Triton X
User Guide

June 14, 2021

System Requirements

1. Computer Requirements

a. Windows OS 7 or later. Will work on older versions of Windows, but is not guaranteed.

b. 2GHz single core processor, or 1.4GHz multi-core processor

c. 2GB RAM

d. Minimum 10GB free space on your Hard Drive. More is preferred. Actual requirement depends on how long you intend to capture recordings.

e. USB 2 or USB 3 port

- With USB 3.0, the Triton X can be powered via the USB for up to 16-channels.
- With USB 2.0, you may need to use the included power adapter for 16-channels or more.

2. Package Contents

a. Triton X amplifier

- Headstages are integrated in the amplifier
- Digitizer is integrated in the amplifier

b. 6-foot (1.8 meter) Mini-USB cable

c. Power adapter. Power adapter is needed for:

- 24-channels or more when using a USB 3 port
- 16-channels or more when using a USB 2 port
- The Power Adapter is not needed for:
  - 8 or 16-channel system with a USB 3 port
  - 8-channel system with a USB 2 port

d. USB thumb drive with the following

- Driver
- TecellaLab software
- Documentation

e. Cable. Following options are available.

- BNC
- SMA
- SMB
- Pin – 1mm, 1.3mm, 1.5mm, 1.8mm, or 2mm diameter
- Terrapin

Driver Installation

3. Driver installation

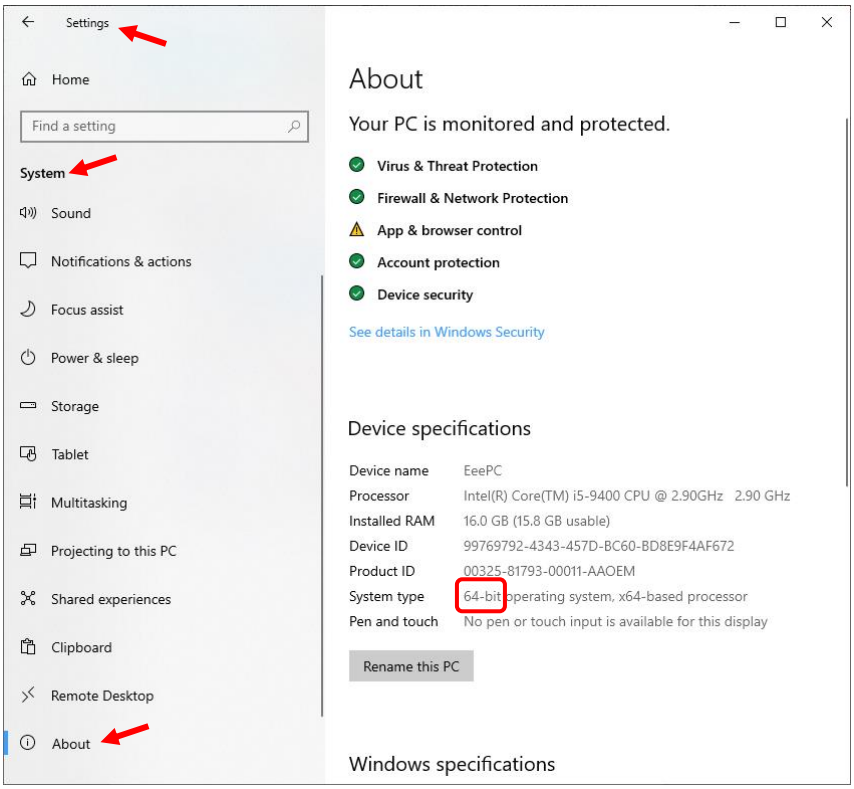
a. Both the 32-bit and 64-bit drivers are included in the USB thumb drive.

b. Drivers can also be downloaded from www.tecella.com under DOWNLOADS. Direct links are provided below:

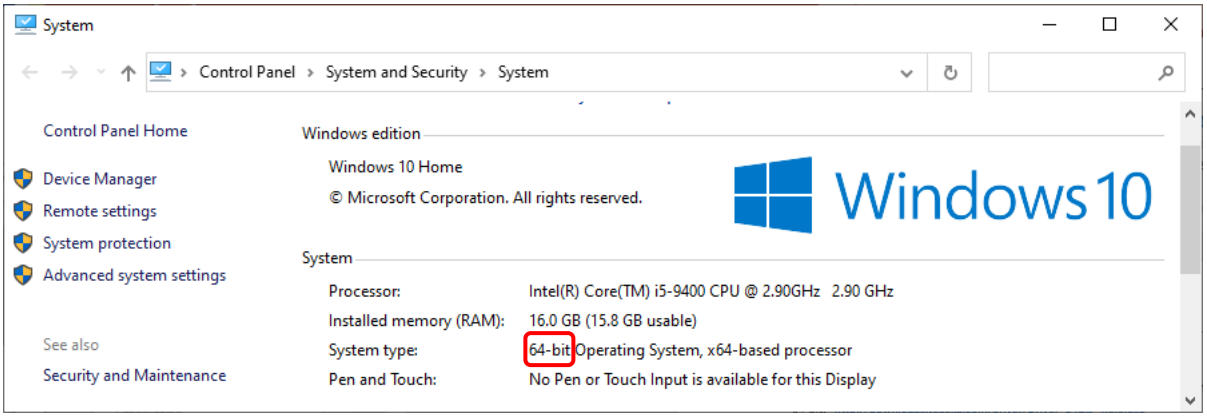
- 64-bit: http://downloads.tecella.com/driver/Driver_64bit_4.5.6.exe
- 32-bit: http://downloads.tecella.com/driver/Driver_32bit_4.5.6.exe

Most systems today are 64-bit systems. If you wish to check your system, the following are two methods. You can also check the internet for other methods.

- Settings > System > About



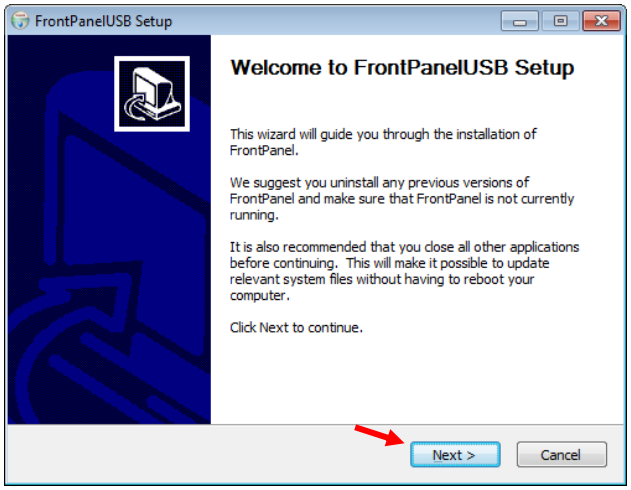
- Right click on your Computer icon, and either go to “Properties” or “More > Properties”



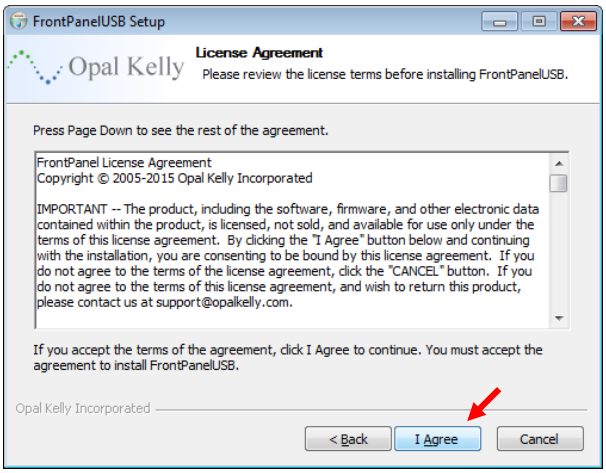
Driver Installation

c. Run the appropriate 32-bit or 64-bit driver installer.

