

# BACtrack® S80

Breathalyzer



User Manual

## TABLE OF CONTENTS

This device is intended to measure alcohol in human breath. Measurements obtained by this device are used in the diagnosis of alcohol intoxication.

<b>Introduction</b> .....	1
<b>Dose-specific Effects of Alcohol</b> .....	4
<b>Preparation</b> .....	6
<b>Components Diagram</b> .....	6
<b>Operation</b> .....	7
<b>Specifications</b> .....	10
<b>Precautions</b> .....	11
<b>Verification and Calibration</b> .....	12
<b>One-Year Limited Warranty</b> .....	13

***Track your B.A.C. – BACtrack!***

## INTRODUCTION

The **BACtrack® Select S80 Breathalyzer** is an alcohol screening device, used for the detection of alcohol in the breath. The BACtrack provides a digital result, displaying an estimate of the subject's BAC (Blood Alcohol Content). Before you begin testing, it is very important to read the entire owner's manual. It is also very important to have the instrument calibrated periodically as recommended on page 13. Failure to do so may result in readings that are inaccurate.

### **Alcohol and its effects on the human body**

When a person consumes alcohol, the alcohol is absorbed from the mouth, throat, stomach and intestines into the bloodstream. The alcohol in the bloodstream exchanges with air deep in the lungs. The percent of alcohol in a person's blood (BAC) is proportional to the percent of alcohol in a person's breath (BrAC). The BACtrack measures a subject's deep lung air alcohol level and converts it to the estimated BAC.

"BAC" means Blood Alcohol Concentration. It is measured in %.

### **How does alcohol affect my body?**

Alcohol is a depressant. It has a relaxing effect on the muscles in your body. The muscles of your eyes relax and lose focus. Your eyesight will become fuzzy and you may experience double vision. Brain activity is slowed. Your judgment, reflexes, and coordination are all negatively

affected. Some vision impairments that occur when you have been drinking include:

- Narrowing of your field of vision
- Reduction in your depth perception
- Decreased ability to see in darkness
- Increased sensitivity to glare and a longer time for your eyes to readjust from the glare

Some mental (brain) impairment can occur when you have been drinking, including:

- Reduced awareness of danger
- Becoming overly confident and reckless
- Difficulty in making decisions
- Reduction in balance
- Slowed reflexes
- Impaired judgment

Variations among individuals and other factors, such as altitude and air temperature, affect the degree of intoxication. Some individuals may become intoxicated at low BAC levels. A low BAC on a breath alcohol tester does not mean that a person's reaction times can respond to any emergency encountered. Individuals should not drink alcohol and drive or use any machinery after consuming alcohol.

## **How does alcohol affect my driving?**

We can't emphasize enough how dangerous it is for you to drink and drive. Your vision and your brain are the most important factors in driving safely. If you jeopardize either by drinking, and then you drive, you are likely to be involved in a serious or fatal collision.

**There is no safe way to drive under the influence of alcohol. Even one drink can make you unsafe.**

From California Department of Motor Vehicles  
(<http://www.dmv.ca.gov>)

## DOSE-SPECIFIC EFFECTS OF ALCOHOL\*

BAC	Dose-Specific Effects
0.02-0.03%	Slight euphoria. Loss of shyness. Depressant effects are not apparent. Impairment possible in some individuals.
0.04-0.06%	Feeling of well-being, relaxation, lower inhibitions and sensation of warmth. Euphoria. Some minor impairment of reasoning and memory. <b>Lowering of caution. Driving skills may be impaired at this level of intoxication.</b>
0.07-0.09%	Slight impairment of balance, speech, vision, reaction time, and hearing. Euphoria. Judgment and self-control are reduced. Caution, reason and memory are impaired. <b>Driving skills are always impaired at this level of intoxication and higher.</b>
0.10-0.12%	Significant impairment of motor coordination and loss of good judgment. Speech may be slurred. Balance, vision, reaction time and hearing will be impaired. Euphoria.
0.13-0.15%	Gross motor impairment and lack of physical control. Blurred vision and major loss of balance. Euphoria is reduced and dysphoria (anxiety, restlessness) begins to appear.

BAC	Dose-Specific Effects
0.16-0.20%	Dysphoria predominates. Nausea may appear.
0.25%	Need for assistance in walking. Total mental confusion. Dysphoria with nausea and some vomiting.
0.30%	Loss of consciousness.
0.40% +	Onset of coma. Possible death due to respiratory arrest**.

\* The effects of alcohol intoxication are greatly influenced by individual variations among users. Some users will be intoxicated at a much lower BAC than shown on the previous page.

\*\* Death can occur at a lower BAC in some individuals.

