Real-time control of Modular Function Generator using Agilent VEE Pro 9.0

This tip shows you how to generate pulses from a modular function generator using Agilent VEE Pro 9.0. You can control the amplitude, frequency, offset voltages and pulse settings. The example programs are developed using both SCPI commands and IVI-COM functions.

Instrument auto-detection

This program helps you configure interfaces (GPIB, LAN or USB) to connect your PC to your test instruments. Select the suitable corresponding interface.

Waveform Selection

In this program, you can choose the type of waveform you need: sinusoidal, square, ramp and pulse. This real-time program allows changes to the application settings to be reflected on the settings of the function generator simultaneously.

Color property

One of the features in VEE 9.0 is the ability to dynamically change the color property of some objects (ie: buttons) that are used in a program. A typical usage of such property is shown as an example in this program.

Parameter settings

You can change the peak to peak voltage, offset voltage and frequency via this program. You can even set the peak to peak and offset voltages in milivolt. The range of the peak to peak and offset voltage sliders will change accordingly once you have selected millivolt unit. You also can change the frequency unit from microhertz to megahertz. The changes of these settings on the program are on real-time basis. An error check is incorporated into settings to detect any incorrect values before sending it to the instrument. If it is detected, a message box will appear until the settings have been corrected

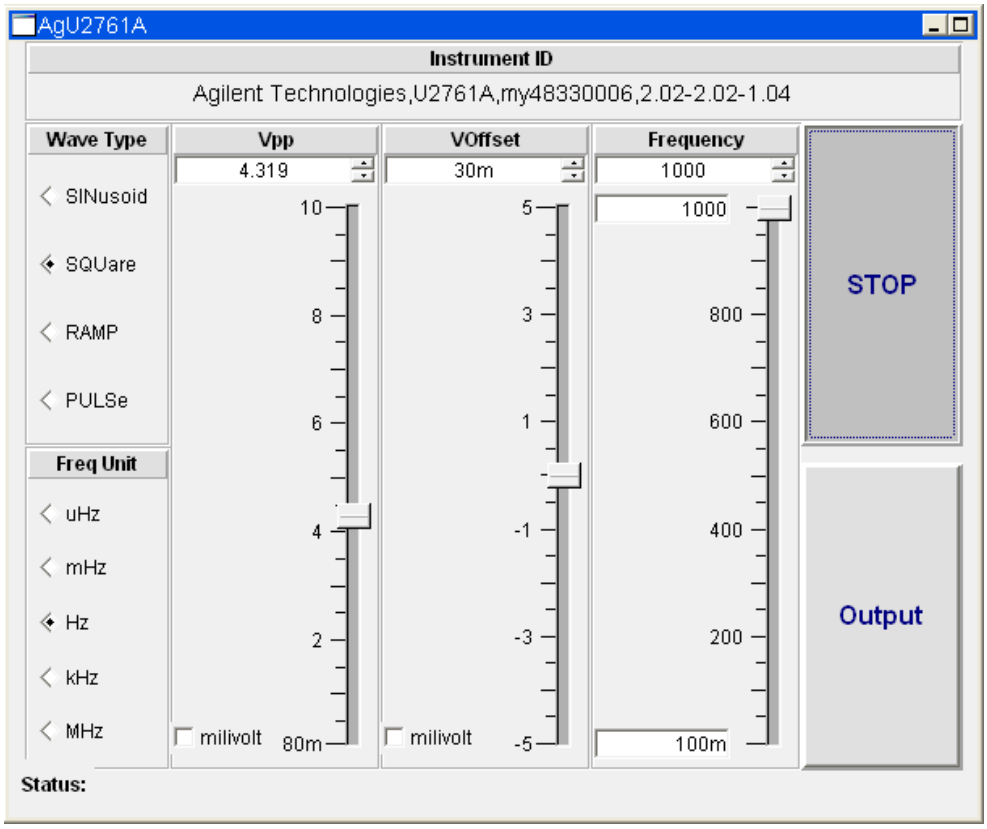

Figure 1.0: A snapshot of the main panel with select Square Waveform signal generation.