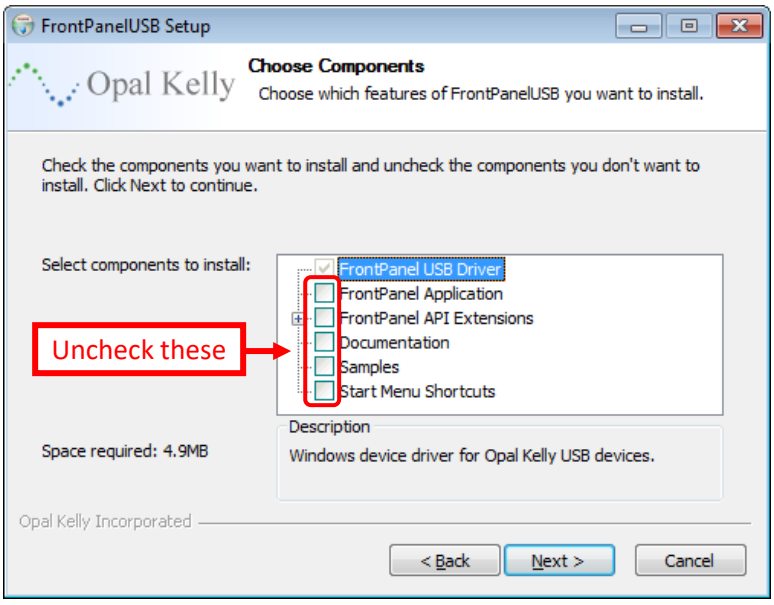
- Click on “Next”.



- Click on “I Agree”.

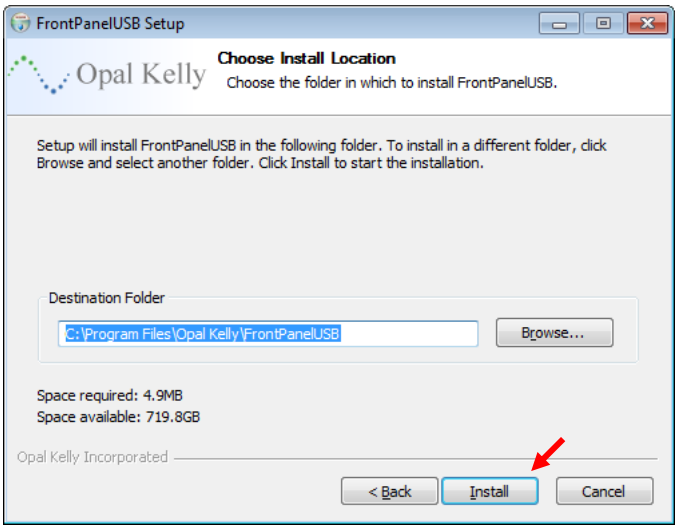


- Uncheck everything except “FrontPanel USB Driver”. (“FrontPanel USB Driver” cannot be unchecked.)

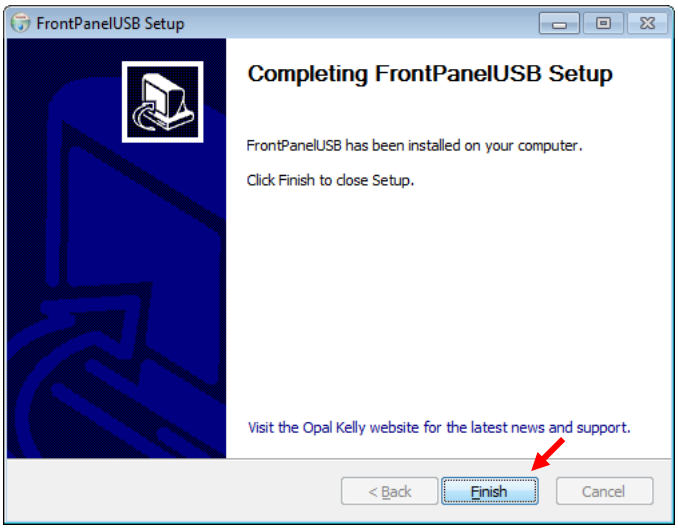


Driver Installation

- Click on “Install”.



- Click on “I Agree”.



- Driver installation has been completed.

4. Amplifier Setup

a. Connect the USB cable and the power supply as shown. For 8-channel and 16-channel systems connected to a USB 3 port, the power supply is not needed. If supplying power from USB3, be sure to connect directly to the USB port on the computer. If using a hub, then make sure that hub is a powered hub.

b. Power on the amplifier as shown.

