Pulse Generation on the 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.

Common Basic Setting

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

Pulse Definition

In this example, you can choose to define the pulse via pulse width or duty cycle function. If you select the pulse width function, the pulse width knob will appear and duty cycle knob will be hidden, and vice versa.

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.
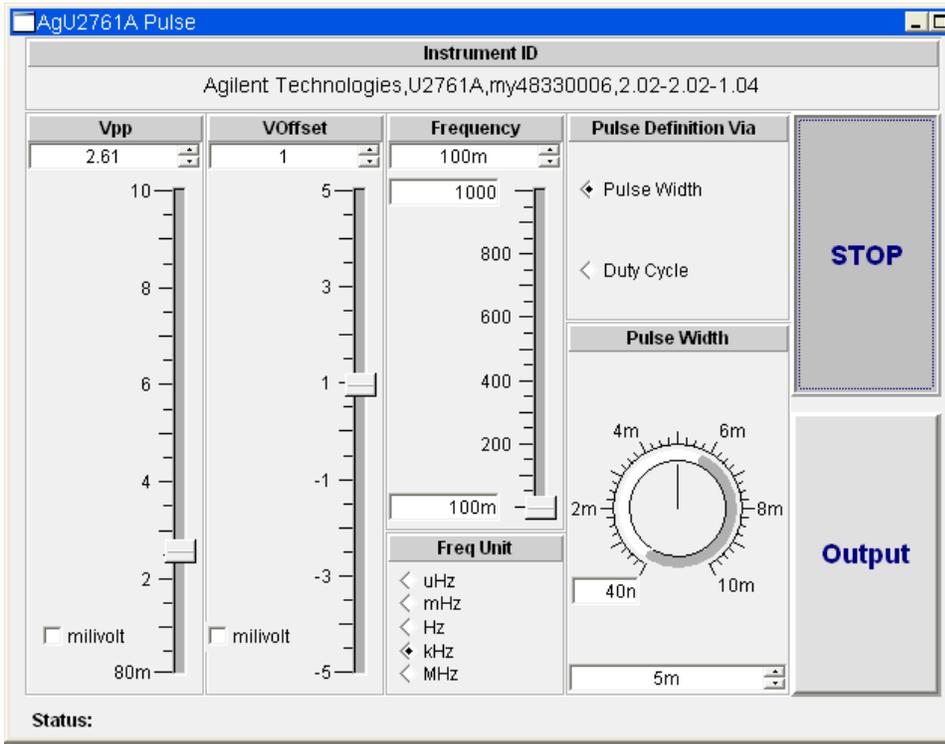
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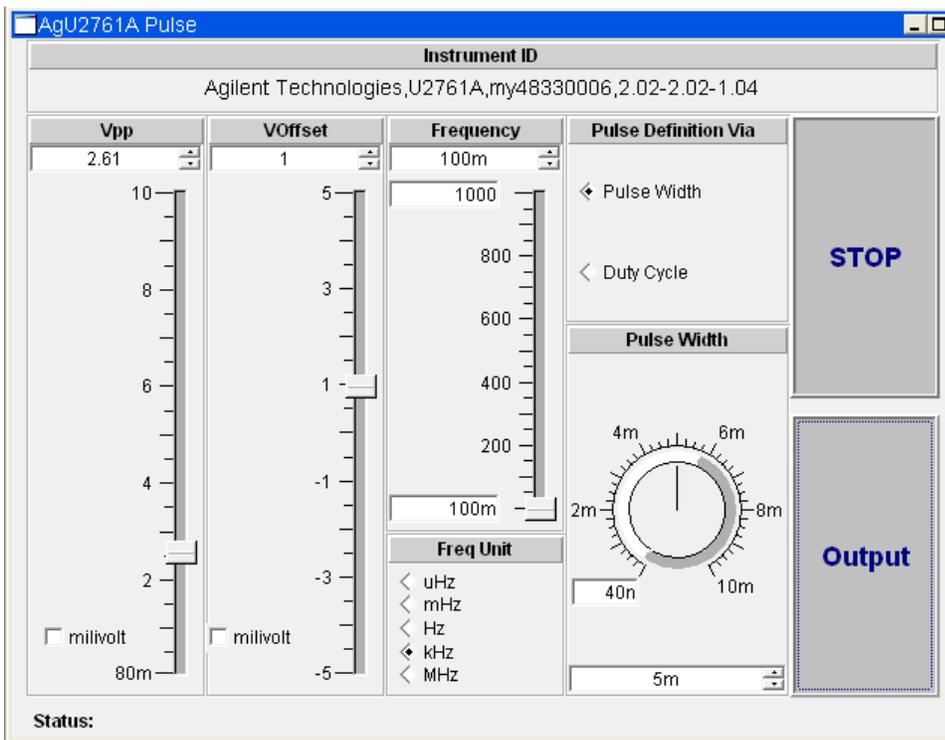
Figure 1.0: A snapshot of the main panel.

