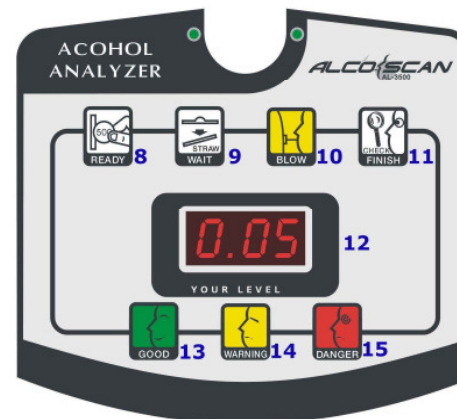
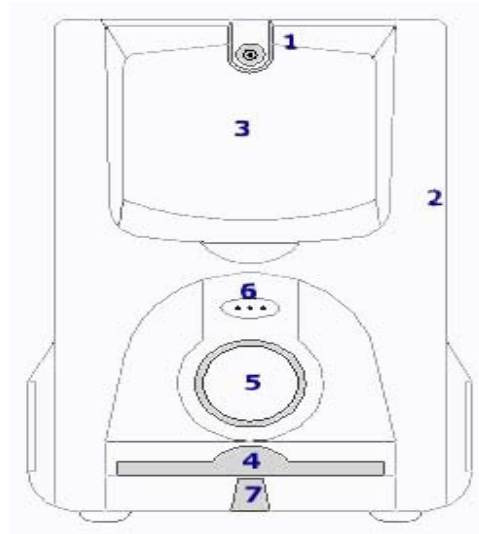


ACE AL-3500 INSTRUCTION GUIDE

Contents

1. Parts and functions
2. Operation and precautions
3. Maintenance
4. Trouble shooting



1. Bulls eye

This is where the customer uses the straw to blow into the machine. The sampling time is 3 seconds.

2. Coin Slot

Located on the right side of the machine accepts only the specified denomination of coin. Others are returned.

3. Display Panel

4. Straw outlet

This is where the straws come out of the machine. The straws should be taken for the measurement.

5. Fan

6. Speaker Hole

7. Power socket

8. "Ready" Lamp

9. "Wait" Lamp

10. "Blow" Lamp

11. "Finish" Lamp

12. Display the alcohol concentration
The display window shows the result of the test, blood alcohol concentration (%BAC, g/l BAC or mg/l BrAC).

13. "Good" Lamp

According to the result, it gives you whether or not you will be able to drive. A resulting BAC less than 0.02%BAC (0.00~0.20g/l or 0.00~0.10mg/l) is indicated by the lamp 13.

14. "Warning" Lamp

the BAC between 0.02 ~ 0.05% BAC(0.20~0.40g/l or 0.10~0.20mg/l) by the lamp 14

15. "Danger" Lamp

finally the BAC more than 0.05% BAC (0.50 g/l or 0.25mg/l) by the lamp 15. Every result will be guided by voice.

ACE AL-3500 is

- n Automatic responding service (ARS)
Guided with ARS system, the process of putting coins into the slot to getting the results is very convenient.
- n Fast recovery speed of the response
The alcohol sensor is adopted with a frontier semi-conductor which measures within 3 seconds. People with small breathing capacities find this very useful.
- n Space-free structure
Easily install anywhere because of the stylish design.

Operation and precautions

n Operation

Step 1. Insert coin into the slot , the following voice message can be heard; "Thanks you. Please take a straw from the tray and wait until the machine counts down to "0" in the display"

Step 2. After taking a straw from the outlet , blow on the straw when you hear following message "Insert the straw securely into the "bullseye" and blow steadily until ton ends" If you blow for more than three seconds, then this message will follow and the measurement will be completed; "Three, two, one, ding-dong. Sampling is completed." If you stop blowing or you do not breathe strongly enough, the following message will be heard "The device does not sense a proper breath sample, please wait and try again" and the machine goes back to the waiting states.

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

Step 3. When the measurement is done, the blood alcohol concentration displays on the display window. Then, along with voice guide, whether or not you can drive will be shown with the lamplights 13, 14, and 15.

Voice message for each level is as follows;

#13 "GOOD"

"The device detects very little or no alcohol. However, if you have had ANY amount of alcohol, it may not be safe to drive"

#14 "WARNING"

"The device detects a moderate level of alcohol. Please wait at least an hour or more and try another test. It may not be safe to drive."

#15 "DANGER"

"The device detects a high level of alcohol. It is NOT safe to drive"



"If you do not blow into the straw, you will see a 10-second timer appear in the display. You must complete your breath test before the timer runs out.". The coin will not be refunded.

