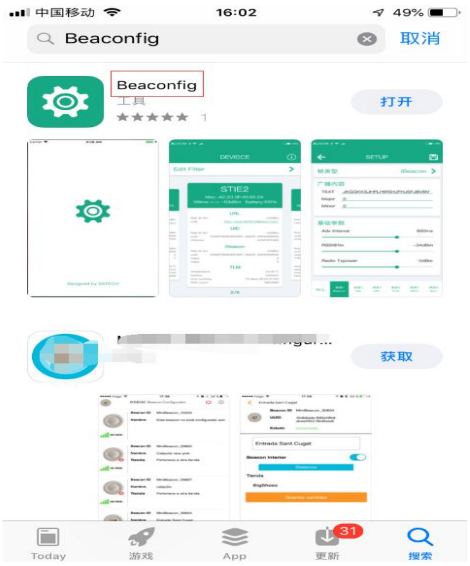
# SATECHBeacon Testing Illumination and Beaconfig APP User Guide

## 1. Download and install the App “Beaconfig”

On your Android smart phone or iPhone, please search and find an App name “Beaconfig” to download and install in GooglePlay or AppStore. Meanwhile, please switch on the Bluetooth communication.

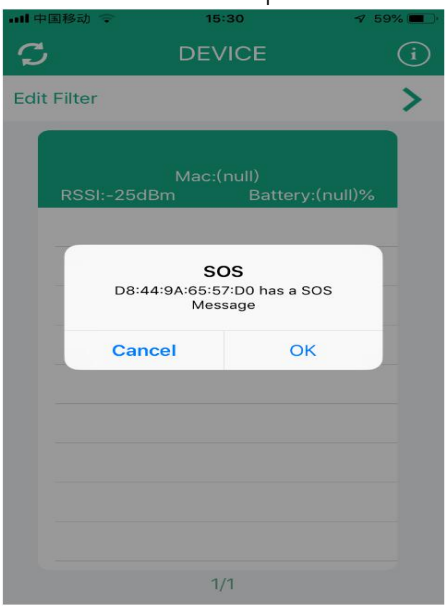



## 2. Switch on the beacon

A. Before testing our beacons, please first check whether the battery is well installed and the Bluetooth pairing is on.

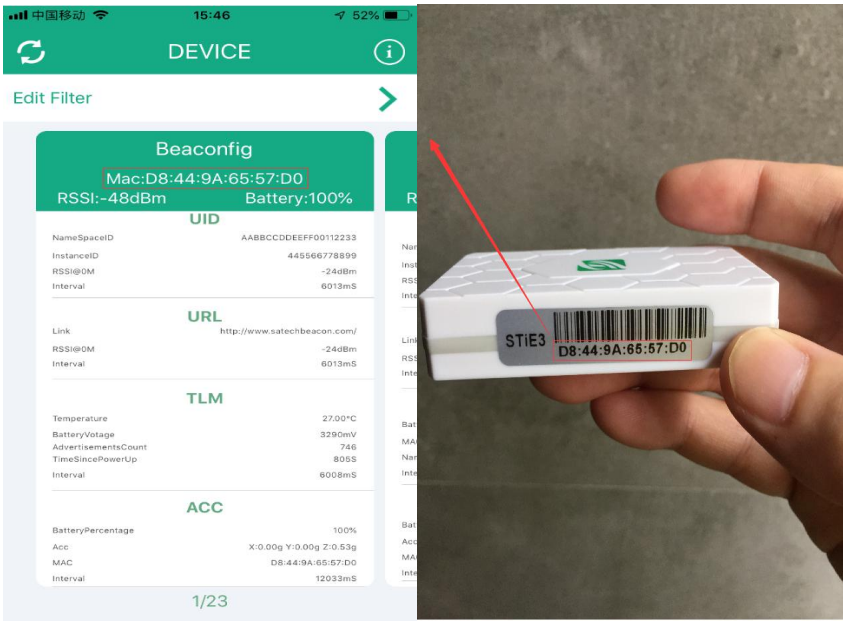
B. All our beacons are power off in default before you don’t power on, this needs you to activate it. Switch on the beacon by long pressing the button for 3-5s until you see a stable Blue LED light.

