

Starter Guide to OBD Fusion Logging – January 2017 Version 1

The following instructions were created to help with Logging using the OBD Fusion App. Feel free to customize as you see fit. As always, use at your own risk. It was created using an Android version 4.0.1 as the software is updated, instructions may change, iProducts configuration is similar however the menu structure and how things are selected may differ. (See Settings – Information) for your build version.

You need to learn how to use the Logging function, this is the most useful part of the tool. It allows people to share what is going on with a vehicle car and can save 40-50 posts on each thread elimination many questions and much confusion.

Every time the App is connected to the vehicle, it will be Logging if properly configured.

Below is information that may be useful. But you really need to spend 20 minutes playing with the App to get familiar with where things are located in the App. **Note anytime you perform a Diagnostic Report, please have the engine running, and ignore the pop up warning in the App.**

You will need to set up a DropBox Free account, learn how to upload and store Logs and Diagnostic Reports, and learn how to perform screen captures on your phone/tablet platform. Directions for DropBox are listed toward the end of this document.

Take your time and double check your settings; it's easy to mis-click while making changes.

Currently OBD Fusion is FAR more intuitive than other Apps. We will start with the App configuration before we worry about connecting to the interface or the vehicle.

Go to “Settings” then “Units”

1. Under Airflow the default setting is **lb/min**. Touch the drop down arrow and change this setting to **g/s**.
2. Under Temperature the default setting is F. Sometimes can be more useful in C vs F, but no so critical.

Set the Readiness Standard

From the Main Page, Go to “Monitors”, then touch the Menu button on the top right side of the screen to set the “Readiness Standard”. You want to choose the State and Model Year windows of the car you are working on so you will get accurate information on Emission Readiness Monitors. This will guide you with correct information in the even you need to get the car ready for a SMOG or Emission Inspection.

Go to “Settings” then “Log Setup”

Logging Enabled - checked

Logging Trigger - choose Trigger at a fixed sample time

Sample Time – choose 1000 msec

“Select Items to Log” - This varies a bit for each car. But here is a list I likes to see:

GPS – Which is the last item, suggest you **unselect/uncheck** both Latitude and Longitude as to not advertise where you live. If you happen to live or drive in an area which is mountainous or has a lot of steep hills, select/check Altitude as this may be helpful in understanding the load the engine may be dealing with.

Use the “back” button on your device to then get back to the page that is titled Select PIDs

Fuel – Default should indicate 0 “selected”, do not check any of the Fuel options

Sensors – Default should indicate “0 selected”, do not check any of the Sensor options

SAE PIDs – The PID choices are important to gather the proper data. Select/check the follow PID items:

1. Fuel system 1 status
2. Fuel system 2 status
3. Calculated load value
4. Engine coolant temperature
5. Short term fuel % trim - Bank 1
6. Long term fuel % trim - Bank 1
7. Short term fuel % trim - Bank 2
8. Long term fuel % trim - Bank 2
9. Engine RPM
10. Vehicle speed
11. Ignition timing advance for #1 cylinder
12. Intake air temperature
13. Mass air flow rate
14. Absolute Throttle position
15. Commanded Secondary Air Status
16. O2 Voltage (Bank 1, Sensor 1) - not all cars support this PID but please choose this PID
17. O2 Voltage (Bank 1, Sensor 2) - not all cars support this PID but please choose this PID
18. O2 Voltage (Bank 2, Sensor 1)
19. O2 Voltage (Bank 2, Sensor 2)
20. O2 sensor lambda wide range (current probe) (Bank 1, Sensor 1) - not all cars support this PID/Sensor
21. O2 sensor lambda wide range (current probe) (Bank 2, Sensor 1) - not all cars support this PID/Sensor
22. Input Voltage read by the scan tool (Last item on the list)

Be VERY careful with the wording for the O2 sensors, I have carefully used the EXACT wording so make sure you match up the proper O2 sensor options. Also note that depending on the car configuration, some of the O2 sensors will come back reporting 0.0 Volts which is perfectly normal because I am asking for sensors/PID's that your car may not support. Do not get worried until I have had a chance to look over the Diagnostic Report to understand what type of Pre-cat O2 sensors your car may have. The above list is comprehensive for many vehicles, there will be PID's that some models do not support and you may be asked to unselect certain PID's once the first Log or Diagnostic Report is reviewed.

You should double check if you ticked off the right number of boxes after you have selected “Done” in the upper right corner of the app. Touch “Select Items to Log” and VERIFY that the number under SAE PIDs is

Look over this page one last time to verify what items have been selected:

Fuel – 0 selected

Sensors – 0 selected

SAE PIDs – 22 selected

Calculated PIDs – 0 selected

User-Defined PIDs – 0 selected

GPS – 0 selected or 1 selected if you chose Altitude

Now touch **DONE** at the top right of the page to complete the Log setup.

