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TFT CAN Bus Gauge for AEM V2 Plug and Play Installation Manual Doc version 1.0 Notice: This product is intended for Off-Road use only. Never take your eyes off of the road while using this device. If you are uncomfortable with wire termination, please have this device installed by a competent shop.

** Notice! This device should be configured by competent personnel. Raising the BOOST too much, reducing the Traction Control too much, improper use of nitrous, or improper use of a line lock can have severe consequences. You could blow your engine and or lose control of your vehicle** Wiring harness installation:

Plug and play wiring harness for Infinity V2 ECUs with the AEM wiring harness:

Locate the 4 pin AEM NET wiring connector on the V2 harness. Connect the Plug and play harness into the AEMnet 4 pin harness and run the cable to the desired gauge installation location. Note that the gauge gets power and the CAN signal from this cable and no other wiring is necessary.

AEMnet CONNECTORS

The AEMnet has four wires, two are for communication (white pin 1 and green pin 2) and two are for powering (red pin 3 and black pin 4) certain AEMnet devices. Only the two communication wires (white pin 1 and green pin 2) are needed for the Series 2 EMS to send/receive data as the EMS is not powered by AEMnet. The red and black wires will need to be connected when using the Series 2 EMS with devices that are powered by AEMnet such as the Dyno-Shaft (see individual instructions for details). The AEMnet connectors are shown below in figure 1. See table 1 for the AEMnet connection pinout.

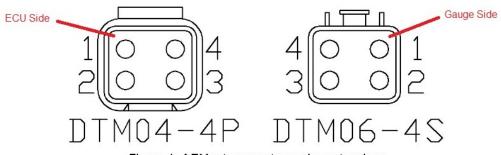


Figure 1: AEMnet connectors, wire entry view

AEMnet	Connector	Series 2 EMS Connector
Pin 1	White	CAN1H
Pin 2	Green	CAN1L
Pin 3	Red	AEMnet Power (switched 12 volts)
Pin 4	Black	AEMnet Ground
•	Table 1: AEMp	at connector pinout

Table 1: AEMnet connector pinout

INSTALLING THE AEMnet ADAPTER HARNESS

4. Table 2 below lists the corresponding CAN1L and CAN1H pin locations for each Series 2 EMS.

		CAN1L (Green wire)	CAN1H (White wire)
EMS	Adapter p/n	LOCATION	LOCATION
30-6100	30-3433	11A	12A
30-6101	30-3433	11A	12A

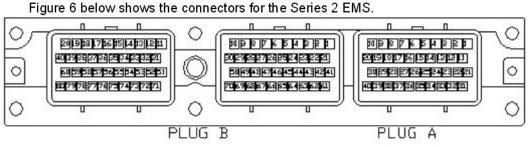
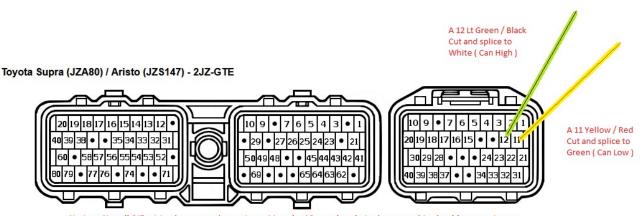


Table 2: CAN1L and CAN1H pin locations

Figure 6: Wire-side view of pinout for 6100 and 6101 EMS



Notice: Not all 2JZ wiring harnesses have pins a 11 and a 12 populated. In the event this should occur, pins or pre-terminated pins with wires are available from Toyota.

