

DIGITAL PERSONAL BREATHALYZER

AlcoMate[®] Revo (Model TS200)



Revo (Model TS200) Operator's Manual

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The AlcoMate Revo (Model TS200) is a breath alcohol tester that calculates alcohol content in g/dL (grams of alcohol per deciliter of blood, commonly called “%BAC” in the United States) based on a breath sample taken by the device. The Model TS200 features top-grade fuel-cell alcohol sensing accuracy in a compact, easy-to-use portable design. The device also incorporates patented pre-calibrated replaceable sensor module technology, which means that unlike other typical breathalyzers, it does not have to be mailed back for calibration service. To ensure accuracy, users of the Model TS200 in situations directly overseen or mandated by the US Department of Transportation (DOT) are required to conduct accuracy checks before and after testing according to the manufacturer’s QAP (Quality Assurance Protocol) for the Model TS200.

- Rear (Battery) Cover Removal -



Carefully use a flathead screwdriver (approx. 1/8" head width) to pry open the rear cover at the notch located at the bottom. You can then fully remove the cover by separating it from the device along one of the longer (vertical) edges. The rightmost image above shows the back of the device with rear cover fully removed.

- Rear (Battery) Cover Removal -



Remove the rear cover, then remove the batteries. Use your finger to hold down the small tab highlighted to the left, and pull the sensor module straight down. You can then simply lift the module up from the device.



To install a new sensor module, place the portion of the sensor module highlighted to the left flush against the section of the slot also highlighted. You can then simply slide the sensor module up into place, as shown by the green arrow. Ensure the tab is locked in place against the small gray locking nub near the center of the device.

- Device Setup and Operation -

1. If batteries are not already installed, remove the rear cover of the device using the method described on the previous page, then insert two 1.5V AAA batteries (included) into the battery slot.
2. Snap the rear cover back in place.
3. Press and hold the power button to see the current cumulative test count in the screen; releasing the button begins the warm-up countdown.
4. Wait for the display to show "blow".
5. You are now ready to test. Please insert a mouthpiece into the mouthpieces slot.
6. Blow sharply into the device until you hear the first audible click and continue to steadily blow until you hear the second audible click, which signals that sampling is complete. You should continue to blow more than 3 seconds until you hear the second audible clicks.
7. After a successful sample, the device will analyze the sample for a few seconds (you will see the digit 0 move back-and-forth in the display).
8. Your reading will be displayed on the screen in g/dL ("%BAC"). While the result is being displayed, you will see the "WAIT" indicator light on and also hear a short series of beeps.
9. The device will shut off automatically within 15 seconds, showing "Out" in the display.

Important Sensor Module Details

The shelf life of an unused but properly stored sensor module is 12 months; once the sensor module is installed, it should be replaced within 12 months of installation or approximately 1000 tests, whichever comes first. Proper storage includes avoidance of temperatures beyond operating range (10-40 degrees Celsius), and avoidance of moisture. Sensor modules are also supplied in air-sealed bags (to be opened only and strictly upon immediate installation), in order to aid in proper storage. However, the above storage guidelines are recommendations only, and the QAP alone should be used to determine accuracy of the Model TS200.

The sealed containing bag for each sensor module is labeled with a serial number and discard date, with an indication that the module must be installed by this date or otherwise discarded altogether. Each sensor module itself is labeled with a matching serial number and an additional space upon which the user is required to record the date of installation, as well as a statement that the sensor module will expire 12 months after this recorded date or approximately 1000 tests, whichever comes first.

- Warnings and Error Codes -

Warnings and Precautions

- **WAIT AT LEAST 20 MINUTES AFTER EATING OR DRINKING BEFORE TESTING.** A breathalyzer examines "lung air" samples, not "mouth air" to calculate alcohol content. Any "contaminants" in the mouth, including alcohol, food, smoke, or even excess saliva, may interfere with testing. This includes alcohol-based mouthwash or similar products. **This is the most common cause of improper use and incorrect results.**
- Avoid testing in high wind or enclosed spaces. Poor ventilation may also lengthen the time required for warm up between tests.
- Do not blow smoke, saliva or other contaminants into the mouthpiece, as the sensor may become damaged.
- **Do NOT use the Revo (Model TS200) as a tool to drink and drive.**
- Keep out of extreme temperatures and out of the reach of children.
- To maintain accuracy, the sensor inside the Revo (Model TS200) must be recalibrated every 1000 tests or at least once a year (whichever comes first). Large numbers of "high positive" (high alcohol) readings may require recalibration of the sensor much sooner than normally expected.
- The TS200 is an alcohol screening device, and as such the displayed results do not carry any legal status whatsoever, and are not admissible as court evidence.

