

# alcoSense™

Pocket Breathalyser



## Instruction Manual



# AlcoSense Instruction Manual

## Thank you for purchasing your new AlcoSense Breathalyser.

As you know, you never can tell how long it takes for alcohol to clear from your body after having a drink. It depends on many variables including body mass, time of day, food intake and even if you have a cold.

Road safety is our primary concern, specifically making it easy for you to know when you are below the legal driving limit again the morning after a few drinks. The AlcoSense breathalyser is designed to quickly and accurately indicate your level of intoxication, alerting you as to whether you are over or under the UK drink drive limit. With its unique ASC function and patented algorithm technology it can be used again and again without loosing accuracy.

Like me, many responsible drivers use the AlcoSense breathalyser to help make sure they're OK to drive the morning after. Thank you again for purchasing this product and I'm sure you will be delighted with it.

Yours sincerely,



Sir Stirling Moss OBE

### Important - Please read

It is safest to drive when you have no alcohol left in your blood stream. As a result we only recommend driving when the AlcoSense breathalyser reads 'LO'. Before using the AlcoSense breathalyser you agree you have read the operating instructions & are aware of the legal alcohol limit in your jurisdiction. The manufacturer, distributors and sellers of this product exclude all liability for improper use or loss or damage caused by actions taken by you after use of this product. This unit is set to alert the user at 0.8% BAC.

AlcoSense User Manual Version 1.01

## Contents

Introduction	3	How to Establish if an ASC is needed	14
Getting Started	5	Changing Units of Measurement	15
Turning On/Off	6	Maintaining your Alcosense	16
Setting Time	7	Accessories	17
Automatic Sensor Clean (ASC)	8	Services	18
Performing a blow test	9	If the Drink Drive Limit changes	18
Understanding the results	10	Legal	19
Quick Sensor Clean	13		

## How Breathalysers Work


Breathalysers work by measuring the concentration of alcohol vapour in your breath. Contrary to popular belief the alcohol is not coming from residue in your mouth but is actually evaporating from the blood that passes through your lungs when you breathe. The amount of alcohol evaporating from your lungs is directly proportional to the amount of alcohol in your blood stream making it possible to accurately calculate the percentage Blood Alcohol Concentration (% BAC) or Micro Grams of alcohol per Litre of Blood (mg/l) and therefore your level of intoxication.

## How Alcohol Is Processed by the Body

When you drink, alcohol is absorbed into the blood stream through your mouth and throat but mostly through the stomach and small intestine. The more you drink the more alcohol is absorbed by the body and the higher your BAC or mg/l reading will become. Approximately 90 minutes after the alcohol is consumed it is distributed equally around the body through the blood stream. This is known as the point of Equilibrium.

As blood flows round the body around 90% of the alcohol it contains is broken down in to water and carbon dioxide by the liver in a process called Oxidation. The remaining 10% of the alcohol is passed from the body through the lungs and kidneys. A healthy liver typically breaks down alcohol at a rate of one unit of alcohol per hour but the more alcohol that is consumed the longer it can take for the liver to process each unit.

When you stop drinking your level of intoxication may stay constant or if you have been drinking heavily it could even increase for around 2 hours



afterwards. This is because of the time it takes for alcohol to reach the bloodstream from the time you actually had the drink. If you have eaten food this can also increase the time, as the release of alcohol into the bloodstream can be slowed by it being absorbed by food in the stomach. This is the reason why we do not recommend using the breathalyser just after finishing drinking because there are too many factors that can influence the reading. The ideal time is the morning after.

### **Things That Can Affect the Reading of Your Breathalyser**

There are some factors that can affect the reading of breathalysers whether it be the AlcoSense breathalyser or a police system. As long as you are aware of these factors you will be able to use your AlcoSense to give high precision readings.

### **The Do's and Don'ts**

Do:

- Use the breathalyser the morning after a few drinks.
- Read the instructions carefully
- Perform an ASC (see page 8) regularly
- Phone us if you have any difficulties
- Have a quick drink of water before using the breathalyser to remove any contaminants in the mouth
- Have a bit of fun with your friends with it!

