

## **User's Manual**

The Fuel cell sensor type, **Alcoscan AL4000** is the coin operated breathalyzer. It is used in restaurants, to prevent alcohol related traffic accidents by customers. The instructions are displayed on LCD, the lamp will be lit to show warning depending on the result, making the device easier and more convenient to use.

## **Components**



\*Bulls eye: This is where the customer places the straw to blow into the machine. The sampling time is 3 seconds.

\*Coin Slot: Located on the right side of the machine, it accepts only the coin denomination specified. Others are returned.

\*Straw outlet: This is where the straws emerge from the machine. The straws should be used to perform the test.

\*LCD display: The instructions are displayed on LCD.

## **Instruction Guide**

- 1. KNOW YOUR LIMIT. CHECK YOUR ALCOHOL LEVEL.  
INSERT COIN(S) AND TAKE A STRAW.**

## 2. WARMING UP, PLEASE WAIT....



## 3. BLOW STEADILY UNTIL TONE ENDS

"SAMPLING"

## 4. SAMPLING IS COMPLETED.

"ANALYZING"

If you stop blowing or you do not breathe strongly enough, "**Flow Error**" will be displayed on LCD.

The device does not sense a proper breath sample, please wait and try again and the machine will return to the waiting mode.

This process will continue until you finally obtain a correct result.

## 5. Display the result

When the measurement is complete, the blood alcohol concentration will appear on the LCD display.

Then the guide will indicate whether or not you can drive, aided by lamplights.

\*The message for each level is;



**Good**

Very little or no alcohol has been detected.

Don't drink and drive!



**Warning**

A moderate amount of alcohol has been detected.

Don't drink and drive!



**Danger**

A high level of alcohol has been detected.

Don't drink and drive!

## Precautions

1. During testing, any alcohol traces left in your mouth will increase the value of the blood alcohol concentration level. Remove these traces before testing. Highest

accuracy is achieved 30 minutes after drinking.

2. When you exhale through the straw, some unintentional salivation may affect the built-in equipment. However, please be aware that placing any other liquids or materials into the straw may cause the sensor to malfunction.
3. Cigarette smoking may also increase the blood alcohol concentration value. Allow one minute after smoking before testing.

### Specifications

Indication of B.A.C	0.000 to 5.000 ‰ or 0.000 to 2.500 mg/l or 0.000 to 0.500 %BAC
Warm up time	within 30 seconds
Response time	within 6 seconds at 0.10 %BAC
Sensor	Fuel Cell Sensor
Accuracy	±0.005 %BAC at 0.100 %BAC
Ambient conditions	Operation : 0 to 40 °C Storage : 0 to 50 °C
Display	LCD Module
Result reading	Good: Less than 0.02%BAC(0.00~0.20‰ or 0.00~0.10mg/l) Warning: 0.02~0.05%BAC(0.20~0.50‰ or 0.10~0.20mg/l) Danger: More than 0.05% BAC(0.50‰ or 0.25mg/l)
Power supply	AC 110~220, 50/60 HZ, 0.5A input DC 12V, 1.5A output
Mouth piece	Cylindrical straw
Coin Mechanism	Specify denomination of single coin
Weight	5.85Kg (including DC power supply)
Dimensions(mm)	90*412*258 (W*H*D)

### Setting Guide for Buzzer, Low/High Level

Open the machine and you will see three buttons on the top of the electric circuit board. Press two buttons labeled "SW1" and "SW2" at the same time, hold them down for at least four seconds and then release them. You can see this message, **"To enter the set up mode"**

This changes the status into the set up mode. To go back to the previous mode, repeat the above procedure. The set up mode allows you to work the machine's maintenance.

It is possible to change functions only by pressing "SW1".

If you select the function, please press "SW2".

### 1. Buzzer

You can turn the buzzer sound on or off by using 'On' or 'Off'.

### 2. Low Pass Level

The default number can be set from 0.000 to 0.040%BAC.

### 3. Hi Danger Level

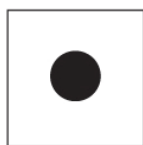
Being above the level entails you are over the legal limit permitted, and that you must not drive.

The default number can be set from 0.050 to 0.100%BAC.

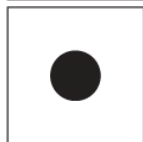
Go to "To enter the set up mode" again if you finish setting the function and then select **EXIT**.

## Maintenance

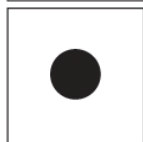
The software product is easy to maintain, and its operating environment can be changed without any special skills. It automatically checks and adjusts the accuracy rate of measurement.



SW1. Total Count



SW2. Set the coin number



SW3. Test

1. If you want to check the total amount of tests, press SW1 and the display window will show the test.

Press SW1 during 2 seconds and the count will be reset to 0, automatically returning to normal operation mode.

Wait a few seconds after testing.