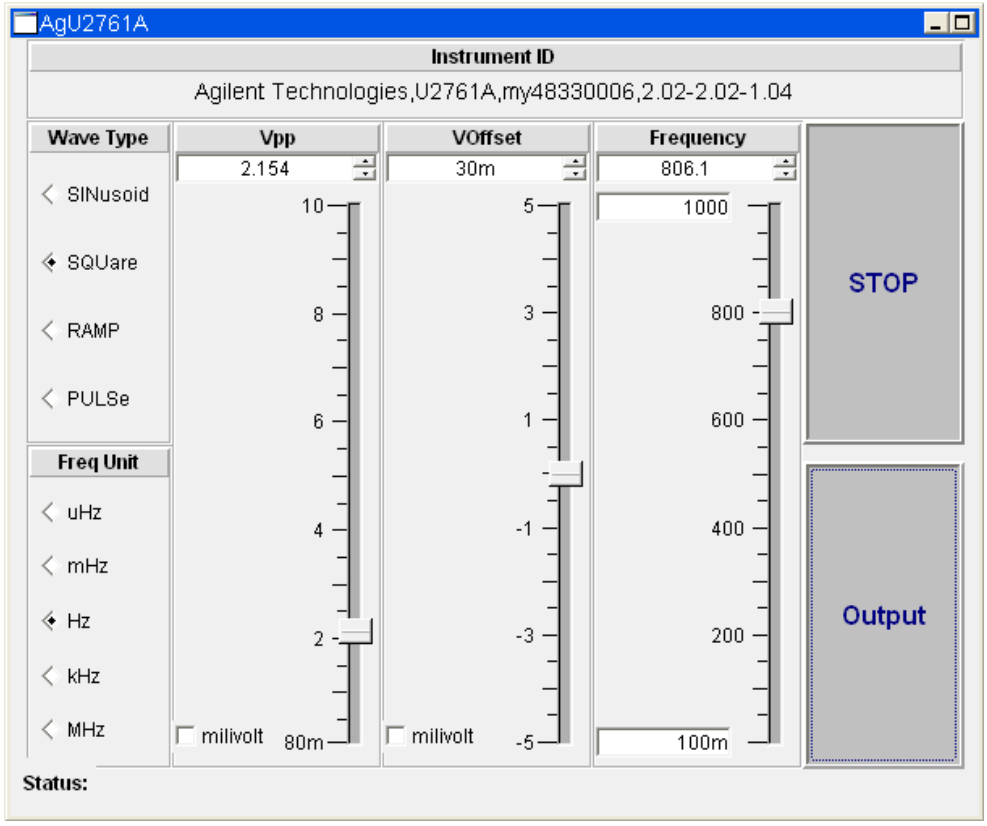

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Figure 2.0: The color of the Output button changes once it is activated or deactivated.