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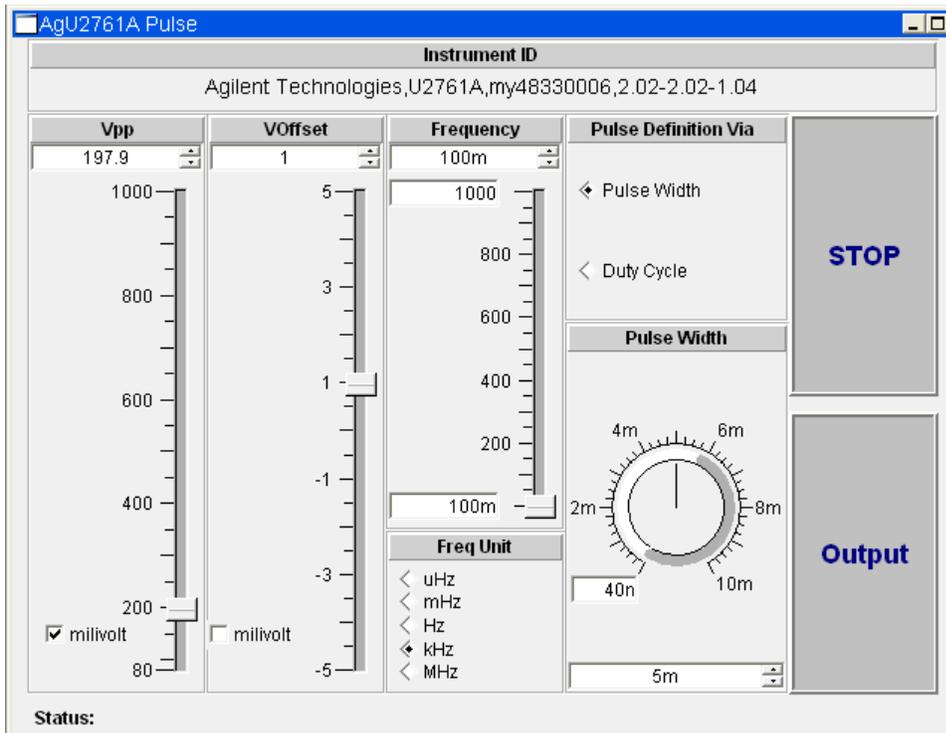
Agilent Technologies

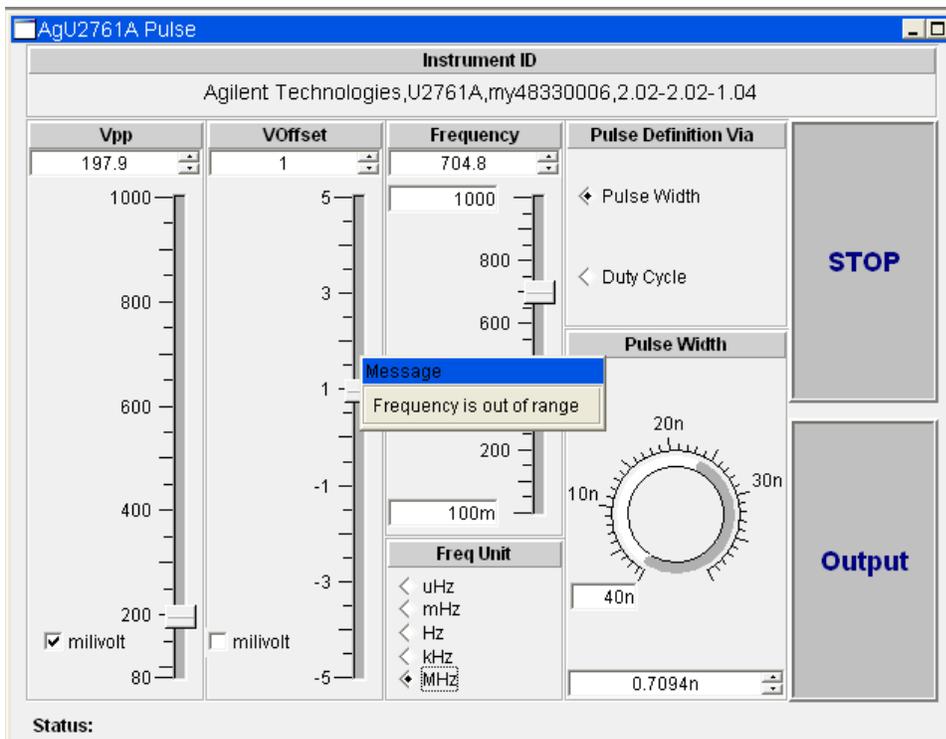Figure 3.0: The peak to peak voltage range changes once the milivolt unit is selected.