Left: Power Supply
Center: OFF
Right: USB-powered (16 channels on USB 3)

TecellaLab Software Installation

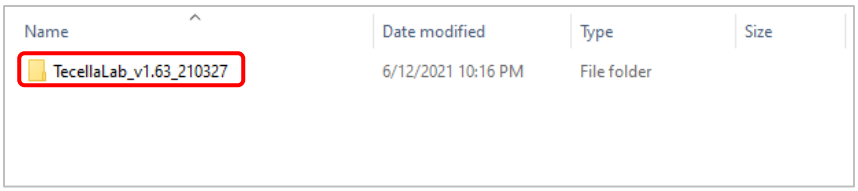
5. TecellaLab software installation

a. TecellaLab version 1.63 or later is required to support the Triton X, and is included in the USB thumb drive.

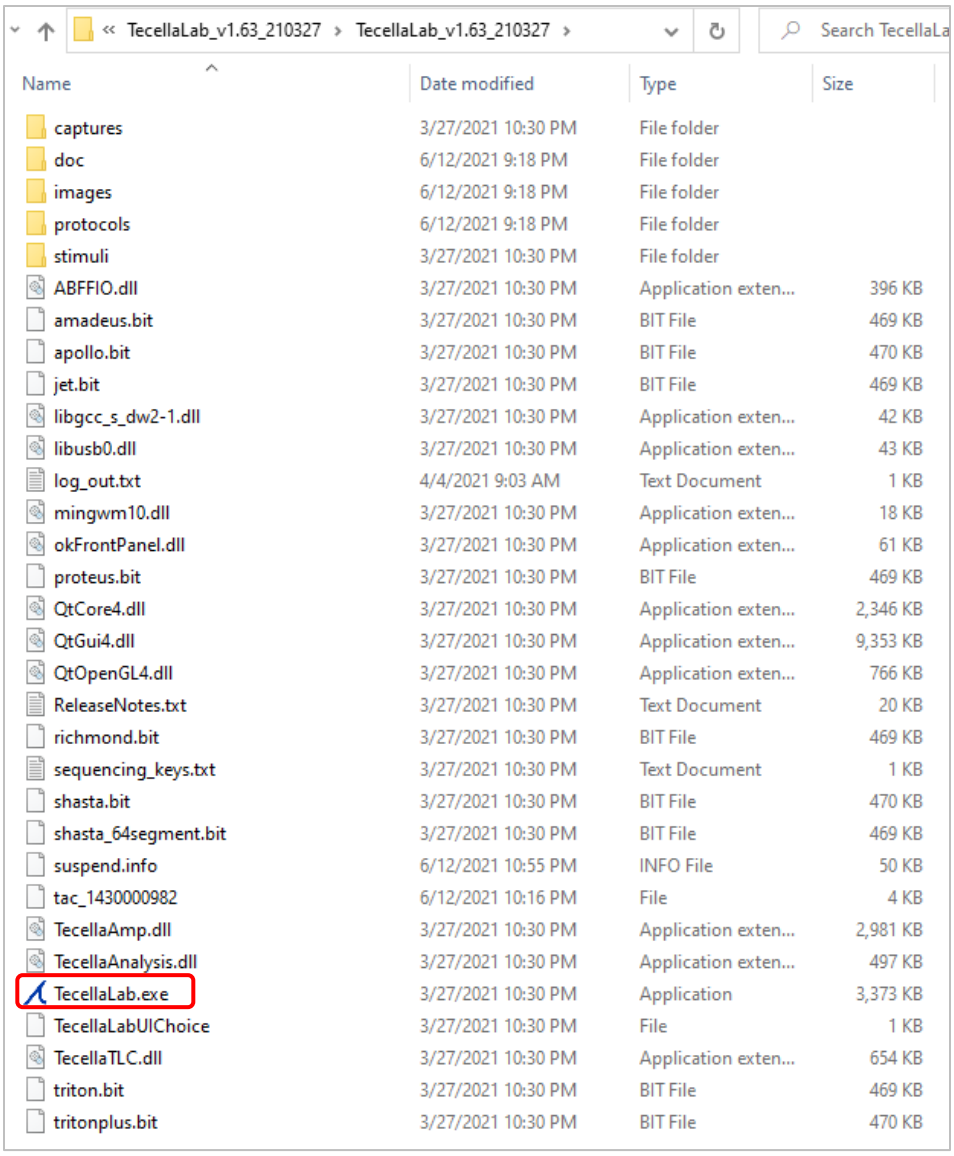
b. TecellaLab can also be downloaded from www.tecella.com under DOWNLOADS. The direct link to version 1.63 is provided below:

- TecellaLab version 1.63: http://downloads.tecella.com/TecellaLab_v1.63_210327.zip

c. Installation of the TecellaLab is very simple. You just need to copy the TecellaLab folder to your desired location. You can even run TecellaLab from the USB thumb drive.



