

# protech



## User Manual

Use ALKALINE batteries only  
Please read this manual before use.

**DO NOT DRINK & DRIVE!**

# Alcohol Breath Tester QM7320

Thank you for purchasing Protech QM7320 - personal alcohol breath tester which measures the alcohol concentration in your breath utilizing an electrochemical (fuel cell) sensor, which provides reliable and accurate test results.

Please read the instructions carefully before use.

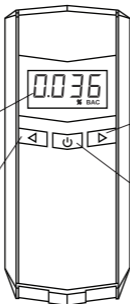
## Getting Started

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**Foldable Mouthpiece**

**LCD Display**  
displays results

**Left-button**  
starts a test;  
navigates through  
test results



**Right-button**  
navigates through test  
results

**Power (Center) button**  
turns unit on/off; recall cumulative  
test count, last test result

## Battery

The tester requires One (1) AA Alkaline battery to operate. Press down with little pressure and slide away the battery cover from back of the unit. Install the battery and close the battery cover. (\*\* It is recommended to use NEW alkaline batteries)

## 15 minute observation period



**Wait 15 mins** from your last consumption of alcohol before you use the unit. Failure to wait 15 mins could give inaccurate test results and damage the sensor!

It is suggested to wait 15 minutes from smoking and drinking, and rinse your mouth with water before using the unit. If you do not wait enough time and perform a test just after drinking, the reading will fluctuate very high reading and then drop gradually. It is due to the strong alcohol residue inside your mouth that enhanced the measured values. In addition, if the alcohol residue inside mouth (without enough wait time) is of too high concentration, it might have potential to damage the sensor.

## Optimal accuracy at room temperature



Room temp.

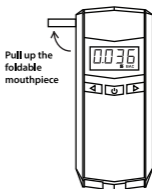
It is recommended to conduct breath tests at room temperature for optimal accuracy. It is also recommended to store the unit in room temperature environment (when not using the unit for long time) to maintain the healthy state of the sensor. Do not use or store the unit under extreme temperature setting. (eg: store inside car under extreme summer or winter temperature)

## Taking a Breath Test

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### Foldable mouthpiece

Pull up the foldable mouthpiece when you are ready to use the unit. Additional mouthpiece could be attached on the foldable mouthpiece for hygiene purpose if you are sharing the unit with another person.



### Breath testing modes (Automatic / Manual)

QM7320 is capable of conducting **Automatic** and **Manual** tests.

**Automatic** test - an easiest way to collect a deep lung sample. The flow system of QM7320 monitors the subject's breath and automatically takes sample near the end of the breath flow.

**Manual** test - normally used only when the subject is unable to conduct an automatic test.

## Conducting a breath test



Press Power button for 2 sec to power on the unit. The unit initiates sensor warm-up process. Timer starts to count down.

### Taking an Automatic test



When you see "rdy" (Ready) with a beep sound, take a deep breath and blow into the mouthpiece moderately, and at a constant speed and pressure.



It displays "[- - -]" and alert a continuous beep, indicates a proper breath flow is detected. At the end of breath flow (~5 sec), the tester would automatically take the breath sample.

'click' 'click'

Blow until you hear the 2 'click' sound (click, click) is complete to signal sampling process is successful.



Tester starts analyzing the collected breath sample and shows "[- - -]" (Calculating). Wait for a short while and the BAC result would be displayed.

### Taking a Manual test



When you see "rdy" (Ready) with a beep sound, apart from let the tester to start collect breath sample automatically, you could also **manually start the**



**breath sample collection process by pressing Left button (Manual test mode).** The manual test mode starts and it displays "[- - -]" and alert a continuous beep sound.



Take a deep breath and blow into the mouthpiece moderately, and at a constant speed and pressure.

'click' 'click'

Blow until you hear the 2 'click' sound (click, click) is complete to signal sampling process is successful.



