CDVI
Security to Access

INSTALLERCUBE

USERCUBE

CUBE **X**
NEXT GEN AUTOMATION

CUBE X

A Full Guide to InstallerCUBE and UserCUBE Apps

RoHS · CE · UKCA

EN

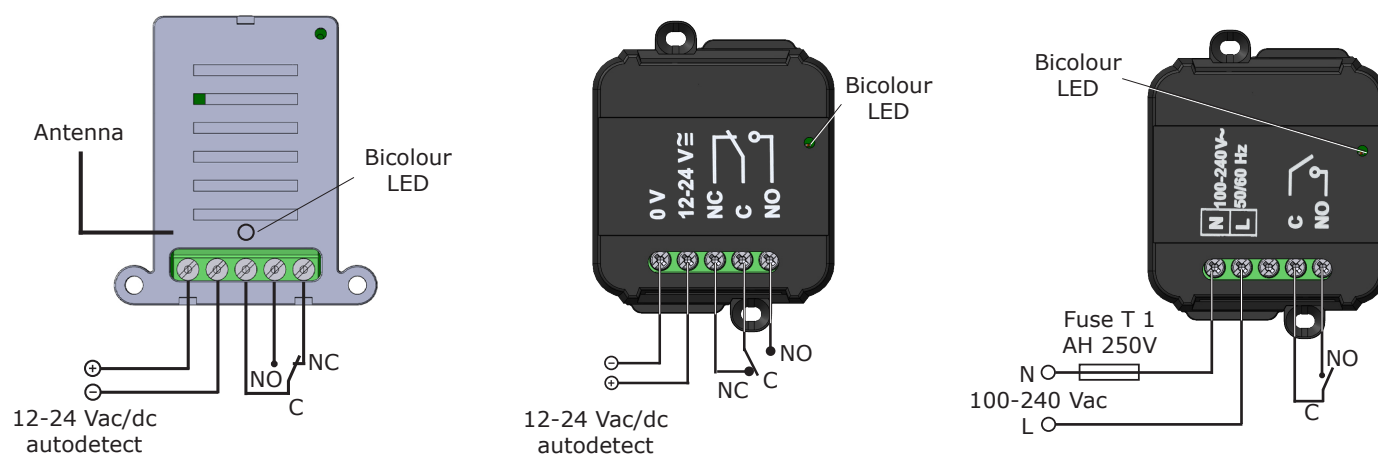# 1] CONTENTS

2] PRODUCT PRESENTATION

Welcome to the CUBE X radio solution! This manual provides a full guide on how to configure and use both of the CUBE apps. If you have any further questions, contact your local CDVI Technical Support.

Technical Features

	CUBESIGNAL	CUBEPOWER	CUBE230
Receiver Type	Superheterodyne		
Memory Capacity	250 transmitters, 100 smartphones		
Security Protocol	KeeLoq® Hopping Code		
Technology	Bluetooth		
Security Level	AES128-bit encryption (with smartphone)		
Operating Modes	Pulse, latch, timed		
Time Delay	from 1sec to 23h 59min 59sec		
Code Combinations	2^{64}		
Dimensions	50 x 32 x 20 mm	44 x 58 x 25 mm	
Relays	1 x C/NO/NC		1 x C/NO
Power Supply	12/24Vac/dc (autodetect)		100-240Vac
Consumption	78mA @ 12Vac (max)	120mA @ 12Vac (max)	16mA @ 230Vac (maX)
Contact Rating	1A @ 24V (60V max)	1A @ 30Vdc (NO), 6A @ 30Vdc (NC)	16A @ 250Vac (NO), 10A @ 30Vdc (C,NO)

Wiring

Antenna

Bicolour LED

NC
NO
C

12-24 Vac/dc
autodetect

Bicolour LED

0 V
12-24 V⁓⎓
NC
C
NO

NO
C
NC

12-24 Vac/dc
autodetect

Bicolour LED

100-240V⁓
50/60 Hz
N
L
C
NO

Fuse T 1
AH 250V

N
100-240 Vac
L

NO
C

LED Indication

🟢	GREEN	Power ON No Bluetooth communication
🟢🟠	GREEN/ ORANGE Blinking	Bluetooth communication in progress
🟠	ORANGE	Relay triggered

Ways to Access

Users can activate the relay in different ways:

With a Transmitter

With the UserCUBE app

The Installer stores the transmitter through the InstallerCUBE app and selects the active transmitter buttons. The transmitter is ready to use.
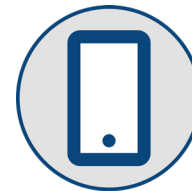
The user interfaces with the receiver through the UserCUBE app.

Permanent button
If the installer memorises the user's smartphone code into the receiver, the user can get a permanent button on the app.

Keypad code
The installer memorises a keypad code when the user is not authorised to get a permanent button.

One-off access
The installer/ administrator can authorise to get one-time acess.

Temporary button
Creates a button in the app but with an expiry date.

3] CONFIGURATION APP: INSTALLERCUBE

The setup of the receiver can only be done through the InstallerCUBE app.

Click or scan the QR code to download the app.

Download InstallerCUBE

Download on the App Store — *iOS 13 and above*

GET IT ON Google Play — *Android 6.0 and above*

Once downloaded, authorise the app to use Bluetooth communication and the GPS localisation. This is necessary for the full operation of the Bluetooth function.

The app works with an Internet connection. It is not mandatory, but without an Internet connection you cannot access the installer menu, make invitations, or create passkeys. The app will work without Internet connection, but functions are limited to device configuration.

This smartphone app saves account information on the cloud only for features closely related to device configuration such as: backups, invited users, and mobile credentials.

Device passwords are saved locally on the phone. In the event of a phone replacement, the installer will have to re-enter the password into the app once the device is configured.

Account Creation

CUBE X
NEXT GEN AUTOMATION

Email
Password

Log In

Forgot password?

