



Little Environmental Observatory

Ateknea Solutions

User Guide V1.0

Product Specifications



- For more details go to <http://citisense.ateknea.com>

LED indications



- **Battery LED:**
 - Red: charging
 - Green: charged
 - Blinking: battery error, connect and disconnect from charger
- **Measuring LED:**
 - Yellow LED: measuring sensor gas concentrations, temperature and relative humidity
- **Bluetooth LED:**
 - Blinks every 10 seconds: waiting for Bluetooth pairing
 - Fast blinks: transmitting data

Working with the sensors and ExpoApp

- Charge the battery (until battery LED turns green) and do not use until the first charge is completed*. Use the USB cable and wall charger provided with the device in the box.
- Before first use, press the reset button with the provided tool.



*If the device is stored without suspending it for more than 48 hours, charge it until completed. The electrochemical sensors need a small current to function properly. A discharged battery is not able to supply this current and the sensors need to stabilise (for at least one hour)

Working with the sensors and ExpoApp

- Recommendations:

- Charge the LEOs every night (as you will do with your smartphone)
- Do not cover the air inlets when measuring
- If not used for longer periods press the *Suspend* button
- If stored for more than 48 hours (without suspending), fully charge the sensor (more than 2 hours) before first use. If suspended battery can last up to 1 week****.

- Do not:

- use the sensor platform under rain. They are water resistant, but mind the USB port.
- blow directly in to the gas sensors or put it directly on the source of pollution (e.g. car exhaust system). This can potentially damages the air sensor.


*Android App will be ready by April 2015)

**<http://citisense.ateknea.com/aircitisensing/downloads>

***maximum of 25.000 measures, approx. 36h @ 5s sampling rate

****if you are not sure, always charge the device if stored for more than 48 hours

Installing ExpoApp

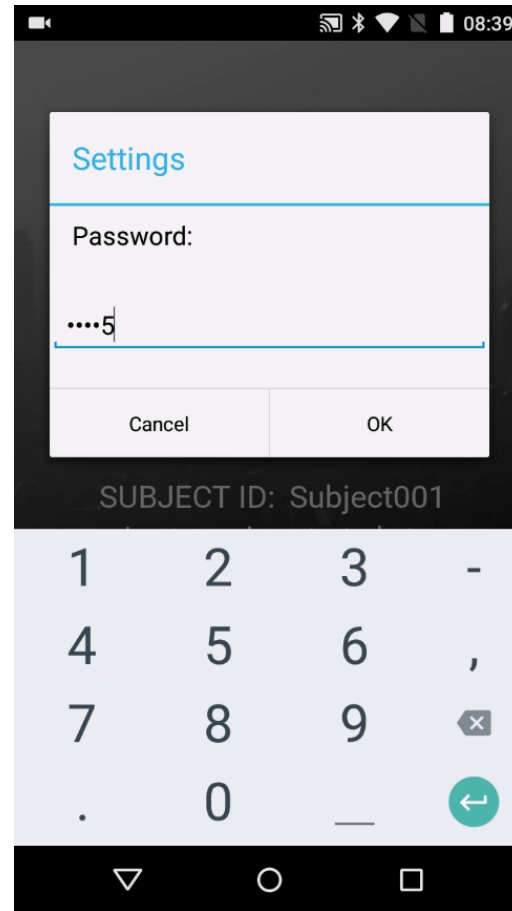
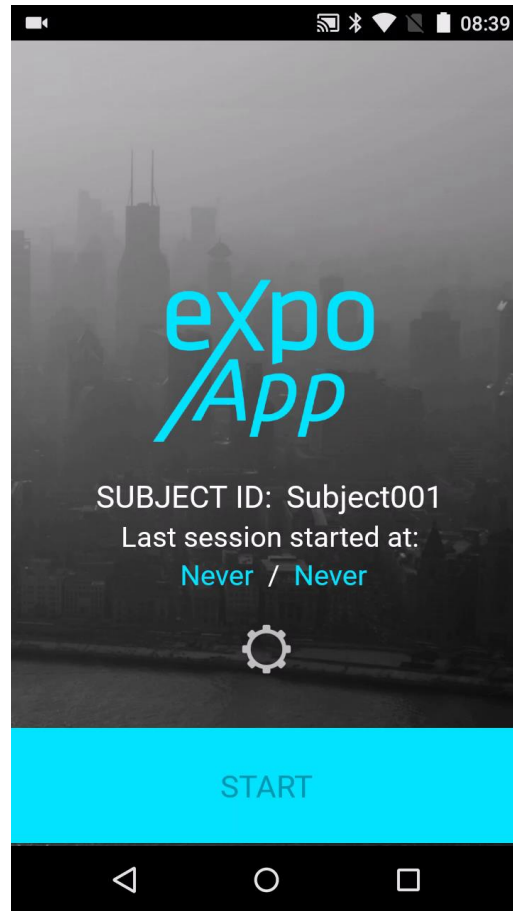
- Go to Google Play on your device
- Or scan the QR code on the right
- Search for ExpoApp 
- Install the App. This might take several seconds



Start ExpoApp

- Click on the Gear icon to setup your session
- You will be prompt a password. The password is 31415

