

Bluetooth Beacon VG01 User Manual

Document Information

Title	VG01	Bluetooth Beacon User Manual
--------------	------	------------------------------

Document type	Datasheet
----------------------	-----------

Document number	SL-19100137
------------------------	-------------

Revision and date	V1.03	14-Oct-2019
--------------------------	-------	-------------

Disclosure restriction	Public
-------------------------------	--------

Revision History

Revision	Description	Approved	Date
V1.01	Initial Release	Hogan	20170403
V1.02	Update certification information	George	20170831
V1.03	Update product information and hardware parameter	Sherman	20191012

List

Device Name	Device No.	Number	Remark
Bluetooth Beacon	VG01	1 PCS	
Button Cell Battery	CR2477	1 PCS	

SKYLAB reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. Reproduction, use, modification or disclosure to third parties of this document or any part thereof without the express permission of SKYLAB is strictly prohibited.

The information contained herein is provided “as is” and SKYLAB assumes no liability for the use of the information. No warranty, either express or implied, is given, including but not limited, with respect to the accuracy, correctness, reliability and fitness for a particular purpose of the information. This document may be revised by SKYLAB at any time. For most recent documents, visit www.skylab.com.cn.

Copyright © 2018, Skylab M&C Technology Co., Ltd.

SKYLAB® is a registered trademark of Skylab M&C Technology Co., Ltd in China.

Contents

1. Product Introduction	4
1.1 VG01 Internal Module Introduction	4
1.2 VG01 Features	4
1.3 VG01 Application	4
2. Hardware Parameter	5
The above data are only for reference.	5
3. Configuration Parameters	6
3.1 VG01 Power on	6
3.2 Scan Bluetooth Beacon	6
3.3 Connect Bluetooth Beacon	7
3.4 Configuration Introduction	8
3.5 Modify Bluetooth Beacon Name	9
3.6 Modify UUID	10
3.7 Modify Major	11
3.8 Modify Minor	12
3.9 Modify Measured Power	13
3.10 Modify Transmission Power	14
3.11 Modify Advertise Interval	15
3.12 Modify Password	16
3.13 Settings	17
3.14 Fast configuration	18
3.15 Download APP	19
4. Contact Information	20

1. Product Introduction

VG01 is a Bluetooth Beacon device. Bluetooth Beacon is a broadcasting protocol which is based on BLE protocol, also referred to a kind of BLE peripheral device that has this protocol. VG01 as a Bluetooth Beacon device, it is usually placed in a certain place, and it broadcasts its beacon signals like UUID, Major, Minor, RSSI etc. to surroundings continuously, and it can not be entered to the connection state to any BLE central device, the advertising data are arranged according to certain rules .

SkyBeacon is a Phone APP for configuring VG01 which is made by Skylab R&D Team. Use this APP to connect to VG01 and modify its parameters such as UUID, Major, Minor, Name and so on. These parameters will be advertised after the VG01 being advertising condition.



VG01

1.1 VG01 Internal Module Introduction

VG01 is based on Nordic nRF51802 Bluetooth chip.

VG01 is powered by a CR2477 button battery, the battery life is related to the internal parameters of the VG01. In addition, the VG01 internal PCB board has a burning port, a pair of UART serial port.

1.2 VG01 Features

Low Power Consumption

Small, Lightweight, Beautiful

Flexible Application

Easy to Install

Advertise Range up to 70 Meters

RoHS compliance (Lead-free)

FCC,CE compliance

1.3 VG01 Application

Indoor Positioning

Information Push

Identification

WeChat Shake

2. Hardware Parameter

Product Parameter

Size	47.5*16.1mm (Diameter*Height)
Battery Model	CR2477
Operating	-20°C~70°C
TX Power	-20~+4dBm

Battery Life

Power	Coverage Area	Advertise Interval	Battery Life (month)
+4dBm	70m	100ms	2.6
		200ms	5.1
		500ms	12.4
		1000ms	23.6
+0dBm	50m	100ms	3.7
		200ms	7.4
		500ms	17.6
		1000ms	32.9

The above data are only for reference.

