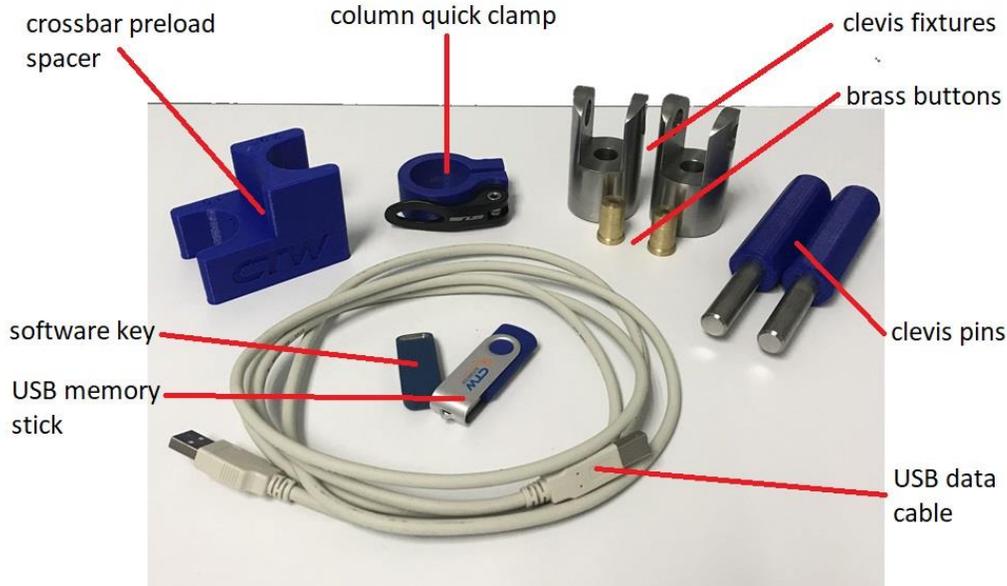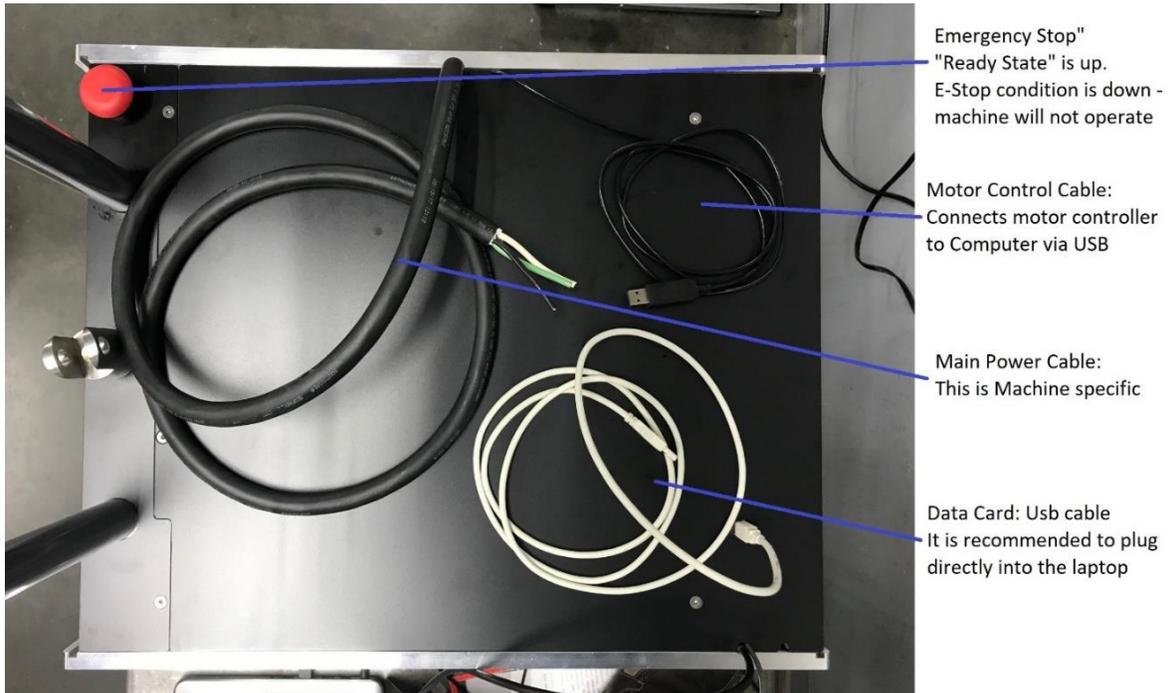**CTW Automation Probe install on a new computer**

