



Alcohol  
Detection  
Systems

A DIRECTED COMPANY

## Alcohol Detection Systems Determinator Users Manual

TN Rev 10 – Released – 1/1/2019

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

(888) 786-7384

Hello  
Thank you for choosing Alcohol Detection Systems, enclosed you will find a user's manual that covers the use of the ADS Determinator Ignition Interlock Device. After reading this entire manual, you should have a good understanding of the use of our device, if not re-read the material, and the installer will walk you through the basics. There is a lot of information here so take your time and familiarize yourself as much as you can with it.

**YOU MUST RETURN TO YOUR INSTALLER WITH YOUR VEHICLE SO THEY CAN PERFORM YOUR STATE MANDATED SERVICE EVERY 30 DAYS! NOT RETURNING BY THE 32<sup>ND</sup> DAY MAY RESULT IN YOUR DEVICE BECOMING LOCKED OUT WHICH MEANS YOUR VEHICLE WILL NOT START. THIS IS REQUIRED BY STATE LAW!**

**BE SURE TO SCHEDULE THIS APPOINTMENT BEFORE YOU LEAVE TODAY!**

Each time you come in for service you will be given a calibration form, you must keep this form and your installation form, in your vehicle at all times. This is evidence that you are keeping your Breath Alcohol Ignition Interlock Device (BAIID) properly maintained. Every day when you power up your device it will display a countdown to your next mandatory service date. Your device has a 3-day buffer by design (should operate normally for 3 days beyond the "service due at midnight" notification). Using that buffer means you have missed your appointment, and may result in additional fees being charged to your account.

**There is a difference between the device stating SERVICE DUE...and LOCK DUE**

Normally at start up the device will display the number of days till service (*service due XX days*) it will also display your next service date. pay attention to this information, if you have a violation or other issue which results in a change in the service in XX days and the verbal notification changes to "Return for service soon" You need to contact our office immediately to avoid being locked out of your vehicle. AGAIN, if you have a violation it may result in a 3-day countdown to lock out, or if your unit says "return for service soon" you will need to contact ADS immediately to schedule service. The installation center cannot reset devices without prior approval

Please be absolutely sure you understand how to use this device before you leave today!

**PLEASE READ THIS ENTIRE MANUAL BEFORE YOU LEAVE TODAY!!!**

If you have a violation which results in a "LOCK DUE 3 DAY" Message, you will need to pay the \$75 violation fee, these can occur from not following directions so be sure you know how to use the device.

**WARNING! ANY PERSON TAMPERING, CIRCUMVENTING, OBSCURING CAMERA IMAGES, OR OTHERWISE MISUSING THIS DEVICE IS GUILTY OF TAMPERING, TAMPERS WILL BE DETECTED BY THE DEVICE AND REPORTED TO YOUR SENTENCING AGENCY, THE TENNESSEE HIGHWAY PATROL, & DEPARTMENT OF SAFETY**

If you ever have any questions Refer to your owner's manual and if necessary call us at 888-STOP-DUI/ 888-786-7384 we will be glad to answer any questions, or assist you with anything we can!

Alcohol Detection Systems

**QUICK START GUIDE**

## **YOU MUST READ THIS ENTIRE MANUAL BEFORE YOU LEAVE TODAY!!!**

Please read the entire manual it will help you to understand, the entire process! The most important thing to remember is that this unit is used to detect what is on your breath. The unit is **alcohol specific** so the only chemical you need to be concerned with is alcohol. Unfortunately Alcohol is present in some everyday things you may not think of. **Mouthwash Cough syrups, perfumes, colognes, hair spray, and Hand sanitizers** will have alcohol in them and if you are exposed to them prior to providing a sample you may fail a test for obvious reasons. If you fail a start up test it will result in you waiting for the device to allow you to take a new test. It is highly recommended if you are exposed to these chemicals you must allow adequate time for your body to purge these chemicals prior to attempting a breath test. If you were to blow a failure of .02 or above during a startup test the unit will go into a short time out depending on the level of failure. If this does occur immediately drink a glass of water, and rinse your mouth out so that any residual alcohol is washed away, and complete a retest as soon as the device will allow. Upon completion of this timeout (usually 3 – 10 min) you should retest. Failures may result in a violation so think about what you have been exposed to prior to starting the vehicle.

**BEFORE STARTING THE VEHICLE MAKE SURE YOUR HEATER/ AC BLOWER IS TURNED OFF!**

All you need to do to take a Startup test is turn the ignition key on. The unit will activate and say "*Determinator please wait*" now it is preparing for your sample. The device must be held upright and as close to level as possible, the device has a built in instrument which will not allow a test if it is too far to one side or the other, ensuring a proper photo of the user. **Obstruction of the Camera, is considered a violation of Tennessee State law, and can be punishable by extension, or suspension of your permit requirement.** Once the unit is ready for your sample the unit will say "please provide sample". You will then blow hard into the device for about 1 second, the device will beep, you will then immediately suck back, the device will beep, then you will blow out steady and not as hard as the first sample, but not too soft either (this breath will be about 8 seconds), while you are blowing the device will beep there are three tones, as long as the tones are sounding continue to blow the three tones are low (blowing too soft) normal (blowing correct) High (blowing too hard), blow till it stops beeping. The most common errors here is sucking back too long, or blowing the second out breath too hard. Once the device stops beeping wait for "*test Passed you may start the vehicle*" once you hear this, you can start the vehicle anytime during this free start period. Upon successful completion of a startup test you may start the vehicle for up to 2 minutes. Always wait for the device to say "YOU MAY START THE VEHICLE" If the device verbally says INVALID SAMPLE the digital display will scroll the reason for the error in the window, most common errors are Too Hard, or Not in Time these both mean you are blowing too hard on your final long sample, retry and lower this final pressure until the device accepts your sample, other reasons for invalid sample can be found later in this manual.