Or create an account

Create your account

Name

Email

Password

Sign up

INSTALLERCUBE

Scan Devices
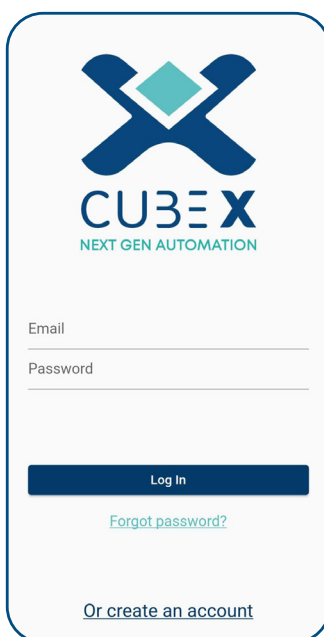
On your first access you have to create your account.
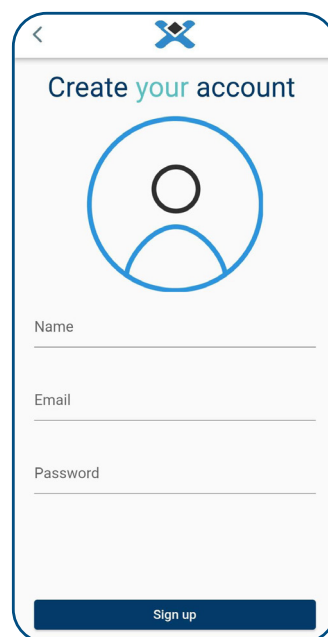
Define e-mail address, name and password. A verification e-mail will be sent to the e-mail address.
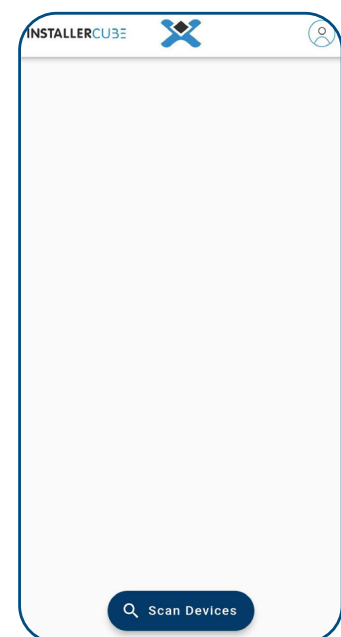
Click on the link in the e-mail to verify your account. Once verified, you can start using the app.

Device Connection

To connect to the CUBE receiver, press 'Scan Devices' and select the receiver.

The scanning feature is limited by the Bluetooth range (up to 30 meters). The strength of the signal depends on the location of the receiver and whether the communication is direct or passes through walls.

The Bluetooth communication is one-to-one. If someone else is already connected to the receiver it is not possible to see it in the list or to connect it to it.

> By factory default, the receiver will show as "CUBE". Once connected, you can change the receiver name (up to 12 characters).
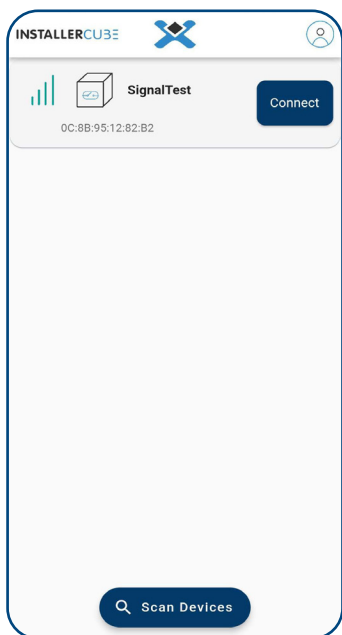
Password

Each device is protected by password. There are two different passwords set on the receiver: one for the administrator and one for the installer.

Default passwords	
Administrators	11111
Installers	00000

> It is highly reccomanded to change the passwords after the first access to the device.

The difference between Administrator and Installer level is defined by who can change and set new password values. Administrators have the right to set passwords for both Administrators and Installers, while Installers cannot.
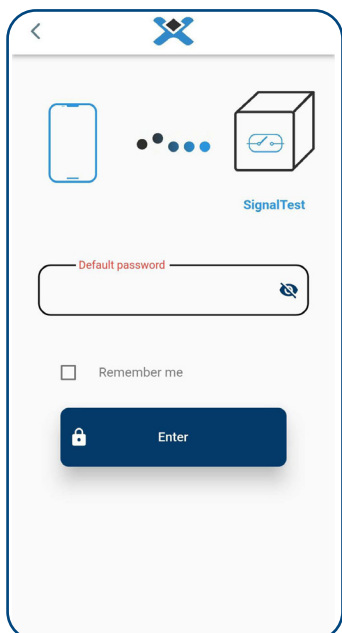
If 'Default Password' appears in red in the password entry screen, it means that at least one of the two passwords has a factory default value.

Home Page
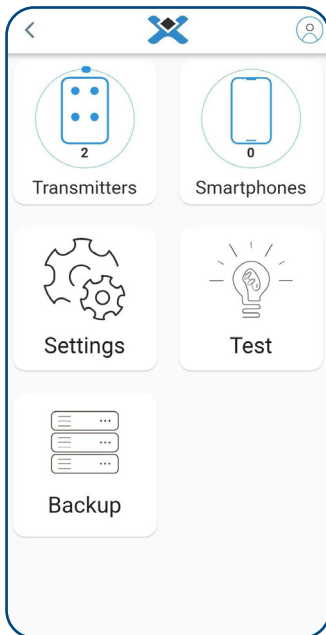
Once connected and the correct password entered, the main menu appears on the app.

You will now be able to manage the receiver and its functionalities: transmitter management, smartphone management, settings, test and backup.

You can also now see how many transmitters and how many smartphones are memorised on the device.

Transmitter Management

In Transmitter Management, the full list of all transmitters stored on the device appears (up to 250 transmitters can be stored).

Each transmitter is characterised by a facility code and a serial number (printed on the back of the transmitter), the number of active buttons, and an ID. The ID is visible only through the app and it is set by the installer (this could be the first or last name of the user).
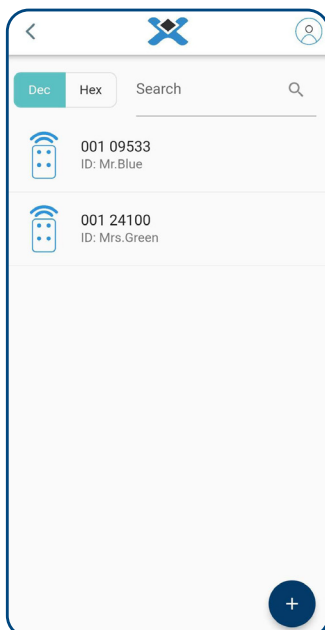
You can select how to view the transmitters - in Decimal or Hexadecimal formats - and use the search bar to filter the transmitters by serial number or ID.

Press and hold a transmitter from the list to delete, see or change information (ID and buttons of a specific transmitter). If you slide the transmitter left or right, you can directly delete it from the receiver, and the list will update automatically.

Adding a Transmitter
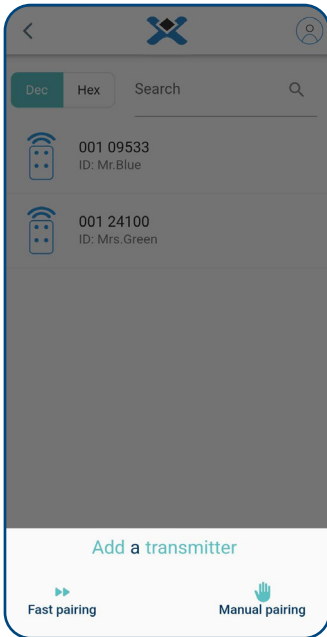
To add a transmitter, click on the '+' button in the bottom right corner.

