GIZZMO

IBC

BOOST CONTROLLER

Thank you for purchasing the Gizzmo IBC Boost Controller. This manual contains operating instructions and installation procedures that are needed for the fitment and operation of this product

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Instruction Manual

V1.12 8/21

GIZZMO
IBC Controller

THE IBC IS AN INFORMATIVE BOOST CONTROLLER WITH EVERYDAY FUNCTIONALITY. TAKING WHAT WE KNOW FROM OVER A DECADE OF BOOST CONTROLLER DEVELOPMENT, AND FROM LISTENING TO WHAT YOU, THE END USERS WANTS, WE CONTINUALLY STRIVE TO GIVE YOU WHAT YOU NEED.

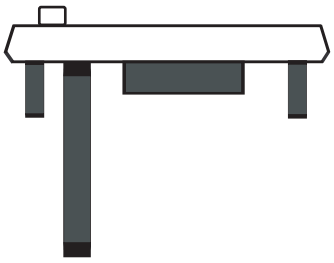
IBC CHANGES:

- OLED DISPLAY
- 50% SIZE REDUCTION
- 40% WEIGHT REDUCTION
- 3 BUTTON NAVIGATION FOR EASE OF USE

FASTER: 32MHZ 16bit PROCESSOR. USING THE LATEST PROCESSOR TECHNOLOGY MEANS THAT YOU'll NEVER BE WANTING FOR MORE PROCESSING POWER! THIS MEANS YOU WILL ALWAYS HAVE THE BEST, MOST ACCURATE BOOST CONTROL

EASE OF USE: SOMETIMES YOU JUST WANT TO KNOW WHAT THE UNIT IS DOING... NOW YOU CAN! WE HAVE ENABLED THE DISPLAY TO SHOW NOT ONLY THE CONVENTIONAL BOOST BUT HAVE ALSO ADDED THE ABILITY TO SEE DUTY OR RPM DUTY OFFSET

What's New in the IBC



New Tiny Sizing
50% smaller so you can fit it anywhere, it is easily the worlds smallest boost controller ever.

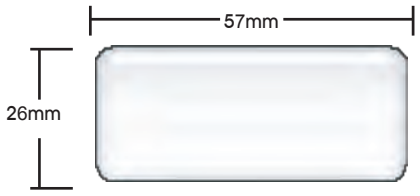
OLED display
Gizzmo's IBC houses a 128 by 64 OLED display so now the menu's are less cryptic and all of your options can be seen at once

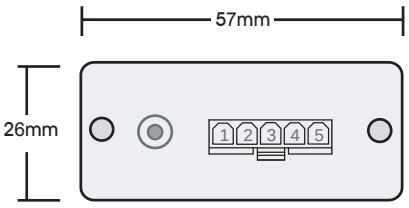
3 buttons
Gizzmo's IBC has added a button to make navigation a lot easier. this IBC is all about user convienience

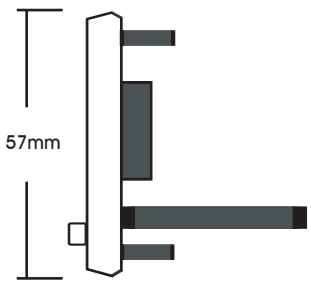
Functions/Specifications

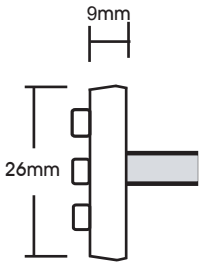
Number of boost memories	4 with individual gain settings
Maximum boost	50psi (3.5bar)
Processing Power	32mhz 16bitRISC
Active Over Boost	5psi to 50psi
IBC size	9mm * 57mm * 26mm 11.8V
Operating Current Reverse	Less than 0.5A
Overcharging Protection	Yes
Display	White graphical OLED
Pressure display options	KPA,PSI,BAR
Wastegate Compatibility	Internal and External
Solenoid	High Performance Single

IBC Specifications









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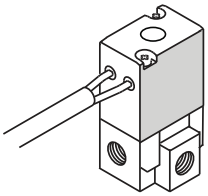
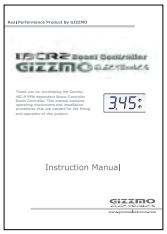
IBC Parts List