Once you start the vehicle the unit will randomly test you while you drive, once in the first 15 min, and then at a rate of 2 an hour after that. When calling for a retest the unit will light up beep and say "*retest required please provide sample*" I highly recommend for the first retest you get, to pull over to a safe location and leave the vehicle running. Look at the display, and listen to the voice commands. This will allow you to get familiar with the retest procedure, without the distraction of driving. Once you become familiar with the procedure of the retest you will easily be able to perform it while driving but until you get familiar give yourself the chance to learn it safely. **Remember you have 3 minutes to provide the sample!** All you need to do is present a sample just like a startup test. The device must be held upright and as close to level as possible, the device has a built in instrument which will not allow a test if it is too far to one side or the other, ensuring a proper photo of the user. **Obstruction of the Camera, is considered a violation of Tennessee State law, and can be punishable by extension, or suspension of your permit requirement.** The unit will once again analyze the sample and give you "Test Passed". If for some reason you were to fail, you will be required to retest until you provide a passing test. This result however could result in a 3 day lockout countdown which does not lock you out immediately that would lock you out after 3 days, this will give you 3 days to start your vehicle normally but the unit will display a service notification each time you attempt a startup. You will need to **contact Alcohol Detection Systems** at our toll free number as soon as possible after receiving this message. The most common cause of 3 day lock outs is not from failing tests it is from not completing the rolling retest in time. **The most common cause for this is people leaving the vehicle running unattended.** So I recommend taking the keys with you when you leave the vehicle it's just cheaper for you, anytime something out of the ordinary occurs you should make a record of it in your log, in the event your sentencing agency has a question for you about the incident. Now any time you pass a test or turn the vehicle off you will activate a 2 minute free start timer. This will allow you to restart the vehicle without a new start up test. If your engine stalls, turn off your key then turn your key back on, wait for the unit to say "you may start your vehicle" then start the vehicle back up

***Violations cost to have them reset no matter what the reason was! Obstruction of the Camera, is considered a violation of Tennessee State law, and can be punishable by extension, or suspension of your Ignition Interlock requirement. An Early Return for an unexpected event, will have a \$75 associated with it, to have reset no matter what the reason was! When the rolling retest is asked for, the sample must be provided, otherwise a violation will occur; however before starting the vehicle again you will need to provide a clean air sample.***

If you have your vehicle serviced you must notify Alcohol Detection Systems prior to, or within 24 hours after ANY major service, this does not include oil changes, or tires. We are mainly concerned with repairs under the hood or within the vehicles electrical system.

When you leave today you should receive 3 mouthpieces, and a box. Your mouthpieces can be washed just be sure they are dry before using them with the device. Additional mouthpieces can be purchased from your installer or by calling Alcohol Detection Systems. The box you receive is the package you will return the device in when you complete the program and have the entire device removed. It is your responsibility for this box and if units are returned without the box there is a \$25 fee to replace the packaging.

The device is designed to work in all temperature ranges we experience in the United States. In the winter you may experience a longer start-up time as the device warms up to prepare for your sample, in the summer the device can over heat if left in direct sunlight, So Never leave your device in direct sun light!!! Un-plugging the handset is allowed to avoid these issues if you prefer. If you prefer to leave the device in your vehicle leave it in a place that has good air circulation (i.e. under seat), do not leave in a sealed glove box or wrapped in a cloth as this will prevent the device from dissipating heat naturally. If you do leave the unit in direct sunlight and receive an invalid sample due to a sample temp error. Turn off the handset, roll your windows down (to decrease cabin temps) and then blow straight through the device to cool the inside of the unit. After 5 or 6 straight blows retry your sample and the unit should function normally. Always remove the plastic mouthpiece before disconnecting the Handset; this will reduce the chance of breaking the mouthpiece off in the unit. Additionally it is not necessary to jam the mouthpiece into the opening. Doing so will increase the chance of breaking off the mouthpiece.