There are two ways to memorise a transmitter:

Fast Pairing	Manual Pairing
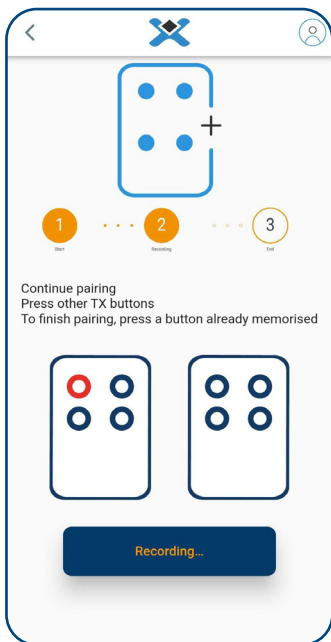
The receiver is in 'listening mode' and will memorise all the buttons that are pressed. To end the listening mode either press an already memorised button or wait 30 seconds.
In this pairing mode the ID is not memorised, but it can be defined later (on the specific transmitter page).
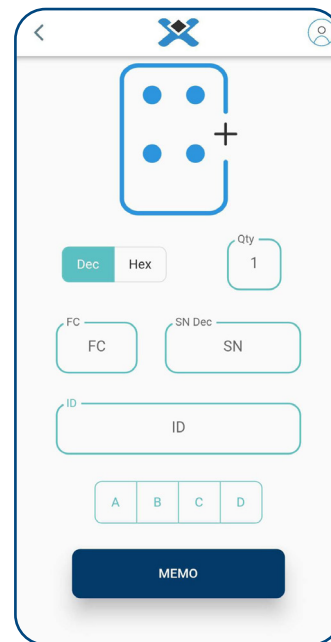
Manual entry of Facility Code, Serial Number (in hexadecimal or decimal), ID and buttons.
It is possible to memorise a group of transmitters. Just specify the number of the transmitters of the block (transmitters with consecutive serial numbers).

Smartphone Management
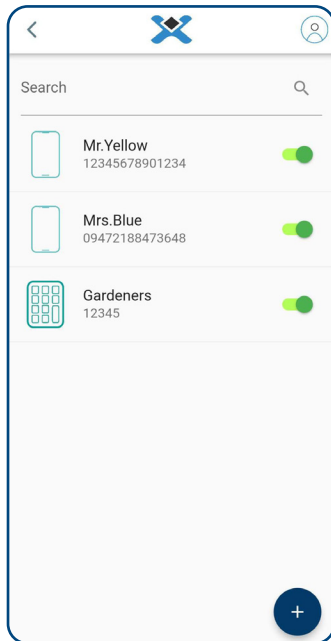
In 'Smartphone Management', you can view a list of all user codes stored on the device.

Up to 100 user codes can be used, divided between keypads and smartphones.
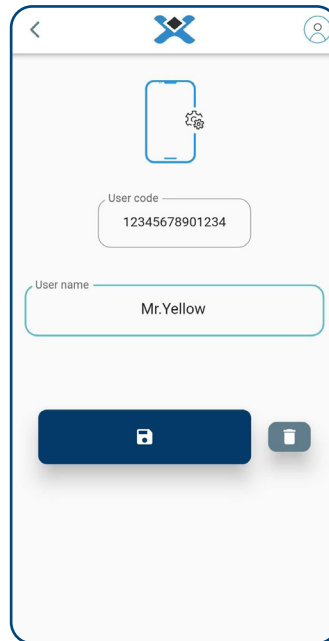
The smartphone is identified by its unique number (called UserCode) and name of the user (called UserName).

This data is visible in the user profile of the UserCUBE app, and the user must share it with the installer in order to be stored in the device and thus have access. A smartphone can also be disabled. In this case, it remains in the memory but the associated user cannot gain access.
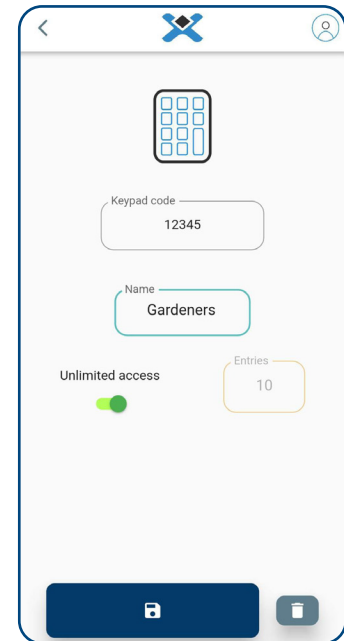
The keypad is identified by its numeric code (up to 10 digits) and name.

You can define the activation number of the code. By default it is unlimited. When the number reaches 0, the code has expired but remains in the memory. The number of activations can be reset or changed at any time. The keypad can be disabled. It remains in the memory but when the code is entered, access is not granted.

Use the search bar to filter the keypad/smartphone by code or by name.

To see, delete, or change the information of a specific element (name and activation number for a keypad, username for a smartphone), press and hold to enter in its settings page. If you drag the keypad/smartphone left or right, you can directly delete it from the receiver, and the list will update automatically.

Add a Smartphone

To add a smartphone, click on the '+' button in the bottom right corner, then select 'Add UserCode'.

Add a Keypad

To add a keypad, click on the '+' button in the bottom right corner, then select 'Add Keypad'.

Settings

In the Settings menu, you can view the device's functions and technical data relating to:

Transmitter
Memory capacity, encoding type, number of transmitters stored

Smartphone
Memory capacity, number of smartphones stored

Software
App version, firmware version, MAC address

Device Settings
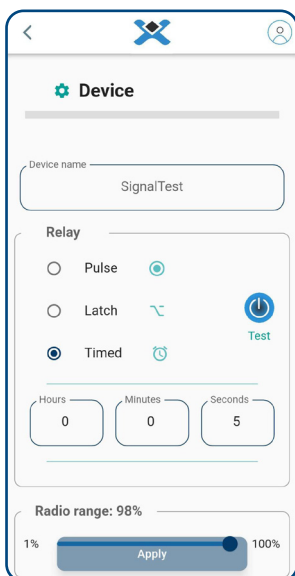
Receiver Name: Set the name of the receiver

Relay: Set the operational mode of the relay.

- **Pulse:** The relay, if activiated, will close the contact and then immediately re-open (time ~ 300 ms).
- **Step (Latch):** The relay, if activated, will close the contact and stay in that position until a stored button is pressed.
- **Timed:** The relay, if activated, will close the contact. When the chosen time expires (from 1s to 23h 59m 59s), the relay will deactivate itself. Pressing the button of a stored remote control during this time will immediately deactivate the relay.

