X-GAUGE™

Overview

While all OBDII compliant vehicles supply a "standard" set of data that ScanGauge can read, some makes and models of vehicles can supply additional information beyond the standard set of data.

Your ScanGauge features the exclusive X-GAUGE™ Programmable Gauge System that provides you a method to tap into this additional information. The X-GAUGE feature allows you to extend the capabilities of your ScanGauge to include things like: vehicle specific gauges, trip data as gauges, and special function gauges.

Programing a new X-GAUGE and saving it to your ScanGauge is simple and easy. Each X-GAUGE consists of specific alpha-numeric strings, or "codes," you enter into the ScanGauge via the front panel push buttons. Your ScanGauge provides enough internal memory to save up to 25 X-GAUGES.

An extensive library of X-GAUGE codes for many different vehicles can be found on our Web site at **www.scangauge.com/support**
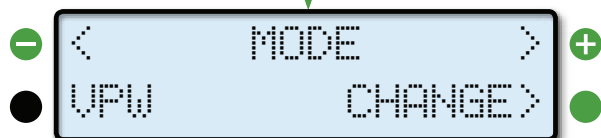
Accessing X-GAUGE Features

From the Home Screen, press the lower right function button twice, next to MORE.

Next, use the upper left and right function buttons to cycle through the available options until the screen titled X-GAUGE appears.
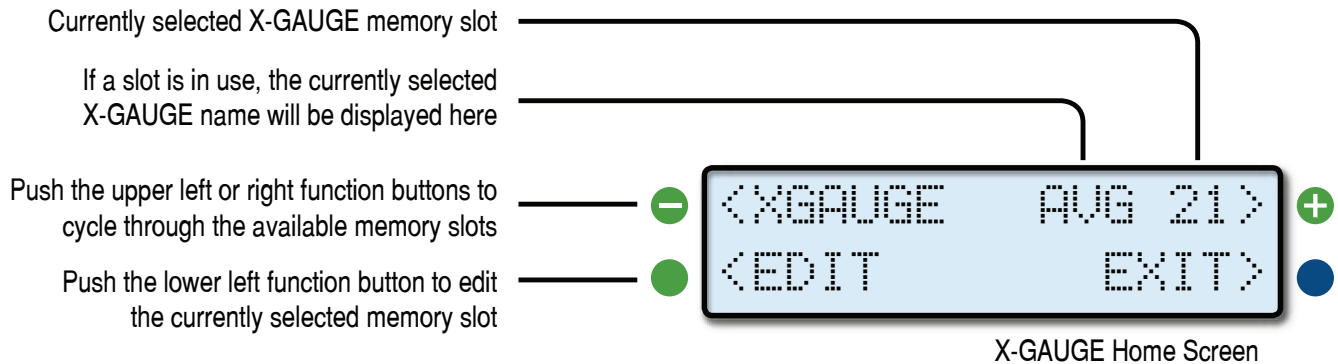
Finally, press the lower right function button next to EDIT to enter X-GAUGE.

The X-GAUGE Home Screen

From the X-GAUGE Screen, pressing the upper left and upper right buttons allows you to cycle through the 25 available memory slots (0-24). Each memory slot can store an individual X-GAUGE.

