SBC i-D **Instruction Manual**

* This system is designed to change the boost pressure of turbocharged vehicles and does not give or reduce fuel to the vehicle. Some cars may need a fuel cut device.
* Read this manual carefully before installing and using this system.

About the system

* This system contains a display, controller, and a solenoid unit.
* The controller is a compact 1/2 din size.
* LCD display can be seen easily during day or night.
* There are 4 individual boost pressure settings.
* This system has a boost gauge, peak hold function, scramble boost function, and a warning device.
* The two solenoid set gives this unit a better response, and is capable of holding high boost pressure.
* This unit sets off a warning beep when boost pressure is close to desired boost setting.
* Switching from wastegate to actuator can be done in controller.

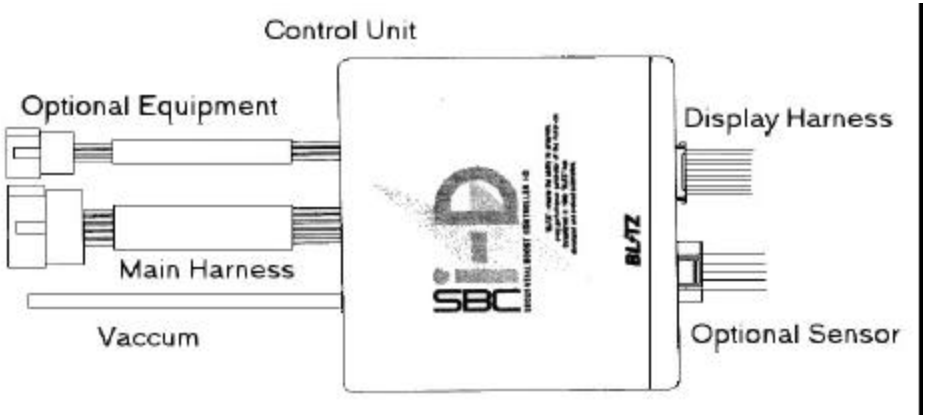
WARNING

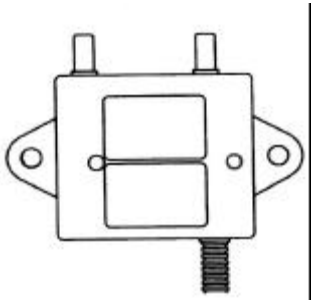
* This device is to change boost pressure but does not give or reduce fuel to the vehicle.
* Boost controller does not go below the stock boost pressure.
* Check the parts list to make sure you are not missing any parts to this device.
* Too much boost or not enough fuel pressure can cause damage to engine and vehicle. Be careful and make sure that the vehicle sufficient fuel pressure for desired boost setting. We are not responsible for damage to the device, vehicle, or engine cause by improper tuning.
* IMPORTANT! The product from Blitz Performance Products has been designed and intended for off road applications. Some products are legal for sale and use only on racing vehicles, which may never be driven on the public highway.
* Do not try to install this device on a hot engine. Please take this unit to a qualified installer.

