Who’s the biggest computer manufacturer in the world? IBM? Nope. Compaq? Sorry, guess again. Dell? Wrong. Believe it or not, the world’s largest computer manufacturer is General Motors.

The answer doesn’t seem to make sense until you understand that we’re not limiting our description of a computer to the kind that sits on your desk. We’re talking about any kind of computer, as long as it performs computer functions of some sort. Going by that definition, nobody builds more cars (or stuffs more computers into its cars) than General Motors.

Computers have become such an integral part of all modern vehicles that it’s gotten difficult to determine where the computer ends and where the rest of the vehicle begins. The automobile has become the ultimate four-wheeled portable computer. Just to make sure we continue to make the loan payments and change the oil, the computer/car allows us to go out for a ride in it from time to time.

When the time comes to diagnose and repair the vehicle computer or its assorted subsystems, what tool is better suited for the job than another computer? OBD-II has opened the door to a wealth of information concerning the internal workings of the vehicle computer, but it takes another computer to sort out that information and present it to non-computer types in a clear and easy to understand format.

Scan tools and dedicated diagnostic equipment can accomplish this level of communication with the vehicle computer. After all, they are computers of a sort as well. With the proper interface connections software, personal computers can also be adapted to the task of automotive computer system diagnosis. One such interface software package is offered by Baum Tools Unlimited, Inc., and it’s called OBD2Scan. OBD2Scan will interface with all OBD-II compliant GM vehicles, as well as all other OBD-II compliant vehicles that use the ISO standard of computer communication.

Like other OBD-II diagnostic software, OBD2Scan provides us with a window into the vehicle’s OBD-II system. The actual quality and quantity of information available is determined by the vehicle manufacturer. Some manufacturers reveal only what the law requires, while others tip their cards a bit more. The value of a software program like OB2Scan comes from its ability to present the available information in an easy to understand format.

We had no difficulty installing the two 3.5-inch OBD2Scan software disks on a laptop computer. After that, we plugged the supplied OBD-II cable into an OBD-II vehicle and collected the screen captures on the following page. If you would like more information about OBD2Scan after reading this article, please Circle No. 123 on the Reader Service Card.
The OBD2Scan screens are divided into a file folder format with tabs at the top that allow you to leaf through the screens. The General Data tab gives an overview of the supported diagnostic tests and their present status. The large red box at the upper left indicates a DTC has been stored.

The Trouble Code tab displays stored and pending DTC's. The red Vehicle Type list displays a full text description of any stored DTC's. Pressing the ReRead DTC's button queries the control unit for any new DTC's. DTC's and freeze frame data stored in the vehicle computer can also be erased from this screen.

The Freeze Frame Data tab will display the value of the inputs the moment it detects a malfunction in any component or system. The DTC number responsible for the freeze frame data is also displayed. Some vehicles are equipped with multiple control modules, so the module number is also displayed.

The Oxygen Sensor tab displays a typical oxygen sensor output pattern. When available, oxygen sensor performance specifications are displayed. If the oxygen sensor readiness test has been completed, actual oxygen sensor performance data will be displayed (green for good, red for out of range).

The Real Time Data tab displays and graphs two control unit inputs, with updates four to five times per second. We had difficulty doing a screen capture of this tab, so we saved the data to a file, then viewed it using the OBDView function. Moveable cursors and a zoom feature allow detailed signal analysis.

Use the Manual Command tab to enter individual control unit commands and conduct manufacturer-specific tests and inputs. OBD-II regulations define seven test modes. Use the Test Mode drop down list to select the desired test. After the Send command, results are displayed in the upper screen.