**ANY SERVICE INQUIRIES SHOULD BE MADE TO ADS @ 888-786-7384**

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## **THIS IS VERY IMPORTANT**

**This letter is from the Tennessee Department of Safety & Homeland Security, and the Tennessee Highway Patrol, it lists the requirements to remove the Ignition Interlock Requirement from your license.**

**A person required to install and use only a functioning ignition interlock device is prohibited from removing or causing to be removed the ignition interlock device from the vehicle for which it was ordered, and the person shall be required to maintain the device in working order for a three hundred sixty-five (365) consecutive day period or for the entire period of the driver license revocation period, whichever is longer.**

**In addition to the minimum three hundred sixty-five (365) consecutive day period during which the ignition interlock device shall be attached, functioning, and maintained on the motor vehicle for which it is ordered, the ignition interlock device cannot be lawfully removed from the vehicle, except for necessary maintenance, replacement, or repair as determined by the department, unless the person has operated the ignition interlock equipped vehicle without violation for the last one hundred twenty (120) days of the period for which it is required.**

**If at any time during the three hundred sixty-five (365) consecutive day period, the department determines that the person removes or causes to be removed the ignition interlock device, the device shall be reinstalled and the three hundred sixty-five (365) consecutive day period shall start again from the date of the reinstallation.**

**During the final one hundred twenty (120) day period for which the ignition interlock device is required, the person shall not violate any of the following conditions:**

- **Tampering with, circumventing, or attempting to start the vehicle with a breath alcohol concentration in excess of the two-hundredths of one percent (0.02%) blood alcohol concentration calibration setting required by § 55-10-417(c); provided, however, that a person shall not be in violation of this subdivision (d)(1)(A) for attempting to start the vehicle, if a subsequent retest within ten (10) minutes shows a breath alcohol concentration of two-hundredths of one percent (0.02%) or less and review of the digital images associated with each test confirms that the same person performed both tests;**
- **Failing to take or skipping a rolling retest when required by the ignition interlock device; provided, however, that a person shall not be in violation of this subdivision (d)(1)(B) for failing to take or skipping a rolling retest if a review of the digital images associated with the test confirms that the vehicle was not occupied by the driver at the time of the retest;**
- **Failing a rolling test required by the ignition interlock device with a breath alcohol concentration in excess of two hundredths of one percent (0.02%); provided, however, that a person shall not be in violation of this subdivision (d)(1)(C) for failing a rolling test, if a subsequent retest within ten (10) minutes shows a breath alcohol concentration of two-hundredths of one percent (0.02%) or less and review of the digital images associated with each test confirms that the same person performed both tests;**
- **Removing or causing to be removed the ignition interlock device at any time during the three hundred sixty-five (365) consecutive day period; and**
- **Failing to appear at the ignition interlock device provider when required for calibration, monitoring, or inspection of the device.**

**If at any time during the final one hundred twenty (120) days of the time period the person is required to use a functioning ignition interlock device, the department determines that the person has committed a violation the one hundred twenty (120) day period shall start again from the date of the violation.**

**Upon completion of the period for which the person is required to use an ignition interlock device, the person shall request that the ignition interlock provider certify that the person has complied with the conditions for the required periods. The provider shall determine whether the person has been compliant with the conditions for the required periods and either issue a certificate of compliance to the person or notify the person of noncompliance and the resulting extension of the ignition interlock requirement.**

**If the data file from the final download and other relevant information shows that the person has been ignition interlock compliant for the requisite periods of time, the department shall inform the person on a compliance form developed by the department that the person may apply for driver license reinstatement and that the ignition interlock device may be lawfully removed.**

**The program participant may take the Certificate of Compliance issued by the manufacturer and the Compliance Form issued by the department to the DMV and apply for an unrestricted driver's license. After receiving the unrestricted driver's license, the program participant may return to the installation facility for an authorized removal of the ignition interlock device**

**[https://www.tn.gov/content/dam/tn/safety/documents/House\\_Bill\\_1843.pdf](https://www.tn.gov/content/dam/tn/safety/documents/House_Bill_1843.pdf)**

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**NOTE: Completely read and understand this manual before operating a vehicle with the Determinator System installed.**

**A user must comply with the requests of the unit and follow its instructions in a timely manner.**

**Failure to do so may require early service or a complete vehicle lockout – at the driver's expense and inconvenience. Always operate the vehicle and provide breath samples in a safe manner.**

### **1. ADS Determinator System Overview**

Alcohol Detection Systems' *Determinator* is a breath alcohol ignition interlock device (BAIID) designed to prevent a driver from starting a vehicle when his breath alcohol content (BRAC) is above a defined set point. It is certified per NHTSA (National Highway Traffic Safety Administration) specifications as published in Federal Register Vol 78, No 89, May 8<sup>th</sup>, 2013. Additionally, the device has been certified and approved for use in the State of Tennessee.

### **2. System Components**



#### **2.1. Determinator Hand Held**

The *Hand Held* is the removable portion of the *Determinator* system into which a user provides a breath sample. Display messages and voice prompts are provided by the *Hand Held* to instruct a user.

#### **2.2. Determinator Vehicle Module**

The *Vehicle Module* is wired to the vehicle's electrical system. It is out of sight of the user and provides the connection to the vehicle. The coiled cord is permanently attached to the *Vehicle Module* and connects to the *Hand Held*.

#### **2.3. Determinator Kit - Mouthpieces**

Along with *Hand Held*, *Vehicle Module*, and wiring harness, the *Determinator* Kit includes 2 disposable Mouthpieces, extra mouthpieces are available by contacting Alcohol Detection Systems at 888-786-7384. Mouthpieces should be changed or cleaned at a user's discretion or for a change of user. Always keep a spare handy.

### **3. Operation**

#### **3.1. Plug In**

Plug the Hand Held Unit into the Cable. The connector is keyed and will only plug in with the connector writing "up". To remove, squeeze the both sides of the connector and gently pull.

