AT7000

QUICK INSPECTION ALCOHOL TESTER

OPERATION MANUAL

PLEASE READ THIS MANUAL CAREFULLY BEFORE USING THE TESTER.

Ver：HW160517WS

Catalogue

1. Summary

AT7000 is the latest development of portable Quick inspection alcohol tester. This instrument adopts new Hi-tech Fuel-cell Sensor as its core component which can inspect accurately concentration of the breath alcohol, and with strong ability of anti-interface. AT7000 has compact keyboard, operation menu and admirable human-device interface, which makes operation more concise and convenient, the color LCD makes interface more clear and beautiful. High light alarm lamp and headlamp are also very conveniently for operator. Non-contact fish-mouth type air blowing opening ensures the health and safety of users.

This instrument are suitable for testing alcohol before work or drive in order to avoid unfortunately accidents, guarantee the security of human life and property. Its delicate appearance and comfortable handle feel will be your best choice of alcohol test.

Main functions and features:

- ➢ Adopt advanced 16 bit low power consumption MCU
- ➢ Fuel-cell sensor, good reliability and accuracy
- ➢ Color LCD indication
- ➢ Lighting indication function, matrix type warning lamp
- ➢ Simple keyboard operation
- ➢ Show up present time and temperature
- ➢ Two level audible and visible alarm indication, alarm level showing clearly
- ➢ Low battery automatic power off function
- ➢ Blowing time can be set by operator
- ➢ Unit and alarming level adjustable
- ➢ Short warm-up time, fast response and resume
- ➢ Non-contact fish-mouth type air blowing opening design,

2. Accessories

Please check the packaging box if the spare parts are all packed in.

- ● AT7000 Quick Inspection Alcohol Tester 1 set

- ● Operation Manual 1 pc

- ● Inspection Report 1 pc
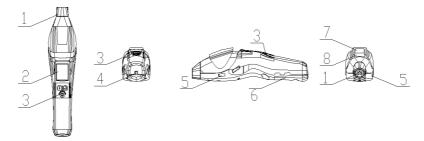
3. Structure
3.1 Appearance

Fig. 1

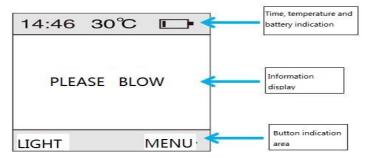| 1	Blowing Nozzle	4	Sling	7	Head Lamp
2	Display	5	USB port(reserved)	8	Alarm lamp
3	Keyboard	6	Battery cover		

3.2 Display

Fig. 2

4. Power On/Off

4.1 Power On

Press" ⏻ " for about 1 second, the system will run set-checking process automatically, after a short cry of the Buzzer, tester model and version will be displayed on the screen. Main menu will come out after the tester finished self-checking.(chart 2 for reference).

In the main menu, press the left button ⊟, head lamp will be light on, press the left button ⊟ again, head lamp will be light off, and alarm lamp as red lamp will blink, press the left button ⊟ one more time, alarm red lamp will be off, and the normal indicator as green light will blink, press the left button ⊟ again, all the lamp will be off.

Remark: The red lamp and the green light only blink when the main menu are in testing, they can be used as simple red or green light.

4.2 Power Off

4.2.1. Power manual off

When the tester is Power On, press button" ⏻ "for over 3 seconds, then the tester will be off.

4.2.2. Power saving off

This tester has the function of power saving off. If the main menu be displayed for over 3 minutes without any operate, then the tester will be power off automatically.

4.2.3 Low battery power off

The tester will be power off automatically when facing energy shortage. Please change new batteries or charge the batteries.(for rechargeable battery)

Battery icon's indicate:

Table 1.

▥	Full battery	▤	Low battery
▨	Battery partly consumed	▢	Energy shortage, please change or recharge the battery.

5. Testing

After the tester is power on, the main menu been displayed(as Fig. 2), take a deep breath and then blow into the tester through blowing nozzle correctly and evenly until the buzzer stops and you can hear a "pop" sound, then stop blowing.

After blowing, screen will show "processing…" which means the tester is analyzing the gas. Testing result will be displayed after analyzing finished, including gas type and concentration, meanwhile, alarm lamp will blink, testing type has the following kinds:

(1) Normal: after proceeding the above testing steps, on top of the concentration value will display "normal" when the testing result is under the alarm point which been set before use the tester. And the alarm lamp will show green light and blink.

(2) Drink: after proceeding the above testing steps, on top of concentration value will display "drinking" if there are alcohol concentration from exhaling breath, the buzzer will make out sounds like the sound drops, and the alarm lamp will show red light and blink.

(3) Passive testing: If the testers don't cooperate for testing (blowing air pressure not strong enough or blowing time so short), passive testing can be proceed. Use clean air blow into the blowing tube in order to clean the residual alcohol before. When screen shows

3

"Please blow", let the tester blow and then press the button"⏻",screen will show the passive test result after analysis; if the tester can not blow, blow clean air into the blowing tube for seconds to clean the residual alcohol before, then put the blowing opening aim to the tester's nose, press the button⏻, screen will show the testing result after analysis. Since definite exhaled gas are needed, passive testing only can be auxiliary function, not suitable for formal inspection.