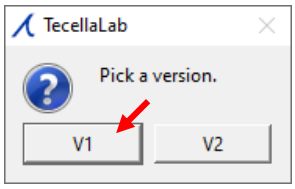
d. To run TecellaLab, you need to have the amplifier connected to the computer and powered up. Then, double click on "TecellaLab.exe" to start the software.



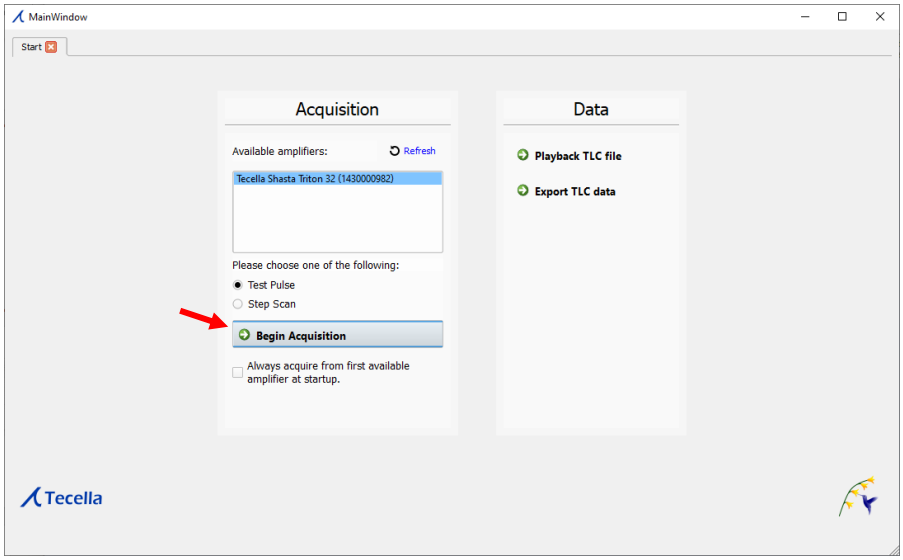
6. Quick Start with TecellaLab

a. Start TecellaLab.

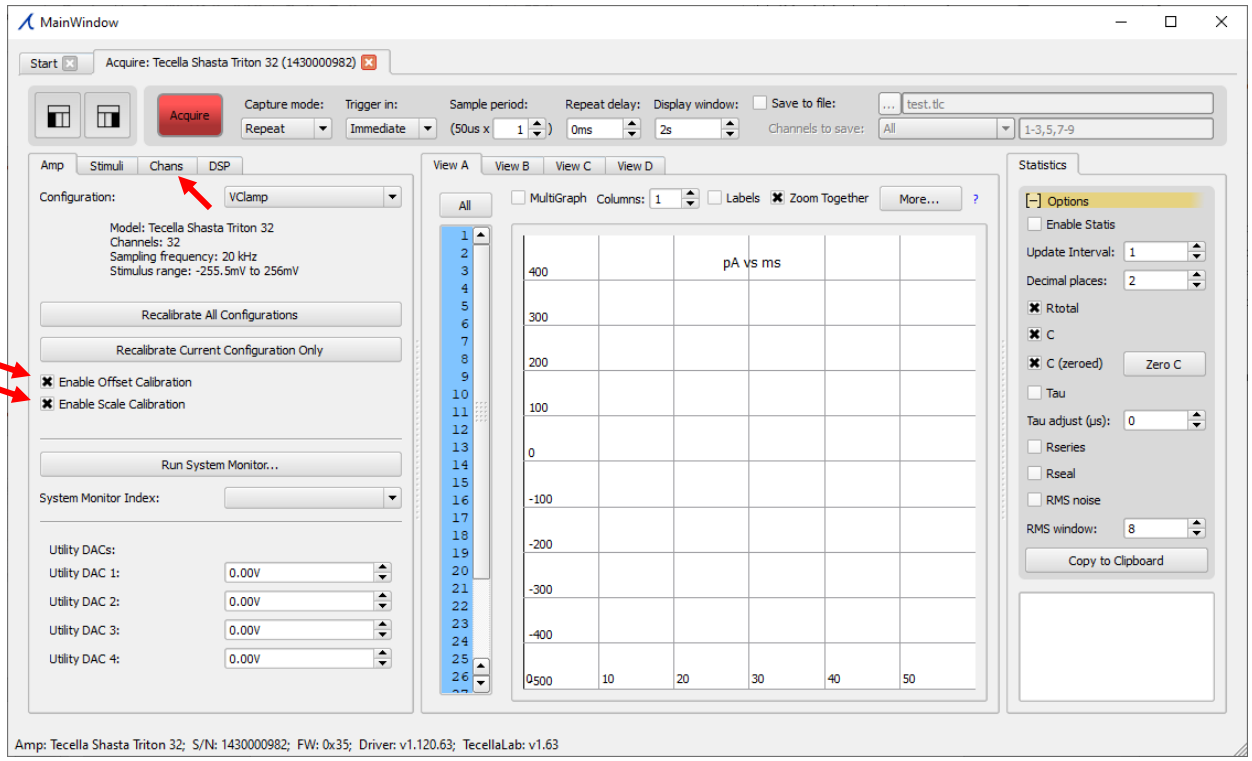
b. Click on “V1”.