Figure 4.0: The message "Frequency is out of range" will appear if the input frequency is over the allowed limit.
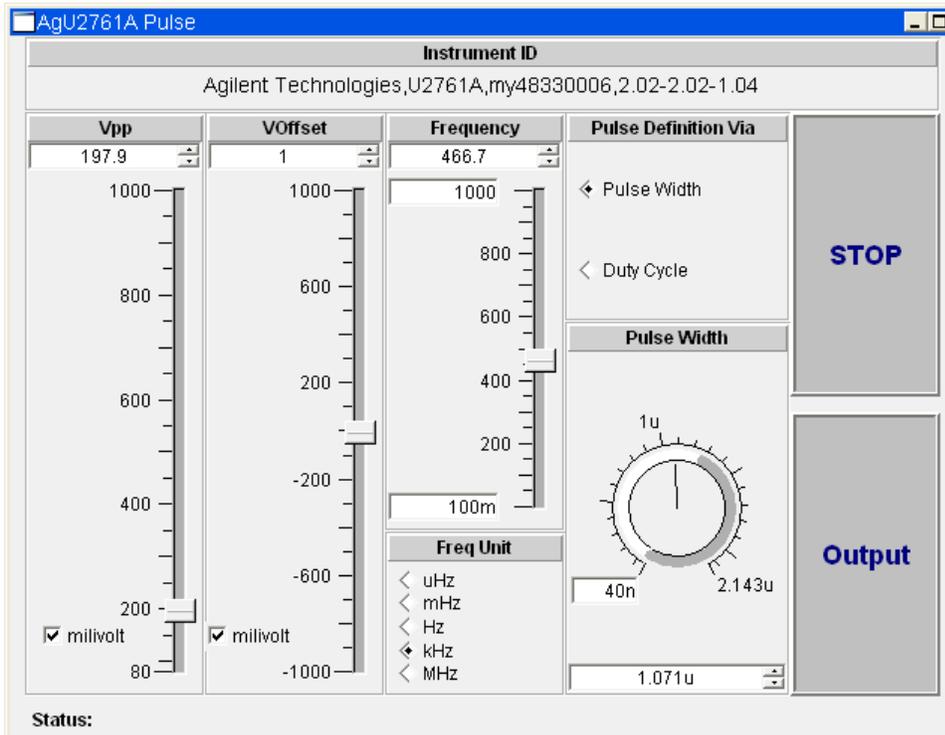
Agilent Technologies

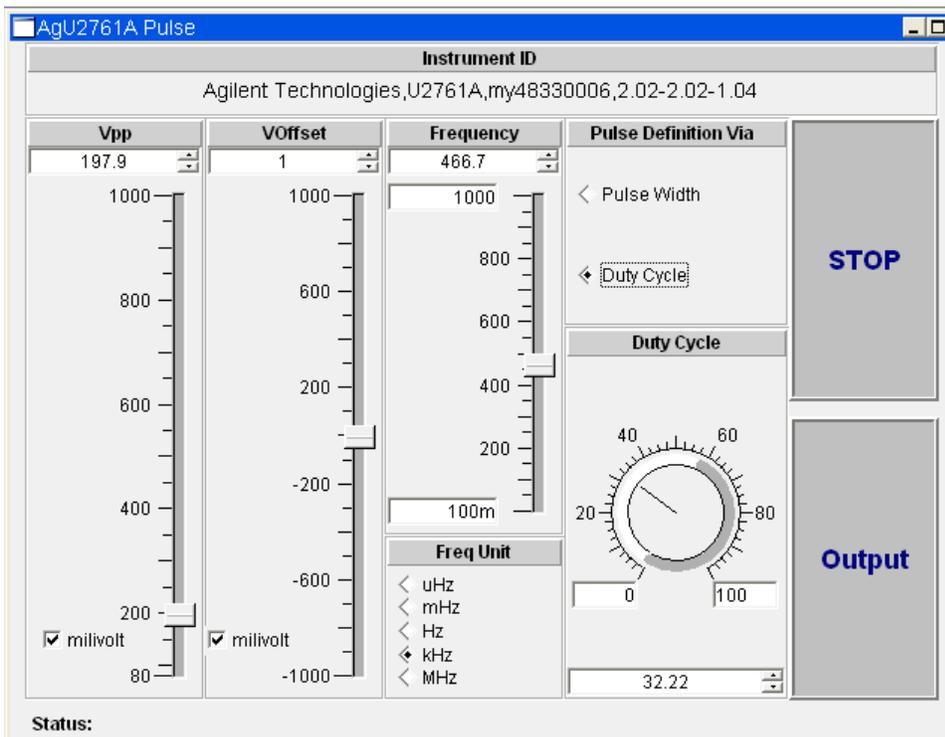Figure 5.0: The ranges indicated by the pulse width knob will change every time the frequency is changed.

Figure 6.0: The pulse width knob is replaced with the duty cycle knob if duty cycle is selected.

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