



**ELECTRONIC VALVE CONTROLLER
SET-UP INSTRUCTIONS**
PART # 45003-BK001
PART # 45999-BK001
V. 31303

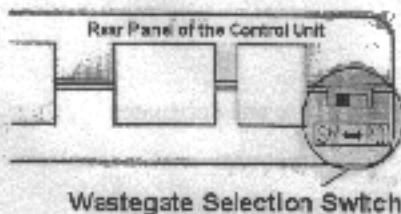
Quick Manual

1. **Ignition ON**

Turn the key so the ignition is in the "ON" position. There is no need to start the engine.

2. **Set the wastegate switch. SW or PO**

Make sure the power on the EVC is off, if not, hold the (PWR) button down for more than 1sec to turn the unit off. Then set the bypass switch shown below to the correct setting.

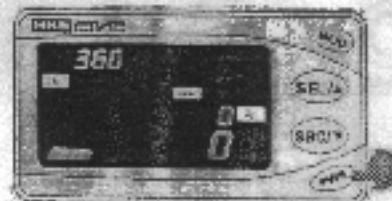


3. **Turn the EVC power ON.**

Hold down the power (PWR) button on either the display unit or control unit for more than 1sec. and turn the power of the EVC "ON".



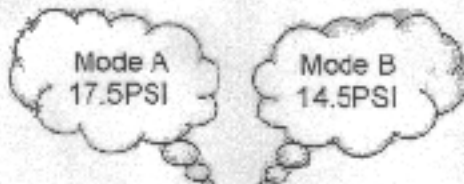
OR



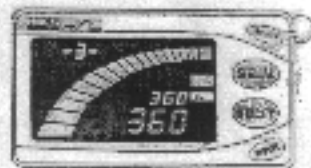
4. **Setting the Warning Values.**

First, the warning values need to be set.

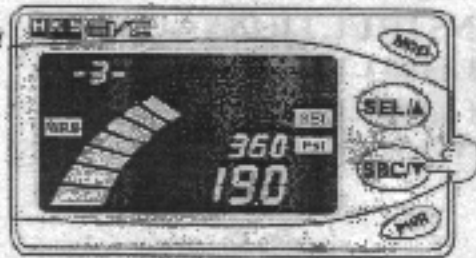
To prevent turbo or engine damage caused by over-boosting, a warning value must be set.



- (1) Decide on a target boost for mode A and mode B.
Example: Mode A 17.5 PSI, and mode B 14.5 PSI.

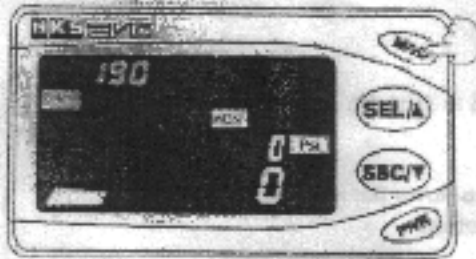


- (2) Press the (MOD) button 3 times to get into "Warning Value Setting Mode".
A "-3-" should display on the top left corner of the screen.



- (3) Add 1.5 PSI to the higher boost setting between mode A and mode B.

Example: 17.5 PSI + 1.5 PSI = 19 PSI



- (4) Press the (MOD) button once to save and go back to the main mode.

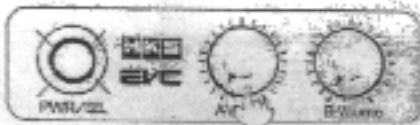
5. Setting the boost for mode A/B

- For safety reasons, do not adjust the EVC while driving. Park the vehicle in a safe and designated area to make adjustments.



Red

- (1) Make sure the ▲ on volume knob A is lit up red. If it's green, press the (PWR/SEL) button once (short press).

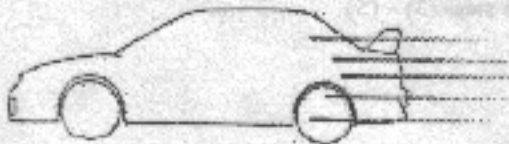


- (2) Press volume knob A to pop the knob up. Then turn it all the way counter clockwise.

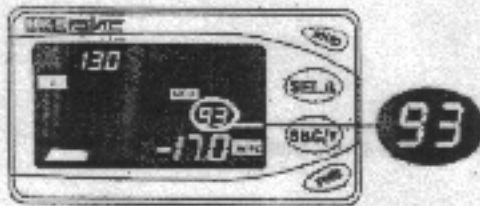


- (3) Cross reference the digital display (large screen) and turn volume knob A slowly clockwise to add to the set value.





