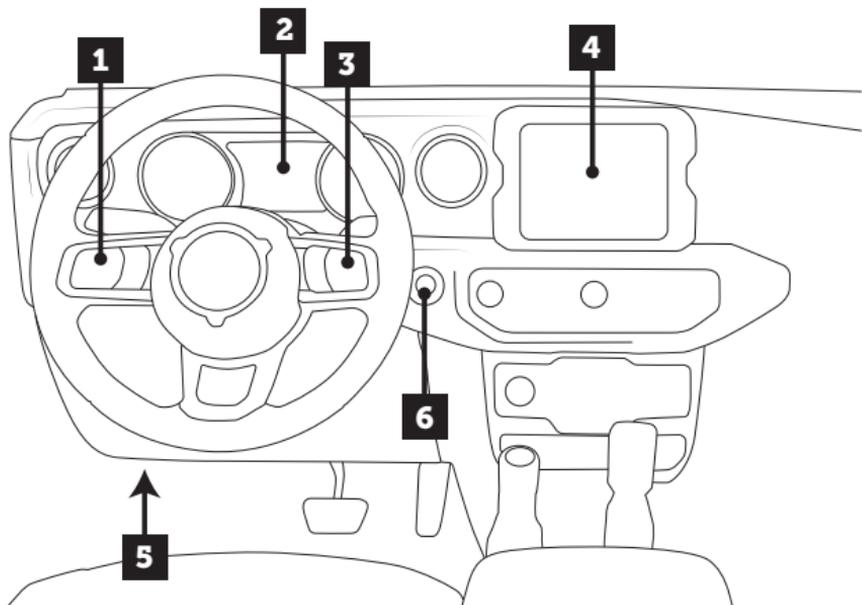




## USER GUIDE

AEV30348AE

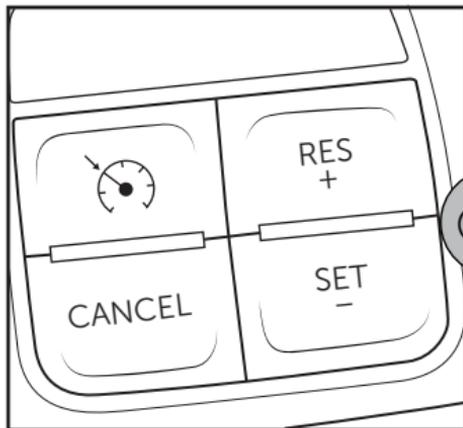


1. INSTRUMENT CLUSTER DISPLAY CONTROL BUTTONS
2. INSTRUMENT CLUSTER DISPLAY
3. CRUISE CONTROL BUTTONS
4. STEREO DISPLAY
5. OBDII PORT
6. ENGINE START/STOP BUTTON

**NOTE:** This illustration may not exactly represent your vehicle. Access to each of these components is required to use this product.

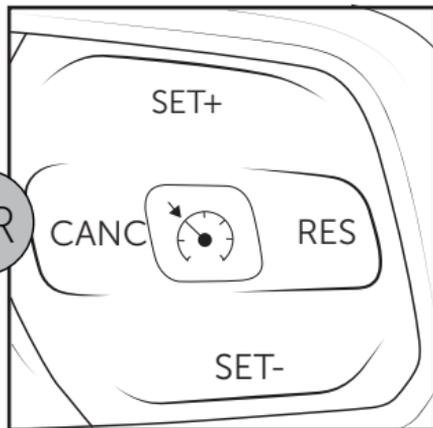
# Cruise Control Layout

## 4-BUTTON



OR

## 5-BUTTON



**NOTE:** Your vehicle will be equipped with one of two cruise control button layouts. Refer to the specific style of switches in your vehicle for all functions of this product.

# OVERVIEW

The AEV ProCal SNAP is an easy-to-use electronic recalibration module designed for Jeep JL Wrangler, Gladiator, and RAM Trucks. It allows recalibration of your vehicle parameters such as tire size, axle gear ratios, and additional configurable parameters. After connecting the device to the OBDII diagnostic port, input numerical values using the stereo's audio equalizer, then activate the device using the vehicle's controls and buttons.

