

Alcohol Tester Operation Manual

ATN-1

Hangzhou JiangDong Electronic Technology Co., Ltd

February 2014

Content

1.	Purpose.....	3
2.	Introduction.....	3
2.1	Components.....	3
2.2	Device Appearance.....	3
2.3	Testing Methods.....	4
3.	Cell phone.....	5
3.1	Hardware Requirements.....	5
3.2	Software Installation.....	6
4.	Client Application Functions.....	6
4.1	Initialization/Main Menu.....	6
4.2	Test Results.....	6
4.3	User Login/User Registration.....	7
4.4	Menu.....	7
4.5	Setup.....	8
4.6	Test Device Search / Self Testing.....	8
4.7	About/Feedbacks.....	9
4.8	Historic Records.....	9
5.	Mail Content.....	10
6.	Tester Features.....	10

1. Purpose

This is a portable alcohol testing device. It allows the user to do alcohol test conveniently to improve driving safety.

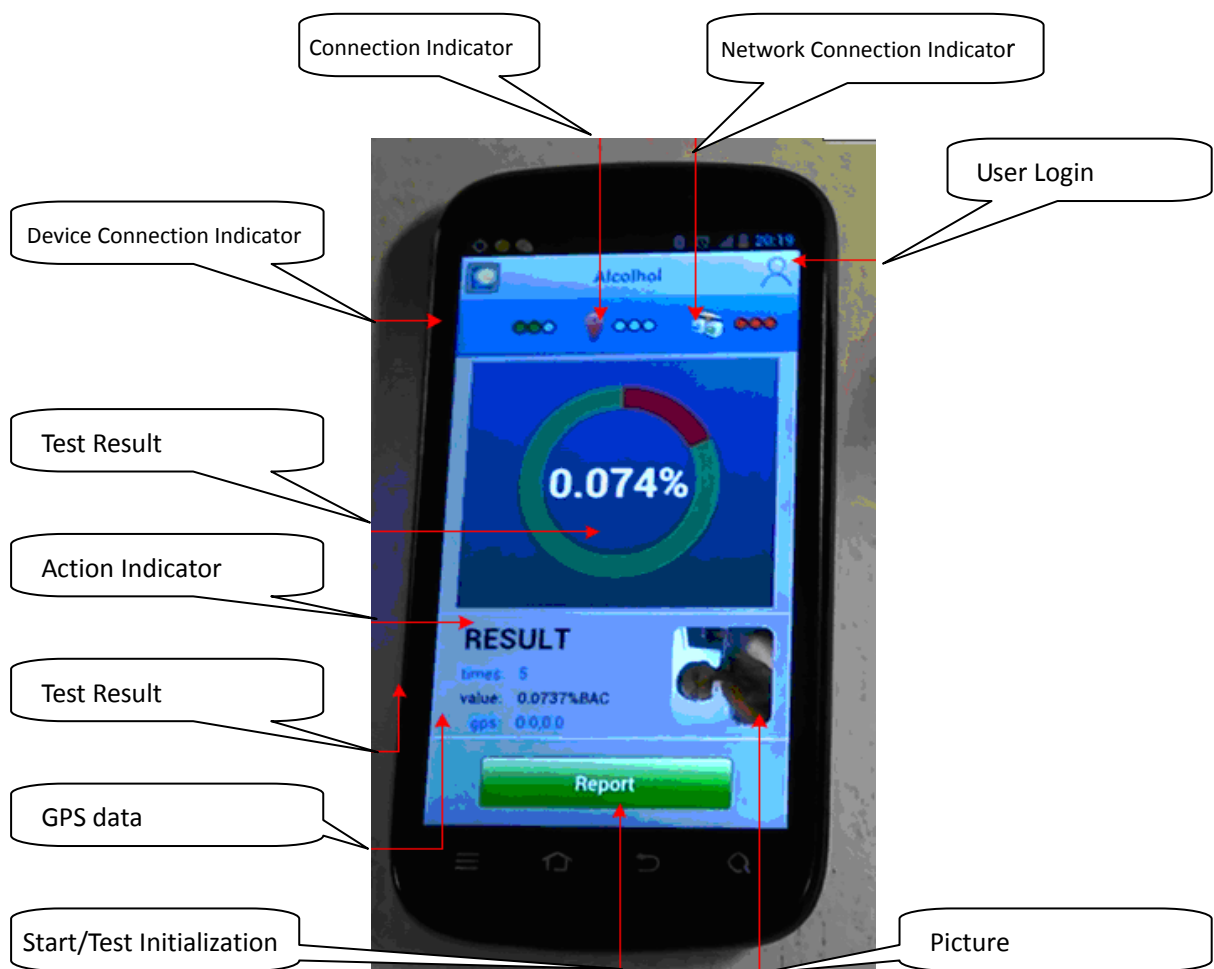
2. Introduction

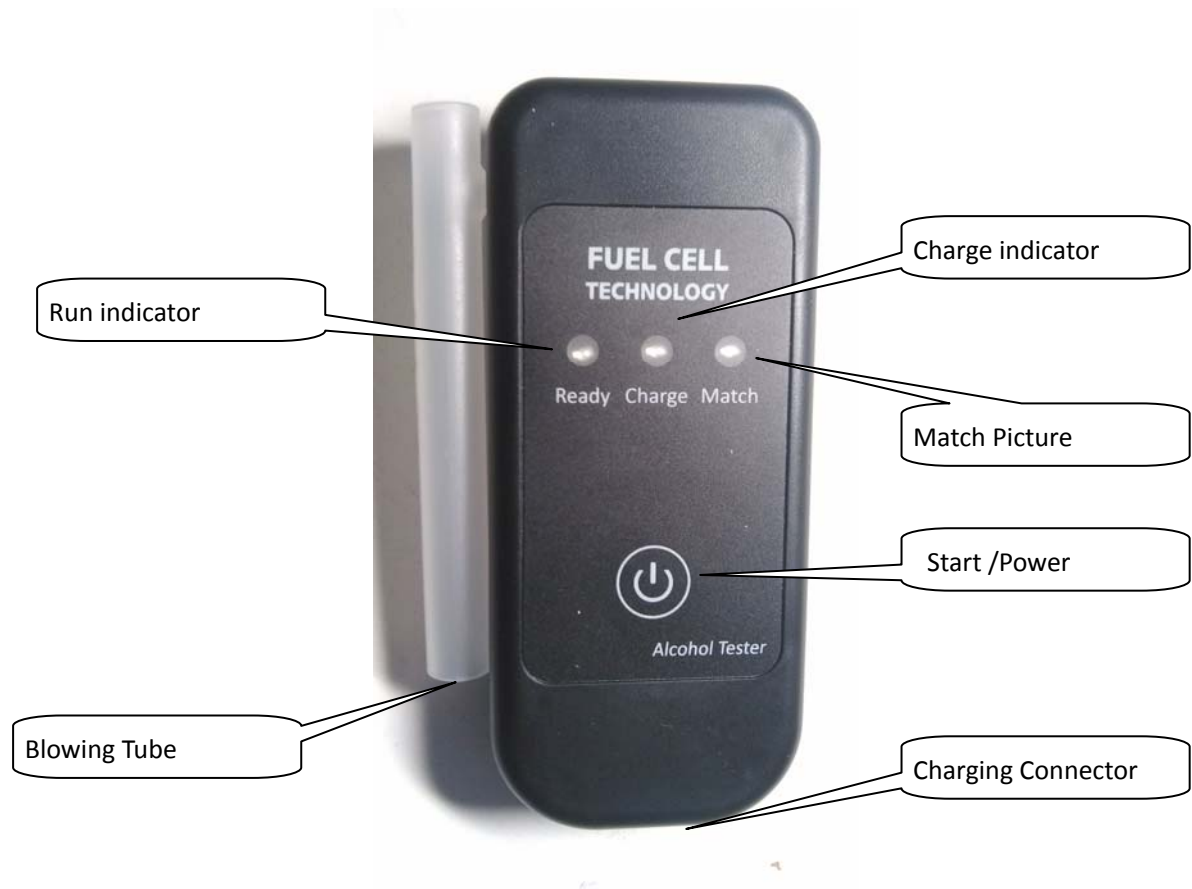
2.1 Components

The alcohol tester is composed by the following:

1. Alcohol Testing Device
2. Android 4.3 mobile phone or Apple iPhone (except iPhone 4) .

2.2 Device Appearance





2.3 Testing Methods

Possess the above two devices, have the client application installed and make sure device has power.

- 1、 After the application starts, the application will then automatically searches the device, get the GPS location and search the network collection.
- 2、 After clicking the start button in the device, the 'Tester indicator' should turn green.
- 3、 When the cell phone 'Device Connection Indicator' turns green, then the connection is successful.
- 4、 Click device 'Start' (Or cell phone 'Report' key) to start the

testing procedure.

- 5、 When the 'Action Indicator' shows 'READY' (Sound prompt should be heard also), it is time to blow air into the tube.
- 6、 Air blowing needs to last at least 3 seconds to guaranty air collecting to finish.
- 7、 In the blowing process, the 'Action Indicator' displays the status changes from 'READY' to 'BLOW' to 'OVER' to 'RESULT'
- 8、 When the cell phone is in the process of testing, it also starts and takes the picture.
- 9、 When 'Action Indicator' is in 'RESULT' status, the testing is successful and the related data such as testing result, testing time, GPS location and picture are showing.
- 10、 When the test finishes, the application is going to automatically send the results to the server and also send to pre-assigned email address setup in the initialization stage.

3. Cell phone

3.1 Hardware Requirements

A) Android mobile phone

Network Mode: 3G

Core: double cores

Screen size: 4.3 inch, 960x540 pixels

Back camera: above 500,000 pixels

Operating system: Android OS 4.3 above

RAM: 1GB

ROM: 4GB

Blue tooth: Support blue tooth 4.0

GPS: Internal GPS

B) Apple mobile phone

All apple mobile phone except iPhone 4, such as iPhone 4S, 5 and 5S.

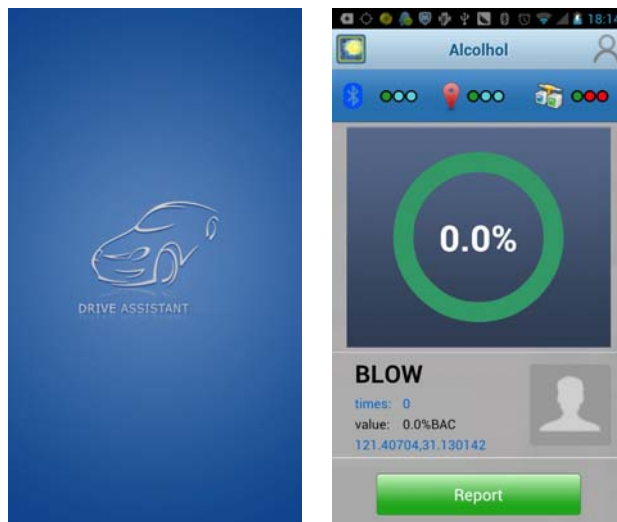
3.2 Software Installation

Software : alcohol.apk

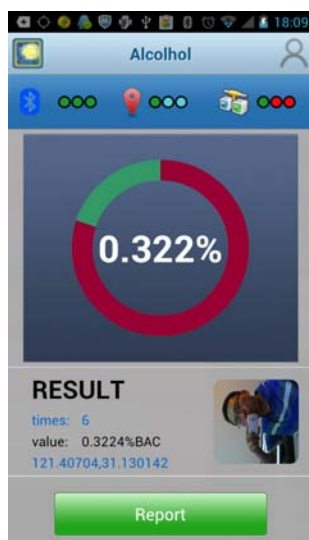
The software installed on Apple Mobile phone.