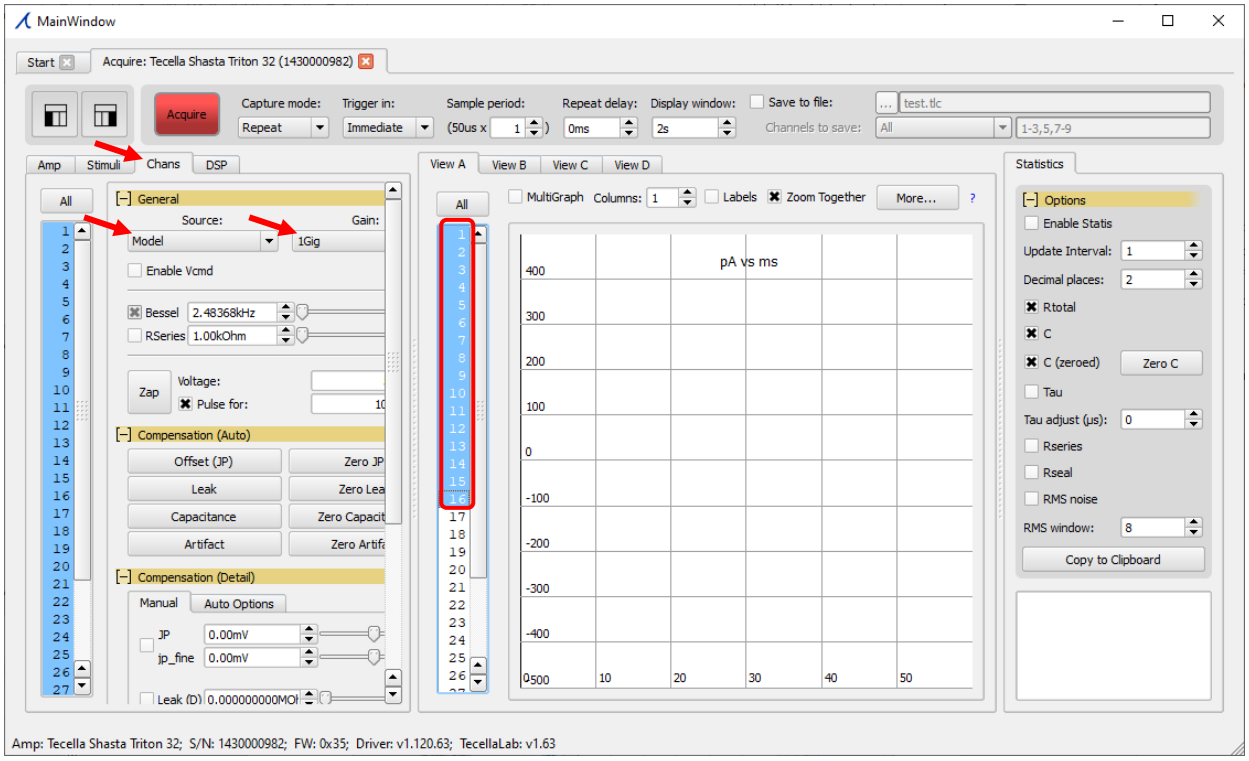
c. Click on “Begin Acquisition”