Unfortunately due to the high number of PID's, the PID polling rate can sometimes be slower than I need in order to see some specific sensor behaviors. Often for non Wideband O2 sensor Cold Start Logs I may request that only the following PID's be chosen if I need more detail, but only set these PID's if I request or you feel like running this Cold Start Log in ADDITION to the standard Cold Start Log with all PID's as above.

1. Engine coolant temperature
2. Engine RPM
3. Commanded Secondary Air Status
4. O2 Voltage (Bank 1, Sensor 1)
5. O2 Voltage (Bank 1, Sensor 2)
6. O2 Voltage (Bank 2, Sensor 1)
7. O2 Voltage (Bank 2, Sensor 2)

Interface Pairing

Assuming you have not paired the Bluetooth interface with your device, this must be done prior to the App being able to connect the car. I will not hand hold on the interface pairing, but will give you a general idea of what is required for anyone that is new to pairing a device with a phone/tablet.

Plug the interface into the vehicle and start the engine, if the interface has a power switch, make sure to turn it on and you see at least 1 LED indicator. Go to Settings on your phone or table. Find the Bluetooth menu and make sure Bluetooth is turned On. Depending on the phone/tablet and operating system, some devices automatically go into the Discovery mode once you drill into the Bluetooth menu, some require you to select a Pair A New Device. Allow your device to search for and find the wireless interface, once the new interface is found; usually you have to touch on the interface name to proceed with the Pairing process. Some interfaces require a Passcode, typical Passcodes are 1234, 0000 or 4321. Once you have Paired the new wireless interface you can move back to the OBDFusion App Settings menu.

Some comments about interface connection stability. Overall Bluetooth connections seem to be the most stable but Wifi connection can be problematic at times either connecting or dropping connections. A few observations/suggestions if you are having dropped connections or random disconnects from the interface.

1. If more than one person is in the car with you, have them put their phone in Airplane mode and see if this helps with connection stability.
2. Wifi can be difficult to connect up when you are in range of your home network. Often you have to search for the Wifi interface and manually connect to it when near your home network.
3. I see far more disconnects while driving with Wifi, this is often due to a few phone/table options:
 - a. Location Control enabled on the phone, you might need to turn this off while using the App. Often Location Control forces the Wifi to scan for nearby networks in an attempt to use the nearby network names to all for more accurate location control and this can cause the Wifi connection to drop. Turning off Location Control may help resolve this problem.

- b. Scanning for Nearby Networks feature, some phones/tablets routinely have a process that will scan for Wifi networks to see if new networks are available, often this process can cause the Wifi connection to the interface to drop. Turning of Automatic Network Detection or Scanning for Nearby Networks will help resolve this problem.
- c. Sometimes even disabling Bluetooth or Cellular Data on the device will help with Wifi stability. Some devices get too busy juggling the wireless networks and trying to download background data that the Wifi connection can become unstable and unreliable.
- d. Note that often when you connect to the Wifi interface, you may get a message on some phone that No Internet Is Available, this is NORMAL due to the fact that when connected to the Wifi interface there is no Internet connection available from the wireless interface.

Settings

Communications, Communication Type – Choose Bluetooth

Bluetooth Settings, Bluetooth Device – Choose your Bluetooth Device

Auto Detect – Usually unselected/unchecked

OBD-II Protocol – Default should be Auto, if not select Auto

Start with Last Connected Protocol – Selected/checked

General, Connect On Start Up – I usually have unselected/unchecked to make sure cold start Log is not long

General, Connect Silently – I usually have this selected/checked

Prompt for ECU – I usually have this box unselected/unchecked

PID Monitor, Fast Polling – I usually have this selected/checked

PID Monitor, Dwell Time – Set to 0 msec

PID Monitor, Keepalive Enabled – I usually have this unselected/unchecked

PID Monitor, Try Unsupported PIDs – I usually have this selected/checked.

Before you clear ANY codes or capture ANY Logs, Run a Diagnostic Report

Touch **Diagnostics** and then find the **Report** tab. It should be near the upper right of the screen, however, if you are using a phone, you may need to swipe the screen Right to Left to find the **Report** tab or rotate the phone/tablet from Portrait to Landscape so you will be able to see things in the widescreen view. Run a **Diagnostic Report** with the engine idling, IGNORE the POP UP WARNING on the screen, you will not have any problems. Be patient, it takes some time for the **Diagnostic Report** to run especially if there is no stored Freeze Frame data, you will know the report has completed as the last line, PID Snapshot should indicate 22.

