



ProRacing® Chip Box OBD2 Series

Certificate IPC: 7711/21, IEC: 61340-4-1

Set contains.

The kit includes:

- ProRacingX ChipBox OBD2;
- Cable OBDII / D-Sub;
- Installation instructions;
- Warranty card.



ProRacing Chip Box OBD2

ProRacing Chip Box OBD2 is an innovative product on the global chip tuning market. Thanks to a modern device we have access to the Engine Control Unit (ECU), and we can safely modify it. This allows for increased power and torque up to 30%.

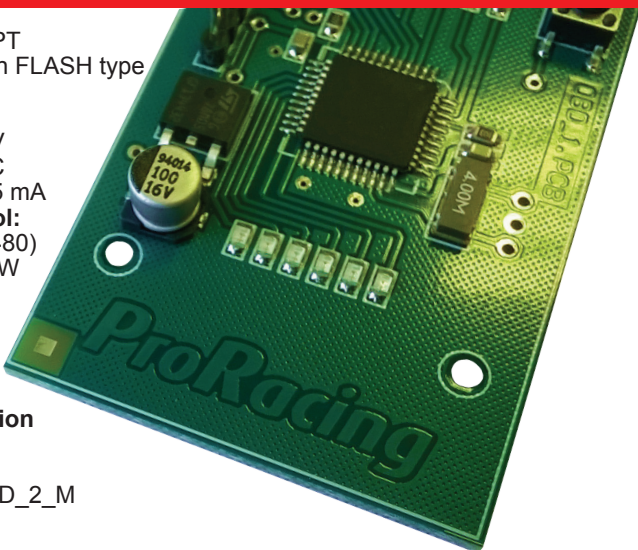
ProRacing Chip Box OBD2 It became the bestselling product of ProRacing company and revolutionized the global chip tuning market.

Chip Box OBD2 contains Microchip processor with built-in FLASH memory. In this memory, there is a three-dimensional data table, called the ignition map, which contains information on the boost pressure, fuel injection rate, ignition angle, injection time. Depending on many real-time parameters, such as air temperature, current air density, RPM, throttle position and others, we modify this map and get more power, more torque and lower fuel consumption.



Technical specifications of the device:

- **Processor:** PIC16F59-I/PT (MICROCHIP) with built-in FLASH type S-RAM memory
- **Technology:** CMOS
- **CPU power supply:** 5.0V
- **Power supply:** 8-15V DC
- **Power Consumption:** 45 mA
- **Communication protocol:** CAN (ISO15765/SAE J2480) / J1850 PWM / J1850 VPW / ISO9141 / ISO14230 (KWP2000) / ISO14229 (UDS)
- **Operating temperature range:** -40° to +85° C
- **Engine protection function**
- **Made in Europe/Poland**
- **Two years warranty**
- **Software:** ProRacing OBD_2_M



Pro Power Increase – Power Boost.

- **Increase of power and a maximum speed of the car.**
- **Torque increase, which guarantees:**
 - better driving dynamics,
 - stable and flexible work of the engine,
 - much better acceleration due to faster response to the gas pedal.
- **Smooth shifting in cars with automatic transmission.**
- **Smooth acceleration from low engine speeds.**
- **Easy starting of the engine even in winter conditions.**
- **Reducing of turbo lag in turbocharged cars with petrol and diesel engines.**

Pro Driving Safety – Safety first.

- **Increase in driving dynamics.**
- **Easier and safer overtaking manoeuvre.**
- **Improved driving comfort.**

The device improves driving comfort. Improving driving dynamics and improving engine performance is equal to the increased road safety. When the device is connected, the torque increases significantly. The car becomes more dynamic, better responsive to the gas pedal. Also, in cars with the automatic transmission, this increase translates to faster gear changes, thanks to which the car gains much better acceleration. This is very important, for example, when overtaking. Thanks to the easy overtaking, we take care of our passengers and their safety. When you are sure of the power of your car the overtaking manoeuvre will be easier and, above all, safer.

Pro Eco Driving – Fuel Economy.

- **Reduces fuel consumption up to about 2.0l per 100 km in diesel engines.**

The increase in power and torque improves the engine performance. Optimizing engine performance reduces fuel consumption. Performance depends on the car's output parameters, engine capacity, current fuel consumption, and driving style. In a continuous route, without rapid acceleration and deceleration, we can expect a reduction of up to 2.0 l per 100 km. The higher the fuel consumption and engine capacity, the greater the achievable fuel savings.

- **Reduction of pollutant emissions.**

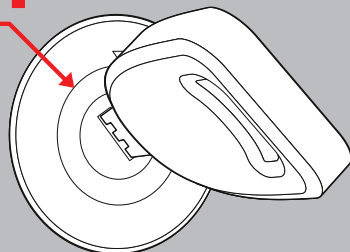
By reducing the combustion, we reduce the number of harmful substances emitted to the atmosphere, including nitrogen and carbon oxides.

We can refuel much less often, save money and protect the environment.

Step 1.

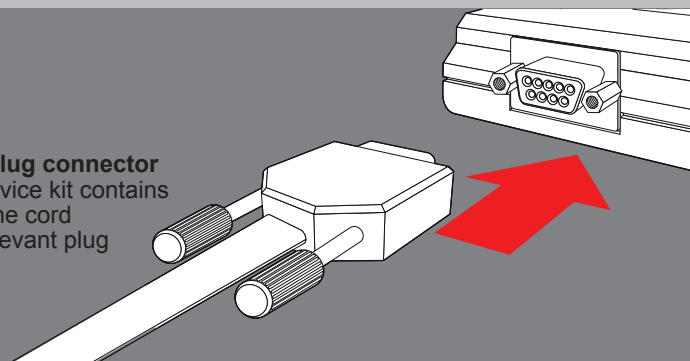
Please make sure your car is off and all electrical components are in the OFF position. Make sure the ignition is in the OFF position and any device such as car radio, navigation, air conditioning, interior lighting, etc. is not turned on.

OFF



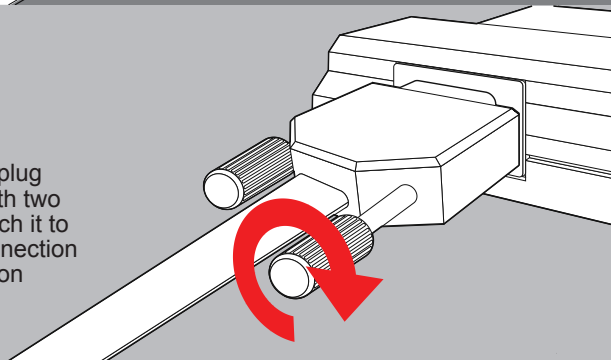
Step 2.

Connect the black 9-pin plug connector into the appliance. The device kit contains the connection cord. Plug the cord into the appliance with a relevant plug (D-Sub / DE9).



Step 3.

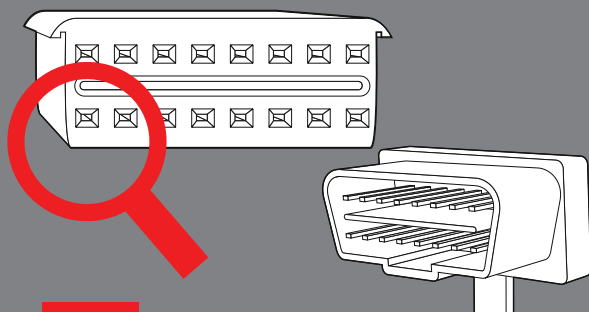
Use screws to secure the plug connection with the device. The plug of the included cord is equipped with two mounting screws. Use them to attach it to the device. This will secure the connection and prevent accidental disconnection during operation.



Step 4.

