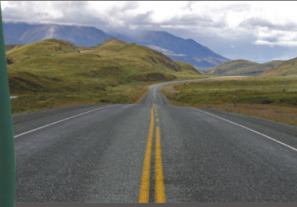




ALCOHOL COUNTERMEASURE SYSTEMS



ALCOHOL INTERLOCK V3

USER GUIDE

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Safety and Precautions

V3 breath alcohol ignition interlock is designed for easy and safe operation. The following precautions should be followed:

- Do not open the handset case. Doing so will void the warranty and potentially damage the components within.
- Avoid exposing handset to direct sunlight for extended periods of time.
- If any liquid is spilled on the handset, remove all excess fluid with a cloth and allow the handset to dry thoroughly. If it is believed there is excessive water damage, do not power on the handset. Contact your dealer.
- Keep all RF transmitting devices (such as cell phones) away from the handset to ensure minimal interference.

Warranty

All ACS products are warranted to be free of defects in workmanship and materials for a period of one year from the date of shipment.

ACS agrees to replace or repair any defective V3, provided the defect was not caused by misuse or mishandling.

Any V3 being returned for warranty repair must be properly packaged and shipped prepaid to the authorized dealer's facility.

Maintenance

V3 is made for field use, making them susceptible to dirt and debris. The handset should be cleaned with a damp cloth and mild soap. Do not use abrasive cleaners or solvents.

Periodic maintenance and calibration is required. Contact your dealer for more information.

Contact Information

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Type Approval: ECE Regulation No.10

1. This type approval follows only the specifications regarding the electromagnetic compatibility.
2. The devices must be installed in such a manner that all applicable technical rules, and also observing other technical directives and regulations, for the vehicle to be modified still apply.
3. The national regulations and behavioral rules must be observed when using this device.

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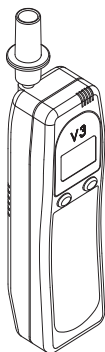
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What is an Alcohol Interlock?



An alcohol interlock is an in-vehicle breath alcohol testing instrument. It prevents a vehicle from starting if it detects that a driver's breath alcohol concentration (BrAC) is over a preset limit. It is designed to fit inside the vehicle, near the driver's seat, and connects directly to the vehicle's ignition system. The interlock consists of a handset and ECU. The ECU enables or disables the ignition of the motor and stores the handset settings.

How does it work?

V3 uses the same alcohol sensing technology used by police in roadside screening. A special alcohol-sensitive cell detects the amount of alcohol in the breath. Breath alcohol concentration (BrAC) is directly proportional to the amount of alcohol in the blood. The blood alcohol concentration (BAC) limit is customizable, and can be set to any specific jurisdictional requirement.

Installation

V3 is to be installed by a qualified installer in accordance with national regulations. An unqualified installation may invalidate the type approval of the vehicle.

The Installation guide is to be followed during installation, the installation guide part numbers are as follows:

60-000053	12V ECU installation
60-000054	24V ECU installation

More information

Alcohol Influence on Testing

Drinking alcohol and eating foods containing alcohol will cause a failed alcohol test.

Some other factors that may affect a test (because they may contain or produce residual alcohol in the mouth) are medicines, drops, burping, smoking, using mouthwash or mouth spray.

Rinsing the mouth with water after using mouthwash or mouth spray will remove the alcohol content in the mouth.

According to the previous information, **do not eat, smoke or drink for at least 10 minutes before taking a test.**

Additionally do not spray any air fresheners, disinfectants, cologne or perfume in the vehicle prior to a test, as these can also contain alcohol.

Note! The above mentioned list of factors that may affect a test is not exhaustive. There are additional items that may affect the results of a breath test. Follow this guide carefully to avoid incorrect results.

Operating Temperature

The maximum ambient operational temperature is between -40°C and +85°C.

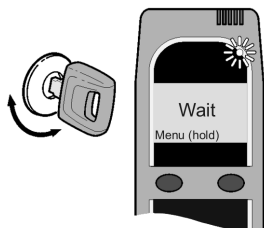
Note! Depending on the ambient temperature, the handset takes a few seconds to warm up (approximately 15 seconds at 20°C, approximately 1 minute at 0°C).

Battery Voltage

The voltage supplied to the ECU, which in turn powers the handset, is supplied by the vehicle battery.