IBC
Module x1



Solenoid Valve
x1

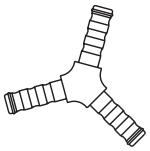


Instruction Manual
x1

IBC
Harness x1

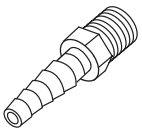
1mx5mm Nitrile
Tubing x1

1.2mx2.8mm
Vacuum Tubing x1



5mm ‘Y’ Piece
Connector x1

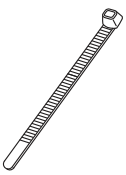
3mm ‘Y’ Piece
Connector x1



Tail 5mm
x2

Bracket and
Accessories

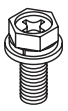
4 X screws
1 X stand off
2 X brackets



Cable Tie
x8

3mm Flat
Washer x2

3mm Nut
x2



3mm Bolt
x2

Warning/Caution

Always connect the wiring exactly as described in the instruction manual.

Disconnect the negative terminal of the battery before proceeding with installation.

Do not drop or expose this unit to excessive shock.

Installation should only be performed by an experienced automotive electrician.

Keep this unit away from moisture.

Never disassemble, modify, or tamper with this unit.

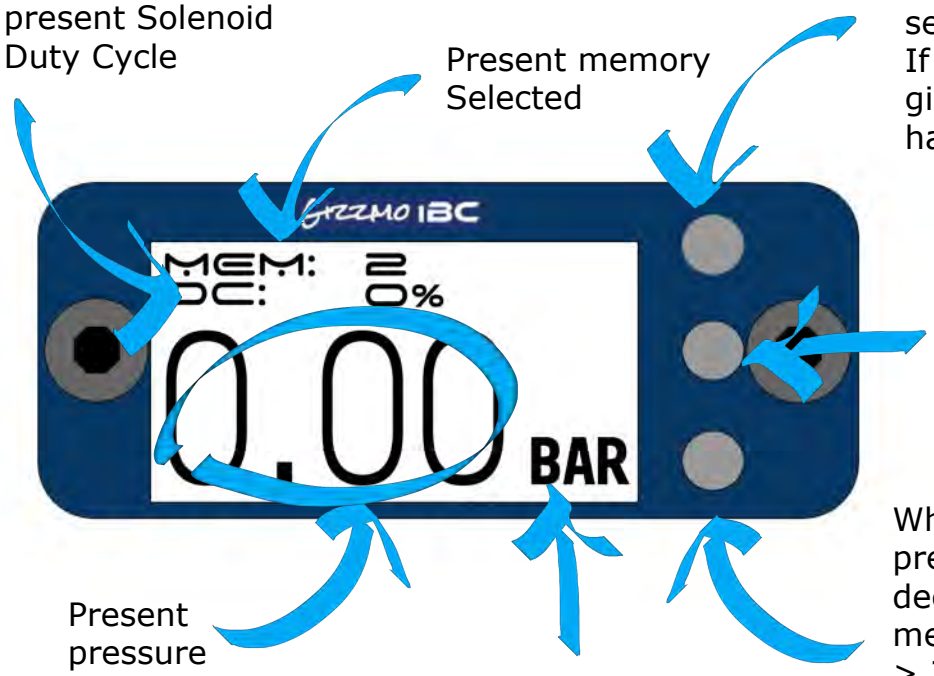
Never operate this unit while driving.

Securely mount this unit away from any area that may effect driving.

This unit is only designed for 12V DC type vehicles with a negative ground supply.

Operating Instructions

Running Display



When in running mode the UP button increments the boost memory to the next setting e.g. 1 > 2 > 3... If held down, the IBC will give you the option for a hard reset.

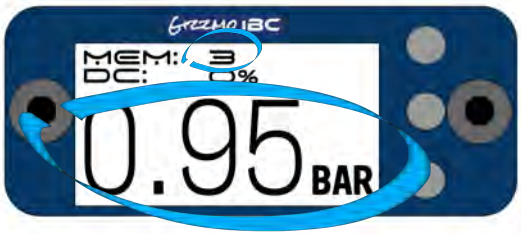
The MIDDLE button, in running mode, is used to rotate between pressure display options e.g. BAR > PSI > KPA

When in running mode pressing the DOWN button deccrements the previous memory selection e.g. 4 > 3 > 2...

