



## Introduction

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DashCommand is an app that acts as an advanced in-car computer. It is currently available for Windows, iOS (iPhone/iPod Touch/iPad), and Android. The following troubleshooting topics are covered in this guide:

- [Connection Troubleshooting](#)
- [Data, Gauge, and PID Troubleshooting](#)
- [Inclinometer / Skid Pad Troubleshooting](#)
- [Performance Issues & Troubleshooting](#)

Having a problem not listed in this Troubleshooting Guide? Please contact [support@palmerperformance.com](mailto:support@palmerperformance.com) for more help. The most recent version of DashCommand while creating this document is v2.9.1.

# Connection Troubleshooting

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The connection process is the most common place to have troubles. First off, you need to make sure that your interface is supported by the platform you are using. If you are using an iPhone, you need to have WiFi interface or a GoPoint GL1. **Bluetooth interfaces are not compatible with iPhone**. If you have an Android phone, just the opposite is true. Android supports Bluetooth interfaces, but **does not support WiFi** (more specifically, Android doesn't support Ad-Hoc networks).

You also need to make sure you have the correct interface type selected in Settings. You should select GoPoint if you are using a GoPoint GL1 interface, Innovate if you are using an Innovate OT-2, and ELM if you are using any ELM interface (OBDLink, Kiwi, OBDKey, etc).

Now you know that you've got the correct interface selected, you need to make sure your device is connected to your interface. For the GL1, just plug it in to the dock connect on your iPhone. For a WiFi interface, you need to join the WiFi network created by your interface (you can find more information on connecting to WiFi from the DashCommand WiFi Setup Guide on our downloads page). If you are using Bluetooth, you need to go to the system settings and make sure you have paired with your interface.

You have the right interface, it's selected in Settings, and your phone is connected to it. Now it's time to get DashCommand connected. If you haven't created a vehicle in the Vehicle Manager yet, do that now. You should be ready to just hit the Connection button in the main menu.

If you are still having trouble connecting after following all these steps, please contact [support@palmerperformance.com](mailto:support@palmerperformance.com) about it. Please include information on what platform you are using (iPhone, Android, Windows), what device you are running (iPhone, iPad, Samsung Galaxy S, etc), and what vehicle you are connecting to (Make, Model, Year, and engine).

# Data, Gauge, and PID Troubleshooting

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Having trouble getting data, or the gauge values seem incorrect? The first step is to check your vehicle settings. The vehicle settings influence how a lot of data is calculated.

Horsepower and torque calculations rely on the Curb Weight vehicle setting. Entering a weight that is too high will cause power numbers that are also too high – we calculate power using your current rate of acceleration and the weight of the vehicle. Also keep in mind this is power **at the wheels**. It will be lower than your factory rated horsepower by as much as 20-40%. This is from altitude losses, drivetrain losses, or driving on a surface that isn't level. Also keep in mind that incorrect values for the tire rolling resistance, frontal area, and drag coefficients will skew power numbers as well.

The Engine Displacement setting determines how boost, MAP, and MAF are calculated. If your vehicle has a MAP sensor (supports SAE.MAP), MAF values are calculated using the displacement. MAF values are required in the fuel economy calculations. If your vehicle uses a MAP sensor, you need to fill in this setting to get fuel economy data. On the flip side, vehicles with a MAF sensor use this value to calculate MAP – which in turn is used to determine boost.

Distance to empty (or fuel range), is determined by using the Fuel Tank Capacity vehicle setting, and the SAE.FLI PID if its available from your vehicle. Many older vehicles don't support SAE.FLI at all, meaning you can't get DTE from these vehicles.

Incorrectly setting the Vehicle Speed Correction Factor will give you vehicle speed numbers that are wrong. This value is multiplied by the speed we get from the OBD-II port, so that users with oversized tires, or a not-stock axle ratio, can adjust to get the correct speed in DashCommand. Unless you need to adjust your speed for tires changes or similar, you should leave this setting blank (or set it to 1 – the default).

What if you're missing a value that isn't calculated, like RPM or vehicle speed? This is usually not an issue unless you are using a GoPoint GL1 (iPhone only) with an older vehicle. The GL1 is constantly requesting engine RPM from the vehicle, and in some cases it delays the vehicle's response to DashCommand long enough for DashCommand to think that a PID isn't supported. To fix this, (before you connect) go to the go to the vehicle settings for your car. Decrease the ISO/KWP Keep Alive Interval slightly, around 2000 would be good. And increase the OBD-II Timeout to 400. Then go connect to the vehicle. After you've connected, press the Validate PIDs button near the bottom of the vehicle settings.

# Inclinometer / Skid Pad Troubleshooting

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The Inclinometer and Skid Pad seem like simple tools, but the math behind them is very complicated and can introduce a lot of issues. Firstly, these screens both “zero” themselves when DashCommand is started. If you are holding the phone when you start DashCommand, you will need to manually re-zero them from the menu after you get your phone situated in a mount or cup holder. If your phone can move or wiggle, you’ll get bad readings from these accelerometer-based features.

If you see that the Inclinometer or Skid Pad show readings while the vehicle is not moving, on level ground, you need to select zero from the menu. For the Skid Pad, it should be perfectly centered and you’re done. This is where the complicated math comes in. The accelerometer in these devices doesn’t measure pitch and roll directly. Rather, it measures acceleration (hence the name “accelerometer”). DashCommand calculates pitch and roll by determining the difference between the gravity vector, and any other vector. We’ve chosen to use the vector that is from the center of the phone, directly out the screen. We are assuming that the screen is always facing the back of the vehicle, and it also means that the phone needs to be mounted more or less vertically for the Inclinometer feature to work correctly. If your phone isn’t vertical, you will always read some pitch even when on level ground.

Some newer phones also include a gyroscope. While this does allow for an accurate pitch to be calculated, we currently don’t have support for this sensor in DashCommand.

# Performance Issues & Troubleshooting

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Slow dashboards are the worst, and unfortunately there is more than 1 factor. There are 2 big influences in how fast the dashboards update, and a large number of smaller ones. One of the biggest bottlenecks is usually the vehicle itself. Older ISO or J1850 vehicles don't communicate very quickly, and can make dashboards seem choppy or slow. The other big slowdown is a combination of the device you are running on, and the DashXL skin set you are using. If you are using an ISO vehicle, it will be slow no matter what you do (J1850 is better, but still slow). There is ***nothing*** that can be done to speed up a vehicle itself that uses an old protocol. However, some things can be done to help DashCommand speed things along slightly.

The default Tuxedo skin set is a very large, detailed skin that shows just about every PID your vehicle could support. The only downside to this is that it's just too much for some older devices to display smoothly. Try using a different skin set from DashXL.net.

You can also try disabling the Persistent PIDs in Settings. Persistent PIDs are PIDs that are monitored all the time, no matter what screen or dashboard you are on. They can add as many as 10 extra SAE PIDs that the vehicle has to supply us with, and will greatly slow down vehicles using older protocols like ISO.

Also realize that a 1<sup>st</sup> gen iPhone with its 400Mhz processor isn't going to be nearly as fast at anything as a new iPhone 4S with a dual-core 1Ghz processor. The device you are using can make as big a difference as any settings you might be able to change.