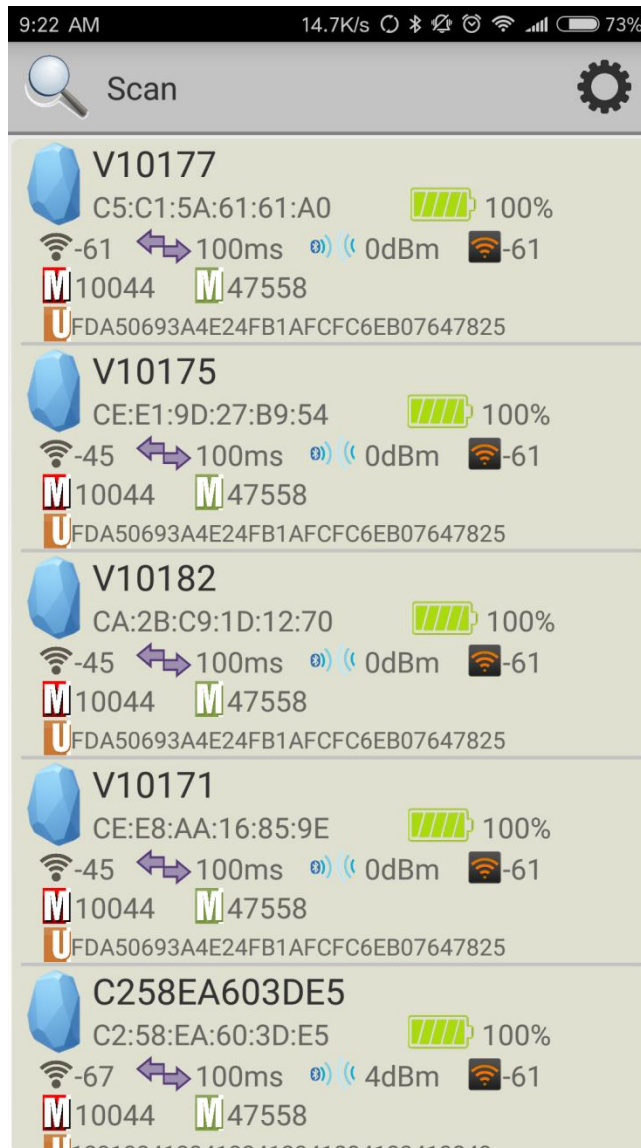
3. Configuration Parameters

3.1 VG01 Power on

Open the bottom shell of the VG01, draw the insulation sheet out of VG01, VG01 began to broadcasting , and then install the bottom shell of the VG01.

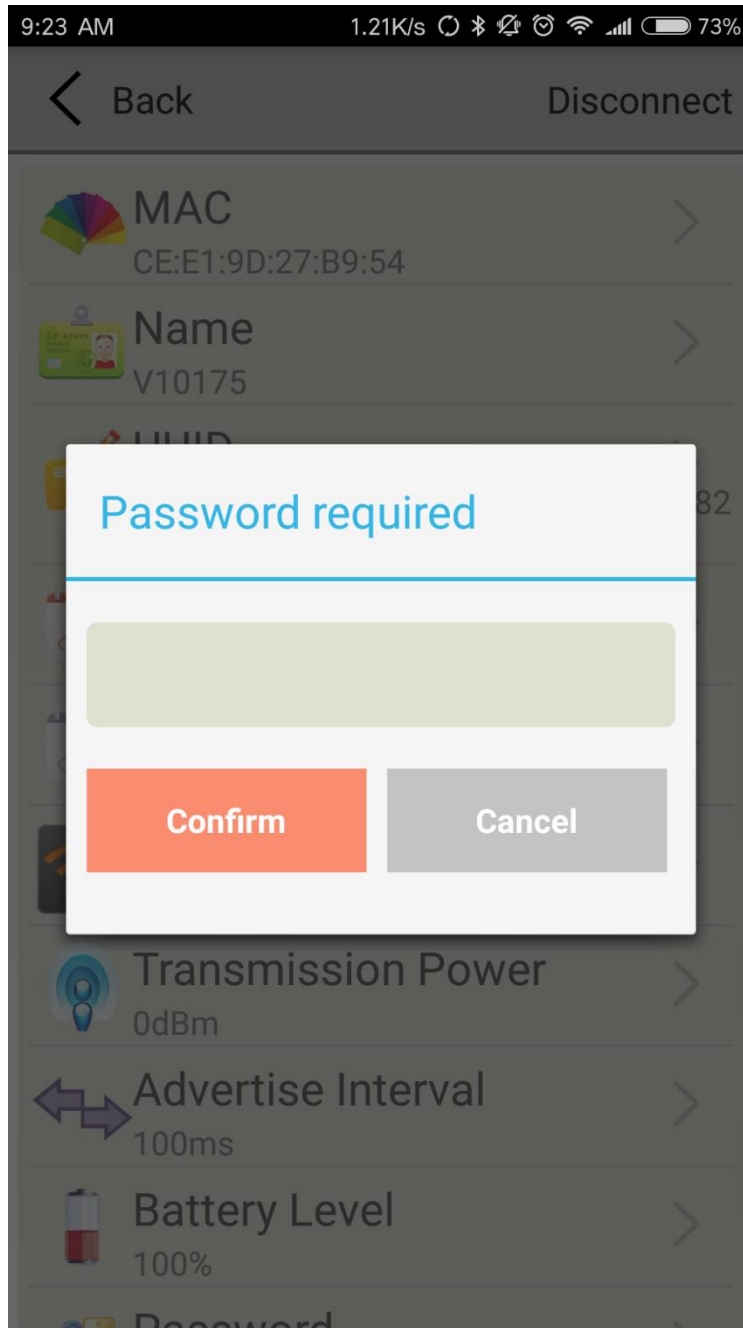
3.2 Scan Bluetooth Beacon

Open the APP and click the "Scan", cell phones begin to scan the surrounding Bluetooth Beacons.

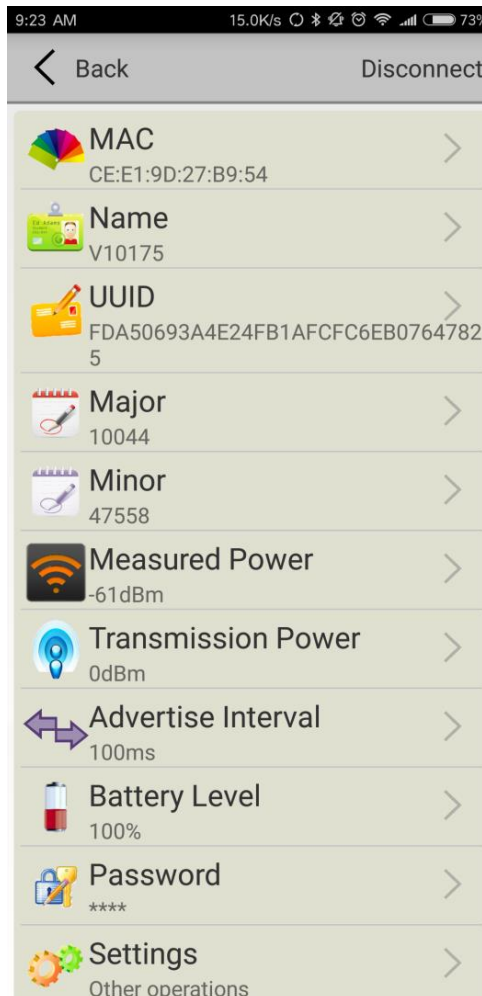


3.3 Connect Bluetooth Beacon

Click the Bluetooth beacon to be connected, enter the password within 30 seconds, in order to obtain operating privileges .(Factory Password:1234)



3.4 Configuration Introduction



Introductions:

MAC: Chip MAC address

Name: The name of the Bluetooth Beacon which is selected.

