



Real-time control of Modular Oscilloscopes using Agilent VEE Pro 9.0

This example shows how to control modular oscilloscopes in real-time basis using Agilent VEE Pro 9.0. The example programs are developed using IVI-COM functions. There are 5 key areas in which this VEE program addresses:

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.

Feedback control

In this program, a feedback loop is introduced for the amplitude and time base control, and for waveform editing. Hence, you are able to either adjust the settings via the program or on the instrument panel itself. The changes will be on real-time basis.

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.

Measurements

Perform typical oscilloscope measurements like frequency, duty cycle, period, pulse width and more, on a real-time basis. The data is then displayed on a pop-up menu.

FFT

This program utilizes VEE's FFT function to convert and plot a waveform in frequency domain basis and plot it. It also searches for the peak signal and displays the peak amplitude and frequency.

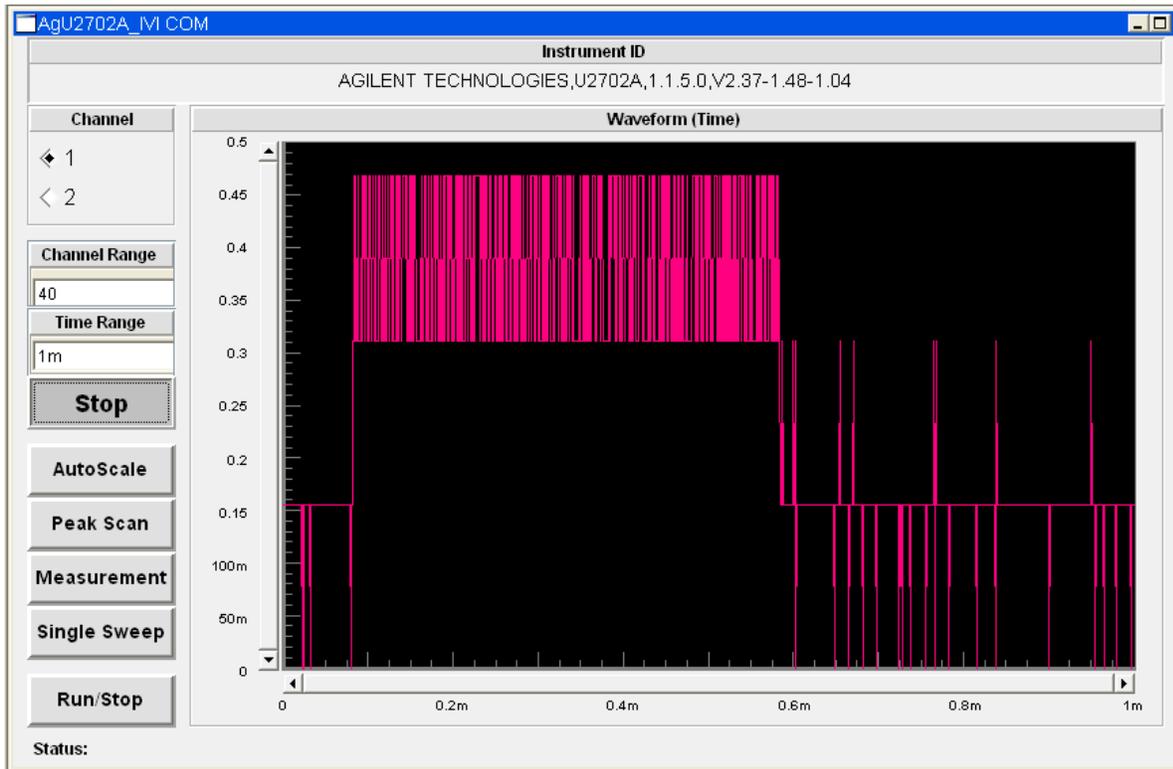


Figure 1.0: A snapshot of the main panel.