(4) Try to use the highest gear possible (3rd or 4th gear) and apply load on the car on full open throttle.



(5) Verify the peak hold value.



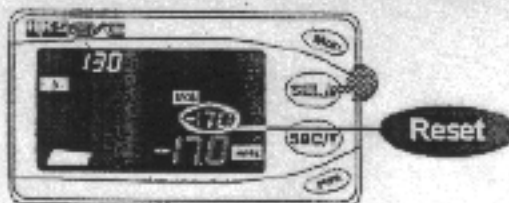
(6) If the peak hold value is not close to your target boost, repeat steps (3) ~ (5) again.



(7) When the setting is done, push volume knob A back in.



(8) Hold the (SEL/▲) button for more than 1 sec. on the digital display unit to reset the peak hold value.



(9) Press the (PWR/SEL) button once (short press) and verify that the ▲ on volume knob B is lit up red.



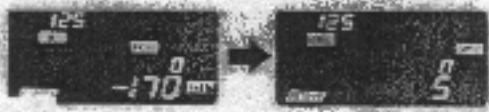
Red

(10) Press volume knob B to pop the knob up. Then turn it all the way counter clockwise.





(11) Repeat steps (3) ~ (5).

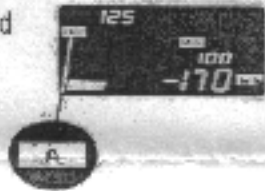


(12) Once the setting is over, push volume knob B back in.






(13) To select between mode A and mode B, press the (PWR/SEL) switch once (short press). The selected volume knob will light up red.
Example: The diagram shows when the mode A boost setting is selected.




Red





How to operate other functions

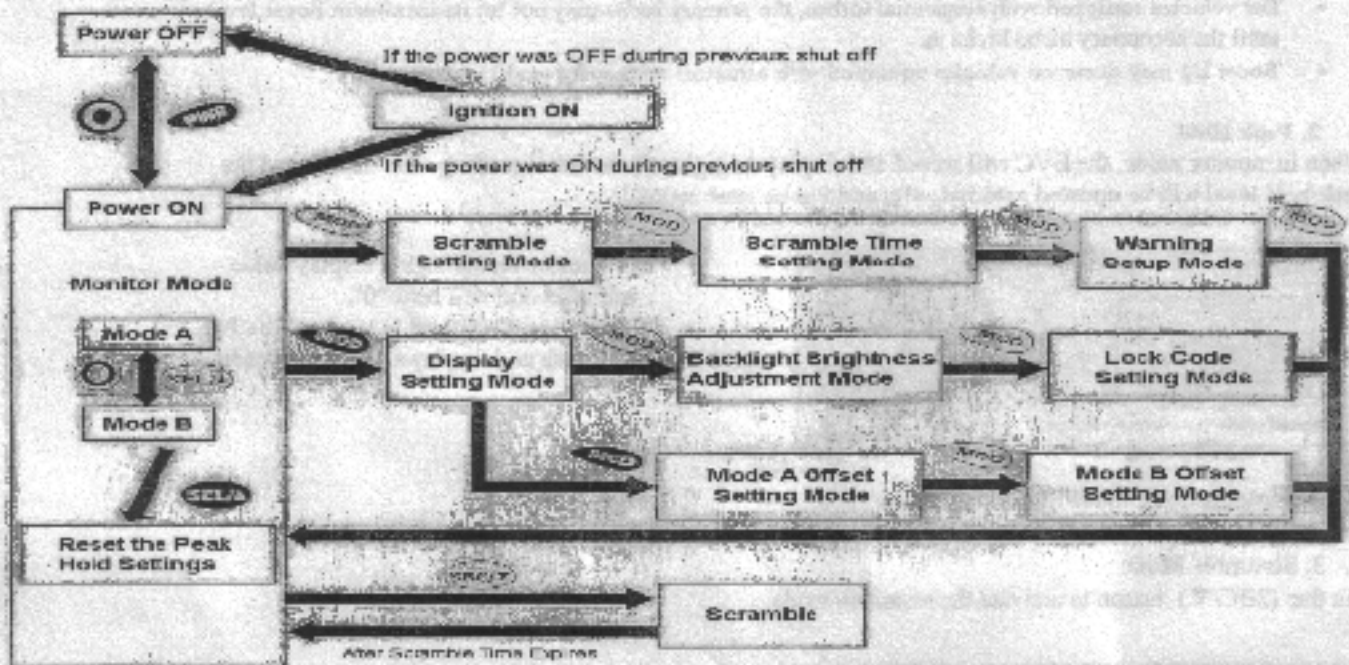
Display Unit

-  Press the Mode Button.
-  Hold down the Mode Button for more than 1 sec.
-  Hold down the Power Button for more than 1 sec.