Radio Range
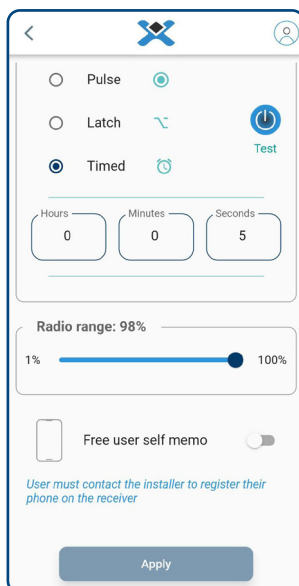
You can adjust the radio range of the receiver from 1% to 100%. This distance only applies to transmitters.

%	1	10	20	30	40	50	60	70	80	90	100
Approx. distance* (m)	1.5	3	4	5	8	20	30	35	70	150	200

*The radio range depends on the location of the receiver and whether the radio communication is direct or passes through walls. It is therefore possible that two receivers with the same percentage value of radio range may have a slight difference in actual radio range.

Free User Self Memo
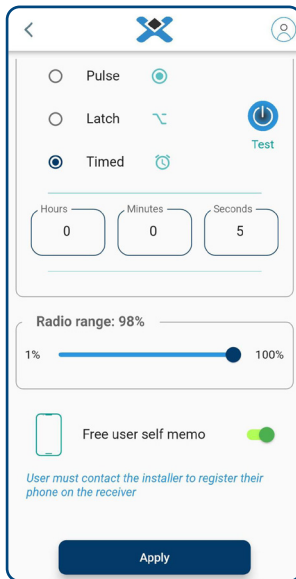
If enabled, this option allows every user with the UserCUBE app to store their smartphone on the receiver independently and have a permanent button.

By default this option is **disabled**. The end user must contact the installer to store their phone on the receiver.

Password Menu
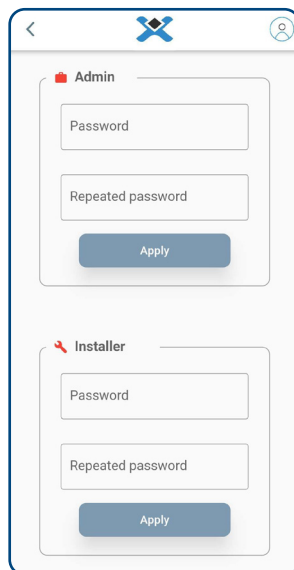
The password menu is only visible when logged in as an administrator. The administrator can change the password values. The red colour means that the password has the factory default values.

Advanced Functions
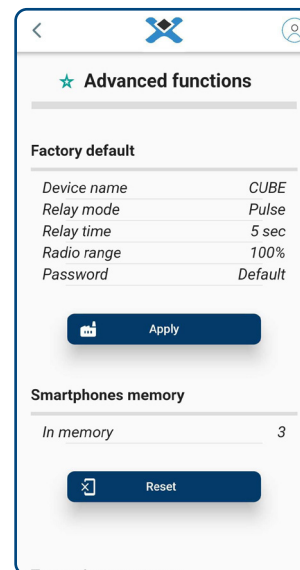
Reset of the device memory (transmitters and smartphones) and its settings (relay operational mode, name of the receiver, passwords).

Testing

Here it is possible to test the relay and read a transmitter:

Testing Relay	Read TX
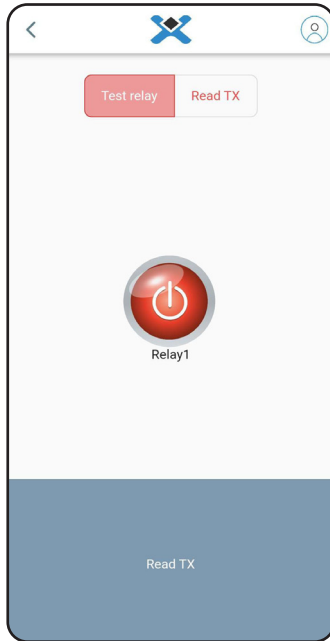
The colour of the button shows the relay status: If green the relay is triggered. Press the button of the app or a memorised transmitter to activate it and test the operational mode.
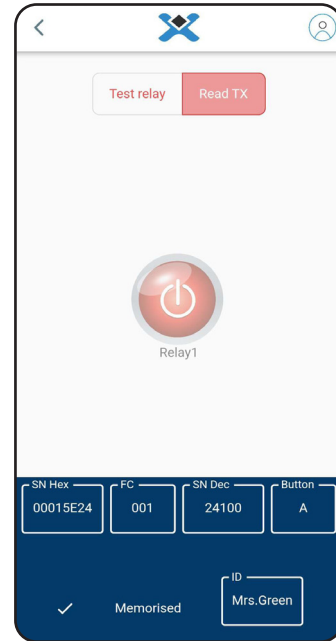
Press a transmitter button and the app will display the serial number, the facility code, and the pressed button. If the transmitter is memorised, the app will also display its ID.

Backup
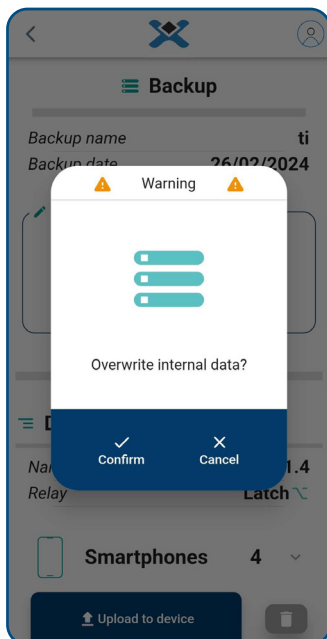
You can create a backup of the device, with the list of transmitters, smartphones, keypad codes and the relays' operational modes.

The home screen shows the list of existing backups, with a search bar to filter them by creation date or name.

Uploading Backups

To upload a backup and restore the memory, select the desired backup and click "Upload to device".

This operation will overwrite existing data. It is recommended to create a backup of the device before uploading the new one.

Installer Menu
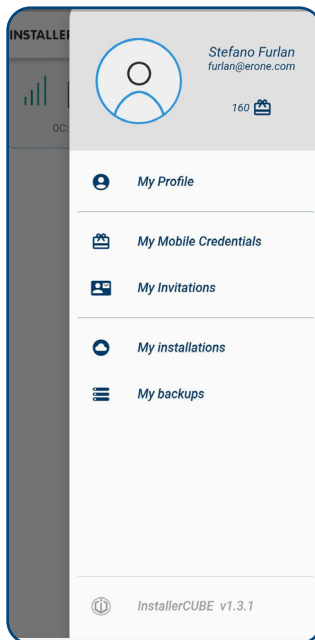
By clicking on the icon in the upper right corner, the installer or administrator can see the installer menu. It is accessible only with an internet connection.

