Davide Cavaliere

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Ducati Monster 797 OBD2 DDA diagnostic connector and communication

I created this simple guide to show you how to simply make a DDA OBD2 connector for your Ducati Monster (797 or older models with fuel injection).

The OBD2 connector (DDA connector) is located under the seat. So, the first step is to remove the seat, and locate the connector. This connector has 4 pins, and it is not the standard OBD2 connector located on most cars, which has 16 pins in total.

Therefore, if you want to use an ELM327 or similar interfaces to communicate with your Ducati, you must make an adapter cable which wires the 4 pins of this DDA connector, to the standard OBD2 female connector (16 pins). Only 4 pins are needed: +12V (Battery), Chassis/Signal GND (0V), CAN High and CAN Low.
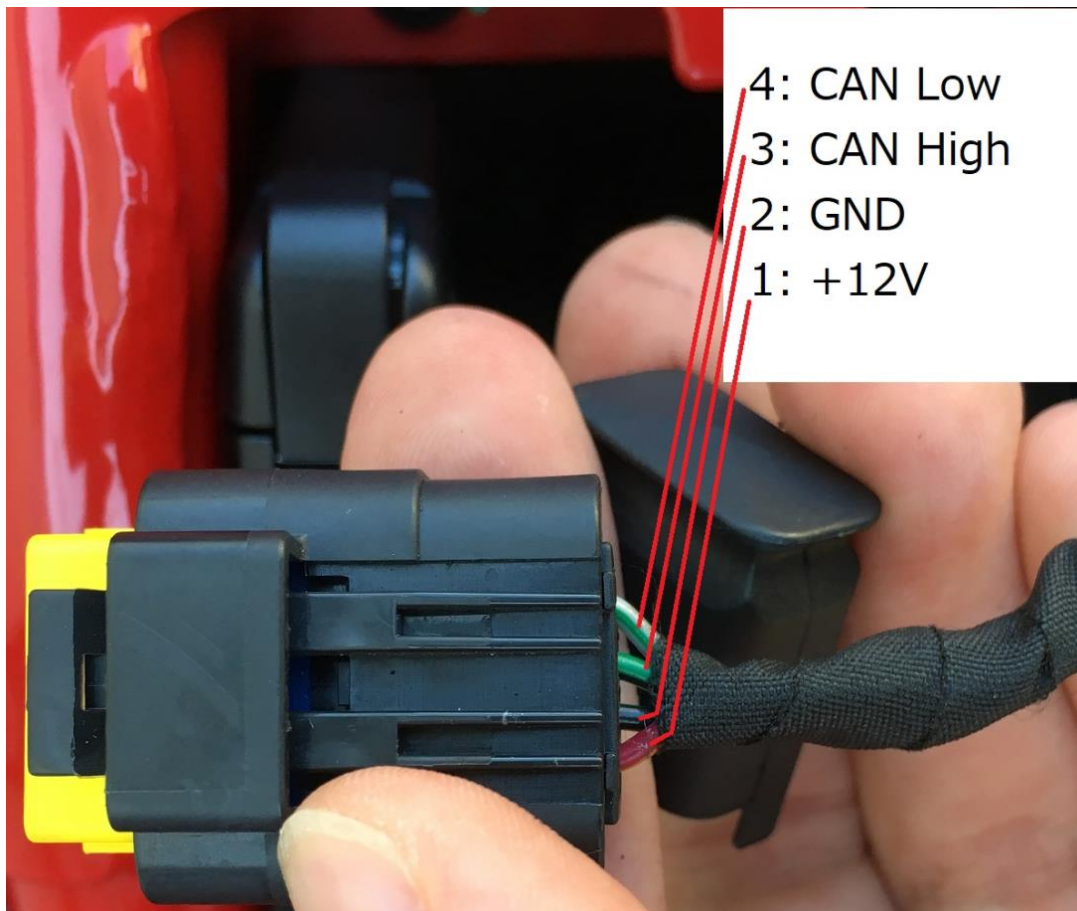
First of all, I checked the voltage on the pins: left one (pin 1) is Battery +12V (actually, 13.09V), and pin 2 is GND. The other 2 pins are respectively CAN High and CAN Low.