-  Press the Select Up Button.
-  Hold down the Select Up Button for more than 1 sec.
-  Press the Scramble/Down Button.

Control Unit

-  Press the Power/Select Switch.
-  Hold down the Power/Select Switch for more than 1 sec.



1. Monitor mode

1. Boost control

Setting boost levels for both mode A and B must be done through the control unit.



- (1) With the ignition ON, make sure the power button is ON.
 - The ○ of the (PWR/SEL) button will light up red.
 - The ▲ of volume knob A or B will either be red or green. Red indicates the current selected knob. If it's green, press the (PWR/SEL) button once (short press) to switch over.
- (2) Once the A or B volume knob is selected, push out the knob to adjust the boost level.
- (3) Start full counter clockwise and slowly turn the knob to a desired boost level.
 - As a reference point **ONLY**, use the display's set value to add (by %) to the stock (baseline) boost level. For example: If the known baseline boost is 10 PSI, by entering 50 (%) as the set value, the actual boost level should increase to about 15 PSI (50% increase). Adjust knob accordingly afterward.
 - The control unit increments are not a set value so cross-reference it with the digital display (large screen) to check the actual boost level.
- (4) When you are done, push the knob back in.

Notes

- If a setting is not performed within 4 seconds after the ▲ is lit up red, the display value (large) will return to monitor mode.
- Make sure the volume knob is pushed in whenever a setting is finished. If the knob is left popped up, there is a chance that the boost may change if accidentally hit.
- For vehicles equipped with sequential turbos, the primary turbo may not hit its maximum boost level until the secondary turbo kicks in.
- Boost lag may occur on vehicles equipped with actuators with soft (weak) springs.

1. 2. Peak Hold

When in monitor mode, the EVC will record and display its highest boost level reading. The memory of the peak/hold level will be updated automatically and can be reset manually.



- The number on the digital display value will reset and will read "0".
- When a new peak level is reached, the P.H. will flash and display a new peak reading.

(1) By holding down the (SEL/▲) button for more than 1 second, the peak/hold level will be reset.

1. 3. Scramble Mode

Hit the (SBC/▼) button to activate the scramble mode.

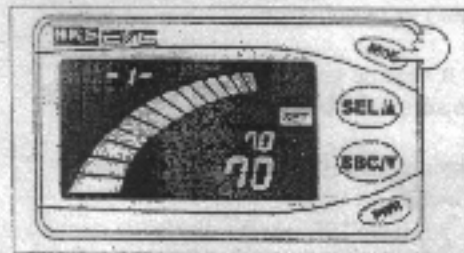


(1) Press the (SBC/▼) button.

- When the scramble mode is activated, the (SBC/▼) will turn red, the display will flash along with a quick set of audible beeps.

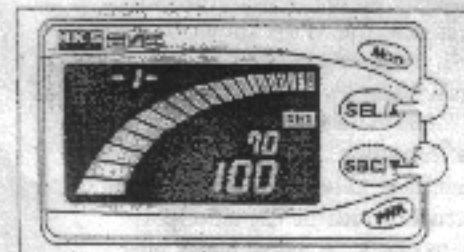
2. Scramble Setup Mode

This mode is used to set a value which adds to the set boost pressure when the scramble mode is activated.



(1) If the display unit is in monitor mode, press the (MOD) button once. If it is in any other mode, scroll through the modes until it displays a "-1-", which is the scramble setup mode.

- The indicator will display "SET" on the screen.

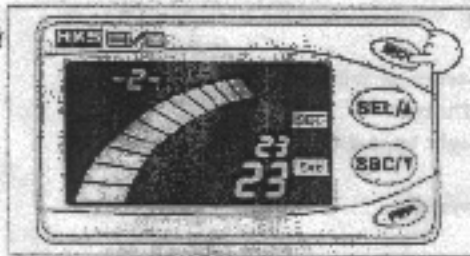


(2) Use the (SEL/▲) or (SBC/▼) button to input the values.

