Radiation Pulse Counting Program

This Radiation Counting Program can be used on all Images Geiger counters with a Data Output Port, including the GCA-07, GCA-06, GCA-03, and DTG-01 series of Geiger counters. The program requires the use of a compatible USB/TTL cable. The PC drivers for the cable must be installed before one can use the USB to TTL cable to connect the Geiger Counter to the PC program.

Step-By-Step

Images SI Inc. Radiation Pulse Counter		- 🗆 X
Pulse Count	Time-Elapse	Time-Set
000000000	000 00	000 00
	Min. Sec.	Min. Sec.
	Reset	A A V
Select Port		unts Per Second (CPS)
Select Port ~	9600	
Connect	Start Stop	Clear

Start the Radiation Pulse Counting program in Python or the Windows executable program.

The Geiger counter being used should be connected to the TTL section of the USB/TTL cable.



The USB side of the cable is connected to the PC running the Radiation Pulse Counting program.

Images SI Inc. Radiation Pulse Counter		- 🗆 X
Pulse Count	Time-Elapse	Time-Set
0000000000	000 00	000 00
	Min. Sec. Reset	Min. Sec.
Select Port	9600	unts Per Second (CPS)
Connect	Start Stop	Clear

Select the proper COM port that the USB/TTL cable is using. In this example, it is COM4.

Click the Connect button to establish communication between the PC and Program. The label on the Connect Button will change to Disconnect.

Use the up and down arrows below the Time-Set window to set the elapsed time you want to count pulses.

In this example, it is set to one minute zero seconds

Pulse Count	Time-Elapse	Time-Set
000000000	000 00	001 00
	Min. Sec.	Min. Sec.
	Reset	A A V V
Select Port	Baud Rate Co	ounts Per Second (CPS)
Disconnect	Start Stop	Clear

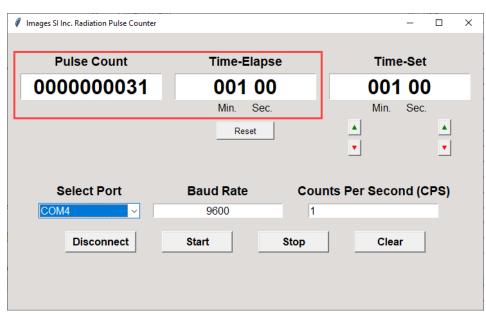
Ensure the Geiger counter is connected and turned off. Check that the TTL end of the USB cable is connected to the Geiger counter's Data Output port.

Press The Start button.

Pulse Count	Time-Elapse	Time-Set
000000017	000 24	001 00
	Min. Sec.	Min. Sec.
	Reset	A A V
Select Port	Baud Rate	Counts Per Second (CPS)
COM4 ~	9600	1
Disconnect	Start Sto	op Clear

The program will begin counting pulses. The Time-Elapse window will show the time elapsed in seconds and minutes. The Pulse Count Window will show the total count, it will continue to increment the pulse count by the number of pulses received each second. The Counts Per Second (CPS) will display the CPS.

When the Time-Elapsed window's time equals the Time-Set window, the counting will stop. No further count from the Geiger counter will be recorded at this point.



In this example, we received a count of 31 pulses at the one-minute mark.

The user has several options depending on the nuclear experiment they are conducting. If the user wants to count additional minutes and have the pulses counted with the previous counts, the user presses the Reset Button.

The Reset Button only clears the Time-Elapse window, leaving the Pulse Count and Time-Set windows undisturbed. This allows the program to count again for the time declared in the Time-Set window.

Images SI Inc. Radiation Pulse Counter		- 🗆 X
Pulse Count	Time-Elapse	Time-Set
000000031	000 00	001 00
	Min. Sec.	Min. Sec.
	Reset	▲ ▲ ▼ ▼
Select Port	Baud Rate	Counts Per Second (CPS)
COM4 ~	9600	1
Disconnect	Start St	top Clear

If the user wants to clear the Pulse Count window, the user should press the Clear button. This will clear the Pulse Count Window, Time Elapse Window, and the Time-Set window. The user can then start over.

When finished using the program, hit the Disconnect button to return the COM port to the computer.