The PIN part number is TE Connectivity 175197-2 or if you insist on OEM Toyota parts: Toyota 82998-24060

	riddpter pri	LOCATION	LOCATION	
30-6030	30-3430	C22	C21	
30-6050	30-3432	D14	D10	
30-6051	30-3432	D14	D10	
30-6052	30-3432	D14	D10	
30-6053	30-3432	D14	D10	
30-6060	30-3432	C28	C29	
30-6310	30-3431	77	87	
30-6311	30-3431	57/77	67/87	
30-6320	30-3435	33	13	
Figures 7, 8, 9, a		E5 36 37 88 01 02 0.5 0.4 B*4 B15 B*9 B*7 B16 0.1* 0.1% <td< th=""><th>CE DE CE D2 CE D2 D1 1 15 DF CT CE D2 D2<th>12 D3 D4 D5 12 D0 D10 D** 212 14 D10 14 D10 14 D10 14 D10 14 D10 14 D5 14 D5 14 14 D5 14 14 D</th></th></td<>	CE DE CE D2 CE D2 D1 1 15 DF CT CE D2 D2 <th>12 D3 D4 D5 12 D0 D10 D** 212 14 D10 14 D10 14 D10 14 D10 14 D10 14 D5 14 D5 14 14 D5 14 14 D</th>	12 D3 D4 D5 12 D0 D10 D** 212 14 D10 14 D10 14 D10 14 D10 14 D10 14 D5 14 D5 14 14 D5 14 14 D
A1 A2 A3 A4 A6 A6 A7 A8 A9 A11 A12 A13 A14 A15 A16 A17 A8 A9 A11	Figure 7: Wire-sic		r 6030	D1 D2 D3 D4 D5
A25 A26 A27 A28 A29 A39 A31 A3 Connector A		22 823 824 825 C23 C24		

4. Table 2 below lists the corresponding CAN1L and CAN1H pin locations for each Series 2 EMS.

Adapter p/n

EMS

CAN1L (Green wire)

LOCATION

CAN1H (White wire)

LOCATION

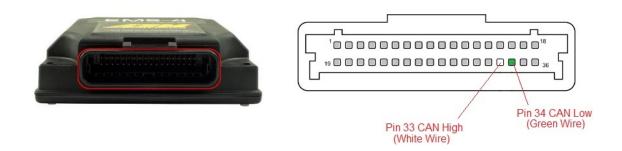
Figure 8: Wire-side view of pinout for 6050, 6051, 6052, 6053, and 6060 EMS

A	В	С	D
		յութու	
1 2 3 4 5 6 7 8 9 10 11 12 13	81 82838485863788	515253545556	71 727374757677787980 81 826364656267566000 91 92
	[3940414243444546]	575859606162	Eeg38482868788899013+12e1
Figure 9: Wire	-side view of pinou	It for 6310 and	6311 EMS

1		2	1	3	4	1	[Ì	2	5	6	5	Ĵ	7	8		41	42	24	3	44	1	Г	722				45	46	47	16	71	72		73	37	4	8				٦		75	76	1	77
9)	10	11	12	2 1:	3	14	15	1	6 1	7	18	19	92	0	21	22	2	3	48	49	95	0	51	52	25	35	54	55	56	57	58	59	15	78	79	80	8	18	2	83	84	8	58	68	37	88	89		90
24	4	25		26	32	72	28	29		3	80	31	32	23	3		34	3	5	60	6	1		62	6	36	4		65	66		67	68		91	92	93	3	9	4	95		96	<u>;</u> 9	79	98		99	1	00

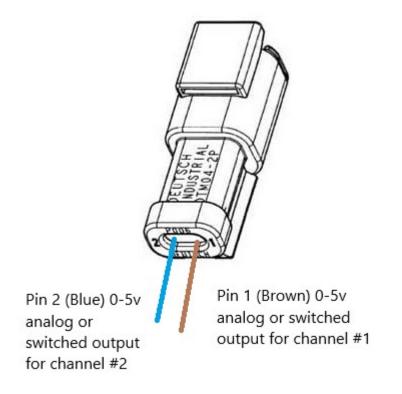
Figure 10: Wire-side view of Pinout for 6320 EMS