**Attention:** after powering on a beacon, if you long press the button for 5s-7s again, the SOS function starts working. When you see the SOS notice, you shall click the “Cancel” to switch off this function and quit the App. You can not see any other data when you click the “OK” to keep the function and some repeated SOS notices come up.




## 3. Scan the beacons with “Beaconfig”

Each beacon from SATECH has an unique MAC code pasted with a waterproof paper sticker. Especially when you have at least 2 beacons on hands, you need to scan and find them by matching their MAC codes.




## 4. Connect with beacons

When you find the beacon with its MAC code, you will see 7 broadcast channels, they are iBeacon, UID, URL, TLM, Info, ACC (acceleration) and TH (temperature & humidity). Click any channel to

connect the beacon with the App, and you will see a twinkling Green LED light after successful connection.

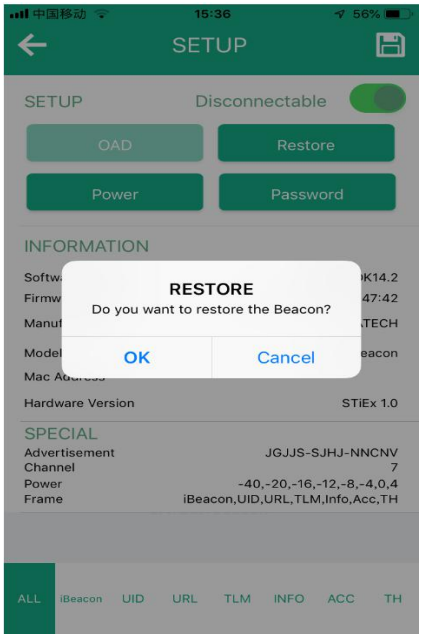
## 5. Experience how to program or modify the beacon data

When you finish the step 4, you come to experience how to program or modify the beacon data with the demo App.

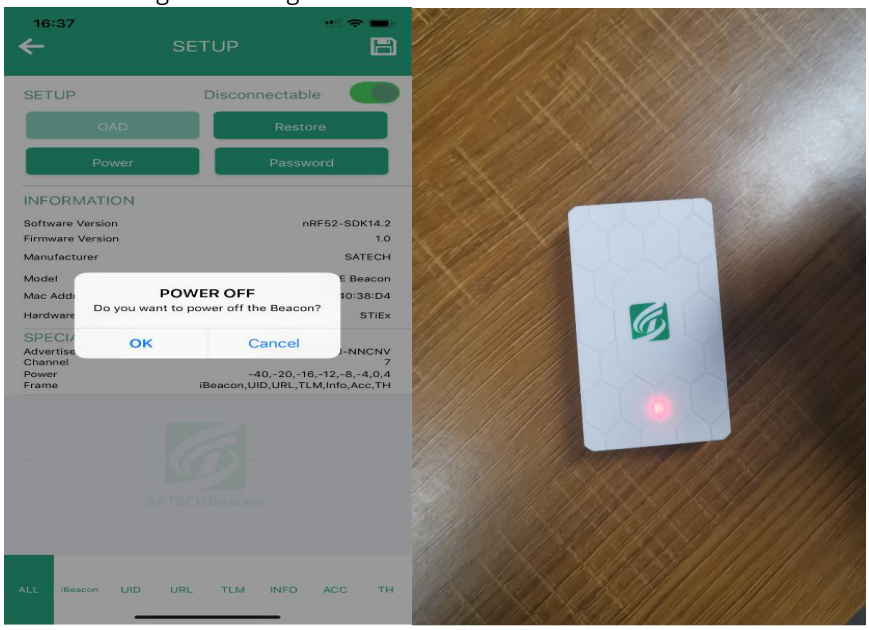
### A. SETUP

**OAD:** This is for OTA DFU. Whenever our firmware is upgraded and you need to use the newest version, you can update the beacon by OTA.