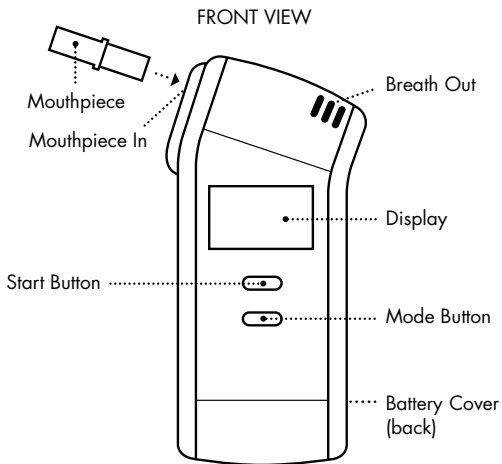
The generally accepted legal standard for alcohol intoxication in the United States is 0.08%. However, your driving skills can be impaired at any level above 0.00% BAC. It is never safe to drink any amount of alcohol and drive.

## PREPARATION

### Installing the Battery

Install two AA batteries in the battery compartment.

## COMPONENTS DIAGRAM



## OPERATION

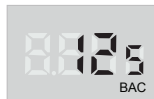
### IMPORTANT!



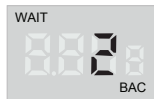
Test subjects should wait 20 minutes after eating, drinking, or smoking before blowing into the BACtrack Breathalyzer. Failure to wait 20 minutes can provide inaccurate test results and damage the sensor.



**STEP 1 :** Insert a mouthpiece into the Mouthpiece In slot. Do not force it - mouthpiece will only insert a few millimeters.



**STEP 2 :** Press the start button. The BACtrack will quickly display the total number of tests performed, and then begin a countdown.



**STEP 3 :** When the countdown is almost completed, begin to inhale a deep breath.



**STEP 4:** When the countdown reaches zero, “START” will flash on the screen and three lines will display. Blow firmly through the mouthpiece for five seconds while the unit emits a long beeping sound. Stop blowing as soon as the beeping sound stops.



**STEP 5:** Once the sensor has analyzed the breath sample, the estimated BAC value is displayed.

## Error Notification



If a user does not blow a sufficient breath sample, the LCD will display “Flu”. Press start to restart the countdown cycle and retest. Please ensure that you are blowing firmly into the device for the entire five seconds.



If there is no breath sample blown within 15 seconds, the LCD will display “Out”. Press start to restart the countdown cycle and retest.



If the unit is powered on outside of the acceptable temperature range (0-40 °C or 32-104 °F) the unit will display Out°F and testing cannot be performed.



If the battery indicator display is empty, install two new alkaline AA batteries.

## Advanced Menu Options

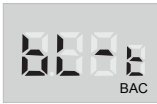
The BACtrack offers several user-adjustable features through Menu Mode. To enter Menu Mode, turn on the BACtrack and during the countdown hold MODE for 5 seconds. To move between Menu Mode options, press MODE.



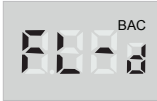
**Units of Measure:** By default, the BACtrack will display test results in %BAC, which is the standard in North America and in many other regions. To change to a different unit of measure, press START. You can select Promille (0/00) or mg/L as alternate units of measure.



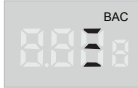
**Audible Warnings:** By default, the BACtrack does not sound an audible warning after a specific %BAC result. To set an audible warning after a specific %BAC test result, press START to cycle through %BAC values.



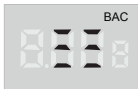
**Blow Time:** The default blow time is 5 seconds. This longer blowing time generally provides a deep lung air sample and a more accurate test result. To adjust the blow time, press START.



**Flow Detection Settings:** Use this option to adjust how hard a user is required to blow. Press Start to change the settings.



*Standard level flow detection*  
This is the default setting for the unit. This level requires a less forceful breath by the user



*Medium level flow detection*  
Press Start to change to the medium level flow setting.



*High level flow detection*  
Press Start to change to the high level flow setting. This level requires a more forceful breath by the user.



*User activated test mode*  
Press Start again to change to the USER activated test mode. When testing in this mode the operator must press Start during a breath sample to activate the pump and perform a test.

## SPECIFICATIONS

Dimensions	2.3 x 4.8 x 0.8 inches (5.8 x 12.2 x 2.2 cm)
Weight	4.8 oz (136 g) with mouthpiece and batteries
Sensor Technology	Xtend™ electro-chemical fuel-cell technology
Detection Range	0.000 – 0.500 %BAC
Test Count	Displays total number of tests performed
Power Supply	Two AA alkaline batteries, included
Battery Life	Approximately 1500 tests
Warm Up Time	10-30 seconds, depending on last use
Response Time	3 seconds
Sensor Accuracy	+/- 0.005 at 0.050 B.A.C
Operating Temperature	32-104 °F (0-40 °C)

This device has been tested using NHTSA/DOT procedures. In this testing, the accuracy of this device was established at Blood Alcohol Concentrations (BAC) of 0.008 and 0.032, but not at greater concentrations. Additional laboratory testing has been performed at concentrations ranging from 0.00 – 0.40% BAC.