If the memory slot is in use, the 3-letter name for the gauge will be shown in the top line next to the memory number. If no name is shown, this memory slot is not being used.
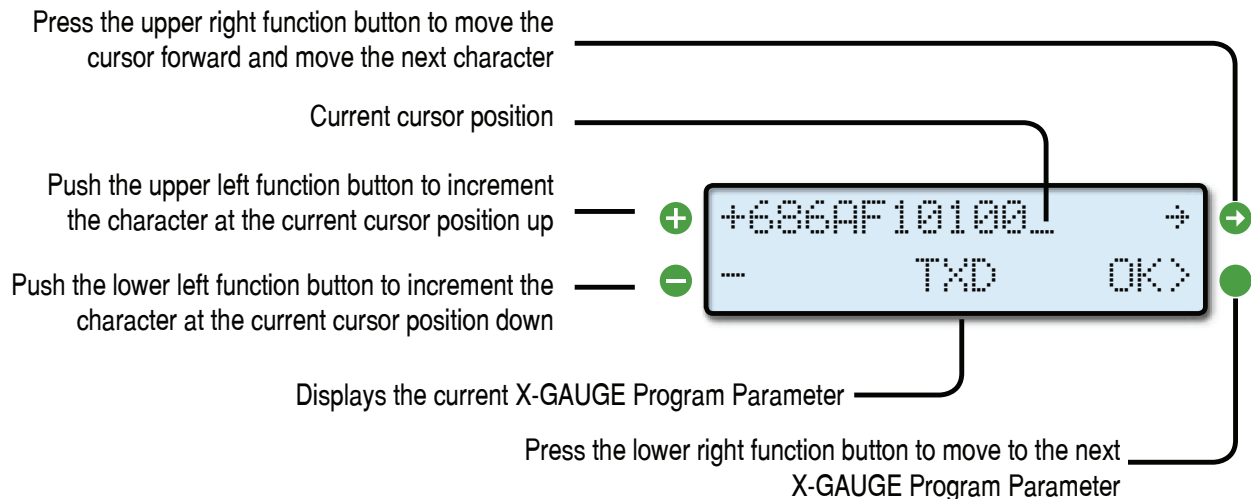
Currently selected X-GAUGE memory slot

If a slot is in use, the currently selected X-GAUGE name will be displayed here

Push the upper left or right function buttons to cycle through the available memory slots

Push the lower left function button to edit the currently selected memory slot

```
<XGAUGE    AVG 21>
<EDIT         EXIT>
```

X-GAUGE Home Screen

Add or Edit an X-GAUGE

To add a custom X-GAUGE to your ScanGauge, you will need to program the gauge parameters into the ScanGauge using the X-GAUGE Program Parameters Screens. In order to read the data from the vehicle and set up a functional X-GAUGE, you need to have the following information:

- Command to send
- How to identify a response to the command
- Where to find the data in the response
- How to scale, offset and display the data.

The X-GAUGE Program Parameter Screen

An X-GAUGE is entered into the ScanGauge through a series of X-GAUGE Program Parameters. Each X-GAUGE consists of 4 program parameter screens — TXD, RXF, RXD and MTH — as well as one gauge name screen.

Press the upper right function button to move the cursor forward and move the next character

Current cursor position

Push the upper left function button to increment the character at the current cursor position up

Push the lower left function button to increment the character at the current cursor position down

```
+686AF10100_    →
 ...      TXD     OK>
```

Displays the current X-GAUGE Program Parameter

Press the lower right function button to move to the next X-GAUGE Program Parameter

Programming Your Own X-GAUGE

Step 1 - Select an Empty Memory Slot

Start by selecting an empty memory slot by using the upper left and right buttons. Next, press the EDIT button.

Step 2 - Enter the TXD Data

The TXD on the lower line means that the value being entered is the command that will be transmitted to the vehicle's computer.

IMPORTANT: Entries must be an even number of characters. If an odd number of characters is entered, a 0 will be appended to the string to make it even.

A nonspace entry must be made in the first character location, or the X-GAUGE will not be an active gauge.