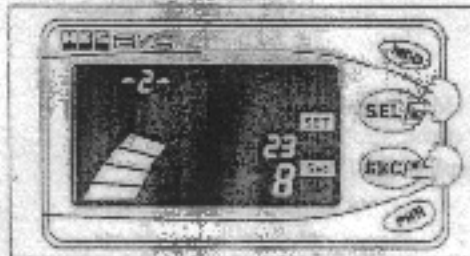
- The digital display value (large) indicates the value currently being set. The digital display value (small) indicates the previous set value.
- The setting value range is from 0-100% in increments of 2% (this is not actual boost pressure). This gain % figure will be added to the previously set boost level.

3. Scramble Time Setup Mode

This mode will set the time interval in which the scramble mode is active.



- (1) From the monitor mode, press the (MOD) button twice. If it is in any other mode, scroll through the modes until it displays a "-2-", which is the scramble time setup mode.
 - The indicator will display "SET" on the screen.



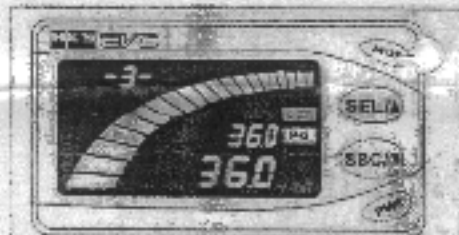
- (2) Use the (SEL/▲) or (SBC/▼) button to input the values.
 - The digital display value (large) indicates the seconds currently being set. The digital display (small) indicates the previous set time.
 - The setting value range is from 0-40sec. in increments of 1second.

Note

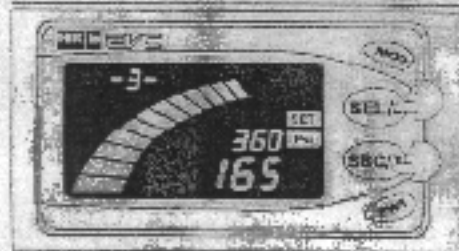
- When the (SBC/▼) button is pressed, the scramble function will activate but will not start until the button is let go.

4. Warning Setup Mode

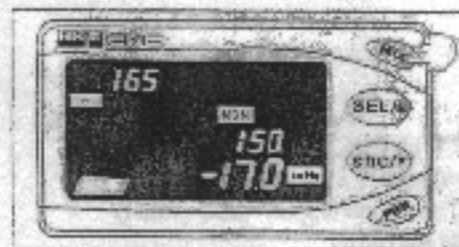
If the pressure in the surge tank exceeds the set boost warning level, it will trigger the warning function. When the warning is activated, the boost level will return to stock (baseline).



- (1) In monitor mode, press the (MOD) button 3 times. The top left corner should display a "-3-".
 - The indicator will display "SET" on the screen.



- (2) Use the (SEL/▲) or (SBC/▼) button to input the values.
 - The digital display value (large) indicates the value currently being set. The digital display value (small) indicates the previous set value.
 - The setting value range is from 0-36 PSI in increments of .5 PSI.
 - Initial setting is 36.0.



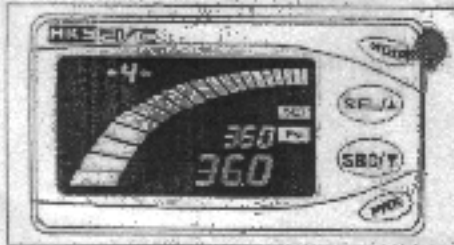
- (3) Press (MOD) button to return to the main screen.
 - Make sure to return to monitor mode or the new set values will not be recorded.
 - If the values are not recorded, the values will go back to default when the ignition or EVC power is turned OFF.

Notes

- As long as the boost level is set below the warning level, the warning will activate if the EVC see's 1.5 PSI (for more than .5 seconds) over the set warning level.
- If for some reason the boost level is set above the warning level, the warning will activate when the EVC see's about 0.7 PSI (for more than .5 seconds) over the set warning level.
- When the warning is activated, the "WRN" on the display unit will light up, a series of audible beeps will be heard and the digital display value (small) will flash.
- When the surge tank pressure goes below 1.5 PSI it will cancel the warning.

