

## 3.5 Bar Map Sensor Kit Instructions

Part # Sens022

The 3.5 bar MAP (manifold air pressure) sensor measures air pressure from vacuum up to 35 psig. Connect the red wire to switched (ignition on, also known as ACC) +12v, the black to ground, and white to one of the Interceptor scan gauge's analog inputs or other data device.

The output of the sensor ranges from 0 - 4.9v at full scale. To configure the Interceptor, Analogic, or other device to read pressure in psi using this 3.5 bar sensor, you will enter 14 as the slope (entered as 014.0), and -14.0 (entered as -14.0) as the intercept following the instructions for these devices. This equates to multiplying the output voltage by 14, and subtracting the result by 14 to display pressure in psi. Note this important point. The above equation assumes that you are at sea level or close to it. For best accuracy, check the value displayed on the gauge with the ignition on, engine off. At this condition the gauge should be reading "0" for MAP pressure. If it's off by more than you are comfortable with, perhaps 0.3 psi or more, you can adjust the **intercept** value to correct for this offset. For example, if you see -0.4 psi with the engine off, add 0.4 ( $-14.0 + 0.4 = -13.6$ ) to correct the reading. The higher your altitude, the smaller in absolute terms the intercept will be. In Denver Colorado for example you may need to reduce it to -13.0 or more. This action will correct the MAP reading over its entire range and can also be used to cancel out an offset due to grounding issues. The same process can be used to read pressure in Bar, kPa, etc.

Please note that the reading will be in psi, both at vacuum and boost, as opposed to inHg in vacuum and psi in boost like a typical mechanical boost gauge. Multiplying a reading in psi by 2.02 will convert to inHg. For example, you see -10 psi at idle on the Interceptor gauge. This equates to -20 inHg.

### Warranty

This product is Aeroforce Technology warrants this product and its accessories against defects in material and workmanship for a period of 90 days from the date of purchase.

Aeroforce Technology Inc.