My Profile

Set the language.
Change Name and Surname of your profile.

My Backups

Shows the list of existing backups, with a search bar to filter them by creation date or name. All the backups are saved on the cloud.

My Mobile Credentials

From this page you can add more mobile credentials to your account.
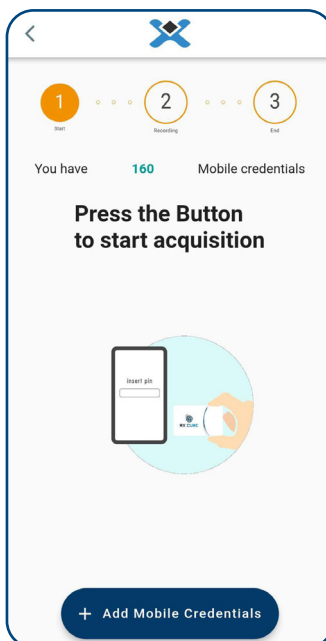
What are mobile credentials?
Mobile credentials are virtual tokens that the installer uses to create invitations and enable the end user to use their smartphone to activate the receiver. When downloading and opening the UserCUBE app for the first time needs an invitation code to unlock the app. This code is created by the installer, using one mobile credential.

How to replenish the account?
Mobile credentials can be added with NFC Cards. Each card has a PIN code to insert into the app to validate the acquisition process.

Three different licence cards are available:

- CMC5: Contains 5 mobile credentials
- CMC10: Contains 10 mobile credentials
- CMC25: Contains 25 mobile credentials

My Invitations
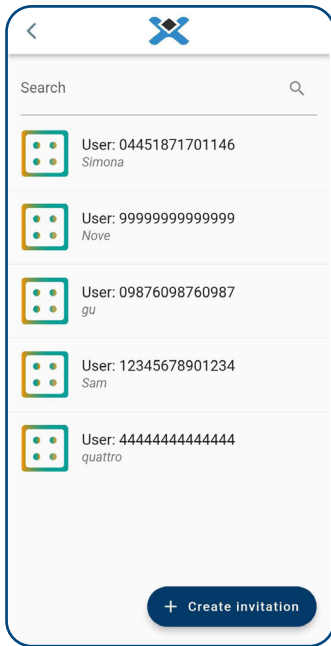
It shows the list of created invitations, with a search bar to filter them by creation date or user code.

All the invitations are saved on the cloud.

Click the 'Create invitation' button to generate an invitation code by inserting the user code. You can also directly scan the QR code from the UserCUBE app.

My Installations

The 'My installations' page shows the list of all devices that the installer configured, with a search bar to filter them by MAC address or name of the device.

When clicking on a specific device you can view the device's information: MAC address, name, relay operational mode, transmitters list, smartphones list, passkey list, and the NFC tag functionality.
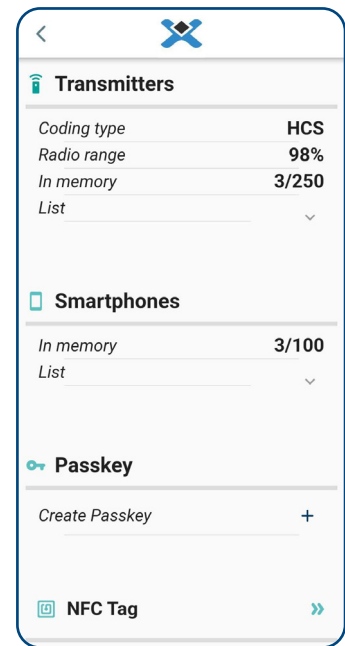
Passkeys

Passkeys are commands that the installer creates for the end user.

A passkey is a proxy that authorises the end user to update the device according to the settings chosen by the installer. The installer selects the actions the end user will be authorised to perform, and saves them to cloud.

The end user then connects to the receiver with the UserCUBE app. The app will autonomously check for passkeys and implement the commands chosen by the installer.
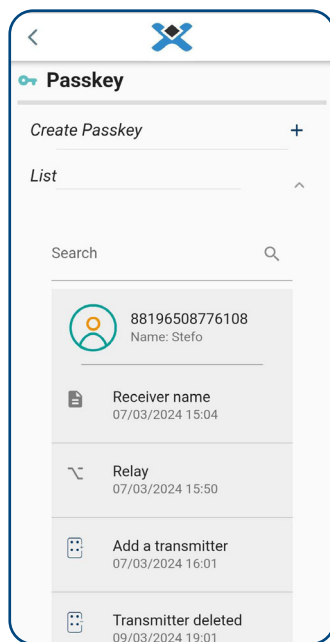
The 'Passkeys' page shows the list of all passkeys created by the installer, with a search bar to filter them by user code or user name.
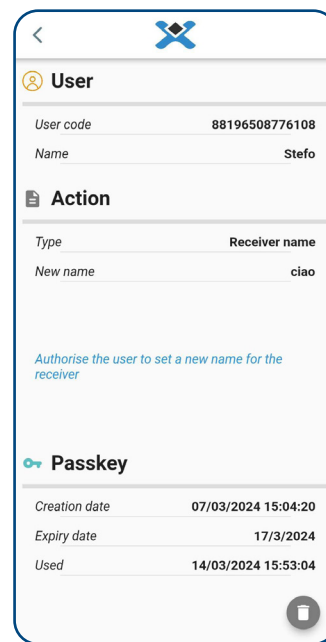
By clicking on the specific passkey you can see information: what it does, when it was created, and when it was last used by the user.

Smartphone passkeys
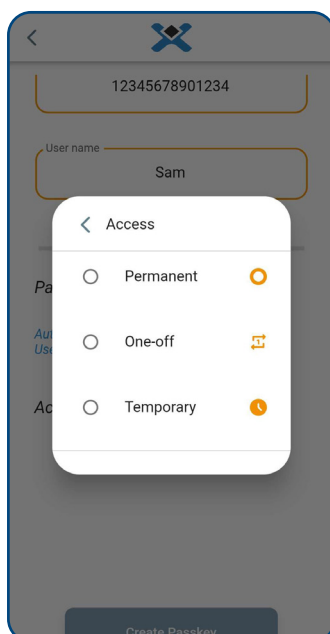
There are three different smartphone passkeys available:

Permanent Button   **One-Time Access**   **Temporary Button**
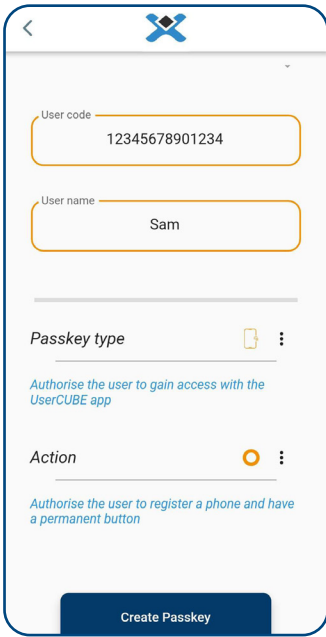
Permanent Button

This passkey allows the user to be memorises on the receiver and obtain a permanent button in the UserCUBE app.
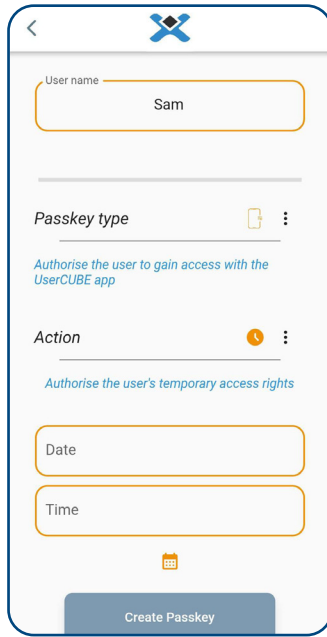
One-Time Acces

Authorises the user to access only once. After that the passkey is marked as used and the user can no longer access (unless another passkey is created for the user).
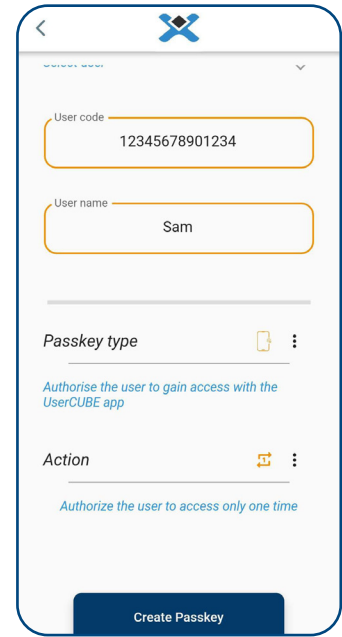
Temporary Button

This passkey allows the user to be memorised on the receiver and get a button in the UserCUBE app. This button has an expiration date. After that period, the button is disabled and the user can no longer access.

Transmitter passkeys
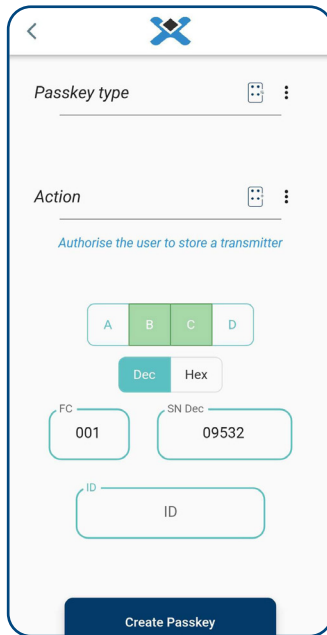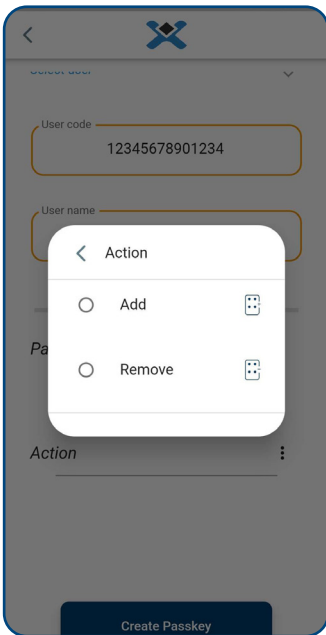
Add Transmitter

The user can memorise a transmitter with the ID and buttons chosen by installer.
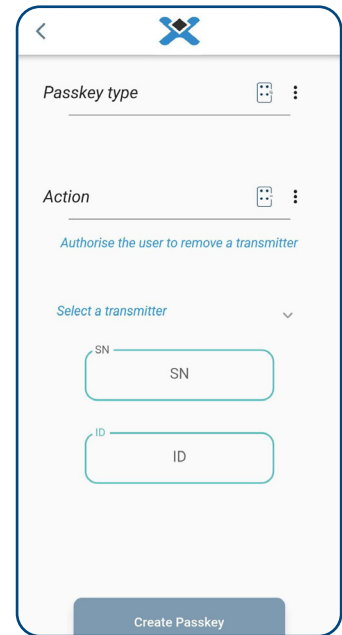
Remove Transmitter

The user can remove the transmitter from the memory of the device. The installer needs to select the transmitter from the list of memorised transmitters.

Passkeys
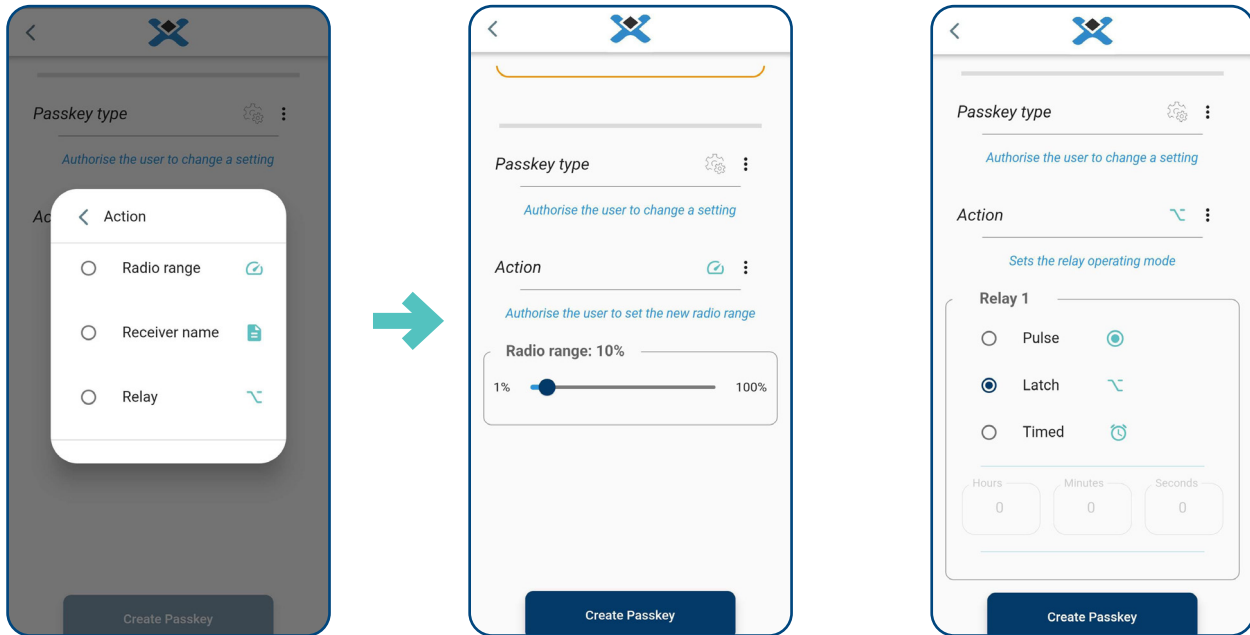
Radio Range

The user can set a new radio distance according to the value chosen by the installer.

