

## ALDL OBD1 Cable Instructions

This package includes an ALDL Cable w/ OBD1 12 pin connector. This cable is intended to be used with cars and trucks using GM ECM/PCM's originally equipped with 12 pin ALDL connectors in the 1982 to 1995 era. For more detailed information on any aspect of this cable, you can read information from our website at [www.aldlcable.com](http://www.aldlcable.com)

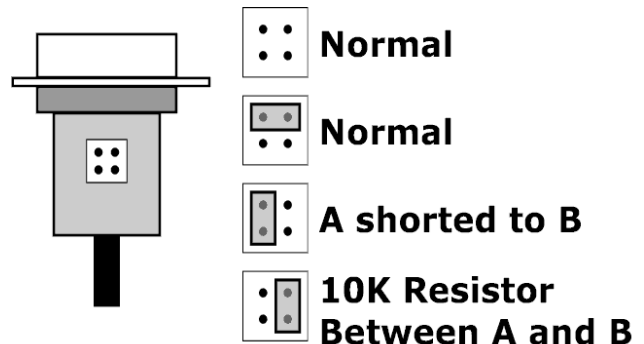
There are 3 ends to this cable, all of which need to be plugged in for the cable to operate properly: 1) a 12 pin connector that plugs into your car's 12 pin ALDL connector under the dash, 2) a 12 volt lighter plug that needs to be plugged in to the lighter socket, and 3) a DB-9 connector that plugs into your PC computer's RS-232 serial port (or your serial port adapter if your computer only has a USB interface).

The 12V lighter plug needs to be plugged in to power the circuitry located in the DB-9 connector (you can see what the circuit board looks like at <http://www.aldlcable.com/sc/details.asp?item=obd1diykit> ).

The 12 pin connector has 12 pins in it, of which only 4 are wired for use in this cable. Serial data only flows through one of these pins from your ECM/PCM to your PC computer. Generally GM cars that use pin E are communicating at 160 baud speed, and the cars using pin M are communicating at 8192 baud. The pin locations are labeled inside of the 12 pin connector shell. Pin M and pin E of our cables are jumpered together inside the connector shell and go to the same spot in the circuit. Again, you are only using one of these pins to read data, so only one of these pin locations will be populated on your vehicle. We jumper these 2 pins together so that this cable will work for any 1982 to 1995 era car, regardless of the pin layout in the car.

IF YOU HAVE some other make of car that uses a GM ECM/PCM, such as Lotus, that uses a different connector type or certain mid-80s cars that use Pin D of the ALDL connector, the pin location will probably be different (see <http://winaldl.joby.se/aldldata.htm> for a list of vehicles which may use pin D). You should buy the Bare Pin Cable from our web site so you could plug it in to one of these different shaped connectors or the data line on any ALDL compatible vehicle.

A 10Kohm resistor is included on the circuit board. This resistor is needed to jumper between the A and B pin locations for some late 1980's cars in order for the ALDL diagnostic data to start flowing (see the R3 section at <http://winaldl.joby.se/aldlcable.htm>). If you do not need this resistor for your vehicle, you can leave it in the normal position as indicated below.



If there is any question of whether or not your car needs this 10Kohm resistor, try it in the normal position first to see if data starts flowing.

You can see a list of software packages available for your diagnostic needs on our home page at [www.aldlcable.com](http://www.aldlcable.com)

To use this cable, plug the 3 ends in and start up your laptop and start whatever data collection or tuning program software you use, and turn the car key forward ( but car not running ) to light up the dash, and start the data stream flowing. Click the record button in the software package to start logging data. You can then start the car and drive around logging data. View data later on to see and review results.

**Trouble shooting:** If all the cables are connected properly and you are sure the lighter plug is providing 12V, but you are still not seeing data, there are a number of things to check. When testing any cable, simply plug in the lighter plug, then the ALDL end into the car connector, and then the serial port into the laptop. Start up the HyperTerminal program (usually under Start > Programs > Accessories), select a COM port (usually COM1), and select a baud rate close to the ECM's (for either a 160 or 8192 baud, chose either 2400 or 9600, respectively). As soon as you turn the car key forward to light up the dash, but car not running, data patterns start to stream across the HyperTerminal screen. At that point you know that proper communication is happening between your vehicles ECM and your laptop, and any data logging program should work.

This HyperTerminal test has got to work, or else the laptop is not talking properly with the ECM. If you are using one of the USB to serial adapters, many of these will not work properly. The USB to serial converter that has been reported to work best is the Belkin F5U103 adapter, and these can be found on ebay for \$10 or so. You can also try to borrow a laptop (or even use a desktop system) with a standard serial port.

If you are still having problems after this HyperTerminal test, check under the device manager of the system control panel on your PC to make sure your COM ports are active and have not been disabled. If you don't see any COM ports enabled, or see red Xs or yellow circles, then you may need to go in to your BIOS and enable them. This is done as the computer boots, and you may need to read the instructions for your particular computer to see how to do this. Usually hitting the delete, F1, or F2 works, but check for your specific computer.

Next, if your COM ports are enabled properly and it still doesn't work, try this. Take a paperclip, and short pins 2 and 3 of the RS-232 port together on your PC with the HyperTerminal program open as before. While the pins are shorted, hit any key on the keyboard. If you see characters appearing on your screen, then your serial port is working fine. If you don't, then your serial port is not working, and you have something else going on. You may not have selected the correct serial port, you may have

software (Palm Pilot Hot Sync) interference, or your serial port may be disabled in the BIOS. Check all these things. If all of this fails, try another computer, even a desktop PC.

If you have a 1996 or later vehicle that has a 16 pin connector, it is an OBD2 compliant vehicle and requires a completely different type of scan tool and software. Please see [www.obd2allinone.com](http://www.obd2allinone.com) to purchase.