This document will walk you through installing CTW Probe as a fresh install.
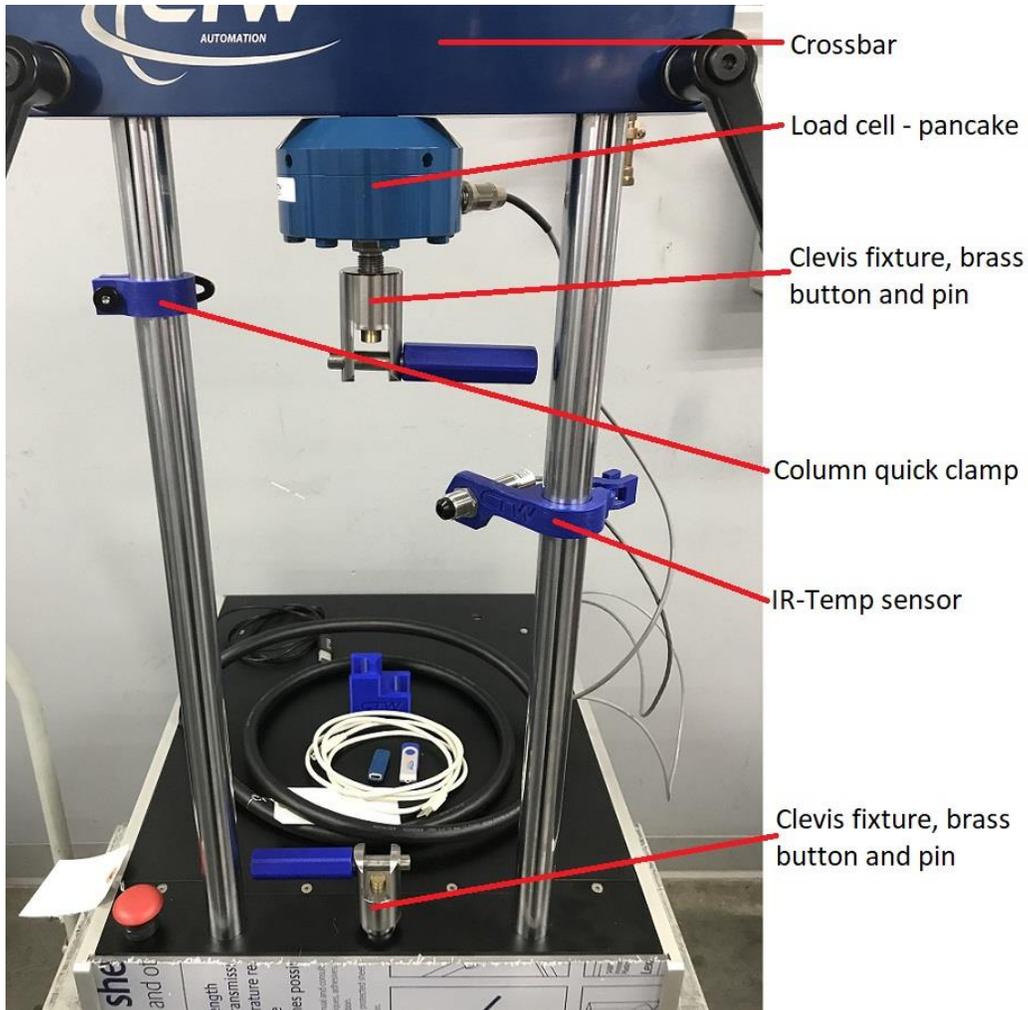
Some general pictures and details about what you should have. These can vary based on dyno type and other conditions but will help in the overall understanding of what we are referring to during the install.

Items in the box with machine

Overview of cables

Dyno overview of items and placement

Position the Column Quick-clamp to rest under the crossbar. You may have to adjust it from time to time to maintain the fit.