For a 12V Interlock system, the vehicle battery voltage can range from 9V - 18V. For a 24V Interlock system, the vehicle battery voltage can range from 16V - 36V

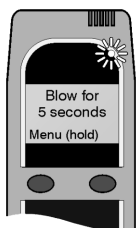
Starting the motor



1. Turn the handset power on by pressing the **right** button. The **Wait** message is displayed during warm-up.

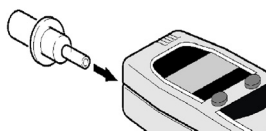
Alternatively, the power can be turned on by switching the ignition key on and off.

Note: The key must be in the OFF position before moving on.



2. The handset displays the message **Blow for 5 seconds** when it is ready for a breath test. The warm-up time is longer in colder temperatures.

Note: Do not store the mouthpiece to be used in a cold area. This causes condensation in the mouthpiece and increases the opportunity for water to enter the handset.



3. Insert a new mouthpiece. Using a new mouthpiece practices good hygiene and ensures a good breath sample.

Note! Do not eat, drink or smoke anything for at least 10 minutes before taking a test. This could contaminate the breath sample.

4. **Blow** into the mouthpiece moderately and continuously while listening for a tone indicating proper breath flow. If you are not blowing correctly, a message is displayed providing instructions on how to blow correctly.

5. Stop blowing when the handset tone stops. The **Wait** message is displayed as the breath sample is analyzed.

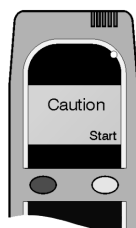
6. The handset beeps and displays the result:



Start Motor

The breath test passed and no alcohol is detected. You may start the motor.

Note! The motor must be started within 5 minutes.*



Caution

The breath test passed, but alcohol below the limit has been detected. There are 2 options:

- **Wait** 5* minutes and try the test again if you are certain there is no alcohol in your breath.
- Press the right **Start** button to acknowledge you will be driving with alcohol in your system. The motor must be started within 5* minutes.



Lockout

The breath test failed. The alcohol level detected is over the preset limit. You may NOT start the motor.

- **Lockout** and a countdown timer is displayed. Wait for the timer to expire before attempting another breath test.

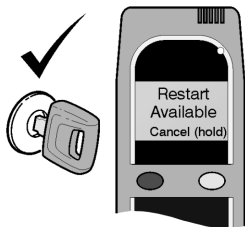
WARNING! Do not attempt another breath test until you are sure your alcohol level is under the limit. A second failed breath test may result in a longer lockout time.

* This value is customizable.

Restarting the motor

If the motor is turned off for **less than 5* (or 30) minutes** (time depends on the settings of the interlock), it can be restarted without providing another breath test. This is a safety feature if the motor stalls, or convenient for frequent short stops.

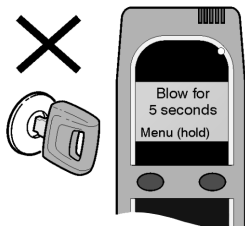
Observe the message on the handset:



Restart Available

The motor can be restarted without providing another breath test.

To cancel the restart, press and hold the right button.



Blow for 5 seconds

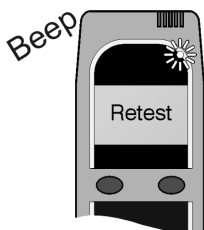
The restart period has expired and a passed breath test is required to start the motor.

Refer to the Starting the motor section.

** This value is customizable. Please contact your administrator for your unit's settings.*

Running retests (optional)

Additional breath tests can be required at random intervals to ensure the driver has not consumed alcohol since the motor has been started.



1. The handset beeps and displays **Retest**.

Do not provide a breath test while the vehicle is in motion. V3 allows a few minutes for the user to stop in a safe location.

2. Provide a breath sample and observe the display message:

Drive Safely

The breath test passed, you can continue driving.

Pull over, turn off Motor

The alcohol level is above the preset limit. The motor must be turned off. **Lockout** and a countdown timer is displayed until another breath test can be attempted. You cannot start the motor until a passed breath test is provided.

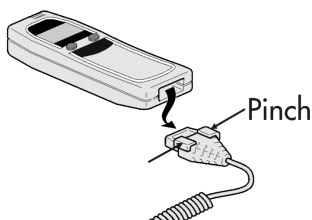
WARNING! Do not attempt another breath test until you are sure your alcohol level is under the limit. A second failed test may result in a longer lockout time.

Sharing a vehicle

Drivers with their own handset can operate the same vehicle without reprogramming V3. All the custom settings are downloaded into the ECU when a new handset is connected.