#### **3.2. Turn On**

Turn the ignition to "RUN" - this is the position just before "CRANK". The Hand-Held will turn on and prompt the user for the next step.

##### **3.2.1. Turn On Messages**

- *Hand Held* firmware version number
- *Hand Held* serial number
- Initializing Message
- Possible Service Due Messages

Pay attention to the service due or lockout date. If you are parking your vehicle for an extended period of time, the device may draw down your battery, to avoid this unplug the Handset, this will minimize the current draw.

The device must be held upright and as close to level as possible, the device has a built in instrument which will not allow a test if it is too far to one side or the other, ensuring a proper photo of the user. For positive driver identification, the Hand Held takes the driver's photo at the instant a sample is provided and measured. To ensure the driver's face is photographed, the unit must be held upright and essentially level (+/- 30 degrees) with respect to the centerline of the mouthpiece. **Obstruction of the Camera, is considered a violation of Tennessee State law, and can be punishable by extension, or suspension of your permit requirement.**

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### 3.3. Warm Up

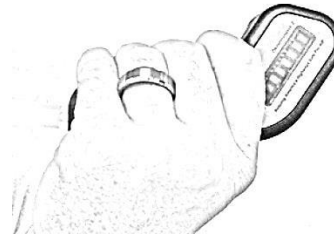
The Determinator must warm to operating temperature before a sample is requested. Bringing a unit indoors in a cold climate will reduce the required warm up time. The message displayed while heating shows 0% to 100% completion.

### 3.4 Camera (Optional GPS Units Only)

Tennessee State Law requires the use of Cameras with all Breath Alcohol Ignition Interlock Devices. This camera is contained within the Hand Held portion of your device. State Law states that any attempt to block or obscure the camera will be considered a violation, and can be considered grounds for extension, and or cancelation of your Driving Privilege. With that in mind be cautious of how you hold the device while testing, be sure to hold it level with the ground, camera up (any other way will the device will not accept your sample) do not place your hands around the device, cup it or hold it on the sides, so as not to interfere with the built-in camera. Not completing a Random Retest due to improper usage is NOT an excuse...always be sure you understand how to use your device prior to operating your vehicle.

*How to properly hold the device during test!*

*Holding this way may result in violations!*



### 3.5. Provide Sample : Blow/Suck/Blow (BSB)

The Determinator requests a breath sample at turn-on and at random intervals while you drive.

- Do not provide a sample until requested
- Two beeps are sounded for attention before "Please Provide Sample" is seen/heard.
- Breath in deeply to fill lungs.
- Provide the sample in three steps:
  - STEP #1: Blow: short, sharp, pulse of air until you hear a beep.
  - STEP #2: Suck: short, sharp, pulse of air until you hear a beep.
  - STEP #3: Blow: long, continuous stream of air to empty the lungs. Keep the pressure above/below the min/max set points. Three tones may be heard:
    - Low tone : blow harder
    - Medium tone : try to maintain this
    - High tone : blow softer
- When the tone stops, stop blowing, sample is complete. Wait for the voice prompt to start the vehicle. DO NOT attempt to start the vehicle until instructed to do so, attempting a start before being prompted may result in a violation.

#### Breath Sample Procedure :

	Pressure	STEP #1 : Blow Out (short)	STEP #2 : Suck In (short)	STEP #3 : Blow Out (long)
↑ Blow	25	Blow this Hard or Harder until Beep	See Below: Provide quick suck. When you hear the beep - quickly go to STEP #3	Too Hard – Retry
	20			High Tone - Blow Softer
	15			Middle Tone - Continue
	10			Low Tone - Blow Harder
	5			Too Soft – Retry
0				
↓ Suck	-5	See Above: Provide quick blow. When you hear the beep - quickly go to STEP #2	Suck this Hard or Harder until Beep	See Above: Provide a long sample. When the tone stops, you're done!
	-10			
	-15			
	-20			

#### 3.5.1. Sample Errors

If an error is detected while taking a sample, the *Determinator* says "INVALID SAMPLE" at the same time the display will scroll one of the following messages to report the actual error and requests the user retry the sample. Possible errors include:

- "Err: Pressure Not Stable" => Prior to Step #1 - do not blow into the unit until requested
- "Err: Suck Not In Time" => Step #2 (short suck) sample not provided in allotted time
- "Err: Blow Not In Time" => Step #3 (long blow) sample not provided in allotted time, or you may be blowing too hard for it to register
- "Err: Low Sample Pressure" => Step #3 - pressure was too low during final breath sample

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- "Err: High Sample Pressure" => Step #3 - pressure was too high during final breath sample
- "Err: Sample Temp" => Step #3 –temperature out of range, Do not leave the device in direct sunlight as it may overheat the device
- "Err: Fuel Cell Stability" => At the start of a sample, the alcohol measurement device was not ready
- "Err: Hold Level " => To ensure a clear picture, the unit must be held upright and within +/-30 degrees of level at the time a sample is provided.

### **3.6. Start The Vehicle**

After a successful sample, the *Determinator* will say, "You may start the vehicle". At this time, turn the ignition to start the vehicle. If a sample is positive for alcohol, "Vehicle Starting is Disabled" will be scroll across the display. Once the vehicle has been started, do NOT disconnect the *Hand Held* unit until the vehicle has been turned off. Once started, the *Hand Held* will display: "RUNNING"  
Randomly, while driving, the *Determinator* will ask for additional samples. See *Rolling Random Retest*.

