



LCI-777®

**User
Manual**



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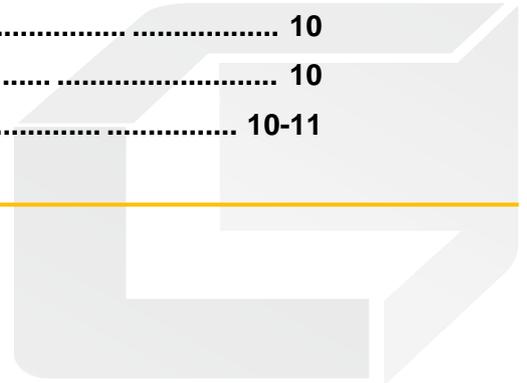
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TERMINOLOGY:

The definition of any word or phrase printed in italics may be found in the table below:

BAIID	Breath Alcohol Ignition Interlock Device. Also, referred to as, "interlock."
Blocked	The condition in which the vehicle will not be able to start due to the action of the Control Unit.
Calibration	A procedure whereby the handset is checked or adjusted to ensure that it is providing accurate results.
Control Unit	The part of the LCI-777, mounted out of sight which blocks or unblocks the ignition circuits.
Early Recall	A requirement to visit a Service Center before the next scheduled visit. This is usually due to having failed to comply with one or more of the Interlock Program requirements.
Emergency override	A procedure which allows the driver to override the LCI-777 and start the vehicle without providing a satisfactory breath sample.
Ethanol	The chemical name for the alcohol found in alcoholic drinks such a wine, beer, liquor, etc.
Grace Period	Period following a deadline (e.g. a calibration /maintenance visit during which the required procedure may take place without penalty).
Handset	The part of the LCI-777 mounted on the dashboard of the vehicle into which you blow your breath sample this is also called the Handset control module (HCM).
Ignition Circuit	This is a general term which covers the various electrical sub-systems which must be present for the vehicle engine to start.
TFT	Thin Filmed Transistor Display. The type of color display screen used on the LCI777.
LED	Light Emitting Diode. The light source providing the red and green lights on the LCI-777 cover.



Maintenance	Periodic checks and adjustments required by the LCI-777 to ensure program compliance.
Valid breath sample	A breath sample provided by the driver which contains alcohol at a value below that of the Setpoint level.
Interlock Program	A program whereby drivers convicted of drink driving may drive a vehicle equipped with a BAIID instead of having their license suspended.
Permanent Lockout	See Lockout.
Positive breath sample	A breath sample provided by the driver which contains alcohol at a value at or above that of the Setpoint level.
Program Administrator	A person or organization responsible for the management of an Interlock Program.
Random Retest	A requirement of some Interlock Programs whereby the LCI-777 will request a further breath sample after the vehicle has been started. Also, known as a Rolling Retest.
Restart Period	The period following the engine being turned off during which it may be restarted without providing a further breath sample. Also, known as a Free Restart.
Setpoint	The alcohol level at or above which the LCI-777 will not unblock the Ignition Circuits. This level is set by the jurisdiction's Program Administrator.
Soft Keys	Buttons on the handset cover whose function changes dependant on the labels displayed on the screen directly above them.
Standby Mode	The mode into which the LCI-777 automatically returns after activity. It is not switched off and continues to monitor its environment while in this condition.
Start Period	The period following the handset displaying PASS after a breath sample. During
Local Settings Numerical or logic	values stored within the LCI-777 which comply with the specific requirements of your local Interlock Program.
Lockout	A period following an event during which the LCI-777 will prevent you from attempting to start your vehicle. In some jurisdictions, continuing noncompliance might lead to a Permanent Lockout which will require your vehicle to be transported to a service center for the lockout to be reset.



INTENDED USE

The LCI-777 is a Breath Alcohol Ignition Interlock Device (BAIID) designed for use primarily in *Interlock Programs* to prevent the vehicle from being driven by any driver whose breath alcohol value is above a pre-set value.