The handset can be changed with the motor on or off.

It is recommended to exchange handsets when the motor is off and the vehicle is parked at a safe location.

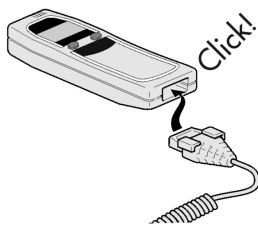


1. Pinch the connector at the sides and pull the cable away from the handset to disconnect.

WARNING! Do not pull on the handset cord. It requires just a gentle squeeze on the release tabs to disconnect.

2. If the motor is running, the ECU beeps every 15 seconds until the handset is reconnected.

If the motor is off the ECU will not beep.



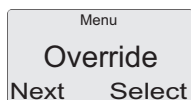
3. Reconnect the handset to the handset cable. It makes a click sound if it is properly connected.

All the handset settings are downloaded to the ECU.

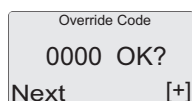
Note! If the handset is replaced while the motor is running, a breath test is required.

Overriding the Interlock

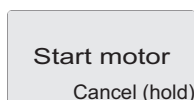
In emergency situations, the ignition interlock can be overridden using a four-digit Override Code provided by your dealer. This code is randomly generated and changes daily. The use of the override function is stored in the log.



1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Override**. Select with the right button.



2. Use the right button to increase the number and the left to move digits. Once entered, press the left button to move to OK? and press right button to Select.



3. The handset beeps and displays Start Motor. A breath test will be required again the next time the motor is started.

If the code is incorrect, the handset beeps and there is no action. Verify the code is correct and re-enter.

MENU OPTIONS

V3 has a number of menus and customizable options, such as language selection, time adjustment, sleep and wake-up time settings. All are found in the Main Menu, which is accessed by pressing and holding the left button.

Dates



The current clock date and time, calibration dates, lockout date and service date are found in this menu.

Calibration is required to maintain optimum accuracy. A reminder is displayed on the handset 14 days before the calibration expiry date.

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Dates**. Select with the right button.
2. Use the left button to scroll through the dates (Lockout, Service, Calibration, Cal. Expiry and Current).
3. Press and hold the **right** button to exit the Dates menu.

Volume Set



The handset uses audio tones. The volume of the tones is set from the *Main Menu*.

Note! The volume setting is for the handset only. The volume of the ECU cannot be set.

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Volume**. Select with the right button.
2. Use the **left and right** buttons to adjust the volume **up or down**.
3. Press and hold the **right** button to save the setting and exit the Volume menu.

Wake-up Mode



The handset has the capability to wake-up up to three times a day. This ensures the handset is warmed up and ready before entering the vehicle.

Note! Before using this option, be sure the vehicle battery has a sufficient charge.

The wake-up option is automatically disabled if the handset is not used for three consecutive days.

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Wake-up**. Select with the right button.
2. Select a time slot by placing the cursor underneath an on/off. Set the wake-up time for that slot. The left button moves the cursor and the right button changes the value.
3. Press and hold the **right** button to save the time selection and exit the Wake-up menu.

Sleep Mode



The handset can be put into sleep mode manually or automatically when the ignition is off. This conserves the handset battery.

To put the handset into sleep mode manually, **press and hold both buttons**. To put the handset into sleep mode automatically:

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Sleep**. Select with the right button.
2. The sleep menu contains 4 pre-programmed times: **5,30,60** and **90** minutes. Use the left button to scroll and select the time.
3. Press and hold the **right** button to save the time selection and exit the Sleep menu.

Time



The time of the handset can be adjusted when changing time zones and daylight savings time.

This time adjustment is primarily for the Wake-up feature and does not change the times in the Dates menu.

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Time**. Select with the right button.
2. The current time is displayed with the option to increment the time by +\-. 0.5 to 3.0 hours. Press the right button to increase the time [+], and the left button to decrease [-].
3. Press and hold the **right** button to save the time setting and exit the Time menu.

Language Selection



The V3 is available in multiple languages. The selections are made at the time of order and programmed at the factory.

For more information on the additional languages that are available, contact your dealer.

1. Press and hold the **left** button to access the Main Menu. Press the left button to scroll to **Language**. Select with the right button.
2. Use the left button to scroll through the languages. Stop at the new language selection.
3. Press and hold the **right** button to save the language selection and exit the Language menu.