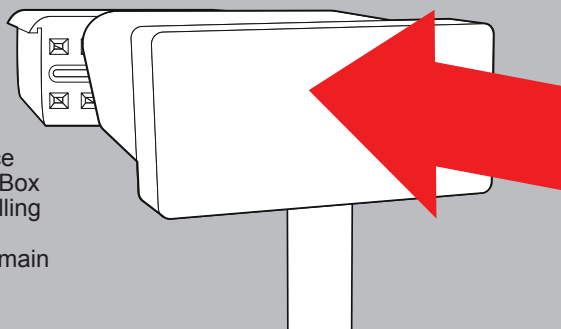
Locate your car's OBDII port.

The OBDII diagnostic port can be usually found at the driver's side, under the steering wheel column. If you have any difficulty with finding the connector, please use 'OBDII locations' diagrams placed further in this manual.



Step 5.

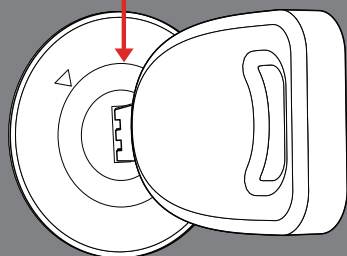
Connect the Chip Box's OBD2 (16-pin) connector to the diagnostic port in the car. The LEDs on the device should glow. This means that the Chip Box is properly connected. The LEDs signalling is different depending on the make of a vehicle, its production date and on the main driver type.



Step 6.

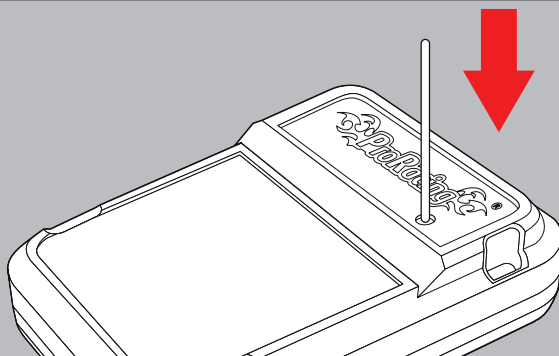
Turn the key to the ON/AAC (ignition) position but do not start the engine yet! Turn the ignition, the key has to be in the position before the start, lights will glow on the dashboard. Remember not to start the engine!.

ON/ACC



Step 7.

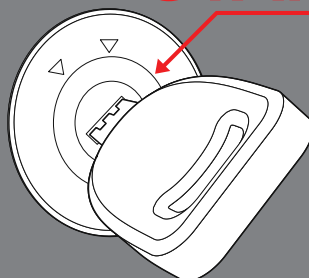
Reset the device! Find a small hole in the top of Chip Box casing. Use a thin object to press the reset button located on the circuit board underneath. Press and hold reset for 3 seconds.



Step 8.

Start the engine and begin riding with the Chip Box OBD2! In order for the device to communicate fully with the ECU, it is necessary to drive about 100 km.

START





Location of the OBDII connector.

Acura: 7/3/8
 Aston Martin: 3
 Audi: 1/2
 Bentley: 2
 BMW: 2/7
 Buick: 1/3/2
 Cadillac: 2
 Chevrolet: 3/2/1
 Chrysler: 2/3/1
 Daewoo: 6/3/2
 Dacia: 9/3/2/6
 Dodge: 2/1
 Eagle: 2
 Ferrari: 3/1
 Fiat: 2/1
 Ford: 3/1/2
 Geely: 3/2/1
 GMC: 2
 Honda: 2/3
 HUMMER: 2
 Hyundai: 2
 Infiniti: 2
 Isuzu: 2/3
 Jaguar: 3/1
 Jeep: 2
 Kia: 3

Lamborghini: 3
 Land Rover: 8/2
 Lexus: 2
 Lincoln: 3/1
 Mazda: 2/3
 Mercedes-Benz: 3/2/1
 Mercury: 2/3/1
 MINI: 2/1/3
 Mitsubishi: 3/2/1
 Nissan: 2
 Oldsmobile: 2/3/1
 Plymouth: 2
 Pontiac: 1/3/2
 Porsche: 2
 Rolls-Royce: 2/9
 Saab: 1/3
 Saturn: 2/1
 Scion: 2/3
 SsangYong: 3/2/1
 Smart: 3
 Subaru: 1/2
 Suzuki: 3/2
 Skoda: 3/2/1
 Toyota: 1/2/3
 Volkswagen: 2/1/4/7
 Volvo: 2/8/6