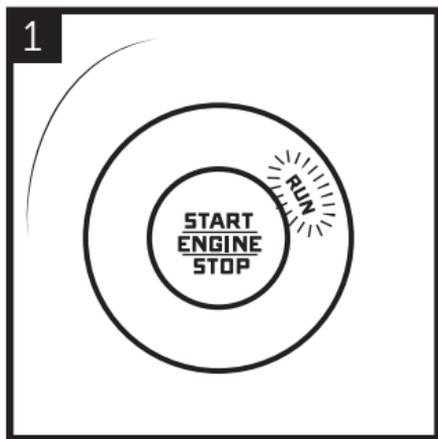
**PLEASE** read these instructions completely before attempting to use this module. Follow these order of operations:

1. Install the included **AEV ProCal Harness** using instructions from [aev-conversions.com](http://aev-conversions.com).
2. Pair ProCal SNAP to the vehicle.
3. Use this guide to program each parameter individually.

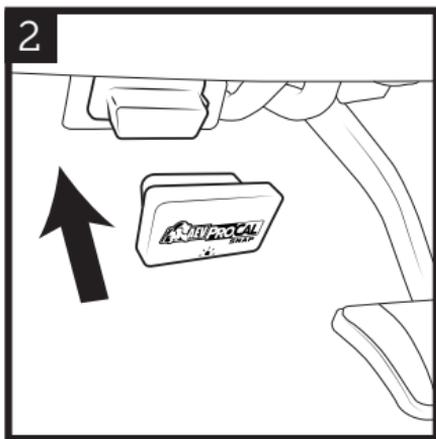
**NOTE:** If a dealership service task requires re-programming or resetting of the vehicle electronic modules the ProCal SNAP adjustments may be overwritten. This may require using the ProCal SNAP again to restore the modified parameters.

## PAIR PROCAL SNAP TO VEHICLE

It is required to have the **AEV ProCal Harness** installed before moving on to the pairing process.

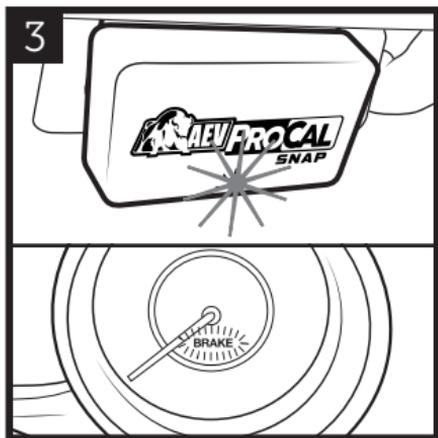


Press 2 times to put into the "RUN" position.

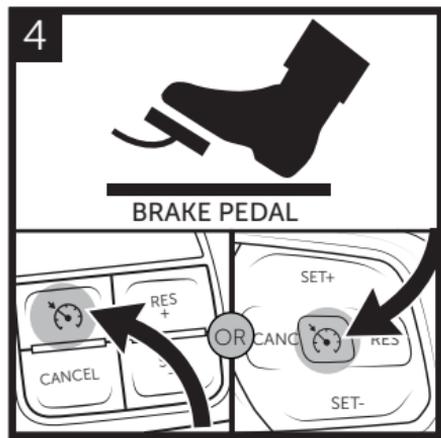


Insert ProCal SNAP into the OBDII port.

**NOTE:** The ProCal SNAP must be paired to a vehicle before it will recalibrate any settings. Once completed, the ProCal SNAP will be **permanently locked to this vehicle.**



Wait for a blinking GREEN light on the SNAP and a blinking BRAKE light on the speedometer.



With your foot on the brake, PRESS and HOLD the CRUISE ON/OFF button until the vehicle honks.

