

Instructions: **Modular boost controller in Dual Stage configuration**
[PATENT PENDING]

The most cost effective way to purchase is by emailing: sales@circuitse7en.net

- 1) Study the connection diagram
- 2) Set the boost to a minimum on all stages :
Loosen both lock nuts and turn the adjuster knobs until the adjuster shaft top is sticking out ~ 0.76" above the **body of the block** (not the top of the lock nut). This will put the boost level at approximately minimum (waste gate spring pressure). Do this for both adjusters. Tighten both lock nuts .
- 3) Connect the wiring and plumbing as shown in the connection schematic
- 4) Note: We have included multi-conductor wiring in case you decide to add more boost stages at a later point, You will only use the red and black wires if setting it up as a dual stage controller.
- 5) Test your wiring, with the ignition on and the toggle switch on the red LED buried (encased) in the top of the solenoid valve should be seen to light.

We have designed the system so that if power or wiring fails, it will fail to the lowest boost setting.

Therefore when the valve is lit, that stage is INACTIVE/Blocked meaning it is as if it is not there, so the next lowest valve stage that is unlit (or has no valve) will be the active boost level. In the case of a dual stage configuration (main body with no stacks bolted on) this means that if the valve is unlit it is on low boost, if it is lit it is on High boost.

- 6) Turn the ignition On and turn the toggle switch to off and make sure the valve is not lit,
- 7) Set the low stage setting: Drive the car and watch the boost gauge. Start at a low rpm in 2nd or 3rd gear and hold the throttle open, watch the boost gauge carefully. Be ready to let off the throttle if the boost goes higher than you want. If the boost is too low turn the adjuster in (clockwise), 2 full turns= approximately one psi. If it is too high turn it counterclockwise.
- 8) Once you are satisfied with the low boost setting turn the switch too "high" and repeat step 7 for the high boost setting.
- 9) Lightly tighten both lock nuts when done.

Tip: If you are drag racing a car with limited traction in the lower gears, set the boost low boost stage low enough to provide traction in the low gears. Use a *momentary (non latching-push button switch)* , mount it on the steering wheel or gearshift lever. When you launch do not hold the button (low boost), once you are in a gear that has traction push the button for high boost. You can also install a microswitch on the shift mechanism (or lever) to keep the switch automatically open in first gear and then have it close in higher gears. Use your imagination ;-)

Modular Staged Boost Controller connection diagram : Dual stage set up .

To 12 volt switched power
 -use vampire tap to tap into ignition switch
 also radio switched power is O.K
 boost valve only draws 0.2 amps
 make sure power goes off when ignition is off

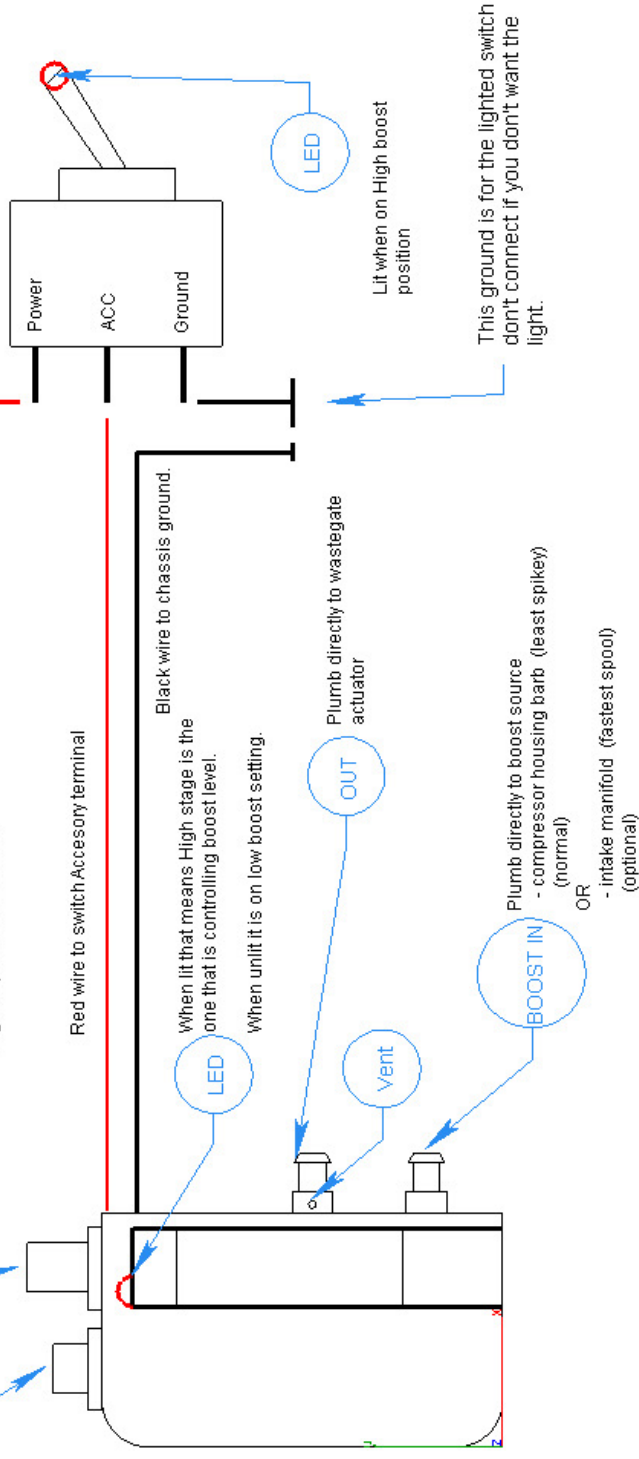
Always adjust this stage to be equal to or lower than High stage. Therefore adjuster shaft should stick up higher.

