

USING THE LORA SIGNAL SCANNER

LoRa signal strengths can be measured with a LoRa scanner. By placing the scanner at the planned installation location of the gateway, the quality of the data transmission signals at that location can be determined.

The displayed signal strength is usually between -30dB...-135dB. Values below -125dB are weak, in which case the transmission of the message is uncertain, and interruptions may occur in the data transmission from the measurement device to the gateway. If the scanner does not receive a message from the measurement device, there is no data transfer connection.

The scanner device is used with an Android phone application. The scanner device and the phone communicate via Bluetooth, so keep them close enough to each other.

The scanner application lists the LoRa messages received by the scanner in chronological order. The device's serial number, reception time, signal strength and information on whether the message came directly from the measurement device or via a repeater are displayed. The scanner can also be used to plan and test the location of a possible repeater.

LoRa scanner setup

1. Download the LoRa Scanner app (Configurator) to your Android phone from:
<https://ioliving.com/ioliving-download-center/>
2. Install the application.
3. Switch on the scanner device.
4. Open the app. If you only use LoRa scanner "Continue without login".
5. Select "LoRa scanner" in the configurator filter settings.
6. The application lists all the LoRa scanner devices it finds. The scanner is selected based on its serial number. Select the correct scanner from the list.
7. The scanning starts immediately. The information of the received LoRa messages starts to be listed on the application screen. Please note that the LoRa message transmission interval of measurement devices is 10–15 minutes.
8. Switch off the scanner device after use.

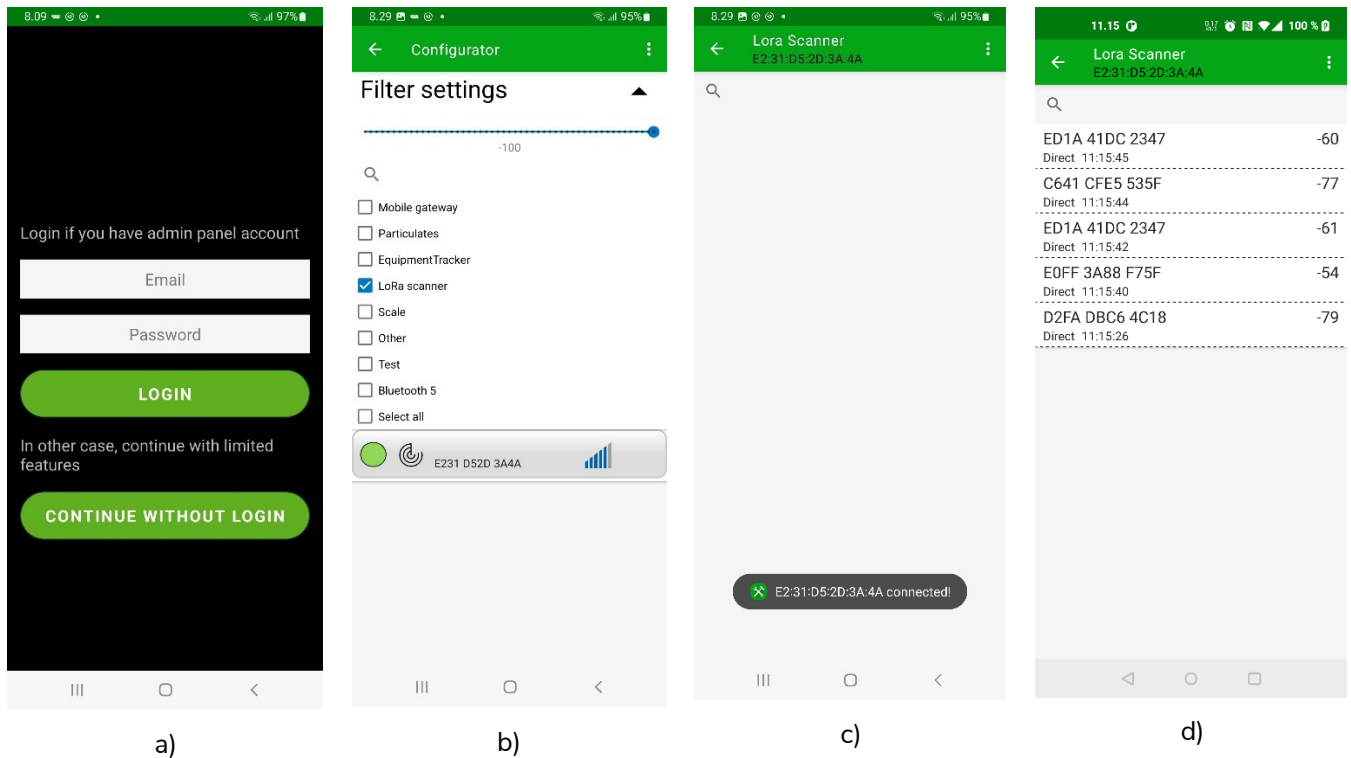


Figure 1.

- a) LoRa Scanner application login screen. If you only use LoRa scanner “Continue without login”.
- b) Configurator Filter settings screen. Available scanner devices are listed.
- c) Scanner device is connected.
- d) Application is listing received LoRa messages.

Using the LoRa Beacon test transmitter

LoRa Beacon can be used as an installation planning aid. It sends a LoRa message every 30 seconds, while the actual measurement device sends the message in every 10-15 minutes. The LoRa message sent by the Beacon is identical to the message sent by the measurement device and is identified based on the serial number of the Beacon. The Beacon will stop transmitting after 30 minutes, if not in use.

The Beacon can be left at the planned location of the measurement device, and the strength of the signal it sends is checked with the scanner at the planned installation location of the gateway device. The Beacon is turned on and off from the power switch.