

**Breath Alcohol Tester**  
**AT8900** **Operation Manual**

HW160509001

## Notification

- To ensure the real test result of alcohol concentration and avoid sensor damage, please wait 15 minutes to take test after drinking.
- Recommend to calibrate the sensor once the tester indicates "0 Days Left"
- Avoid to use the tester when environment temperature exceed its specified range;
- The sensor may be damaged if the cigarettes smoke is blew into the tester directly.
- Avoid any fall or strong shock.

## Instructions icon



Warning—May cause danger to user



Caution—May cause damage to tester




Remarks—Notes or instructions for additional information.


[ ] button on the alcohol tester.

<> button on the touch screen.

## Quick Guide

Switch on/off: Long press [ ]

### **Steps of testing alcohol**

1. Install the mouthpiece, then Long press [] for power on.
2. Click <Test>.
3. Preparing of testing, take a deep breath now.
4. When indicate “Pls blow”, then please blow into mouthpiece regularly and consecutively until the progress bar is full.
5. When indicate “Analysing”, then do not blow, or else the result will be affected.
6. Show result and store automatically. Click <ENTER> to next step, or click <CANCEL > to step 10, that will skip the Vehicle No. and Driver license No. input.
7. Input Vehicle No. by virtual keyboard, then click <ENTER> to next step, or click <CANCEL> to skip input.
8. Input Driver License No. by virtual keyboard and click <ENTER> for confirmation.
9. Indicate “Print?”, if connect with printer, then click <print>.

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## 1. Summary

AT8900 is an advanced portable Breath Alcohol Tester with up-to-date design in the international field at present. The core component adopts Changeable Electrochemical Sensor module and the tester is in more accuracy, high sensitivity, strong anti-jamming ability and easy calibration. The design of multicolor OLED, simply keyboard, and touch screen make the tester more concise and suitable for outside use. The anti-return mouthpiece ensures the health and safety of users.

The product is applicable to driving in drunk or alcohol detecting before busywork, so that it can help us avoid the accident, protect human life and property safe. The delicate appearance and comfortable handle are the best choice for alcohol testing.

### **Main functions and features:**

- Adopt industrial 32 bit embedded MCU with fast response.
- Adopt high sensitivity electrochemical sensor, good reliability and accuracy.
- Sensor Module changeable, more convenient for recalibration and change.
- Simplify keyboard with touch screen operation.
- 2.8 inch OLED screen, applicable for wide range of working temperature.
- 20000 memories storage capacity.
- Thermal printer and stand-alone dot-matrix printer optional.
- USB upload to PC
- Pass, Fail two level alarming, Blow interrupt, Test reject alarming etc functions
- Multi testing units (mg/L, mg/100ml, g/L, ‰BAC, ‰BAC) optional

- Real time, Temperature indication
- Password management
- Disposable anti-return, anti-jam mouthpiece design, 360° rolling.
- Low battery reminder and Battery saved automatically off function
- Big capacity rechargeable Li battery
- Wide working temperature range, to meet different demand
- Intelligent management for the testing information (Apparatus No., testing address, time, testee, testing result etc)

This product is designed, manufactured and inspected according to our national standard.

## **2. Accessories**

- Alcohol tester
- DC8.7V 1.2A charger
- Car adaptor charger
- Communication cable
- Bluetooth Printer
- Printer charger
- CD for software upload
- Mouthpieces
- User manual

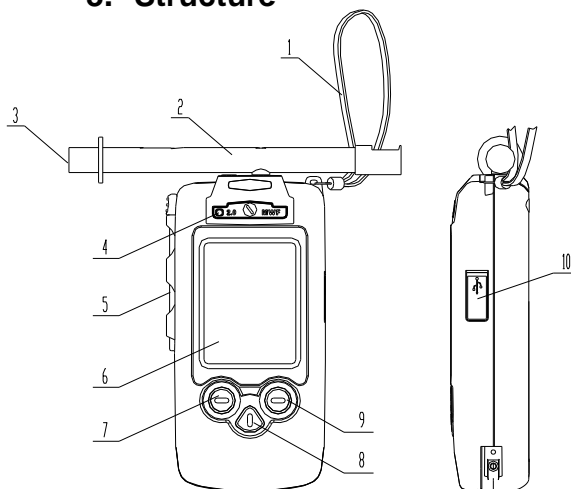
Please use the accessories which match the tester, or the software which manufacturer permitted, otherwise the incurred damage or fault, manufacturer will not maintain in the guarantee time.