The IR-Temperature sensor will be on the right column, later you will position it for temperature recording of the damper body.

The load cell and IR-Temp sensors will have cables installed and going inside the top plate of the damper machine and already connected to the electronics board.

Set the dyno onto a sturdy table or strong cart. It can be on wheels for mobility as we have many customers that move them in and out of haulers and trailers. Your main concern will be connecting to power so keep that in mind as to where you place the machine.

Software key - dongle (License)

USB Memory stick with software

The Software key/Dongle is your license to collect data with our CTW Software. In order to collect data, you will need to have this plugged into the computer to collect data. It is not needed to use the software in a demo-viewing mode. The USB memory stick (right) is loaded with everything you need to run and use the damper dyno.

We recommend a:

- 64-bit / Win10 / Win11 with an Intel chip and i7 8th generation or better
- at least 12 GB of RAM laptop with (3) USB ports.
- If you have less USB ports, you can use a USB hub for expansion.
- You should always plug the USB data cable directly into the computer for best results.


USB Hub with Software key – USB cable from Data card – USB for motor control

The red Emergency Stop button is located at the front. During shipping this may have been depressed, please check to make sure it is in the "up" and ready position. Pressing this button will cut the main power to the motor controller.

Software Install

- Plug the USB Memory stick into your computer. Open the memory stick and copy the folder to your desktop. It will be called **"COPY THIS FOLDER TO THE DESKTOP"**. You should have the files shown below noting a different model serial number. It includes our Software, Manual, drivers for the motor controller and the data card, your calibration settings (ZIP folder), TeamViewer remote access program and a Sheet for how to run a Test.
- From the USB Memory stick, drag (copy) the folder called "COPY TO DESKTOP!!!" to the desktop of the computer. Do not operate programs from the USB stick.
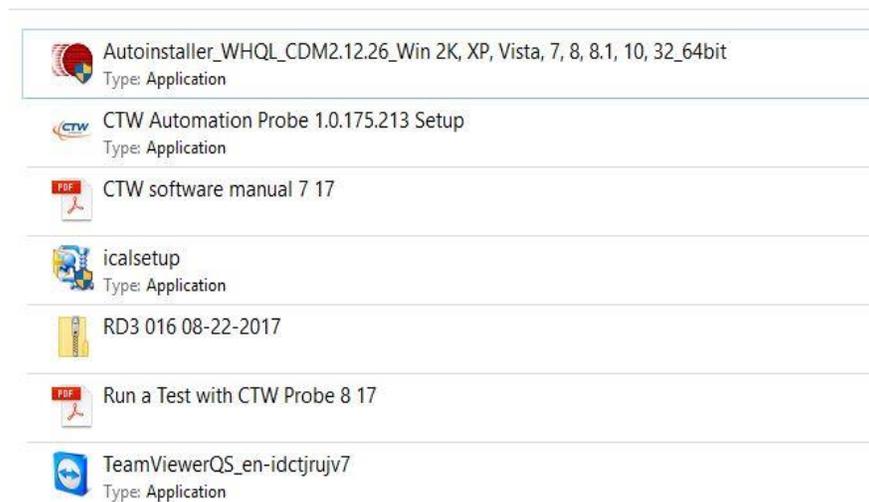