### **4. Rolling Random Retest**

While driving the vehicle you will be asked to provide retests at random intervals. The rolling retest sample is provided the same way as the original sample – by providing a Blow/Suck/Blow sample. The time allowed for you to provide this test is 3 minutes. As the driver, you must be sure you can safely provide this sample. Move to a safe lane, reduce vehicle speed, or pull over, if necessary. Turning off the device will not change or eliminate the retest requirement. If you turn it off during the retest, you can turn the vehicle back on and fulfil the test requirement. If you do not provide the test in this initial 3 minutes, or pull over and turn off the vehicle the device will verbally request you do so. Do not leave a vehicle running unattended - the rolling retest will require a sample. If a sample is not provided in the allotted time, sanctions will be invoked. These include an early lockout and vehicle warning indications. For positive driver identification, the *Hand Held* takes the driver's photo at the instant a sample is provided and measured. To ensure the driver's face is photographed, the unit must be held upright and essentially level (+/- 30 degrees) with respect to the centerline of the mouthpiece. **Obstruction of the Camera, is considered a violation of Tennessee State law, and can be punishable by extension, or suspension of your permit requirement.**

### **5. Courtesy Restart**

If the engine dies, or is turned off, a courtesy restart is allowed. If a rolling retest is not required, the vehicle may be restarted for up to two minutes. If the engine ever dies or is turned off, turn the key off then to the run position and wait for the device to say "you may start the vehicle" DO NOT attempt to restart the engine until you hear "You May Start the Vehicle" doing so may result in a recorded violation and an early service notification

### **6. Service Interval / Unit Lockout**

The *Determinator* must be returned for state mandated service every 30 days. Every time the *Hand Held* is turned on, it will display the number of days before the next required service "**service due XX day**" ... When the device is in the final day before service is due the device will read **SERVICE DUE MIDNIGHT**. Remember **Service due** means service is approaching, and **Lock due** means lock out is approaching. To perform this, you will need to return to your installation center. YOU WILL NEED AN APPOINTMENT TO PERFORM THIS SERVICE. The STATE OF TENNESSEE requires your data be reported to them within certain limits. If you are late in taking your vehicle in, your data will not be able to be reported in time, your license/ privilege may be suspended, and you may be subject to additional fees. If your license/ privilege is suspended, the time with the interlock installed during that suspension will not count toward your required interlock time. Additionally, if service is not performed within the allotted time, on the 33<sup>rd</sup> day the unit will become "locked out"; No samples will be accepted and the vehicle may not be started. A code may be entered through the *Hand Held's* keypad to allow a 24-hour grace period to return for service. Contact ADS and provide the displayed 8-digit serial number to receive a temporary code. A charge will apply. The code will be a 5-digit code containing only the numbers 1, 2, or 3. Enter the code using the corresponding keys on the *Hand Held* (numbers are written below the buttons). If entered wrong, the ignition must be turned off and back on for the unit to request the code. Once accepted, the unit will reset and begin a normal startup sequence requiring the driver to provide a sample. This code is only allowed once during a monitoring period.

### **7. Failing Tests/ Tampering / Circumvention / Early Service**

If you fail a start test due to the presence of alcohol, then the device will enter a temporary time out (3-10 min) when this occurs you should immediately determine the reason, and retest after an appropriate time, or the temporary time out has passed. "A person tampering with, circumventing, or otherwise misusing this Ignition Interlock System is guilty of a misdemeanor, and, on conviction is subject to additional time in the Interlock Program, a fine, imprisonment, or possibly all of the above. Tampering and circumvention include: jump or push starting the vehicle, **opening the unit's case**, disconnection of the *Vehicle Module* or battery, and bogus breath samples. If any tampering, circumvention, or positive alcohol is detected by the unit, the service interval may be set to **lock due 3 days**. If this occurs the unit will be locked out unless returned for service within this time period, you will need to notify Alcohol Detection Systems of the situation so that we can ship a replacement *Hand Held* device before the countdown ends, there is a charge for this type of violation. The *Determinator Hand Held* and *Vehicle Module* devices log and report all aspects of the unit's operation as well as any tampering or circumvention detected to State authorities. The state may send a request for explanation letter on these types of events, so you must answer these requests when you receive them.

### **8. Products Containing Alcohol**

The *Determinator* measures and will report the presence of alcohol as a violation and will require an early return for service. Many products you may not consider contain alcohol include:

- Mouthwash / breath strips-drops-mints / some gums
- Menthol and bargain cigarettes or chewing tobacco
- Baked goods high in yeast or fermented foods including vinegar
- Cough syrups and cough drops and some cold remedies
- Hand Sanitizers
- Liquid Windshield and Lock De icers

The occurrence of a positive alcohol sample must be explained to the proper authorities. The early return for service will also cost the user in inconvenience and the cost of a download. To prevent any of these issues avoid eating and smoking while using the *Determinator*. Wait at least 15 minutes before providing a sample if any of the products listed above are ingested. If you do provide a sample and receive a "pos Alcohol" the device will

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go into a short time out, wait out the time out, rinse your mouth out with water and try again. The state will look at the entire sequence rather than the one event. The state may send a request for explanation letter on these types of events, so you must answer these requests when you receive them. Having successful retests after a failed test is mandatory so do not leave your vehicle, until you pass a test. We recommend waiting a minimum of 10 minutes prior to a second test, then 20 minutes from test 2 to test 3 if required. Always consider your exposure to Alcohol how ever minimal you believe it is and correct if necessary.