Receiver name

The user can set a new name for the receiver according to the name chosen by the installer.

Relay

The user can set a new operational mode for the relay according to the modes chosen by the installer.

NFC

From the specific device page, an NFC tag can be programmed with the device information. This tag will work with the UserCUBE app.

When the end user places the unlocked smartphone on the tag, the UserCUBE app opens automatically. If the user has a button associated with the device, the button will start automatically. Once the command is triggered and verified to be working properly, the app will close by itself. It is then possible to place multiple NFC tags in different locations and associate them with different devices.

To program the tag, follow the steps below:
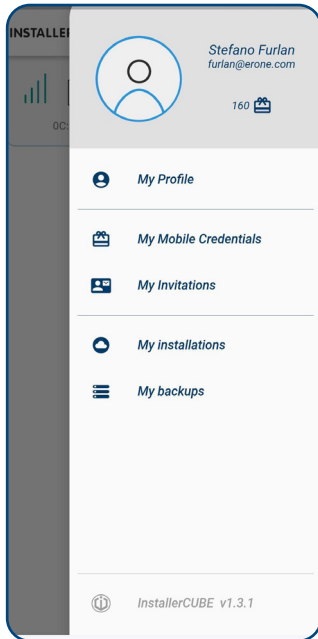
1. Go to 'My Installations' in the Installer menu.
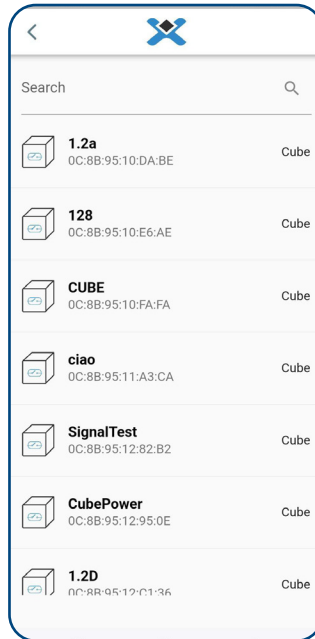
2. Click on the receiver you want the tag to be associated with.
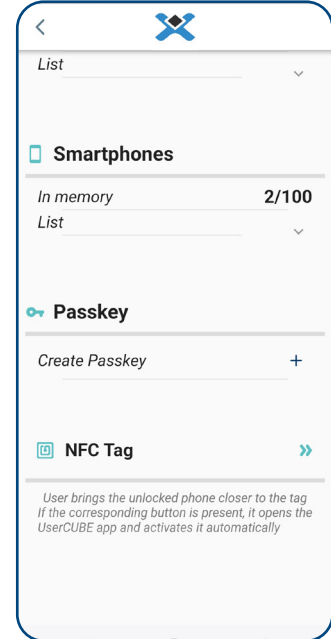
3. In the receiver settings click on 'NFC Tag'.
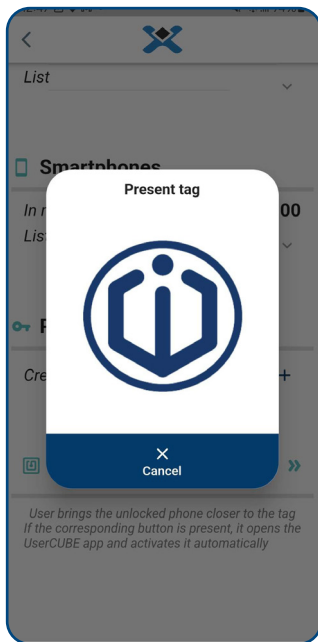
4. A window will open and ask you to present the tag to the smartphone.
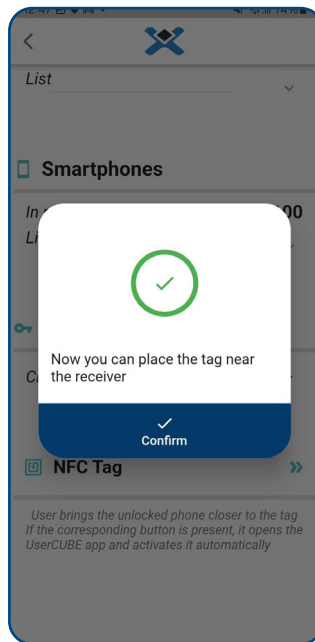
5. Place the NFC tag on the back of the phone until the confirmation of successful programming appears.

The tag is now ready to be used by the end user.

4] END USER APP: USERCUBE

The UserCUBE app allows users to activate the receiver's relay from their smartphone. UserCUBE allows the smartphone to be used as a Bluetooth remote control, with its own Serial Number (UserCode) and name (UserName).
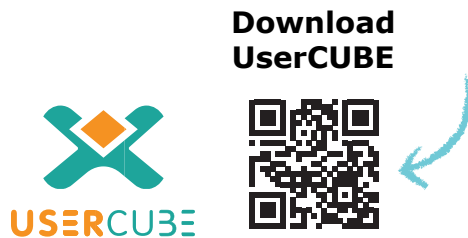
Download UserCUBE
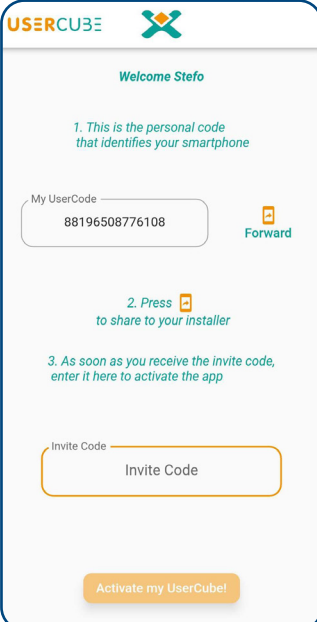
Once downloaded, authorise the app to use Bluetooth communication and the GPS localisation. This is necessary for the full operation of the Bluetooth function.

This app works with an Internet connection. It is not mandatory, but without an Internet connection you cannot use passkeys.

The app is available in multiple languages: English, French, Italian, German, Spanish, Portuguese, Swedish, Danish, Norwegian, Finnish and Polish.

First Time Use

When accessing the app for the first time, the user needs an invitation from the installer.

- Forward the user code to your installer.
- Insert the received invitation code into the field "Invite Code".

