

3. Operation

- **Plug In:** Connect the *Hand Held* to the coiled cable
- **Turn On:** Switch the vehicle's ignition to "RUN"
- **Warm-Up:** Wait for the unit to warm-up
- **Provide Breath Sample:** Blow-Suck-Blow
- **Start Vehicle:** Drive until a random retest is required

3.1. Plug In

Plug the Hand Held Unit into the coiled 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

HH X-XX
SN XXXXX
Initting

Serv Due 30 Days
Lock Due 5 Days

LOCKOUT: Enter Code (S/N XXXXX)
RETURN FOR SERVICE (LOCKOUT)

Pay attention to the service due or lockout date. If you are parking your vehicle for an extended period of time, it may be locked out when you return.

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 warmup time. The message displayed while heating shows 0% to 100% completion.

Wait XX

3.4. Provide Sample : Blow/Suck/Blow (BSB)

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

- Do not provide a sample until requested
- Two beeps are sounded for attention before “Please Provide Sample” is seen/heard.

Please Provide Sample

- 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 start the vehicle until instructed to do so.
- If the BSB feature has been replaced with a “Straight Blow”, only STEP #3 is required.

Breath Sample Procedure :

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

3.4.1. Sample Errors

If an error is detected while taking a sample, the *Determinator* reports the 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
- "Err: Low Sample Pressure" => Step #3 - pressure was too low during sample
- "Err: High Sample Pressure" => Step #3 - pressure was too high during sample
- "Err: Sample Temp" => Step #3 – sample temperature out of range
- "Err: Fuel Cell Stability" => At the start of a sample, the alcohol measurement device was not ready

3.5. 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 heard.

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 typical time allowed 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.

If you cannot provide the sample in time, pull over to a safe location and turn off the vehicle. Turn the vehicle back on and provide a sample normally – without time restrictions or pressures.

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.

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 three minutes (typically). If the engine ever dies or is turned off, DO NOT restart the engine until you hear “You May Start the Vehicle” and see the message:

Start Vehicle

6. Service Interval / Unit Lockout

The Determinator must be returned to the Service Center at a defined interval – typically 30 to 60 days. When the *Hand Held* is turned on, it will display the number of days before the next required service. If the unit is not returned to the Service Center within the allotted time, 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 get to a Service Center. This is an optional feature of the unit. If enabled, the display will show:

LOCKOUT: Enter Code (S/N XXXXX)

If not available, the display will show:

RETURN FOR SERVICE (LOCKOUT)

Contact your dealer and provide the displayed 8 digit serial number to receive a temporary code. A charge may apply.

The code will be 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.