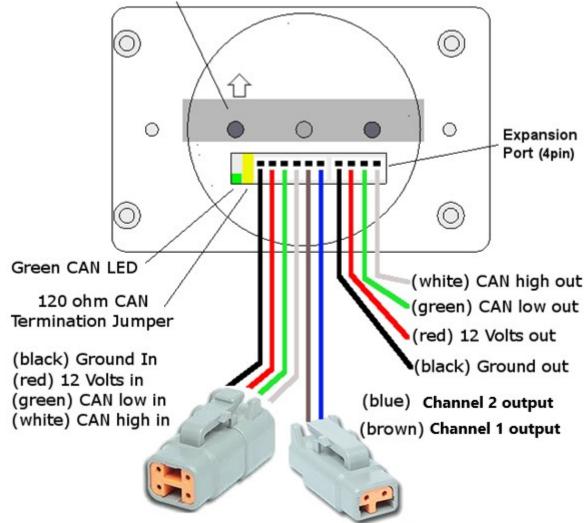
EMS-4 CAN Bus wiring:



2 Pin Analog Out Connector (Brown and Blue Wires)

The termination of these two wires is dependent on the inputs that are assigned in the AEM Tuner software. If you are using one of these gauge outputs for boost control, tie the output to the V2 "**ModeSwitch Input**". Either output may be connected to a different input on V2 (5 volt low current) or used with a 5 volt relay for Nitrous Arm / Purge or a line lock if desired. We offer both 1 channel and 2 channel optically isolated 5 volt relay for these scenarios listed on page 19 of this manual.





Please note the offset post holes in the aluminum bracket. Ensure that the bracket does not cover the connectors.

Data LED: This indicator will flash when ever the gauge is energized and CAN communications are present. Use this to confirm communications.

CAN Bus Termination Jumper: Remove this jumper if the gauge is not the last device on the CAN Bus. If there are multiple gauges, the last gauge should be the only gauge with the jumper installed.

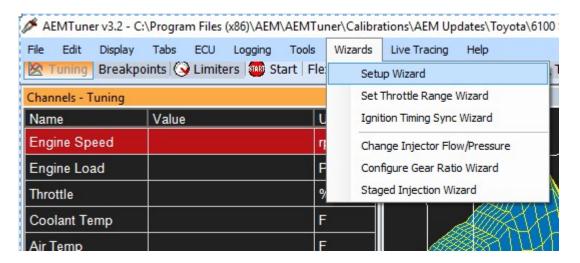
Leave the jumper installed if the gauge is a stand alone installation and there is nothing else on the CAN Bus.

AEM Tuner software configuration:

In order to have a properly functioning gauge, it is mandatory that the CAN protocol is configured in the AEM Tuner software.

Steps to create the protocol and generate the multipliers:

1. Open the AEM Tuner software and proceed to the Wizard / Setup Wizard:

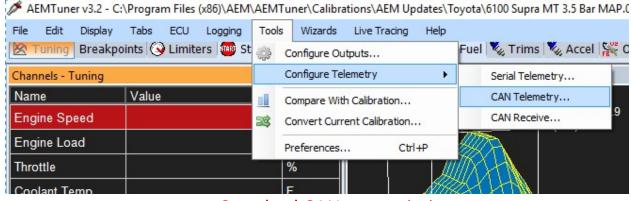


 Now select "Telemetry: AEMNet" and click on the space under "Matched". This should insert the word "Matched" if the datastream is not linked.

/izard Types:	Configuration Name	Matched	
nition: Coil Dwell niectors: Primary	AEMNet Datastream	Matched	
jectors: Staged	A LIVING DURUKIOUN		
lev Limit: 2Step			
lev Limit: Main			
ensor: Air Temperature (AIT) ensor: Cam/Crank Position ((
ensor: Coolant Temperature			
ensor: Exhaust Gas Temp (E			
ensor: Fuel Pressure			
ensor: Manifold Pressure (M./			
ensor: Mass Air Flow (MAF)	-		
ensor: O2 #1 (AFR) ensor: O2 #2 (AFR)			
ensor: Oil Pressure			
ensor: Spare Pressure 1			
ensor: Spare Pressure 2			
ensor: Spare Temp 1			
ensor: Spare Temp 2 ensor: Vehicle Speed (VSS)			
etup: AEMNet Receive	Configuration Notes:		
etup: Automatic Transmissior etup: Variable Valve Control i elemetry: AEMNet	This wizard will enter in the default CAN for a CAN Datastream Gauge.	I Telemetry settings into the	calibration file 🔺
elemetry: Serial	WARNING: Settings from other Series firmware version, this wizard must be us		

Now that the datastream is matched, this will build the basis for the standard transmit and save some time in configuration.