If the TXD value is blank, no name will be shown; and this X-GAUGE memory will not appear as a selectable gauge.
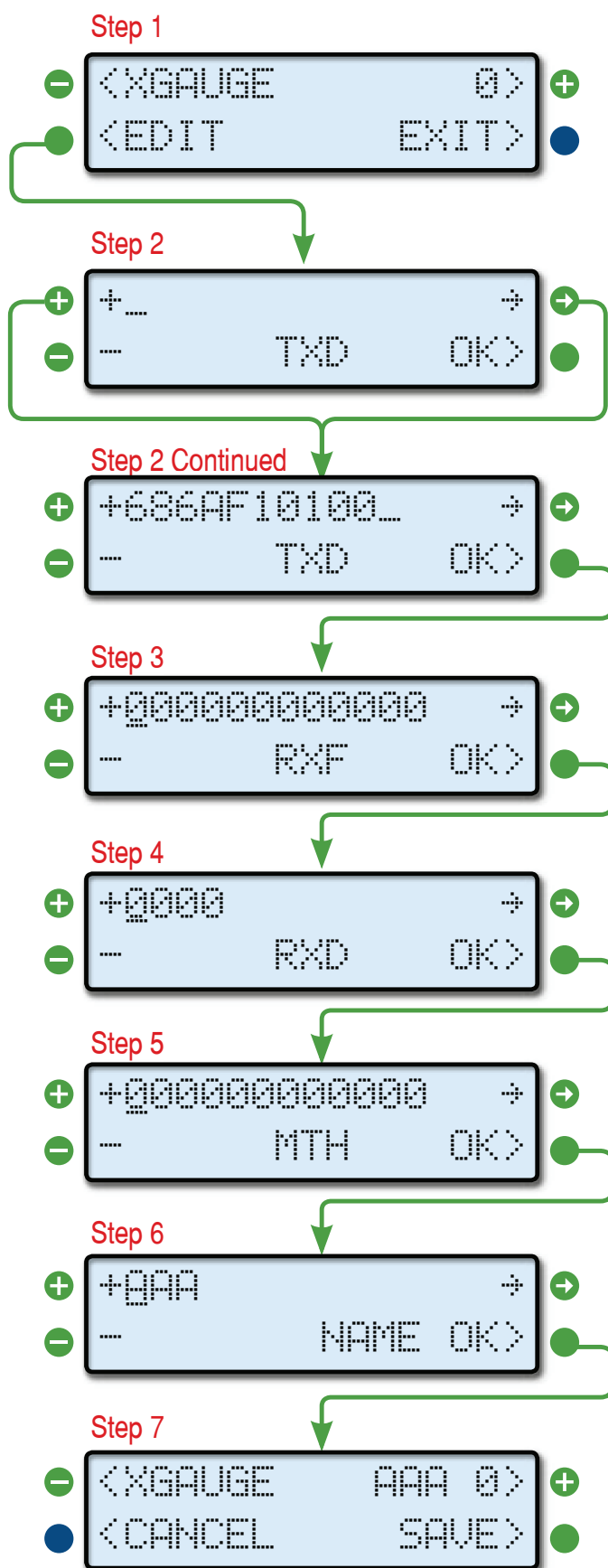
Step 3 - Enter the RXF Data

The RXF Screen is the entry for the receive filter. This value tells the ScanGauge what to look for in a response from the vehicle's computer.

Also, some of the entries tell the ScanGauge how to display the data. Choices are integer, tenths, hundreds, hexadecimal or on/off. There are also some fields that can turn any trip value into a gauge. When you're done, press the OK button to proceed to the next step.

Step 4 - Enter the RXD Data

The RXD Screen is the entry that tells the ScanGauge where the data and its size are in the response. Entry in this screen is done the same as the other X-GAUGE entry screens. When you're done, press the OK button to proceed to the next step.

Step 1

```
<XGAUGE        0>
<EDIT       EXIT>
```

Step 2

```
+_                →
—        TXD    OK>
```

Step 2 Continued

```
+686AF10100_     →
—        TXD    OK>
```

Step 3

```
+00000000000     →
—        RXF    OK>
```

Step 4

```
+0000            →
—        RXD    OK>
```

Step 5

```
+00000000000     →
—        MTH    OK>
```

Step 6

```
+AAA             →
—        NAME  OK>
```

Step 7

```
<XGAUGE    AAA 0>
<CANCEL     SAVE>
```

Step 5 - Enter the MTH Data

The MTH (math) screen tells the ScanGauge the math needed to scale and/or offset the value received for the X-GAUGE entry screens. When you're done, press the OK button to proceed to the next step.

Step 6 - Give Your Gauge a Name

The Name Screen allows you to input a 3-letter designator for the name of the gauge you are making. This screen allows a complete ASCII set of characters to be used. This includes punctuation and symbols. You can give the gauge any 3-character name. Please note, you can give your new gauge a name that matches those that are already defined. This should be avoided as it can cause confusion.

When you're done, press the OK button to proceed to the next step.

Step 7 - Saving Your X-GAUGE

To save your new X-GAUGE programming, press the lower right function button next to SAVE. If you wish to discard the changes you have made, press CANCEL. This will cause all the modifications to the X-GAUGE memory slot to be canceled and not saved.

```
⊖  <XGAUGE    AAA 0>  ⊕
⊙  <EDIT       EXIT>  ⬤
```
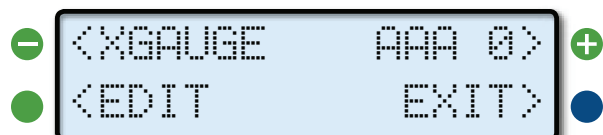
Pressing SAVE will return you to the X-GAUGE Home Screen. The new X-GAUGE name will also appear in the top line, next to the memory slot number.