Don't

- Use the breathalyser for at least 30 minutes after drinking alcohol (we recommend using it the morning after, please see section "How Alcohol is Processed by the Body" on page 3)
- Use the breathalyser for at least 30 minutes after using mouthwash, breath spray, cough medicine or anything else that may contain alcohol.
- Use the breathalyser for at least 25 minutes after having a cigarette or eating certain over-ripe fruit.
- Perform a test in dirty air, i.e. a smokey room.
- Use the breathalyser if you are breathing quickly (for example, after running up the stairs) or have been holding your breath. This can falsely lower or raise the reading respectively. Wait until you are breathing normally again.

## Getting Started

This section will take you step by step through the basics of using your new AlcoSense Breathalyser, namely:

1. Unpacking the box
2. Installing the batteries and learning to navigate the menu system
3. Preparing it for use for the first time – performing an Auto Sensor Clean (ASC)
4. Setting the time
5. How to perform a breath test and understanding the results
6. Things that can affect the readings

## Unpacking the Box

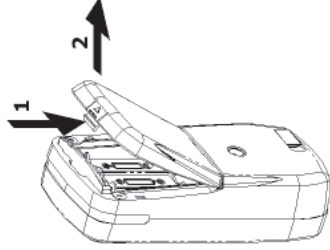
In the box you will have the following components:

- 1) 1 x AlcoSense Breathalyser
- 2) This instruction manual
- 3) 3 x AAA Batteries
- 4) 5 x Blow Straws



## Installing the Batteries

Keep the AlcoSense Breathalyser in the closed position and turn the machine over so the back is facing you. Following the diagram below remove the battery compartment cover. Insert the three 1.5v AAA batteries supplied into the slots provided in the battery compartment making sure that the batteries are inserted the right way round as indicated in the battery compartment. Then put the battery compartment cover back on again following the diagram below but in reverse. The screen will then display the default time.



## Turning the AlcoSense On and Off

### Turning On

The AlcoSense can be turned on one of two ways; slide the unit open, or press and hold the + key until the screen lights up.

### Turning Off

The unit will automatically turn itself off after a while to conserve batteries. If you wish to turn it off manually you can do so by sliding the unit into the closed position and pressing and holding the + key until the screen goes blank.

### Using the Menu System

The menu system is designed to be as easy to use as possible. You will see an L shaped symbol rotating around the screen of the AlcoSense, in turn highlighting either the Clock, ASC, Unit or Clean functions (shown below).



Clock Settings


ASC

Units of Measurement

Sensor Clean

1) To access the menu options press and hold the 'MODE' key for approximately 2 seconds until you hear a beep. The L shaped indicator will stop rotating and will now be flashing over one of the options.

2) Press the 'Mode' key again to rotate the L shaped indicator to the next option, and again to go to the following option and repeat as required.



3) Once you are on the required option, you can select it by pressing the 'SET' key. The L shaped indicator will stop flashing. You can now access the settings.

4) You can then change the setting by pressing either the + or – keys. Once you have got it to the desired setting press the 'SET' key again to save it.

The different options that you can adjust are:

1. Clock – Set the time
2. ASC – Auto Sensor Clean please see section dedicated to this function
3. Unit – This allows the user to change the unit of measurement from mg/l to ‰ BAC
4. Clean – This allows you to do a quick sensor clean. It is automatically performed after every breath test performed

### Setting the Time

To set the time you will need to access the menu system (please see section 'Using the Menu System' on page 6) and select the CLOCK option. When selected, press the SET key.

You can then use the + and – keys to change the minutes. When the minutes are correct press the SET key, you will now be able to change the hours using the + and – keys. When the hour is correct press SET again to confirm the time and then press MODE to save the setting.



### **Automatic Sensor Clean (ASC) Function**

The first time you use your AlcoSense breathalyser you will need to perform an ASC. The ASC Function cleans the sensor inside the system and removes any contaminants from it (for example, oxidation if it has not been used for a period of time or residue left from tannin in red wine etc) to ensure high precision readings.

Please note: When performing an ASC you will need to do so in an environment with clean fresh air.

- a) Keep the AlcoSense in the closed position and press and hold down the "MODE" button until the menu selector stops rotating and you hear a beep. Then repeatedly press the "MODE" button until the L shaped selector reaches ASC. Press the "SET" key once to select the ASC option.
- b) The screen will either display "ON" or "OFF". Press the "+" key to change the display to ON. When it displays "ON" press the "SET" key to start the ASC Function.



