

iBoost

Before use, please read these instructions carefully

Advanced Boost Control System | OBD Reader Multi Gauge

Warnings/Limiters | Oled Display

/OBD/OLED

Thank you very much for purchasing this product.

In order to use this product correctly and safely, please be sure to read this instructions manual carefully. This product's purpose is to control the boost of the turbocharger and improve the output of the engine.

Specifications

Operating Temperature	20 until 80 Celsius
Operating Voltage	9 – 30Volts
Dimensions	94x48x13mm
Weight	115g
High Quality Oled Display	2.42”
High Quality Aluminum Case	-
Reading Values	Boost, Rpm, Speed, Gear
input	obd

Product Description

- The Can bus Version Includes(only for cars that support CanBus
- Boost Controller
- Pressure Sensor
- Solenoid
- Wiring and Connectors(plus and play install)
- Obd Controller

Features

- Boost Per Rpm
- Boost Per Gear
- Boost Warning And Limit
- Start Boost For Faster Spool
- 3 Boost Maps(OFF,LOW, HIGH)
- Rpm Prepare and Shift light
- Exhaust Gas Temperature Warning And Limit
- Air-Fuel Ratio Limit Per Rpm
- Customizing 12 Volts Output
- External Input For Changing Boost Maps
- External Input For Safe Mode(Off Map)
- Record High Variables
- Record High Variables Since Car Start
- High Accuracy 4 Bar Map Sensor

IMPORTANT NOTE-SAFETY

These instructions provide information on the installation, operation and programming of the unit. Please keep this booklet safe for future reference.

Please use this manual at your own risk. iBoost is not responsible for any damage or injury.

- Install this product at a well ventilated area.
- iBoost is designed to work until 30v DC and the ground is designed to be the chassis of the car.
- Disconnect the Ground line from the battery during the installation of the iBoost.
- DO NOT damage any wiring(s) and (or) piping(s) from the engine room during the installation of the iBoost.
- DO NOT install iBoost while the engine and its components are hot.
- The installation of the iBoost MUST BE from a professional or a technician. Otherwise it will be at risk
- The Regulation of the iBoost MUST BE done from a technician who has read the iBoost manual and knows the boost limit of the car. Otherwise your engine will be at risk.
- iBoost will NOT Responsible for damage engine caused by faulty installation or regulation.
- DO NOT operate or regulate iBoost while driving or on public roads. DO NOT insert extreme force to the product during the installation of the iBoost.

INSTALLATION

Power Connector

Black	Connect to the Ground (chassis of the car)
Red	Connect to the Power of the car (until 30 Volts).Must be install with 5 Amps Fuse.

I/O Pins Connector

Pink	Positive of the EGT Sensor
Orange	Negative of the EGT Sensor
Grey	External Input For Changing Boost Maps
Brown	Rpm Input Signal
Green/Black(or Green/Brown)	Customizing 12 Volts 1 Amps Output
Violet/Black(or Cyan)	Solenoid Output
Green	vehicle Speed Input Signal
White/Red	External Input For Safe Mode(Off Map)
Yellow	Afr Analog Input
Yellow and BLUE wires	Can Bus wiring is a twisted pair
Input 1 - yellow or Input 2 - Green	Fuel pressure
Brown 11	Auxiliary output
Grey	Solenoid wire 1 – connect using wire supplied
Orange	External set point switching OPTIONAL

Power supply

- The required power supply for the iboost is 9 - 13V DC
- connect RED power supply wire to a switched +12V power source.
- Connect BLACK ground wire to good chassis or engine earth point.

Solenoid

There are 3 ports , one on the left (port 2),one in the middle(port 3),one on the right(port1).Somewhere on the valve will be a logic diagram like this.



Since there are two blocks/squares this valve has two possible positions. The two squares with the arrows in them represent the two flow positions of the valve, energized and non energized. The numbers on the right side square represent the ports, the numbers are not repeated on the left side (for simplicity). The arrow shows which ports are connected at the given state. So in the state on the right side (spring position means energized) ports 2 & 3 can flow to each other (in either direction) and port 1 is blocked (dead ended). In the left case (solenoid slash symbol means energized) 1 and 2 are connected and port 3 is blocked. The rectangle with the diagonal slash "/" means this valve is solenoid operated. The spring symbol on the right defines the "at rest" (energized) position of the solenoid valve. So the right side block is what happens when the solenoid is UN-energized.