To Change Boost Memories

To select the next memory simply press the UP button once

To select the previous memory simply press the DOWN button once



The MEM: display will increment and the pressure display will show the target pressure for your new memory selected

Then the running display will return to the real time pressure

Units of Pressure

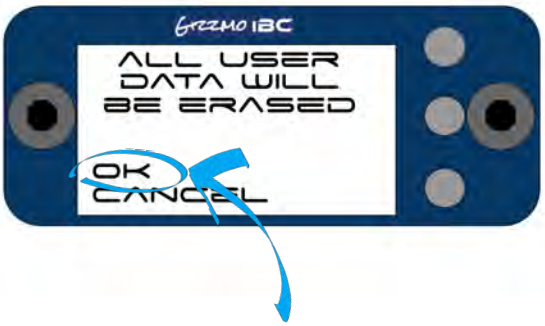
Press MIDDLE buttton once

Press MIDDLE buttton once

Caution: All readings in this Manual are in BAR unless otherwise stated.

Hard Reset

Hold the UP button until the hard reset screen appears



By default the 'OK' will be flashing. If you press the MIDDLE button, the IBC will reset ALL memory locations to what was supplied as standard. This means it will overright your settings. If you want to cancel this operation, press DOWN once to select CANCEL and the the MIDDLE button once.

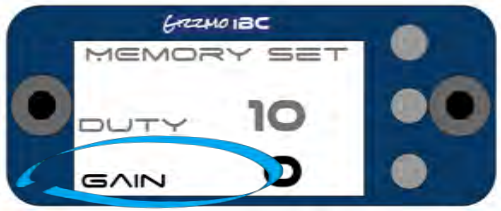
CAUTION!

If you do a hard reset, all user settings e.g. scramble, input trigger, all memory duties, gains pressures etc will be erased. You will end up with all the factory setting as per when the unit was supplied and as such, will have to program everything again, you've been warned.

Adjusting the **Memory Setting**

Hold DOWN button until screen changes

The setting screen will start by flashing the 'DUTY' setting. UP or DOWN will increase/decrease this setting. When you have set this to the desired setting, press the MIDDLE button to continue to the GAIN setting.



The 'gain' setting will now be flashing. UP increases the gain and DOWN decreases it. We'd recommend skiping this setting if you are setting a new boost level and coming back to it after the boost is set (see the quick start guide). Press ENTER to continue

At this point the IBC needs to learn the 'stable' boost for the set duty. Drive the car under full throttle at sufficent revs and load to attempt to get the 'Max' reading on the screen as high as possible. You may see higher boost on the real time readout than is recorded on the 'Max' reading, this is simply because the boost you have seen is not stable. Once you have finished, press any button to lock this setting in memory.

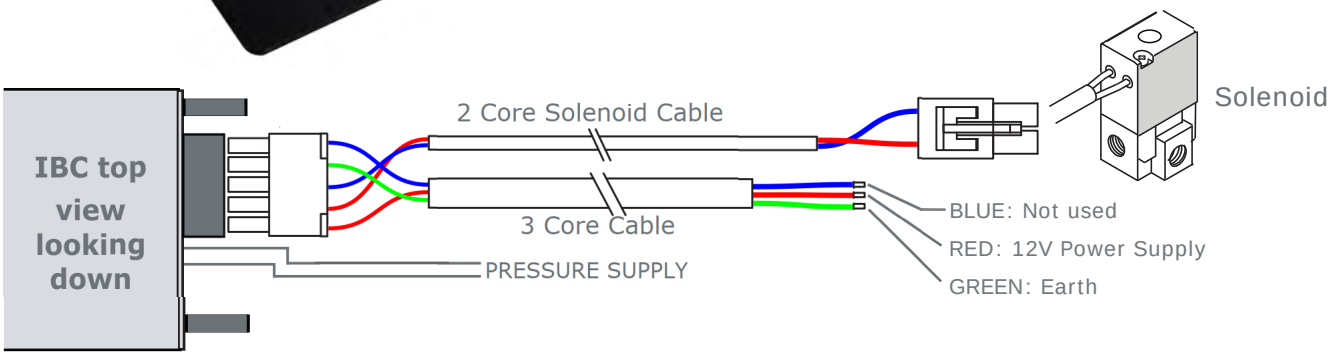
VERY IMPORTANT TIP :)

Whenever you adjust the duty in the setting mode you can then drive the car (recommended in 3rd or 4th gear at sufficent revs) and the IBC will display the boost pressure on the setting screen tempoarily, this makes it very fast to set up.