Accessing maintenance functions

V3's system maintenance functions can only be accessed by your dealer using a System Code provided from ACS. This code is randomly generated and changes daily. The use of this function is stored in the log.

Servicing the Vehicle

When the vehicle requires service and an interlock is installed, a Dealer Code provided from your dealer can be used to start the motor. This code is randomly generated and changes daily. The use of this code is stored in the log.

Calibration

Yearly calibration is required to maintain optimum breath test accuracy. The handset displays a message 14 days before calibration is due. Calibration is performed with either a breath alcohol simulator or a gas alcohol reference.

Troubleshooting Table

The following table lists basic problems that may occur, along with their solutions. For other problems, contact your dealer.

If V3...	You should...
Will not turn on	Check the vehicle battery
Displays an error code	Refer to the table of messages on the next page
Aborts a breath test	Retry the test, or investigate the Abort code
Is in permanent lockout	Contact your dealer
Requires service	Contact your dealer

Display Messages

V3 may not accept a breath test and could display error messages instead. To minimize errors, make sure that the handset is connected properly, the vehicle's battery is in good condition, and that mobile phones are not in use during breath tests. The following is a list of messages (including error messages) that the handset may display:

Display Messages	Description	What to do
ADR-incompatible	Certain vehicles require an ADR approved handset to transport hazardous goods. Occurs when a non-ADR handset is connected to an ADR approved vehicle.	Find the correct ADR approved handset and connect it to the vehicle.
ABORT Error Code 10, 30, 40, 45, 50	There is a problem with the handset.	Retry the test. If the message persists, contact your dealer.
Battery Error	The batteries of the handset and/or ECU are depleted.	Contact your dealer to arrange for service.
Calibration Expired *	If the handset is not calibrated before the expiry date, a calibration expired message is displayed. You may be able to start your motor, or your motor may be blocked from starting, this depends on your unit's settings.	Contact your dealer to have the V3 calibrated.
Cancelled Try Again	The breath test was cancelled before completion.	Retry the test. If the message persists, contact your dealer.

Display Messages	Description	What to do
Clock Error	The internal clock circuit has failed. The handset will still operate correctly, but the time and date information will be incorrect.	Contact your dealer.
Communication Error	The handset and ECU are not communicating properly.	Contact your dealer.
Voltage too low/Voltage too high	The handset or ECU is not receiving the correct supply voltage.	Check your vehicle's battery. If the problem persists, contact your dealer.
Invalid Sample	The handset could not analyze the breath sample that was given.	Retry the test. If the problem persists, contact your dealer.
Missed Retest	Occurs when a retest is not done within the three-minute time frame.	Complete the test as required.
Pull Over, Turn off Engine	Occurs in response to a failed alcohol test while driving.	Pull over at the first safe opportunity and turn the motor off. Wait 5 minutes before attempting another test.
RF-error	There is a strong RF source in the near vicinity of the handset.	Try to shield the handset from any surrounding antennas, including mobile phones. If there is no change, contact your dealer.
Service Due	Reminder that a service appointment is coming up.	Arrive at the scheduled time for the appointment.

Display Messages	Description	What to do
Service Required *	The service period has expired. You may be able to start your motor, or your motor may be blocked from starting, this depends on your unit's settings.	Contact your dealer to have your vehicle serviced.
Start Violation	If you start the vehicle without passing a breath test, a violation results. V3 requests a retest, and the Start Violation message displays.	Take the breath test and contact your dealer.
Technical Error	An internal failure has occurred. The motor can still be started as normal with no breath test required.	The interlock should be serviced as soon as possible.
Try again	There is a problem with the test.	Try the test again. Call your dealer if the problem persists.

* For a **Calibration Expired** or a **Service Required** display message, you may be able to start your motor, or your motor may be blocked from starting, it depends on your unit's settings. If you are allowed to start your motor, press the **Start** right handset button. If you are not permitted to start your motor, no start message will be displayed above the right button. Please contact your administrator for more information.

Disposal of Unit at End of Service Life

Return to your dealer for removal of the interlock from your vehicle. Following the removal, disposal of the alcohol interlock (ECU, handset, or both) at the end of its service life can be done by:

- Returning the unit to your dealer for disposal.
- Contacting your local waste management authority for more information on the appropriate disposal methods to be followed.
- Asking a suitable disposal contractor to dispose of the interlock.

Replacement Parts

Contact your dealer for the following parts:

- Mouthpieces (Bag of 25), ACS Part Number: 95-000140

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