



**INTERCEPTOR**  
*scan gauge*

**FOR CAN VEHICLES**

*by*



**USER MANUAL**

*FIRMWARE VERSION 3.2*

[www.aeroforcetech.com](http://www.aeroforcetech.com)

***Made in the USA!***

Patent Pending

## **WARNING**

Vehicle operator should focus primary attention to the road while using the *Interceptor*. The information provided by this device should be observed as part of a normal sequence of observations performed in the operation of the vehicle, as with any gauge or other instrumentation. *Interceptor* settings should be changed only during conditions when it is safe to do so. **Focusing on the road should be the primary concern of the driver.**

Aeroforce Technology Inc. shall not be held liable in any way for any incidental or consequential damages to the vehicle, driver, passengers, and or other involved parties or property occurring while using the *Interceptor* scan gauge.

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## INSTALLATION

Read these instructions thoroughly before installation. Also, be sure to check for your vehicle specific notes in appendix A at the end of this manual. There could be important information there concerning your gauge and its installation. New parameters are added from time to time, and may not be listed in this manual. For the latest updated manual go to [www.aeroforcetech.com/usermanual.html](http://www.aeroforcetech.com/usermanual.html) and select the latest release that pertains to your gauge.

1. **Make sure the car's ignition is turned off.**
2. **Run included 5', or optional 9' main cable, and three wire mini cable, from the OBD2 connector (do not plug in yet) to the location of the *Interceptor(s)*.** The *Interceptor* will fit in any 2 1/16" or 52mm gauge pod, or can be mounted in a custom fashion anywhere within 5 (9) feet of the OBD2 connector. The OBD2 connector is located under the dash on either side of the steering column.
3. **Plug both cables into the back of the *Interceptor*.** See figure 1. Press the *Interceptor(s)* into the gauge pod or mounting hardware.

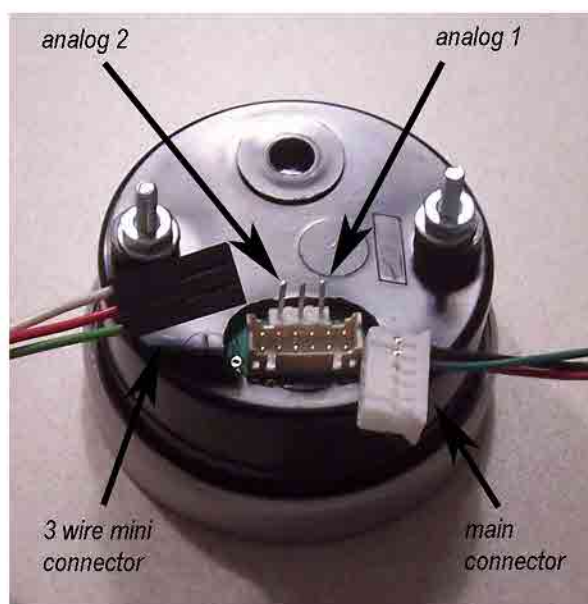


Figure 1

4. **Plug the main cable connector into the OBD2 connector.** See figure 2. The data, ground, and power on most vehicles come from this connector.



Figure 2

5. **Connect the 0-5v analog inputs (optional).** You will see 3 pins above the main connector on the back of the gauge as shown in *figure 1*. The 2 outer pins connect to the analog inputs. The center pin is for switched 12v power and is not required for virtually any CAN bus vehicle. The right side pin, when looking at the rear of the gauge, goes to analog input 1. The left pin is for analog input 2. See *figure 1*. Included in the gauge packaging is a 3 wire cable that connects here. Once attached to the gauge, you'll see that the white wire is for analog 1, the green for analog 2. These inputs can be used to read the outputs from pressure senders, A/F ratio analog outputs, 2 or 3 bar MAP sensors, or any voltage up to 5v that you want to monitor and/or record. You can scale these signals with a menu function described below. ***These inputs are rated for 0-5 volts, with an over-voltage protection circuit built in. However, running more than 6v into these inputs for an extended period of time could effect the operation of the entire gauge, and possible damage it.***
6. **Turn vehicle on.** With the key on and engine off, or engine running, the *Interceptor* will power up. While the unit powers up, the “*Interceptor*” and “*AeroForce*” logo will appear on the display. This only takes a few seconds. Please note that dual *Interceptor* units may power up sequentially (one at a time) and may take up to 15 seconds. When turned on for the first time the *Interceptor* will ask you to enter a list of parameters that will then be available for scan, see “*Setup*” below in the **Operation** section for more details on this. See page A1 of

these instructions for the list of parameters supported by the *Interceptor*. Remember that not all parameters are supported by every vehicle, so don't expect to be able to view them all on the *Interceptor* you install in your vehicle. If the vehicle **and** the *Interceptor* support the parameter, you will have access to it.