Wiring/**Bracket** Diagram

Disconnect the negative terminal of the battery BEFORE proceeding with the installation.

Please ensure you follow the image on the left re the assembly of your bracket



IBC

IBC Plug looking INTO plug from IBC side

1: RED 12V+ Power Supply input
2: RED 12V+ Supply output to IBC to Solenoid
3: BLUE Switching ground output to IBC Solenoid
4: BLACK Ground supply input
5: BLUE Not used

1. The Pressure port is to be connected to a direct pressure source at an inlet manifold e.g. Fuel Press Regulator. Do not connect this to any other device such as a solenoid valve or blow off valve. A 3mm Y connector is provided to assist plumbing.

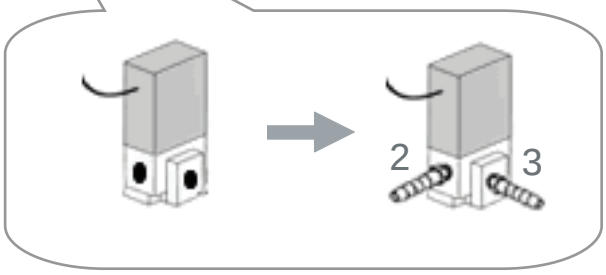
2. Mount the solenoid with the un-used port facing downwards. Connect the hoses as per the correct application (actuator or external wastegate).

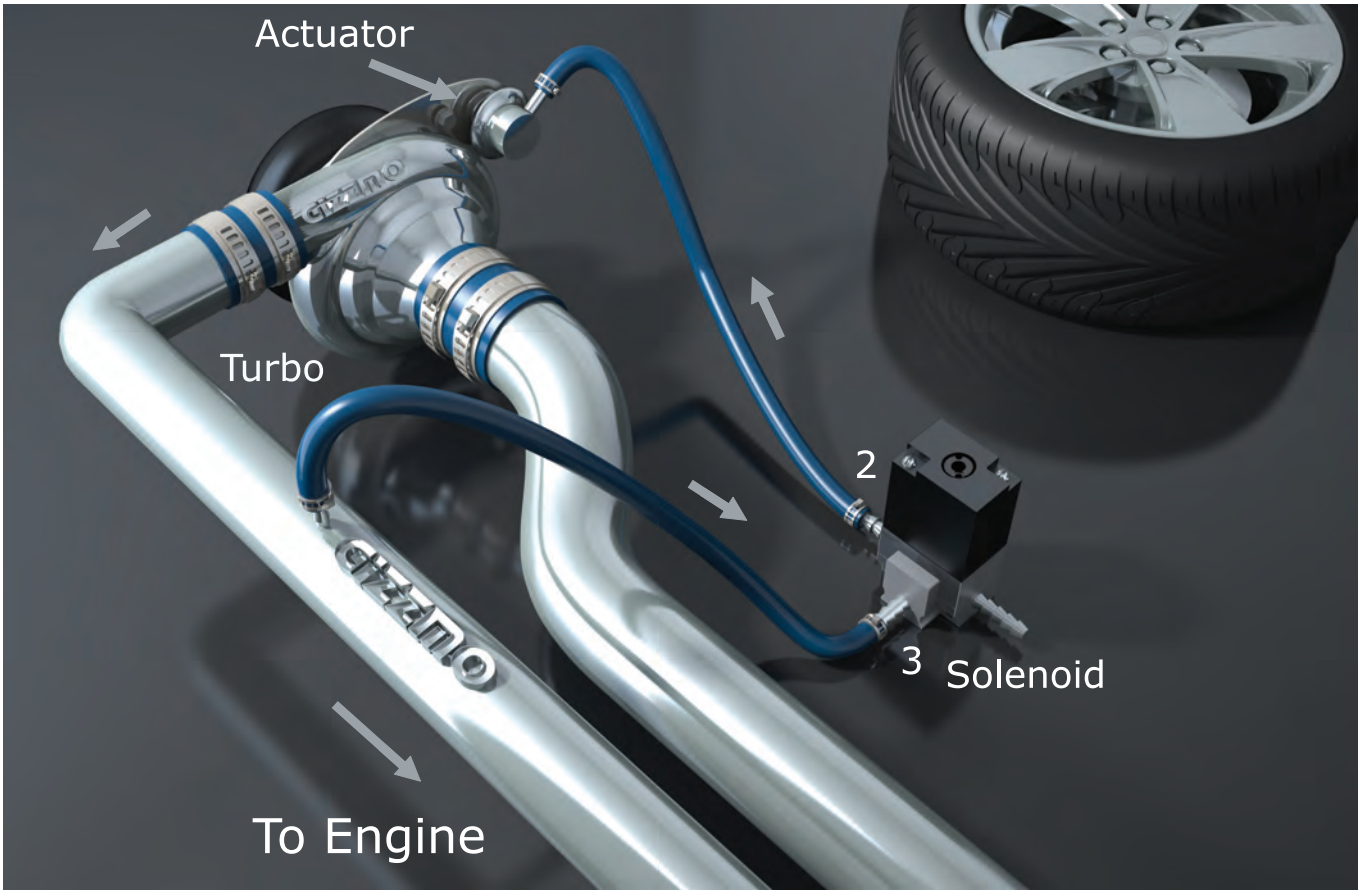
3. Connect the Red wire to a good fused power source that is live only when the ignition switch is in the on position.