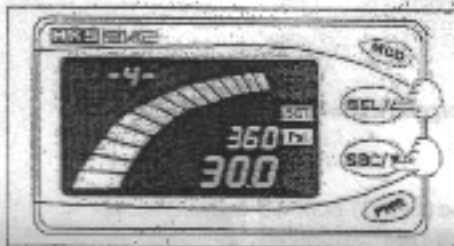
5. Display Setting Mode

This mode will determine the range of the bar graph.



- (1) In monitor mode, hold the (MOD) button down for more than 1 second. The top left corner should display a "-4-".

- The indicator will display "SET" on the screen.



- (2) Use the (SEL/▲) or (SBC/▼) button to input the desired bar graph range.

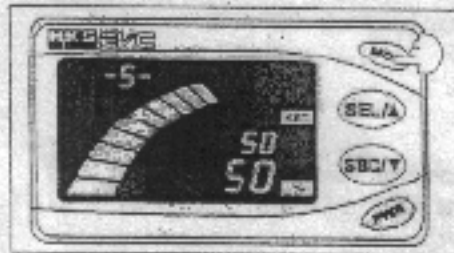
- The digital display value (large) indicates the value currently being set. The digital display value (small) indicates the previous set value.
- The bar graph range is from 0-36 PSI in increments of 5 PSI.
- Initial setting is 36.0.

Note

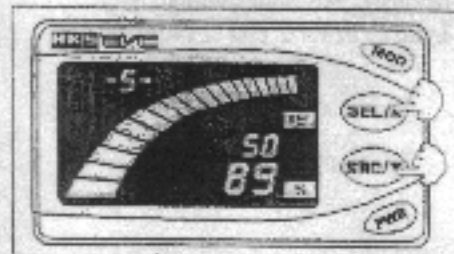
- If the bar graph is set to the same value as the warning boost level, the bar graph can be used to quickly glance at the display to see the real time boost level in relation to the warning level. The bar graph is much easier to see than the digital display value.

6. Backlight Brightness Adjustment Mode

This mode will adjust the brightness of the digital display.



- (1) In monitor mode, held the (MOD) button down for more than 1 second and press (MOD) 1 more time. The top left corner should display a "-5-".



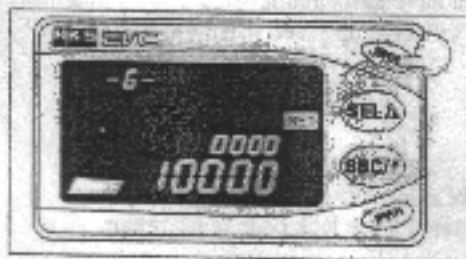
- (2) Use the (SEL/▲) or (SBC/▼) button to input the values.

- The digital display value (large) indicates the value currently being set. The digital display value (small) indicates the previous set value.
- The brightness setting range is from 0-100% in increments of 1%.
- As the values decrease, the display will get darker.
- Initial setting is 100%.

7. Lock Code Setting Mode

To lock in valuable settings/data use the lock code setting.

7.1. Setting the Lock Code



- (1) In monitor mode, hold the (MOD) button down for more than 1 second and press (MOD) 2 times. The top left corner should display a "-6-".

- The digital display value (small) will display as follows.

"0000" : Lock code not set

"---" : Lock code set



- (2) Use the (SEL/▲) or (SBC/▼) button to input a lock code number.

- The digital display value (large) indicates the code number currently being set. The digital display value (small) indicates the previously set code number.
- The setting value range is from 0-10000 in increments of 1.
- Initial setting is 10000.

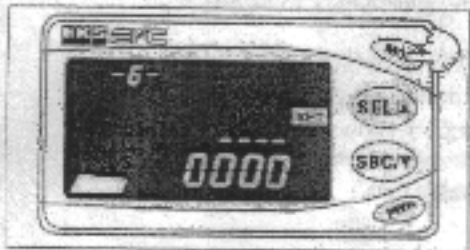
- (3) Press (MOD) once to activate the lock code and return to monitor mode.

- The (MOD) button will light up red when the lock code is activated.