UUID: 128-bit identifier according to ISO/IEC11578:1996 standard (32 hexadecimal digits)

Major: set 16-bit identifier (0-65535)

Minor: set 16-bit identifier (0-65535)

Measured Power: Signal strength at 1 meter (VG01 transmission power is 0dBm)

Transmit Power: VG01 transmit power

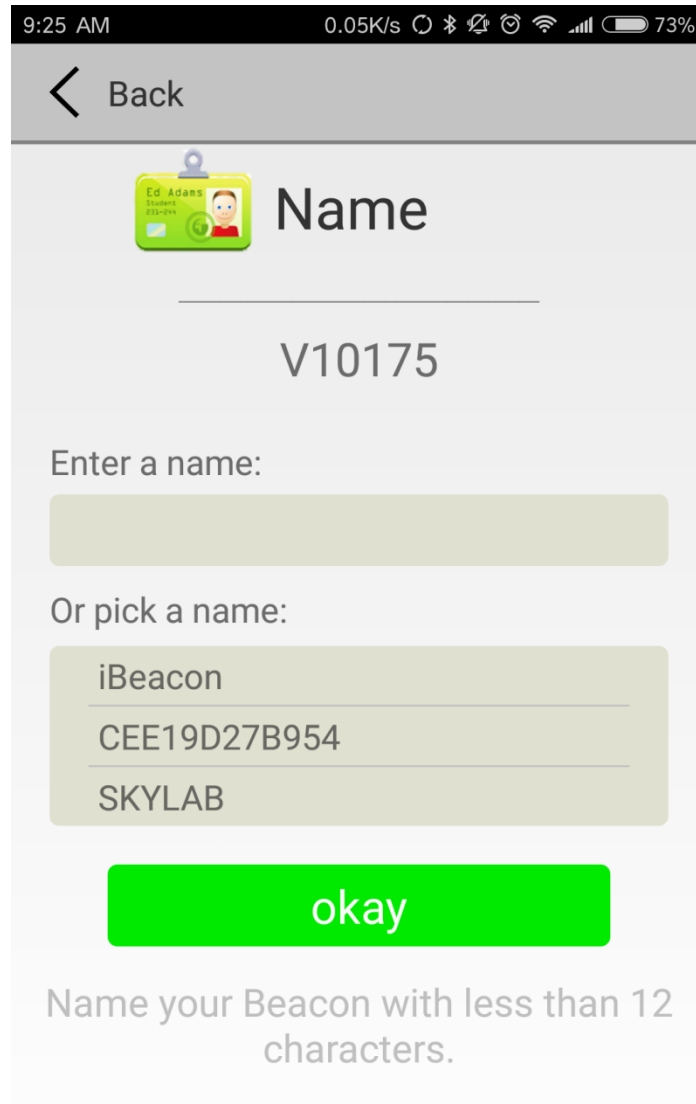
Advertise Interval: VG01 advertise interval