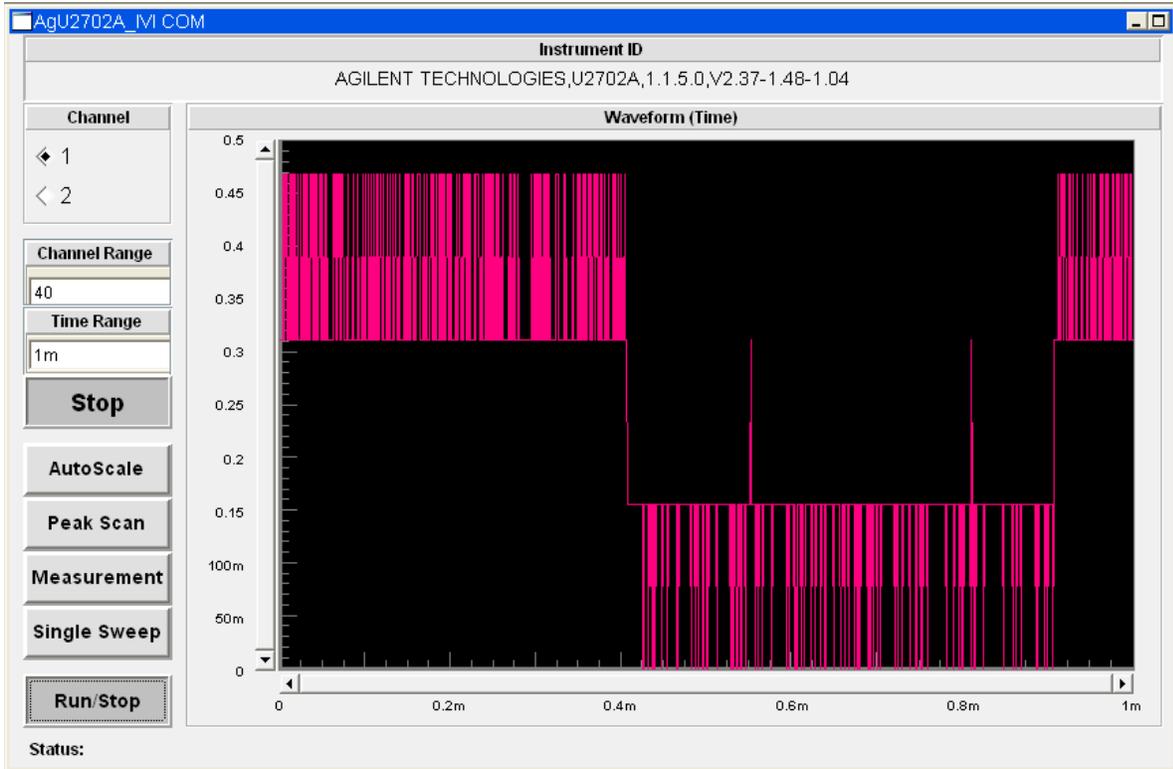


Figure 2.0: The color of the Run/Stop button changes once it is activated or deactivated.

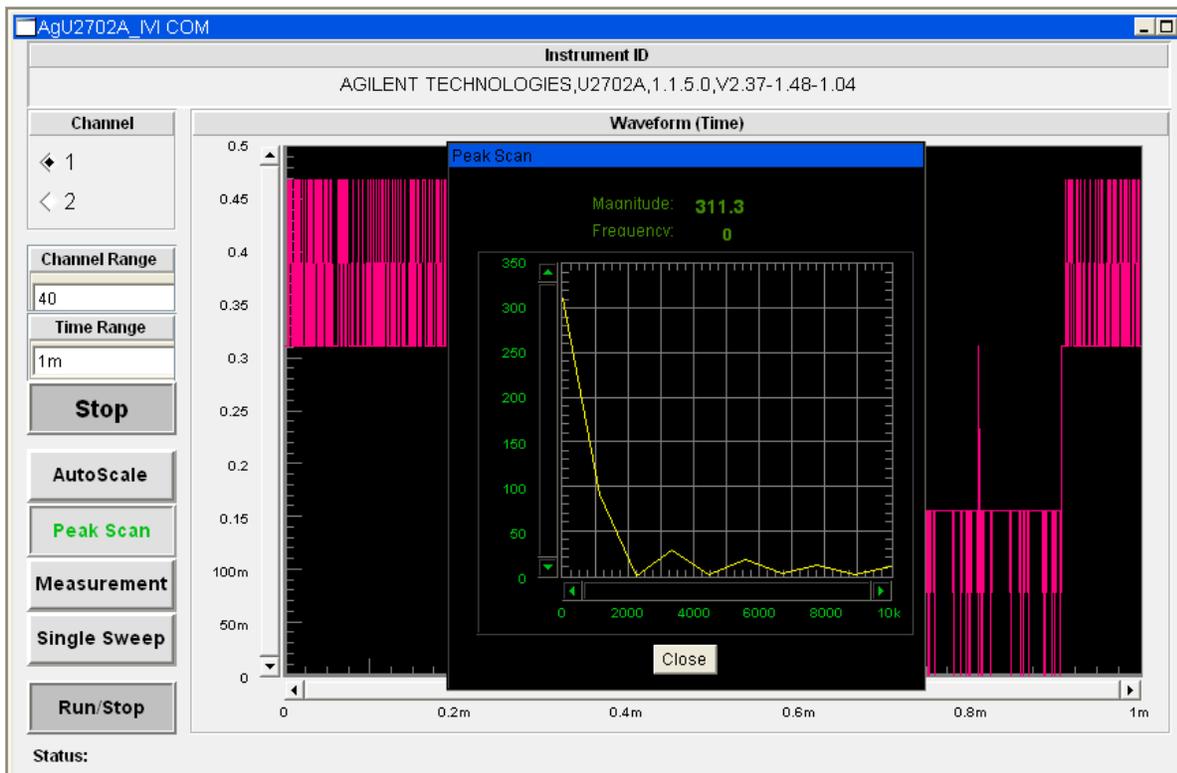


Figure 3.0: The peak scan shows the waveform in frequency domain.