Enter button

Menu button

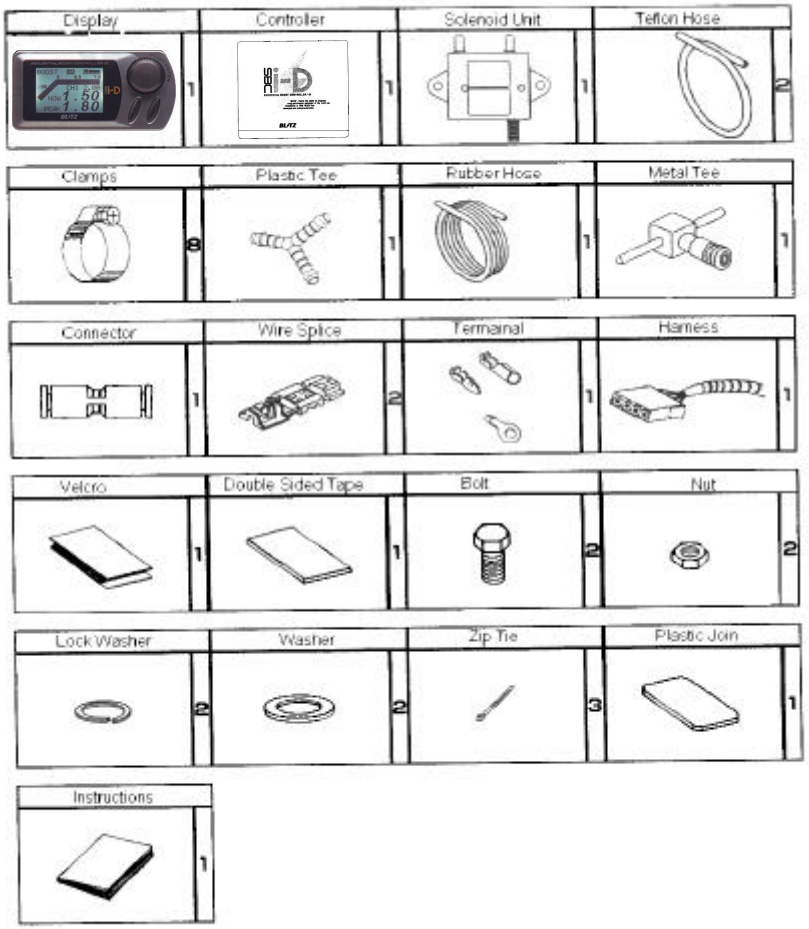
Display unit Rec / Stop





solenoid unit

Parts List



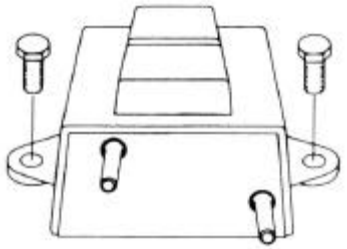
SBC-ID Installation

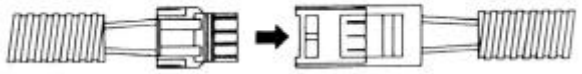
Use caution on Installation

* Be aware to make sure that the installation on valve unit is correct on in and out ports.
* Check for pressure leaks in hoses.
* Cut hoses straight down and not in an angle.
* Check and make sure that hoses are clamped tight for no leakage.
* Keep the rubber hoses away from heat sources such as the exhaust manifold and etc.
* Keep the valve unit and hoses away from moving parts.
* Some vehicles may need a boost and fuel cut device.

Installation of valve unit

* Keep the valve unit away from hot components but keep within three feet from the turbo.
* **CAUTION**: more than three feet away from the turbo can cause bad response with boost surge or boost spike.
* Use hose enlargement adapter to connect hose to valve unit and use hose clamp to prevent leakage.
* Connect main wiring harness to valve unit.
* Connect main wiring harness to controller.
* Connect display to controller.





WARNING: keep hands away from hot engine components. Install when entire engine bay has cooled. Turbo may still be hot even after engine has cooled.

INSTALLATION OF VALVE UNIT

Actuator type

* Cut or remove stock hose between turbo compressor and actuator.
  Use connector to connect hose from valve unit to turbo compressor.
  Use hose clamp to hold hose and connector together.
* Use hose connector to connect hose from valve unit to actuator.
  Use hose clamps to hold hose and connector together.

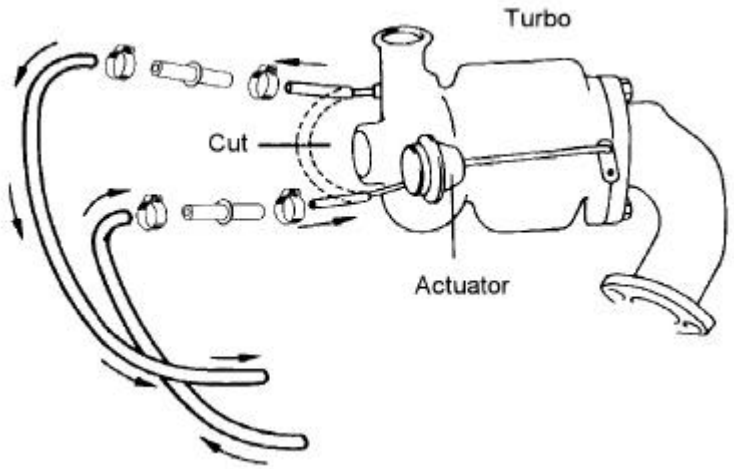


Diagram 1

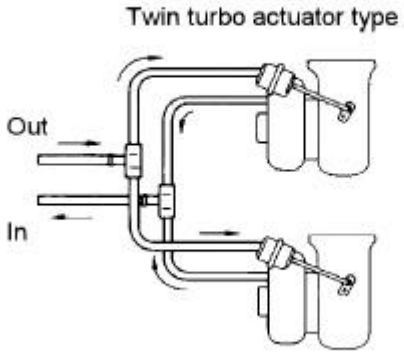


Diagram 2

Cars equipped with stock solenoid valve

Locate the T between the turbo, actuator, and stock solenoid. Remove and cape off the stock solenoid valve and connect the turbo and actuator to the Blitz supplied valve unit.

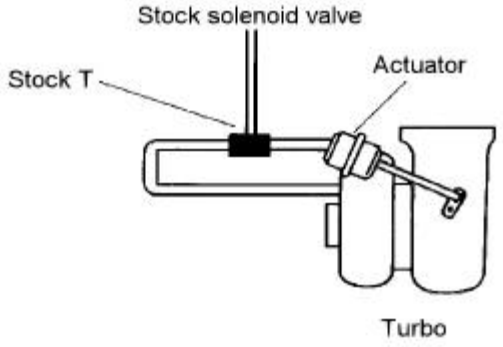


Diagram 3

DUAL PORT ACTUATOR TURBO

Cut hose between stock solenoid and dual port actuator. Cap both ends of the hoses. Cut hose between actuator and turbo and follow instructions on Diagram 1.

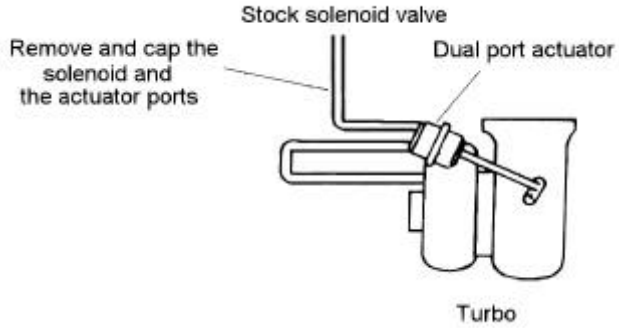
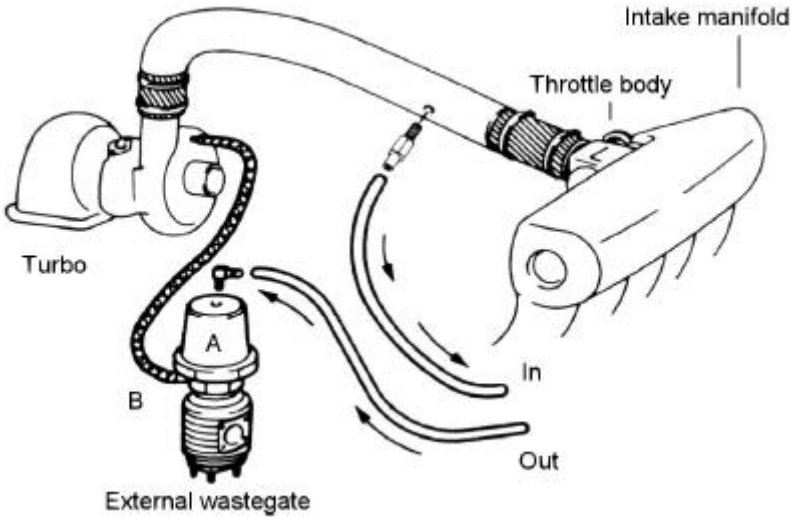


Diagram 4

CAUTION
Do not T - off any of these pressure hoses.

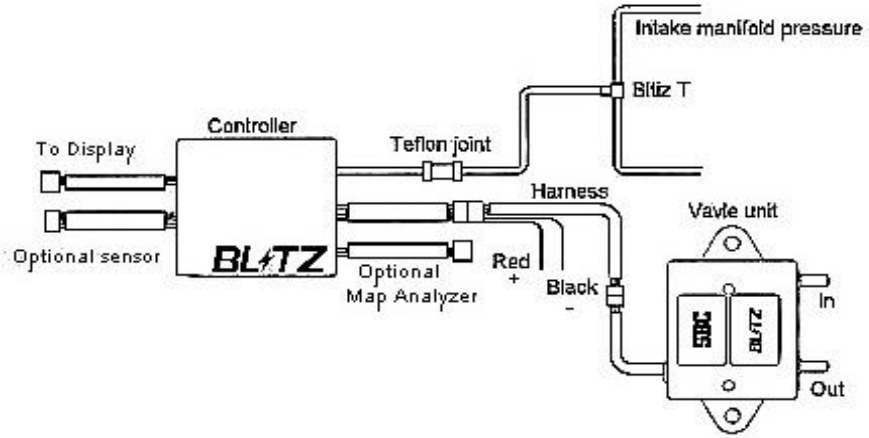
External wastegate type

* The in port of the Solenoid unit is taped from pressure before throttle body. Use supplied hose clamps to prevent pressure leak.
* Valve unit Out port connects to top port of external wastegate (A).
* Connect compressor port to bottom port of external wastegate (B).



IMPORTANT: Compressor pressure must be between turbo and the throttle body.

Installation of the controller

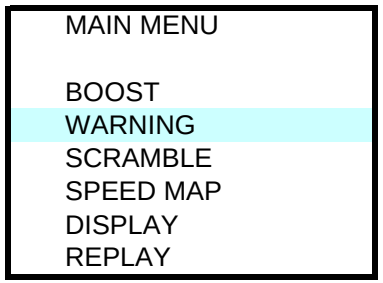


* Red (+) positive wire from harness connects to 12 v ignition on.
* Black (-) negative wire from harness goes to ground
* Connect main harness to controller coupler.
* Connect the other end of the harness to valve unit.
* Use Teflon hose and connect to pressure port in controller to after the throttle body, on the intake manifold. Use the crescent clamp to hold the Teflon hose to the pressure port of the controller and the Blitz T.
* The 3-wire coupler is not to be used in basic installation. It is for Map Analyzer unit.
* The optional sensor harness allows the user to tap into the vehilces electronic monitoring systems.

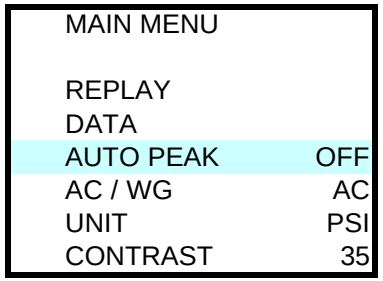
CAUTION: make sure the Teflon hose is not crimped or squeezed.

MAIN MENU

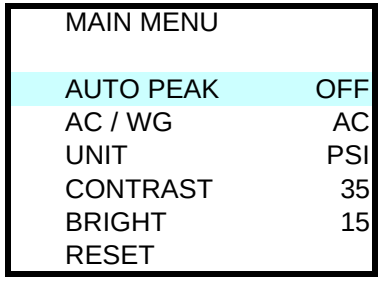
1 To get to Main Menu, press Menu button.
2 Turn the knob to scroll for desired options.



1. Go to Main Menu and select the display desired.



2. How to set
   Press enter to select.



3. How to unselect
   If you press the menu button at any time, the previous screen will appear.

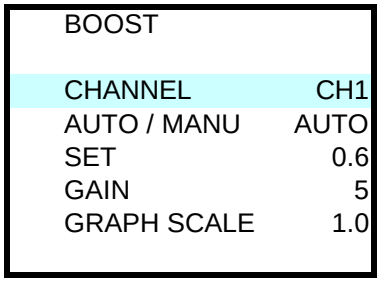
BOOST	Boost Controller settings To set, refer to Page 6
WARNING	Warning and limiter settings To set, refer to Page 7
SCRAMBLE	Scramble boost settings To set, refer to Page 7
SPEED MAP	Speed Map is only used with the Blitz Power Meter I-D To set, refer to Page 8
DISPLAY	Different displays (up to 6) Refer to Page 8
REPLAY	Record and replay To use, please refer to Page
DATA	Optional features Refer to Page 9
AUTO PEAK	Automatic Peak hold reset. To set, refer to Page 9
AC / WG	Actuator / Wastegate settings To set, refer to Page 9
UNIT	Boost type kg/cm2, kpa, bar and PSI To set, refer to Page 9
CONTRAST	Adjust the contrast of the display unit (0~100) To set, refer to Page 9
BRIGHT	Adjust the brightness of the display unit (0~10) To set, refer to Page 9
RESET	Erase and resets the boost controller To set, refer to Page 9

BOOST

1 In order to set desired boost
Press MENU button, scroll down to BOOST and press enter.

2 To select function, scroll down and press enter
The function will be highlighted, scroll to select or set different setting.

3 To unselect, press MENU button to go to previous display.



EXPLANATION OF EACH CATEGORY

CHANNEL

Channel 1 ~ Channel 4
SBC I-D has 4 programmable boost settings. Each channel has its own individual memory and will not affect any other channels.

EXT
Only use with the Blitz MAP Analyzer, refer to Map Analyzer instructions

OFF
Turns boost controller off, boost pressure will be at stock.

AUTO / MANUAL

AUTO - Full automatic mode
Dial in desire amount of boost pressure to set boost
WARNING - Auto mode will not work properly on any twin turbo, sequential turbo, or high boosting vehicles.

MANUAL - Setting the boost pressure manually.
WARNING - the number displayed does not represent actual boost. It is a ratio, 0 represents stock boost, 100 represents maximum boost.

***** Always start off with a low amount ratio, then adjust to preference
IMPORTANT - Boost and EGT gauges must be used when setting the SBC I-D. Always start with the boost ratio set at low then slowly adjust to desired setting.
Note: Each channel can be set differently, either to AUTO or MANUAL

SET

- Shows the boost ratio or boost pressure setting

1 To change boost setting press enter and scroll down to SET and press enter and scroll left or right to adjust setting.

2 While in **Boost Digital Display**, the Channel and Boost setting can be change without going to Boost setting. Channel and Boost setting is located under boost digital bar. By pressing enter Channel will be highlighted, scroll to Channel desired. Press enter again to go to boost setting, set as desired.

GAIN

- Ratio of 0-100
- Gain controls the boost response. The high the gain setting, the faster the boost response will be. Stock turbo charged vehicles with actuator type wastegates will usually use a gain setting of 5-15 percent. External type wastegates usually requires higher gain setting.

WARNING - High gain setting might cause boost spikes.
Note: Each channel can be set to each individual gain setting

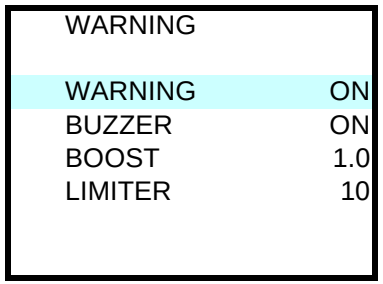
GRAPH SCALE

You can select the graph scale that appears on your display screen. 1.0 ~ 1.5 ~ 2.0 ~ 2.5 kg/cm2
example: 1.0 ~ 1.5 ~ 2.0 ~ 2.5 x100kpa
1.0 ~ 1.5 ~ 2.0 ~ 2.5 BAR
10 ~ 20 ~ 30 ~ 40 PSI
Note: Each channel can be set to different graph scale

WARNING

- The Blitz SBC I-D incorporates an advanced warning and limiter function. The function allows the user to preset warning and preset the amount of boost reduction.

1 To set, press MENU button, scroll down to WARNING and press enter to select.
2 To select function, scroll down and press enter.
The function will be highlighted, scroll to select or set different setting.



WARNING

- Allows the user to turn warning on or off. Buzzer and Limiter will not work unless warning function is on
- The LCD backlight will turn red if boost exceeds warning setting

BUZZER

- Allows the user to choose to turn buzzer off, the unit will not beep if the buzzer function is turned off.

BOOST

- To set boost warning level. Can be set in kg/cm2, kpa, BAR and PSI.

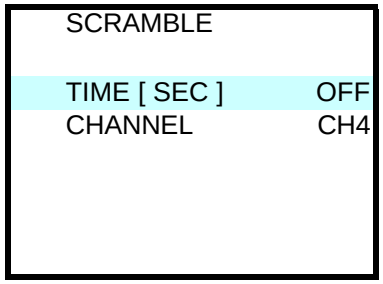
LIMITER

- This function is a boost reduction function. Limiter will turn on automatically if boost level exceeds the warning setting.
- Limiter is set in boost ratio
  ex. 0 = no boost reduction
  99 = will reduce boost back to stock
- Recommended setting 7-10

SCRAMBLE

- Scramble boost allows the user to set an increase or decrease amount of boost for a desired time.

1 To set, press MENU button, scroll down to SCRAMBLE and press enter to select.
2 To select function, scroll down and press enter.
The function will be highlighted, scroll to select or set different setting.



TIME

- Scramble boost operates by TIME (seconds); if left off, scramble boost will not operate.
- Time is set from 1-99 seconds
- Scramble boost is operated by throttle response, scramble will automatically.

CHANNEL

- To set scramble boost pressure, choose a designated channel that is only going to be use for scramble boost. Set boost pressure as desired.

Example: Channel 1 is set at 15 psi, and want to set scramble boost at 20 psi. Choose designated channel, in this case use Channel 4, set to 20 psi. Go to scramble setting and set Time to 3 seconds, exit Scramble setting and return to Channel 1 display. Drive vehicle in Channel 1 boost setting, boost will automatically jump to Channel 4 (which is set at 20 psi) for 3 seconds, then it will return back to Channel 1. This will continued every gear until the scramble boost is turn off.

SPEED MAP

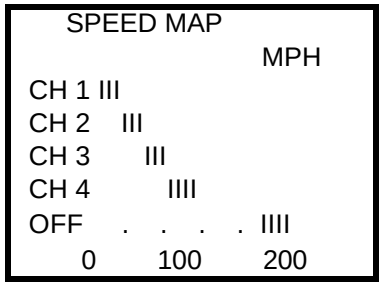
- The Speed Map allows the user to set boost pressure according speed of the vehicle.
- The Speed Map option will only work if the Blitz Power Meter I-D is hooked up, otherwise the SBC I-D display will show NO CONNECT.

SBC I-D **WITHOUT** Power Meter I-D

```
SPEED MAP


NO  CONNECT.
```

SBC I-D **WITH** Power Meter I-D



Note: For Speed Map to display MPH settings, you must change SBC I-D Unit setting to PSI.

Explanation of Speed Map Diagram

- The Diagram above shows that the vehicle from 0-50 mph will be in Channel 1, then the boost controller will automatically change to Channel 2 from 50-75 mph and continue on until it reaches Channel 4.
- Speed Map can also work with 2 Channels, not all 4 Channels have to be used. To turn off Speed Map set all tabs to off positions located under Channel 4.

How to Set Speed Map

1 Set up Boost Channels as desired.
2 Go to Speed Map option located in Main Menu.
3 Press enter to set, scroll left or right and set tabs according to your desire. Press enter to set. Repeat until Speed Map is set.
Important: Speed Map will be activated once any tabs are set. Make sure all tabs are set on the off position is Speed Map is not used.

DISPLAY MENU

- SBC I-D has the ability to display different options. It has the ability to display 6 different options (Boost, OPTN 1~2, DATA 1~3). Each option also can be display is both graphical and digital form. Power Meter I-D and option SBC I-D harness is needed to display other 5 options (OPTN 1~2, DATA 1~3).

DISPLAY MENU			
BOOST	DIGITAL	BOOST	Boost in digital display
	GRAPH	BOOST	Boost in graph display
OPTN1	DIGITAL	OPTN 1	Option 1 in digital display
	GRAPH	OPTN 1	Option 1 in graph display
OPTN2	DIGITAL	OPTN 2	Option 2 in digital display
	GRAPH	OPTN 2	Option 2 in graph display

DISPLAY MENU			
DATA 1	DIGITAL	DATA 1	DATA 1 in digital display
	GRAPH	DATA 1	DATA 1 in graph display
DATA 2	DIGITAL	DATA 2	DATA 2 in digital display
	GRAPH	DATA 2	DATA 2 in graph display
DATA 3	DIGITAL	DATA 3	DATA 3 in digital display
	GRAPH	DATA 3	DATA 3 in graph display

NOTE: If Power Meter I-D is connected, both OPTNs in Display Menu will change. OPTN 1 will be replace by SPEED, and OPNT2 will be replace by POWER.

DISPLAY MENU	
BOOST	DIGITAL
	GRAPH
SPEED	DIGITAL
	GRAPH
POWER	DIGITAL
	GRAPH

SBC I-D with Power Meter I-D

DATA

- SBC I-D is capable of displaying up to 3 different optional displays. Capable of displaying electronic outputs from the ECU such as temperature, voltage, pressure, TPS, A/F, and etc.
- Optional harness is needed to display this feature.

DATA	
INPUT LINE	1
LOW [V]	0.0
FIT	0.00
HIGH [V]	5.0
FIT	1.00
UNIT	%

DATA	
INPUT LINE	2
LOW [V]	0.0
FIT	0.00
HIGH [V]	12.0
FIT	200
UNIT	*C

* To set up A/F, set up DATA chart as shown below.

LOW [V]	0.00
FIT	0.00
HIGH [V]	16.0
FIT	16.0
UNIT	VOLT

DATA	
INPUT LINE	3
LOW [V]	0.0
FIT	0.00
HIGH [V]	16.0
FIT	16
UNIT	Volt

Important
- Addition instructions are included in the SBC I-D optional harness.

AUTO PEAK

Auto Peak ON - Will automatically reset Peak Hold. Peak will reset only when throttle is release after the vehicle has been in boost for more then 2 seconds.

Auto Peak OFF - Peak Hold will retain the highest boost level achieved.

- To set Auto Peak, Press MENU and go to Main Menu. Scroll to Auto Peak, press enter and scroll to select. Press enter to set.
- To reset Peak hold, press both REC/STOP and MENU button at once.

AC / WG

- AC - Actuator Type Wastegate
- WG - External Type Wastegate
- Refer to Page 3 and 4 for different types of wastegate
- To set, press MENU and go to Main Menu. Scroll to AC / WG, press enter and scroll to select. Press enter to set.

UNIT

- SBC I-D has the ability to display 4 different types of boost pressure

kg/cm2	-76 cmHG ~ 2.50 kg/cm2
kpa	-76 cmHG ~ 2.45x100 kpa
BAR	-30 inHG ~ 2.45 BAR
PSI	-30 inHG ~ 35.5 PSI

- To set, press MENU and go to Main Menu. Scroll to Unit and press enter. Scroll left or right to select Unit, press enter to set.

CONTRAST

- To set, press MENU and go to Main Menu. Scroll to CONTRAST and press enter. Scroll to adjust, press enter to set.

BRIGHT

- To set, press MENU and go to Main Menu. Scroll to BRIGHT and press enter. Scroll to adjust, press enter to set.

RESET

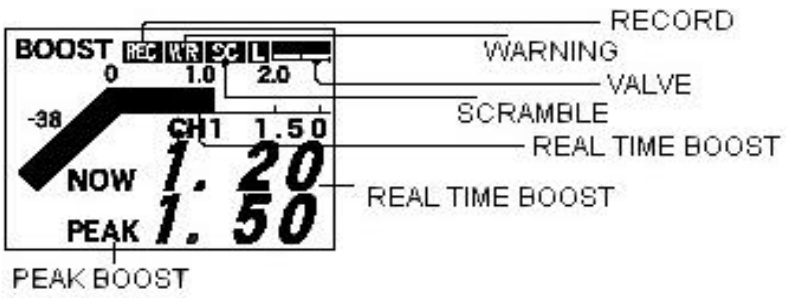
ALL RESET

-> EXECUTE
CANCEL

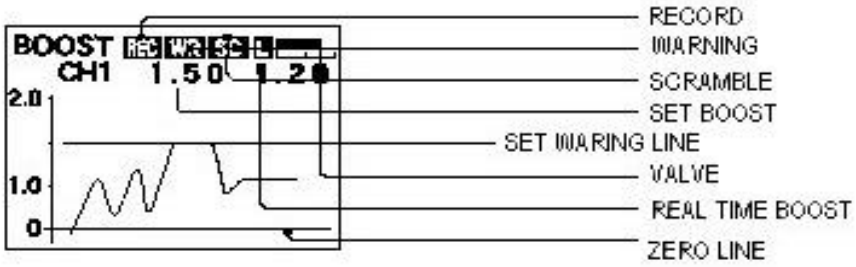
1. Press MENU button, scroll down to RESET and press enter to select.
2. To select function, scroll down and press enter.
   NOTE: It is recommended to reset the boost controller if the unit is not functioning properly.

DIGITAL / GRAPH DISPLAY

1 BOOST DIGITAL



2 BOOST GRAPH



1 SBC I-D has a total of 12 different displays.
2 Each display can be access by either the Display option in Main Menu or scrolling through while in Digital / Graph Display.

Display description

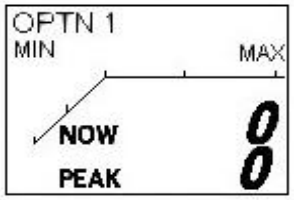
NOW Actual boost pressure
PEAK Peak boost pressure
- To reset Peak: Press REC/STOP and MENU at the same time

REC Record
WR Warning
SC Scramble Boost

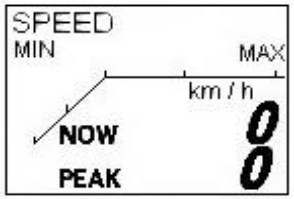
Shortcuts

- Hold Enter for 3 seconds, this will jump you to Boost setting menu
- To change channel: Press enter, CH will be highlighted. Scroll to desired Channel
- To change boost: Press enter, 1.50 will be highlighted. Change to desire boost setting.

3 OPTN 1 DIGITAL



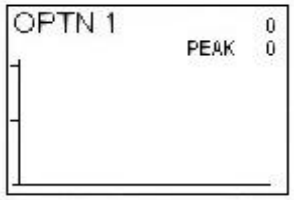
***** OPTN 1 is not used if Power Meter is not connected.



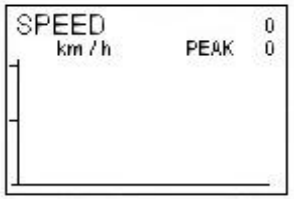
OPTN 1 in digital display with Power Meter I-D.

- OPTN 1 will only work if Power Meter I-D is connected.
- When Power Meter I-D is connected OPTN 1 will automatically change to SPEED.
- When the Power Meter is connected, the SBC I-D can display speed.

4 OPTN 1 GRAPH



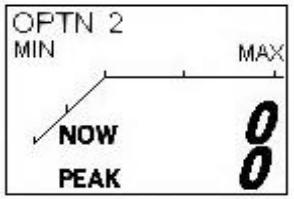
***** OPTN 1 is not used if Power Meter is not connected.



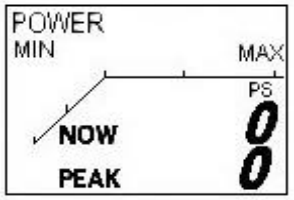
OPTN 1 in graph display with Power Meter I-D.

- OPTN 1 will only work if Power Meter I-D is connected.
- When Power Meter I-D is connected OPTN 1 will automatically change to SPEED.
- When the Power Meter is connected, the SBC I-D can display speed.

5 OPTN 2 DIGITAL

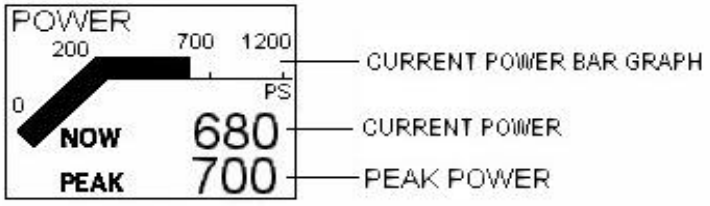


***** OPTN 2 is not used if Power Meter is not connected.

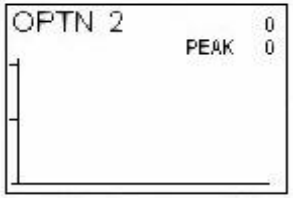


OPTN 2 in digital display with Power Meter I-D.

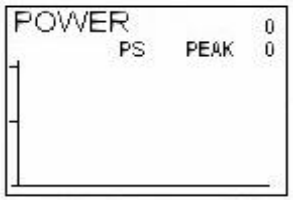
- OPTN 2 will only work if Power Meter I-D is connected.
- When Power Meter I-D is connected OPTN 2 will automatically change to POWER.
- When the Power Meter is connected, the SBC I-D can display power.