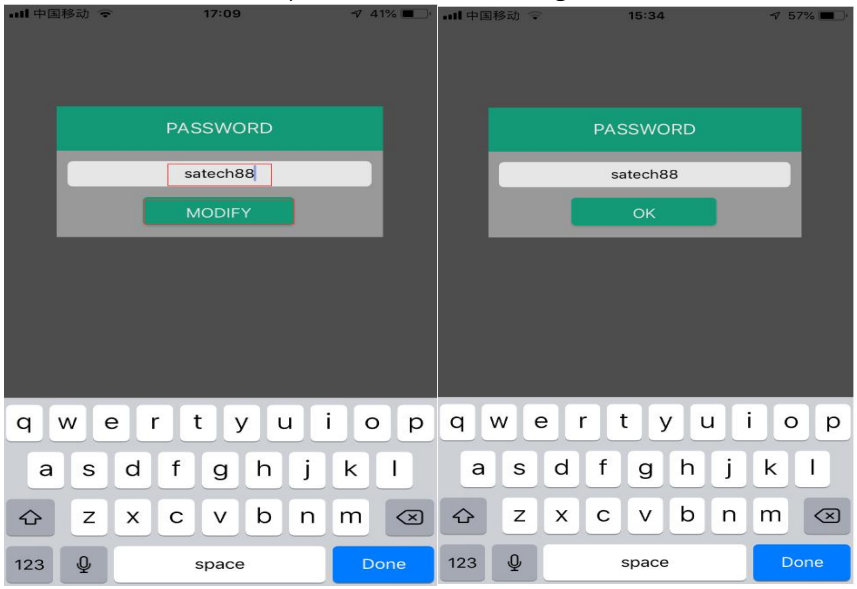
**Restore on:** When you click it, the beacon data will be restored factory settings.



**Power-Power off:** This is for switching off the beacon device without pressing the physical button. SATECHBeacon tags have a physical button, but the button function is only programmed for "Power on" and "SOS". When you want to switch off the beacon, you can click "Power" and then choose "Yes" in the message interface of "Power off" ("No" means quitting powering off) and meanwhile see a twinkling red LED light.



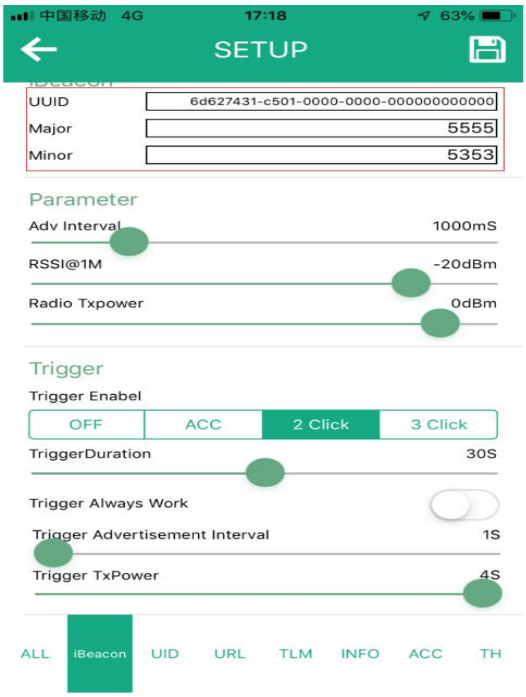

**Password:** This is for setting up a password which the manager uses to program or modify then save the beacon data. **Attention**: the password must be 8-digit characters.