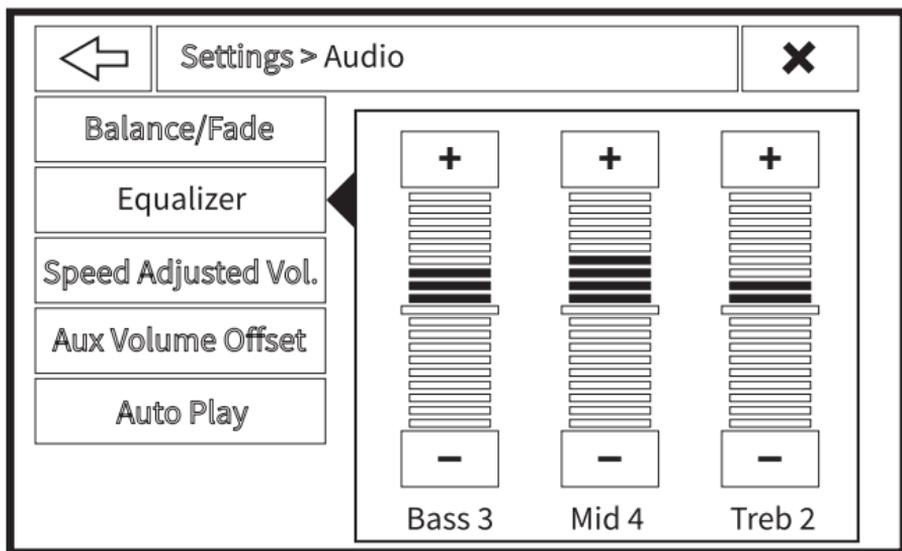
**5 HONK! HONK! HONK!** When the pairing process is complete, the horn will sound quickly 3 times. Your ProCal SNAP is now paired and ready to recalibrate your vehicle.

# SETTING EQUALIZER

Adjust the stereo's AUDIO SETTINGS to the values you wish to set (be sure the stereo source is set to AM/FM).

**Always enter the values in order: Bass, Mid, Treb. regardless of their order or orientation on the equalizer.**

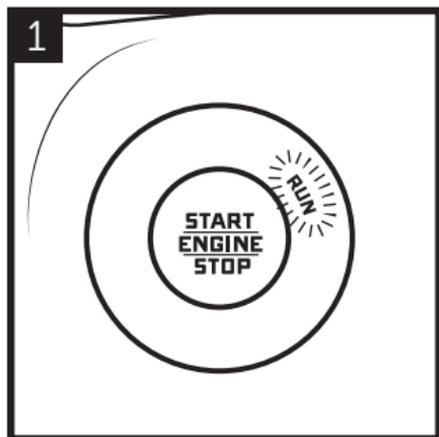
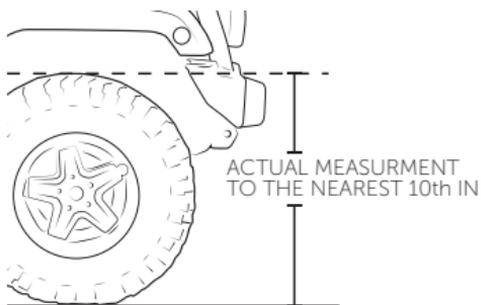
- Example: 34.2" Tires, Bass = 3, Mid = 4, Treb = 2.



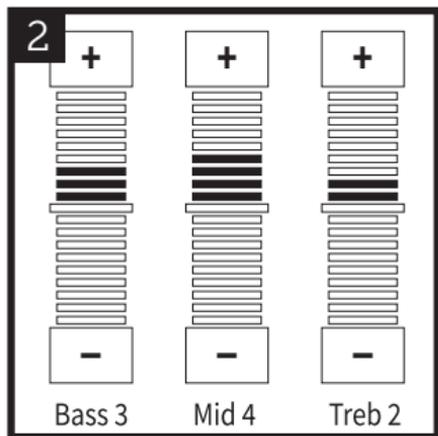
UCONNECT 4 and 4C

## EXAMPLE: TIRE SIZE

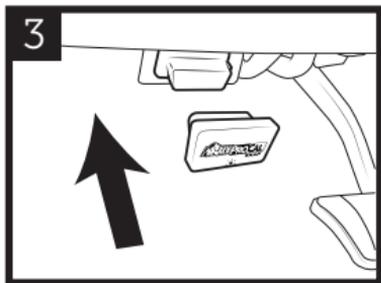
To recalibrate Tire Size: Begin by physically measuring your tire diameter IN INCHES from the ground to the top of front tire with the vehicle level and on the ground.



Press 2 times to put into the "RUN" position.



Set the EQ values for the tire size (Example: 34.2" Tires, Bass = 3, Mid = 4, Treb = 2).