Troubleshooting

- **WARNING DISPLAY "Flow"**: If you see "Flow" in the display, the breath sample was not strong or long enough for measurement. Please try again and make sure the breath is strong and steady during sampling. As soon as you start blowing into the device, you will hear a long beep indicating how long you should blow.
- **WARNING DISPLAY "bAt"**: If you see "bAt" in the display, the battery power is low. Please replace the batteries with a new pair. Make sure to properly align the batteries by looking at the +/- marks.
- **WARNING DISPLAY "Err2/Err4"**: If either of these codes appear in the display, the device is reporting a general problem with the alcohol sensor, or that the device has been physically damaged. Please replace sensors or contact AK GlobalTech Corp.
- **WARNING DISPLAY "Err6"**: The device is reporting that the sensor module is either improperly connected or missing altogether. **It is very important when installing a sensor module that the 9-pin contacts are securely in position and that the central tab is locked in place.**
- **WARNING DISPLAY "Err9"**: Power source is too weak to complete operation. Please replace batteries with a new pair.
- For the other troubles, please contact AK GlobalTech at support@alcomate.net, along with your error codes and photos if available.

- Specifications -

Alcohol Sensor	Advanced Electro-Chemical Fuel-Cell
Detection Range	0.000 -0.400 g/dL (Accuracy to 0.02)
Warm-up Time	5 seconds - 2 minutes
Response Time	Within 10 seconds at 0.100%BAC
Calibration	In lieu of traditional calibration, the sensor module must be calibrated every 1,000 tests or at least once yearly, whichever comes first, in situations directly overseen or mandated by the DOT, users must perform calibration checks according to the manufacturer's QAP for the Revo TS200.
Breath Sampling	Sample complete on audible click
Sensor Accuracy	+/-0.005 up to 0.100 g/dL
Display	4-Digit LCD
Battery	Two 1.5V AAA Alkaline (included)
Weight	3.0 oz
Dimensions	4.0 x 2.0 x 0.7 in
Casing	Gray ABS Plastic
Operating Temperature	32-104 degrees Fahrenheit or 0-40 degrees Celcius
Warranty	One (1) Year (Refer to "Warranty" section)

- Limited Warranty -

Manufacturer's Warranty Coverage

AK GlobalTech Corporation warrants the Revo (Model TS200) to be free from defects in workmanship or material, excluding spent or used sensor modules, under normal use for one (1) year from the date of purchase. AK GlobalTech's obligation under this warranty is limited to replacing, adjusting or repairing the unit only if returned along with proof of purchase, complete shipping address, daytime contact phone number and written explanation. The warranty is void if the unit has been tampered with (excluding the opening of the rear cover as specifically described in this manual) or maliciously damaged. The calibration of the device is a required periodic maintenance procedure required of any and all breathalyzers in order to maintain accuracy (every 1,000 tests or at least once per year, whichever comes first), and as such, is not a warranty service. Warranty does not include shipping costs to AK GlobalTech. Warranty is non-transferable.

Disclaimer

AK GlobalTech makes no warranties, express or implied, as to the ability of this product to determine whether, or the extent to which, a test subject's mental or physical functioning, or judgment, may be impaired by blood alcohol including whether the test subject is intoxicated under any definition of that word. AK GlobalTech expressly disclaims any liability for direct, indirect, incidental, special, or consequential damages of any nature under any legal theory. Any act or failure to act based on a reading from this product shall be at the test subject's or user's own risk.

AK GlobalTech assumes no responsibility for consequences to or of test subjects who use this product and later are shown to have been under the influence of alcohol or to have had their judgment or any mental or bodily function impaired by alcohol.

Correlation between breath alcohol content and blood alcohol concentration depends on many variables, including environmental factors (such as air quality, wind, humidity, temperature, etc.) and health conditions of the test subject. A low g/dL or %BAC reading does not mean that the test subject's physical or mental performance or judgment (including reaction times) can respond to an emergency. The concentration of alcohol in the blood of a test subject cannot be exactly determined by using a breath alcohol screening product.

AK GlobalTech does not warrant that the operation of the product will be error-free. AK GlobalTech is not responsible for any consequences arising from failure to follow instructions or relating to the product's use. This warranty does not apply: (a) to consequences caused by accident, abuse, tampering,

misuse, flood, fire, earthquake or other external causes; (b) to consequences caused by operating the product outside the permitted or intended uses described by AK GlobalTech; (c) to consequences caused by service performed by anyone who is not an official representative, reseller or distributor of AK GlobalTech; or (d) to a product or part that has been modified to alter functionality or capability without the written permission of AK GlobalTech.

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EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, AK GLOBALTECH IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES UNDER ANY LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE OR INCOME; LOSS OF ACTUAL OR ANTICIPATED PROFITS (INCLUDING LOSS OF PROFITS FROM A CONTRACT); LOSS OF THE USE OF MONEY; LOSS OF ANTICIPATED SAVINGS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL, OR LOSS OF REPUTATION.

Some countries, states and provinces do not allow the exclusion or limitation of incidental or consequential damages or allow limitations on how long an implied warranty or condition may last, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary by country, state or province. This Limited Warranty is governed by and construed under the laws of the country in which the product purchase took place.

Technical Support

AK GlobalTech Corporation
21 Grand Ave., Suite 102, Palisades Park, NJ 07650
800-943-1016 Toll-Free (9A-6P EST)
201-943-9411 Office (9A-6P EST)
201-943-8828 Fax
<http://AKGlobalTech.com>
support@AlcoMate.net