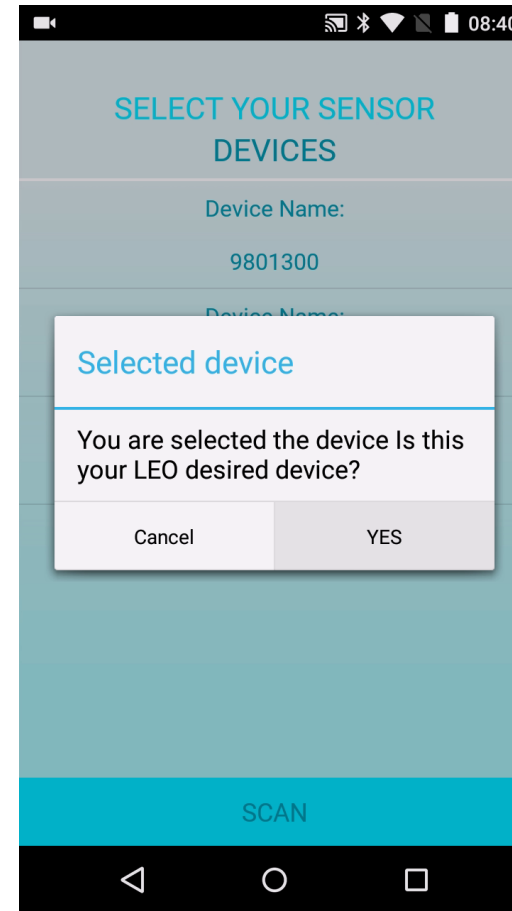
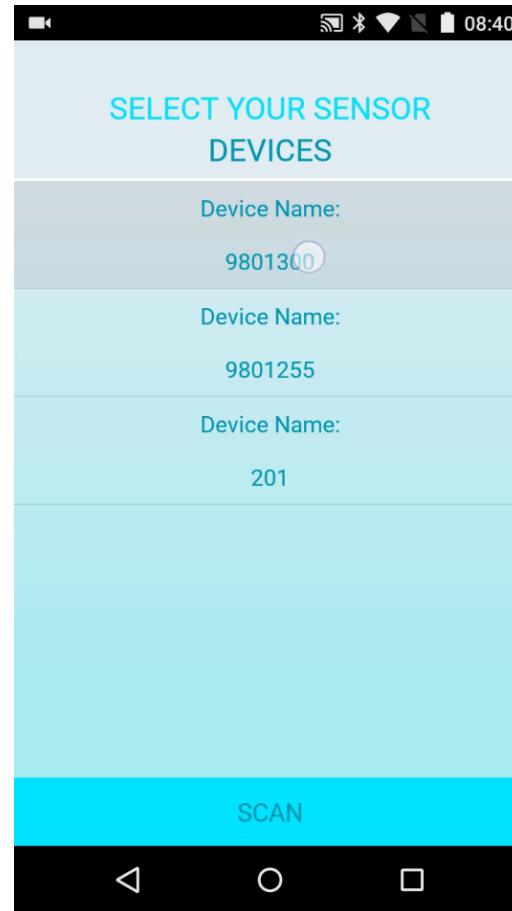
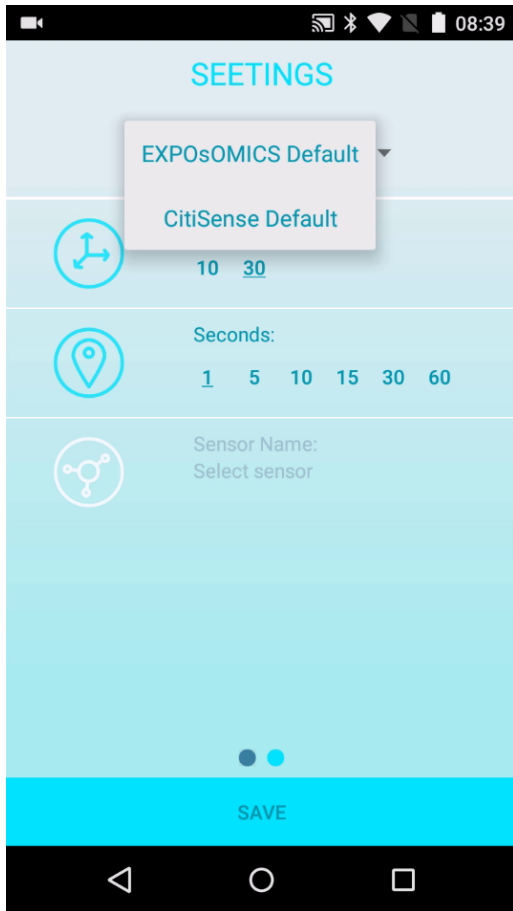
Start ExpoApp



Setting up ExpoApp

- Select the CitiSense profile
- Then select “Sensor”, a new screen will show up
- Press on “SCAN” and wait for few seconds until your device shows up (check number on device)
- Make sure you select the correct device