Battery Capacity: VG01 battery Capacity

Password: VG01 connection password

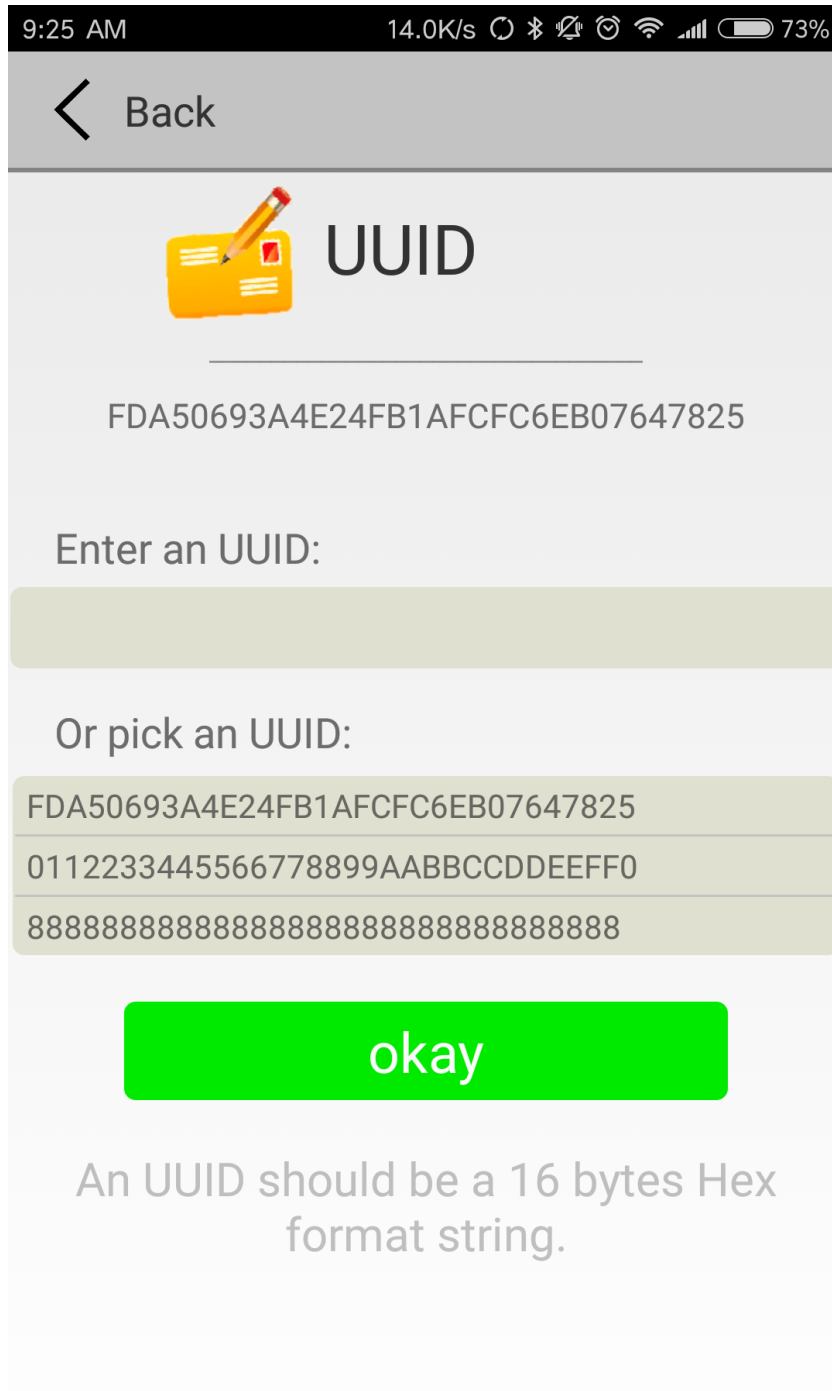
3.5 Modify Bluetooth Beacon Name

Click the “Name”, appear the following UI, and then enter a length of less than 12-bit English characters as VG01 device name in the following “Enter a Name” box. Then click “okay”.



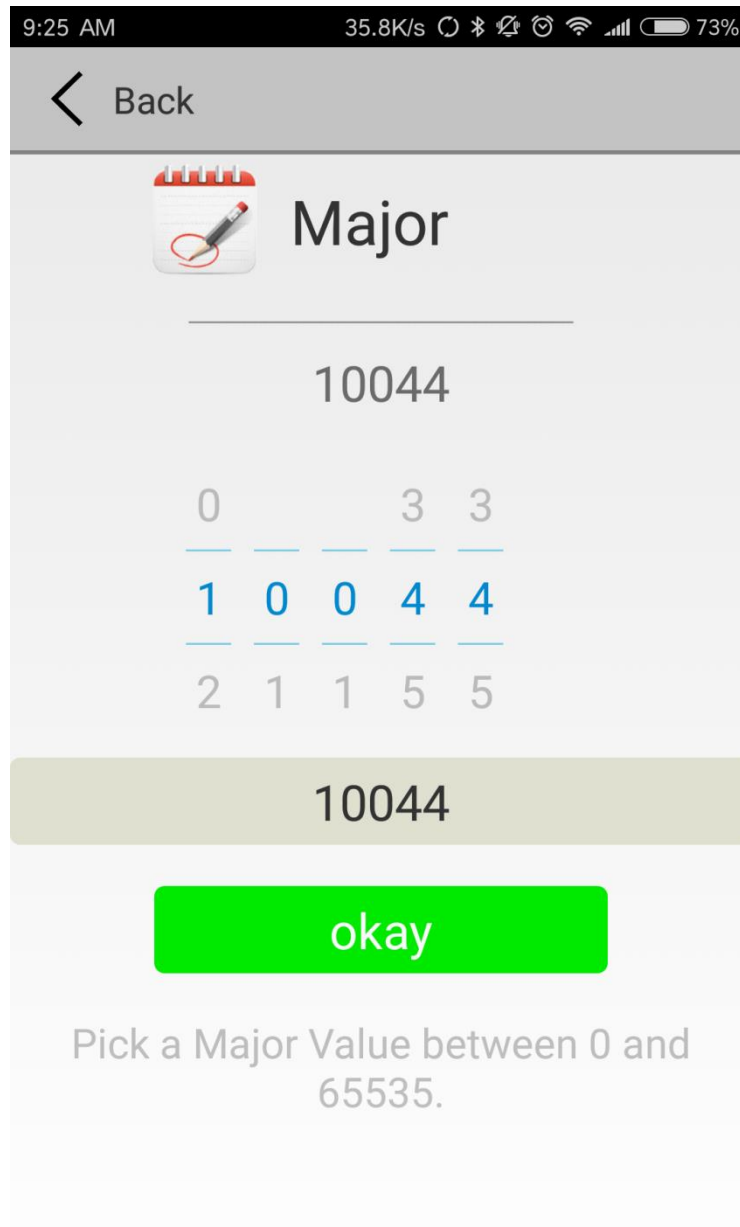
3.6 Modify UUID

Click the “UUID”, appear the following UI, and then enter a 32-byte string of sixteen as the UUID of VG01 in the following “Enter an UUID” box. Then click “okay”.