ASC will then flash on the screen for the duration the ASC function runs for. After 8 minutes the AlcoSense will beep meaning that it is almost finished. After a further 2 minutes it will beep again and ASC will stop showing on the display and the time will re-appear.

ASC is now complete and you are now ready to use your AlcoSense Breathalyser!

Please note: You will need to perform an ASC at various intervals to ensure high precision readings. To establish if your unit requires an ASC in the future please read "How to Establish if an ASC is Needed in the Future" on page 14.

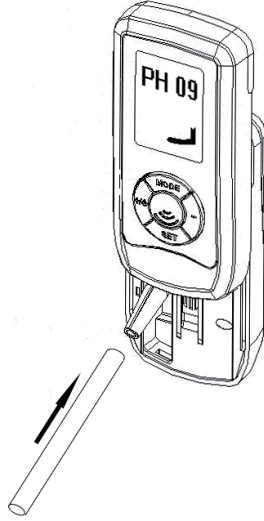


## How to Perform a Breath Test

Performing a breath test is easy and can be performed at any time, anywhere quickly and easily.

AlcoSense is a sensitive measurement device. You must wait at least 30 minutes after drinking or smoking before performing a breath test, performing a breath test before this time may permanently damage the sensor and cause your AlcoSense system to read inaccurately.

1. Slide the AlcoSense into the open position and put blow straw on the system as shown in the image below.



2. The AlcoSense will beep and PH will flash on the screen for around 3 seconds, it will then display PH19 and count down all the way to PH00. This time is used to heat the sensor to the required operating temperature.
3. The AlcoSense will then beep and flash BLOW on the screen. At this point you must blow into the AlcoSense breathalyser. **IMPORTANT:** when blowing use a pressure similar to when you breath out normally. Keep blowing until the system beeps or for around 5 seconds.
4. The AlcoSense will then display your reading and you will hear a buzzing sound – this noise is the unit performing a sensor clean and is nothing to worry about.

**TIP:** If the AlcoSense displays ERR on the screen, it is most likely that you have either blown too hard, too soft, or blown too late.




## Understanding the Results

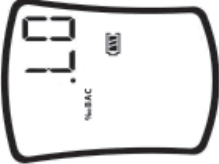


The AlcoSense will display the result of your breath test on screen in either mg/l or ‰BAC. Please see the table opposite.



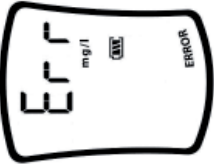
Although the legal drink drive limit in the UK is currently 0.8‰ BAC it is safest driving when you have no alcohol left in your blood stream.


As a result we only recommend driving when the AlcoSense breathalyser reads LO.

**Please Note:** This AlcoSense Breathalyser is set to alert the user at 0.8‰ BAC which is the legal drink drive limit in the UK as of July 2007. Should you use the breathalyser in different countries you must be aware of the drink drive limit in the jurisdiction you are using the AlcoSense in. Also, should the drink drive limit in the UK change you must be aware that your AlcoSense breathalyser will continue to alert you at 0.8‰ BAC with an accuracy of +/- 0.2 ‰ BAC taking into account environmental variables. Your AlcoSense breathalyser can be re-calibrated to alert at different levels, please see page 18 of the manual.



Reading Range	Example of Screen	Explanation
<p><b>LO</b>            Less than            0.2% BAC            (Screen            Backlight            is YELLOW)</p>		<p>There is either no alcohol in the sample or such a small amount it is negligible. The reading is well below the legal drink drive limit.</p>
<p><b>Between            0.2%            BAC and            0.69%            BAC</b>            (Screen            Backlight            is YELLOW)</p>		<p>The sample has alcohol in it but it is below the legal drink drive limit.</p>
<p><b>Between            0.7%            BAC and            0.79%            BAC</b>            (Screen            Backlight            is RED)</p>		<p>The sample was very close to the legal drink drive limit and it is therefore not recommended to drive.</p>