## **9. Service Center**

The Service Center is responsible for vehicle installation, monthly service, early lock out resets, and removal of the *Determinator*. Feel free to contact Alcohol Detection Systems to report any problems or ask questions related to the operation of the *Determinator*.

## **10. Verify Safe Installation**

The *Determinator* should not interfere with the operation of a vehicle after it has been started.

- Verify the location of the *Hand Held* and the Cable routing from the *Vehicle Module* does not interfere with vehicle operation, but gives full access to the *Hand Held*.
- Double check that taking the *Hand Held* from its mount to the driver's mouth is a normal motion and that the cord does not interfere with any driver control such as the steering wheel, blinkers, or gear shift.
- Verify brake and gas pedals and steering are not affected by the installation.
- Finally before you leave the service center be sure when your vehicle is running the device displays "running"

## **11. Training and Demo Mode**

- Read this manual completely
- Watch the *Determinator* video (at the service center online at [www.ADSinterlock.com](http://www.ADSinterlock.com) )
- Demo Mode

At the Service Center, the *Determinator* will be in a demonstration mode to allow a driver to learn all aspects of the *Determinator* operation such as:

- how to provide a sample
- starting the vehicle
- rolling random retests

In demo mode, the *Hand Held* displays the following message at turn-on.

The *Determinator Hand Held* is shipped in Demo Mode to allow a new user to learn the unit's operation. In Demo Mode, the unit is fully functional, but all aspects of operation are sped up (to the point of being nonfunctional while driving). Typically, one minute is allowed to provide a sample or a rolling retest. A vehicle may not be started unless a proper sample is provided. Your installer will remove the device from Demo Mode prior to your departure. To exit Demo Mode, with the vehicle running press the menu button until **Demo Exit?** is seen.

Then press the yes button the unit display will read **ADS** if you leave the service center and your unit calls for retests every 30 seconds or so it may be in demo mode, return to the service center or take it out of demo mode yourself by following these instructions.

To exit Demo Mode, with the vehicle running press the menu button until "**Demo Exit?**" is seen.

Then press the "**yes**" button the unit display "**Please Wait**" then press "**NO**" the unit will then read "**ADS**"

Replacement Handsets **do not** come in Demo Mode!

## **12. Determinator Menu**

- Menu Button: YES Accept or change the currently displayed menu option. Also the "1" key.
- Menu Button: MENU Enters the *Determinator's* menu and steps through options. Also the "2" key.
- Menu Button: NO Exit the *Determinator* menu. Also the "3" key.
  
- DEMOEXIT press YES to exit Demo Mode
- SERV DUE how many days until required to return to Service Center
- VOLUME press YES to increase the voice volume (values 1-10)
- TIME HMS display unit's time
- DATE YMD display unit's date
- DAYS2CAL number of days until a Service Center calibration is required
- DIAGNOSE press YES to enter the Diagnostic sub-menu
  - Starter if a sample has been provided and vehicle is not running, allows the starter relay to cycle on/off.
  - Horn cycle the horn relay on/off
  - Lights cycle the lights relay on/off
  - Alarm cycle the VM alarm on/off
  - Batt/Volt display the vehicle's battery voltage (displays about 0.5 v less than actual)
  - TachCnt displays the number of positive and negative edges seen on the digital tach signal (per second)
  - Pressure display the pressure sensor value in "H2O"
  - TSample temperature of breath sample
  - TFuelCel temperature of the fuel cell
  - Tblock temperature of the measurement block
  - HH SN serial number of the *Hand Held*

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- HH VERS firmware version of the *Hand Held*
- VM SN serial number of the last connected (or expected) *Vehicle Module*
- VM VERS firmware version of the last connected (or expected) *Vehicle Module*

### **13. Frequently Asked Questions**

**Q:** Can I leave my car running while it warms up on a cold morning, or while I run into the convenience store?

**A:** NO. Once a vehicle has been started, the *Determinator* will randomly prompt the user for a sample.

If the user is not available, this will be treated as a failure to provide a random retest and an early lockout will occur

**Q:** The *Determinator* requires a long time to heat up and request a sample. Can this time be decreased?

**A:** The *Determinator* must warm up to operating temperature. In cold climates, warm up time can be improved by disconnecting the unit from the cord and bringing the unit indoors or keeping it in a pocket, when not in use

**Q:** "My battery died" or "I replaced my battery". Why did I get an early lockout?

**A:** The State of Tennessee requires the *Determinator* record an event at the loss of battery power. These events will eventually lead to a violation. A vehicle must be in good operating condition when the device is installed.

A user must contact Alcohol Detection Systems prior to the loss of power when ever possible or as soon as possible after it occurs, the state of Tennessee may send you a request for explanation, on this type of event, When ever possible obtain documentation on a power interruption for your own protection.

**Q:** A sample was rejected for "Pressure not stable".

**A:** Do not provide a sample until requested. If a user blows into the unit or even breathes lightly into the unit before it is ready this error can occur. Please wait until prompted and retry the sample.