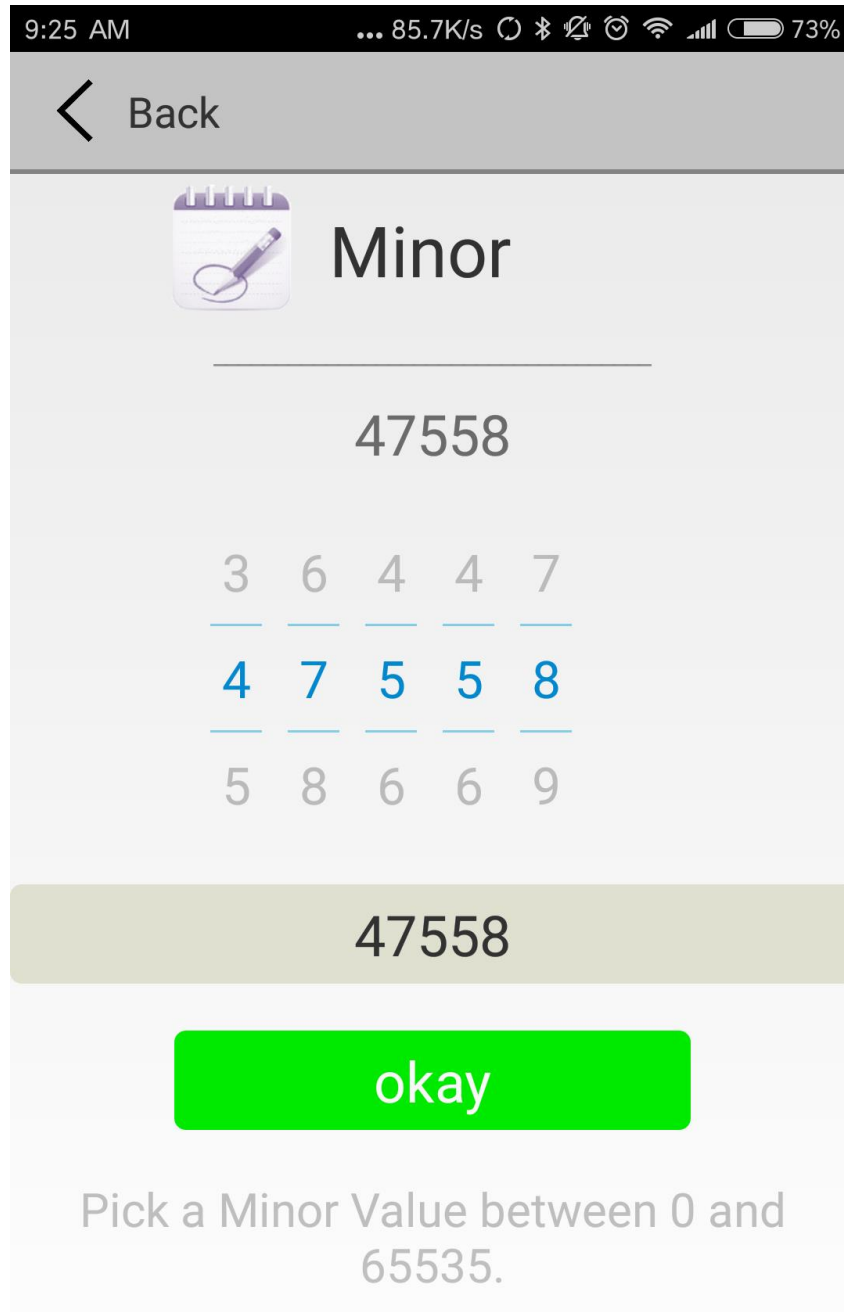
3.7 Modify Major

Click the "Major ", appear the following interface, set a value between 0~65535 as the Major values of the device. Then click "okay".