<p><b>Between 0.8‰ BAC and 1.5‰ BAC</b> (Screen backlight is RED)</p>		<p>The sample is at or above the legal drink drive limit. You should not drive.</p>
<p><b>Above 1.5‰ BAC</b> (Screen Backlight is RED)</p>		<p>The sample's alcohol level is above twice the legal drink drive limit and off the scale. You should not drive.</p>
<p><b>Error in Reading</b></p>		<p>There has been an error while performing the breath test. This is normally caused by either blowing too hard or too softly into the AlcoSense. Try experimenting with a different strength of blowing. If the error still appears please call us.</p>



### Performing a 'Quick Clean'

After every breath test the unit performs a quick clean on the sensor – this can be heard by a buzzing noise. If you wish to perform a quick clean of the sensor at another time this can be performed by following these steps:

1. Press and hold down the MODE key until you hear a beep.
2. Repeatedly press the MODE key until the indicator reaches the 'clean' icon, located at the bottom left of the screen, then press the SET key once.
3. The screen will then display the words 'OFF'. To start a clean, press the + key once and the screen will display 'ON' and then count down from 8 to 0 and you will hear a buzzing sound. When complete, the screen will display 'OFF' and the buzzing will stop.
4. To exit from this mode press the SET key once and the AlcoSense will return to the standby mode.



Please note: We recommend performing a full ASC (Auto Sensor Clean) regularly.






## How to Establish if an Automatic Sensor Clean (ASC) is Needed in the Future

To keep your AlcoSense breathalyser reading at its most accurate we recommend performing an ASC if it is not used for more than a week or when required as explained below.

To perform the test below you must have an alcoholic liquid of 3-5% volume. In the UK pre-made drinks of this volume are difficult to find so we suggest the following which can be easily prepared using normal white wine. All you need to do is mix a small amount of white wine and water in a ratio of 1 part wine to 2 parts of water. This reduces the wine's alcohol % volume from approx 12-14% to 3-5% and provides a very pure liquid which is ideal.


a) Following the diagram below, turn the AlcoSense over so that the back of the unit is facing you. On the bottom right hand corner of the AlcoSense breathalyser you will find a small cap which you can remove.



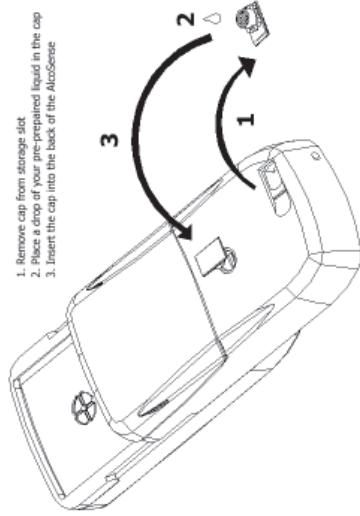
b) When you have removed the cap you will see that there is a small sponge section in the middle. Dip this cap in your pre-prepared alcohol of 3-5% Volume, ensuring that the sponge section is now wet.

c) Insert the cap in to the ventilation hole on the back of the breathalyser (do not press the cap in more than ½ way otherwise it may be difficult to remove it), in the middle and about two thirds of the way down the back of the AlcoSense, as shown in the diagram by arrow 3.

d) Turn the AlcoSense over so that it is facing you and slide the unit open as if you were to perform a breath test. The AlcoSense will count down from PH19 to PH0 and then display "BLOW" on the screen. At this point press and hold down the "SET" key until the screen changes to display either "LO" or gives a reading.



- a. If the result is "LO". It will be necessary to perform an ASC.
- b. If the result is not "LO" the system is fine and the sensor is in good condition. No ASC is required.
- e) Remove the cap from the ventilation hole and replace it in the bottom right hand corner where it originally came from.



### Changing the Unit of Measurement

You can change the AlcoSense's unit of measurement between mg/l (micro grams per litre) or ‰BAC (percentage over 100 blood alcohol concentration). The two different units of measurement are two different scales, like degrees Celsius and degrees Fahrenheit in temperature. You can change the unit of measurement as follows:

- 1) With the AlcoSense breathalyser in the closed position hold down the MODE key until you hear a beep. Then press the mode key repeatedly until the indicator reaches the UNIT option.
- 2) Press the SET key. You can now change between ‰BAC and mg/l. Press the + key to select ‰BAC and press the – key to select mg/l.
- 3) When you have selected the unit you wish to use, press the SET key once again and this will save your preferred option.