While the LCI-777 effectively incorporates a vehicle immobilizer, it is not designed as an antitheft device and should not be used as so.

PRINCIPLE OF OPERATION

The LCI-777 consists of a *handset* which is a sophisticated Breath Alcohol Meter plus a *Control Unit* which resembles a vehicle immobilizer. Until the driver provides the handset with a *valid breath sample* the *Control Unit* maintains the *Ignition Circuits* in a *blocked* condition whereby the vehicle's engine cannot be started. The *Ignition Circuits* may only be *unblocked* by providing the handset with a breath sample containing an alcohol level lower than the *setpoint* value

HYBRID VEHICLES

The LCI-777 may be installed on hybrid vehicles. Principle of operation is the same as with a standard vehicle using a conventional gas/diesel engine.

SAFETY

Starting a vehicle equipped with a *BAIID* will take slightly longer than starting one not equipped with device. For this reason, do not leave a LCI-777 equipped vehicle in any position where it may need to be quickly moved.

INSTALLATION

The LCI-777 may only be installed by a LCI approved technician in compliance with the LCI Installation Manual and in accordance with local jurisdictional regulations. Unqualified installation or service will invalidate the product warranty and LCI will accept no liability for consequential damage to the vehicle.

CALIBRATION, DATA DOWNLOAD, AND MAINTAINANCE

Calibration, *Maintainance*, and repair may only be conducted by LCI approved technicians using LCI approved parts. Failure to observe this condition will invalidate the product warranty and will relieve LCI of responsibility for any consequential product liability. *Maintainance* and *calibration* must be carried out in accordance with the LCI Service Manual in order to ensure correct operation of the unit.

The unit requires periodic *calibration* and *maintainance* procedures. Required dates for these procedures are carried in software and are outlined by each jurisdiction. When *calibration/maintainance* procedures are required, a *pre-calibration/maintainance* request will be displayed on the *handset* screen at startup for a period of time (locally regulated) before



attention is required. In some jurisdictions an extra period of time (*Grace Period*) after the due date may be available during which the unit may be *calibrated/maintained*. If *calibration/maintenance* have not been carried out before the end of the *Grace Period* then the LCI-777 will prevent the vehicle from being started until it has been reset at an authorized *Service Center*.

Ignition Interlocks for use in *Interlock Programs* are required to store data electronically concerning events such as breath sample results, vehicle starts, *Random Retests*, attempts to disconnect the system or otherwise drive the vehicle without having provided an acceptable breath sample. *Interlock Programs* require that this information is downloaded from the unit on a regular basis. *Data Download* usually occurs at the same time as a routine *calibration/maintenance* visit but can also be completed in realtime. *Data Downloads* allow the monitoring authorities the ability to check that the conditions of the driver's license/permit are being adhered to.

Downloaded data is encrypted and can be accessed only by the *monitoring authorities*, LCI authorities, but not by its distributors (i.e. service centers).

Data download requires hardware and software specific to the LCI-777. Attempts to otherwise access or manipulate data will result in the event being recorded and disclosed at the next download or in realtime depending on the jurisdictional requirements.

VEHICLE BATTERY

The LCI-777 is designed to work with an input voltage of 9 V to 28 V. It is important to recognize that under extremely cold conditions your vehicle's battery may not be able to provide the required 9 V – it would not in any case be able to turn the engine over with this voltage. Please ensure that you follow your vehicle manufacturer's instructions for battery care.

You should also be aware that the LCI-777 itself constantly draws power from the battery. The battery in a typical vehicle would power the LCI-777 for over three months without recharging.

Many *Interlock Programs* require that vehicle battery disconnection is logged as an event in the memory of the interlock and some also require an *Early Recall* following a disconnection. Please review your program documentation for information regarding battery disconnection and vehicle servicing.

MODIFICATIONS

Do not attempt, under any circumstances, to modify either the LCI-777 system or its associated wiring. Failure to observe this advice may result in damage to the LCI-777 or to the vehicle on which it is installed. Such action may also result in the loss of your driving privileges. System design and installation is such that attempts to tamper with the components will be visually evident and or electronically recorded.



