

# KENWOOD

Breath Alcohol Tester

# CAX-AD100

## INSTRUCTION MANUAL

JVCKENWOOD Corporation

© 2021 JVCKENWOOD Corporation

### BEFORE USE

To ensure proper use, please read through this manual before using this product.

It is especially important that you read and observe WARNING and CAUTION in this manual.

Please keep the manual in a safe and accessible place for future reference.

### Features of this product

This product measures the concentration of ethanol contained in exhaled breath and displays it as a digital number. You can check for the presence of alcohol by simply blowing on the sensor part.

## IMPORTANT SAFETY INSTRUCTION

### ▲ WARNING

- The numerical value displayed on the breath alcohol tester "CAX-AD100" is a guide, it does not judge whether you can drive a car or work on a machine. It cannot be used intentionally as a tool to help any illegal activity such as drunk driving, or directly used for finding legal facts in an accident or damage case. Regardless of whether or not this product is used, the parties involved in manufacturing and sales are not responsible for any acts or damages that are not legally permitted.
- When using this product for operation management and business management, never operate or make a judgment that depends only on this measurement results. We are not responsible for any damage or trouble caused by using this product.
- Do not use this product while driving a vehicle. Also, never use this product in games such as compete for the alcohol concentration in the breath. There is a risk of death or serious injury if you deliberately drink alcohol to increase alcohol levels.

### ▲ CAUTION

#### ● Precautions for use

1. Do not disassemble, modify or wash with water.
2. This product is a precision electronic device. Avoid any strong impact.
3. Do not sit down with this product in your trouser or skirt pocket as it may be damaged.
4. Do not handle with wet hands.
5. When you blow into it, please try not to release saliva from your mouth.
6. When using the hand strap, do not swing the main unit by holding the hand strap. It may cause harm to you or anyone nearby, or it may cause a malfunction of this product.
7. Do not spray cigarette smoke or spray gas on the sensor. It may cause a malfunction.
8. Do not spray high concentration alcohol (ethanol) continuously. It may cause a malfunction.
9. Be careful not to pinch your fingers when opening or closing the cover or attaching the attachment.
10. Avoid measuring in places with odors, windy places, and hot and humid places.  
(Appropriate operating temperature 0 °C to 35 °C)

#### ● Precautions for storage

1. Avoid humidity and direct sunlight, and do not store in a potential hot place such as in a car during a sunny day.  
(Storage temperature -10 °C to 60 °C)
2. Do not put perfume, cosmetics, etc. in a bag or case together, or store in a place with a strong odor.
3. Keep out of the reach of children.
4. Do not store near an air conditioner.
5. If you do not use the product for a long time, remove the battery.

## ⚠ CAUTION

### ● Precautions for cleaning

1. If the display panel becomes dirty, immediately wipe it with a soft, dry cloth.  
\* Do not use boiling water, water, thinner, etc.

### Precautions when using after opening a new product or after long-term storage

Due to its characteristics, this product may be in a kind of standby state at the time of shipment or when it has not been used for several days. When using this product after opening a new product or storing it for a long period of time, do the following before measuring:

- ✓ Slide the sensor cover to the top and shake this product 2-3 times to remove odors and moisture accumulated inside.
- ✓ Perform "blank measurement" (press the ON / OFF switch to operate once or twice).

Even if it is stored in a bag or case, some odorous components may adhere to the sensor and it may not be possible to measure accurately. Please use after performing blank measurement as described above.

If the product is used after opening a new product or after long-term storage without performing blank measurement, an error message may be displayed even if exhaled breath is blown normally. Therefore, perform blank measurement before use.

### For continuous measurement

When measuring continuously, shake the main body lightly 2-3 times to remove the miscellaneous gas accumulated inside it (Do not shake strongly).

If alcohol is detected, please measure it after a while (Errors are likely to occur until the sensor is in the initial state).

## Understanding Breath Alcohol Tester

This product uses a high-sensitivity gas sensor that detects alcohol (ethanol). The gas sensor is a consumable item, not a permanent one. When using the product daily, any deposits on the surface of the sensor element (saliva, atmospheric gas, dust, condensation, tobacco tar, etc.) can cause erroneous measurements and measurement errors (no reaction).

In addition, due to the characteristics of the sensor, accuracy cannot be maintained if more than one year has passed since it was purchased or used, or if it is measured more than 5,000 times. If you want to continue using this product, we recommend that you replace it with a new one.

There are individual differences in exhalation. Depending on your physical condition, constitution, time of day, etc., this product may detect alcohol (ethanol) even though you are not drinking alcohol.

Please use it after understanding these things as well.

### \* Things that may react with something other than alcohol :

- ① After meals (especially fermented foods) / ② Immediately after ingesting energy drinks and beverages / ③ Immediately after smoking / ④ After taking some medicine / ⑤ Immediately after eating gum or tablet / ⑥ After using toothpaste or mouthwash / ⑦ If you have bad breath / ⑧ Fermentation gas from inside the body.

