**How to Use the Sound Output Tutorial**

Functions -> Programming -> Graphics and Sound  -> Sound  -> Output  ->

Play Waveform 

Start by opening the Functions palette and navigating to the Programming sub-palette. From here

open the Graphics and Sound  sub-palette and select Sound  where you will find the

Output sub-palette . Finally, under the Output sub-palette you will find the Play Waveform

function .

When you place the Sound Output function, an Express VI as shown in Figure 1, will appear in your block diagram with terminal inputs and outputs as shown in Figure 2.
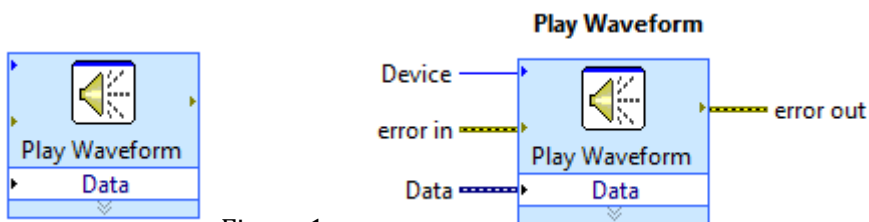

Figure 1                                                          Figure 2

The device input simply specifies what sound output device to use (if more than one is available).

The data input takes a waveform data type which you can produce using the Build Waveform block. The Play Waveform then takes the data in the waveform and outputs the sound based on the amplitude and time data provided by the waveform.

Thus it is important to realize that this function block is usually used in conjunction with a build waveform block where you can define properties of the wave such as time interval between samples.

Figure 3 shows an example of how to implement a Build Waveform function in conjunction with the Play Waveform function.
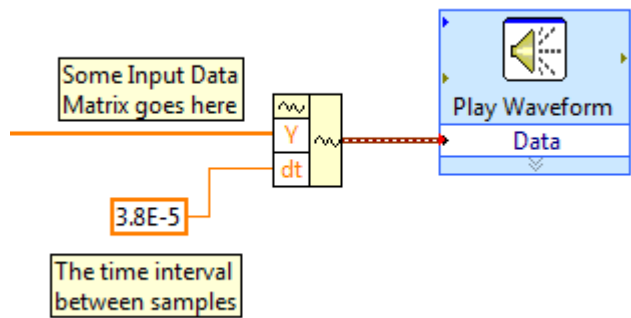
Figure 3

To generate a pure tone, we can also use the Simulate Signal Express VI which will prompt you for specifications of the signal when you first place it in the block diagram. The result is shown in Figure 4 below. Notice we encase the Play Waveform and Simulate Signal Express VIs into a while loop in order to get continuous playback of the signal.
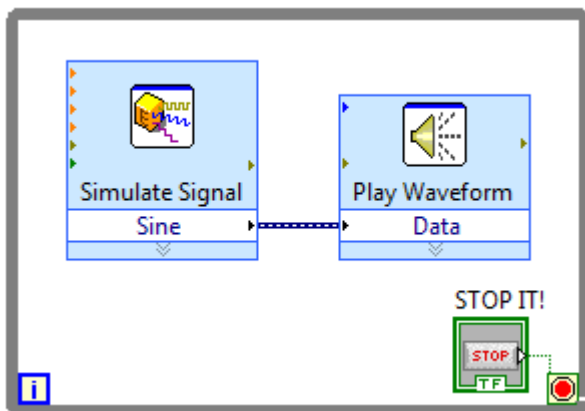


Figure 4