Setting up ExpoApp

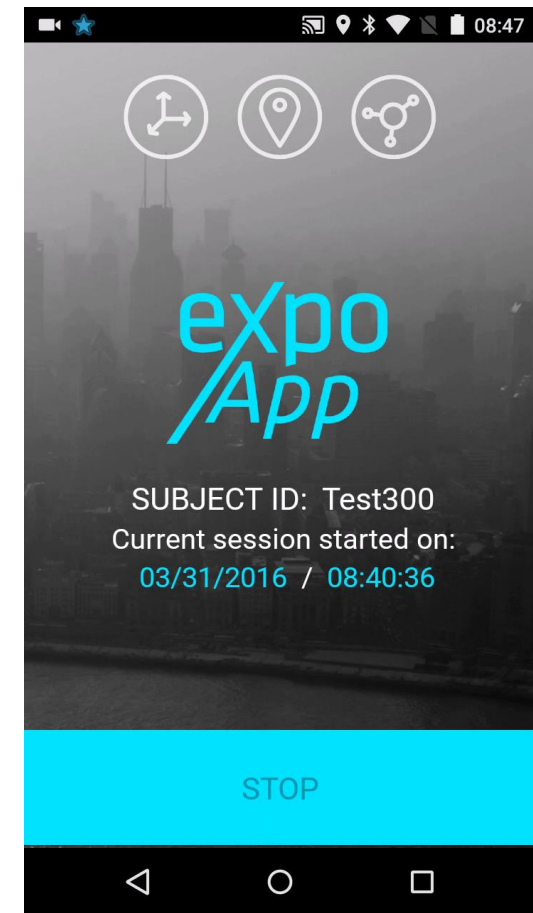
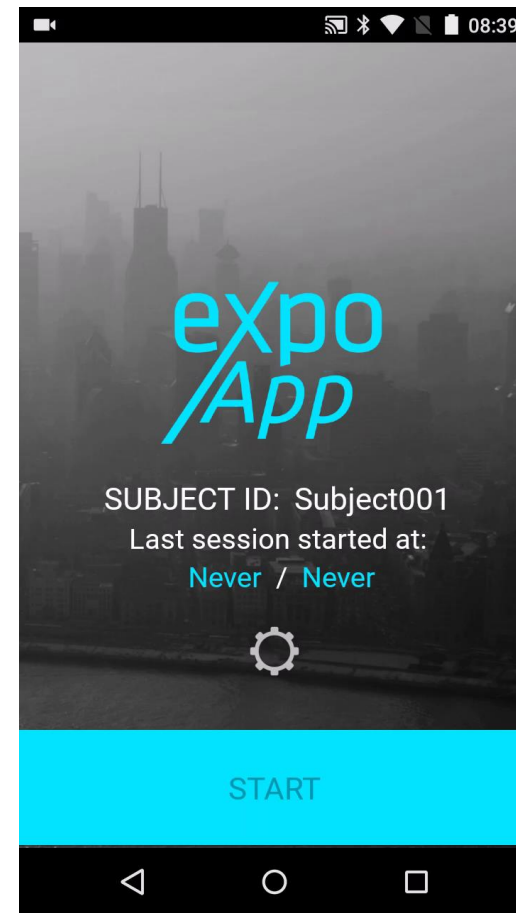
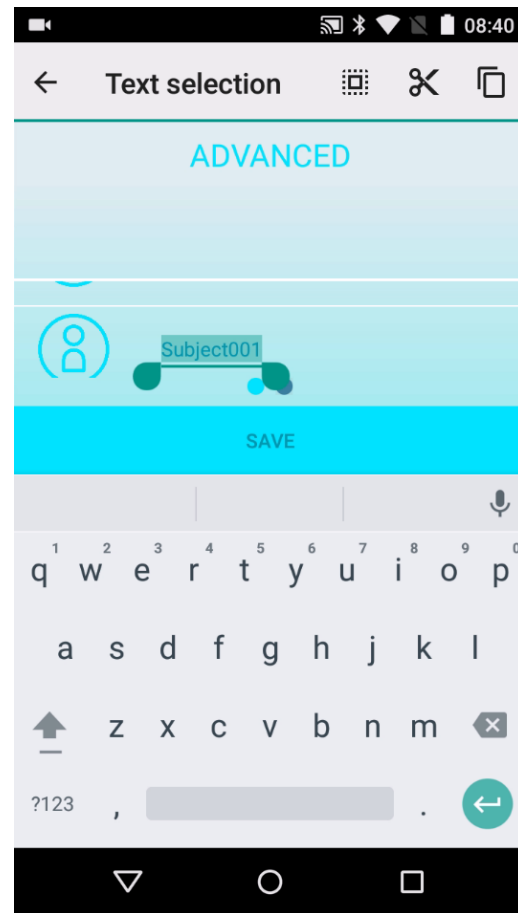
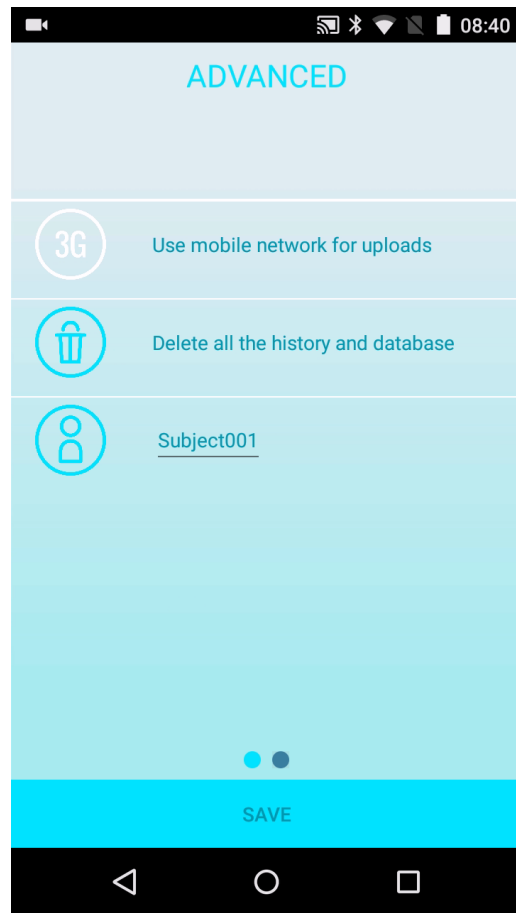