4. Connected the Green wire to a good clean chassis earth.

Installation for an Internal Wastegate

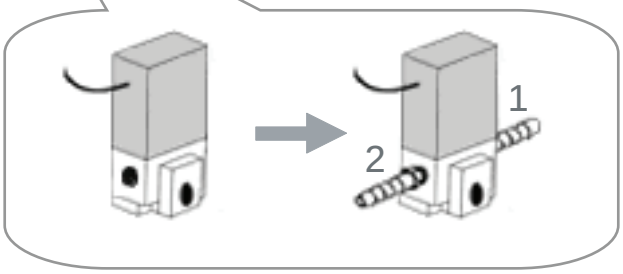
Connect the tails to Port 2 and Port 3 of the Solenoid Valve.

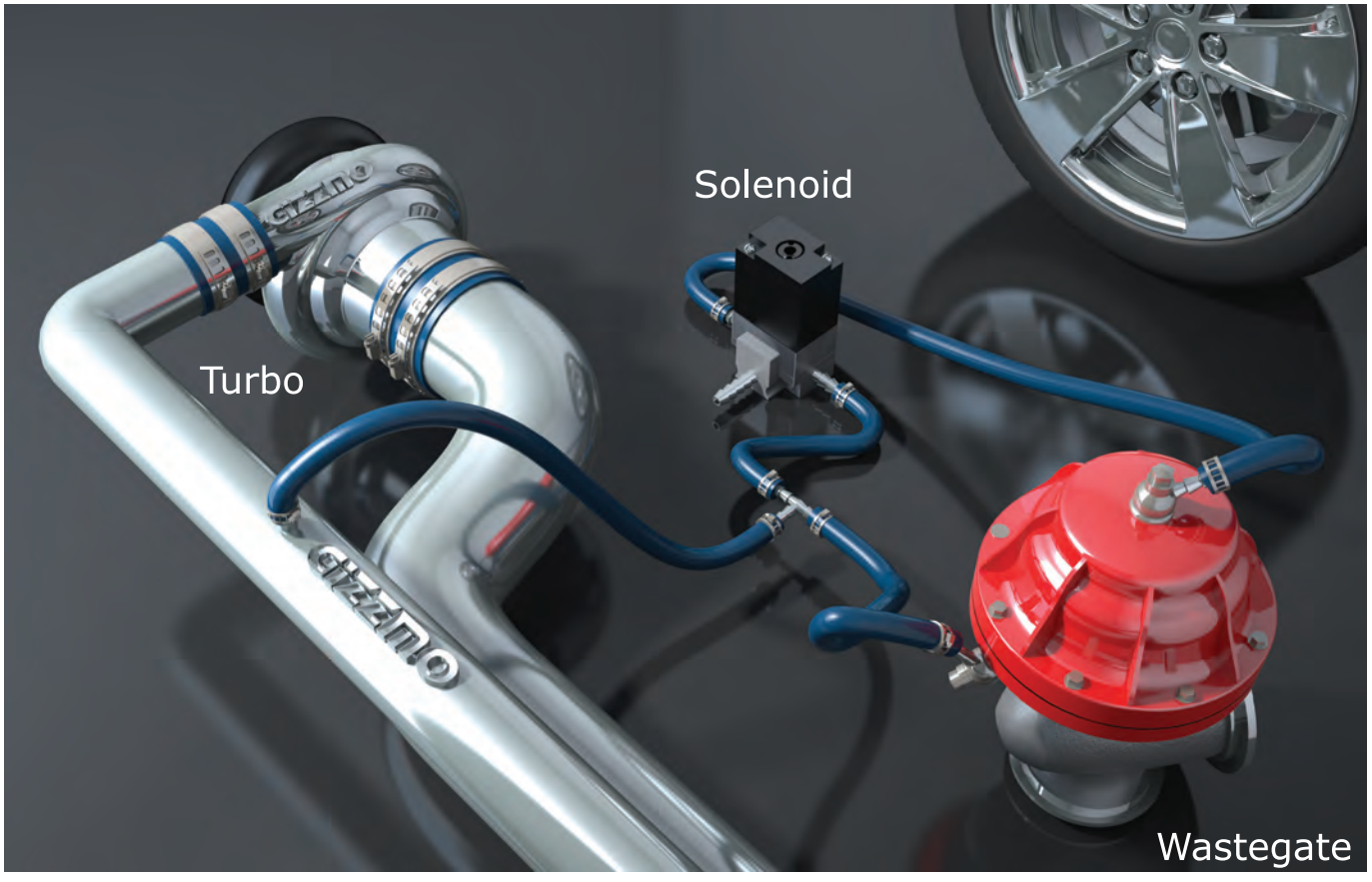




Installation for an External Wastegate

Connect the tails to Port 1 and Port 2 of the Solenoid Valve.





Glossary

Display Settings

The IBC can display real time boost in Pounds, Bar or Kpa. All this can be set in the display menu. Example: 1bar equals 14.5lb which equals 100kpa.

Duty

This duty cycle, also referred to as the 'Base duty' can be adjusted from 10% to 90% to adjust the boost level. Every vehicle has a different response to duty cycle and essentially the only way to work out your duty cycle vs boost relationship is via trial and error starting from a low duty cycle. A lower duty cycle equals lower boost and typically your boost won't start to rise till at least 20%.

Gain

Gain effects how quickly the turbo comes on boost. Ideally this would be set as high as possible; however, if this is set too high overshooting and boost instability can occur so there will be an ideal setting for this that will be different from vehicle to vehicle.

Memories

The IBC has 4 memories in total and can fast switch between these. This means that when you select the next memory the boost will change immediately which is an advantage when changing memories whilst racing. Each memory has its own gain setting (refer to 'gain' in this glossary) and control start point

About The Warranty

Gizzmo Electronics Limited
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Effective 1 January 2003

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For a period of one year from and after the date of purchase of a new Gizzmo Electronics product, Gizzmo Electronics warranties and guarantees only to the original purchase/user that such a product will be free from defects of material and workmanship in the manufacturing process. Gizzmo Electronics, at its sole option, shall replace the defective product. This express warranty shall be inapplicable to any product not properly installed and properly used by the purchaser/user or to any product damaged or impaired be external forces. This is the extent of Warranties available on this product. Gizzmo Electronics shall have no liability whatsoever for consequential damages following from the use of any defective product or by reason the failure of any product. Gizzmo Electronics specifically disclaims and disavows all other warranties, express or implied including, without limitation, all Warranties of fitness for a particular propose, Warranties of Description, Warranties of Merchantability, Trade Usage or Warranties of Trade Usage, The above warranty is valid in New Zealand, Australia,UK and the America's only as Gizzmo Electronics does not offer an international warranty outside of these regions.