OPERATING TEMPERATURE

The LCI-777 is designed for use at temperatures between -40°F and $+185^{\circ}\text{F}$. If you switch on your vehicle's ignition while the *handset* is at temperatures above this range, then the message "Handset Temperature Too High" will be displayed and the unit will automatically return to *standby mode*. In the case of the temperature being below -40°F then both green and red *LED*'s will illuminate without flashing for a short period before the unit returns to its *standby mode*. Please note, that the *LED*'s are operational at all working temperatures and may be used instead of the display screen if desired.

If the handset is at a temperature above 185°F , then remove it from the heat source (usually the sun on the dashboard) to allow it to cool down. If it is below -40°F , then apply gentle heat to warm it up. Placing it close to your body: under your coat is usually an effective way of warming the device to operational temperature.

SYSTEM START-UP

NOTE. The On/Off button on the *handset* is for service use only. In this variant of the LCI product range, power is controlled by the software.

The LCI-777 will exit its *standby mode* and power up automatically once your vehicle's ignition is switched on or the door of the vehicle is opened. A beep will sound, followed by a series of screens showing the following messages:

- LCI logo on the LCD screen will appear
- LCI logo with the call center number 1-800-352-4872 the LED flashing Orange
- Calibration Interval information
- "Starting up" if the unit needs to heat then this will be orange the LED flashing orange □
When the unit is ready the status Led will be flashing Blue.

During this time, the blue *LED* will flash

There are four screen that will alternate to prompting the user to give a sample.

1. Please Give Sample
2. Please Fit to Mouth
3. Then Start to blow
4. Blow until you hear a "click" sound

Meanwhile, the system automatically checks its operating parameters. When the *handset* is ready to take a sample, a further single beep will sound, followed by the message: "Fit Mouthpiece Provide Sample" alternating with the message "Blow for minimum 3 seconds"

BREATH SAMPLE TEST PROCEDURE

Before providing a sample

1. The LCI-777 reacts specifically to the presence of alcohol in the breath. However, it can be affected by use of alcohol containing products such as mouthwash or the application of perfume or aftershave immediately before providing your sample. Vehicle windshield wiper fluid can also contain high concentrations of alcohol and washing your windshield before providing a sample may cause a *positive result*. You should also avoid the presence of paints, polish, solvents, and the like near the handset as many of these products contain alcohols.
2. Taking any form of alcohol by mouth within 15 minutes of providing a sample is not recommended and may cause positive results to occur. Many foods and drinks contain small but detectable quantities of alcohol. For this reason, it is recommended that you take nothing by mouth for 15 minutes before driving a LCI-777 equipped vehicle. Depending on jurisdictional rules governing BAIID, you may be required to provide a breath sample at random during the operation of the vehicle. Be aware of this possible requirement when eating/drinking in the vehicle. It is always suggested to rinse your mouth out with water prior to providing a breath sample. See also section below labelled "*Random Retest*".
3. Elevated results can occur if you have consumed alcohol up to 15 minutes before providing a sample. This is because your mouth may still contain residual alcohol from the drink.
4. Smoking within two minutes before providing a sample is not recommended.

PROVIDING A SAMPLE

1. Remove the handset from its docking station (if applicable) by lifting upwards parallel to the mounting surface.
2. Insert a clean dry mouthpiece into the mouthpiece slit. For full details see section below titled "Disposable Mouthpiece". Take a deep breath, seal your lips around the wide end of the mouthpiece and blow into the LCI-777. The *handset* will detect your breath flow and will emit an alternating tone if you are blowing sufficiently hard. Once sufficient breath has been blown, the continuous tone will stop. The LCI-777 will then sample your breath by engaging the internal solenoid. This procedure is to ensure that the sample taken comes from deep in the lungs and is therefore a better representative of the true blood alcohol level.