Setting up ExpoApp

- Slide to the next screen
- Setup a new user name or SubjetID
- Enable 3G if you want to use your network connection to upload data to the server*
- Press on SAVE and then START
- A new session will start. A start Icon will show up and the gear icon will disappear

* If 3G is disable, data will be uploaded only when a Wi-Fi connection is available. Hence the data visualization will not be real time.

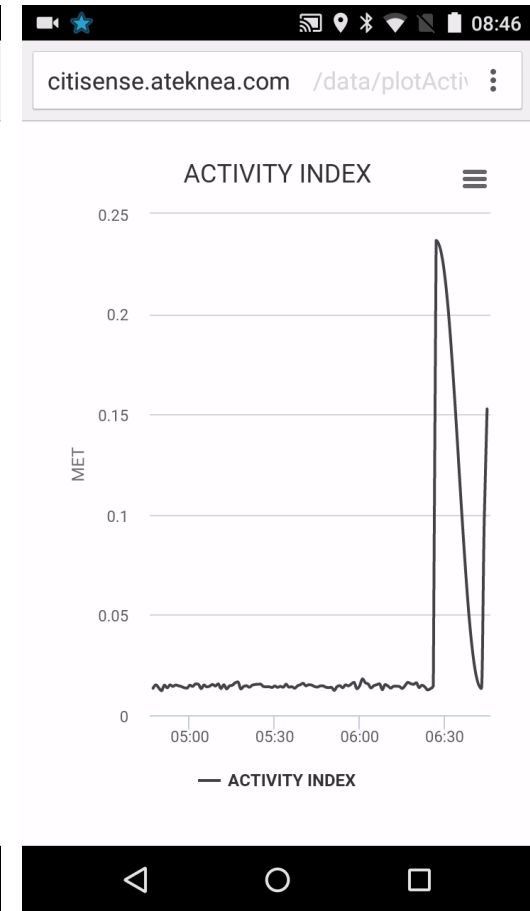
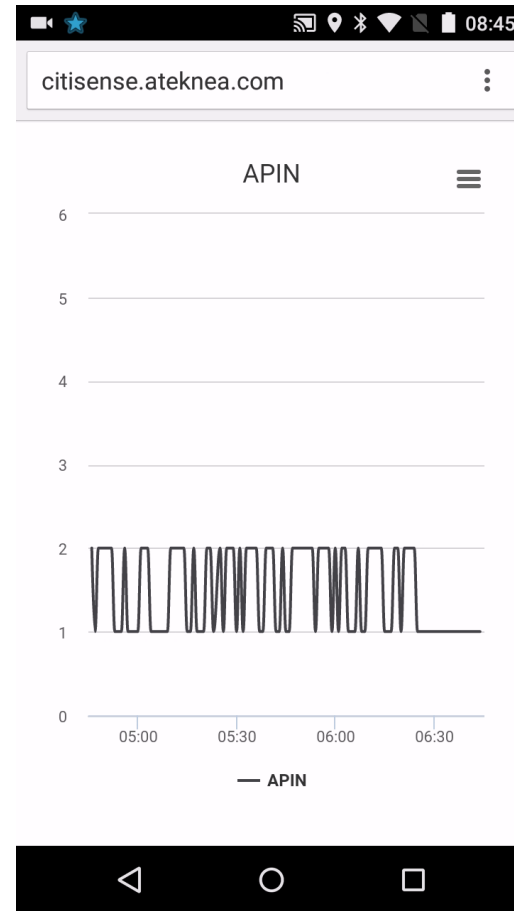
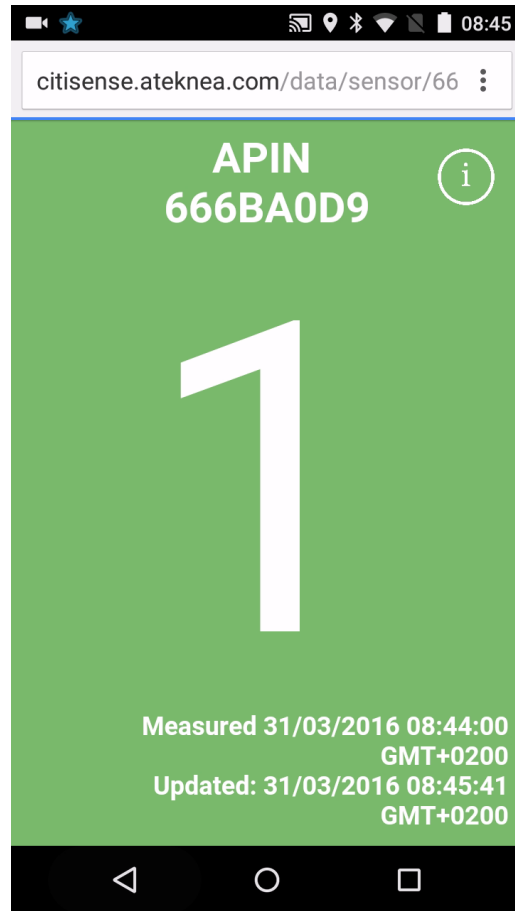
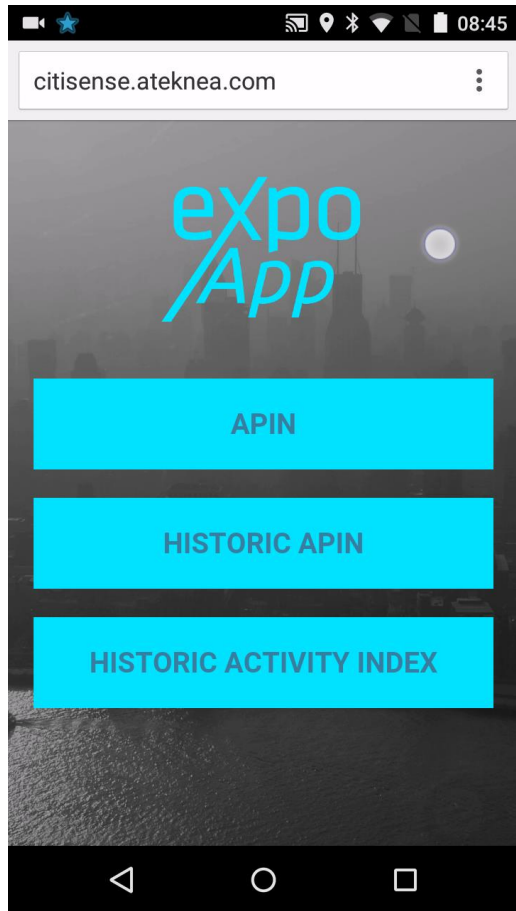
Setting up ExpoApp