You can buy the accessories from local distributor or manufacturer.

These accessories could support the tester work better.

Other non-original accessories may not be compatible with tester.

### 3. Structure



1	ring
2	mouthpiece
3	Gas entrance
4	Indication LED
5	Touch pen
6	Touch Screen
7	Function key <sup>①</sup>
8	On/off key
9	Function key <sup>①</sup>
10	Charging/communication jack cover

Remarks: Function key will carry the functions which indicated in left/right down side of screen.

### 4. Power on/off

4.1, Press [] to turn on or off the tester.

4.2, In standby mode, if within 180 seconds continuously without any operation, the tester will give out sound to remind user to turn off. If you do not want to turn off, please dot the screen or press any keys, otherwise it will turn off automatically.

4.3, If the battery was exhausted, the tester will turn off automatically, please recharge in time.

### 5. Touch screen usage

Using the touch pen or finger to dot the screen to choose the item or use its functions.

- ◆ In order to avoid scrape the screen, do not use the speculate tools.
- ◆ Avoid screen to contact other electronic equipment. Static discharge will result the screen fault.
- ◆ Avoid screen meet water. The screen may fault when meet water or in humidity environment.



In order to use the screen better, please take out the protection membrane before usage.

## 6. Preparation before usage


### **Recharging batteries**



Using the charger which provided by manufacturer.  
Other inapposite charger will cause explosion or damage tester

### **Low battery indication**

When the tester is with low battery, it will:

- Send out alarming;
- Show short of battery;
- Empty battery icon  twinkle

If the battery was too low, the tester will turn off automatically, please recharge it in time.



### **Recharge the tester by adaptor**

Use DC8.7V adaptor or Car adaptor to recharge the tester.

1, Open the charging/communication jack cover at the side;





- 2, Insert the small terminal of adaptor into recharging jack;
- 3, Insert the big terminal pin of adaptor into power socket (If car adaptor then insert in car DC12V socket), the indication LED in Adaptor and [  ] on tester will be on.
- 4, Pull out the adaptor when Recharging finish (the indication LED in Adaptor and [  ] on tester will be off).

### **Install Mouthpiece**

The mouthpiece is disposable hygienic and anti-return design, please change it for each test.



### **Connect Printer**

Modular thermal printers or independent bluetooth dot-matrix printers optional

#### **➤ Using the thermal printer**

The machine comes with a removable modular thermal printer. Before printing, please make sure the correct connection between printer and alcohol tester.

### Technical data of Printer:

Paper type: thermal printing paper;

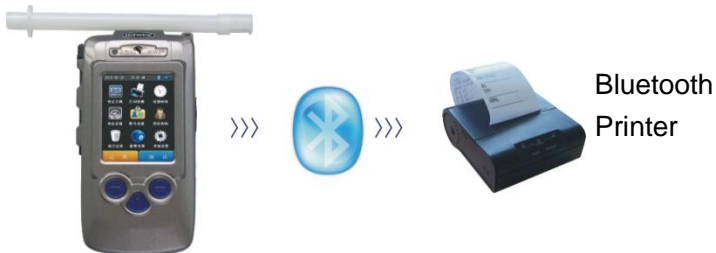
Paper width: 57mm;

Paper roll diameter:  $\leq 25\text{mm}$ .

### ➤ Using the bluetooth dot-matrix printers

The built-in blue-tooth printing module enables automatic connection with blue-tooth printer when printing.

Make sure effective connection distance between tester and printer:  
 $\leq 10\text{m}$



### Technical data of Printer:

Paper type: Printing paper for dot-matrix printers;

Paper width: 57mm;

Paper roll diameter:  $\leq 25\text{mm}$

### User Setup

Before carrying out test, please read "Part 8 Menu operation" carefully and set print copies, Measure unit, Pass/Fail alarming value, Police ID input etc.

## 7. Testing

### Testing requirement


- ◆ Sufficient respiratory flow, evenly without interruption.