**Q:** A sample was Invalid due to "Sample Temp".

**A:** This is not common when used properly, however can occur occasionally when left in direct sunlight, or extremely hot vehicles. The device is designed to operate and detect certain conditions during a sample, if a unit is too hot, then it can not properly detect these conditions. Be sure to never leave your device in direct sunlight. If this occurs cool down your vehicles cabin by rolling down the windows, and then blow straight through the device with out it being turned on this air flow will cool the inside of the device and allow for it to accept your sample

**Q:** The display reads "Synch Error" while I attempt a test/ retest

**A:** This occurs when the Vehicle Module loses communication with the Handset, the most common cause for this is the cable is not properly connected to the Handset. Turn off the ignition, unplug the handset, check to make sure there is no dirt or debris in either the connector or the receptacle by blowing through each component. Then reconnect making sure the connector seats securely into the receiver. If problem persists contact Alcohol Detection Systems for further options.

**Q:** My device will not allow me to test, it says provide key (12345) (*may be different number*) what do I do?

**A:** In most cases the device will give an entire message ("Disabled Provide Key 12345 Heating voltage") these startup errors are described in section 14 of the owners manual. If you call our office asking what to do, we are going to ask you what the entire message says, if you do not know then we will recommend you determine the entire message and call back. With up to 30 different error messages we need to know the entire message or we can not assist you. Secondly anytime these types of messages appear it is considered out of the ordinary and you should record it in your personal log, in case the state requests an explanation.

**Q:** My device displays "service due at midnight"

**A:** This is the day before your regular service date. Your handset should arrive by 7pm the following day. When you go to start your vehicle the next day it will work the message will display "Lock Due 3 Days" This is your actual service date. Expect your shipment by 7pm this day. If you do not receive it contact Alcohol Detection Systems.

**Q:** My device said "service due in (50) days (for example) earlier today, now it says "Lock Due 3 Days"

**A:** If your device drastically jumps dates from service due to a Lock Due message then it is calling for early service due to some reason. You will need to contact Alcohol Detection Systems about this issue, and a replacement Handset will need to be sent. There is a charge for this earlier than normal service, however with out this service your device will lock you out of your vehicle when the "Lock Due" reaches zero days

**Q:** I broke all of my mouthpieces. What do I do?

**A:** You will need to contact Alcohol Detection Systems to order new mouthpieces. The mouthpieces we send with the original installation should be enough to get you through your time required for the device. However if you are not careful then you will break them. You will need to contact us to order more mouthpieces. Their cost is \$2 each with a one time shipping and handling charge of \$2, unless we ship them with your normal replacement handset in which case we waive the \$3 S&H fee.

**Q:** My vehicle requires service what do I do.

**A:** Occasionally you may need to take your vehicle in for service. If this is for basic service like an oil change, tire work, etc, then we do not need to know about this. If it is for major work under the hood or to the electrical system contact our office and let us know what is being done, by whom, and when. Make sure you get a receipt for any work performed showing the work done, and the time it was in possession of the repair center. If you are doing the work yourself keep any receipts for any items you purchase to complete the work.

**Q:** The State has sent me a letter asking for a request of explanation for an event(s)?

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**A:** This will occur if you do something that is considered a violation of state law. We can not tell you how to answer these requests for explanation, you will need to refer to your log (list of events out of the ordinary you are required to keep) Answer to the best of your ability the circumstances surrounding the date and time listed on the explanation form. If you have questions about how to respond, contact the number on the form itself. Remember the state probably has more information than just the single incident, so if you (for example) failed a test due to mouthwash etc, then 20 minutes later passed, they have that information so include it in your explanation, and they will consider it when reading your explanation.

**Q:** I received a charge on my credit card I was not expecting

**A:** We sometimes are forced to charge late fees due to actions you take. If your payment is late we may charge a late payment fee. If you do not return your device as required by state law, we may charge a late device return fee. To avoid these charges simply return your device according to the terms of the agreement, and or make sure the funds are available for us to charge your monthly lease on the card we have on file and you will never experience these extra charges. If you receive a new credit card contact us to update your information.

**Q:** I failed a test what do I do? Now the device says NSXXX

**A:** The NSXXX is a countdown of a **No Start** condition, once this counts down you may retest. First figure out why you failed the test was it from an external source or from consumption of alcohol. If it was from an external source resolve the contamination, by rinsing your mouth out with water, or air out the vehicle, what ever is required to remove the alcohol from your sample. Then retest as soon as possible. In most cases if you rinse your mouth out with water, then you can retest after 10 minutes. Getting a passing test as soon as possible is crucial at this point. If it was from consumption remember we are looking at Brace levels above .025 well below the state law of .08 so your failed test may not mean you have a violation resulting in a "lock due" message. You really have few options, you can rinse your mouth out with water wait 20 min and retest or you can just choose not to drive that day. Remember that alcohol stays in your system for long periods of time, and you should avoid driving after consumption of alcohol, in some cases even the next morning.