- Plug in all (3) required items for running your dyno, one at a time, allowing for the computer to find them and load any drivers it needs. This will happen automatically.
    - The software key / dongle
    - The USB data card cable
    - The USB motor control cable
- Run the "CTW Automation Probe XXXX.XXX Setup" program.
    - Based on some anti-virus and / or IT protocols, using the right-click and "Run as Administrator" might help the install.
- You will need Administrative Privilege, at least local.
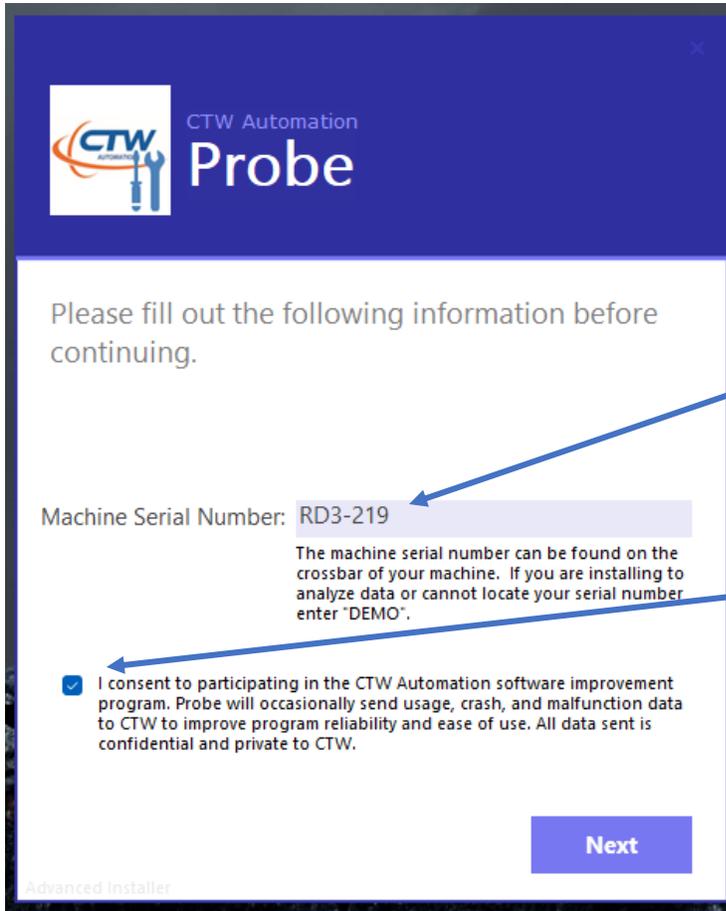
Machine Serial Number: Enter you serial number, a name, a word, anything. This is not a license.

Please check the "I consent" to help us better understand Users, Probe and general software.
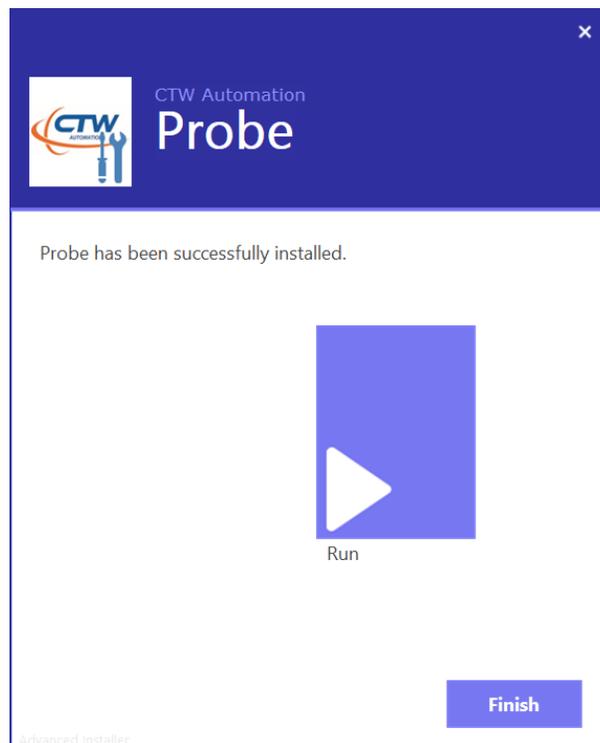
- Select "RD Dynos Only" for the installation.
-
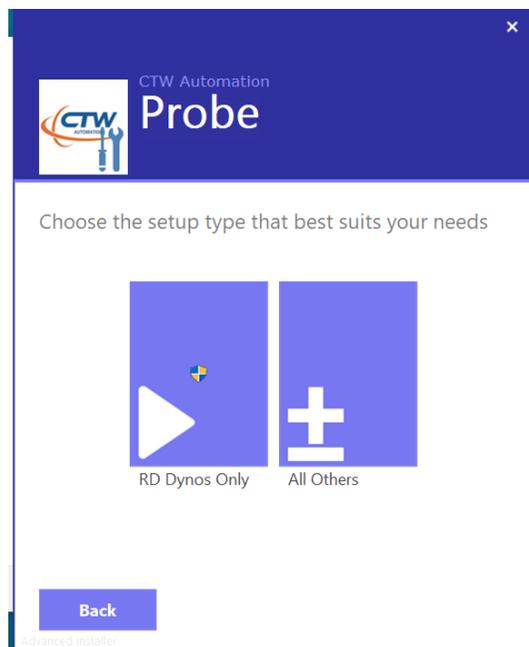
- During the install you may be ask to install Labjack software. If this install is for a RD2,3,5 or Roehrig upgrade click "Install".
   - Note: later versions do this automatically
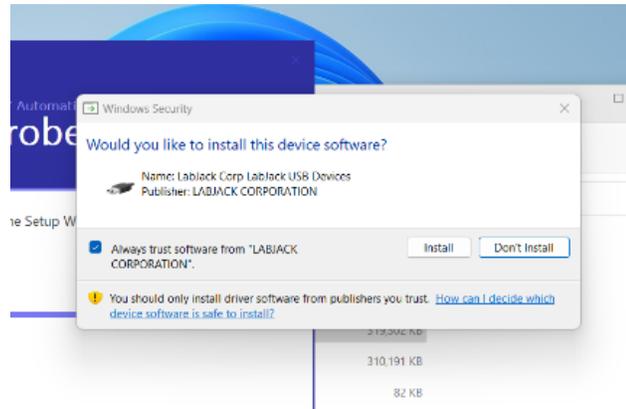
- When the install is completed, you will see the screen below. Click the **'Finish'** button.