Please test within 10 seconds after machine count down to "0".

n Precautions

First, during testing, any alcohol left in your mouth will increase the value of the blood alcohol concentration. Remove it before measurement. The greatest accuracy results 30 minutes after drinking.

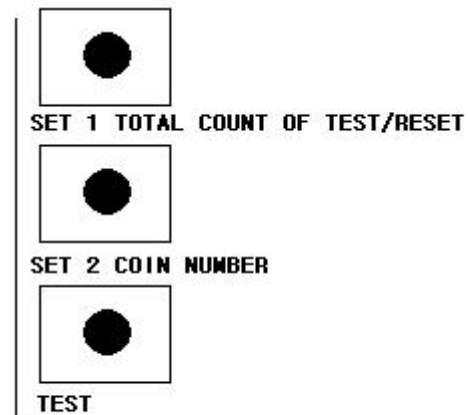
Second, when you breathe out through the straw, some unintentional salivation may affect the specially built-in equipment. However, please be aware that putting other liquid or material into the straw may cause the sensor to malfunction.

Third, cigarette smoking may also increase the value of the blood alcohol concentration. Allow a minute after smoking before testing.

Maintenance

The self-developed frontier 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.



1. If you want to check total amount of test, press set 1 and display window shows the counts of test and press set 1 for 2 seconds, the counts will be reset to zero. It will be return to normal condition

automatically. So, wait for seconds after checking.

2. When you adjust the number of coins for each test, press SET 2 for 2 seconds. The display window shows "CO" and press SET 2 again. It will be available from 1 to 10 coins per test. If the number 2 is entered, that means two coins are required. The default number was set at 1.

Buzzer, Sound on / off and Low & High level set

1. Entering the setting mode: Open the machine, and you will see three buttons on the left side of the electric circuit board. Press two buttons labeled "set1" and "set2" at the same time, hold them down for more than two seconds then release them. This changes the status into the setting mode. To go back to the previous state, repeat the above procedure. The setting mode is a

state allowing you to work on maintenance of the machine. It is possible to change functions only by pressing buttons here.

2. "bu2" (buzzer)
You can turn on or off the buzzer sound by using 'On' or 'Off'
3. "Snd" (sound)
You can select whether or not the voice guide service is automatically performed by selecting 'On' or 'Off'.
4. "Lo" (pass level)
Being below this pass level means that you may drive. The default number was set at "L.02" in case of %BAC unit
5. "Hi" (danger level)
Being above the level, the legal permitted limit, means that you must not drive. The default number was set at "H.05" in case of %BAC unit

"Please refer to the guide on the electric circuit board.!"



***. Replacing sensors**

When you have trouble with sensors, you should replace them with the one provided by the manufacturer. Please refer to the following for replacement:

- a. Turn the power off. (Very Important)
- b. Open the machine and take the alcohol sensor board out from the circuit board.
- c. Replace it with the new one.
- d. Turn on the power and then perform the accuracy adjustment.
- e. The replacement is done.

The machine is equipped with various self-diagnosis functions for easy customer services. When it abnormally operates, the error codes show on two display windows: 'Er#' on window , Error numbers, parts in trouble and the actions to be taken are listed on the following table:

Er#	Parts in trouble	Actions to be taken
SEn	Alcohol sensor	1. Check if the alcohol sensor is in the right place on the board. 2. If you still have the error message, replace the sensor.
3	Coin slot error	If improper coin is inserted and stop in the slot, you can see the Er3. Push the button below the coin slot or check the coin slot inside.

Troubleshooting

1. You plugged in, but there is no power on.

First, the power of the product was set at 110V (or 220V) as default. You need to affirm the voltage of the power lines.

Second, make sure that the line attached to the power adapter is well connected to the power socket on the bottom of AL-3500.

2. You inserted a coin, but the machine does not work.

First, make sure you use the proper coin. The machine only accepts the specified kind and others are discharged.

Second, select 'Co' with SET 2 button, and then affirm the number set on the display window. As explained above, only if you use this number of coins will the machine will

operate.

3. There is no voice guide or buzzer sound.

The option for voice guide and buzzer sound can be selected. In the setting mode, check the status of the setting as explained above.

4. You blow, but there is no response from the machine.

First, check if the display window shows "SEn". 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 measurement, the machine does not go back to the waiting status.

The machine displays the result value for about 10 seconds. In order to go back to the measuring state, the alcohol blown into the

machine must be removed completely. The amount of alcohol increases the elapsing time for this removal, but it does not usually exceed a minute. So if it takes more than a minute for the removal, the sensor must be malfunctioning. You should contact customer services for this problem.