Note

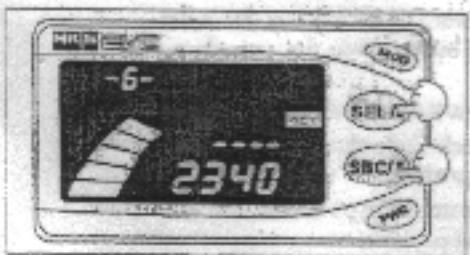
- When the lock code is set, the EVC (display & control unit) power ON/OFF, changing the boost between A & B, re-setting the peak hold level, and scramble are still active. For any other changes, the lock code must be released (see 7.2 Lock Code Release).

7.2. Lock Code Release

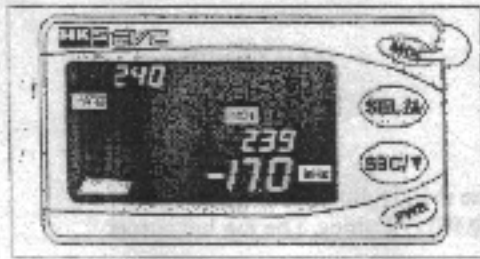


- (1) In monitor mode, hold the (MOD) button down for more than 1 second and press (MOD) 2 times. The top left corner should display a "-6-".

- The digital display value (small) will show a "---".



- (2) Use the (SEL/▲) or (SBC/▼) button to input the lock code number.



(3) Press (MOD) once to release the lock code and return to monitor mode.

- If the number inputted in step (2) matches the previously set lock code number, it will release the lock. If the number does not match, it will not release the lock and you will have to try again.
- The (MOD) button will light up green when the lock code is released.

Note

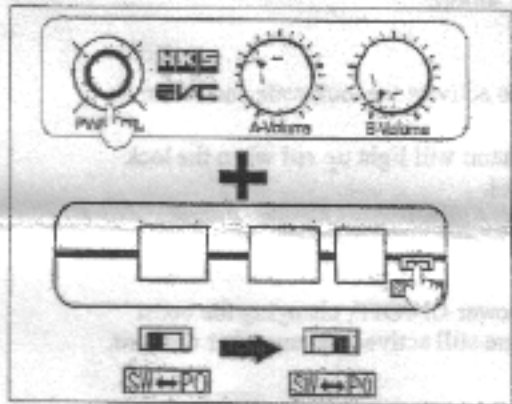
- If the lock code number is forgotten, a data reset (see below) must be done. When the data is reset, all stored memory will be lost. The only time the EVC should be reset is if the lock code is forgotten.

Data Reset



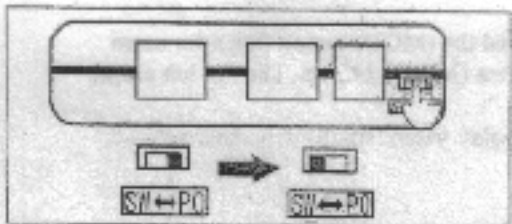
(1) Hold down the (PWR/SEL) button until the EVC power shuts OFF.

- The \circ of the (PWR/SEL) switch will light up green, with both lights on the \blacktriangle of A/B volume knobs turned off.



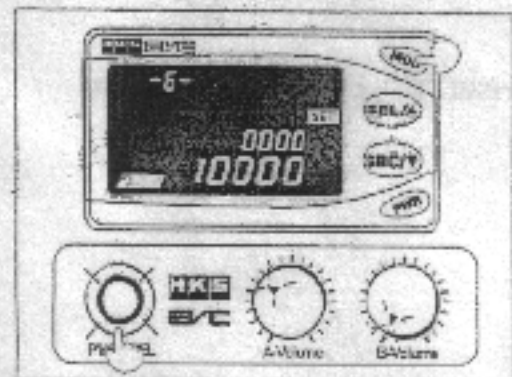
(2) Simultaneously hold down the (PWR/SEL) button on the control unit and flip/reverse the bypass switch (SW/PO) on the back of the unit.

- The display unit should beep for about 2 seconds.
- The diagram shows an example in which the bypass switch is set on swing valve (SW).
- The vehicles ignition (12V) must remain on.



(3) Flip the bypass switch back to its original position.

- The (PWR/SEL) button does not have to be held down during this step.
- The diagram shows an example in which the bypass switch was originally set on swing valve (SW).