Viewing my Data

- Press on the sensor icon
- Press on “Verify Data”
- You can view:
 - Current value of Air Pollution INdication (APIN)*
 - Last 2 hours of APIN
 - Last 2 hours of the Activity Index

Viewing my Data

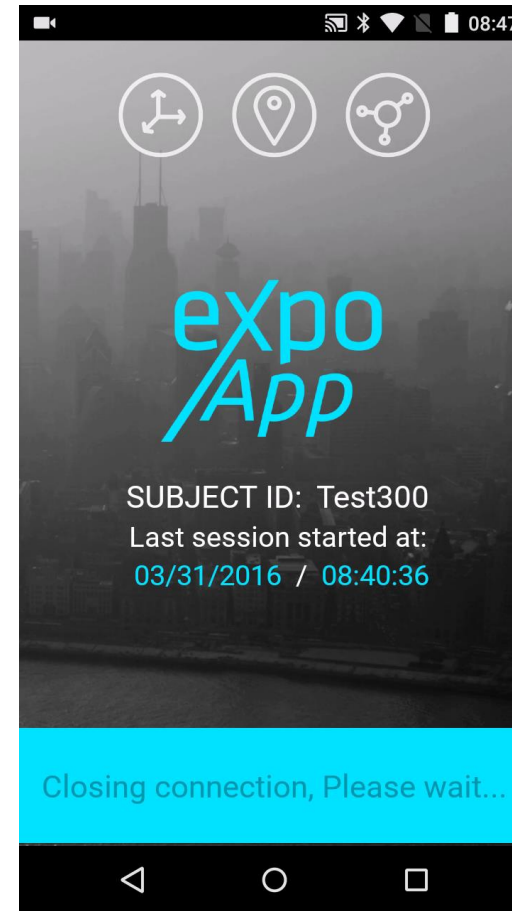
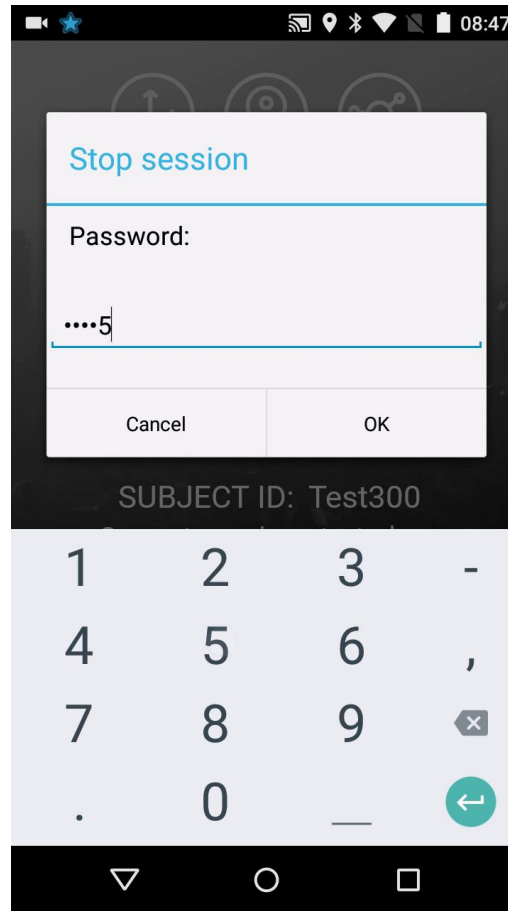
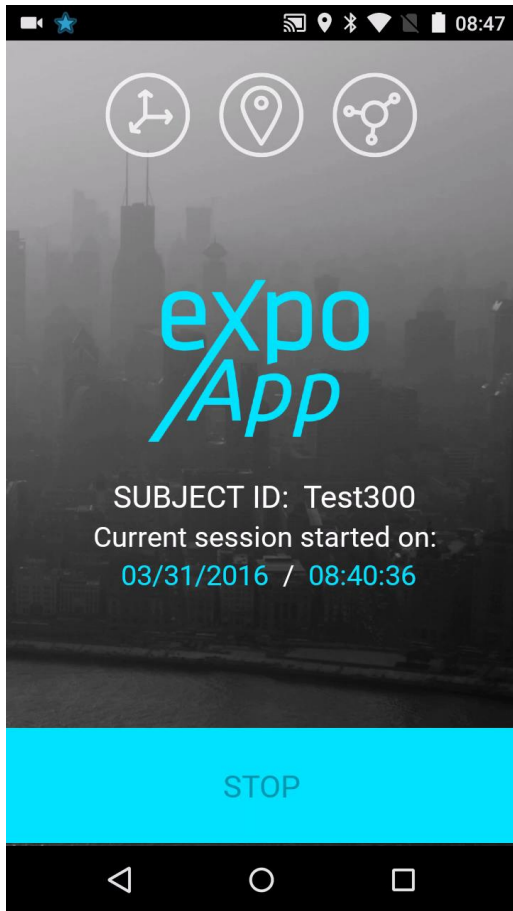


Stop the Session

- Press STOP
- You will be prompt a password. The password is 31415
- The message “Closing Connection, Please wait” will show up
- Now you can close ExpoApp

* If 3G is disable, data will be uploaded only when a Wi-Fi connection is available. Hence the data visualization will not be real time.

