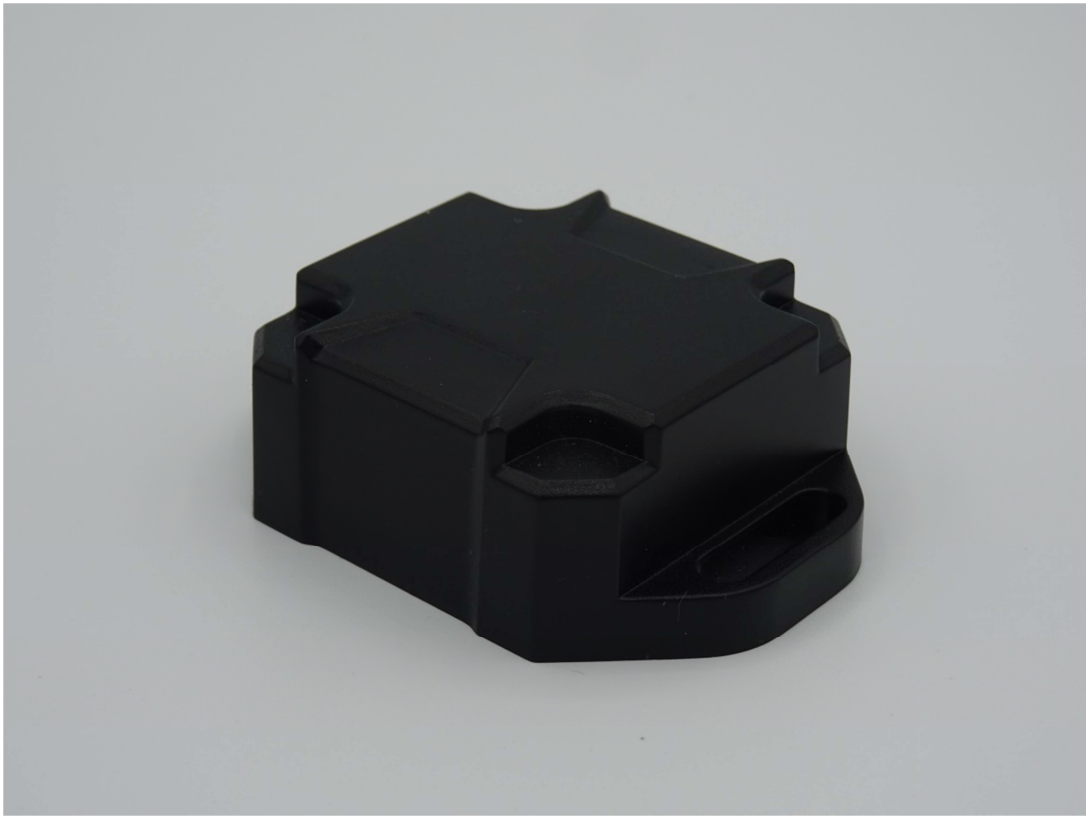
Aroco AC-BLE-T110 iBeacon Quick Start Guide



Revision: v1.1

Updated: 26 Nov 2020

Specification

AC-BLE-T110:

Mechanics Data	
Size	Approx. 60.3 x 43.3 x 21.1 mm
Weight	Approx. 25 grams (without Battery) Approx. 34 grams (with Battery)
Casing	PC/ABS Case
Electrics Data	
Bluetooth Chip	Nordic nRF52840
Frequency	2.4GHz
Memory	256kB Ram, 1MB Flash
BLE Version	Bluetooth 5 compatible iBeacon compatible BT4.2 Advertise Mode supported Long Range (PHY Coded) Mode supported
Input/ Output	1 Digital Input for Magnet Door Switch, Flood Detection 1 Digital Output reserved
Interface	I2C interface for external device
Battery	Non-rechargeable Battery CR2477 (3V 1000mAh)
Life Time	Base on different interval and power setting
Transmission Range	Up to 200m (with Long Range PHY Coded Mode)
Environmental Conditions	
Operating Temperature	-25°C to +75°C
Waterproof Rating	IP68
Material Resistance	UV resistance