Note you can only go as low as your basic "spring pressure of the wastegate actuator arm. So if you want to go even lower you will have to adjust the length of your actuator arm.

Each full turn of adjuster is about 2 psi boost. IN (less threads exposed) is higher boost.

Low boost adjuster
 High Boost adjuster

+ 12v switched



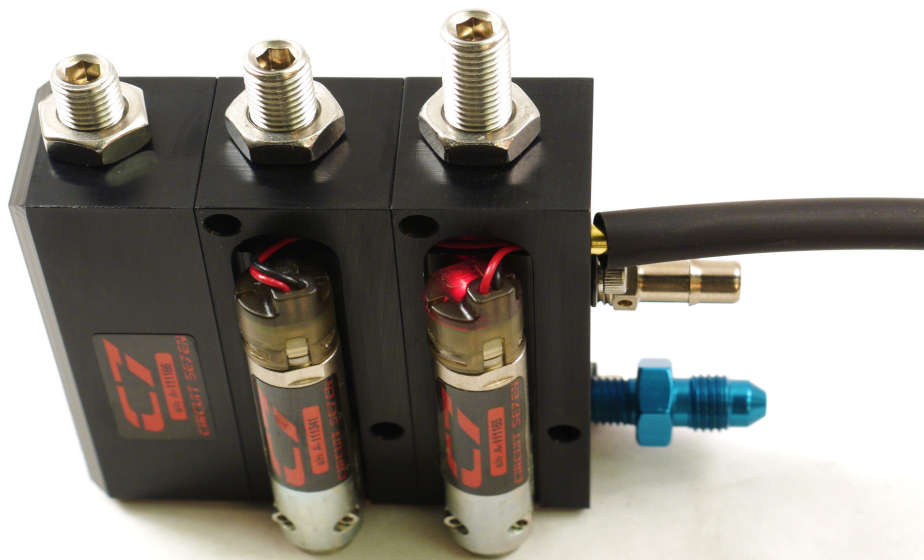
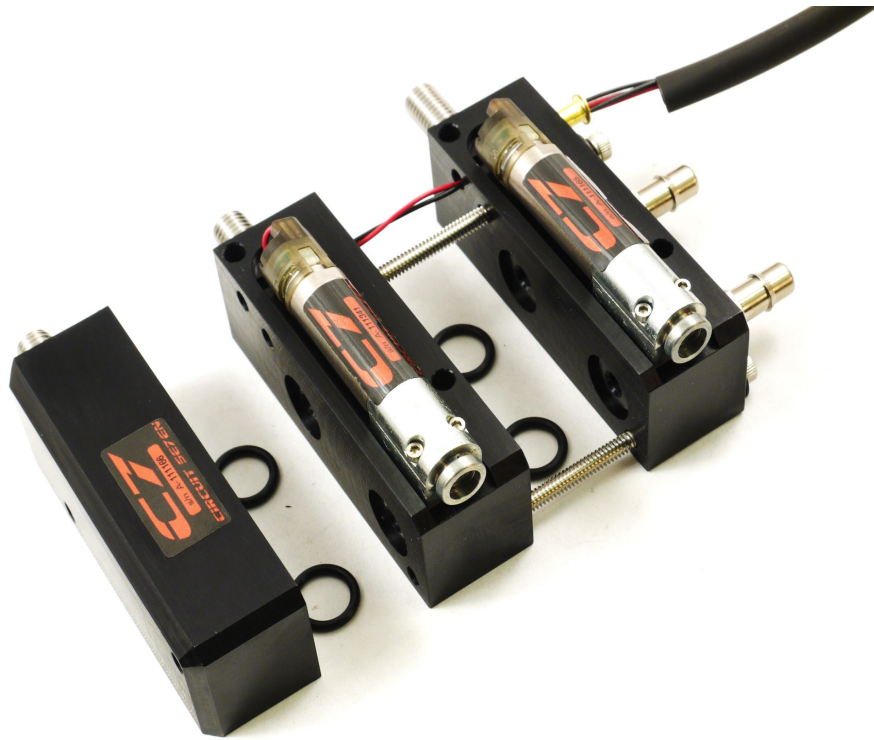
Lit when on High boost position