1. Driver's side, underneath dashboard, in the area under the steering column.
2. Driver's side, underneath dashboard, between the driver-side door and steering column area.
3. Driver's side, underneath dashboard, between the steering column area and the central console (also includes connectors on the driver side but connected to the central console).
4. Driver's side, dashboard instrument/gauge area, between the steering column and central console.
5. Driver's side, dashboard instrument/gauge area, between the driver-side door and steering column.
6. Central console, vertical surface (i.e. near radio and air-conditioning controls), on the left from the vehicle centerline.
7. Central console, vertical surface on the right of the vehicle centerline or on passenger's side.
8. Central console, horizontal surface (i.e. armrest, handbrake area), in the front passenger's area.
9. Any other location than locations # 1-8 (i.e. rear passenger's area, passenger side glove box, top of dashboard near windshield).

Note:

- **Locations #1-3 represent preferable locations.**
- **Locations #4-8 represent allowable locations.**
- **Connectors in location # 6, #6/7, and #7 may be covered by ashtrays, covers, cup holders, coin holders, etc.**

Important notice.

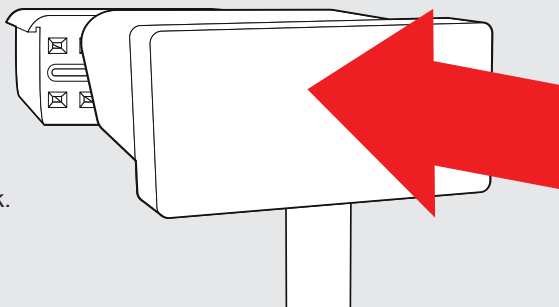
- Before installing the Chip Box OBD2 device, please make sure that the OBD2 connector in the vehicle is not damaged and free from any contamination or moisture.
- The Chip Box OBD2 is designed exclusively for typical passenger cars (operating on 12V DC installation)!
- Chip does not fit trucks and tractors – for this types of vehicles You can find in our offer other devices – in order to select the proper device please contact the company ProRacingX.
- Be sure to perform the first installation of the device when at least 50 kilometers route is expected. During this time the Chip Box OBD2 device will be in the adaptation phase, which will allow to better fitting to the car.
- Make sure that your car and all its components are in very good condition.
- Before connecting the Chip Box, we recommend replacement of filters and oils.
- After unplugging the Chip Box OBD2, the car's ECU will return to its factory settings.

Reset procedure.

Please use this option if you want to install Chip Box OBD2 device in another vehicle. Please note that the chip is programmed to one type of fuel. Connecting the device to the vehicle powered by another type of fuel than intended may damage the ChipBox!

Step 1.

Make sure that the device is connected to OBDII diagnostic connector in the car.
LEDs on the device should glow / blink.
This means that the chip is properly connected.

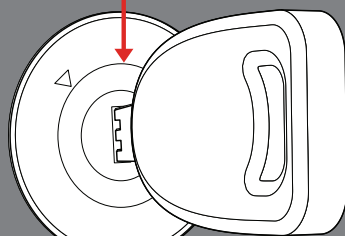


Step 2.

Insert the key into the ignition and turn it to the ON/AAC (ignition) position but do not start the engine yet!

Turn the ignition, the key has to be in the position before the start, lights will glow on the dashboard. Remember not to start the engine!

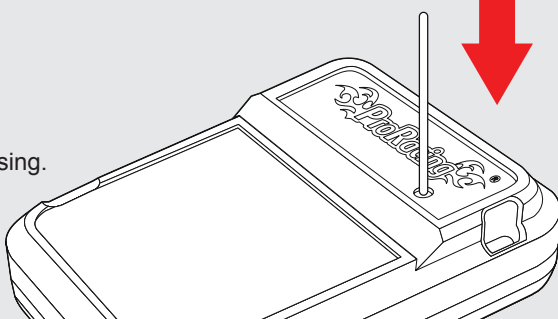
ON/ACC



Step 3.

