How do I install CarChip in my car?

To install CarChip or CarChipE/X, first find the OBDII port on your vehicle. The D-shaped OBDII port will be located within three feet of the steering wheel and should be easily accessible to a person in the driver's seat. If you have trouble finding your OBDII port, don't forget to look under the dashboard or in the dashboard area in front of the passenger seat. For help finding your OBDII port, visit our website at www.carchip.com and look for the link to the National OBD Clearing House interactive database. Once you find the OBDII connector, plug CarChip into it. Check to make sure CarChip's indicator light is blinking. This verifies that CarChip was properly inserted into the OBDII port and is communicating with your vehicle.

What is the difference between CarChip, CarChipE/X, and CarChipE/X with Alarm?

CarChip records up to 75 hours of trip details. It monitors the time and date of each trip, distance traveled, speed, idle time, hard accelerations and decelerations, and the time and date of each time CarChip was connected or disconnected. CarChip also monitors engine diagnostic trouble codes and the status of engine parameters at the time the codes occurred. CarChipE/X records up to 300 hours of trip details. (Actual number of hours logged depends on the number of parameters monitored and the logging interval selected by the user.) CarChipE/X has all the features of CarChip plus it allows you to select and monitor any four out of 23 additional engine parameters in addition to those recorded by CarChip. The user can set CarChipE/X to record data at intervals between 5 to 60 seconds. CarChipE/X also has an accident log which shows the last critical 20 seconds of speed before a hard deceleration. CarChipE/X with Alarm offers all the features of CarChipE/X as well as an audible alarm that sounds when the driver exceeds the acceleration or deceleration limits you have set.

How do I connect CarChip to a computer? Can I use a USB port?

If you have a serial version of CarChip (product numbers 8210, 8220, 8240, or 8244), your download cable requires a serial port connection. In order to use a USB port with these CarChips, you will need our Serial to USB adapter, product number 8434. If you have the USB version of CarChip (product numbers 8211, 8221, 8225, 8241, or 8245) your download cable requires a USB port connection.

To connect CarChip to your computer, locate a free port on your computer and insert the 9-pin connector or USB connector of the download cable into the port. (For serial port versions, you must also plug the power adapter cable into the power jack on the 9-Pin connector, and plug the power supply into an AC outlet.) Then plug the 8-pin micro connector into the port on the CarChip data logger. CarChip is now interfaced to the computer.

Can I connect my CarChip to a Mac?

CarChip is not compatible with Macintosh computers.

How does CarChip work?

CarChip plugs into the OBDII port, which is found in most 1996 or newer vehicles, to record trip and performance data. The data is then downloaded into your computer, providing a detailed look at how the vehicle was driven. It also detects any OBDII trouble codes which might occur during the trip. CarChip software displays vehicle data in summary, plot or table format and can also be exported to Microsoft Excel.

What is OBDII?

OBDII stands for "on-board diagnostics two." It is the on-board automotive diagnostics system that has been required by the EPA on every new motor vehicle sold in the USA since 1996. The on-board diagnostics system monitors virtually every component that can affect vehicle emissions and many other vehicle functions and operations as well. Any detected problems will be recorded by OBDII and will cause the vehicle's "check engine" light to be illuminated.

Frequently Asked Questions — CarChip

Will CarChip work with my vehicle?

Generally all vehicles, both foreign and domestic, model years 1996, later and sold in the USA will work with CarChip. Starting in 1996, all vehicles made for sale in the US and Canada were mandated to have an OBDII connection that complies with specific protocols. The protocols are: J1850-41.6, J1850-10.4, ISO 9141, and KWP2000 (ISO 14320). Some vehicle manufacturers have begun to adopt a newer protocol (CAN) in their latest models. CarChips shipped as of April 2005 (model numbers 8211, 8221, 8225, 8241, and 8245) will also accommodate this newer protocol as well as the four prior protocols. Please check our website (http://www.davisnet.com/drive/products/carchip_exclusions.asp) for a list of vehicles that use the CAN protocol, as well as vehicles that have a known conflict with CarChip.

What are the additional 23 parameters that CarChipE/X will monitor?