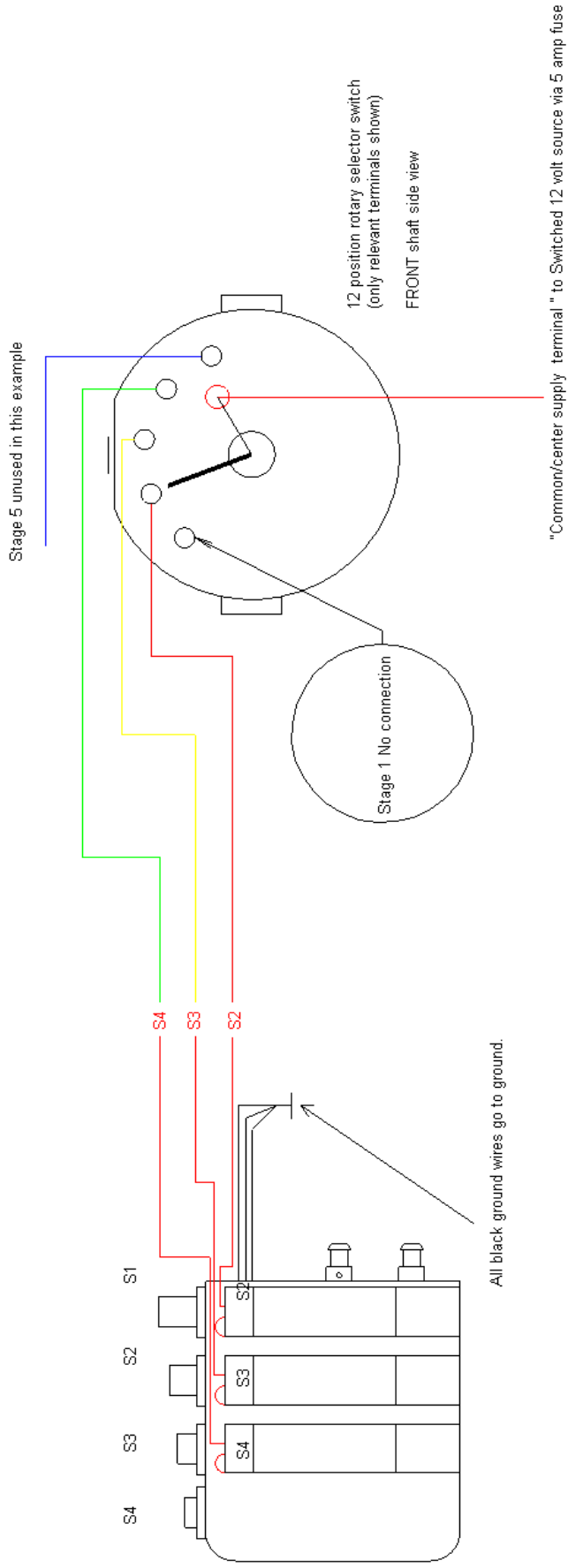
This ground is for the lighted switch don't connect if you don't want the light.

Plumb directly to wastegate actuator
 LED
 Vent
 BOOST IN
 Plumb directly to boost source
 - compressor housing barb (normal)
 OR
 - intake manifold (fastest spool) (optional)

Suggested Parts List
(not included)

- 1 Valve with manifold block
- 1 Switch
- 3' Hose
- 10' 4 conductor wire
- 2 Mounting screws with nylock nuts
- 1 Vampire tap terminal
- 2 Ring terminals
- 3 Female spade connectors





When no valves are receiving power (all unlit) the boost will be at level of Stage1 (S1 adjuster).

If S2 is lit then Stage 1 adjuster is blocked and boost will be at level of S2 adjuster.

i.e.

Stage 2 adjuster active when S2 is lit.

Stage 3 adjuster active when S3 AND S2 lit.

Stage 4 adjuster active when S4 AND S3 AND S2 lit.

etc

Note : you must set your boost levels so that the left most adjuster is highest boost (adjuster shaft is the most screwed in). And as you go to the right each boost level is less.

Note: There are diodes soldered into the rotary switch so that each position higher retains conductivity to all levels lower.

If the know is fully counterclockwise that is position1/S1/Lowest boost it has no connection, turn clockwise one position and that is boost level 2 (S2), the orange wire. and so on.