2. Now we must create the CAN Message Data. Note that there will be different CAN transmissions for cars using the AEM V2 to control an automatic transmission vs cars running Flex Fuel. We do this in order to get the most amount of Data out of V2 given it's limited communication size. In order to do this, navigate to Tools / Configure Telemetry / CAN Telemetry:



Standard CAN transmission:

(Manual transmission cars with or without flex fuel):

Genera					
CAN Te	elemetry 🗹 Ena	able	Speed	500 kbps V	
AN M	essage 1 CAN Mess	sage 2 CAN Messa	ge 3 CAN Me	ssage 4	
ID: (x01F0A000	Use Extended	d Format		
Data					
Byte	Channel	Channel Alias			
1	Engine Speed				
2	Used by Last Byte				
3	Engine Load				
4	Used by Last Byte				
5	Throttle				
6	Used by Last Byte				
7	Air Temp				
8	Coolant Temp				
_	1	1			

Change Byte 3 from "Engine Load" to "MAP Voltage" AEM V2 is not capable of outputting the MAP pressure on the CAN bus, so we will need to put in a scalar and offset in the gauge in order to get our MAP Pressure.

CAN Message 1 should now look like this:

AN Te	elemetry 🖂 Ena	able Speed	500 kbps 🗸
	,		
AN M	essage 1 CAN Mess	age 2 CAN Message 3 CAN M	Message 4
D: (x01F0A000	Use Extended Format	
Data			
Byte		Channel Alias	
1	Engine Speed		
2	Used by Last Byte		
3	MAP Volts ~		
4	Used by Last Byte		
5	Throttle		
6	Used by Last Byte		
7	Air Temp		
8	Coolant Temp		

Notice that "MAP Volts" may change to one of the ADCR channels once you have made your selection. This behavior is

Genera	al			
CAN T	elemetry 🗹 En	nable	Speed	500 kbps 🗸 🗸
CAN M	essage 1 CAN Mes	ssage 2 CAN Message	3 CAN Me	ssage 4
ID:	0x01F0A000	Use Extended Fo	rmat	
Data		-		
Byte 1	Channel Engine Speed	Channel Alias		
Byte 1 2				
1	Engine Speed			
1 2	Engine Speed Used by Last Byte	MAP Volts		
1 2 3	Engine Speed Used by Last Byte ADCR02	MAP Volts		
1 2 3 4	Engine Speed Used by Last Byte ADCR02 Used by Last Byte	MAP Volts		
1 2 3 4 5	Engine Speed Used by Last Byte ADCR02 Used by Last Byte Throttle	MAP Volts		

1. Now we must create CAN Message 2. Match CAN message 2 to the following:

CAN Teler	metry		
CAN M	elemetry 🗹 En	able sage 2 CAN Message 3	
Data	Channel	Channel Alias	
Byte 1		Flex Fuel Freq, Flex Fuel	Per
2 3 4 5 6	Used by Last Byte Flex Fuel Temp Timing Errors Fuel Pressure Oil Pressure		
7	EGT 1		
8	EGT 2		

2. Now create CAN Message 3 to match the following:

-	1				
Genera	3				
CAN T	elemetry 🗹 En	nable	Speed	500 kbps	~
CAN M	lessage 1 CAN Mes	ssage 2 CAN Me	essage 3 CAN M	essage 4	
D. D					
ID: (x01F0A002	Use Exten	ded Format		
Data			-		
	Channel	Channel Alias	•		
Data Byte 1	Channel O2 #1 FB Value	Channel Alias	•		
		Channel Alias	•		
Byte 1	O2 #1 FB Value	Channel Alias	•		
Byte 1 2	O2 #1 FB Value Used by Last Byte	Channel Alias	•		
Byte 1 2 3	O2 #1 FB Value Used by Last Byte O2 Target	Channel Alias	•		
Byte 1 2 3 4	O2 #1 FB Value Used by Last Byte O2 Target Spare Temp 1	Channel Alias	•		
Byte 1 2 3 4 5	O2 #1 FB Value Used by Last Byte O2 Target Spare Temp 1 Boost Target	Channel Alias	•		