**Q:** What do I do when I am done with the device?

**A:** If you have a Court order you have been sentenced to the device for a specific time frame, if you have a State Permit it too is good for a specific time, in either case we recommend contacting the sentencing agency before having the device removed. Ask them to be sure you have fulfilled your BAIID requirement before taking it off. If you are required to have it for a specific time frame, we recommend waiting till the day after that time frame, just to be sure you have fulfilled your obligation, (*example*) if you have it till the 10<sup>th</sup> then schedule your removal for the 11<sup>th</sup> or after. Once you have contacted your sentencing agency, and confirmed you have fulfilled your obligation, then contact Alcohol Detection Systems, with the contact information the agency gave you to give us. We will give you an RA # to give to the installer who installed the device. Contact them to schedule your removal, and **finally contact our office after removal** so that we can arrange to have the device returned to our office. Only after the device is returned to our office will you be removed from the billing cycle. We will also review your account to determine if a prorated refund is due. Usage of the device beyond 15 days constitutes a full month; therefore no refund will be issued.

### **14. Startup Error Messages**

The following messages may be displayed at unit startup with the unit temporarily disabled. If this occurs, turn the ignition off and back on to retry normal operation. If the problem persists check the listing below to see what you can do to resolve the issue, if you can not resolve the issue call our office and be sure to tell us exactly what the display scrolls in its entirety (the key code will change each time the Ignition is turned off and on) the important message happens after the key code.

#### **Displayed Message Explanation**

DISABLED – HOLD LEVEL"

To ensure a clear picture, the unit must be held upright and within +/-30 degrees of level at the time a sample is provided.

"Lockout: Enter Code (S/N 001001)"

Unit is locked out either due to expiration of the service interval; notification of the pending lockout was displayed prior to the actual lock out. Provide the Hand Held's Serial Number (it is displayed and printed on the unit's rear label) to Alcohol Detection Systems for a possible access code override (*fee may apply*) A 5 digit code will be provided. Enter the code using the Hand Held's keypad with the buttons representing the numbers 1, 2, and 3. The unit will allow for 24 hours of continued operation while a replacement Hand Held device is shipped. (Fee will apply)

"DISABLED - RANDOM RETEST FAIL" (horn may also sound)

A random retest was not provided in the allotted time. Pull over as instructed and turn off the ignition.

"DISABLED – NO SAMPLE" (horn may also sound)

No sample was provided in the allotted time. Turn off ignition and then retry

"DISABLED - BREATH TEMP"

The temperature of the sample was too low or too high. Turn off ignition and then retry

"DISABLED - POSITIVE ALCOHOL" (horn may also sound)

A sample over the allowed limit was measured. If driving, pull over as instructed and turn off the ignition. Upon turning the ignition back on you will see a NS X:XX this is a count down until you can retest (in Minutes) when this gets to 0:00 you can retest we highly recommend you rinse your mouth out with water and retest at least one time after a failed test. Before you do consider what may have caused it and correct the situation, then retest.

"DISABLED - TIME RESTRICTE

The unit has an **optional** time restriction entered. Unit will only operate between certain hours. (Does not apply to Tennessee)

"DISABLED - AMBIENT TEMP"

System error: the internal ambient temperature is out of expected range. Turn off ignition roll windows down if hot and retry

"DISABLED – HEATING VOLTAGE"

System error: the heaters encountered an unexpected condition, this generally may be an indicator of a dead or low vehicle battery condition, Charge your vehicles battery up then retry this error message will be gone when the vehicles battery has sufficient voltage to allow the device to heat up properly

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### "DISABLED - SYNCH MISMATCH"

The Hand Held unit does not recognize the connected Vehicle Module. These two devices are paired at the Service Center and must remain matched.

### "DISABLED - SYNCH ERROR"

The Hand Held could not communicate to the Vehicle Module. This could indicate a problem with either device or the Cable between them. Unplug the Hand Held check both sides of the connector for dirt or debris, blow out both with air, reconnect, and retry

## **15. Voice Prompts**

The Determinator has several voice prompts that are spoken to alert the user to provide a sample or indicate the unit status.

### Spoken Prompt Explanation

"Return for Service Soon"—Spoken after warm up if service is due in less than 3 Days

"Please Wait"—Spoken while heating, or before requesting a sample.

"Determinator, Please Wait"— Start-up message

"Please Provide Sample"— Spoken for a first test or rolling random retest. Provide a breath sample.

"Please Retry Sample"— Previous sample failed. Provide another breath sample.

"Provide sample now"— Spoken during a random retest if the first request is ignored

"Provide Sample Now or Vehicle Lockout will begin"—Spoken during a random retest if the first two requests are ignored

"Pull over and stop the vehicle"— the engine was detected as running without authorization to start/run. Continuing to drive after a positive alcohol sample or the failure to provide a random retest will also generate this message.

"Invalid sample - Please wait"—Spoken if the provided sample could not be measured (temperature/pressure/etc.). See?? for more information.

"You May Start the Vehicle"— The vehicle may be started. Spoken if a proper sample was provided or if the engine dies and a courtesy restart is allowed.

"Vehicle Starting is Disabled" —An alcohol positive sample was measured. The vehicle will not start.

"Rolling Retest Passed. Thank You"— A valid sample was provided for a rolling random retest. A new random interval will be calculated.

"Return for service now - Vehicle lockout"— Lockout period has elapsed. Vehicle is locked out and may not be started. If enabled, a code may be entered for a 24 hours grace period.