INPUTS

- Protected against over voltage
- Analog inputs impedance: 30K to 0V
- Switch inputs impedance: 100K to 3.3V
- Frequency inputs impedance: 70K to 0V
- Frequency inputs filter 3db: 400Hz

OUTPUTS

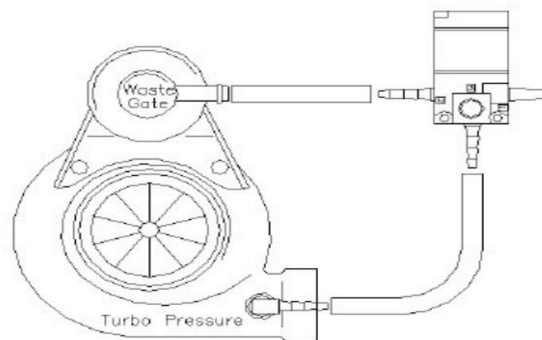
- Solenoid output type: push to 12V
- Solenoid output protected against short circuit, over current and over temp
- Solenoid output nominal current capacity 5A
- Warning output type: pull to 0V
- Warning output suitable for resistive and inductive loads
- Warning output NOT protected against over current!

Internal West gate

Port 1: To atmosphere

Port 2: To the internal West gate actuator

Port 3: To pressure source

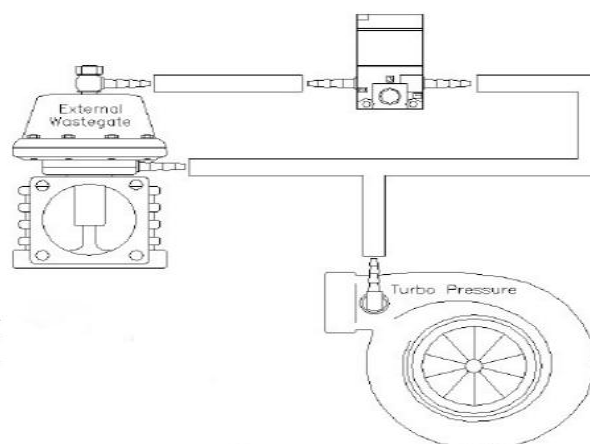


External West gate

Port 1: To pressure source

Port 2: Top of the Westgate

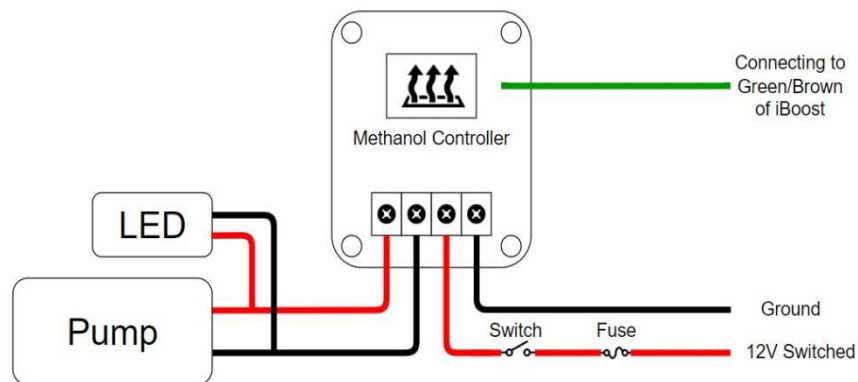
Port 3: To atmosphere



Water Methanol Injection

This iBoost boost controller is so advance and intergrated , it combined WMI control and boost control into 1 single unit, Essentially it offers a 1 solution for both WMI and boost control and both boost and WMI can be set up based on:

Boost Per Rpm,Boost Per Gear,Boost Warning And Limit, Start Boost For Faster Spool,3 Boost Maps(OFF,LOW, HIGH),Rpm Prepare and Shift light,Exhaust Gas Temperature Warning And Limit,Air-Fuel Ratio Limit Per Rpm,Customizing 12 Volts Output.and below Water Methanol Injection connection system.



The iboost can be connected to a water/methanol injection system that has a fail output so that the boost can be lowered in case of a problem.

Connect the Green wire from pin 5 (Boost Safe LS Output) of the AEM controller to one of the grey wires.(Switch input 1or Switch input 2).In menu 5.7 of the set the connected Switch Input to "LIMIT @ ON" Now when the AEM Water/Methanol controller detects a problem it will ground the green wire and the detect it disabling the solenoid to limit boost.