NOTE: The LCI-777 is equipped with highly sophisticated methods of detecting sample tampering. Any attempt to start your vehicle without providing an unadulterated human breath sample will fail and will be logged within the system. The vehicle cannot be started using a tampered sample and you may be subjected to penalties if you are using this product as part of an *Interlock Program*.

3. You will now see the *handset* display show the message "Analyzing. "
4. After a few seconds, your breath sample will have been analyzed and, if the breath alcohol level is below the pre-set *setpoint*, then "PASS" will appear on the *handset* display. A coded signal will be sent immediately to the *Control Unit* to *unblock* the *ignition circuit*. Return the handset to its mounting position. You now have a *start period* during which you may start your vehicle, even if you turn the ignition off and then back on. The LCI-777 will return to its *standby mode* automatically.
5. If *Random Retesting* is required in your jurisdiction, at a random point within a set period following engine start, the system will sound a series of continuous beeps. At this point you now have a set period to provide a further test.
 - a. The Handset will now beep, the display will be Red with the following messages
 - 1.1. Call Please Give sample
 - 1.2. Call Please Fit to Mouth
 - 1.3. Call Then Start to blow
 - 1.4. Call Blow till click
 - b. Should you provide a retest sample containing an alcohol level either at or greater than the *setpoint*, then this event will be noted in the LCI-777's memory and will be included in the next data download to the jurisdiction's *Program Administrators*. It may also trigger an additional requirement for your vehicle to visit your local *Service Center* within a defined period (*Early Recall*). Moreover, it may simply prevent re-starting the vehicle until a visit to the *Service Center* has been completed and pending jurisdictional requirements, the vehicle's horns and or lights may activate. This may require your vehicle to be towed, or otherwise transported to the center, at your expense.

For safety reasons the LCI-777 will not shut down the vehicle engine in the case of a failed sample.

Please refer to your *Program Administrators* for details of how a failed *retest* is handled in your locality.

RESTART PERIOD

After using the device and once the vehicle's engine is turned off, the LCI-777 system enters what is called a *Restart Period*. During this period, the engine may be restarted without the need for a breath sample to be provided. This feature allows the driver to restart quickly should the engine be stalled or turned off for a short period.

DISPOSABLE MOUTHPIECE

The mouthpiece must be fitted into the mouthpiece holder to provide a sample.

Unwrap the mouthpiece from its protective packaging and, slide the mouthpiece into the top hole in the center of the *handset* above the display. Failure to correctly locate the mouthpiece



may result in the *handset* refusing to accept a breath sample and therefore preventing the vehicle from starting.

The mouthpieces are disposable, manufactured under hygienic conditions, and supplied in individual wrappers. It is acceptable to wash and re-use mouthpieces provided they are perfectly dry before use. Use of wet mouthpieces may prevent your vehicle from starting; additional mouthpieces may be purchased from your local LCI distributor or *Service Center*.

CALIBRATION

The system requires periodic *calibration* per jurisdictional requirements. A *calibration* reminder will appear on the display screen when the *calibration* date is approaching. The timing of recalibration is set by your jurisdiction. Please note that failure to comply with the required calibration procedures may result in your vehicle being prevented from starting until reset, at your expense, at an approved *Service Center*.

In this case, a *Permanent Lockout* countdown will start once the calibration date has been passed. This will be shown at during the start-up sequence of the handset and will require that you acknowledge having read the message by pressing the indicated *soft key* before continuing.

IF THE IGNITION CIRCUITS FAIL TO UNBLOCK

If the *handset* displays "FAIL" then it has detected alcohol in the breath at a level above the *setpoint*. If you have observed the points shown in the "Before Providing a Sample" section of these instructions, then you have a breath alcohol level above the pre-set limit. At the user's discretion, wait for a period of 15 minutes and try again. By this time your breath alcohol level may have reduced to a point whereby you will pass the test. In some jurisdictions, the LCI-777 may be programmed with a built-in delay before providing another sample.