Create a Button
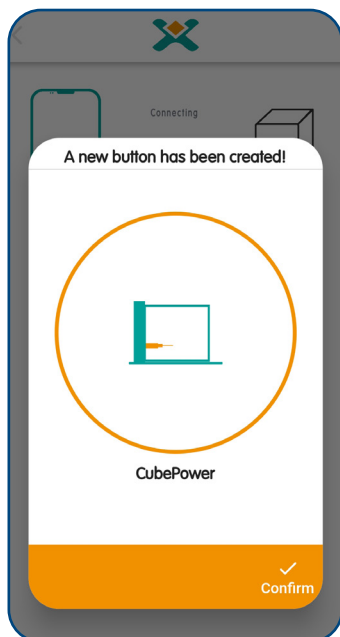
The user sends his own UserCode to the installer.
Then the installer, within InstallerCUBE connects with the receiver, memorises and enables the UserCode.

After confirmation the user connects to the receiver and the app will do the rest.

If the smartphone is memorised and correctly enabled, a button will be created. The user can personalise it by changing the icon or name.

App Usage

Once the button is set up, the user can either click or hold the button to send a command to the receiver. When holding the button, the receiver relay will be triggered until the user lifts their finger from it.

From the button menu, the user can change the icon or name of the button, and change the order of the buttons in the list.

Keypad Code
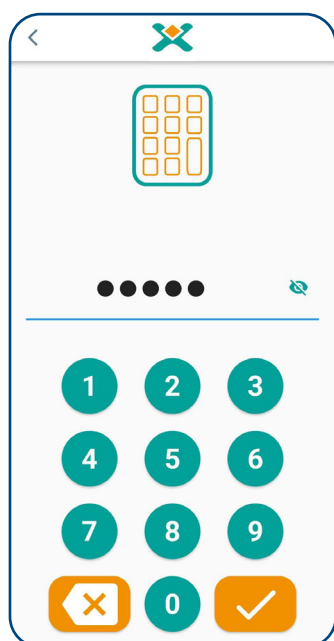
The installer can set a keypad code for the receiver.

This keypad will show when any unauthorised users attempt to connect to the receiver.

Insert the right code to trigger the relay.

Passkeys

The installer can delegate receiver commands to a specific user. The user then connects to the nearby receiver. The app will download all the passkeys and make the changes pre-set by the installer.
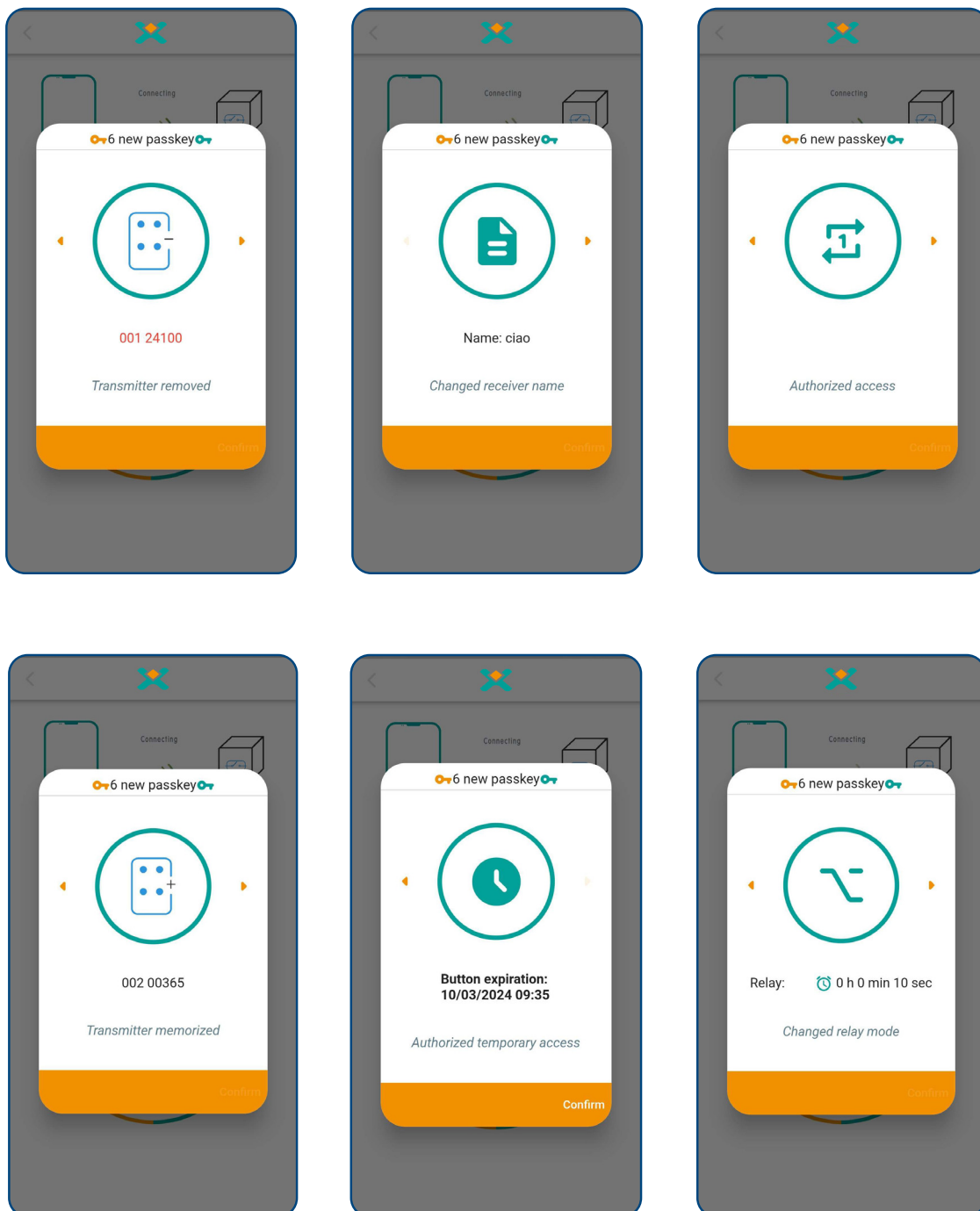
NFC

NFC tags let users send a "one shot" command through the app.

Users just need to unlock their smartphone and place it over the tag.
The app will automatically open and, if the button has been created, the command will automatically start.

Activating the relay with an NFC tag saves a lot of time: instead of searching for the app each time and then selecting the relevant button, the user simply places the unlocked phone against the tag.

The app closes automatically. This allows for the use of different NFC tags associated with different receivers. As the user approaches a tag, they do not have to worry about closing the app each time and can proceed directly to the next one.

The tag is programmed from the InstallerCUBE app. ()

Notes

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