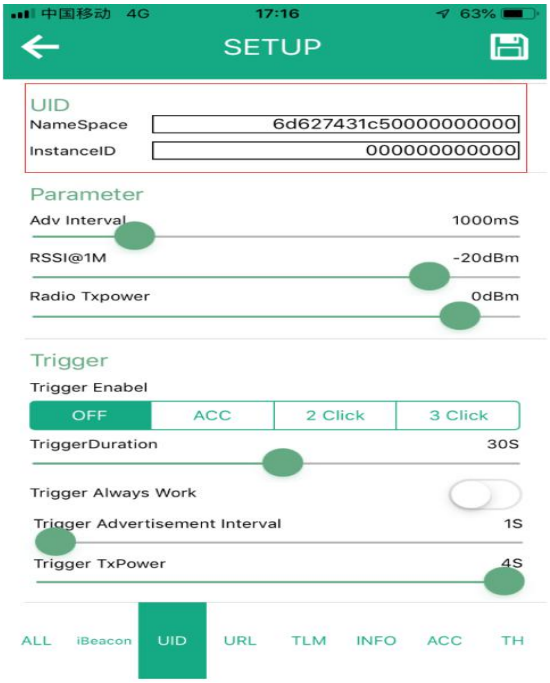

## B. Modify and save the beacon data

You can modify any data of 7 broadcast channels, and then save all that you have modified with a password "**satech88**".

**iBeacon:** You can program the UUID (16 bytes), Major (2 bytes) and Minor (2 bytes). For example, UUID: 11223344-5566-7788-9900-112233445566.
**Attention:** you must enter the characters as per the format limit and digit limit, otherwise, the UUID will be neglected to the default value. For example, xxxxxxx(7-digit character)-xxx(3-digit character)-xxxx-xxxx-xxxxxxxxxxx(11-digit character) is a wrong UUID.
Major: 43707(0xAABB)
Minor: 52445(0xCCDD)
Adv Interval: You can program the broadcast interval from 100ms to 5000ms.
RSSI@1M: You can program the RSSI in 1m as you hope.
Tx power: The Tx power range is -40dBm~4dBm.
Trigger: if the beacons you bought are with accelerometer sensor, you can program how to test them as you hope. The trigger function is “off” in default.



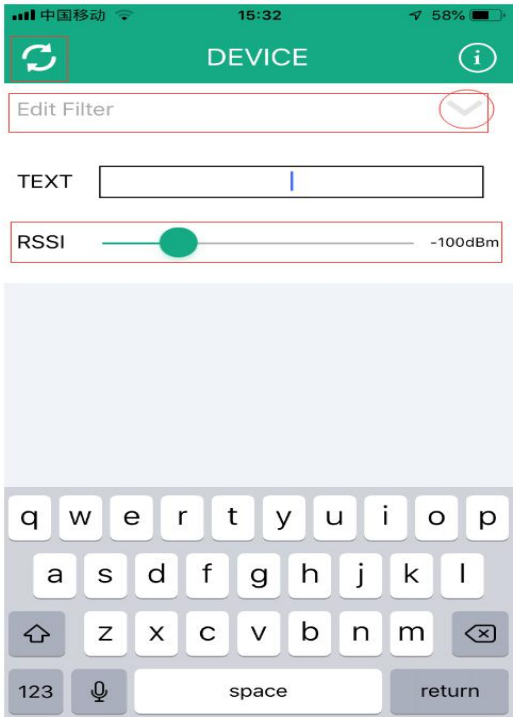

**UID:** You can program the NameSpaceID (10 bytes) and InstanceID (6 bytes) as an example as follow:
NameSpaceID: 00112233445566778899---(20-digit characters)
InstanceID: AABBCCDDEEFF----(12-digit characters)




