

1. Signal Generator

Design a VI that displays a sine, triangular, sawtooth, and square waves.

Include inputs for the signal frequency, amplitude, phase, sampling rate, sample size, phase, duty cycle (for the square wave), and an enumerator to select which type of signal gets displayed.

Also include a switch to reset the phase and a button to stop the signal generation.

Display each signal on a waveform display which uses a data cluster as its input.

Use may need to use a CASE structure to control which signal type gets displayed and a WHILE loop to execute the signal.

For the signal generation, use Sin Wave, Square Wave, Sawtooth Wave, and Triangular Wave subVIs.

In your lab notebook, be sure to derive the equations for computing the frequency input for each signal type.

You'll need to research each function to make sure you have the correct operation.