## OPERATION

1. **SCANNING.** Once the *Interceptor* has been installed and set up as described below, you will see an upper and lower field containing a description and parameter value when the ignition is turned on. The right button will change the upper parameter field, the left button the lower. One quick push of the button will toggle to the next parameter. Included in the list of parameters is instantaneous fuel economy, calculated horsepower, and both the analog 1 and analog 2 inputs. Fuel economy and horsepower will be available on only those cars using a Mass Air Flow sensor or a calculated air flow.
2. **MENU.** The menu and its operation have been designed to be intuitive and easy to use. The following is a list of all the menu selections and their functions. Pressing both buttons at the same time will take you to a menu screen. Once here you will see many choices. Use the left button to toggle down to the desired choice. The current selection will be highlighted. Push the right button to select this choice and proceed to the associated screen. **Pressing both buttons while in a menu selection will exit and save your entries and take you back to the main menu.** Remember this when in "Setup" or "Cyclic Scan Setup", this prevents you from having to scroll all the way to the end of long lists of parameters. Once in the menu, you will initially see four menu selections, continuing to scroll down will bring up a new list of 4 more options, and so on. Continuing beyond the fifth group of selections will bring you back to the beginning.

Choices are:

- a) **SCAN.** This is the standard mode of operation for the unit and the default mode when powered up. In this mode the unit is scanning and displaying data.
- b) **SETUP.** When powered for the first time, the *Interceptor* will ask you to edit a list of parameters that will then be available for scan. At any later time you can return to the menu function called "**Setup**" and edit this. Once in this mode, you may or may not be asked to choose your vehicle type. You'll then see a list of parameters that you can select for display that apply to your vehicle. Use the left button to scroll down through the list, and the right button to select a parameter. Once selected, that parameter will have an \* next to it. You can deselect a selected parameter the same way. You'll be able to choose any parameter on the list, but be aware that not all vehicles will support all parameters. Once in **Scan** mode, if an unsupported one is chosen, typically the gauge will display a black screen or show the unchanging value of the previous parameter selected. You should consult the parameter lists by

manufacturer in the appendix of this manual for assistance in choosing parameters.

- c) **CYCLIC SCAN**. This selection will activate the cyclic scan mode that you set up in “**Cyclic Setup**” described below. Cyclic scan is an optional function and does not need to be used or set up. If one of the two front buttons is pushed while in **Cyclic Scan** the gauge will go to normal **Scan** mode.
- d) **CYCLIC SETUP**. This menu option will allow you to choose certain parameters from the main list you choose in the **Setup** routine to display on a pre-determined rotation. For example, you may choose to view knock retard and ignition advance (screen 1) for a certain amount of time, then intake air temperature and coolant temperature (screen 2) for a period, and so on for up to 4 combinations or 8 parameters. When you first enter this selection, the list of parameters you chose in **Setup** will be shown, under the heading “**Screen 1 Field 1**”. The parameter you select, by scrolling down with the left button and selecting with the right, will be displayed in the top field of screen 1 during **Cyclic Scan** mode. To deselect the parameter, simply select a different one. Once selected the parameter will have an “\*” next to it on the list. After the parameter is selected either hit both buttons to proceed to the next screen or scroll to the end of the list and select “**EXIT**”. You will then go to “**Screen 1 Field 2**”. Repeat these steps for the bottom parameter field of screen 1. You must repeat these steps for all four screens. After the fourth screen is configured the last step will require a number be entered indicating the number of scans that each **Cyclic** screen will be viewed. For data rates 1 or 2 figure about 5 scans per second, so 20 scans will result in each screen staying up for 4 seconds. You may have to go back and adjust this value a second time after you get a feel for this value. Different vehicles will respond at different speeds, and the data rate you choose will also effect this outcome. If a screen is not configured, that screen will default to the factory setting of **Intake Air Temp**. for its turn in the cycle.

Example: Display **knock retard** and **fuel pressure** for 20 scans (~4 seconds), **knock retard** and **ignition advance** for 10 scans (~2 seconds), and **intake air temp**. and **oil pressure** for 10 scans (~2 seconds).

Procedure: Enter **Cyclic Setup**. In **Screen 1 Field 1** select **knock retard**, hit both buttons or select “**Exit**”, then for “**Screen 1 Field 2**” select **fuel pressure**, hit both buttons or select “**Exit**”, on “**Screen 2 Field 1**” select **knock retard**, hit both buttons or select “**Exit**”, for “**Screen 2 Field 2**” select **fuel pressure**, hit both buttons or select “**Exit**”, for “**Screen 3 Field 1**” select **knock retard**, hit both buttons or select “**Exit**”, for “**Screen 3 Field 2**” select **ignition advance**, hit both buttons or select “**Exit**”, for “**Screen 4 Field 1**” select **intake air temp**, hit both buttons or select “**Exit**”, for “**Screen 4 Field 2**” select **oil pressure**, hit both buttons or select “**Exit**”. After leaving “**Screen 4 Field 2**” you will then be asked to enter the number of scans for each screen, enter 10. You will then go back to the main menu where you will select “**Cyclic Scan**”. You’ll then enter a scan mode where the parameters you selected will cycle in their predetermined amounts of time. You’ll need to experiment with the number of scans because scan rate, and the vehicle itself will effect how long each scan takes. If the parameter list in **Setup** is changed, the **Cyclic Setup** must be completed again.