Extended Battery Compartment:

Size	Approx. 81.8 x 61.3 x 36.6 mm
Weight	Approx. 54 grams (without Battery)
Casing	PC/ABS Case
Battery	2 x C-Type 1.5 Batteries Appr. 5000mAh
Waterproof Rating	IP68
Material Resistance	UV resistance

Instructions for Connect the Beacon

1. Download the Aroco Beacon Configuration Android App (version 1.2) from following QR Code url:

   Android version: 5.1 or upper

2. Unscrew the screw and open the cover. Fill in battery CR2477 to Turn On the Beacon.

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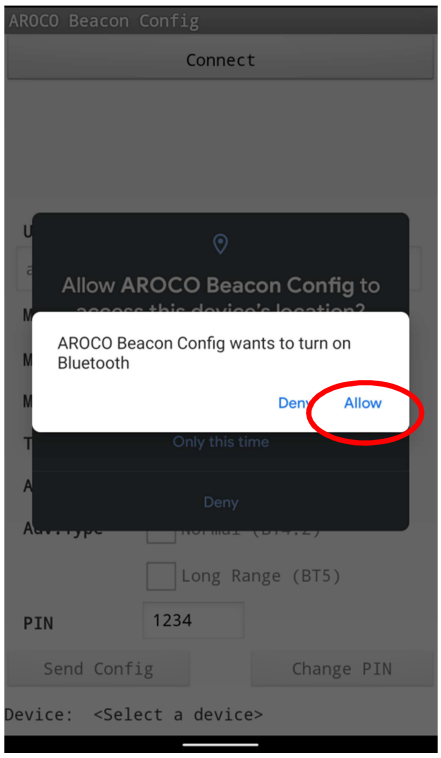
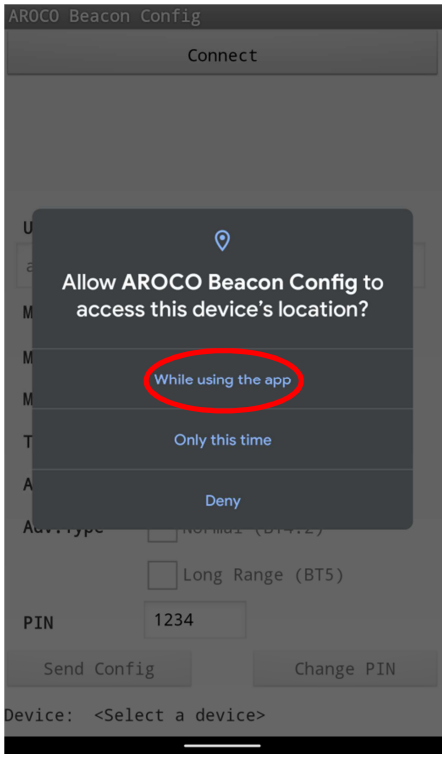
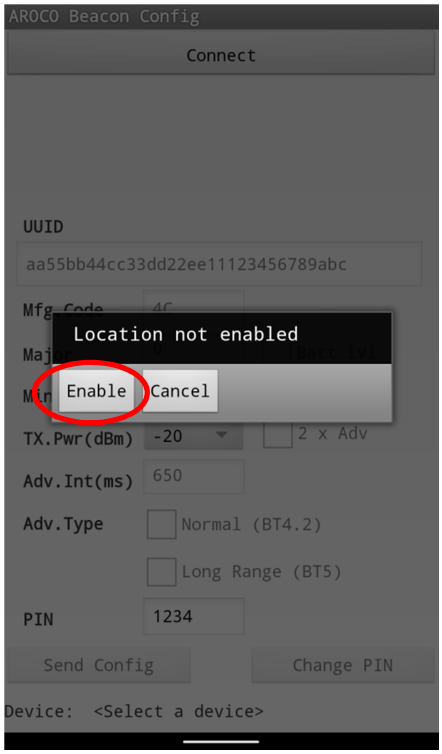
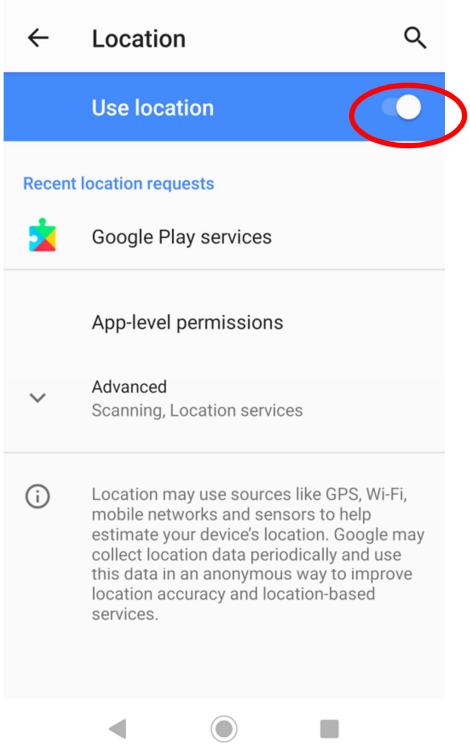
3. Start the App. Allow Device's Location permission, Enable Bluetooth and Location.