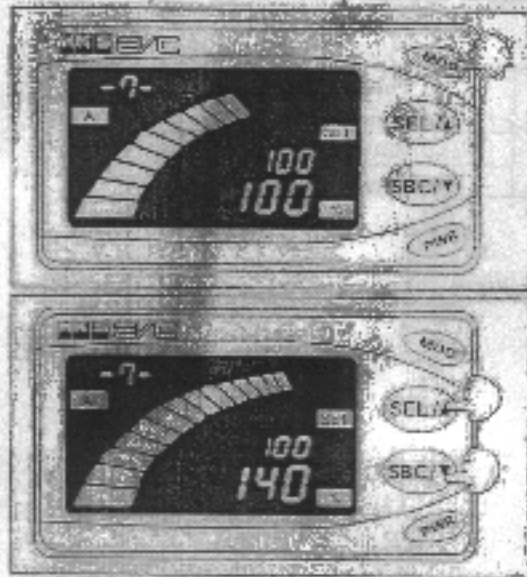
(4) Turn the power ON by holding down the (PWR/SEL) button down for more than 1 second.

- The (PWR/SEL) button will light up red.
- The Lock Code should return to default.
- If the (PWR/SEL) button is flashing, make sure the bypass switch is back to its original position.

8. Offset Setting Mode

8.1. Mode A Offset Setting Mode

This mode adjusts the boost response and stability for Mode A.



(1) While in the Display Setting Mode, hold down the (MOD) button for more than 1 second. If the display is not in the Display Setting Mode, follow the flow chart to get to the Mode A Offset Setting Mode.

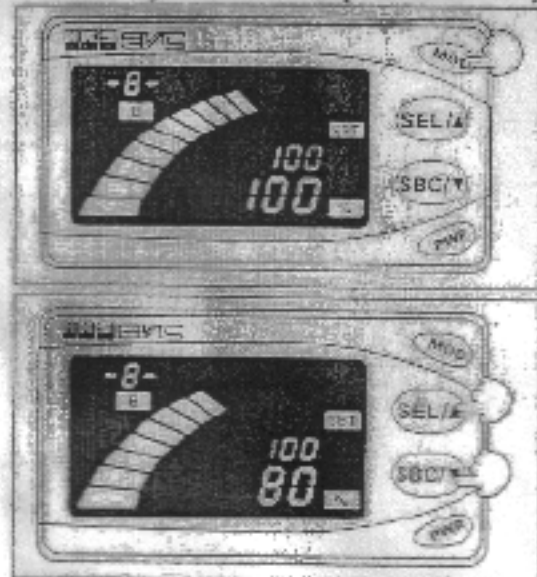
- The selected boost should be on "A", indicator on "SET", unit on "%", and the mode on "-7-".
- Even if the boost control is on Mode B, it will temporarily change to Mode A.

(2) Use the (SEL/▲) and (SBC/▼) buttons to input the necessary offset values.

- The digital display value (large) indicates the offset value currently being set. The digital display value (small) indicates the previously set offset value.
- The setting value range is from 10 - 200% in 1% increments.
- When the Mode A Offset Setting value is changed, the boost setting for Mode A will remain the same but the maximum boost level will change.
- Initial setting is 100%

8.2 Mode B Offset Setting Mode

This mode adjusts the boost response and stability for Mode B.



(1) While in the Display Setting Mode, hold down the (MOD) button for more than 1 second followed by a short press. If the display is not in the Display Setting Mode, follow the flow chart to get to the Mode B Offset Setting Mode.

- The selected boost should be on "B", indicator on "SET", unit on "%", and the mode on "-8-".
- Boost control will change to Mode B.

(2) Use the (SEL/▲) and (SBC/▼) buttons to input the necessary offset values.

- The digital display value (large) indicates the offset value currently being set. The digital display value (small) indicates the previously set offset value.
- The setting value range is from 10 - 200% in 1% increments.
- When the Mode B Offset Setting value is changed, the boost setting for Mode B will remain the same but the maximum boost value will change.
- Initial setting is 100%.

(3) Press the (MOD) button once to return to the Monitor Mode.

Notes

- Refer to the table below to determine the characteristics of maximum boost in relation to the offset and wastegate settings.
- In most cases, when using a swing valve, a quicker response can be obtained by setting the offset somewhat higher.

Offset Value	Swing Valve (Internal Wastegate)	Poppet Valve (External Wastegate)
Decreasing value	Maximum boost goes up	Maximum boost goes down
Increasing value	Maximum boost goes down	Maximum boost goes up

- **For a Troubleshooting List, please refer to the EVC Installation Instruction Manual.**