Finish install screen

Now that the software is installed, time to get the dyno running.
First, we need to get your calibrations to the correct area.

- In the folder that you copied to the Desktop, you will find several items. For this next step you need to locate the file that has a small zipper like icon and is named with your dyno serial number and then CTW (and the date).
- Example: **RD3-112 CTW 11-25-2020.zip** this zip file contains the calibrations specific to your dyno. You must use this file.
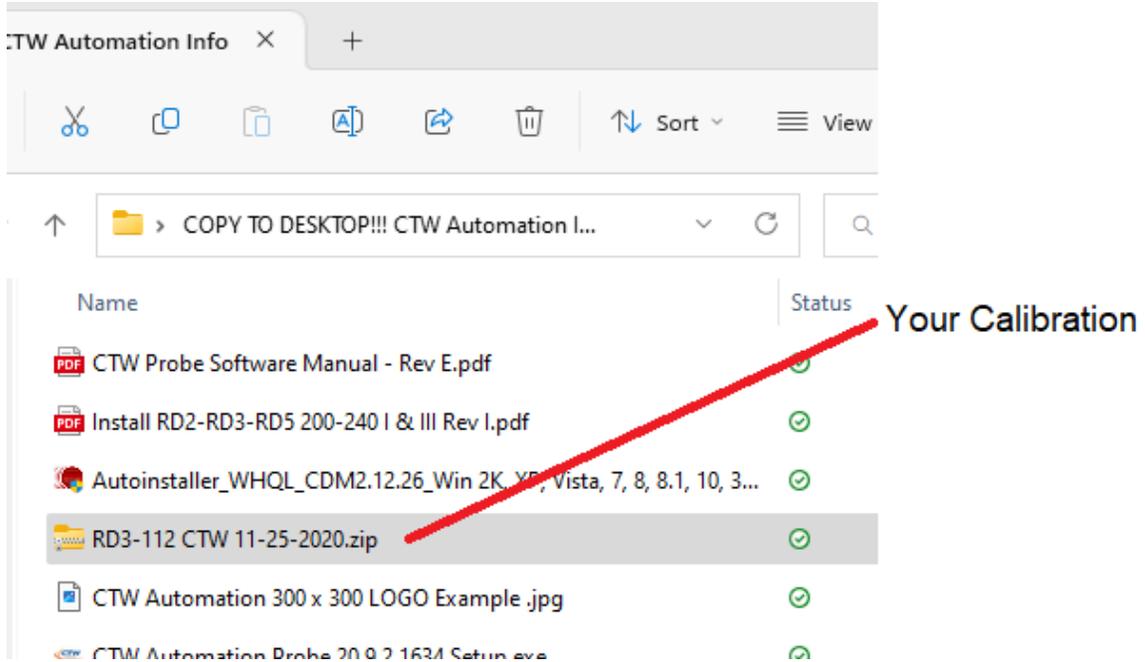

Screenshot of the COPY TO DESKTOP FOLDER!!!