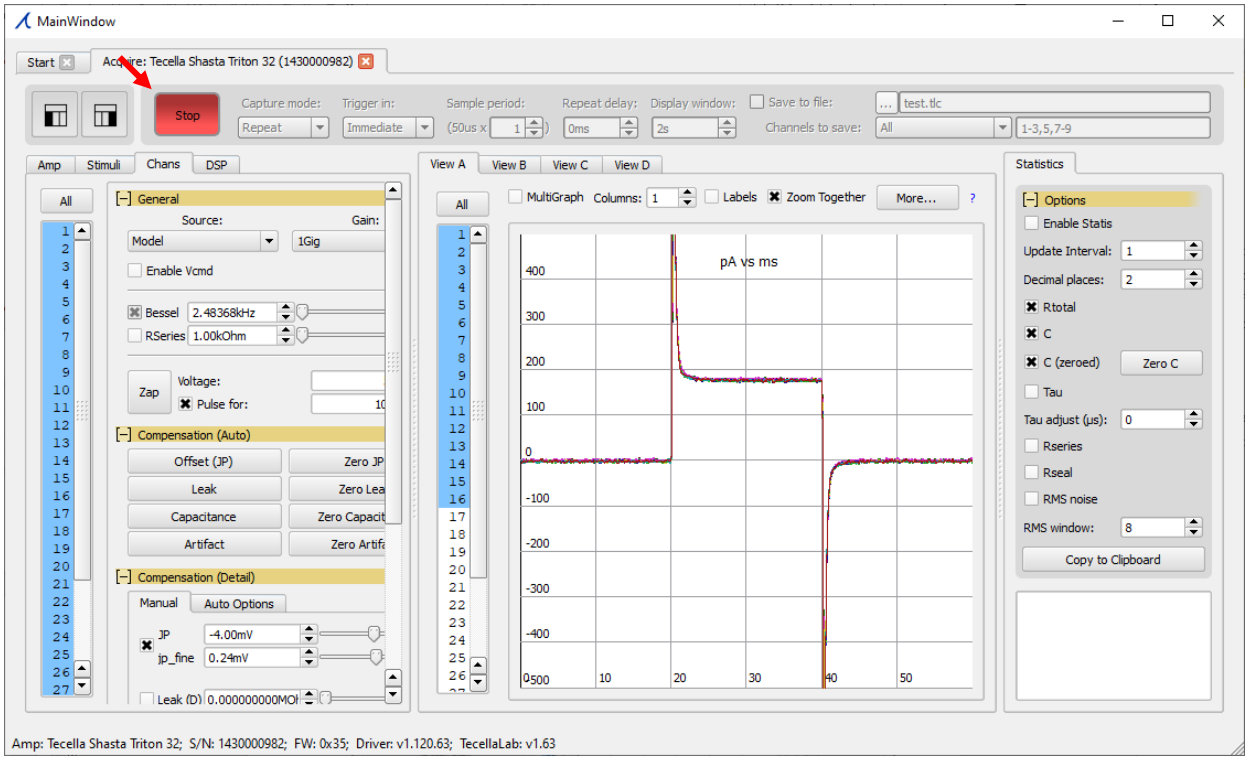
d. Ensure “Enable Offset Calibration” and “Enable Scale Calibration” are checked. Select “Chans” tab.