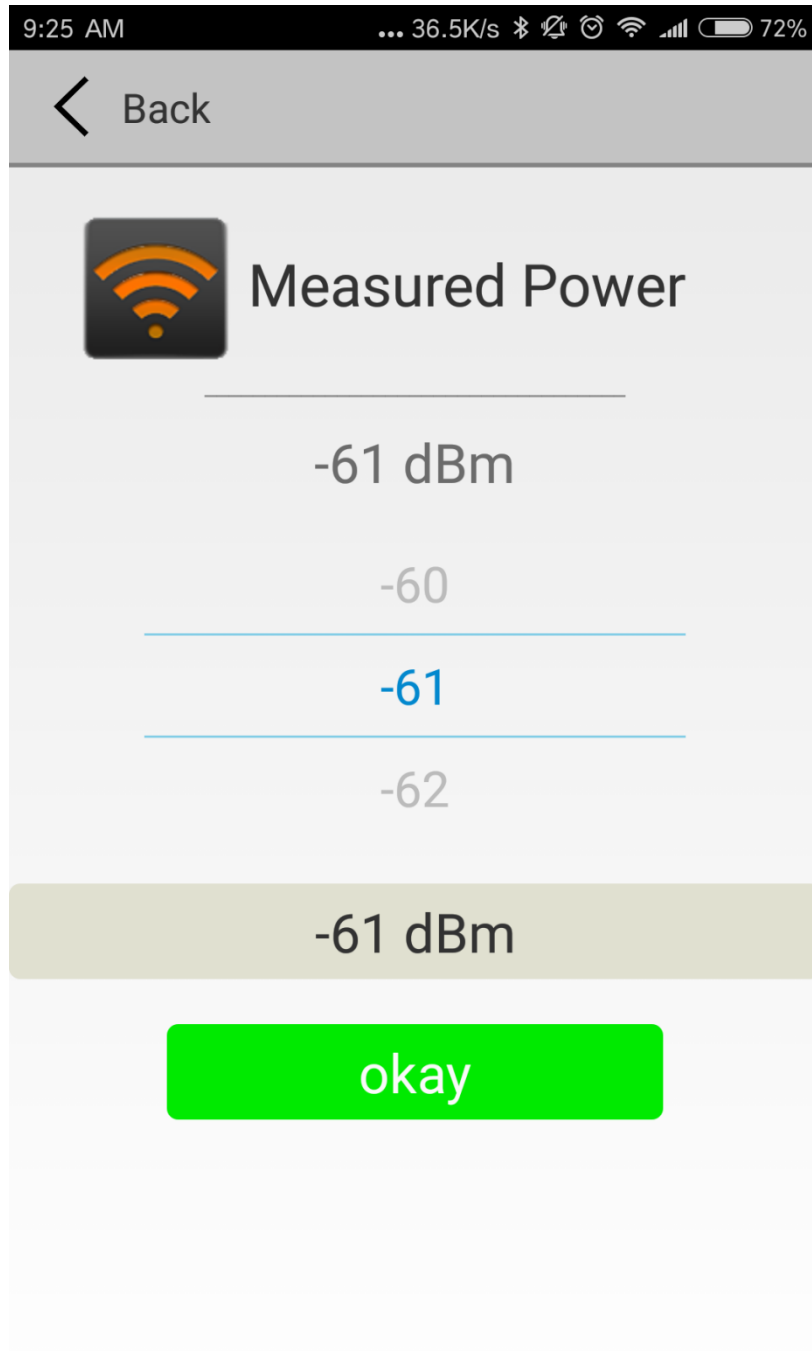
3.8 Modify Minor

Click the "Minor" appear the following UI, set a value between 0~65535 as the Minor value of the device. Then click "okay".



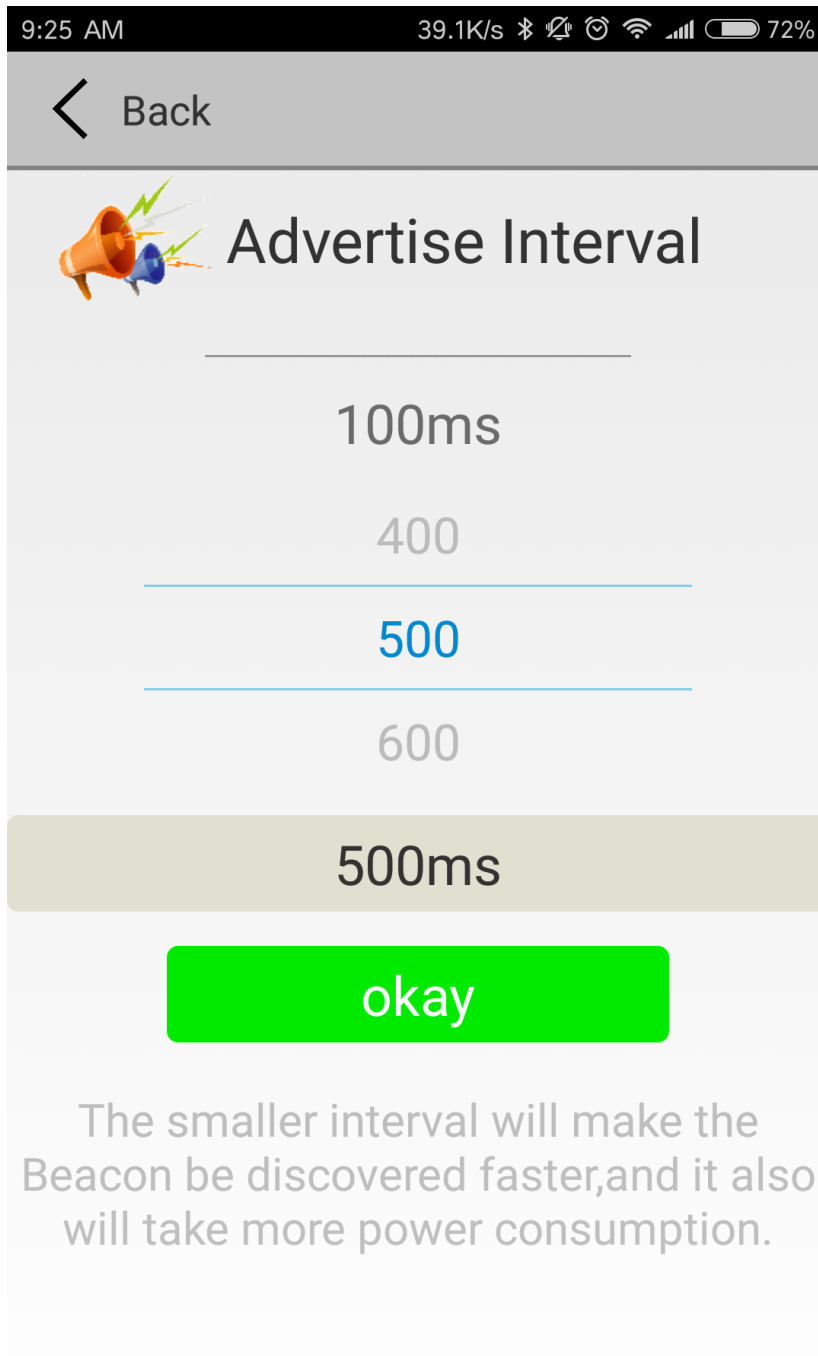
3.9 Modify Measured Power

Click the “Measured Power”, appear the following UI, set a measured power far away one meters from VG01, adjustable range -100dBm~-30dBm, the default is -61dBm.The meaning of the value, when the device received advertise signal strength is -61dBm of VG01, the device is about 1 meter from VG01. Then click “okay”.