## Maintaining your AlcoSense Breathalyser

### Keep it Clean

To keep your AlcoSense in tip top condition we recommend cleaning it regularly using a soft damp cloth or the AlcoSense Cleaning Kit which is available separately. We also recommend that you regularly perform an ASC (Auto Sensor Clean as explained on page 8).

### Clean the Sensor

After every breath test the AlcoSense automatically cleans the sensor but we recommend you should perform an ASC regularly to remove any contaminants from the sensor. You can find instructions for doing this on page 8.

### Be Careful

Take care not to drop the AlcoSense breathalyser as sudden knocks can affect the unit's accuracy. If you have dropped your AlcoSense and feel that it is not reading correctly please call us to arrange to have the unit serviced.

### Technical Support

If you have any queries which are not covered in this manual or need assistance using your unit please call our technical support number Monday to Friday 9am to 5.30pm. When calling please make sure you have your breathalyser to hand.

## Accessories

The following accessories are available for your AlcoSense unit, which are available either from your local dealer or directly from [www.AlcoSense.co.uk](http://www.AlcoSense.co.uk).

Accessory	Description	Price*
Protective Carry Case	Keep your AlcoSense breathalyser safe and sound in this beautiful carry case	£9.99
Cleaning Pack	Special cleaning fluid complete with micro fibre cloth and storage pouch	£6.99
Pack of 20 Spare Straws	Pack of 20 straws for breath tests	£4.99


\*Subject to change



## Servicing

We will happily service your breathalyser to keep it in top condition so that it is reading to the highest levels of accuracy and reliability. Servicing normally takes around 5 working days to complete as after each service your AlcoSense breathalyser will be quality tested before leaving us. We have two levels of service:

- 1) Alert Level Change  
Should the UK law change we can recalibrate your AlcoSense unit to alert at the new drink drive limit. This service typically takes 3-5 working days to complete and is priced at £17.99 including return postage back to you.
- 2) Full Service  
This service completely re-works your breathalyser, including cleaning, sterilisation, re-calibration and replacing any parts that may be required. If the drink drive limit has changed we will also update the alert level for you. This service typically takes 5 working days to complete and is priced at £24.99 including return postage back to you.



Although every effort has been made to ensure that the contents of this manual are accurate and reliable Now Group UK Ltd accept no liability for errors or omissions and we reserve the right to change information without notice.

### If the Drink Drive Limit Changes

The government has talked about changing the drink drive limit in the UK, lowering the alcohol limit to bring it in-line with the majority of the European Countries at 0.5% BAC. At present (July 2007) the UK drink drive limit is 0.8% BAC and this is the point at which the AlcoSense breathalyser is set to alert the user. Should the UK drink drive limit change you will still be able to continue to use your AlcoSense breathalyser as it displays your level of intoxication from zero to 1.5% BAC in increments of 0.01% BAC. You must however be aware that it will still alert you not to drive at 0.8% BAC. Should you wish to have the AlcoSense alert level set differently we can do this for you. Please see the Servicing section on this page.



## Note on Environmental Protection



After implementation of the European Directive 2002/96/EU in the national legal system, the following applies: Electrical and electronic devices may not be disposed of with domestic waste. Consumers are obliged by law to return electrical and electronic devices at the end of their service lives to the public collecting points set up for the purpose or point of sale. Details to this are defined by the national law of the respective country. This symbol of the product, packaging or instruction manual indicates that this product is subject to these regulations. By Recycling, re-using the materials or other forms of utilising old devices, you are making an important contribution to protecting our environment.

## AlcoSense limited warranty

### WARRANTOR

This Limited Warranty is granted by and this Limitation of Liability is stipulated for the benefit of AlcoSense, a trade mark of New Group UK Ltd, Minster Court, 22-30 York Road, Maidenhead, Berkshire SL6 1SF Unite Kingdom.

### WHAT THIS WARRANTY COVERS

1) New Group UK Ltd, ("AlcoSense") warrants to you that the Hardware will be free from defects in workmanship and materials under normal use (" Defects ") for a period of one (1) year from the date that the Hardware was first purchased by you ("Warranty Period"). During the Warranty Period the Hardware will be repaired or replaced at AlcoSense's choice (" Limited Warranty ") without charge to you, for either parts or labour. This Limited Warranty covers the replacement of the Hardware only, if the Hardware is repaired after the Warranty Period has expired (at six (6) months after the Warranty Period for the repair will expire six (6) months after the date of repair.

