**CR1000-04 Gauge Demo with Settings**

The purpose of this document is to describe the functionality of this database. The database will run, fully functional, without intervention. However, should you want to showcase features of the CR1000 and Crimson 3.1, we've added a pause button, a shortcut button & an interactive screen.

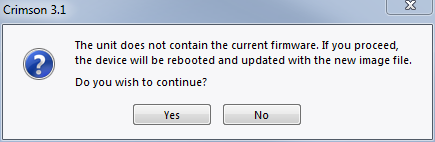
**Pause Button**

The pause button is in the lower right hand corner of every page. When pressed, it will light up, and the page will not move to the next in the series.

**Shortcut**

There is a darkened triangle in the lower left-hand corner of every screen but the last four. This triangle executes the action GoToPage(Circle\_Customize) which is the screen set up for you to be able to show customers how some of the gauge customization features work.

**First Time**



The first time you connect & download the database to your HMI, you may get this notice. Click Yes to continue.

**Data Tags**

There are minimal data tags used in this database. The way the values change in the gauges is by using the command GetUpDownData(DispCount,xx) where xx is the maximum value you want a value to reach before heading back "down" in the other direction.

If you change the value xx in that formula, be sure to change the Max value of the gauge to reflect whatever you put in the Value string above.

There are data tags that have been set up for the customizable gauge at the end of the series of screens. (CG is the folder name for the **C**ustomizable **G**auge data tags.)

They are defined as follows:

|  |  |  |
| --- | --- | --- |
| **Tag Name** | **Meaning** | **Initial Value** |
| Pause | Flag tag (True/false). If this tag is True, the pages will not move from one to the next. | False |
| TagMath | This demonstrates a tag having a general formula in it (versus directly in the value field of the primitive). It's just another way to show how versatile Crimson is – you can assign values at the primitive level, the tag level or by writing a program. | GetUpDownData(DispCount,100) |
| CG.B1\_Start | Band 1 start –the lower end number of a green band on the gauge | 20 |
| CG.B1\_End | Band 1 end – the upper end number of a green band on the gauge | 35 |
| CG.B2\_Start | Band 2 start – the lower end number of a red band on the gauge (set above/greater than the B1\_End value) | 75 |
| CG.B2\_End | Band 2 end – the upper end number of a red band on the gauge, the high end of which is set by | 90 |
| CG.MaxValue | The maximum value on the gauge. | 100 |

**Initial Values**

Initial values are set in the Pages area of Crimson 3.1. They're already established at power up and no action is required on your part unless you want to modify initial values.

**Caution**

We have not restricted values on these data tags beyond setting the maximum value of 500. What this means is you can accidentally create a Start value that is greater than an End value. What happens in that instance is the band will simply not appear. You can of course change the values to be dependent on each other (all end values are at least 5 greater than whatever the start value is, that kind of thing) but we did not set it up that way for this demo.

**Included Screens**



Figure 1 SQ\_NoTag Page

Crimson 3.1 includes a variety of gauges, with a breadth of customizations offered for each gauge.

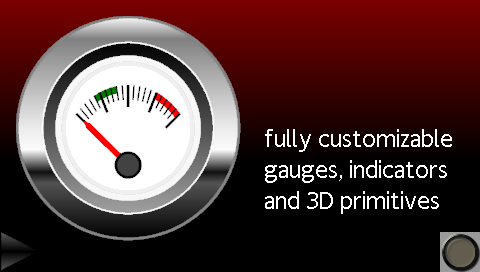


Figure 2 Circle

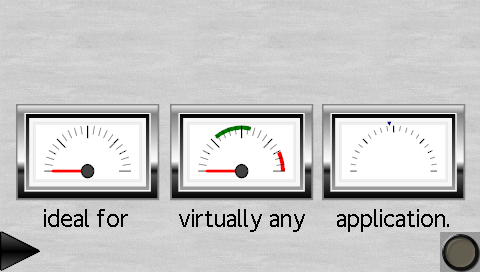


Figure 3 Screens 3-5 (A4\_Radial)

In this page, we show the same gauge with various options, including bands, bugs (the blue mark) and "sweep" option (versus a needle). We also show a new capability, the ability to fill primitives (in this case, the rectangle that makes up the background) with a fill other than a color (in this case, 'metal').

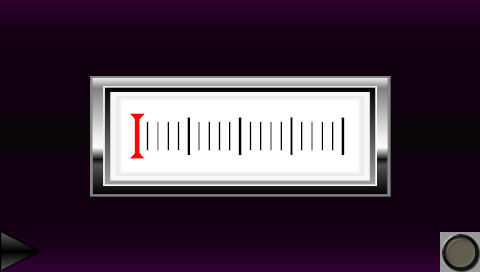


Figure 4 Bar



Figure 5 Circle\_1 Page

These next screens show how a gauge can be adapted to meet the needs of a customer's process, including



Figure 6 Circle\_2 Page

adding numbers on the face of the gauge itself



Figure 7 Circle\_3 Page

Add bands to show where ideal or



Figure 8 Circle\_4 Page

at-risk values are for a given process, or add



Figure 9 Circle\_5 Page

Corresponding lights to the screen to ensure operator comprehension.



Figure 10 Circle\_6 Page

This screen shows that the face of the gauge can be further modified to add space for additional text or information for operators.

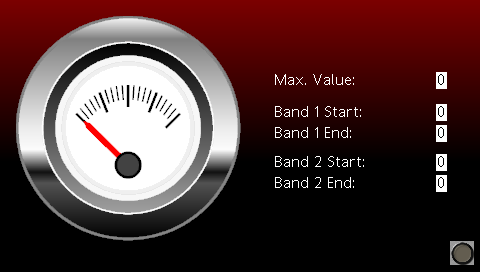


Figure 11 Circle\_Customize

The gauge on this screen will move up and down on its own based on the refresh rate of the screen, just like all the other pages.

However, this page is customizable.

TIP: PRESS PAUSE button first to keep this screen up. You can control how fast or slow the needle moves by changing the Max Value. (The smaller the number, the faster it will move up and down).

The purpose of this screen is to show customers that they can assign data tags (variables) to features of the gauges, and in that way, create a page that adapts to the process, versus having to create multiple screens depending on what recipe or process is being controlled.