If you experience any abnormalities such as "alcohol reaction does not occur even though you are drinking" or "alcohol reaction occurs even though you are not drinking", discontinue use. If the troubleshooting does not help, please contact the store where you purchased the product or the JVCKENWOOD Customer Support Center.

### Information on Disposal of Old electrical and electronic Equipment and Batteries (applicable for EU countries that have adopted separate waste collection systems)

Products and batteries with the symbol (crossed-out wheeled bin) cannot be disposed as household waste.

Old electrical and electronic equipment and batteries should be recycled at a facility capable of handling these items and their waste byproducts.

Contact your local authority for details in locating a recycle facility nearest to you.

Proper recycling and waste disposal will help conserve resources whilst preventing detrimental effects on our health and the environment.



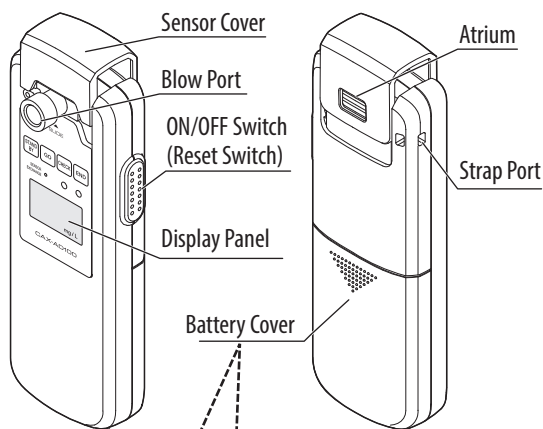
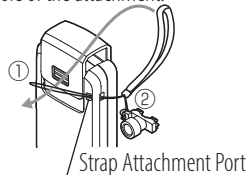
## Names of each parts

There are two types of measurement methods for this product.

- "Straw method" using accessory attachments and commercially available straws.
- "Open blow method" that blows directly onto the product.

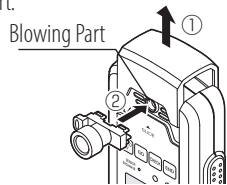
### How to attach the strap (accessories)

- 1 Pass the longer string through the strap port of the product body and tie it.
- 2 Attach the shorter string to the strap hole of the attachment.



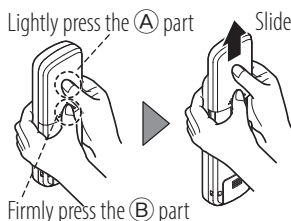
### How to insert the attachment (accessory)

- 1 Slide the sensor cover upward.
- 2 Insert the attachment into the blowing part.



### How to remove the battery cover

- 1 Turn the product body upside down and hold it with both hands.
- 2 Lightly press the (A) part with your thumb, and slide it upward while firmly pressing the (B) part with your other thumb.



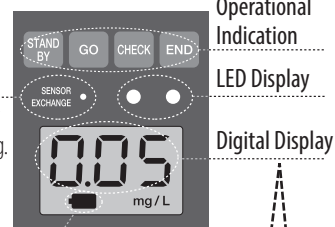
### Display Panel Description

#### Sensor Exchange Mark

Notified the sensor lifetime by blinking.

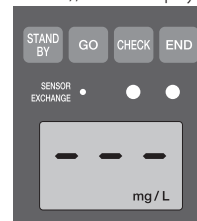
#### Battery Display

and red LEDs flash together when the battery is dead. When the display appears, replace the battery.



### Error Display

If the measurement fails (accurate measurement was not performed), "---" is displayed



## How to use

**1** Remove the battery cover and set the battery. Carefully set  $\oplus$   $\ominus$  and attach the battery cover. Be sure to set the direction of the battery  $\oplus$   $\ominus$  pole correctly.

**2** Slide the sensor cover upward to insert the attachment.

- For how to attach the attachment, see the names of each parts.
- Measurement by direct blowing is also possible without using an attachment.

**3** Insert a commercially available straw and press the ON / OFF switch on the side of the main unit to turn on the power.

The countdown of the digital display starts at the same time as the "STANDBY" of the operation display blinks. (14 • 13 • 12 • ... • 1 or 6 • 5 • 4 • ... • 1)

Commercially available straw

- Only use a straw with a diameter of 4 to 6 mm.
- When measuring by direct blowing, do not attach an attachment or a commercially available straw, and turn on the power as it is with the sensor cover slid upward.

**4** Blow your breath into the product.

The "GO" lamp flashes, and at the same time as the beeping sound, blow into the inserted straw for "4 seconds". Please continue blowing until you hear next beep.

Keep blowing stably for about 4 seconds. If you blow all at once, your breath will not last for 4 seconds. Blow with strength (expiratory volume) that keeps you breathing for 4 seconds.

1st BEEP → 2nd BEEP

Blow "Fuuuu" for 4 seconds

In the case of direct injection, use the following method.

1cm Blow "Huhhhh" for 4 seconds

In case of measurement error

**5** When the sensor detects it, "CHECK" of the operation display blinks and measurement starts.

**6** When the measurement is completed, "END" of the operation display blinks to display the measured value.

The green LED lights up when the measured value is 0.00 mg/L. The red LED lights up when the measured value is 0.05 mg/L or more.