Reset the device!

Find a small hole in the top of chip casing. Use a thin object to press the reset button located on the circuit board underneath. Press and hold reset for 3 seconds.

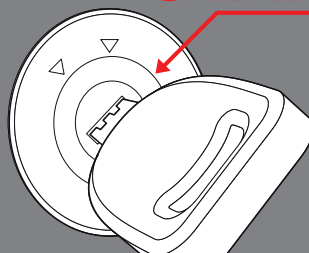


Step 4.

The whole process of resetting the device is completed.

After the reset, the ChipBox OBD2 device is ready to cooperate with the car. You can turn the key in the ignition and start the engine. From that moment the device starts to adjust to the parameters in the vehicle.

START



Frequently Asked Questions.

Q: Must the device be permanently connected?

A: Yes, the Chip Box need to be constantly connected to the OBDII interface during exploitation. After unplugging the device the car's ECU will return to its factory settings.

Q: When I went to the service I had to unplug the device. Will I need to reset it?

A: There's no need. The ChipBox OBD2 device has a built-in flash memory, where the parameters are saved. But CAUTION! If the device is disconnected, e.g. for a month or longer and the car has been used at this time, it is recommended to reset the ChipBox, so that it can once again fit into the vehicle.

Q: Despite I turned off the car the LEDs on the device continue to glow. Can this discharge my battery?

A: There is no danger of discharging the battery. Diodes that are in the device consume power at minimal level. LEDs are similar to those in the security system of the car.

Operating of the ECU and the OBD2 device.

The ChipBox OBD2 device is connected to signal lines of (ECU) main computer's communication buses and 12V power.

These are lines:

1. Power supply 12V from ECU
2. Car signal ground usually connected to ECU
3. CAN Hi Line
4. CAN Lo Line

Since ever, when ECU computers appeared in cars, ALL signal and power lines, which are coming out of their casing, have been SECURED in a very solid way.

Particularly, the opinion saying that sometimes the quality of cars lowers does not apply here. If the lines were not correctly secured, car producers would be at risk of huge losses because almost all ECU computer specimens would fail during first months of exploitation.

From the outside ECU computer breakdown could happen in a very early stage of their development and ONLY on lines with very high power supply, i.e. of engine and injection control and other similar actuators. NOWADAYS, exactly for the last 15-20 years, these circuits have been also perfectly secured against short circuit to ground or to direct battery power. Due to the fact, the chance to start the spontaneous fire of a car caused by damage of elements inside ECU and next burning of power cords or control cables has been minimized.

Assuming the correct connections in OBDII socket of a car, the breakdown of the vehicle's ECU is improbable because:

1. **12V power supply is beyond doubt perfectly secured against accidental short-circuit which could influence further damages.** Against such a scenario car producers secure themselves in their own interest as any damages resulted from the fact would be practically impossible to prove the client and then warranty repairs would be necessary after (for example) accidental connection of a damaged OBDII interface.
2. **All CAN line interfaces used in an industrial way are adapted and secured against short circuits and overcharging in a range of voltage to 28V (at the power supply of 5V) because they are used in cars and lorries.**
3. **All signal lines of OBD2 device have built-in protection of the outputs, which unables the current flow valued more than a few mA, both directions: to the device and from the device.**
4. **OBDII diagnostic socket may contain additional connections to the car system but only at outputs defined as ready to use by the producer as a standard.** From this aspect, nothing can be damaged because ALL the outputs are left DISCONNECTED in OBD2 device.

Conclusion.

There is no possibility OBD2 can cause any ECU breakdowns, especially when disconnected from the car and after the power provision it still tries to connect the communication bus, which is signalled by LED diodes.

Customer Service.

Our service is available to you from
Monday to Friday, from 9⁰⁰ to 17⁰⁰.

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