

*AT8020*

**Breath Alcohol Tester**

# **Using manual**

Ver: HW120401146

# MENU

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## 1 Brief introduction

AT8020 is an advanced portable breath alcohol tester, its core component adopts new high-tech electrochemical sensor which can get more accurate alcohol concentration value, with strong anti-interference ability. The admirable human-device interface makes operation more concise and convenient, the color LCD makes interface more clear and beautiful. Moreover, the one-off anti-return mouthpiece design ensures the health and safety of users.

## 2, Main Technical Features

- Advanced 16 bit low power consumption MCU
- Electrochemical sensor, good reliability and accuracy
- LCD indication
- Simple button operation
- Low pressure and testing rejection function
- Measurement unit and alarming level adjustable function
- Testing record review function
- Passive testing available
- Short warm-up time, fast response and resume
- Adopt anti-return mouthpiece for health and safety
- Power saved design

## Main technical data

Sensor type: Electrochemical (Fuel cell) sensor

Detection Range: 0.000~2.000mg/l (0.40%B.A.C, 4.0‰B.A.C, 4.0g/l)

Alarm level: 0.250 mg/L (could be modified)

Resolution: 0.01mg/L

Display: 1.8 inch LCD screen

Work conditions: temperature: 10℃~40℃

humidity: <95%RH (No Dews)

Storage conditions: 0℃~50℃

Battery: 3×AAA 1.5V batteries

Dimension l×b×h: 114×66×26mm

Weight: about 100g (excluding battery)

Sensor life: 2 years

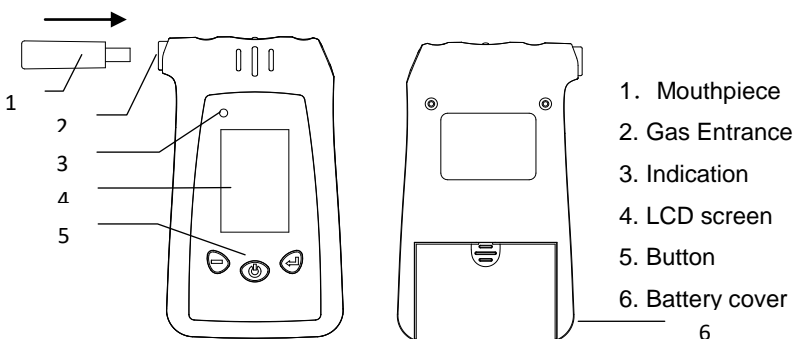
**Table 1 Allowable error**

Alcohol concentration range C/(mg/L)	Accuracy
$C < 0.400$	$\pm 0.050$ mg/L
$0.400 \leq C < 1.000$	$\pm 20\%$
$C \geq 1.000$	$\pm 30\%$

Table 1 the allowable error in the process of detecting

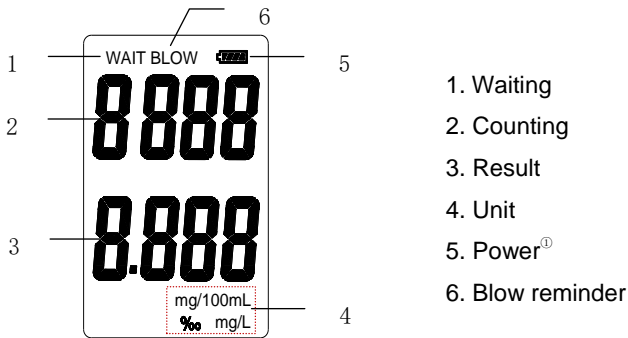
## 3. Configuration

### 3.1 Appearance



Pic 1

## 3.2 . Display




Pic 2


Remark<sup>①</sup>: This battery icon will flash if it's lack of battery, please change new batteries. If the battery capacity is too low, the tester will be not turn on normally.


## 4. Operation instruction

### 4.1. Turn on and make testing

- 1) Take off the battery cover, install 3pcs AAA 1.5V batteries correctly.
- 2) Install the mouthpiece according to the directions shown in Pic 1.
- 3) Press  button to power on, together with an brief buzzer sound, backup LCD will on, meantime the screen will show 30 seconds counting down for warming up.

Please do not blow during warming up, otherwise it will have error in the accuracy.


- 4) When the LCD screen shows “” icon, please have a deep breath, then blow to mouthpiece continuously and equally, stop blowing till heard a “pa” sound from tester. After a few seconds, the screen will show the testing result.

During testing process, if the blowing flowrate is too small or blowing interruption, the screen will show “Err” alarming. In this conditions, please wait for some seconds, or press  to test



again.

- 5) If the testing result is lower than the preset alarming level, the indication LED is green;

If the testing result reach or exceed the preset level, the indication LED is red, meantime the buzzer will send out rapid alarming sound.



- 6) In the testing result indication interface, press  button to take next test.

### **Passive test:**



The passive testing will be carried if the testee do not assort to test, or he is too drunk to take testing. When the LCD screen shows “” icon, take off the mouthpiece and put the tester close to the testee’s nares, then press  button to take tests, few seconds later, the screen will show the result.

**If long time no operation, the tester will turn off the backup light or turn off the tester automatically.**

## **4.2. Check the history records**



In tester turning on status, press  button to check the history records, press  button to return to warm-up counting down status. The 1<sup>st</sup> record is the latest testing result. It can store max 10 records.

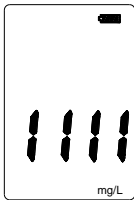
## 5. Function setup

In tester turning on status, press  button first and then press  button to enter into function setup interface (As pic 3).



Pic 3

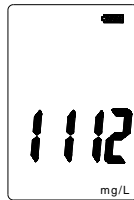
In function setup functions, press  button to choose numbers, then press  button for confirmation, input “1111”(as pic 4) to enter into “unit setup” menu (as pic 5), input “1112” (as Pic 6) to enter into “alarming level setup” menu(as pic 7).



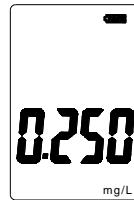
Pic 4






Pic 5



Pic 6



Pic 7

After entering into these menus, pressing  button to change the unit or alarming level; pressing  button to save this setup and exit; Pressing  button to not save this setup.

Remark: The history records will be cleared up if setting the testing unit or alarming level again.

The default alarming level is 0.250mg/L

In other units it's 55mg/100mL; 0.050%BAC; 0.500‰BAC; 0.500g/L.

## **Notification**

- Please read the manual carefully and follow the instruction before the operation.
- To ensure the validity of the testing result, please wait 15 min to take the testing after drinking.
- The calibration of the tester should be no longer than 6 months for ensuring the accuracy of tester.
- Please do not blow smoke to the tester directly, otherwise the tester will be damaged.
- After storing for long time, the first several testing results may be not so accurate, pls test for several times then get the correct result.
- Avoid using the tester when environmental temperature exceeds its specified range.
- Any application or fault beyond this manual, please contact with manufacturer or dealer for solutions.