





How to Use the Build Waveform Function Tutorial

Functions -> Programming -> Waveform  -> Build Waveform 

The Waveform is a data type composed of a set of sample points and sample step value which represents the time between sample points.

To use a Build Waveform function, first open the Functions palette and select the Programming palette. Then open the Waveform  palette where you will find the Build Waveform  function.

You will notice that the Build Waveform function takes in a Waveform data type, and a number of waveform components (can be changed by resizing the function).

The first input is the Waveform that the Build Waveform function will modify. If no existing Waveform is wired to this input, then the Build Waveform function will simply use the parameters specified in the other inputs and build a new Waveform from the connected inputs (treating the empty Waveform input as a zero function).

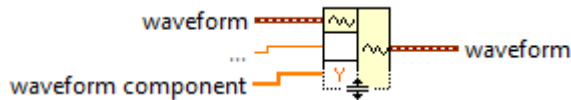


Figure 1

The “waveform component” input takes in an array of values and a sample step value dt to create a new waveform to superpose with an existing waveform as shown in Figure 2.

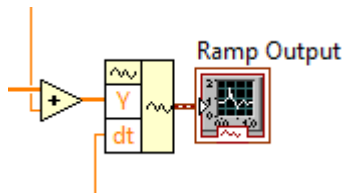


Figure 2

In this example, there is no existing Waveform that is being modified so the Build Waveform function generates a new one from the inputs. The second input is configured to be a “Y” value which takes in an array of values and the third input “ dt ” is the time interval between measurements.

It is also possible to specify the start time of the generated waveform to by using the “ t_0 ” input option which is demonstrated in Figure 3.

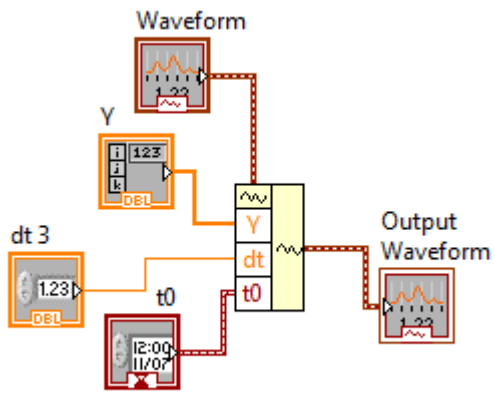


Figure 3