4. Client Application Functions

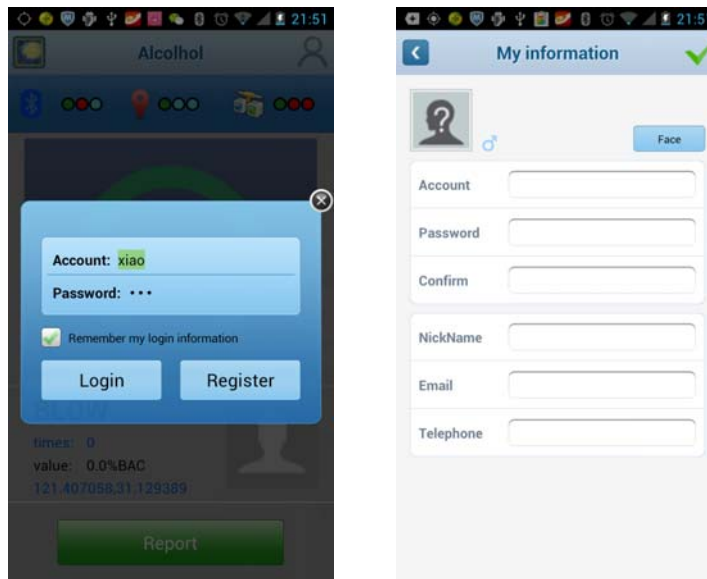
4.1 Initialization/Main Menu



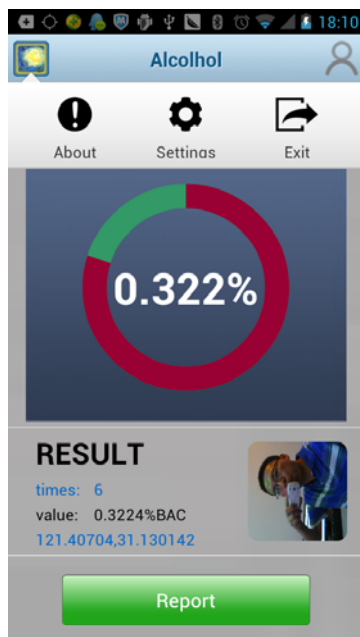
4.2 Test Results



4.3 User Login/User Registration