Copying an X-GAUGE To a Different Memory Slot

If you want to program a new X-GAUGE that is very similar to one you have already entered, you can copy the program peramter data in one X-GAUGE memory slot to another.

Step 1 - Select an X-GAUGE to Copy

Start by selecting the X-GAUGE you would like to copy. Use the upper left and right function buttons to cycle through the X-GAUGE memory slots until you locate the X-GAUGE you want to copy. Next press the lower left function button next to EDIT.

Steps 2-6 - Edit The Program Parameters

Step through the settings and edit the selected X-GAUGE's program parameters as needed for the new X-GAUGE.

Step 7 - Change Memory Slot and Save

Before pressing SAVE, use the upper left and right function buttons to select a new memory slot.
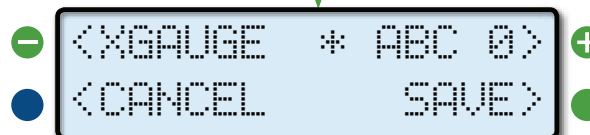
If an asterisk (*) is present in the top line next to the new X-GAUGE name, then there is already an

Step 1 (select an X-GAUGE)

```
⊖  <XGAUGE    AAA 0>  ⊕
⊙  <EDIT       EXIT>  ⬤
```

```
⊖   Follow Steps 2 thru 6 of      ⊕
⊙   Programing Your Own X-GAUGE    ⬤
```

Step 7

```
⊖  <XGAUGE  * ABC 0>  ⊕
⬤  <CANCEL     SAVE>  ⊙
```

Step 7 (continued)

```
⊖  <XGAUGE    ABC 1>  ⊕
⬤  <CANCEL     SAVE>  ⊙
```

Saving an X-GAUGE in a particular memory slot will overwrite any X-GAUGE data that may already be saved in that memory slot.

X-GAUGE saved in that memory slot. Saving the new X-GAUGE in that particular slot will overwrite any X-GAUGE data already present in that memory slot. Once you have the desired memory slot selected, press lower right function button next to SAVE. All the data will be written to that X-GAUGE memory slot, leaving the previously selected memory slot unchanged.

Disabling an X-GAUGE

To disable an X-GAUGE already in memory, start as if you were going to edit the gauge. In the TXD Screen, change the first character to a space. Continue to step through the editing fields by pressing the lower right function button next to OK and press SAVE to exit the screen. This will actually delete the data to transmit, which tells the ScanGauge not to use this X-GAUGE. The name will not be displayed. If you put transmit data back into this gauge, it will be reactivated.

Displaying a Trip Value as an X-GAUGE

You can set any of the built-in trip values and have them displayed as a gauge. This allows you to monitor trip functions along with other gauge functions.

In the example to the right, a custom X-GAUGE that displays the Time Driven Today is set up.

Step 1

To get started, choose an empty memory slot from the X-GAUGE Screen. Then press the lower left function buttons next to EDIT.

Step 2

In the TXD Screen, the first character determines which trip function will be displayed. Choose a number from the **Available Trip Parameters** chart on the next page.