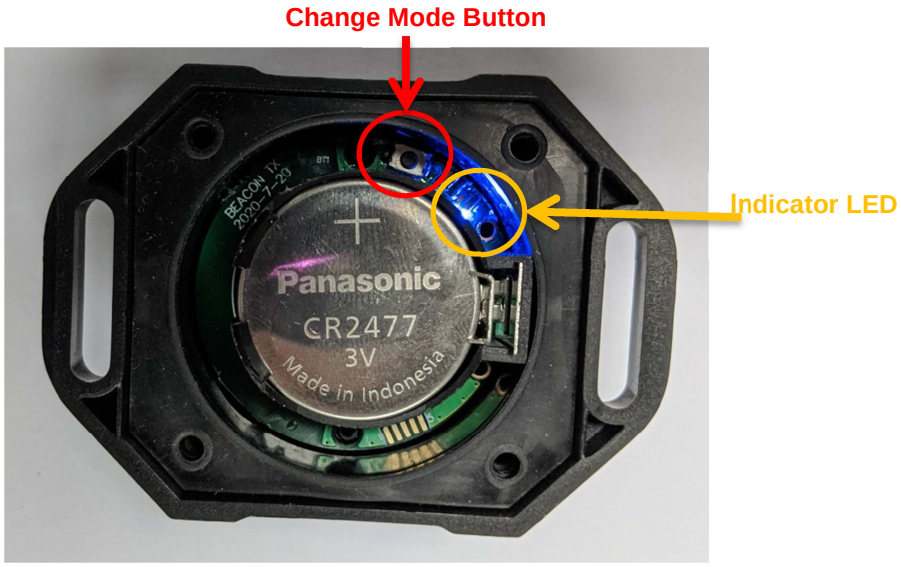








4. Press the Change Mode Button on the Beacon board. Beacon will enter configuring mode



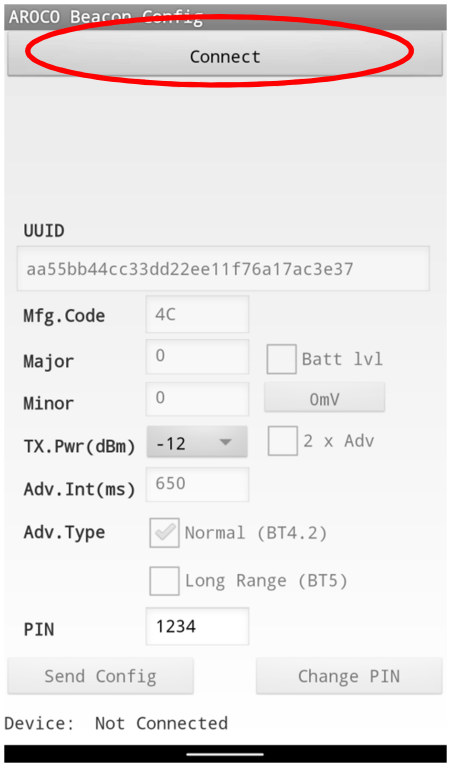
Indicator Blue LED has different Flashing Rate in different Mode

iBeacon Mode: Indicator LED Flash 4990ms Off 10ms On

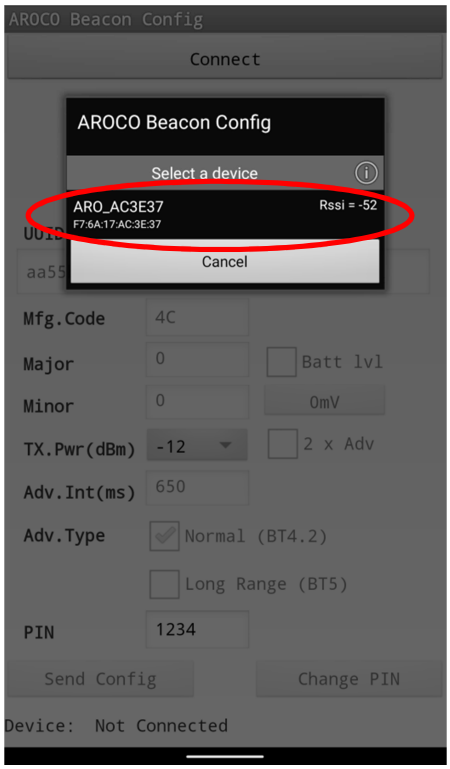
Configuring Mode: Indicator LED Flash 1600ms Off 400ms On

- **The Indicator LED will stay On when the Beacon in Configuring Mode and connected the Mobile App**
- **Beacon will back to iBeacon Mode for save energy while no any connection over 60 seconds; or press "Disconnect" Button in Mobile APP, press change mode button after Indicator LED flash**.