- You will now need to copy your calibration zip folder to the CTW Automation folder in Documents.
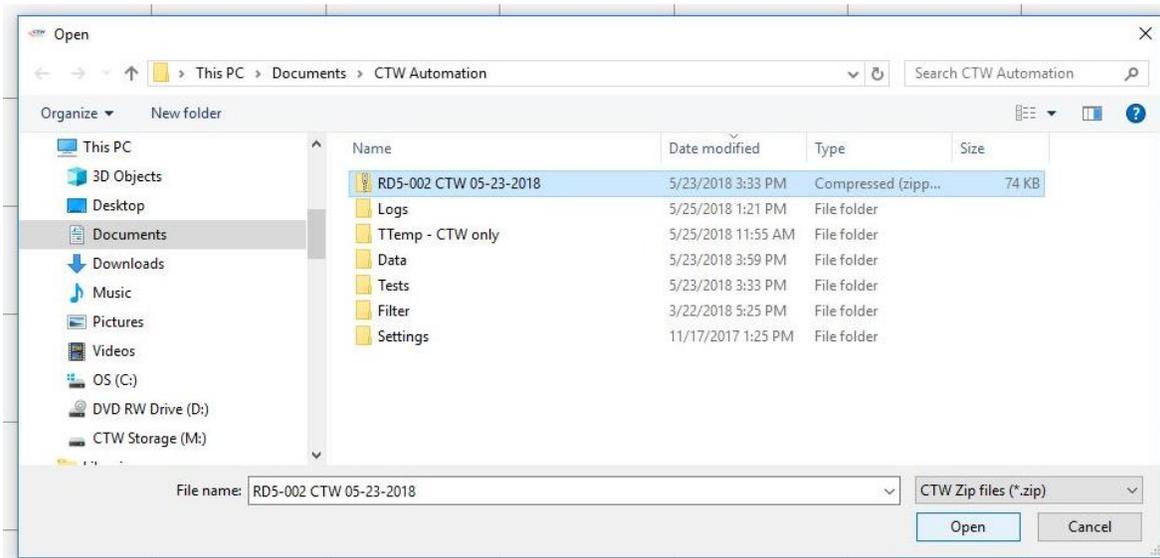

Screenshot of your computer's Documents folder with CTW Automation

- Start the program by clicking on the icon on the desktop.
  - Make sure the software key and both cables are plugged in and the power is on to the dyno and the low voltage cord is plugged in. Look for the light on the front left corner of the machine.
- Now you need to load your calibration settings we used for your dyno.
  - In the program, go up to the top and find "Preferences" click and then look for the "Restore settings and restart….." and click
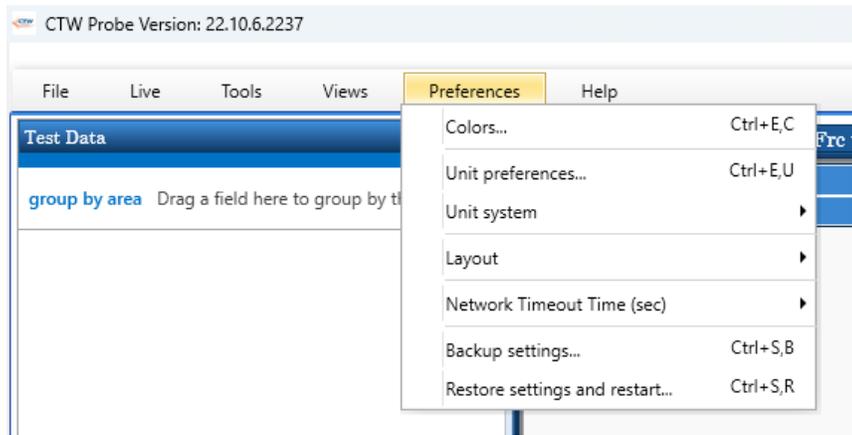