USER MAINTENANCE

If required, simply wipe over the handset over with a lightly dampened cloth.

Do not use chemical solvents, abrasives, or excess water as these could damage both the case material and the internal sensors.

FAQ'S

- Q:** My LCI-777 keeps telling me to "Try to Blow Harder" but I keep running out of breath before the double beep.
- A:** *You must blow for at least 3 seconds. Try blowing more softly. If you can hear an Alternating tone, then you are blowing hard enough.*
- Q:** I can see droplets of condensation coming out of the end of the mouthpiece. Will this affect the results?

- A:** *We recommend that if you see this happening that you change the mouthpiece for a dry one immediately. Condensation may prevent you from starting your vehicle; your wet mouthpiece may be dried out and re-used.*
- Q:** Can I leave my mouthpiece in the handset?
- A:** *Yes, in fact we would recommend that you do so especially if Random Retests are required.*
- Q:** I have forgotten my mouthpieces. Can I blow directly into the LCI-777?
- A:** *Yes. The unit is designed to accept a mouthpiece and be used without a mouthpiece. For Hygiene purposes please use the mouthpiece provided.*
- Q:** Can I re-use my mouthpieces?
- A:** *Yes; you can also wash them if desired. Use water and mild detergent, and rinse thoroughly. Do not use solvents (i.e. alcohol laden wipes, acetone). Mouthpieces must be perfectly dry before use to prevent false positive results.*
- Q:** How many drinks can I have before the LCI-777 will prevent me from starting my vehicle?
- A:** *The answer to this question is entirely dependent on where the LCI-777 setpoint level has been set and how quickly your body metabolizes alcohol. For this reason, it is recommended not to drink any alcohol before driving. Remember that alcohol stays in the body for many hours after you stop drinking. Alcohol levels in the morning – after consuming alcohol the night before – may prevent you from starting your vehicle.*
- Q:** My handset is displaying “Circumvention”. What does this mean?
- A:** *The handset has detected an unusual reading in your breath sample. Please ensure that you are observing the correct blowing procedure and repeat the test. If the “Circumvention” message is displayed again, try removing the mouthpiece, removing any moisture that could have accumulated in it, hold it in your hands and make sure that it is dry before reinserting it. If the problem persists then please contact LCI for advice.*
- Q:** Can I disconnect the LCI-777 and drive my vehicle without it?
- A:** *No. Any attempt to tamper with the system, either by trying to disconnect the unit or by providing a sample other than one provided by you, is recorded electronically. It may also result in an Early Recall. Such actions may also leave you subject to penalties under your local jurisdiction.*
- Q:** What happens if I miss a *random retest*? Will the engine switch off?



- A:** *No. For safety reasons the LCI-777 cannot turn off a running engine. It can only prevent an engine from starting. If you fail to provide a sample within the specified time, the event will be logged electronically and will be downloaded later; additionally, per jurisdiction requirements, the vehicle's horn and/or lights may begin to function until the vehicle is shut off or a valid sample is provided. In some jurisdictions, you may be subjected to an Early Recall.*
- Q:** The cable connecting the handset to my vehicle uses an RJ45 connector. Does this mean I can connect my handset to my computer?
- A:** *No. Although a RJ45 Ethernet connection is utilized, it is wired completely different than a standard RJ45 Ethernet connector and uses a higher voltage. Attempts to connect the handset or the cable to any other device (i.e. laptop, printer, smartphone) may result in damage to both devices. Furthermore, the LCI-777 incorporates sophisticated encryption and protection algorithms. Both stored data and operational firmware are inaccessible without the correct passwords and hardware. Attempts to access the inner workings of the unit are also detected and logged in the unit's memory.*
- Q:** What happens at the end of my Program, when the leased LCI-777 is due to be removed?
- A:** *If you do not wish to continue to utilize the interlock, then the system will be removed and your vehicle's electrics returned to their pre-installation condition. Removal costs are outlined in your LCI contract. Should you wish to continue to use the installed interlock then please contact LCI.*