IMPORTANT INFORMATION

- iBoost recommends resetting the boost set point values to Zero and measure the new minimum boost pressure before increasing your boost set point values.
- When the valve working it will make sound.
- Shorter Tubes Produce faster turbo spool

MAIN MENU

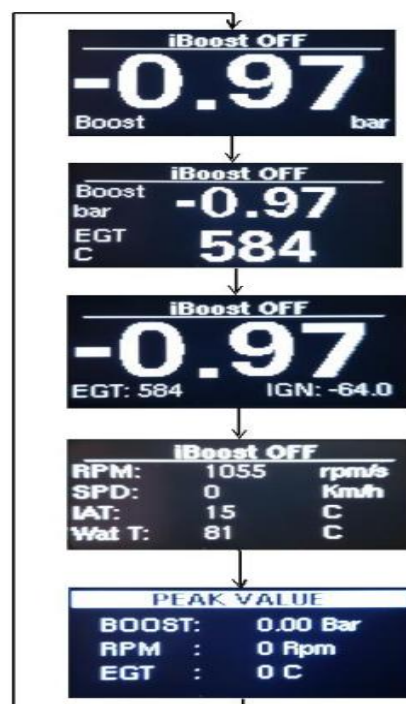
Change Boost Maps

On main menu the user can easily change boost modes by pressing the mode button. Boost Mode will change from OFF, LOW, HIGH successively.



Change Screens

iBoost has 5 Screen. With pressing Down/Up on rotation switch user can change between screens with one, two, three and four variables or Peak Value Measurements (More about this screen will be described on Peak Value Paragraph).

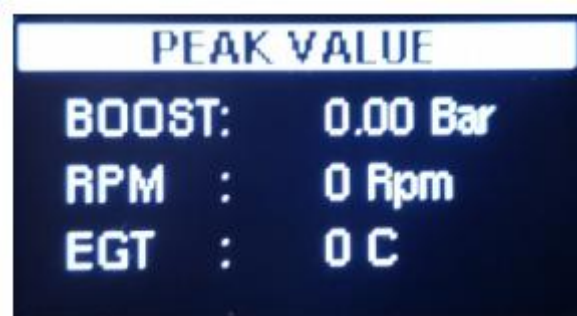


Change Screen Variables

To switch the displayed values hold press mode button on main menu. The screen will be invert the color on the selected value. With pressing Up/Down Rotation Switch you can select another value to be changed with press inside the rotation switch you can change the selected value. To exit from this menu hold press mode button.

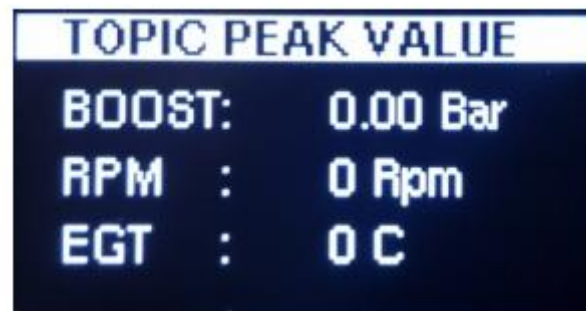
Peak Values Screen

In this Screen user can see the peaks measurement of his vehicle. To reset the peaks values hold press inside the rotation switch.



Topic Peak Values Screen

In this Screen user can see the peaks measurement since the vehicle has start. This peaks will be deleted when switch down iBoost.



DEVICE SETTINGS

From main menu on OFF Mode by hold press inside the rotate switch you can enter on Device Settings menu. To exit from the Device Settings hold press inside the rotate switch. To navigate on Device Settings menu press Up/Down the rotation switch to move the circle. To change a variable, press inside the rotation switch, now the circle is solid and you can change the variable by pressing Up/Down Switch. When you finish the regulation press inside the rotation switch to save the variable, now the circle will be empty and you can modify another variable or you can exit from Device Settings.

Variables Explanation



- **Start Screen:** You can select the Start Up screen when you power up iBoost.
- **Start Boost:** You can select the startup Mode when you power up iBoost.
- **Led Brightness:** You can control the brightness of bot leds (Blue and Read) by changing this variable (1 is off 10 is full on).
- **Solenoid Hz:** You can change the solenoid frequency by modify this variable(iBoost suggesting 35hz).



Rpm Setup



- **Shift Light:** Select in which rpm you want the shift light signal(Solid Red Led).