Tester starts analyzing the collected breath sample and shows "[. ---]" (Calculating). Wait for a short while and the BAC result would be displayed.

## Read the results

BAC result would be displayed in either format of (‰, %, mg/l) according to your country specific BAC display format. In case you would like to change the display format, simply press LEFT button to change between display format.

\* At some occasion, the unit may auto long beep before you blow into the unit and display result as 0.00. This happens because there is a possibility to measure a very low presence of other substance on the sensor after long storage without usage. In this case, simply restart another test.

\* At some occasion, the unit may display result as "DUŁ". This happens because the test has been conducted in either too cold or too hot temperature environment. Please bring the tester back to a normal room temperature environment. You might need to wait few minutes for the sensor inside the tester to stable down to room temperature condition before conduct a re-test.

\* The BAC result will show on display for 30 seconds. The unit will turn off automatically afterwards. You can also turn off the unit at any time by pressing and holding down 'POWER' button for 3 seconds.

## Suggested wait time between tests

After you have completed the first test and would like to take a second test and so on, it is recommended to WAIT AT LEAST FEW MINUTES (PREFERABLY 5-10 MINS) between tests to prevent the sensor being saturated and to keep the healthy state of the sensor.

## Test Record memory mode

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### Recall cumulative test count

During countdown, press 'POWER' button to display the cumulative test count - the number of tests it has performed.

In case you would like to reset this counter, you could long press LEFT button until you see the counter is reset to zero.

## **Recall previous test results (up to 16 records)**

And then press 'POWER' button again to display the latest test record (indicated by the serial number '1' on screen, followed by the corresponding result) Press LEFT button to display the next test records sequentially upto the 16th test record history.

Press RIGHT button to see the records in backward order.

To exit the test record memory mode, press 'POWER' button again back to countdown.

## System messages

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Display	Cause and Course of Action
H	This message means the unit detected an out of range high alcohol concentration (above 4.00‰ BAC / 0.400%BAC / 2.00mg/L ).
FLo	This message (Flow) means insufficient or uneven blowing is detected. Kindly perform another test.
Snr	This message means Sensor Not Ready. It happens when high concentration of alcohol residue or pollutant is found on sensor from last test. Kindly switch off unit and wait few minutes before conduct next test.
rPt	This message (Repeat) means the unit could not complete a test. Kindly repeat another test.
Out	This message means the test has been conducted in either too cold or too hot temperature environment. Please bring the unit back to a normal room temperature environment. Suggest to wait few minutes for the sensor inside the unit to stable down to room temperature condition before conduct a re-test.
Lo	This message means Low Battery. Replace new AA alkaline batteries.

## Precautions

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1. Allow at least 15-20 mins after drinking, smoking before testing. Rinse mouth with water before testing. Blowing residue of high concentration of alcohol in mouth without 15-20 mins wait time might damage the sensor and shorten the sensor life time.
2. For more accurate results, it is recommended to have the unit recalibrated for every 12 months or 300 tests.
3. The unit is designed to be used in a temperature range of 10-40C (Celsius), with optimal accuracy for tests conducted at room temperature (i.e: around 20-26C Celsius).
4. Do not use the unit as a tool to determine you should operate vehicle. The BAC result displayed is for reference only. Manufacturer and dealer disclaims any legal responsibility for the measured test value.

## Notes

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# Specifications

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BAC Detection Range	0.000 to 0.400%BAC
Accuracy	+/- 0.005 %BAC at cal. point at room temp.
Warmup	Within 5 seconds (* at low concentration test)
Response time	Within 10-30 seconds
Sensor	Electrochemical Fuel Cell sensor
Operating temperature	10 - 40°C (50 - 104°F)
Display panel	Digital LCD display with backlight
Digital display	4 digits (%BAC)
Power	One 1.5V AA Alkaline Battery
Battery life	Approx. 500-1000 tests with new battery
Dimensions	118 x 50 x 18 mm

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