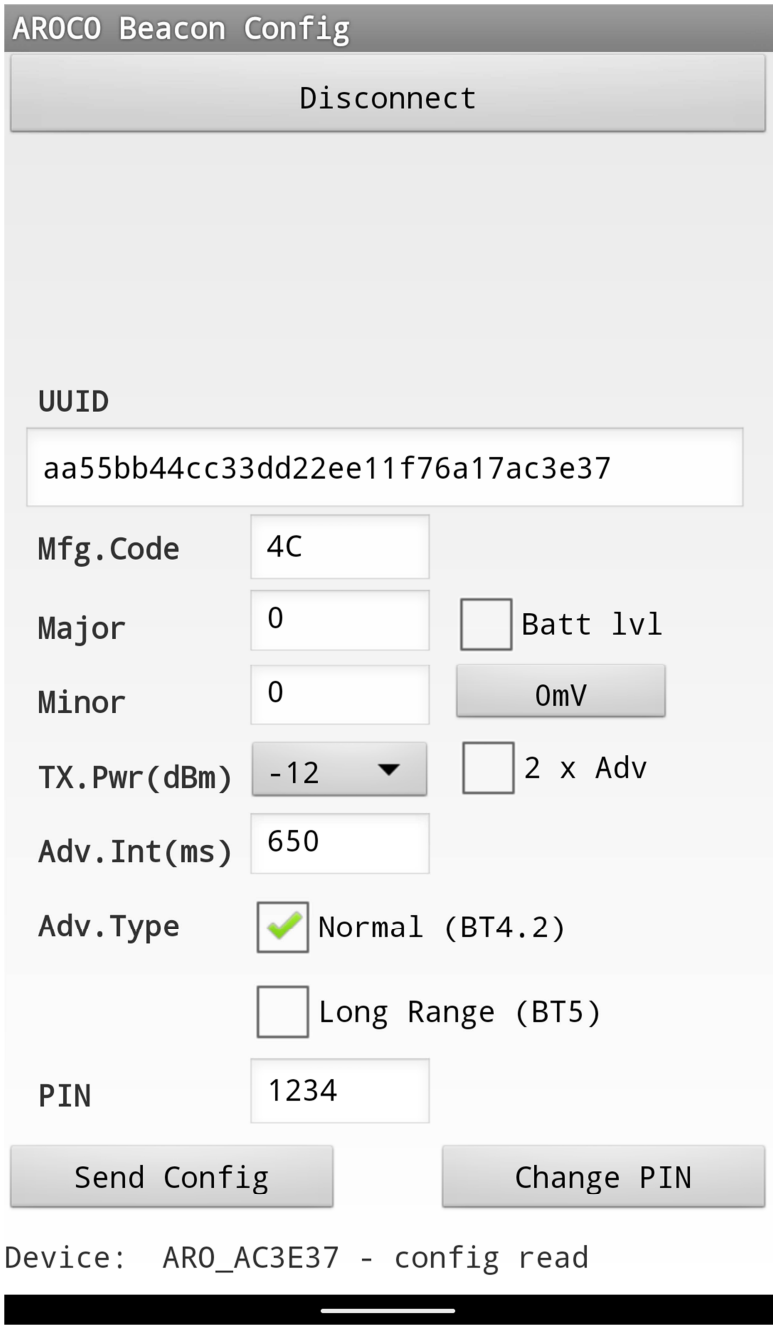
5. Press **Connect** button on the Mobile App to scan and connect the Beacon.



6. Select the Beacon and Tap to connect. All current parameter will be read.

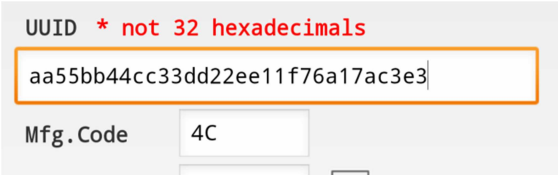


Beacon Configuration



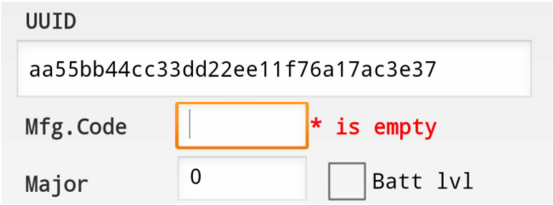
UUID: 16 Bytes UUID data can be changed. Non-hexadecimal content will be blocked. (Default: aa55bb44cc33dd22ee11+6bytes Beacon MAC address)

- If new UUID length not 32, the notice will be shown as below and all parameter cannot be updated.



Manufacturing Code: 2 Bytes Code data can be changed. Non-hexadecimal content will be blocked. (Default: 0x004C)

- If new Mfg. Code is empty, the notice will be shown as below and all parameter cannot be updated.