In order to connect to the DDA connector, you need to buy and make a cable like this (details later).
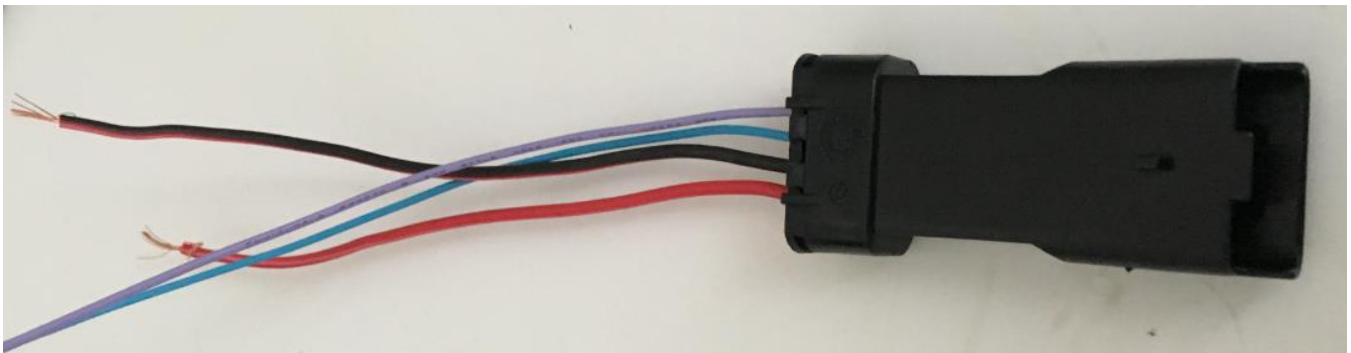
The following is the pinout of the Ducati DDA connector, on motorcycle side.

4: CAN Low
3: CAN High
2: GND
1: +12V

Vehicle side has female connector, so you need to make a male one. The part numbers are visible below: 673-7868 (**211CL2S1160**) and 673-7789 (**211PL042S0011**) for the Delphi pins and plastic connector. All these parts are available on Aliexpress, RS Components or similar websites.
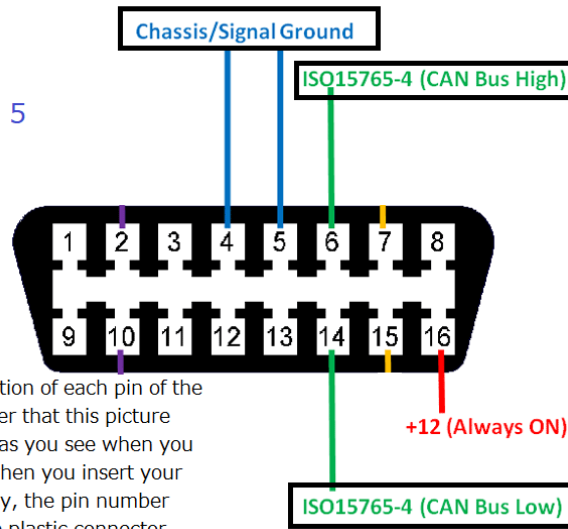
Take an OBD2 female connector (standard one) and connect the wires as following.
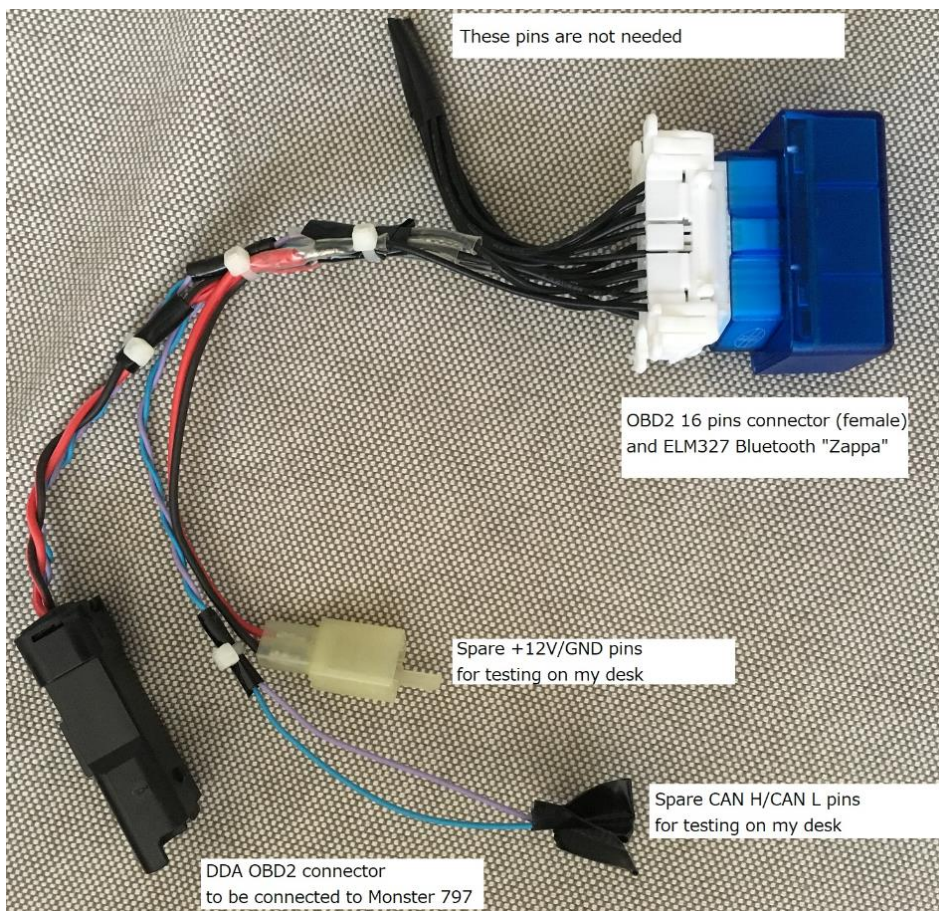
DDA male connector pins:

1 2 3 4

1: Vbat (+12V) => PIN 16
2: GND (0V) => PIN 4 and 5
3: CAN High => PIN 6
4: CAN Low => PIN 14

Note: to understand the position of each pin of the picture above, please consider that this picture shows the female connector as you see when you are in front of it (example: when you insert your ELM327 adapter). By the way, the pin number should also be written on the plastic connector.

Chassis/Signal Ground

ISO15765-4 (CAN Bus High)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

+12 (Always ON)

ISO15765-4 (CAN Bus Low)

The final cable looks as the following. I connected an ELM327 Bluetooth on the OBD2 port. For the OBD2 16 pin cable and connector, you can find them online for 10 dollars: just cut and rewire.

These pins are not needed

OBD2 16 pins connector (female) and ELM327 Bluetooth "Zappa"

Spare +12V/GND pins for testing on my desk

Spare CAN H/CAN L pins for testing on my desk

DDA OBD2 connector to be connected to Monster 797

Next step is to connect the OBD2 interface cable to the motorcycle, and then attach the ELM327 OBD2 to Bluetooth adapter, or similar ones.
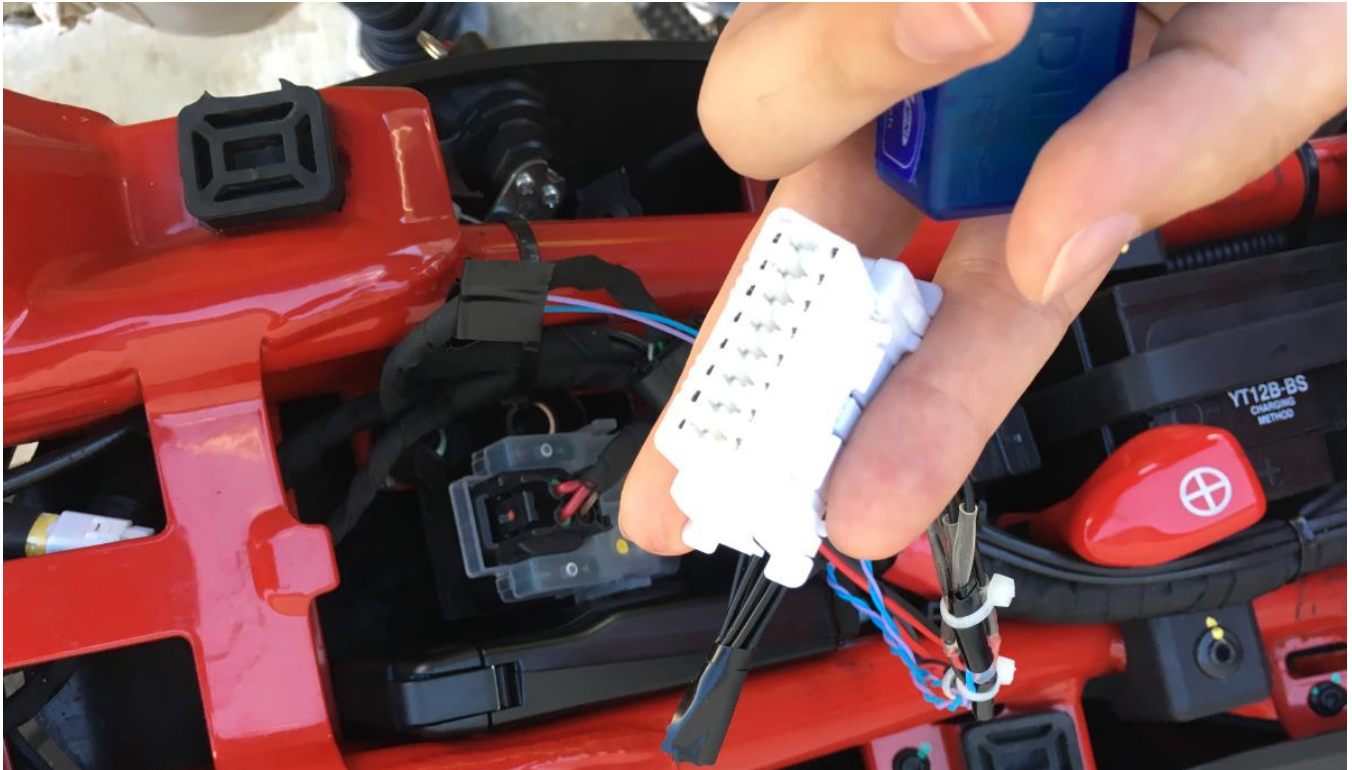
Once I connected the ELM327, the LED turned ON.