3. Now given the wizard's auto configuration, CAN Message 4 should already look like the following:

CAN Telemetry

AN T	elemetry 🗹 En	able	Speed	500 kbps 🗸 🗸
AN M	lessage 1 CAN Mes	sage 2 CAN Message 3	CAN Mes	sage 4
): (x01F0A003	Use Extended Form	nat	
Data				
Byte	Channel	Channel Alias		
1	O2 #1			
-	02 #2			
2 3	O2 #2 Vehicle Speed			
2 3	and the second se			
2 3 4	Vehicle Speed			
2 3 4 5	Vehicle Speed Used by Last Byte			
2	Vehicle Speed Used by Last Byte Gear Calculated			

4. Skip the Automatic Transmission CAN protocol configuration and proceed to step # 7 on generating the CAN multiplier sheet on the bottom half of page 14 in this document.

Auto CAN transmission:

(Automatic transmission cars):

Can Message 1 should look like this:

Change Byte 3 from "Engine Load" to "MAP Voltage" AEM V2 is not capable of outputting the MAP pressure on the CAN bus, so we will need to put in a scalar and offset in the gauge in order to get our MAP Pressure.

CAN Message 1 should now look like this:

N Telen	netry			
Genera				[]
CAN Te	elemetry 🗹 Ena	able	Speed	500 kbps 🗸
CAN M	essage 1 CAN Mess	sage 2 CAN Message 3	CAN Mes	ssage 4
ID: T	01504000			
ID. [0x01F0A000	Use Extended Form	lat	
Data				
Byte	Channel	Channel Alias		
1	Engine Speed			
2	Used by Last Byte			
3	MAP Volts 🗸 🗸	MAP Volts		
4	MAP Volts	A		
5	Miss Time			
6	Missed Motor 1 Analog In			
7	Motor 1 Error			
8	Motor 1 Position			

Notice that "MAP Volts" may change to one of the ADCR channels once you have made your selection. This behavior is normal:

CAN Telemetry

AN Te	elemetry 🗹 En	able	Speed	500 kbps ~
AN M	essage 1 CAN Mess	sage 2 CAN Message 3	CAN Mes	sage 4
D: [x01F0A000	Use Extended Form	nat	
Data				
Byte	Channel	Channel Alias		
1	Engine Speed			
	Engine Speed Used by Last Byte			
1 2 3		MAP Volts		
2 3	Used by Last Byte	MAP Volts		
2	Used by Last Byte ADCR02	MAP Volts		
2 3 4 5	Used by Last Byte ADCR02 Used by Last Byte	MAP Volts		
2 3 4	Used by Last Byte ADCR02 Used by Last Byte Throttle	MAP Volts		

4A. Now we must create CAN Message 2. Match CAN message 2 to the following:

Genera	al			
CAN T	elemetry 🗹 Enable	L.	Speed	500 kbps V
CAN M	lessage 1 CAN Message	e 2 CAN Message 3	CAN Mes	sage 4
ID: C	x01F0A001	Use Extended Form	nat	
Ľ				
Data				
Data	Channel	Channel Alian		
Byte	Channel	Channel Alias		
Byte 1	Spare Temp 2		T. Goor O	var Driva A/T Gazr Razdu A/T Gazr
Byte 1 2	Spare Temp 2 A/T Gear Change Rqd		T Gear Ov	ver Drive, A/T Gear Ready, A/T Gear
Byte 1 2 3	Spare Temp 2 A/T Gear Change Rqd A/T Gear Selector		T Gear Ov	ver Drive, A/T Gear Ready, A/T Gear
Byte 1 2 3 4	Spare Temp 2 A/T Gear Change Rqd A/T Gear Selector Timing Errors		T Gear Ov	/er Drive, A/T Gear Ready, A/T Gear
Byte 1 2 3 4 5	Spare Temp 2 A/T Gear Change Rqd A/T Gear Selector Timing Errors Fuel Pressure		T Gear O	/er Drive, A/T Gear Ready, A/T Gear
Byte 1 2 3 4	Spare Temp 2 A/T Gear Change Rqd A/T Gear Selector Timing Errors		T Gear Ov	ver Drive, A/T Gear Ready, A/T Gear