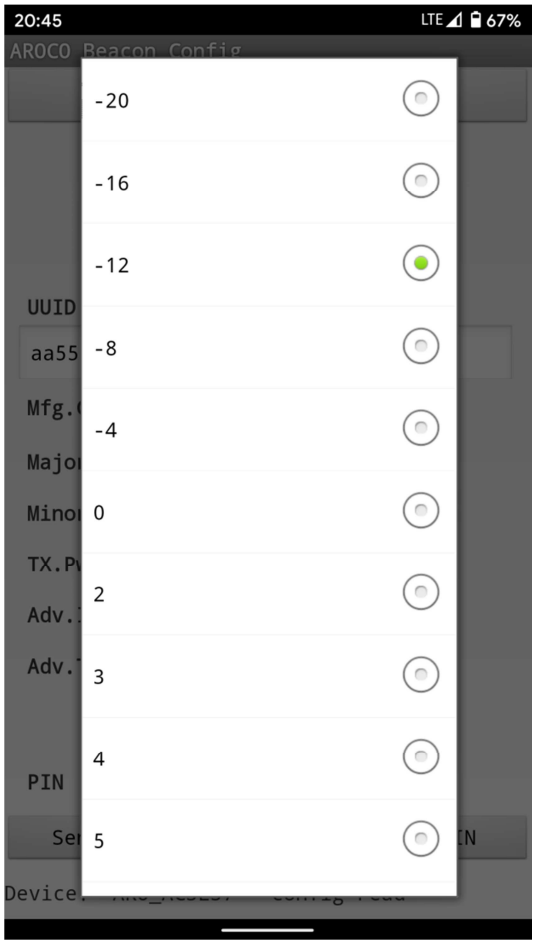
Major: Range 0 to 65535 (Default: 0)

Minor: Range 0 to 65535 (Default: 0)

Battery Level (Batt lvl): Tick box for choose the data advertising of Beacon Battery Level; Click Button to show the current Battery Level in mV

- Battery Level reporting will cover the upper 4 bits of Major

TX Power (dBm): Combo Box choice include -20, -16, -12, -8, -4, 0, 2, 3, 4, 5, 6, 7, 8 (Default: -12)



2 x Adv: Tick box for data advertising by Double Advertisement

Advertising Interval (ms): Range 50-3600000. (Default: 650)

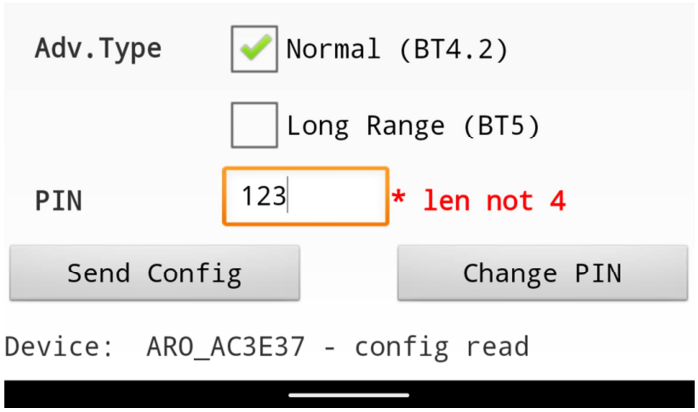
- If new Adv. Interval is empty or less than 50, the notice will be shown as below and all parameter cannot be updated.

Advertising Type: Tick Box to choice Normal Type (BT4.2) **or/ and** Long Range Type (BT5) (Default: Normal (BT4.2) Type only)

- Tick both box for choose the both type

PIN: 4 digits PIN (Alphabet or number) for Login when every connection create (Default: 1234)

- If new PIN length not 4, the notice will be shown as below and all parameter cannot be updated to Device after press “Send Config” button.



* Configuration APP will send all the above parameter to change the Beacon config by press Send Config Button. No any parameter will be updated individually if any input error notice appear.

** Bottom Text Box will show the current status include:
“Device: Not Connected” – No Device Connected
“Device: ARO_xxxxxx – config read” – Connected and Read Device Config
“Device: ARO_xxxxxx – BattLvl read” – Read current Battery Level
“Device: ARO_xxxxxx – PIN updated” – Updated PIN No.
“Device: ARO_xxxxxx – config updated” – Updated Device Config

***** Press and Hold the Change Mode Button 5 seconds under iBeacon Mode to restore all above config to default.**

FCC Warning:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.