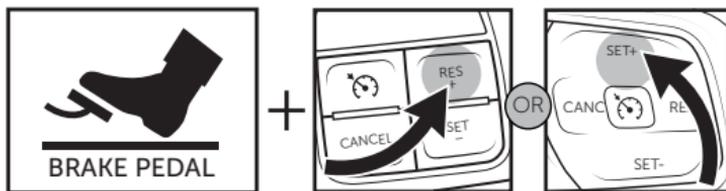


Insert ProCal SNAP into the OBDII port.



Wait for a solid GREEN light on the SNAP.

- 5** PRESS and HOLD the combination below for 3 SECONDS. Programming is complete when the **horn sounds twice**. Shut off vehicle. Unplug ProCal SNAP and store in vehicle.

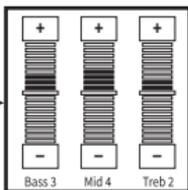


**NOTE:** If the BRAKE INDICATOR (a red light on the dash labeled 'BRAKE') flashes, immediately release the BRAKE PEDAL. Not releasing it promptly could result in errors and activate warning lights. If this occurs, re-attempt the programming, closely monitoring the pedal and the indicator. This condition is common in many vehicles.

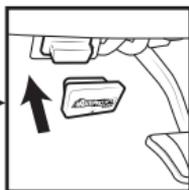
# PROGRAMMING STEPS



*Press RUN Twice*



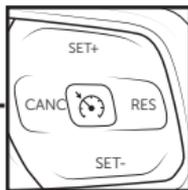
*Adjust EQ levels*



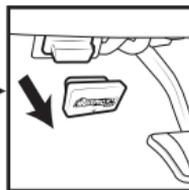
*Insert ProCal SNAP*



*Press Brake Pedal and Designated Button*



*Turn Vehicle OFF*



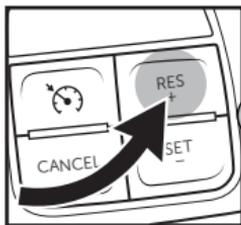
*Remove ProCal SNAP*

**NOTE:** Repeat this process for **EACH** programming change.

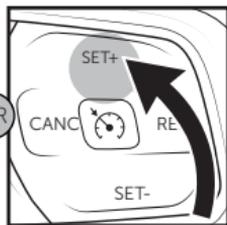
## TIRE SIZE

Example: 34.2" Tires Bass: 3 Mid: 4 Treb: 2

When setting Tire Size, use the measured size, not the rated size written on the tire.



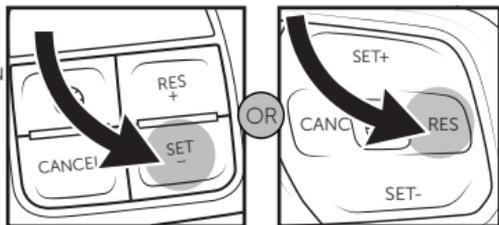
OR



## AXLE RATIO

 Example: 4.10:1 Axle *Bass:4 Mid: 1 Treb: 0*

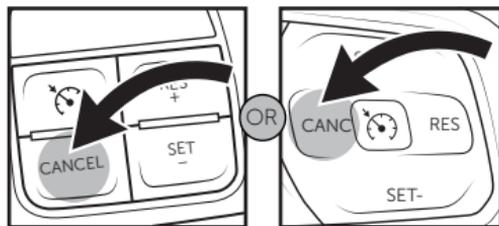
The physical ratio of gears in your differential. Do not modify unless you have changed gears. **Note for 4xe owners:** Do not program gear ratios over 4.50:1 even if your physical ratio is larger.



## TPMS

Example: 32 PSI *Bass: 0 Mid: 3 Treb: 2*

This sets the "off value," the tire pressure level at which the low-pressure indicator light turns off. **For Jeeps**, this value can be set between 28-50 psi. **RAM Trucks**, can accept specific pressures: 35, 45, 50, 60, 65, 80, or 95 psi; any other value will round up to the nearest valid pressure.