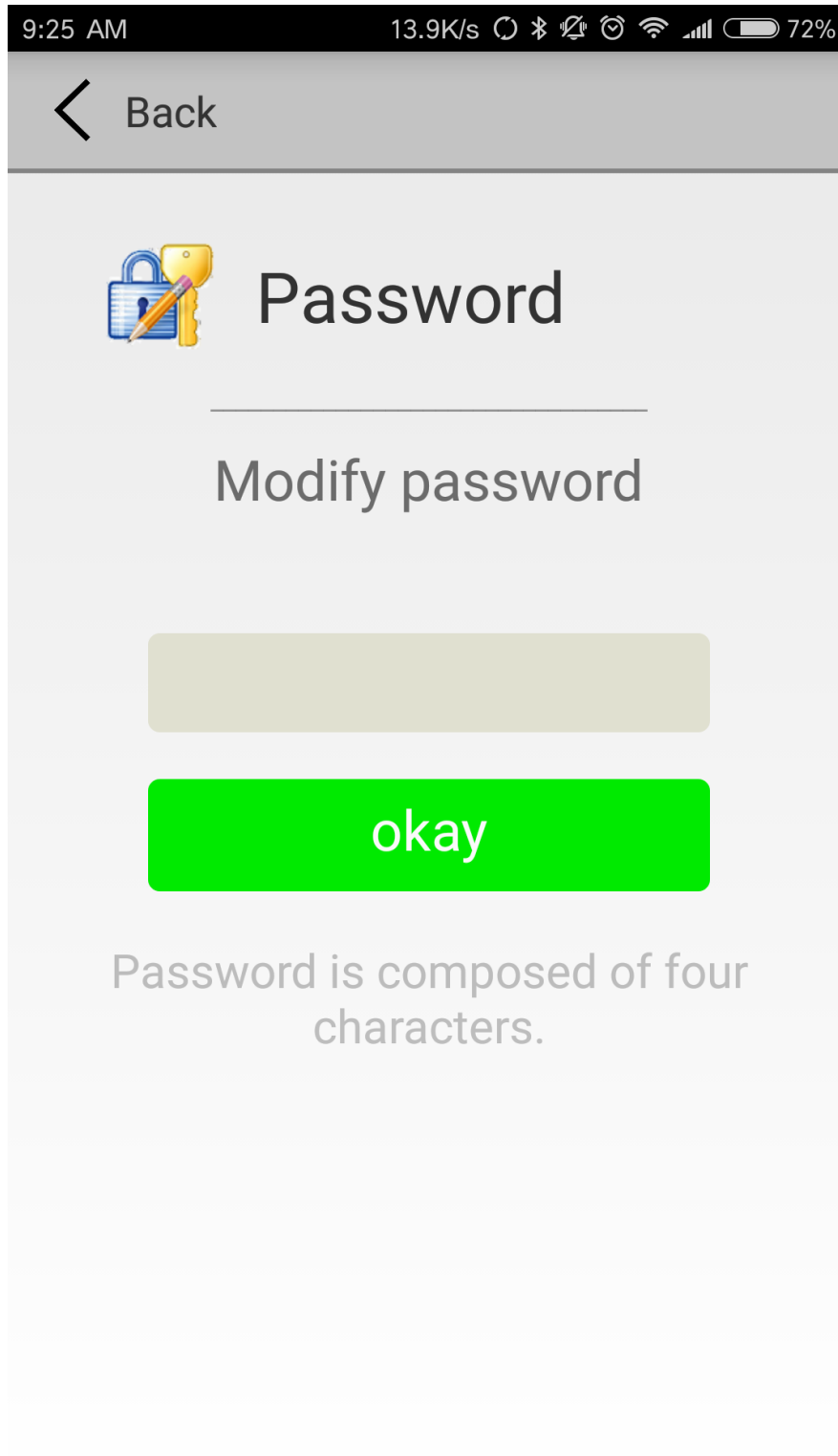
3.11 Modify Advertise Interval

Click the "Advertise Interval" appear the following UI, set a advertise interval, broadcasting interval can be set to 100ms, 200ms, 300ms, 400ms, 500ms, 600ms of 700ms, 800ms, 900ms and 1000ms. The default is 500ms. Then click "okay".



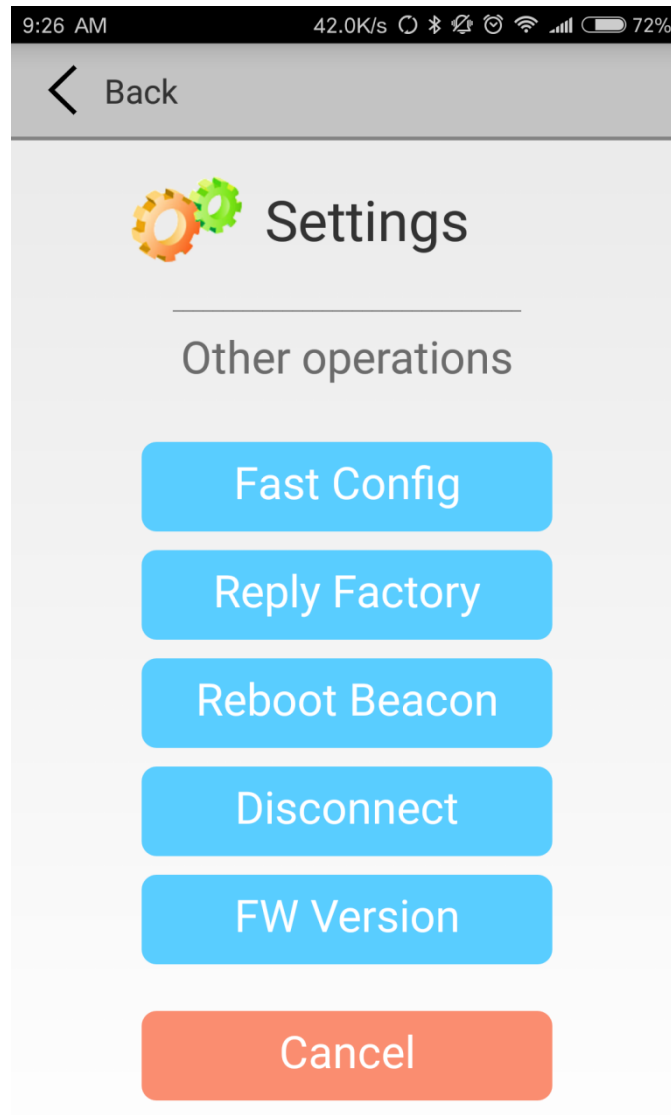
3.12 Modify Password

Click the “Password”, appear the following UI, and then enter the 4 characters as a connection password in the “Password” box, the default is 1234. Then click “okay”.