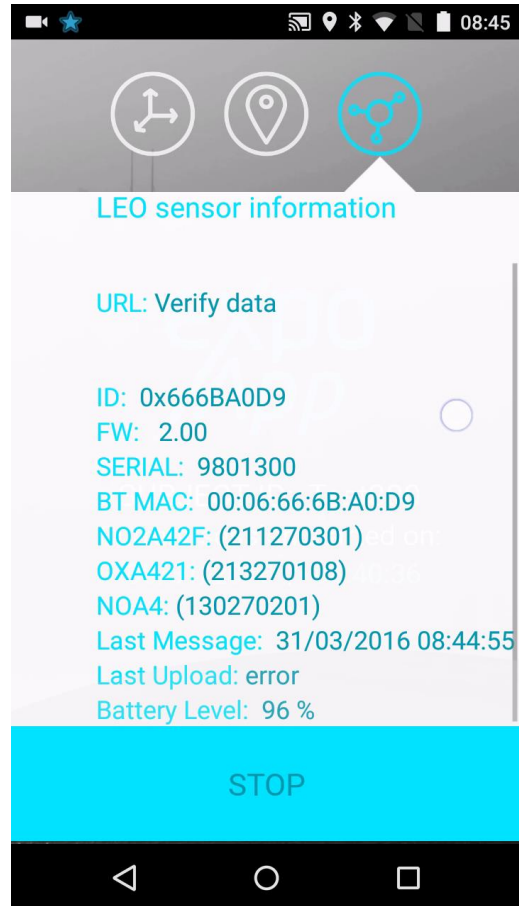
Stop the Session



Troubleshooting

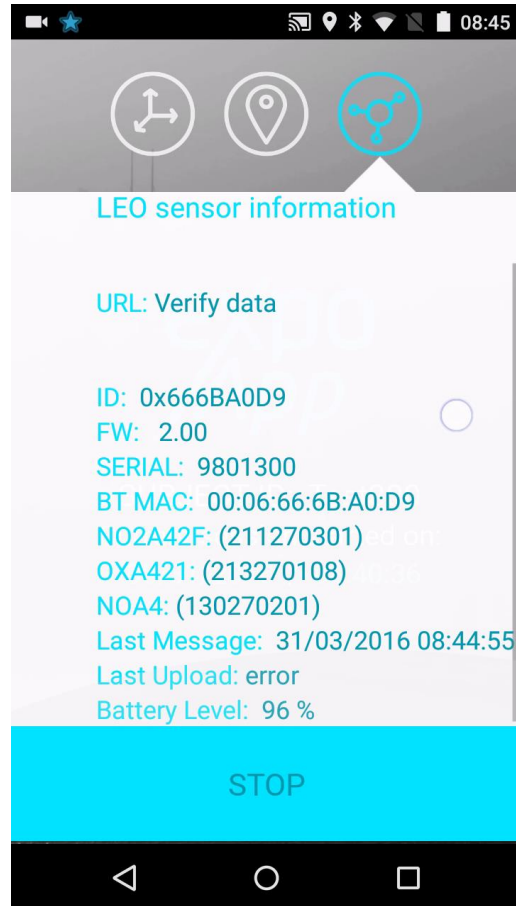
What do I do if something goes wrong?

Monitoring ExpoApp



- You can monitor ExpoApp to check if the communication with the sensor is good.
- Press on the sensor icon to see information about the sensor

Monitoring ExpoApp



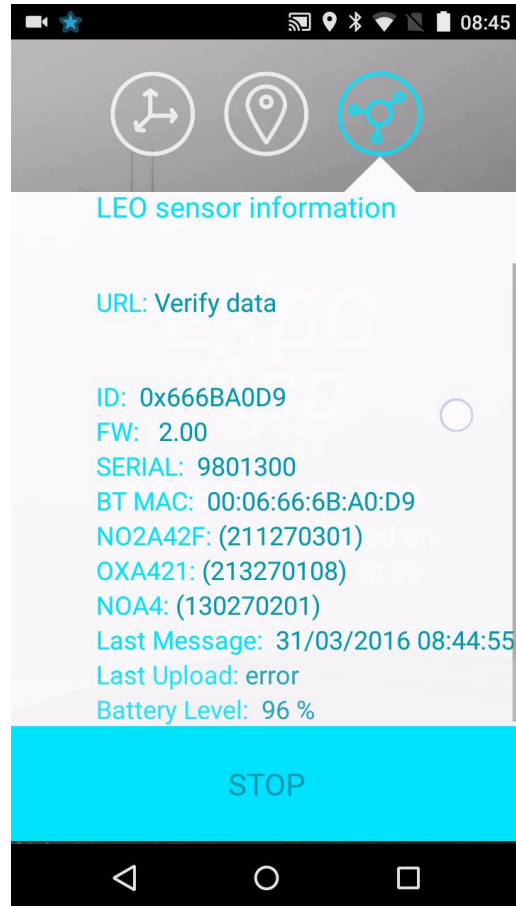
- Last Message

- This value is updated when the smartphone receives new data from the device. New data should be sent every minute.

- Possible errors:

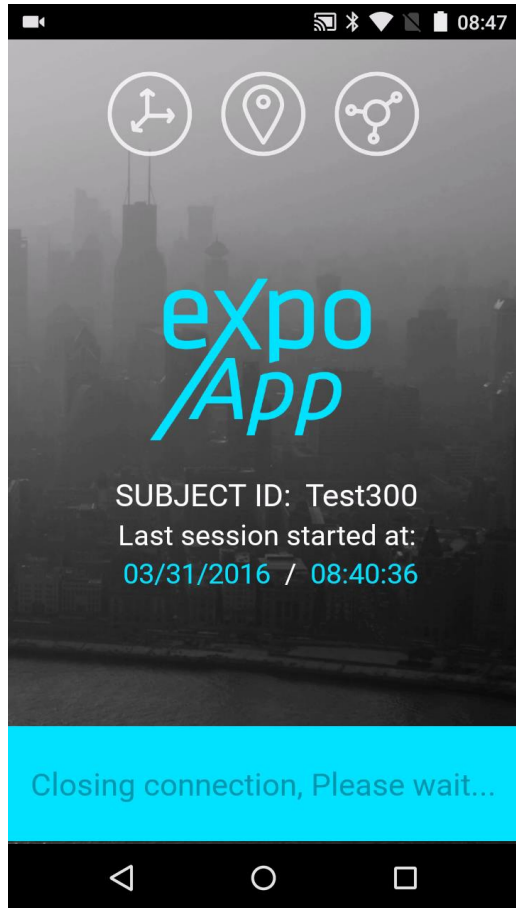
- More than one minute of difference with timestamp and current time
 - Solution: Reset the device and wait for a new pairing request (no more than 2 minutes). If it does no work, kill the App and start a new session.
- Value is “error”
 - Solution: reset the device, stop the session and start a new one. If it does no work, kill the App and start a new session.

Monitoring ExpoApp



- Last Upload
 - This value is updated when the smartphone sends new data to the cloud. The new data is sent every minute if a valid data connection is available (3G or Wi-Fi, depending on your settings)
- Possible errors:
 - More than one minute of difference with timestamp and current time
 - Solution: Check connection with the server. Press on “Verify Data” if the page is load correctly server is OK. Wait a couple of minutes for new data to be uploaded.
 - Value is “error”
 - Solution: disable/enable your Wi-Fi connection. New data will be push when a valid connection is available.
- If nothing else works STOP the session. Kill the App* and start ExpoApp Again

Stock on Closing Connection, Please wait..