5A. Now create CAN Message 3 to match the following:

Genera	al			
AN T	elemetry 🗹 En	nable	Speed	500 kbps \sim
AN M	lessage 1 CAN Mes	sage 2 CAN Message 3	CAN Mes	sage 4
L	x01F0A002	Use Extended Fom	liat	
Data		-		
	Channel	Channel Alias		
Byte 1	Channel O2 #1 FB Value	Channel Alias		
Byte 1		Channel Alias		
Byte 1 2	O2 #1 FB Value	Channel Alias		
Byte 1 2 3	O2 #1 FB Value Used by Last Byte	Channel Alias		
Byte 1 2 3 4	O2 #1 FB Value Used by Last Byte O2 Target	Channel Alias		
Byte 1 2 3 4 5	O2 #1 FB Value Used by Last Byte O2 Target Spare Temp 1	Channel Alias		
Data Byte 1 2 3 4 5 6 7	O2 #1 FB Value Used by Last Byte O2 Target Spare Temp 1 Boost Target	Channel Alias		

6A. Now given the wizard's auto configuration, CAN Message 4 should already look like the following, with exception of the "Gear Calculated". Change this to "A/T Gear".

Genera	al			
CAN T	elemetry 🔽 En	able	Speed	500 kbps
CAN M	essage 1 CAN Mes	sage 2 CAN Mess	age 3 CAN Mes	ssage 4
ID:	x01F0A003	Use Extende	d Format	
Data				
Byte	Channel	Channel Alias		
1	O2 #1			
2	O2 #2			
3	Vehicle Speed			
4	Used by Last Byte			
5	A/T Gear V			
6	Ign Timing			
7	Battery Volts			
8	Used by Last Byte			

7. Generate the Multiplier Sheet:

Click on "Show Info" in order to generate the CAN Configuration Sheet with the Scalars and Offsets. We will need this info in order to ensure that the displays are accurate. Click "Show Info..." to generate the sheet.

CAN Te	elemetry 🗹 En	able	Speed	500 kbps 🛛 🗸	
AN M	essage 1 CAN Mes	sage 2 CAN Message 3	CAN Mes	ssage 4	
ID: (x01F0A000	Use Extended Fom	nat		
Data					
Byte 1	Channel Engine Speed	Channel Alias			
2	Used by Last Byte				
3	ADCR02	MAP Volts			
4	Used by Last Byte				
5	Throttle				
6	Used by Last Byte				
7	Air Temp				
8	Coolant Temp				

Notice that sometimes it is possible to get an error when generating this sheet. You may have to click "Ignore" up to 3 times in order to get past this.

ç 🚫 F	at 0.A.0(Html at 0.A.Genera at AEM.AEMT at System.Wir at System.Wir	TextWriter, CANTe teHTMLReport(CA FunerUI.CANTelem ndows.Forms.Cont ndows.Forms.Butto		entArgs) e) e)	ation)
	at System.Wir at System.Wir	ndows.Forms.Cont ndows.Forms.Cont		sage& m, MouseButtons butt & m)	on, Int32 clicks)
		Abort	Retry	Ignore	