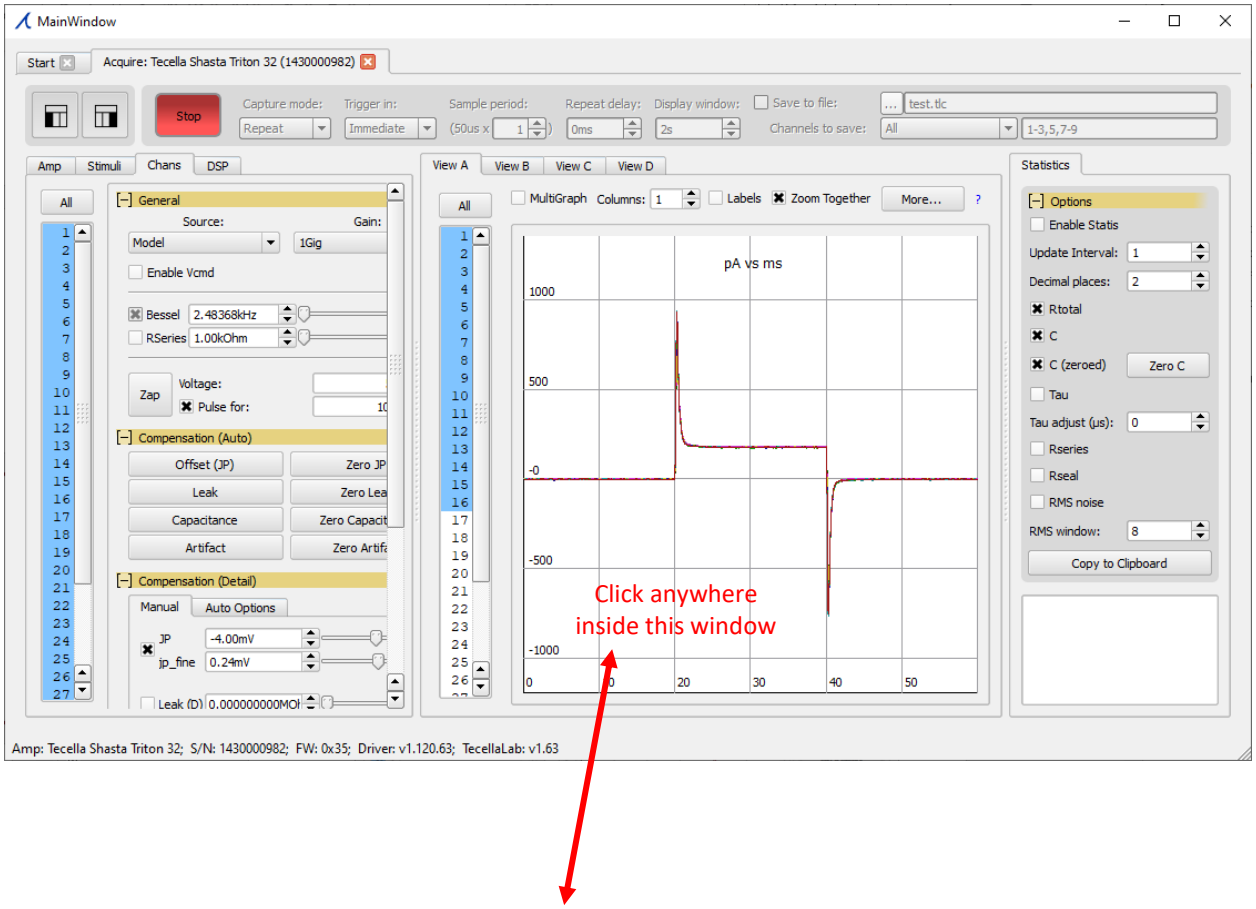
e. Select “Source” = “Model”. Select “Gain” = “1Gig”. On the right channel selector, select channels 1 thru 16.



f. Click on “Acquire”. The button will toggle to display “Stop”. You should see waveforms.



g. Double-click in the graph window to make the waveform fit inside the window. Drag while holding down the left mouse button to move the waveform. Drag while holding down the right mouse button to zoom in/out in both the horizontal and vertical directions.



Double-click:	Fit waveform inside window.
Left-click and drag:	Pan. Move the waveform around the window.
Right-click and drag:	Zoom in/out, and horizontally/vertically.

h. For additional information on using the TecellaLab, please refer to TecellaLab_Getting_Started.pdf included in the USB thumb drive, or refer to the link below.

- TecellaLab Getting Started: http://tecella.com/doc/TecellaLab_Getting_Started.pdf

i. This Triton X Use Guide is included in the USB thumb drive, and is also available at the link below.

- Triton X User Guide: http://tecella.com/doc/TritonX_User_Guide.pdf