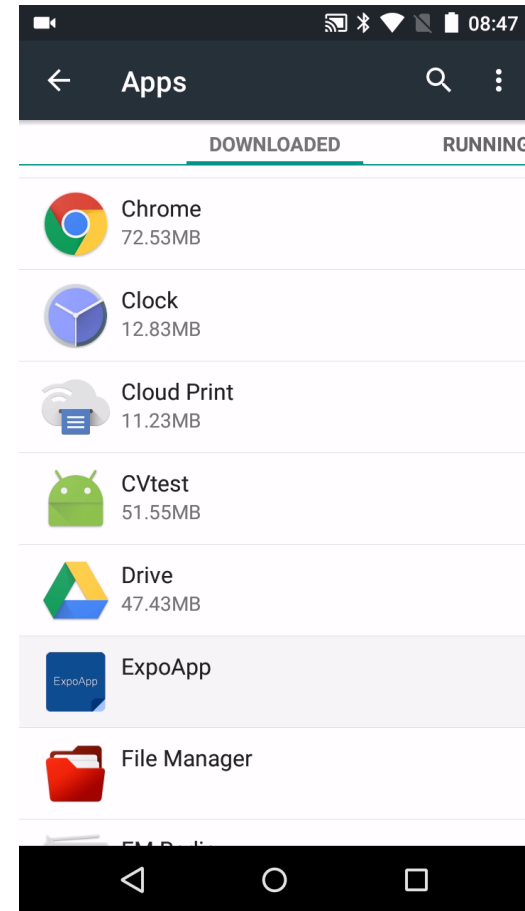
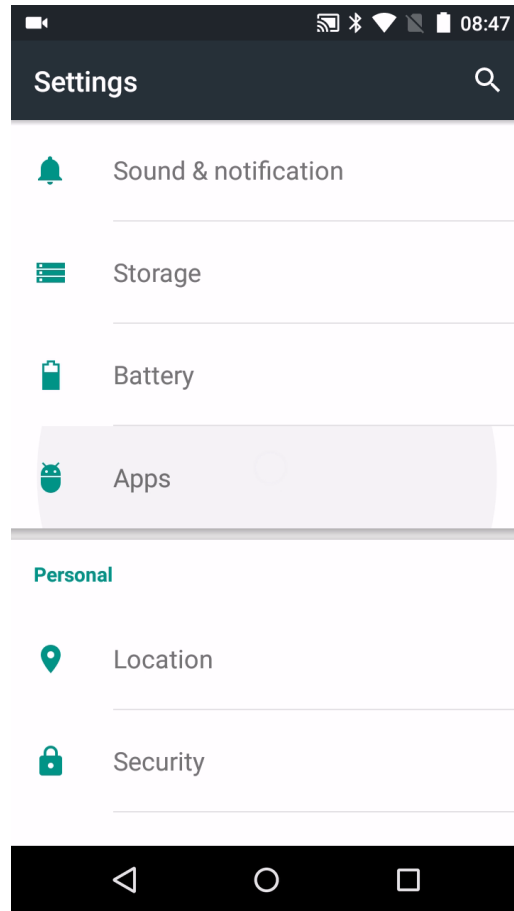
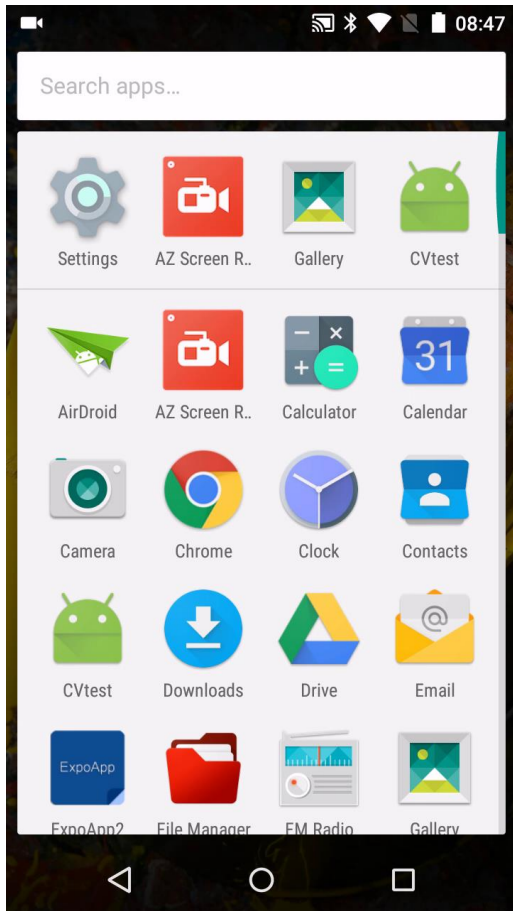


- Close the app as you normally would
- If that does not work, then “Kill the App”

Kill ExpoApp

- Go to your settings -> Apps
 - Search for ExpoApp
 - Press “Force Stop” then “OK”
 - Press “Clean Cache*” then “OK”
 - Reset the sensor device
-
- You can start ExpoApp again and start a new session

Kill ExpoApp



Kill ExpoApp