2. When you adjust the number of coins for each test, press SW2 during 2 seconds.

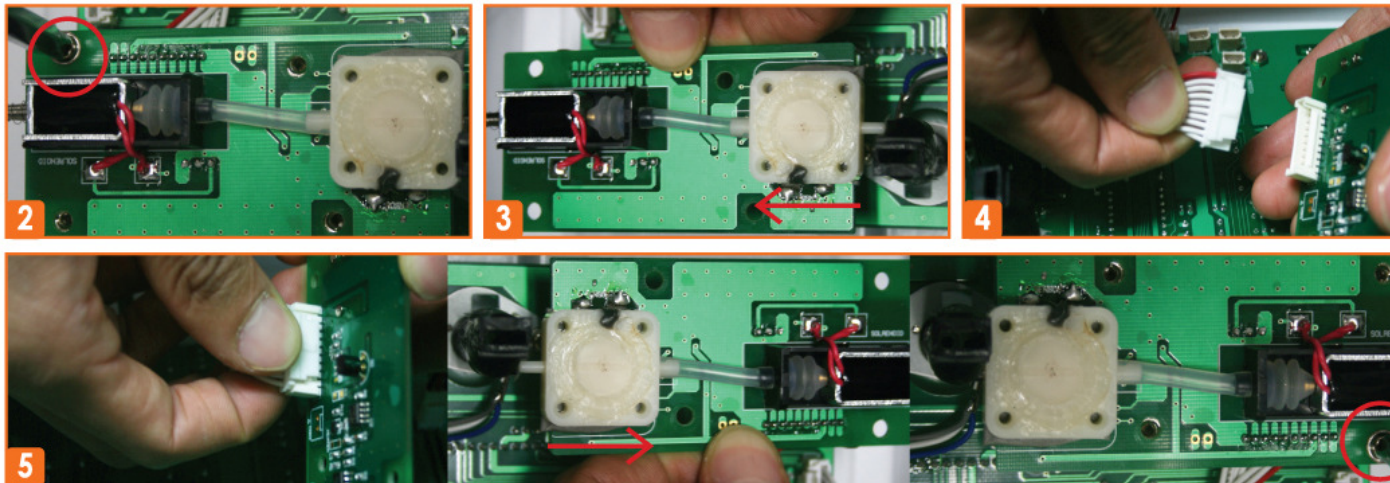
The display window will show "set the coin number", then press SW2 again. It will allow from 0 to 10 coins per test.

If number 2 is entered, that means two coins are required. The default number was set to 1.

## Replacing sensors

If you have trouble with the sensors, you should only replace them with those provided by the manufacturer.

Please refer to the following for replacement issues:



**1. Turn the power off. (Very Important!!)**

2. Open the rear door of AL4000 and unscrew
3. Pull out the sensor board above the arrow direction.
4. Plug out the connector and exchange the new sensor board
5. Plug in connector, push the sensor board and turn 4 screws tightly.
6. Turn on the power and then perform the accuracy adjustment.
7. The replacement concludes.

### Warning Display

**1. Flow error**

If you stop blowing or you do not breathe strongly enough, “**Flow Error**” will be displayed on LCD.

Please wait and try again and the machine will return to the waiting mode.

**2. Coin error**

A. If an inadequate coin is inserted and caught in the slot, you will see this message.

Push the button below the coin slot or check the coin slot form inside.

B. If the coin is full in a coin container, you will see this message.

Please empty the coin container

**3. Sensor error**

A. Check if the alcohol sensor is in the right place on the board.

B. If you still have the error message, replace the sensor.

### Trouble shooting

1. The machine is lugged in, but there is no power.

- a. The power of the product was set at 110V (or 220V) by default. You need to make sure the voltage is correct.
- b. Make sure that the line attached to the power adapter is connected correctly to the power socket on the bottom of the machine.
2. You inserted a coin, but the machine does not work.
  - a. Make sure you use the proper coin. The machine only accepts the specified kind and others are returned.
  - b. Select 'Coin number' using the SW2 button, and then make sure the number set on the display window is correct. As explained above, the machine will work only if you use this number of coins.
3. There is no buzzer sound.

The option for buzzer sound can be selected. In the set up mode, check the status of the set up as explained above.
4. You blow, but the machine does not respond.

Check if the display window shows "Sensor error".

If it does, the machine may have a problem. You need to take the action corresponding to the error number as previously explained.
5. After testing, the machine does not go back to the waiting mode.

The machine displays the result value for about 10 seconds. In order to go back to the measuring mode, the alcohol blown into the machine must be eliminated completely.

The amount of alcohol increases the time required for this elimination to be completed, but it normally does not exceed a minute. If it takes more than one minute, the sensor may be malfunctioning.

You should contact customer services in this case.

### Warranty

The manufacturer warrants the product to be free from defects in workmanship or material (excluding calibration) under normal use for six (6) months from the date of purchase.

The manufacturer's obligation under this warranty is limited to replacing, adjusting or repairing the unit if returned along with proof of purchase. This warranty is void if the unit has been tampered with or maliciously damaged.

### Recalibration & Service

For recalibration and technical support, please contact us at: [www.alkotesteri.net](http://www.alkotesteri.net)