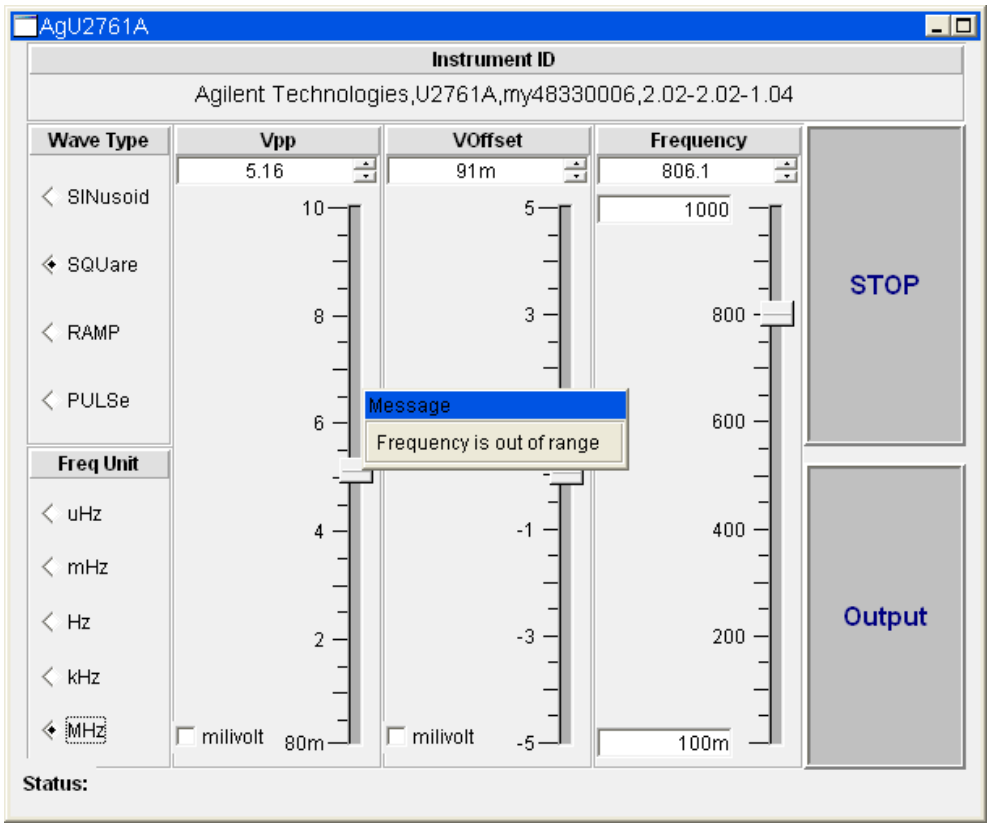

Figure 3.0: In the event of a frequency setting that is out of limits, an error message will appear and the command will not be sent to the instrument.

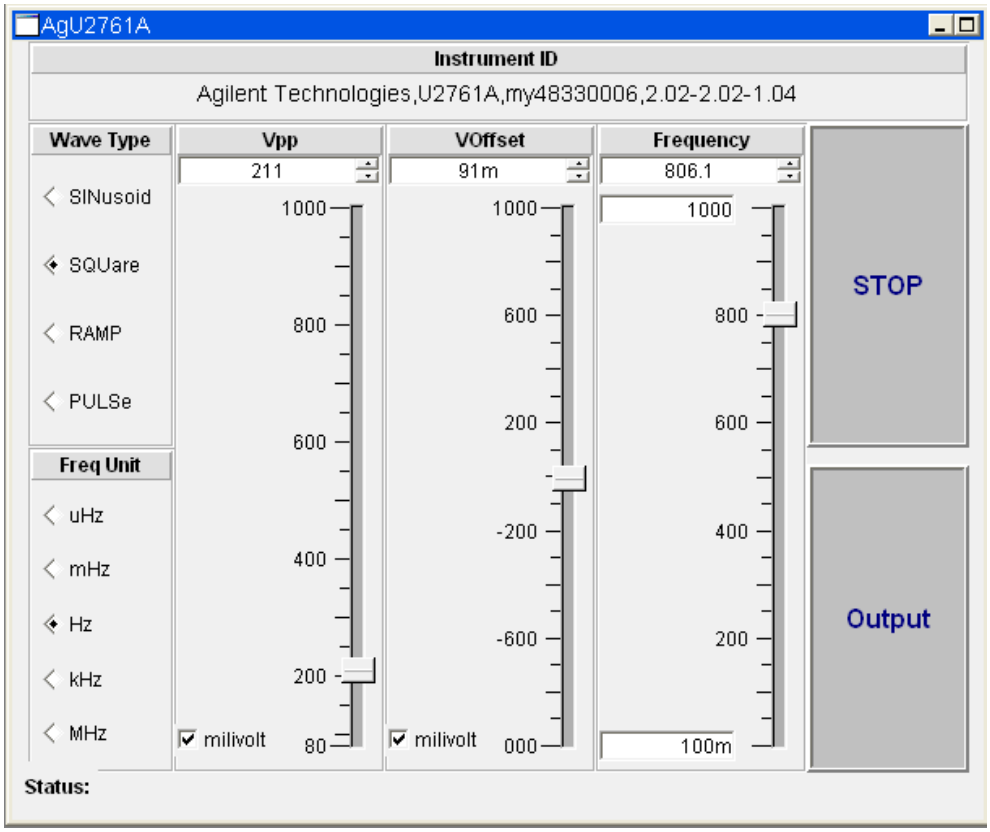

Figure 4.0: Peak to peak voltage and offset voltage in milivolt unit. The range of slider will also change.