Alcohol tester starts to collect a breath sample when the breath sample greater than 1L. The sample collection will last for more than 3s. The "blowing interrupt" will be displayed when blowing is interrupted.

◆ **Waiting time for blowing**

When the screen displays "please blow", please use the mouthpiece to blow continuously & evenly; if not, after 50s, "Reject" is displayed and automatically saved, with buzzer beeping at the same time. Click <Cancel> to active print interface with result saved; Click <confirm> to active Plate No. Input interface with result saved.

**Testing Steps**

- 1, Insert disposable anti-return mouthpieces
- 2, Press & hold  to switch-on
- 3, Click <TEST>
- 4, The test person shall take a deep breath during warming up
- 5, When showing "Please blow", the test person must breath into the device with a sufficiently respiratory flow, evenly and without stopping, till bar is complete.
- 6, No blow allowed during analysing, otherwise, it will distort the results.
7. The screen displays the test result.  
Click <ENTER> to next step  
Click <CANCEL> to step 10 directly, skip the Vehicle No. and Driver No.
8. Input Vehicle No.  
From the virtual keyboard to find the characters which you need, click them on the input ,click< next >to find other characters in next

page, click “↩” to cancel the wrong characters. When the input is completed please click the <ENTER> to next step, click <CANCEL> to next step directly.

9. Input Driver License No.

Please input the Driver License No. from the virtual keyboard, then click <ENTER>

10. The screen displays <Print?>, if the tester connected with printer, please click <PRINT>, the result will be printed.

## ► PASSIVE TESTING

The passive mode serves to check the contained content of alcohol in ambient air. It is to check if there is any alcohol in the ambient air only.

**PASSIVE1:** If the driver does not cooperate to test (blowing pressure is not enough or time is short), can carry on the passive tests. When the screen display “Pls Blow”, click the <PASSIVE 1>, then request the driver to blow.

After the analysed, the screen displays passive test result.

**PASSIVE2:** When the driver no testing ability due to severe drunk, can be via <PASSIVE2> to actively collect the exhaled breath to complete the testing. When the screen display <Pls Blow>, click <PASSIVE1> put the intake aim at driver’s mouth or nostrils, then click<PASSIVE2>, the alcohol tester collect the sample actively and analyse, the screen displays passive test result.

## 8. Menu Operation



Time  
Tem

Battery Power

Menu Icons

Function keys instructions area

Show the current function assigned to  
left/right function keys

In the standby interface shown on the left, click the menu icon on the screen to enter the corresponding menu item. Partial menu operation requires password authentication.


Initial Password: 000000



### Next Calibration

After a certain period of using, it needs to recalibrate the tester to avoid inaccuracy. You can check the left days for next calibration.

### Checking method:

- Standby interface click  icon, Check the calibration remaining days.
- Click <CANCEL> or <ENTER> to quit.
- After switching on, the display shows "Next calibration" (i.e. 0 days left for next calibration). Please contact with manufacturer or distributor.



## Print Copies

Set up print copies for test results or records.

### Setup method:

- Standby interface click  icon.

**Input the print copies though the virtual Keyboard, from 1 to 3 copies.**


- Click <STORE> to save setup, the test result or test record can be printed according to preset copies; click <CANCEL> give up this operation.



## Time Setup

Setup the time included “year、 month、 day、 hour and minute”.

### Setup method:


- 1, Click  icon under standby interface.
- 2, Input the password, click<ENTER>.
- 3, Input the time through the virtual keyboard. Set in sequence "year, month, day, hour and minutes, the current revision bits with blue color. If wrong input, please click “←” to delete then input again.
- 4, Click<STORE> to save the setup; click <CANCEL> give up this operation.



## Units Setup

Setup the Unit of test result

### Setup method:

1. Standby interface click  icon,
2. Input the password, click<ENTER>.
3. Click touch screen to select the Unit.

4. Click<STORE> save setup  
Click<CANCEL> give up this operation.

There are five Units for customers to choose:

- a、(BrAC) mg/L;
- b、(BAC) mg/100mL;
- c、g/L;
- d、‰BAC;
- e、‰BAC.