Telemetry Info

CAN Telemetry Settings

CAN Telemetry:	Enabled
Speed:	500 kbps

CAN Message Data

CAN Message 1

ID: 0x01F0A000

Byte	Name	Units	Scalar	Offset	Min	Max	Signed?	Bitmask
1	Engine Speed [msb]	rpm	0.390625	0	0.0	25599.6	No	
2	Engine Speed [lsb]							
3	ADCR02 [msb]	Volts	7.78198227635585E-05	0	0.0000	5.0999	No	
	(MAP Volts [msb])	Volts	7.78198227635585E-05	0	0.0000	5.0999	No	
4	ADCR02 [lsb]							
5	Throttle [msb]	%	0.00152587890625	0	0.000	99.998	No	
6	Throttle [lsb]							
7	Air Temp	°C	1	0	-128	127	Yes	
8	Coolant Temp	°C	1	0	-128	127	Yes	
) indic	ates alias channels.'							

CAN Message 2

ID: 0x01F0A001

Byte	Name	Units	Scalar	Offset	Min	Max	Signed?	Bitmask
1	Flex Fuel Content [msb]	%	1	-49	-31	1253083	No	
	(Flex Fuel Freq [msb])	Hz	1	1	19.1	1253132.9	No	
	(Flex Fuel Per [msb])	ms	0.000798000022768974	0	0.0000	52.2969	No	
2	Flex Fuel Content [lsb]							

Once the CAN Telemetry Settings Sheet is generated, the Fuel Pressure Scalar, Oil Pressure Scalar, Boost Target Scalar, O2 Scalar, and O2 Offset must be verified

Operation:

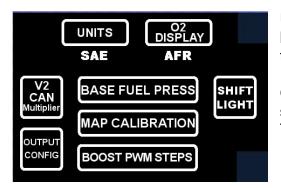
Upon powering up a properly terminated gauge, the Gauge will display the interface and version number.

Gauge Setup Options:

Touch the cog wheel on the touch screen in order to configure the gauge.



This will bring you into a screen where the Boost Control and Settings can be accessed. Press the SETTINGS button will allow you to make the following changes:



UNITS button will allow the user to toggle between SAE and SI units. This applies to temperature, pressure, speed, and distance.

O2 DISPLAY button will change how the Oxygen sensor data is displayed. The options are AFR and Lambda.



V2 CAN Multiplier:

This setup is critical in how the gauge functions and determines what data is brought in and how accurate it is.

First, select what type of setup this is: Select "MANUAL/FLEX" or "AUTO" and press "NEXT" to continue.

Now we will need to refer to the CAN Telemetry info sheet that we generated earlier. Use this to adjust the Fuel Pressure Scalar, Oil Pressure

Scalar, Boost Target Scalar, O2 Scalar, and O2 offset. Proceed through the menu and press next if the current value is correct. If the value needs to be adjusted, make the adjustments and press "NEXT" until the configuration is complete.

If the value in the gauge does not match the value on the sheet, adjust the value for said scalar or offset

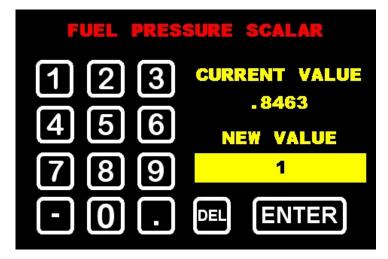
Example:

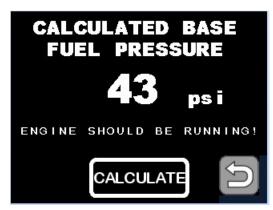
Telemetry Info

CAN Message 2

ID: 0x01F0A001

Byte	e Name	Units	Scalar	Offset	Min	Max	Signed?	Bitmask
1	Flex Fuel Content [msb]	%	1	-49	-31	1253083	No	
	(Flex Fuel Freq [msb])	Hz	1	1	19.1	1253132.9	No	
	(Flex Fuel Per [msb])	ms	0.000798000022768974	0	0.0000	52.2969	No	
2	Flex Fuel Content [lsb]							
3	Fuel Pressure	psi	1	0	0	255	No	
4	Oil Pressure	psi	1	0	0	255	No	
5	Boost Target [msb]	%	0.863281291003659	0	0.0	25599.6	No	
6	Boost Target [lsb]							
7	EGT 1	°C	5	0	0	1275	No	
8	EGT 2	°C	5	0	0	1275	No	





Base Fuel Pressure configuration:

In order to calculate the base fuel pressure, the engine should be idling. Press the CALCULATE button and the base pressure will be calculated and displayed. This is used on the fuel screen in order to graph the fuel pressure vs. boost pressure for simple regulator function verification.