### WHAT THIS WARRANTY DOES NOT COVER

2) The Limited Warranty does not apply to normal wear and tear, does not apply when the Hardware is opened or repaired by someone not authorised by AlcoSense and does not cover repair or replacement of any Hardware or part thereof damaged by: misuse, moisture, liquids, proximity or exposure to heat and accident, abuse, non-compliance with the instructions supplied with the Hardware, neglect or misapplication. The Limited Warranty does not cover physical damage to the surface of the Hardware or calibration of the Hardware.

### HOW TO MAKE A WARRANTY CLAIM

3) In order to make a claim of a Defect, you must contact AlcoSense by email or telephone during the Warranty Period via [www.AlcoSense.com](http://www.AlcoSense.com) to explain the Defect and to obtain an RMA number (Return Materials Authorisation) if necessary. You must return the Hardware during the Warranty Period, along with an explanation of the Defect, to the address provided to you by AlcoSense. If a defect arises and a valid Claim under this Limited Warranty is received by AlcoSense after the first one hundred and eighty (180) days of the Warranty Period, AlcoSense is entitled to charge you for any reasonable shipping and handling costs made in connection with the repair or replacement of the Hardware. You must comply with any other return procedures stipulated by AlcoSense, if any.

### YOUR LEGAL RIGHTS

4) Some countries may not allow the exclusion or limitation of damages. If any part of this Limited Warranty is held to be invalid or unenforceable, the remainder of the Limited Warranty shall nonetheless remain in full force and effect.

5) This Limited Warranty is the only express warranty made to you and is provided in lieu of any other express warranties or similar obligations (if any) created by any advertising, documentation, packaging, or other communications.

6) Except for the Limited Warranty and to the maximum extent permitted by applicable law, AlcoSense and its suppliers provide the Hardware "AS IS AND WITH ALL FAULTS", and hereby disclaim all other warranties and conditions, whether express, implied or statutory, including, but not limited to, any (if any) implied warranties, duties or conditions of satisfactory quality, of fitness for a particular purpose, of reliability or results, of workmanlike effort, of lack of viruses, and of reasonable care and skill, all with regard to the Hardware, and the provision of or failure to provide support or other services, information, software, and related content through the Hardware or otherwise arising out of the use of the Hardware. Also, there is no warranty or condition of quiet enjoyment, quiet possession, or non-infringement with regard to the Hardware. This exclusion does not apply to (i) any implied condition as to title and (ii) any implied warranty as to conformity with description.

7) This Limited Warranty does not affect any legal rights under applicable national legislation governing the sale of consumer goods.

8) This Limited Warranty cannot be transferred to any other person.

### LIMITATION OF LIABILITY

1) Neither New Group UK Ltd nor its suppliers shall be liable for direct or indirect damage to property for any damages either direct, indirect, incidental, consequential or otherwise, (including, in each case, but not limited to, damages for the inability to use the equipment, loss of business, loss of profits, business interruption or the like) arising out of the use of or inability to use the Hardware even if New Group UK Ltd has been advised of the possibility of such damages.

2) Notwithstanding any damages that you might incur for any reason whatsoever (including, without limitation, all damages referenced herein and all direct or general damages in contract or anything else), the entire liability of New Group UK Ltd and of its suppliers shall be limited to the amount actually paid by you for the Hardware.

3) New Group UK Ltd shall not be liable for (i) any fraud on the part of its employees and/or agents; or (ii) any fraudulent misrepresentation on the part of its employees and/or agents.

4) Notwithstanding the above, neither party's liability for death or personal injury resulting from its own negligence shall be limited.

5) If any of these terms shall become or be declared illegal, invalid or unenforceable for any reason whatsoever such term shall be divisible from these terms and shall be deemed to be deleted from them.





**Win dinner with  
Stirling Moss\***

**Register on-line at:  
[www.alcosense.co.uk](http://www.alcosense.co.uk)**

\* Terms and Conditions apply, see on-line for details

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**0800 195 0088 [info@alcosense.co.uk](mailto:info@alcosense.co.uk) [www.alcosense.co.uk](http://www.alcosense.co.uk)**