Using RealTerm or similar serial terminal programs (TeraTerm, etc.), I connected to the ELM327. First of all, you should pair the device: "OBDII", password: 1234.
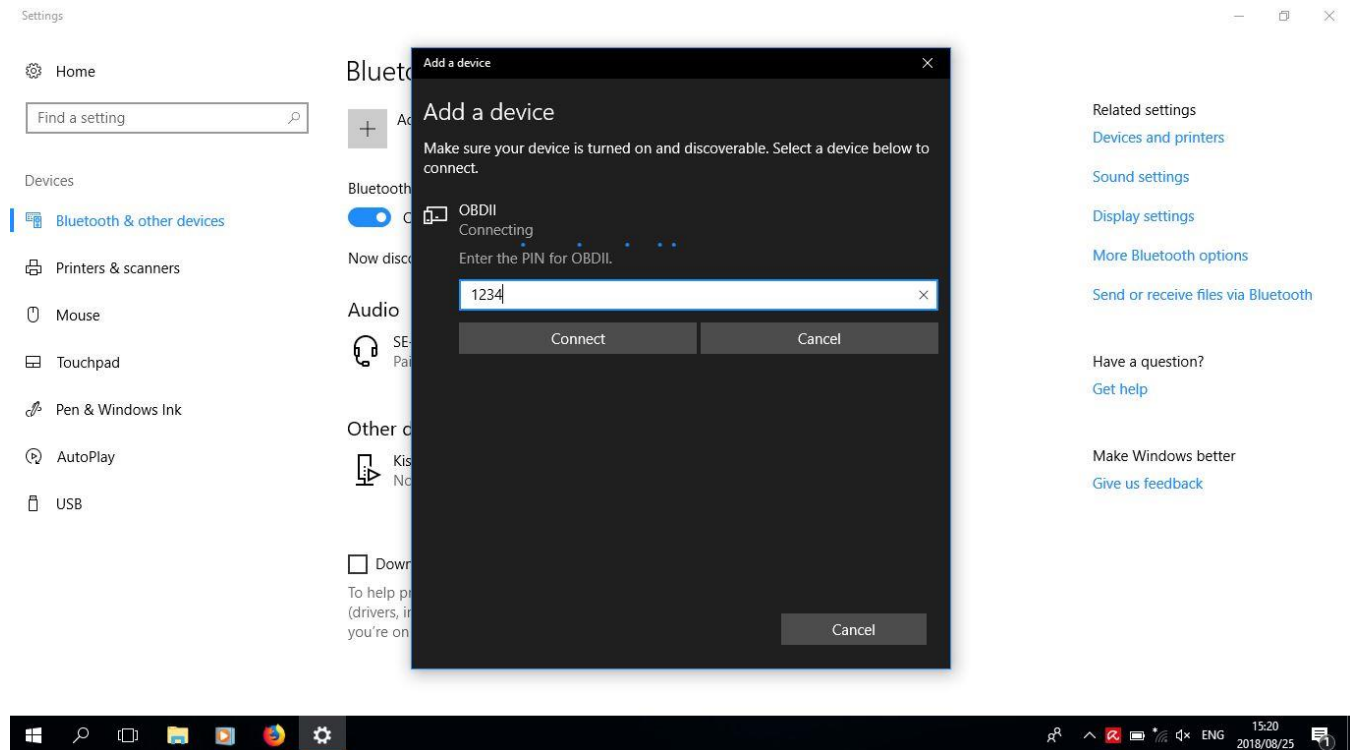
Then, I sent some commands using RealTerm. "AL L1" sets line feeds ON. "AL H1" sets header ON. I tried to send some comments, like Service $01 00, and it works (remember to turn Ignition ON).

