Important Information about ELM327 Adapters:

A Known Good ELM327 OBD2 Adapter will cost around \$30

• We HIGHLY recommend the Vgate iCar Pro Bluetooth OBD2 device

IMPORTANT – There are **MANY** "ELM327" devices available. During our development, we found that MOST of them were inadequate because of the long data messages provided by the Clarity. Do not attempt to gauge a given ELM adapter by price. Expensive ones fail just as often as low-cost ones. We found the Vgate to be good, and low cost. You can try a different one, but you are on your own. There is a thread on the InsideEEVs Clarity Forum that shows how to evaluate an adapter. My recommendation is to just purchase a Vgate unit.

Which 'version' should I get?

• Specific listings come and go. There are at least 3 versions shown below. We have valiated both Bluetooth versions (BLE4.0 may be preferred with MAC or iPhone). If you want to try a WiFi one, feel free. Please report back if you do. If you want to go with what is known to work, then choose one of the versions identified with blue arrows below.



*** See Important Information on Next Page About Power-Saving / Shut-down ***

Important Power Savings / Shutdown of iCar Pro ELM327 Adapter

When installed on the vehicle, the iCar OBD2 adapter powers down after 30 minutes of "inactivity". Should you install the OBD2 device and always leave it connected to the vehicle?

- The theory is that this will allow you to keep the adapter connected without worrying about battery drain.
- The trouble is that "inactivity" is measured by activity on the CAN bus. The adapter will power itself back up when CAN activity resumes.
 - With some vehicles, this is a good solution because the next time the vehicle is 'started', the CAN activity resumes.
 - The Clarity however, does NOT have any activity on the CAN bus during normal operation of the vehicle. It is only when you interact with it using Car Scanner, or similar that the CAN bus is alive.

This is a problem because the only way we have found to "wake up" the device is to physically unplug, and replug the device after it has shut itself down. Note - It shuts down after 30 minutes even if the car remains on (as long as there are no CAN interactions). We have not been able to think of a great way around this since the 12V pin on the OBD2 connector is always alive.

So, What do I do?

1. Plug in the OBD2 adapter when you want to take a reading, then unplog it when you are done.

2. Leave it plugged in all the time, but recognize that you must unplug / re-plug in order to wake it up the next time you want to use it. Using a "Y" cable can make it easier to reach.

3. Cut the 12V wire from the vehicle's OBD2 port, and re-wire it to a 12V source that turns off when the vehicle is off. This way, at least starting the vehicle will always turn on the device. It does NOT prevent shutdown if the vehicle is on for an extended period while driving (with no CAN traffic). Of course, this alters the OBD2 standard (albeit just a little).

4. You can disable this automatic shutdown feature (see next page). This allows it to remain connected and it will always be active. The downside is that there will be a constant (but small) drain on your 12V battery (even when the vehicle is off). This drain is around 50 mA. If your vehicle sits for extended periods, this could deplete your battery depending on its condition.

How to Disable Auto Sleep in iCar Pro

By default, the iCar Pro goes into deep sleep, and can't be awakened by turning on the Clarity. You can disable deep sleep by going into Car Scanner's Terminal screen, and sending the following:

```
>ATPP 0E SV 7A
OK
>ATPP 0E ON
OK
>ATZ
ELM327 v2.2
```

To re-enable deep sleep, substitute the first line of the above with

>ATPP OE SV FA

Turning off the deep sleep function can save some wear and tear on the car's OBD2 connector. You probably don't have to worry about battery drain if you drive the car regularly, but if you let the car sit for over a week, it's probably a good idea to unplug it, or keep the deep sleep enabled.

Also, there's the issue of security. If you leave it plugged in an it's on all the time, anyone who's in its vicinity can connect to it, and change its settings. It is unlikely that they can hack your car, however, since the CAN bus is turned off at the OBD2 port unless the car is turned on.

You can install a Y-cable (and leave that connected to the car). That way, you can unplug/plug the device repeatedly, w/o worrying about wearing out the OBD2 connector. Here is an example:

