DUAL SOLENOID BOOST CONTROLLER
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.

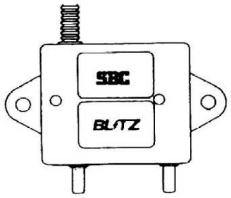
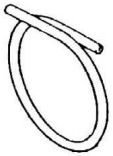
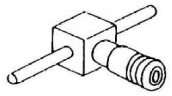
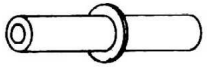
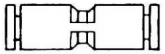
About the system

* This system is a two pc unit. The controller and valve unit.
* The controller is a compact 1/4 din size.
* Use the knobs for modes, settings, and volume control.
* 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 it has 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 by a switch.

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.

PARTS LIST

		
Controller 1 pc.	Valve unit 1 pc.	Harness 1 pc.
		
Rubber hose 1 pc.	Teflon hose 1 pc.	Blitz T
		
Hose connector 2 pc.	Teflon connector 1 pc.	Clamp 6 pc.

Other parts

* Crescent clamp	2 pcs.	* Bolts	2 pcs.
* Electrical tape	2 pcs.	* Nuts	2 pcs.
* Wire connector	1 pc.	* Special washer	2 pcs.
* Velcro	1 pc.	* Flat washer	2 pcs.
* Double sided tape	1 pc.	* Manual	1 pc.

INSTALLATION OF VALVE UNIT

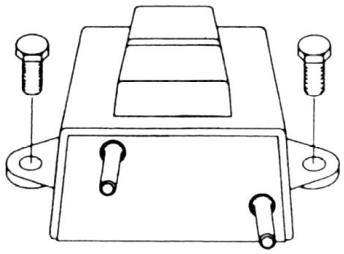
Dual SBC Installation

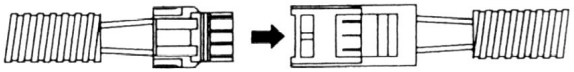
Use caution on Installation

* 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.



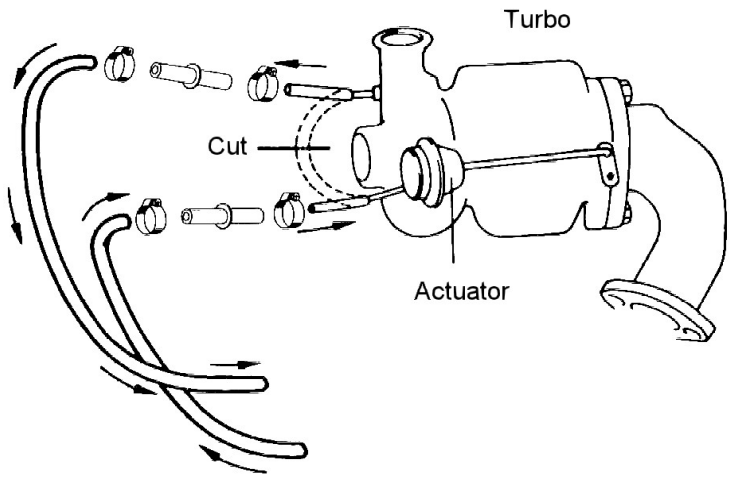


WARNING: keep hands away from hot engine components. Install when entire engine bay has cooled. Turbo may still be hot even after engine has cooled.

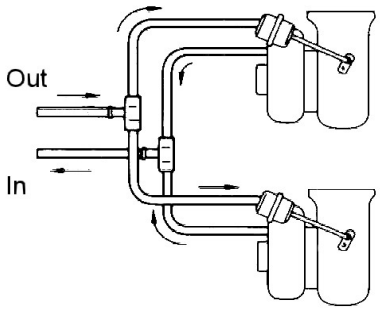
Cars equipped with stock solenoid valve

Actuator type

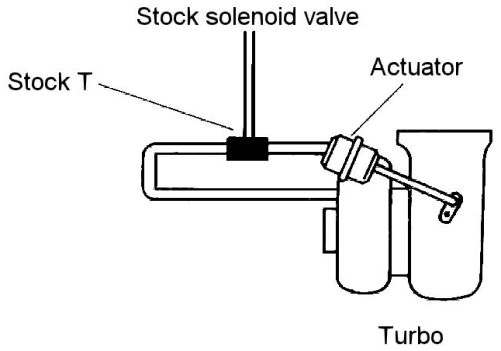
* Cut or remove stock hose between turbo compressor and actuator. Use connector to connect hose from valve unit to turbo compressor. Use hose clamp to hold hose and connector together.
* Use hose connector to connect hose from valve unit to actuator. Use hose clamps to hold hose and connector together.



Twin turbo actuator type

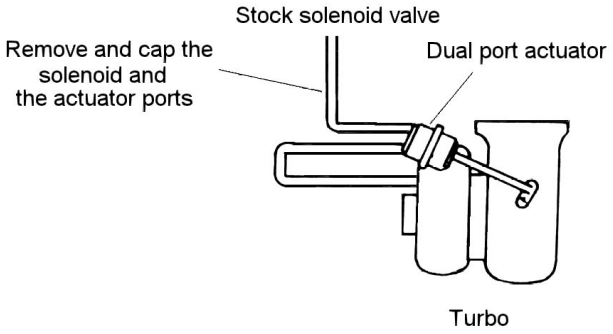


Locate the T between the turbo, actuator, and stock solenoid. Remove and cape off the stock solenoid valve and connect the turbo and actuator to the Blitz supplied valve unit. (Follow instructions on previous page)



DUAL PORT ACTUATOR TURBO

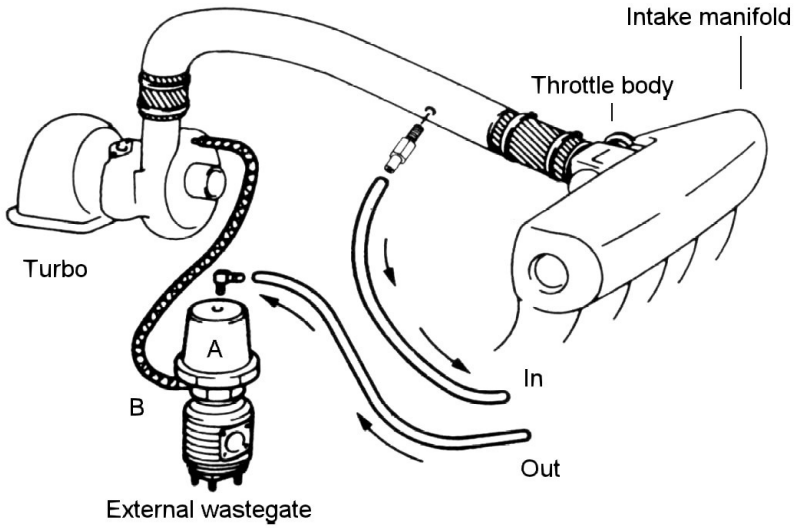
Cut hose between stock solenoid and dual port actuator. Cap both ends of the hoses. Cut hose between actuator and turbo and follow instructions on previous page.



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

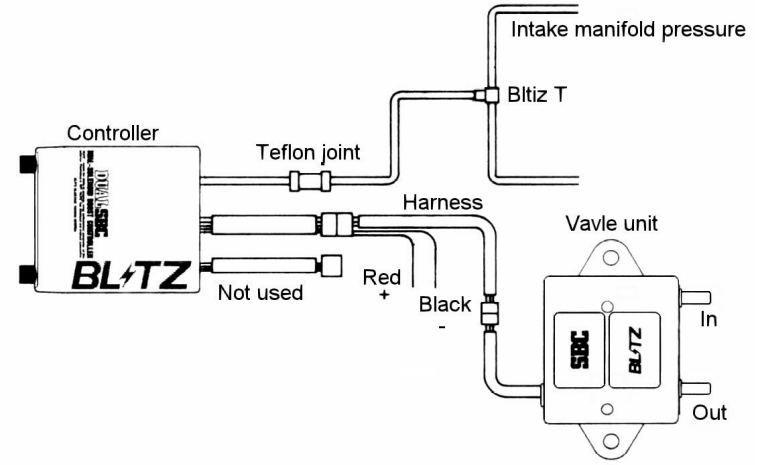
External wastegate type

* Connect hose from valve unit IN to after turbo but 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.

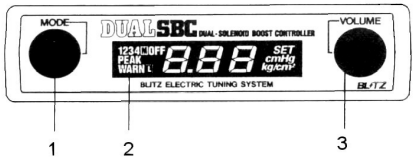
Installation of the controller

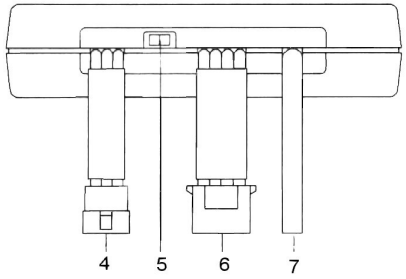


* Red (+) positive wire from harness connects to 12 v ignition on.
* Black (-) negative wire from harness goes to ground
* Connect main harness to controller coupler.
* Connect the other end of the harness to valve unit.
* There is switch in back of the controller unit to switch from wastegate WG to actuator AC. Choose the correct setting.
* 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 an additional unit.

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

ABOUT THE CONTROLLER





1- Left knob
   * Left knob is used to change modes and to unlock boost settings

2- LCD display
   * To view the different modes

3- Right knob
   * Right knob is used to set boost settings and to change various functions within each mode

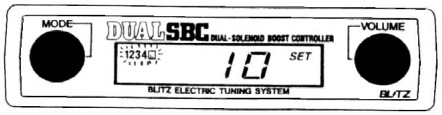
4- 3 pin harness
   * Optional harness for data system. **Not used** for basic operations.

5- AC / WG switch
   * Switch to change from actuator to external wastegate setting.

6- 4 pin harness
   * Connects to main harness.

7- Pressure hose
   * Used to sense pressure from intake manifold.

MODE SETTINGS



Modes in order when turning knob clockwise

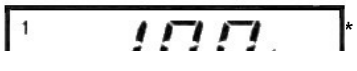
1 > 2 > 3 > 4 > M > OFF > WARN > L

EXPLANATION OF EVERY MODE

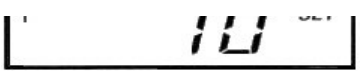
Mode - 1, 2, 3, 4

* DSBC allows the user to set boost in 4

Mode - Boost and peak hold

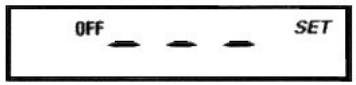


* Boost display mode



different boost settings

Mode - Off



* Turns off boost controller. Boost will return to stock. Boost gauge and peak hold can still be used in off mode.

Mode - warning & limiter

Display of warning setting

Flash

* Display of limiter setting

* The warning & limiter is used to warn and prevent over boosting and or boost spikes.

Mode - Scramble boost

Flash

* Display of scramble boost setting

* Display of scramble boost time

* The scramble boost function will allow the user to achieve boost settings other than the 4 preprogrammed settings. The duration of time is decided by the user.

Basic Operations

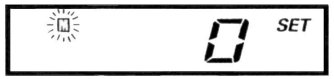
Setting the desired boost.

* The DSBC allows the user to set boost at 4 different settings (channels 1, 2, 3, 4).

* Peak hold display mode

* Boost pressure will be displayed in boost display mode
* Peak boost reached will be displayed in peak hold mode

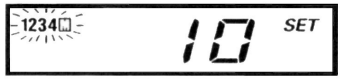
Mode - M



* Map analyzer mode

* Must purchase the optional map analyzer unit to use this function.

Mode - Gain setting

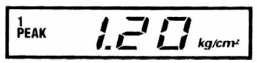


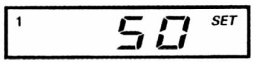
* Gain setting

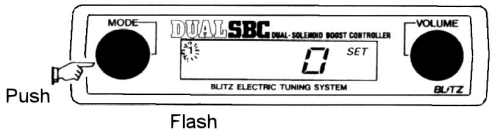
* Adjusts the sensitivity of boost response.

Boost gauge and peak hold display

When in channel 1, 2, 3, 4, M, or Off, pressing the volume knob will change to boost display mode, peak hold mode, and boost setting mode.

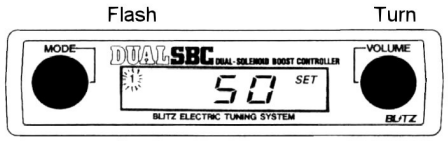






To set boost:

A - Turn the mode button to channel 1. " 1 " will appear. Push the mode button " 1 " will flash on the left.



B - Push volume button until the " SET " appears on the right. Then turn volume knob to desired ratio.

C - Repeat steps A and B to set channels 2 - 4.

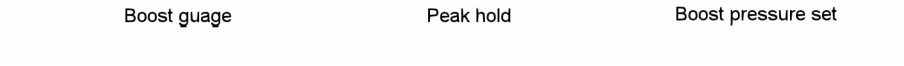
WARNING - the number boost setting displayed does not represent actual boost. It is a ratio, 0 represents stock boost, 100 represents maximum boost.

IMPORTANT - Boost and egt gauges must be used when setting the DSBC. Always start with the boost ratio set at low then slowly adjust to desired setting.

Scramble mode

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

IMPORTANT- the scramble boost setting is an additional amount of boost added on top of the desired boost setting.

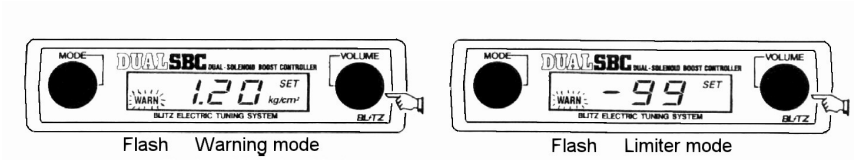


Press once Press twice Press three times

Peak hold records the highest boost pressure recorded by the DSBC. Peak hold remains in memory until the user resets the unit.

* To reset peak hold change to peak hold mode and press mode button.

Warning and limiter mode



Warning Mode

The DSBC allows the user to set boost warning. This unit will sound when boost is passing the desired warning.

* To set the warning turn the mode knob until the screen is red and the " WARN " appears. (If it is in the limiter mode press volume button to go to warning mode.) When in warning mode turn volume button to desired warning setting.

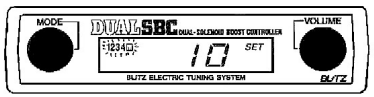
Limiter mode

Limiter mode is activated automatically when boost goes above set warning.

* To set limiter mode unit must be in warning mode. Press volume button once and a negative sign should appear. Then turn volume button to desired setting. (Recommended - 7 to - 10 setting). This will reduce the boost the ratio set.

The limiter does not work when limiter is set to - 0

GAIN SETTING



I.E.- if channel 2 is set at 50, and the scramble boost is set at 10 then the total boost when scramble boost is activated will be at 60.

Scramble point setting

Scramble time setting

To set the scramble boost mode turn mode button until " L " flashes.

1- Turn volume button to set to desired scramble boost.
The letter " P " should appear.

2- Press volume button to enter time setting. Turn volume button to set the duration of scramble boost. The letter " C " should appear.
(Scramble time is set in duration of seconds)

IMPORTANT - To turn scramble boost off both " P " and " C " have to be set at 0.

Gain is mostly used for external type wastegates.
To set gain:

1- Unit must be in either channel 1, 2, 3, 4, or M.
2- Press mode button and hold for three seconds. The unit will beep. Channels 1, 2, 3, 4 and M should flash.
3- Turn the volume button to set gain.
4- Press mode button to exit.

CAUTION -if the gain is set to high it may cause boost spikes or increase boost pressure.

Recommended gain settings

Gain	Vehicle	Motor	Gain	Vehicle	Motor
5	JZA80	2JZGTE	20	S13/S14	SR20DET
5	MA70	7MGTE	5	R32,R33	RB26DETT
5	SW20	3SGTE	5	Z32	VG30DETT
5	FD3S	13BREW	10	D32A	4G63
5	FC3S	13BT	5	Z16A	6G72

This is only a recommendation. Boost pressure will be different on every vehicle.