https://en.wikipedia.org/wiki/OBD-II_PIDs
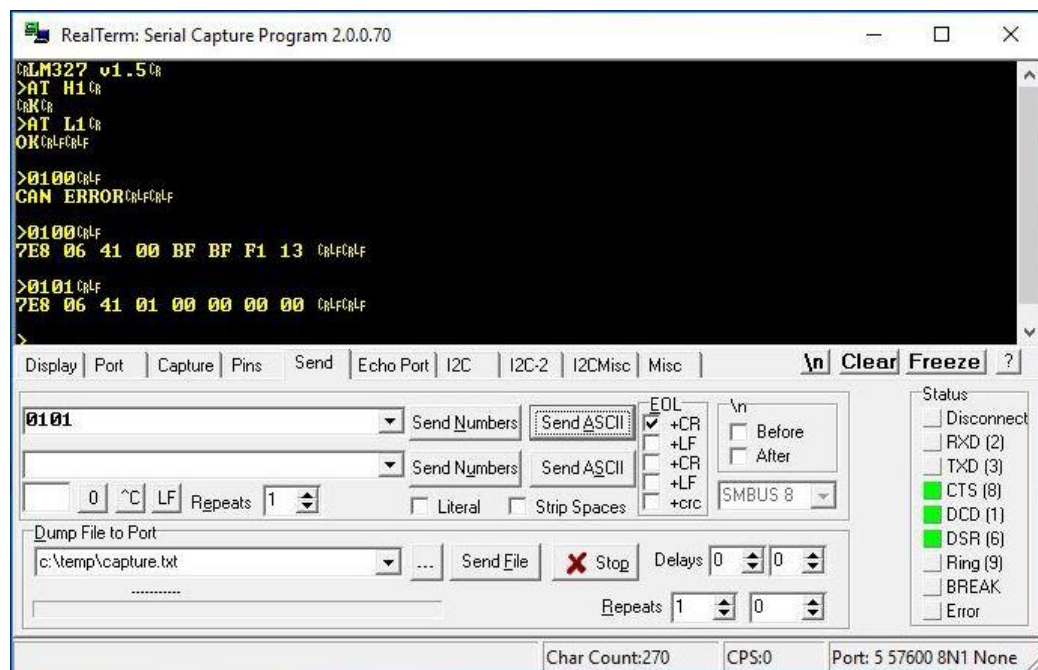
This is a log obtained asking other PIDs of **Service $01**. <mark>Yellow</mark> lines show which are available.

<mark>0100</mark>

<mark>7E8 06 41 00 BF BF F1 13</mark> → 10111111101111111111000100010011

>0101

7E8 06 41 01 00 00 00 00

>0102

NO DATA

>0103

7E8 04 41 03 01 01

>0104

7E8 03 41 04 00

>0105

7E8 03 41 05 4E

>010A

NO DATA

>010B

7E8 03 41 0B 64

>010F

7E8 03 41 0F 4D

>010F

7E8 03 41 0F 4D

>0111

7E8 03 41 11 FF

>0120

7E8 06 41 20 91 04 20 01 → 10010001000001000010000000000001

>0131

NO DATA

>0133

7E8 03 41 33 64

>0140

7E8 06 41 40 10 08 00 00 → 00010000000010000000000000000000

>0146

NO DATA

>015C

NO DATA

>0160

NO DATA

>0180

NO DATA

>01A0

NO DATA

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