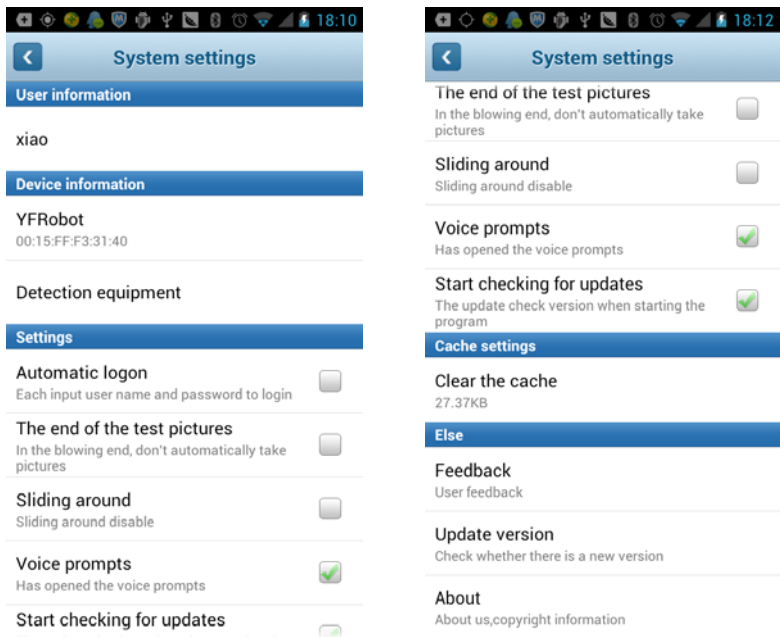


4.4 Menu

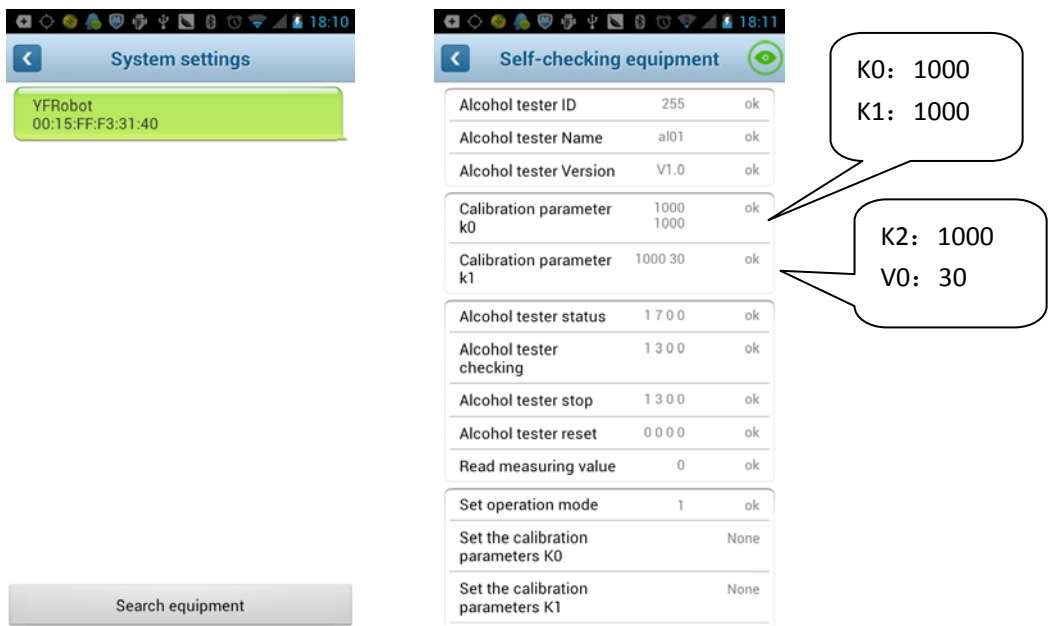


Clicking the LOGO or cell phone menu can bring out the application menu

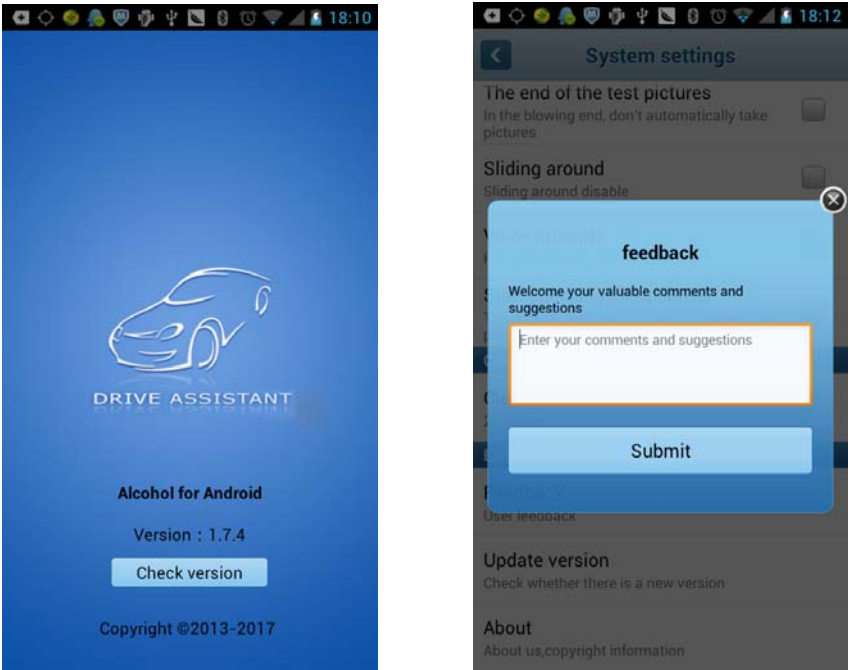