6 OPTION 2 GRAPH



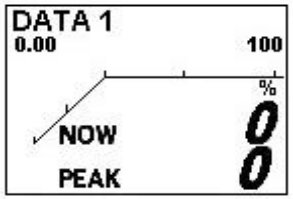
***** OPTN 2 is not used if Power Meter is not connected.

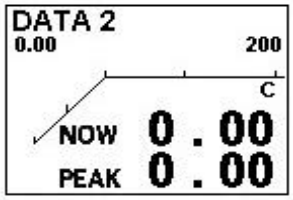


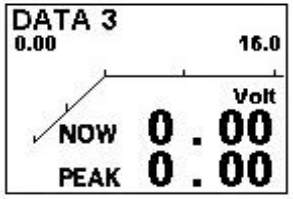
OPTN 2 in graph display with Power Meter I-D.

- OPTN 2 will only work if Power Meter I-D is connected.
- When Power Meter I-D is connected OPTN 2 will automatically change to POWER.
- When the Power Meter is connected, the SBC I-D can display power.

7 DATA 1 ~ 3 DIGITAL

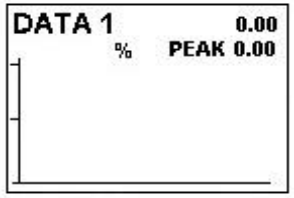


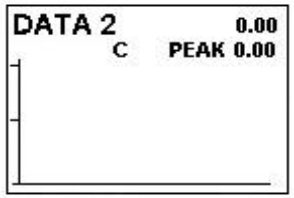


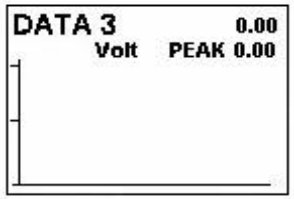


- SBC I-D is capable of displaying up to 3 different optional displays. Capable of displaying electronic outputs from the ECU such as temperature, voltage, pressure, TPS, A/F, and etc.
- Optional harness is needed to display
- Additional information will be included with SBC I-D optional harness.

8 DATA 1 ~ 3 GRAPH







- SBC I-D is capable of displaying up to 3 different optional displays. Capable of displaying electronic outputs from the ECU such as temperature, voltage, pressure, TPS, A/F, and etc.
- Optional harness is needed to display
- Additional information will be included with SBC I-D optional harness.

REPLAY

- The SBC I-D has the ability to record and replay any information recorded on the boost controller and the Power Meter I-D.

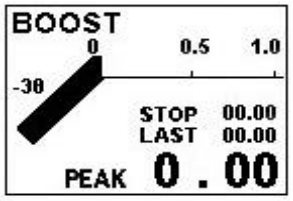
To Record

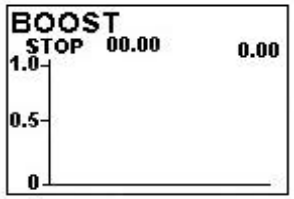
1 Must be in Digital/Graph display mode.

2 Press Rec/Stop button, this will automatically reset your previous record. REC will appear on top of screen, and recording will start. To stop recording, press Rec/Stop again and the REC will disappear.

To Replay

1 Scroll to Replay in main menu and press Enter.



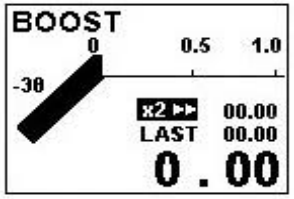


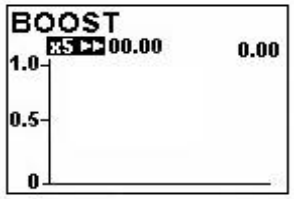
1a. Boost can be replay in either graphical or digital mode.

1b. Last - Represents the amount of time recorded.

2 Play - Press Enter, STOP will be highlighted. Turn knob clockwise and PLAY will appear.

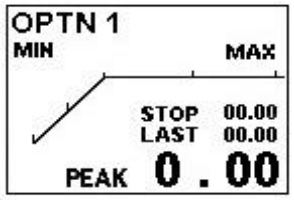
3 Fast forward - Press Enter. Turn knob clockwise to x2 or x5, press Enter to select.

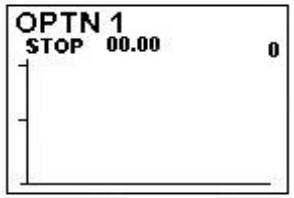




4 Rewind - Press Enter, and turn knob counter clockwise to x2 or x5, press Enter to select.

5 SBC I-D can replay any information display in the SBC I-D, OPTN 1~2 and DATA 1~3





Note: OPT1N and OPTN 2 will display Speed and Power if Power Meter I-D is connected.

6 SBC I-D also has the ability to replay information from DATA 1~3. SBC I-D optional harness is necessary to use this option