3.13 Settings

Settings interface can achieve other operations.



Introductions:

Fast Config: Fast configuration can realize quickly configuration your beacons by using the last record

Reply Factory: Restore factory settings

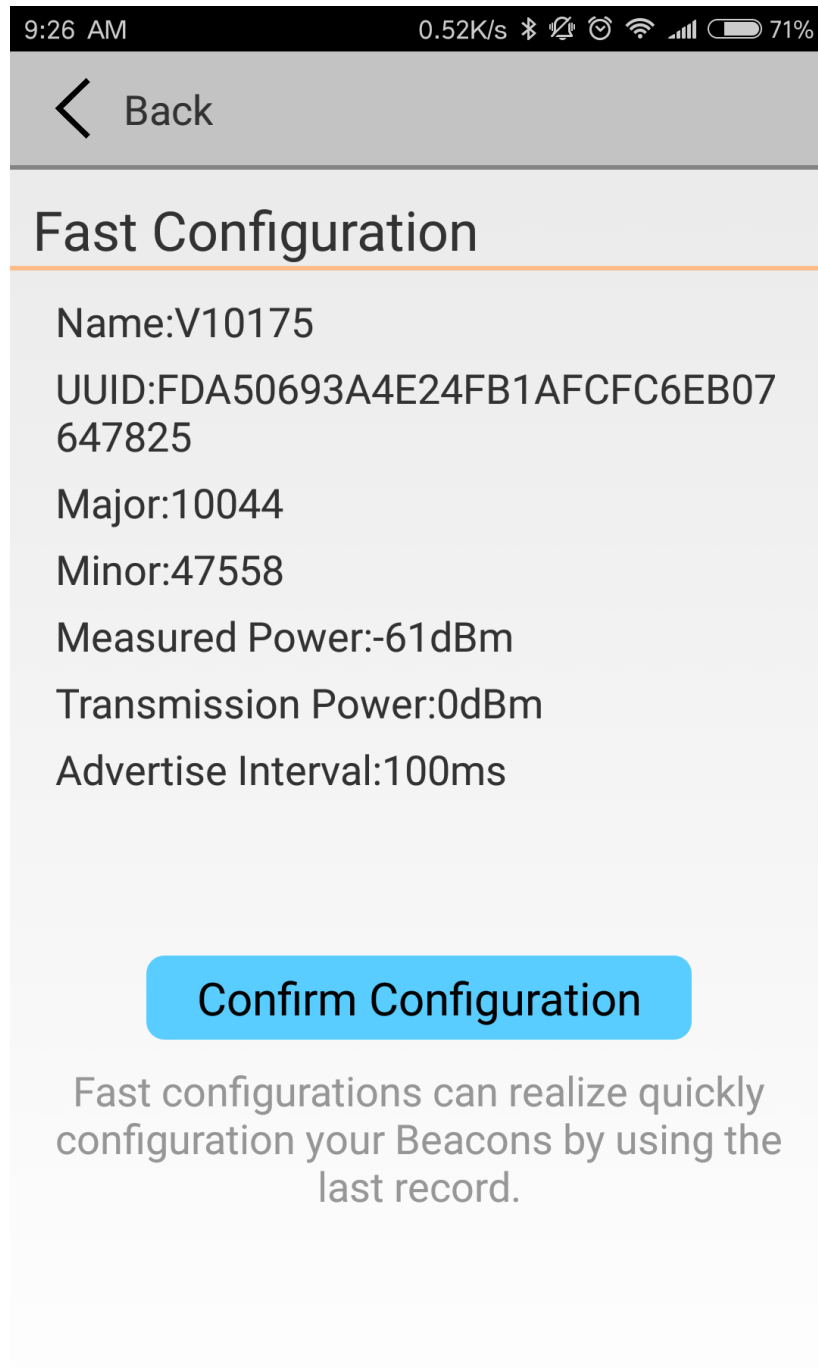
Reboot Beacon: Restart the VG01

Disconnect: Disconnect the current VG01

FW version: View the current firmware version of VG01

3.14 Fast configuration

Fast Configuration can realize quickly configuration your beacons by using the last record.



3.15 Download APP



Android Version of QR Code



IOS Version of QR Code

Introductions: Also available in Android Market (Android version) or the APP Store (IOS version) download in APP. SkyBeacon is the name of the APP.

4. Contact Information

Skylab M&C Technology Co., Ltd.

深圳市天工测控技术有限公司

Address: 6 Floor, No.9 Building, Lijincheng Scientific & Technical park, Gongye East Road,
Longhua District, Shenzhen, Guangdong, China

Phone: 86-755 8340 8210 (Sales Support)

Phone: 86-755 8340 8510 (Technical Support)

Fax: 86-755-8340 8560

E-Mail: sales1@skylab.com.cn

Website: www.skylab.com.cn www.skylabmodule.com