Remark: After one test, you can press any button to return the testing page, also you can set the "display time", then testing result will only show for some time and then will return to the testing page automatically. If the former tester is drinking or drunk, we suggest to use clean air clean the blowing tube first, so that the residual alcohol can be cleaned and the next testing will be more correctly.

6. Setup

In the main menu, press the right button ⊟ to popup submenu, including calibration remind, time set up, date set up, unit set up, blowing time set up, and time display, choose one item which need to be set through pressing the left button ⊟, and then press the right button ⊟ to enter the next operate.

6.1. CALIBRATION REMIND

How many days left for the next time calibration can be seen if you enter this menu.

6.2. Date set up

In the menu of date set up, press the left button ⊟ to choose setting item, item will show blue color if been chosen, then press the right button ⊟ to change the item value, press the right button ⊟ for one time, the item value will be changed for one step, if you press the button for over one second, then the item value will be changed continuously. Press the button ⏻ to quit the date setup menu after setting finished. If the time have been changed, it will be saved automatically when you quit the menu, meantime, saving interface will be displayed for remind.

Remark: The first row number shows year-month-date from the left to right.

The second row number shows hour:minute from left to right.

6.3. Unit Set Up

In the menu of unit set up, press the left button ⊟ to choose unit which need to be set, then press the right button ⊟ to confirm the settings. Press the button ⏻ to quit the unit setup page, new unit will be automatically saved when you quit the page if you have changed the unit. After changing the unit, drinking alarm point and drunk alarm point in the "alarm setup" will updated automatically, and former unit conversion relation will also be updated.

6.4 Blowing time

Blowing time can be changed, press left ⊟ to choose needed time, press right ⊟ for saving. Press ⏻ to quit after setting finished, new blowing time will be saved automatically if you changed, and saving page remind will also displayed.

Suggestion:

1, Set the blowing time a little big, so that residual air in the blowing tube can be cleared completed and the testing will be more accurate.

2, Blowing distance from the tester's mouth to blowing nozzle of the instrument should be controlled within 3cm when testing, so the testing air will only be diluted less and testing result will be more accurate.

6.5 Time display

Display time means how long time the testing result will be displayed after testing, in order to improve the testing efficiency, testing result will be displayed for some time and then go back to testing page automatically and ready for next testing. If this auto-return function is not needed, you can set the "time display" to be "unlimited", then testing result will be displayed all time until you press any button for return.

Press left ⊟ to choose how long time are needed for display of testing result, press right ⊟ to save the display time. Press ⏻ after setting to quit the display time setup page. If you changed the display time, new time will be saved automatically with saving page reminding.

7. Trouble Shooting Sheet

Table 2.

Fault Description	Possible Reason	Solutions
Unable to turn on the tester	Low battery	Change batteries in time
	Battery polarity reversed	Refit the batteries
Inaccurate testing result	Expired sensor	Contact with manufacturer to replace the sensor
	Blowing distance to long	Make sure tester's mouth is close to the blowing opening
	Long time no calibration	Calibrate the tester
Wrong Time Display	Wrong time setup	Reset the time
Battery not durable	Battery capacity limited	Alkaline battery or rechargeable Ni-Cd battery will be more better

Remark: default batteries of this tester are four pieces of 1.5 voltage AA batteries, you can also use four rechargeable Ni-Cd batteries, while then voltage should be 1.2V, normal capacity should be over 2000mA so can be more durable. If choose Ni-Cd batteries, battery

type in the tester's program should be changed or the battery indication will not be correct.

Solution: press ⏻ and right ⊟ together when starting the tester about 1 second, then can enter the setting page of battery and voltage, check the nominal voltage on the battery, then press ⊟ to choose the right battery voltage, and then press right ⊟ to confirm after choosing, then you can save the setup. Press ⏻ to quit the setting page.

8. Main technical indexes and parameter

Table 3.

Model	AT7000
Sensor type	Fuel-cell alcohol sensor
Measuring range	0～2.000mg/L（0～440mg/100ml）
Working Temperature Range	10℃～40℃
Response time	<1s
Continuous working time	100-2000 Times(depend on battery capacity）
Dimensions	L×W×H: 284×68.5×74mm
Net weight	About 400g（with 4 pcs batteries）
Working life	2 years

9. Care and Maintenance

Please make sure to verify and calibrate regularly in fixing time, alcohol testers without verification or expired shall not be used for enforcing the law in case of unnecessary legal action.

If alcohol tester need to be cleaned, please use soft wet fabric or with suitable amount of neutral detergent to clean, be careful to avoid using any chemical organic solvent (like alcohol or lacquer thinner etc.) to clean the surface of the alcohol tester.