Using a Fixed Output Range on the DG1000Z
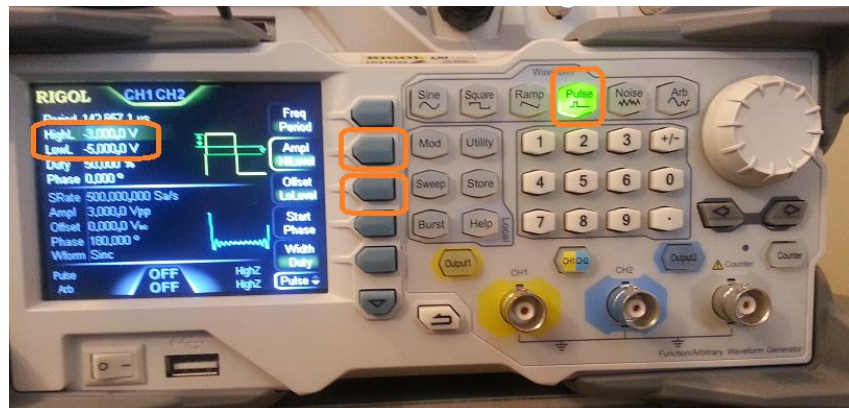
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Solution:

The DG1000Z series of arbitrary waveform generators uses a number of different circuits to accurately set the output to different values.

In some instances, such as pulsing between a High and Low voltage value, the settings cross from one range to another. When the range changes, there is a brief period of time in which the output is no longer in full control by the generator. This causes a glitch in the output which can cause issues with the DUT or circuit that is connected to the output.

To solve this issue, you can fix the output range to a specific range by following these steps:

- Set the High level and Low levels for the amplitude to the largest voltage span that you require.

For example, if you are going to adjust the High and Low amplitudes of the output pulse between 0, 1, 2, and 5V respectively, set the High to 5V and Low to 0V.

- Press UTILITY

- Select the channel of interest (channel selection key is between Output 1 and Output 2 buttons on the front panel)

- Select CHANNEL SET

- Select OUTPUT SET

- Set RANGE to FIXED

Now you can adjust the Amplitude High and Low values within a fixed range with minimal glitching.

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