



How to Create Arrays on the Front Panel Tutorial

Controls -> Modern -> Array, Matrix, & Cluster  -> Array 

To create an Array, first open up the Controls palette and click Modern. Under the Modern palette select Array, Matrix, and Cluster  where you will find the Array .

Place it on your Front Panel design. You will notice that when you put the Array down on the Front Panel, there is a Numeric Control on the left side and a blank space on the right side representing an array with an undefined size and data type. You must place the type of Front Panel control or display into the blank space to the right that you want the array to hold as shown in Figure 1.

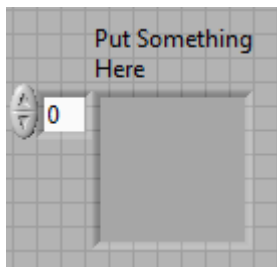


Figure 1

You will also notice that on the left side of the undefined blank space there is a numeric control. This control is placed so that you can navigate through impossibly large arrays such as a 1 x 1000000 array. To show the nth element if you only have one display, you can simply input n into the control to display the value at the nth index.

For instance, if you wanted to create a display array such as the one in Figure 2, we would drop a Numeric Indicator into the blank space. By default, the size of the displayed array is one element once we complete the last step. But if we wanted a larger display, we can simply drag the handles of the array portion until the desired number of elements is displayed. Note that for the one dimensional array case, you can only expand the array in one direction so that only one row or column of elements is displayed.

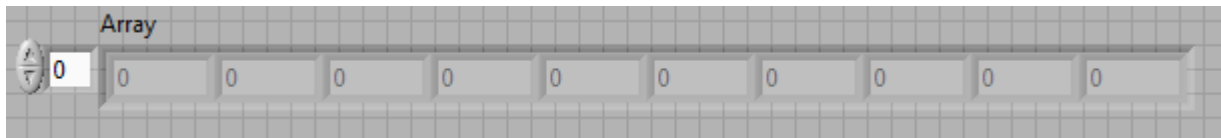


Figure 2 – A simple array display

If we wanted to create an input array, we would follow the same steps as we did for the display array except put a Numeric Control in the blank space rather than a Numeric Indicator.

For a two dimensional array, we would start by expanding the number of numeric controls on the left side as shown in Figure 3. The result is shown in Figure 4.

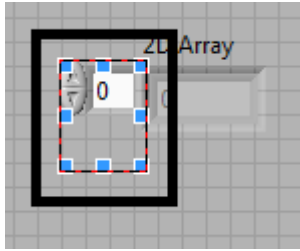


Figure 3

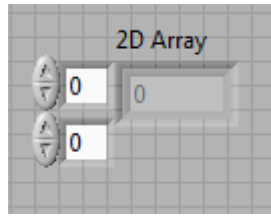


Figure 4

We will now notice that when we go to expand the number of elements shown by the array on the front panel that we can now expand the array in two directions as opposed to only one direction when we had a one dimensional array. Figures 5 and 6 show how to expand the array and the resulting 2 dimensional array on the front panel.

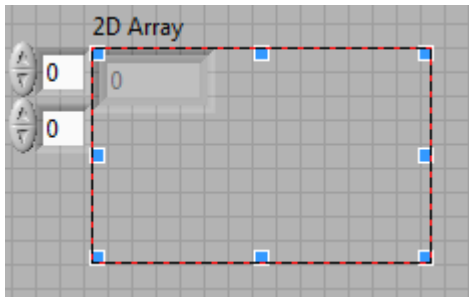


Figure 5

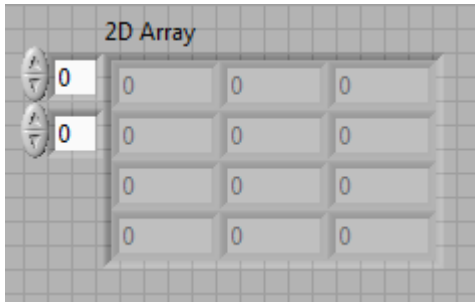


Figure 6

Notice that the array created in Figures 5 and 6 is not initialized.