



# Breath Alcohol Analyzer

## Quick Start Guide

V1.0.0



# Foreword

## General






This manual introduces the functions and operations of the Breath Alcohol Analyzer (hereinafter referred to as "the Analyzer").

## Model

DHI-ISC-BA02

## Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 <b>DANGER</b>	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 <b>WARNING</b>	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 <b>CAUTION</b>	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 <b>TIPS</b>	Provides methods to help you solve a problem or save time.
 <b>NOTE</b>	Provides additional information as a supplement to the text.

## About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the Analyzer.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

## About the Device

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:.

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

# 1 Product Information

## 1.1 General Information

DHI-ISC-BA02 is a key chain breath alcohol analyzer which is convenient to carry and use at all times. The fuel cell sensor provides superb accuracy and repeatability. OLED shows results with 3 decimals. Alarm threshold is preset and there is low voltage indication.

### 1.1.1 Alcohol and its Effects on the Human Body

Alcohol is absorbed into the bloodstream from the mouth, throat, and stomach. Since alcohol is present in the blood, it can be detected in human breath. Alcohol in the bloodstream cannot undergo digestion and chemical reactions. Alcohol in the bloodstream passes through the membrane of the lung air sacs (alveoli) into the air as the blood flows through the lungs. The concentration of alcohol in the alveolar air is directly related to the concentration of alcohol in the blood. As the alveolar air is exhaled, the breath alcohol analyzer can detect the alcohol in it. The alcohol concentration in the breath is related to the alcohol concentration in the blood. Therefore, a person's BAC can be determined by measuring the alcohol in the breath. The ratio of breath alcohol to blood alcohol is usually estimated to be 2,100:1. All in all, 2,100 milliliters (ml) of alveolar air will contain approximately the same amount of alcohol as 1 ml of blood.

### 1.1.2 Alcohol is a Chemical Substance

Alcohol is a kind of chemical substance (ethanol or ethanol) produced by the fermentation of grapes or grains.

Alcohol is absorbed directly into your blood. From your blood, the fluids in your body tissues absorb alcohol. Your brain is made up of a lot of fluid and will absorb a lot of the alcohol you drink. Your liver eliminates the absorption of alcohol at its speed, and nothing you eat or drink can accelerate this process. Your liver does this by oxidizing alcohol (converting it into water and carbon dioxide).

### 1.1.3 The Way Alcohol Affects the Human Body

Alcohol is a depressant, which has a releasing effect on the muscles in your body. Alcohol makes your eyes' muscles relaxed and hard to focus. Blurred eyesight, double vision even slower brain activity will occur. In conclusion, alcohol has such a bad influence on your judgment, responsiveness, and coordination. Divide the harm of alcohol into two categories below: Eyesight & Mental.

- Eyesight harm
  - Narrow your eye horizon
  - Damage your depth perception
  - Decrease your night vision
  - Increased your sensitivity to glare
- Mental harm
  - Become reckless and conceited
  - Hard to keep balance or respond in time
  - Difficulty in making decisions or judgments

### 1.1.4 The Way Alcohol Affects Driving

Eyesight and brain, as the most important factors in driving safely, will be damaged by drinking.

So if you drink and drive, you are likely to be involved in a serious or fatal collision then damage your valued life! And nothing else can replace its function. Only time can make it.

Here comes the effects of the specific alcohol concentration.

BAC	Effects
0.02-0.03%	Slight happiness, not apparent sadness; lack of sense of shame; some individuals may get Impairment.
0.04-0.06%	Some individuals may get some minor impairment of reasoning and memory; feeling of happiness, relief, and warmth; under this concentration of alcohol, driving skills may be negatively influenced.
0.07-0.09%	Judgment and discipline are impaired. Caution, reason, and memory are impaired; slight impairment of balance, speech, vision, reaction time, and hearing. Feeling of happiness; under this or higher concentration of alcohol, driving skills are always negatively influenced.
0.10-0.12%	Significant impairment of motor coordination and loss of good judgment. Balance, vision, reaction time, speech, and hearing will be impaired. Feeling of happiness.
0.13-0.15%	Happiness is reduced and sadness (anxiety, restlessness) starts to appear. Gross motor impairment and lack of physical control. Fuzzy vision and major loss of balance.

BAC	Effects
0.16-0.20%	Sadness predominates. Nausea may appear.
0.25%	Cannot walk alone without help. Total mental confusion. Sadness with nausea and some vomiting.
0.30%	Consciousness Loss.
0.40% and higher	The onset of coma. Possible death of respiratory arrest.



## **WARNING**




Driving after drinking is not safe. It is safest to drive when you have no alcohol left in your bloodstream.

## 1.2 Checking List

After receiving your product, check against the table below. If there are any problems, contact the after-sales service personnel.