After the Unit changed, the pass and Fail critical value according to the new and old unit conversion relation update automatically




mg/L and mg/100mL are chinese standard “GB/T 21254-2007” requested measurement results, Conversion relation:  $BAC=BrAC \times 2200$



### Police ID

Input the Police ID on duty

### Input Method

- 1, Click  under standby interface.
- 2, Input password and click <Confirm>.
- 3, Input your Police No. Thouch keyboard on screen. If wrong, click ⇐ to erase front No. of cursor.
- 4, Click <Save> to confirm setting; <Cancel> to give up operation.




### Changing password

For the reasons of information security and mis-operation by others, please change the password promptly and remember the new password. If forget the password, please contact with

manufacturer or distributor.

### **Set new password:**

1. Click  under standby interface.
2. Input password, click <Confirm>.
3. Input new password through keyboard on screen. Click ⇐ to erase front No. of cursor.
4. Click <Save> to active the new password; click <Cancel> to give up operation.




### **Delete Records**

This operation will clear all test records.

The apparatus can save up to 20000 records and upload records to Computer for Back-up management. Make sure you want to clear all test records before executing this operation.

### **Clear records:**


1. Click  under standby interface.
2. Input password, click <Confirm>.
3. Click <Dele> to clear all test records; Click <Cancel> to give up erase operation.



### **Alert Set**

This operation aims to set Pass value and Fail alert value. When test result  $\geq$  Pass alert value but  $<$  Fail alert value, it shows Pass; When test result  $\geq$  Fail alert value, it shows Fail.

### **Set method:**

1. Click  under standby interface.







2. Input password, and click<Confirm>.
3. Click Pass/Fail value edit box. The selected item shows in Blue.
4. Input value of Pass/Fail through keyboard on the screen. The editing item is displayed in Blue.
5. Click <Save> to confirm new setting; Click <Cancel> to give up operation.



## **Touch Screen Calibration**

To improve accuracy of clicking touch screen.

### **Calibrating method:**

- 1, Click  under standby interface or press  &  simultaneously to active calibration under shut-down.
- 2, Click the center of “+”on the screen till shows "OK"; If shows "FAIL", please recalibrate.
- 3, Press  to exit calibration.

## **9. Records**

1. Click <Records> under standby interface to review historical records.
- 2, Click <Last>, <Next>, <Go to> to review certain record under Records display interface.
- 3, Click <Print> to print records under records display interface
- 4, Click <Cancel> to exit.

## 10. Record upload

The back-up management on computer requires cooperation of software.

### Uploading steps:

- Open the cover of Charging or communication socket on the right-side, then, connect computer and apparatus by data communication line. Run software.



- Turn on breathalyzer and Operate software under standby interface.

Note: Standby interface only for data upload; No operation is allowed of breathalyzer during data uploading, otherwise it will cause fault.

- Confirm data transmission and turn off.

## 11. Main technique parameter

Model	AT8900
Sensor type	Fuel-Cell (Electrochemical) Sensor
Detecting Scope	0~2.000mg/L (0~440mg/100ml)
Warm-up time	<20s
Pass Alert Value	0.090 mg/L
Working Temperature Range	-20℃-50℃
Fail Alert Value	0.250 mg/L
Accuracy	± 0.02mg/l (0-0.400mg/l) ± 5% (0.400-1.000mg/l) ± 20% (1.000-2.000mg/l)
Battery	7.4V Lithium Battery Rated capacity 2500mAH
Charging time	6 hours
Continuous operating	>20 hour normally
Dimension	156mm×76mm×38mm
Weight	About 320g

## 12. Ordinary fault and solution

Trouble	Possible	Solution
Unable to turn on	Low voltage	Charge timely
	Circuit fault	Contact Manufacturer/Distributor
Inaccuracy	Expired sensor	Contact manufacturer /Distributor to change sensor
	Beyond normal working Tem.	Do test in allowed working condition
	Long-term non-calibration	Calibrate sensor timely
Time Display fault	Incorrect time setting	Reset the time

## **Professional Police Breathalyzer Manufacturer**

- ◆ High-tech enterprise with R&D, production, sales capacities and own national brand.
- ◆ Import and Export rights, passed ISO9001:2000 quality management system certification.
- ◆ Our products cover Professional police application, commercial application and gift application.

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