## PRECAUTIONS

1. Wait at least 20 minutes after drinking, eating or smoking before testing. Not observing this waiting period can cause inaccurate readings and damage the sensor.
2. Do not blow smoke, food, or liquids into the BACtrack as this will damage the sensor.
3. Do not test in areas with strong winds, smoke, or in an area where a large amount of alcohol is being consumed.
4. Replace the two AA batteries when the battery indicator icon reaches one bar.
5. Send your tester in for periodic calibration service as required. (See calibration).
6. The BACtrack Breathalyzer is designed to be used in a temperature range of 32-104 °F (0-40 °C).
7. Avoid testing in the presence of any substances that contain methyl alcohol, isopropyl alcohol or acetone. These substances may interfere with the results of the test.
8. You cannot use the results of this product in court.
9. Do not use the BACtrack as a tool to determine whether you should operate a motor vehicle or equipment, or perform any other dangerous act.
10. Do not drink and drive. Always have a designated driver when alcohol is being consumed.

## VERIFICATION AND CALIBRATION

The BACtrack is calibrated during manufacture using advanced alcohol simulation equipment. Known alcohol concentrations are passed through the sensor to set baseline values for testing. During testing, the unit compares users' breath samples to these baseline values.

The accuracy of breath alcohol testers can fluctuate after six to twelve months of normal use, depending on the number of tests performed and operating conditions.

If this product is providing inconsistent test results, is not providing any test results, or provides unusually high or low test results, the product should be recalibrated immediately by a trained professional.

The product should be recalibrated at least every six to twelve months depending on frequency of use and operating conditions. We recommend sending the unit in for calibration after 200 tests have been performed, or every 6 to 12 months if less than 200 tests have been performed. If the product is used every day, it may need to be recalibrated as frequently as every month.

### Calibration Instructions

Please visit [www.bactrack.com/calibration](http://www.bactrack.com/calibration) or call 877-334-6876 for information on how to get your BACtrack Breathalyzer recalibrated. Calibrations are an important part of the maintenance of your breathalyzer and should be performed regularly.

During recalibration, a professional technician will reset the sensor baseline values and also perform a full diagnostic check to ensure the accuracy and reliability of the product.



## ONE-YEAR LIMITED WARRANTY

KHN Solutions' warranty obligations for this product are limited to the following:

KHN Solutions warrants this product against defects in materials and workmanship under normal use for a period of ONE (1) YEAR from the date of retail purchase by the original end-user purchaser ("Warranty Period"). Except as provided in the preceding sentence or applicable law, KHN Solutions provides this product "as is". If a defect arises and a valid claim is received by KHN Solutions within the Warranty Period, at its option, KHN Solutions will either (1) repair the product, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or (3) refund the purchase price of the product. When a refund is given, the product for which the refund is provided must be returned to KHN Solutions and becomes KHN Solutions' property. This warranty is limited to the original end-user purchaser and is not transferable to, or enforceable by, any subsequent owner.

### **Exclusions, Limitations, and Disclaimers**

KHN Solutions 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. KHN solutions 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. KHN Solutions 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 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.

KHN Solutions does not warrant that the operation of the product will be error-free. KHN Solutions 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 KHN Solutions; (c) to consequences caused by service performed by anyone who is not a representative of KHN Solutions or a KHN Solutions Authorized Service Provider; or (d) to a product or part that has been modified to alter functionality or capability without the written permission of KHN Solutions.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN,

STATUTORY, EXPRESS OR IMPLIED. AS PERMITTED BY APPLICABLE LAW, KHN SOLUTIONS SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS. IF KHN SOLUTIONS CANNOT LAWFULLY DISCLAIM STATUTORY OR IMPLIED WARRANTIES THEN TO THE EXTENT PERMITTED BY LAW, ALL SUCH WARRANTIES SHALL BE LIMITED IN DURATION TO THE DURATION OF THE EXPRESS WARRANTY AND TO THE REPAIR OR REPLACEMENT SERVICE AS DETERMINED BY KHN SOLUTIONS IN ITS SOLE DISCRETION.

No KHN Solutions reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty. If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.

EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, KHN SOLUTIONS 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.

This Breath Alcohol Tester is intended to measure alcohol in human breath. Readings obtained by this device are used in the diagnosis of alcohol intoxication.

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.

### **Obtaining Warranty Service**

Please be sure to read this instruction manual carefully if you believe your product is not operating properly. If you still feel that your product requires warranty service, please follow these instructions:

Obtain a Return Authorization (RA) number by calling toll-free 877-334-6876 or by emailing [service@bactrack.com](mailto:service@bactrack.com).

When shipping the product back to KHN Solutions, please package the product carefully and ship using a major carrier (UPS, FedEx, USPS, etc). To ensure proper credit for a returned item, be sure to obtain a delivery confirmation on the return shipment. The customer is responsible for all return shipping charges.

Include the following information with your returned product:

- Your Return Authorization number
- Name, address, and phone number as stated at the time of order
- A copy of your original sales receipt

# BACtrack<sup>®</sup>

KHN Solutions Inc.  
300 Broadway, Suite 26  
San Francisco, CA 94133

Phone: 877.334.6876 Fax: 415.358.8030

Sales: [sales@bactrack.com](mailto:sales@bactrack.com)  
Support: [support@bactrack.com](mailto:support@bactrack.com)

[www.BACtrack.com](http://www.BACtrack.com)

©2016 KHN Solutions Inc.