Order	List	Description
1	Overall packaging	Appearance
		Obvious damage
		Packaging
		Accidental impact
		Accessories (list of accessories on warranty card)
		Complete or not
2	Host	Appearance
		Obvious damage
		Model
		Whether consistent with the order



Components	Unit	Quality	Image
Breath alcohol analyzer	Set	1	
Blow tube	Piece	5	
Battery	Section	1	
User's manual	Copy	1	—

### 1.3 Specification

Parameter	Description
Model	DHI-ISC-BA02
Sensor	Fuel Cell
Test Range	0–2.00 mg/L; 0–0.400% BAC; 0–4.00 g/L; 0–440 mg/100 mL
Display	OLED
Accuracy	$\pm 0.010\%$ BAC at 0.050% BAC
Warm Up Time	Less than 5 s
Operation Condition	Temperature: $-10\text{ }^{\circ}\text{C}$ to $50\text{ }^{\circ}\text{C}$
Resolution	0.001% BAC
Battery	1 $\times$ 1.5 V AAA
Dimension	66 mm $\times$ 47 mm $\times$ 19 mm
Weight	35 g

## 2. Appearance and Screen

### 2.1 Appearance



No.	Description	No.	Description
1	Breath Sample Outlet	4	Indicative Light
2	Screen	5	Breath Sample Inlet
3	Button	6	Battery Cover

### 2.2 Screen



No.	Description
1	Battery Capacity
2	Measurement Unit
3	Test Result

## 2.3 Meaning of Display Contents

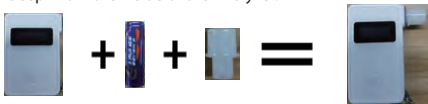
Display Contents	Meaning
0.055	Breath test result
4 digits after starting For example:1988	Residual testing times before next recalibration
WARM	Warming up
CALIB	Calibration
BLOW	Please blow
CALC	Calculation
LOW POWER	Battery low
LOWER POWER Auto Power Off	Battery low and power off
APP MODE	App working mode
K	Constant conversation value between BrAC and BAC

## 3 Device Operation and Configuration

### 3.1 Device Operation

Step 1 Install the battery and blow tube to the Analyzer.

Aim at the blow tube and blow continuously until you hear "Beep" from the inside of the Analyzer.



Step 2 Press and hold the button to power on the Analyzer, and set the alarm threshold.

- When the test result is lower than the set alarm threshold, the indicator light shows green, the specific value will be displayed on the screen.
- When the test result reaches or exceeds the alarm threshold, the indicator light shows red, and the buzzer emits a rapid alarm sound.



Step 3 Press and hold the button for more than 3 s to power off the Analyzer.



- If blowing is interrupted, the red indicator is solid on.
- If there is no operation for a long time, the device will automatically power off.

## 3. 2 Device Configuration

- Entering the configuration interface



- Setting CALIB

When the remaining number of tests is 0, it will prompt Please calibrate CALIB. Cotact after-sales person for calibration.

- Setting Unit

Select the unit from %BAC, ‰BAC, g/L, mg/L, and mg/100mL . It is %BAC by default.



- Setting ALM

Set the alarm threshold. It is 0.050%BAC by default.



- Setting MODE

Select the working Mode from STANDARD, ECO, and DEMO.

-STANDARD: Standard mode (default)

-ECO: Economy mode

-DEMO: Demonstration mode



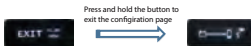
- **Setting K**  
Adjust the conversion coefficient of breath alcohol content and blood alcohol content. This function is designed for maintenance.
- **Setting CLEAN**  
Clear the used times. This function is designed for maintenance.
- **Setting MIC**  
Set sensitivity level of blow. It ranges from 1 through 5. It is 2 by default.



- **EXIT**  
Press and hold the button to exit the configuration interface, and the current program version is displayed.



Only on the CALIB page, can you exit the configuration page.



## 4. App Operation and Configuration

Search for "Alcotecit" in Google Play or Apple Appstore, and connect the Analyzer to the mobile phone app through Bluetooth.

### 4.1 App Operation

Step 1 Download the app.

Step 2 Enable Bluetooth on your smart phone, and open the app.

Step 3 Turn on Analyzer, and it will automatically search for the Bluetooth of the phone.

After the connection is successful, APP MODE page is displayed on the screen of the Analyzer.



Step 4 Tap START on the app, and then keep blowing into the mouth of the blow tube until hearing a "beep" sound. The test result is displayed on the app.



## 4.2 App Configuration

- Configuration page



Tap Setting to go to configuration page.



- UNIT setting



Tap Unit selection on the Setting page to go to the unit setting page.



- ALM setting



Tap Alarm point setting on the Setting page to go to the alarm point setting page.



- MODE setting



Tap Working mode setting on the Setting page to go to the working mode setting page.





## 5 Troubleshooting

Problem	Possible cause	Solution
The Analyzer cannot strat normally.	The battery is not installed correctly.	Install the battery according to the positive and negative polarity.
	The battery is much low.	Replace with a new battery.
	Circuit failure.	Contact distributors or manufacturers for maintenance.

## 6 About Us

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