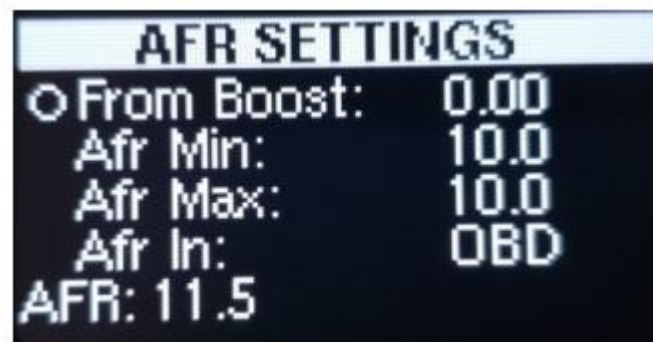
- **Prepare:**Select how many rpm before the shift light you want the prepare signal(Blink Red Led).
- **Disp Warning:**You can enable or disable a Pop-Up window on main screen to inform you about shift light and prepare signals.
- **Rpm In:**Select the input of the rpm reading.

Exhaust Gas Temperature Setup



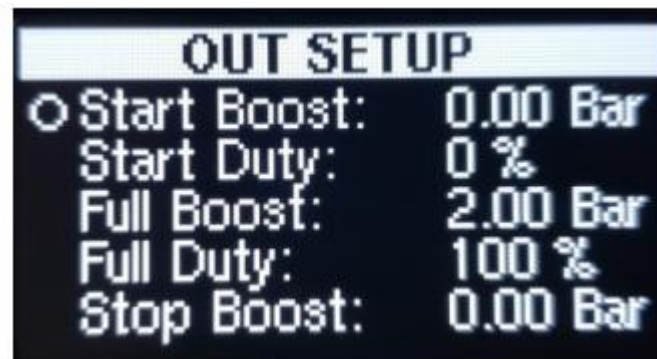
- **Warning:**Select the temperature for Warning signal. iBoost will inform you if temperature exceed the warning level with solid blue led and Pop-Up window with real-time temperature measurement.
- **Limit:**Select the temperature of Exhaust Gas Temperature limit.iBoost will immediately change duty to zero if the temperature exceed the limit variable.
- **Egt In:**Select the input of the Exhaust Gas Temperature reading

Air/Fuel Ratio Setup



- **From Boost:**When the boost pressure exceed this value and the afr isn't between of Afr Min and Afr Max iBoost immediately change duty to zero.
- **Afr Min:** Lower Air/Fuel Ratio Limit.
- **Afr Max:** Max Air/Fuel Ratio Limit.

- **Afr in:**Select the input of the Air/Fuel Ratio reading
- ### Out Setup



- **Start Boost:**In this pressure the output will starting being enable.
- **Start Duty:**With this Duty the output will be start when the pressure reach the Start Boost value.
- **Full Boost:**Until this Pressure the output will be progressive.
- **Full Duty:**The Max Duty that you want to reach your output.
- **Stop Boost:**In this pressure your output will be OFF(is this value is zero the stop is disable).

Gear Setup



To learn a gear the vehicle must be on moving. Put a gear on gearbox and without pressing the clutch move the circle on the running gear with pressing Up/Down Rotation switch and press inside the rotation switch for learning. This routine must be done for all gears.

BOOST SETTINGS

Full Boost Settings

- **Warning:**When the boost pressure exceed this value iBoost will inform you with Pop-Up window and solid Blue led.

- **Limit:**When the boost pressure exceed this value iBoost will be reduce the total duty by Drop value. The duty will be reset to the selected when the pressure will be below zero.
- **Duty:**This is the base duty.
- **Drop:**With this value you can regulate how much duty iBoost will reduce from total duty (Base Duty and Rpm Duty and Gear Duty) when boost pressure exceed Limit (iBoost recommend -100%).The duty will be reset to the selected when the pressure will be below zero.
- **Start:**With this value help the turbo to spool faster.Until this pressure the duty will be 100%.Higher of this value may cause overshoots on boost pressure.iBoost recommend to set this value on your lowest pressure.



Rpm Map:From this map you can add or eliminate the total duty on specific Rpm's. (To move the cursor press inside the rotation switch or hold it to exit from this menu)

Gear Map: From this map you can add or eliminate the total duty on specific Gears.(To move the cursor press inside the rotation switch or hold it to exit from this menu.

Further Support

To find out more information visit <https://jdyperformance.com>.

Consult your qualified installer / electrician for any user queries.