You can use the Drop Down Arrows to review the data if you choose, however, I suggest you first save the **Diagnostic Report** by touching the Floppy Disk icon at the top of the page. The touch the Share option on the top right and email the report to yourself and/or Upload to DropBox if you have set this feature up.

Logging

BEFORE YOU RUN A WARM IDLE LOG, typically after you have captured the Highway Cruise Log, PLEASE RUN A DIAGNOSTIC REPORT as mentioned above.

Once the OBFusion App has been properly configured, the App will automatically Log anytime it is connected to the car. Just make sure if you have a wireless interface if it has a power button on it, turn the interface on and connect the App and it can see the OBDII stream from the vehicle.

For a complete overview of what the car is doing, I like to see 3 baseline Logs. This will require you to manually “Connect” and “Disconnect” the App from the interface. You should see the “Connect” and “Disconnect” feature on the bottom of the main screen of the App. If you cannot figure out how to “Disconnect” the App, you can just close or shut down the App assuming you know how to do this on your device.

1. Cold start from overnight: Turn ignition to position 2 or until the dash warning lights light up and **get App connected before you start the engine**. Start the engine and let it idle for 5 minutes in Park or Neutral, *do not touch the throttle*. After 5 minutes, disconnect the App to stop the Log so it is not too large to review.
2. Warm highway cruise for 4 minutes: Try to find a flat/level road without much traffic. 50-65 MPH range, hold as steady as possible and/or use cruise control.
3. After running the Highway Cruise Log, run a Diagnostic Report with the engine warm and idling. Ignore any pop up warnings about running the Diagnostic Report while the engine is running. Look in the Diagnostics section for Report in the upper right hand corner. If you cannot find Report, rotate the phone from Portrait to Landscape and you should see Report in the top right corner of the display. Touch Report, it takes about 30-45 seconds to run. You will know it is completed when you see like 18-22 PID's mentioned. Save the Diagnostic Report so it can be uploaded to DropBox or emailed directly.
4. Warm idle for 4 minutes: You can connect the App while the engine is running, then disconnect the App after 4 minutes.

After you have run the 3 Logs **AND** Diagnostic Report, forward these along directly by uploading them to DropBox or emailing them to [OBDDLogs\(at\)gmail\(dot\)com](mailto:OBDDLogs(at)gmail(dot)com)

After you get the 3 Logs, upload them to DropBox or email them directly along with any screen shots or Diagnostic Reports. If you decide to use DropBox, then choose the Share option within DropBox, then copy and paste the URL back in the Forum thread for review. Dropbox info below.

If you choose to email Logs & Diagnostic Reports directly to me, I will need you to tell me what Forum you are on, your Forum user name and provide me the vehicle information like the Make, Model, Year and Mileage. This is because I am involved with many Forums and have a lot of people sending me Logs and support emails. I can be very hard for me to track down who is sending me files and what Forum they are on and their user name. The Log file and Diagnostic Reports can be send directly from within the App to [OBDDLogs\(at\)gmail\(dot\)com](mailto:OBDDLogs(at)gmail(dot)com). I have somewhat disguised the address to hopefully keep bots from capturing the addressing and SPAMMING me to death.

DropBox Info

You need to set up a DropBox “Free” account and learn how to upload the .CSV files to it.

The easiest way it to set up a DropBox “Free” account is using your computer not your phone or tablet.

Most people use their email address for the DropBox user name and then choose a password. Make note of this password as you will need it for both direct web access and configuring DropBox within OBD Fusion.

WARNING - YOU DO NOT WANT TO INSTALL THE DROPBOX SOFTWARE ON YOUR COMPUTER. IT WILL DO SOME CRAZY THINGS IF YOU DO NOT DISABLE AND MANAGE IT.

Just make sure you do not download any of the DropBox software on your computer, if you do, it can be removed, but it is much better to skip the installation of any software you really do not want or need.

This is just one step of the process, but an important one.

During the DropBox Free sign up process, once you enter your user name and password, when the prompt shows up to download and install the software; just use the Back browser button. This will take you to your Account and then you can upload the files directly from the phone, once you enter the DropBox user name and password in the OBD Fusion App under Settings, DropBox.

After you get the Logs, upload them to DropBox along with any Freeze Frame screen shots or Diagnostic reports. Then choose the Share option in DropBox, then copy and paste the URL back in the Forum thread for review. You need to take a few additional steps to get the Logs posted here.

Here is the simplest way to get the Logs uploaded to a Forum thread.

Log into your DropBox account from a computer.

Find the Folder and/or files in your DropBox account. Choose the Share option.

Choose Create A Link.

Choose Copy Link.

Paste Link(s) back into the thread so I can access the Logs.