

OBD-II Break Out Box USER MANUAL



The purpose of this OBD-II Break Out Box is:

1. To test vehicle diagnostic link connector (OBD port) for any abnormality, such as shorting or reverse polarity at the pins, before the diagnostic tool (scanner) is plugged into the DLC. This is to prevent damage to your scan tool.
2. To have a live display of communicating signals e.g. communication protocol signals and manufacturer specific assigned pins, etc.
3. To provide quick access to all 16 pin connections during repair and diagnosis of the vehicle.
4. To monitor the input voltage during chip programming with low voltage alarm.
5. To test individual pins for voltage present.

Specifications:

Operating range:
7.0 - 30.0VDC Input.

Maximum load:
Up to 3.0 Amps Output.

Overload protection:
Yes, PTC Fuse (Self-healing)

Volt displays:
3 Digits LEDs (Resolution: 0.1V)

Banana sockets:
16 outputs x 1.0mm diameter with LED lamp indications.

Protocols detected:
PWM (J1850), VPW (J1850),
ISO 9141-2, DIS/ISO 14230-4, CAN
bus (J-2284)

Operating temperature:
32°F - 122°F
(0°C - 50°C)

Permitted humidity:
Less than 70%.

OBD cable length:
30 inches (0.8 meter)

Reverse polarity protection:
Yes, LED on pin 4 & 5 turns red.

Warning beeps:

Slow beeps:
Below 11.8V/23.6V (Low Voltage)

Fast beeps:
Above 15.5V/31.0V (High Voltage)

OK Green LED
will illuminate when everything is OK (no short, no voltage on any pins, reverse polarity, etc.)

WARNING Yellow LED
will illuminate if pin 1 has voltage present on it.

WARNING Red LED
will illuminate if any of these pins 3,8,9,11,12,13 has voltage present on them.

When SELECT button is pressed, the "Pin" display will change randomly as well as the voltmeter display should any voltage be present on the selected pins.

If there is a need to check voltage of other pins, press SELECT button and the pin numbers will jump one at a time then show its corresponding voltage in the "Volt" display, if detected.

Press SELECT button again to continue to pin 2 and so on.

The contact points can be either plugged in for hands-free operation or just by surface contact during the measurement with the probes.

If Pin 16 voltage is Low (below 11.8V for 12V system or below 23.6V for 24V system) a slow alarm beeping will sound. If Pin 16 voltage is High (above 15.5V for 12V system or above 31.0V for 24V system) a faster alarm beeping will sound.

RESET button
is to restore the default setting where pin selection is set to pin 16.

SELECT button
is used to select pin for testing of any voltage present.



Operations:

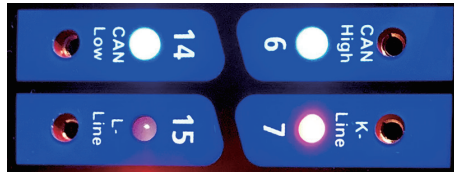
This OBD-II Break Out Box is applicable for 12V and 24V systems. Once plugged into the vehicle's DLC (OBD port) it will start to check the pins for any voltage present. If voltage is present, the respective LEDs will illuminate as follows:

Pins 2, 6, 7, 10, 14, 15

Blue/Red dual color LEDs

Blue color: Normal protocol communication (pulse) signal.

Red color: Constant voltage present.



Depending on the communication protocols (Pin 6: CAN H, Pin 14: CAN L), Pin 2: Bus + Line), (Pin 10: PWM-), (Pin 7: ISO-9141

K-Line & Pin 15: L-Line) the Blue LEDs will blink accordingly when signal voltage is detected. If the unit detects constant 12V on these pins, the LED will stay on and become RED.



Default Pin display is always set to pin 16 with corresponding battery voltage display on its voltmeter (example: 12.5V) detected from the DLC.

Pins 3,8,9,11,12,13

Blue/Red dual color LEDs

Blue color: Normal protocol communication (pulse) signal.

Red color: Constant voltage present.

Pins 1

Yellow/Red dual color LEDs

Yellow color: Normal communication (pulse) signal.

Red color: Constant voltage present.



If pulse voltage is detected on pin 1, its LED will turn Yellow.

If pulse voltage is detected on any of these pins 3,8,9,11,12 and 13, its respective LEDs will turn Blue.

Please note that different vehicle manufacturers use many of these pins for special purposes (example: pin 8 is used by Nissan for ignition voltage) other than the communication protocol signals. If the breakout box detects constant 12V present on these pins, the LED will stay on and become RED.

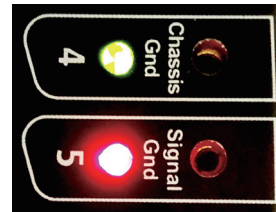
Note: Due to the fluctuations of voltage readings in Pulse voltage, the unit will only display peak to peak voltage of the pulse.

Pin 4 & Pin 5

Green/Red dual color LEDs

Green color: Correct grounding (-).

Red color: Reversed polarity (+) detected.



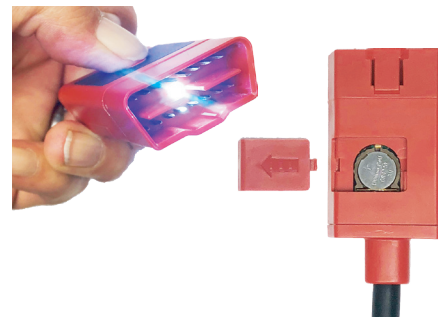
When the OBD-II Break Out Box is plugged into the vehicle DLC and detects reverse polarity in pin 4 and 5, the LED will turn RED.

This indicates incorrect polarity.

DLC Connector Light:

Pressing the power will illuminate a flashlight in the DLC connector to aid in locating the vehicles DLC.

To replace the flashlight battery, remove the battery cover on the rear of the DLC connector. (Replace with CR1220)



Product Warranty

The **OBD-II Break Out Box** comes with a one (1) year warranty and undergoes strict quality control for testing workmanship, function, and safety before leaving the factory. From the date of purchase, we will warranty/repair the **OBD-II Break Out Box** against defects in parts and workmanship. All repairs due to misuse or tampering with will incur a charge. All warranty units must be accompanied by a copy of the original sales receipt.

This warranty does not apply to products which have been:

- Altered
- Improperly installed
- Damage by accident, negligence, or misuse

THE WARRANTY WILL BE VOIDED FOR ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF MISUSE.

Warranty Claims:

Please include a copy of the original receipt and return to:

Power Probe Group, Inc.
2810 Coliseum Centre Drive,
Ste. 100. Charlotte, North Carolina
28217 USA

Out of Warranty Repairs:

Please contact our Tech Support department regarding non-warranty repairs or service.

Ph: (833)533-5899

Email: cs.na@mgl-intl.com

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www.powerprobe.com