LED lights up

**7** After measuring, press the power button to "OFF". Remove the attachment and return the sensor cover to the bottom.

If the power supply is left in the "ON" state, it will automatically turn the power supply "OFF" after 1 minute.


If the measurement cannot be performed accurately, an electronic sound is heard three times, the red LED is lit, and the measurement display indicates "---". Press the power button to manually switch "OFF" the power. Press the power button again to turn the power to "ON" and remeasure.

- Is the sensor cover open?
- Are you blowing for 4 seconds?
- Is the straw inserted firmly?
- Is the measurement conducted in a place where there is no odor or gas around?




# Battery Replacement and Sensor

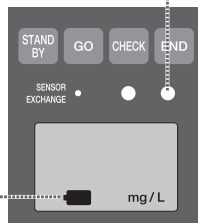
## When the battery runs out

When the battery runs out,  and the red LED will blink simultaneously. If you see this, replace the batteries.

[Please use AA alkaline batteries] (Do not use manganese batteries or rechargeable batteries)

When replacing the batteries, allow 20 seconds with the batteries removed, and then insert the new batteries.

 symbol will be reset and disappear.

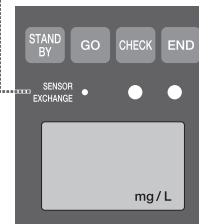


## About the "SENSOR EXCHANGE" indicator

When you use this product more than 5,000 times, the "SENSOR EXCHANGE" mark blinks.

Since the measurement accuracy of the sensor will not be maintained, it is recommended to replace this product.

- Even if it is used infrequently, it is recommended to replace it with a new one after using it for one year.



## ⚠ CAUTION

- Risk of fire or explosion if the battery is replaced by an incorrect type. Ensure to replace only with the same type.
- Risk of fire, explosion or the leakage of flammable liquid or gas if the battery is left in an extremely high temperature surrounding environment and/or subjected extremely low air pressure. The battery pack or batteries shall not be exposed to excessive heat such as sunshine, fire or the like.
- Risk of fire, explosion or the leakage of flammable liquid or gas if the battery is disposed into fire or a hot oven, recharged, shorted, mechanically crushed or cut of the battery.
- If spilled fluid comes in contact with your eyes or on clothing, immediately rinse with water and consult a physician.



**Declaration of Conformity with regard to the EMC Directive 2014/30/EU**  
**Declaration of Conformity with regard to the RoHS Directive 2011/65/EU**

### Manufacturer:

JVCKENWOOD Corporation  
 3-12, Moriya-cho, Kanagawa-ku, Yokohama-shi,  
 Kanagawa, 221-0022, JAPAN

### EU Representative:

JVCKENWOOD Europe B.V.  
 Amsterdamseweg 37, 1422 AC Uithoorn,  
 THE NETHERLANDS

## Product Specifications

Power supply	DC 3 V two AA alkaline batteries
Battery life	About 1,200 times
Operating temperature	0 °C to 35 °C (no condensation)
Storage temperature	-10 °C to 60 °C (no condensation)
External dimensions	122 x 45 x 21 mm
Mass / Weight	Approximately 92 g (including batteries)
Main materials	Body case: ABS resin
Detection method	Semiconductor gas sensor
Display method	LCD digital display 0.00 mg/L and 0.05 mg/L to 1.00 mg/L (If less than 0.05 mg/L, 0.00 mg/L will be displayed) LED 2-stage display (Green/Red)
Sensor life	Purchased and used 1 year or 5,000 times
Accessories	Instruction manual (warranty), attachment, strap, Two AA alkaline batteries

\* The contents and specifications are subject to change without notice.



**Declaration of Conformity with regard to the Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)**

**Declaration of Conformity with regard to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (S.I. 2012/3032)**

### Manufacturer:

JVCKENWOOD Corporation  
 3-12, Moriya-cho, Kanagawa-ku, Yokohama-shi,  
 Kanagawa, 221-0022, JAPAN

### UK Importer:

JVCKENWOOD U.K. Limited  
 12 Priestley Way, London, NW2 7BA,  
 UNITED KINGDOM

## Troubleshooting

<b>Cannot turn on</b>	Are there batteries? ► Set two AA alkaline batteries (included) correctly. Is the plus/minus of the battery set in reverse? ► Please set plus and minus correctly.
<b>Error display "----"</b>	Are you blowing properly? Is there any odor or gas at the measurement location? ► Please refer to "How to use" in this manual and measure correctly.
<b>The measured value is not stable.</b>	Are you using it in a windy place or a place with a strong odor? ► Please change the location and measure.
<b>Getting an alcohol reaction even though not drinking.</b>	Is there any odor remain inside the product? ► Shake this product lightly 2-3 times. Are you measuring immediately after using mouthwash or smoking? ► Please refer to "Understanding Breath Alcohol Tester" in this manual.
<b>No alcohol reaction even though drinking.</b>	The blown breath may not have passed through the sensor part. ► Refer to step 4 of "How to use" in this manual, and blow properly.