4.5 Setup



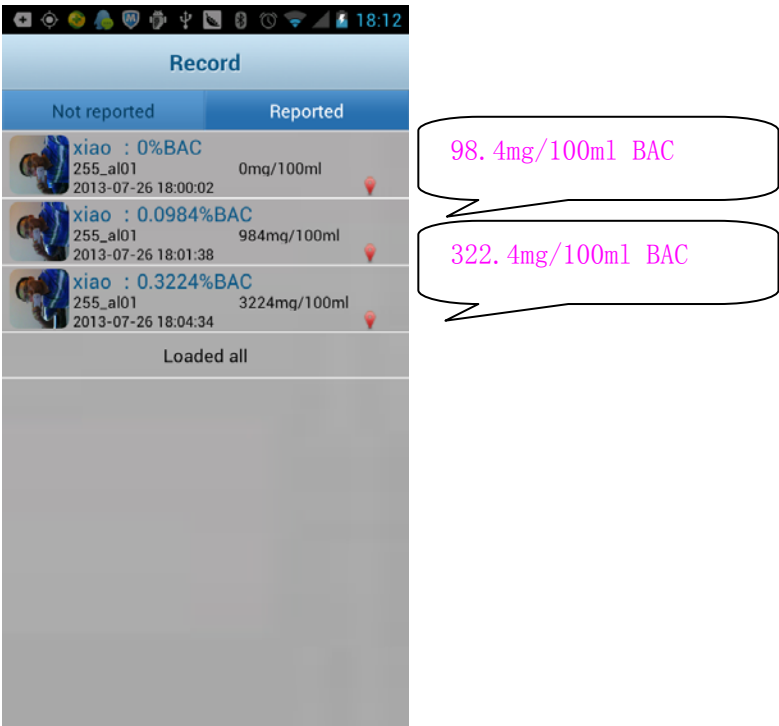
4.6 Test Device Search / Self Testing



4.7 About/Feedbacks

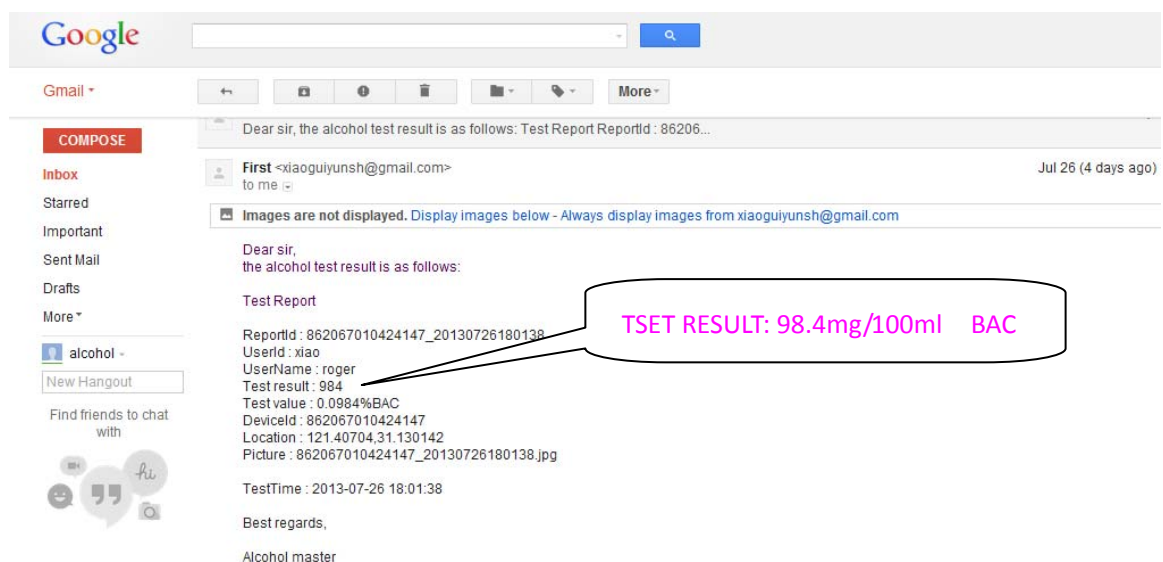
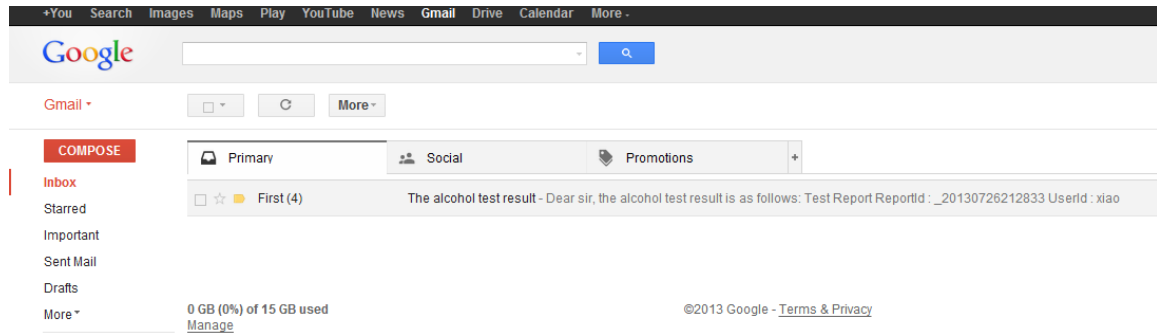