NAP SENSOR	CONF I GURATION
AEN 3.5 Bar	CURRENT VALUE
AEN 5 Bar	AEN 3.5 Bar
Omni 3 Bar	Multiplier
Omni 4 Bar	10.9 Offset
GN 3 Bar	10.9
Cus t om	

MAP CALIBRATION:

Given the nature of AEM V2's MAP sensor output on the CAN BUS, the proper MAP sensor that is being used must be selected here. Failure to do so, will result in improper MAP sensor readings.

Pro tip The number in the multiplier is the pressure value in psi that 1 volt will yield. The offset is the number needed to zero out the absolute pressure.

SHIFT LIGHT		
GEAR	RPM	0
1	10000	പ്പ
2	10000	
3	10000	TOUCH RPM
4	10000	TO CHANGE
5	10000	
6	10000	

OUTPUT CONFIGURATION

OUTPUT #1

NITROUS ARM

NITROUS PURGE

LINE LOCK

ENTER

Shift Light Configuration:

Touch the gear that you wish to change the shift light RPM on. That gear number will appear above the up and down arrows for verification. Use the up and down arrows to adjust the shift light RPM set-point of said gear. Press the back arrow button at the bottom right hand corner to save the settings. The shift light should flash once the settings are saved.

Output Configuration

The 2 outputs on the display may be configured to behave in different ways. This will determine what button options will be available to the user. Using the output for Boost Control, the output can be scaled dependant on the "Boost PWM Steps" This will make the output a 0-5 volt signal. Setting the output to be either "NITROUS ARM" or "LINE LOCK" will allow the use of a latching 5 volt output and selecting the "NITROUS PURGE" option will create a momentary 5 volt output.

Note that this is a **low current** output and is suitable for connecting to an input on the ECU.

If you wish to use the Nitrous Arm, Nitrous Purge, or Line Lock directly to the solenoid, relay or system, we do offer a low voltage to 12 volt 10 amp optically isolated relay in both 1 and 2 channels.

1 channel BTI part number: TTL-RLYx1



2 channel BTI part number: TTL-RLYx2

BOOST PWM Steps:

Use this feature to determine how many steps are to be programmed in the AEM Tuner software for

Boost . Typically the scale is from 0-5 volts and the max amount of steps allowed is 7 which give you 8 settings (0-7). Example: a value of 7 here would make each step would have a value of .71 volts. A value of 1 here would give the step a value of 5 volts. It is **imperative** to view each step in the AEM tuner software when configuring this as there could be a potential difference with regard to ground.

** Note that these two settings should be configured by competent personnel. Raising the BOOST too much can have severe consequences. **

Boost Control settings must be configured in the AEM Tuner software.

It is imperative to configure these inputs correctly. (if you are uncomfortable here, please take your vehicle to a competent shop)

Warranty:

All BTI Gauges carry a 1 year warranty effective at the time of purchase.

This warranty extends only to products distributed and/or sold by BTI Gauges. It is effective only if the products are purchased and operated in the USA. (Within the USA including US 48 States, Alaska and Hawaii.)
 This warranty covers only normal use of the computer. BTI Gauges shall not be liable under this warranty if any damage or defect results from (i) misuse, abuse, neglect, improper shipping or installation; (ii) disasters such as fire, flood, lightning or improper electric current; or (iii) service or alteration by anyone other than an authorized BTI Gauge representative.
 You must retain your bill of sale or other proof of purchase to receive warranty service.

 \Box No warranty extension will be granted for any replacement part(s) furnished to the purchaser in fulfillment of this warranty.

□ Warranty claims must be sent to sales@btigauges.com.