**URL:** You can program an URL (16 bytes) as an example as follow: https://satechbeacon.com.
**TLM:** This is a channel of obtaining firmware version, battery voltage, chip temperature, total broadcast times, total working time and etc. For example:
Version: 1.0
Battery Voltage: 3303mV(0x0CE7)
Chip Temperature: 24.0℃
Advertisements count: 5127196(0x004E3C1C)
Time since power-on: 105Days+22:57:16(0x0574E456)
**Info:** This is a channel of obtaining MAC address, battery level and device name, etc. For example:
Type: 0xA1,0x08
Battery Percentage: 100(0x64)
MAC: AC:23:3F:24:F5:C0
Name: PLUS(0x50,0x4C,0x55,0x53)
**ACC:** This is a channel of obtaining AccSensor value, battery level and MAC, etc. For example:
Battery Percentage: 100(0x64)
AccSensor: 0xFF9D(-0.15),0xFF50(-0.08),0x004A(0.07)
MAC: AC:23:3F:26:0C:E4
**TH:** This is a special channel of obtaining the environment temperature and humidity data, battery level and MAC, etc. For example:
Type: 0xA1,0x04
Battery Percentage: 100(0x64)
Temperature: 24.0℃
Humidity: 85.0%
MAC: AC:23:3F:26:0C:E4

C. Refresh the App and signal filter

When you need to refresh the current page, you have two methods to achieve that: 1. click the refresh button (see the following screenshot); 2. click the “Edit Filter” and go back, when you hope to scan the beacon at nearer distrance, you shall slide the “RSSI” scroll bar.

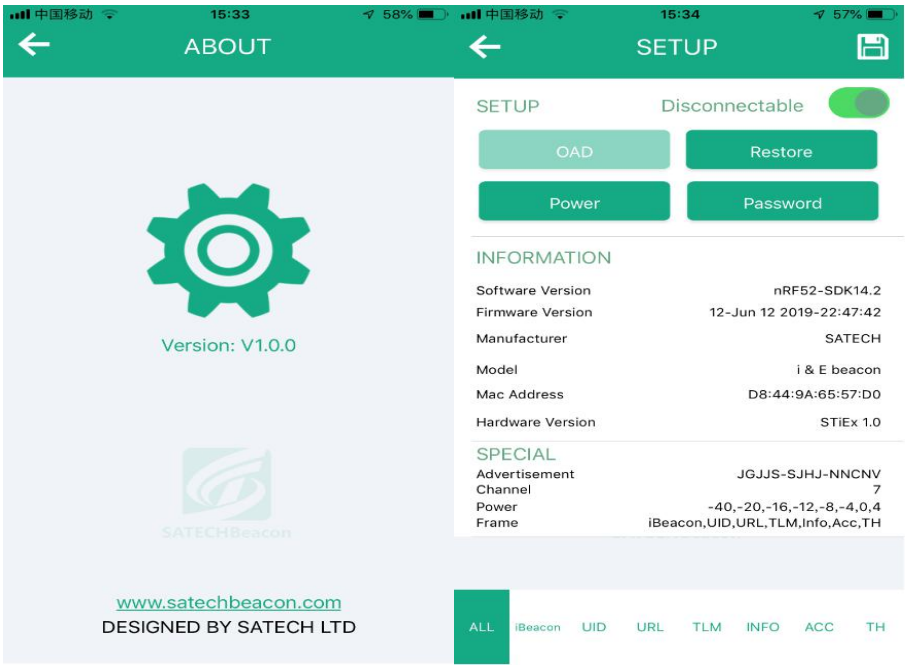



6. Declaration and Cautions

A. Beaconfig is only a demo App developed by SATECH LTD, it is only for helping you test our beacons and experience how to manage the beacon data on your own future running platform, and it is also as a reference when you develop and design your own management platform (or APP).

B. When a beacon can be switched on with a stable green LED light and scanned with its MAC code, this is definitely that the beacon has no any hardware quality problem.

C. Our team always commit ourselves to repairing any bug and optimizing our demo App, so please don’t worry about any problem you are meeting, just contact sales team.




www.satechbeacon.com
Shenzhen Sato Intelligent Technology Ltd
Issued by: David Ding
Approved by: Tony Cheng
Date: 2019-7-15

FCC Statement:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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.