4.8 Historic Records



5. Mail Content

Mail Contents:



Testing photo is also included.

6. Tester Features

- Sensor: Fuel cell alcohol sensor.
- Sensor Range: 0.000mg/L~2.000mg/L BrAC.
- Sensor Accuracy : $\pm .001$ mg/L BrAC.
- Detection range:

-mg/L BrAC 0.000-2.000mg/L

- BAC % 0.000-0.400%

-mg/100ml BAC 0.0-400.0mg/100ml

● Measurement error:

BAC

$C < 88.0 \text{ mg/100ml}$ $\pm 7.0 \text{ mg/100mL}$

$88 \leq C < 220 \text{ mg/100ml}$ $\pm 8\%$

$C \geq 220 \text{ mg/100ml}$ $\pm 30\%$

- Calibration cycle: 6 months.
- Operating temperature range: $23^{\circ} \text{ F} - 113^{\circ} \text{ F}$ ($-5^{\circ} \text{ C} \sim 45^{\circ} \text{ C}$)
- Storage temperature range: $14^{\circ} \text{ F} - 122^{\circ} \text{ F}$ ($-10^{\circ} \text{ C} \sim 50^{\circ} \text{ C}$)
- The benchmark working conditions: $68^{\circ} \text{ F} \pm 9^{\circ} \text{ F}$ ($20^{\circ} \text{ C} \pm 5^{\circ} \text{ C}$)、 $< 80\% \text{ RH}$ 、 $86 \text{ kpa} \sim 106 \text{ kpa}$
- Blowing Time: 3seconds(flow: $\geq 20 \text{ L/min}$) .
- Dimensions: $122 \text{ mm} \times 52.5 \text{ mm} \times 28 \text{ mm}$.
- Voltage

Charge Voltage (USB) DC 5V;

Working Voltage DC $3.6 \text{ V} \sim 4.2 \text{ V}$;

- Battery: Lithium-ion Rechargeable battery 3.7V 800mAh
- Bluetooth 4.0 BLE:

Main Frequency: 32 MHz

Radio Frequency: 2.4 GHz ($2402 \sim 2480 \text{ MHz}$)

Transmit current consumption : 24 mA

Receiver current consumption : 19.6 mA

Output power: 4 dBm

Receiver sensitivity: -93 dBm

Voltage: $2 \text{ V} \sim 3.6 \text{ V}$

Data rate and modulation format: 1 Mbps , GFSK, 250 kHz deviation

- Weight : 100 g .

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.