CarChipE/X and CarChipE/X with Alarm can monitor vehicle speed, engine speed, coolant temperature, engine load, intake manifold pressure, air flow rate, intake air temperature, timing advance, fuel pressure, fuel system status, short term fuel trim (two sensors), long term fuel trim (two sensors), battery voltage and oxygen sensor output voltage (eight sensors). You may select four parameters to monitor during a trip and you can change the selection using CarChip's software.

Can I get real time data with CarChip?

No, there is no way that you can get real-time data from CarChip. CarChip must be unplugged from the OBDII connector and connected to your PC via the included serial or USB download cable to download and review your vehicle's data.

Will CarChip clear trouble codes?

CarChip will report what the cause of the light was, and provide a "snapshot" of the engine's parameters at the time the light came on. While CarChip will not clear the trouble code from the engine's computer, it will, in most cases, allow you to turn the "Check Engine" light off. You do this through the software by "instructing" CarChip to reset the light the next time it is plugged into the vehicle. If the issue that caused the light to come on is still there, then the "Check Engine" light will illuminate again.

How do I view trip data?

To view trip data, select "File," then "Open" and highlight the database you want to open. From the top tool bar select "View," then select "Trip Log." The screen will show all your trips. Click on the down arrow by the word "Summary." Select a trip by clicking on it. For each trip you will be able to select a tab for a Report, a Plot Graph, or a Table for that trip.

Can I export data to a spreadsheet?

You can export logged data from the Trip, Activity, Accident, and Trouble Log views to a spreadsheet using the right-click menu. Information displayed in any of the Log views can be exported by either saving to a file or copying to the clipboard. Copying to the clipboard allows you to paste the information directly into other applications. Summary, Report and Table views can be exported as either a text file or a data file. Plot views can be exported as a metafile (vector graphic format), bit-mapped graphics file, or as data. The data files are tab delimited text files that can be imported into a spreadsheet.

Is it possible to change the monitoring intervals to one second?

No, the lowest interval you can choose is every five seconds. Other choices for the interval length are every 10, 20, 30 and 60 seconds.

Can I log trips as personal or business with CarChip?

CarChip itself does not distinguish between personal or business trips. To record your business trips, plug in CarChip when driving for business purposes. Then download your business trip data into a database where you can log all your business-related trips.

How long will CarChip maintain the current time and date?

Even when unplugged from the vehicle, CarChip should maintain the current time and date for approximately 10 years.

Why didn't my CarChip report anything in the vehicle trouble log when the ABS light was on?

The diagnostic trouble codes (DTC) report error codes or trouble lights only for the engine and power train. This system records and reports no data for the ABS, cab light, seatbelts or other systems not directly connected to the engine or the power train.

One of the parameters CarChipE/X will monitor is battery voltage. Is that really system voltage?

Yes, it really is system voltage. When the regulator kicks off you see battery voltage. When the regulator is on you see alternator voltage.

Most vehicles have two oxygen (O2) sensors. CarChip monitors up to eight oxygen (O2) sensors. Why?

While most vehicles have one or two oxygen sensors, the OBDII protocol allows for up to eight. The output comes in the form of two banks with four sensors in each bank. CarChip users will likely monitor the first one or two sensors of the first bank.

Does OBDII monitor acceleration and deceleration?

No, acceleration and deceleration are not reported by OBDII. CarChip calculates acceleration and deceleration by monitoring speed over time.

Why isn't the intake manifold pressure ever reported as a negative number?

The vehicle measures and reports manifold pressure via the OBDII "absolute pressure" value. This value includes atmospheric pressure, which will change at different altitudes and is critical for the vehicle to adjust its fuel mixture. If you are at sea level, your average pressure will be 14.7 psi. If your intake manifold pressure reports 10 psi, then it is less than the outside air. This pressure differential causes air to be drawn into the mixture.

What do the codes in the fuel system stats report mean?

There are two readings in the status report, one for fuel system #1 and the other for fuel system #2.

o = open loop: This means the vehicle's other sensors aren't reporting to the fuel system yet, so the fuel system make no adjustments. Open loop usually occurs when the engine is first started until the engine warms up.

c = closed loop: This means that all sensors are reporting and the fuel system makes adjustments according to what those readings are.

o(u) = open loop un-initialized. This means the fuel system is un-initialized, i.e. at startup.

o(sf) = open loop system fault = open loop. This means the fuel system sees a system fault, so it will not make any adjustments. The fuel system will run as if it was not getting any reports from the other sensors.