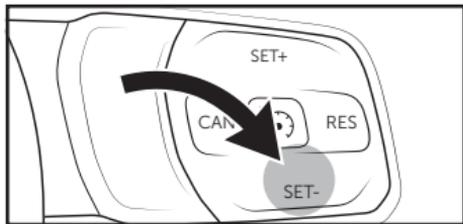
**NOTE: It is imperative for RAM Trucks to inflate tires to the pressure specified on the tire's sidewall and not lower the pressure below this value.**

## T-CASE

 Example: 3.80 T-Case *Bass: 3 Mid: 8 Treb: 0*

### ONLY FOR JEEPS

The physical ratio of gears in your Transfer Case. **Do not modify unless you have replaced the transfer case.**

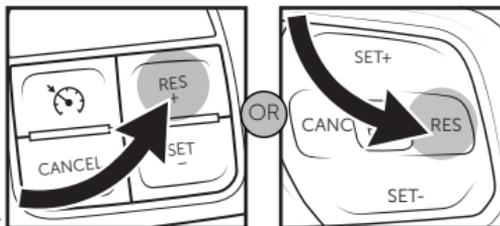


# ADDITIONAL FUNCTIONS



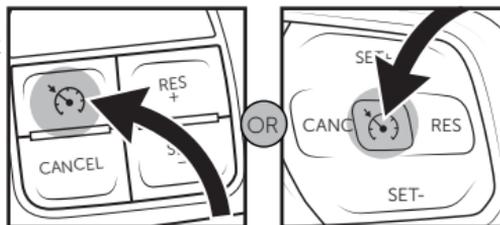
## CLEAR DTC CODES

To clear DTC Codes, follow steps above then additionally press and hold the RESUME (RES) on the cruise control switches. The Procal SNAP will attempt to clear codes, although actively set codes remain after clearing.



## RESTORE FACTORY SETTINGS

The Procal SNAP attempts to keep track of your initial settings as it first saw them. To restore these initial settings, follow the activation steps above then additionally press and hold the CRUISE ON/OFF button.



## VIEW SETTINGS

To view the current vehicle parameters, insert the ProCal SNAP into the OBDII port and turn the radio off. Use the Instrument Cluster Display Control Buttons to navigate to AUDIO. The display will cycle through showing the current values for Tire Diameter, Axle Ratio, Tire Pressure Threshold (Front and Rear), 4Low Ratio, and the ProCal SNAP part number.



## ERRATA AND NOTES

- The ProCal SNAP may not honk when clearing codes if a code is actively set, some codes are more stubborn than others.
- Wrangler 4xe: Do not program an axle ratio value higher than 4.50, regardless of the actual gears. This limitation is a workaround for inherent conditions in the transmission control systems.
- Wrangler 4xe: After programming, the 'check engine light' or Malfunction Indicator Lamp (MIL) may be on. These errors typically clear over time. Alternatively, you can use the SNAP's "Clear Codes" function to immediately remove these error indications.

# DIAGNOSTIC CODES



**BLINKING GREEN:** ProCal SNAP ready to pair



**SOLID GREEN:** ProCal SNAP paired and ready



**SLOW PULSING ORANGE:** Waiting for vehicle ignition to be turned to RUN.



**SLOW PULSING BLUE:** Inserted into incorrect vehicle.



**FAST PULSING ORANGE:** No connection. Check that the harness is properly installed.



**FAST PULSING BLUE:** There has been an error in programming. Turn the radio off. Use the Instrument Cluster Display Control Buttons to navigate to AUDIO. Record the error message and contact AEV support with the information shown.

# TROUBLESHOOTING

**Q:** I attempted to program two features in a row and the device would not respond.

**A:** The ProCal may time out in between setting changes. It is good practice to cycle the RUN position on your vehicle between settings features.

**Q:** I see no lights on the device when I insert it into the OBD-2 port.

**A:** Contact Support

**Q:** I attempted to program a parameter, there was no honk, and now the device has a flashing blue light.

**A:** Turn the radio off. Use the instrument Cluster Display Control Buttons to navigate to AUDIO. Record the error message and contact AEV Support with the information shown.

**Q:** What if I don't have a factory stereo?

**A:** It may be possible for aftermarket head units to work with the ProCal SNAP, but it is highly unlikely.

AEV Customer Support: **(248) 926-0256**

Email: **tech@aev-conversions.com**



AEV-CONVERSIONS.COM