The second character determines which trip to use. Choose a number from the **Trip Designations** chart on the next page.
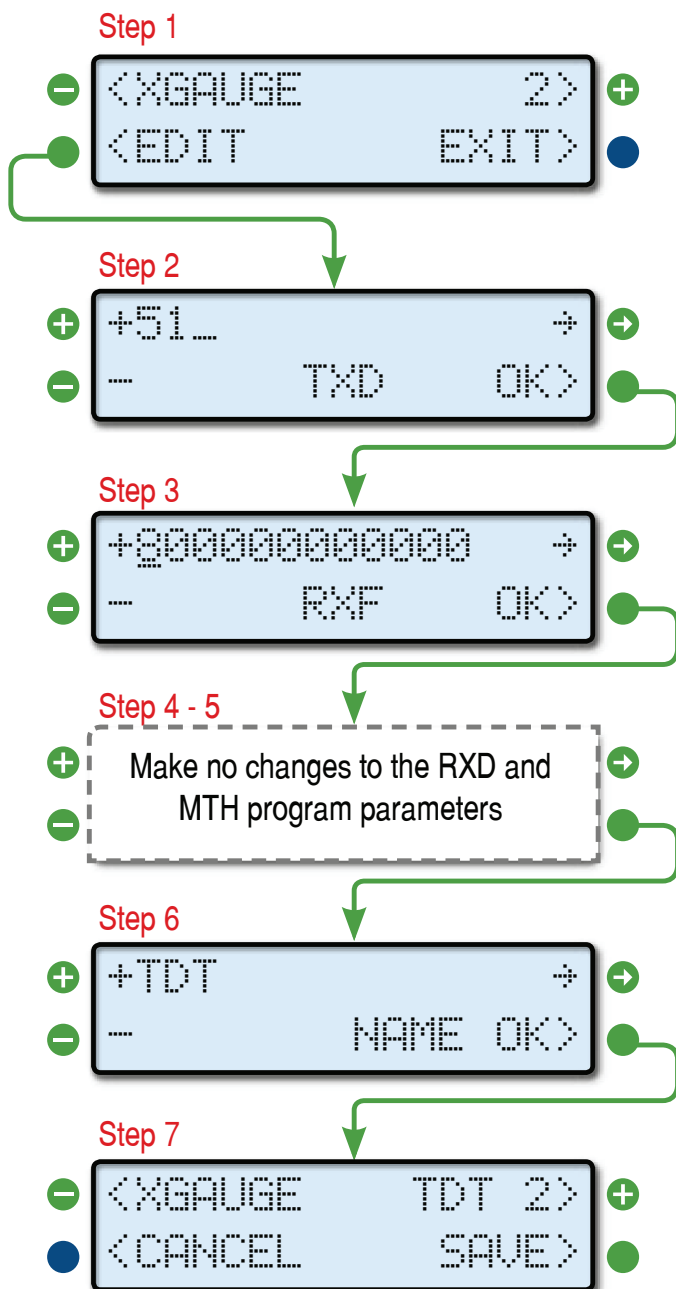
When you're done, press the lower right function button next to OK to move to the next screen.

Step 3

For RXF, make the first character an 8 as shown to the right.

An 8 as the first character is a special condition that tells the ScanGauge that this is to be a trip gauge. All values after the 8 are ignored.

When you're done, press the lower right function button next to OK to move to the next screen.

Step 1
```
<XGAUGE        2>
<EDIT       EXIT>
```

Step 2
```
+51_            →
—        TXD   OK>
```

Step 3
```
+800000000000   →
—        RXF   OK>
```

Step 4 - 5
Make no changes to the RXD and MTH program parameters

Step 6
```
+TDT            →
—        NAME  OK>
```

Step 7
```
<XGAUGE    TDT 2>
<CANCEL     SAVE>
```

Steps 4 and 5

Do not make any changes to the RXD and MTH screens. Simply press the lower right function button next to OK until you reach the name screen.

Available Trip Parameters	
Parameter	**Trip Name**
0	Average Fuel Economy
1	Fuel used
2	Max Coolant Temperature or Fuel Remaining for TANK trip
3	Distance
4	Max RPM or Distance to Empty for TANK trip
5	Time
6	Max Speed or Time to Empty for TANK trip
7	Average Speed
8	Cost

Step 6

Enter a name for your new X-GAUGE. For this example, we used TDT for Time Driven Today. When you're done, press the lower right function button next to OK, to move to the next screen.

Step 7

To complete this X-GAUGE, press lower right function button next to SAVE. Once saved, the new X-GAUGE will be available on the GAUGE screen along with other gauges (see page 23).

Trip Designations	
Designation	**Trip Name**
0	Current Trip
1	Today's Trip
2	Previous Day's Trip
3	Tank Trip

Using an X-GAUGE

After an X-GAUGE has been created, it can be selected like any other gauge. In the Gauge screen (see page 23), press the function button next to the gauge position you want to use for the X-GAUGE. Keep pressing as needed until the X-GAUGE name appears.

For instance, if the following screen were visible, pressing the button next to RPM a number of times would eventually reach TDT.

Example Gauge Screen

Push the function buttons to cycle through the available Digital Gauges.