  - Next, a box will open and you will select your file which will be named by your dyno serial number and date.
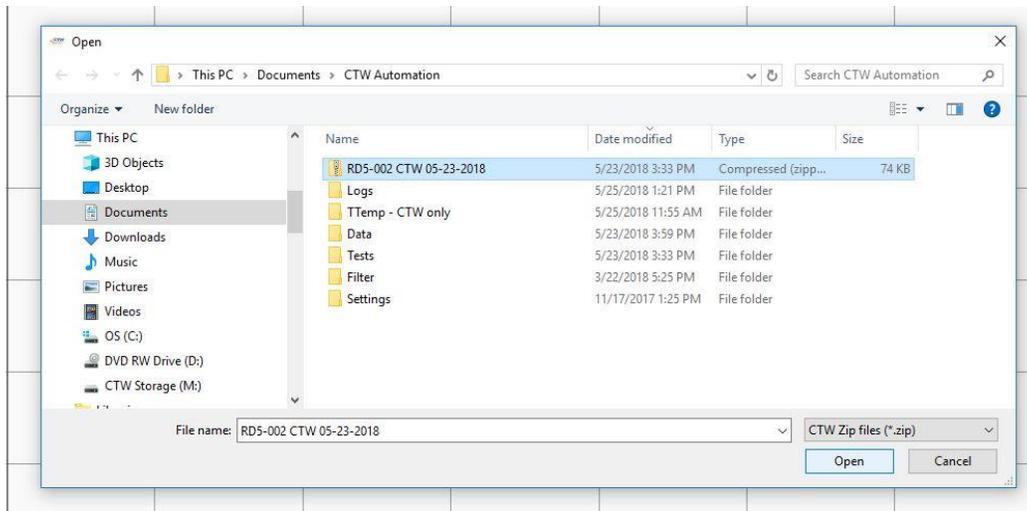
- Select the file and press the 'Open' button. Probe will close and restart automatically.
- You should now be ready to start using your dyno.
- You can find training videos on our YouTube Channel for the software

CTW YouTube Channel: https://www.youtube.com

The FIRST thing to do is use the Live Control screen to do a Measure Stroke.
If you cannot find the "Live Control" tab, go to the Toolbar / Live and turn it on.
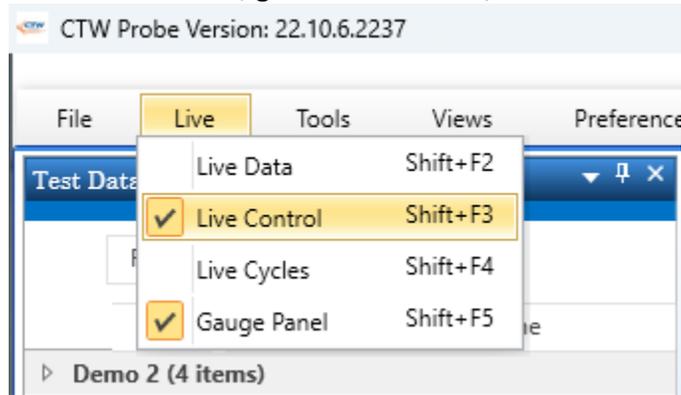
Turning on Live Control tab from the Toolbar

The CTW-Probe software will run the dyno and measure the stroke that it is on. Any time you use a new computer or when you change the physical stroke, you need to do this step. If the physical stroke and the software measured stroke do not match, then your Test speeds will be wrong.

Live Control Tab – used to Measure Stroke as well as many other features

When it is finished, it will give you the result: 2.0 inches or 50 mm. Click OK and then go to Configuration Tab and click Save. This will update the software to the measured stroke.

Your First test. We have provided you with several tests that can be used to get started.

You can also view training videos on our YouTube Channel:

   CTW Automation: https://www.youtube.com

You can now proceed to the manual and even the First Test PDF included in the COPY TO DESKTOP folder.

Troubleshooting

If after opening Probe and loading your calibration settings file your 'Shock Dyno' shield (upper-right corner) is still red, ensure that the software key, and motor & data card cables are plugged into the computer, then follow these steps.

- Hover your mouse over the Shock Dyno shield to open up the information window as seen below.
- If Commands Sent is "0" and/or the Serial Port is blank or listed as "None", close the Probe program.

- Open your computer's Device Manager. Go to the 'Control Panel' and choose 'View by: Icons' (large or small) and double-click on 'Device Manager' to open.

- Find 'Ports (Com & LPT)' and expand using the arrow. Make a note of the USB Serial Port Com number.
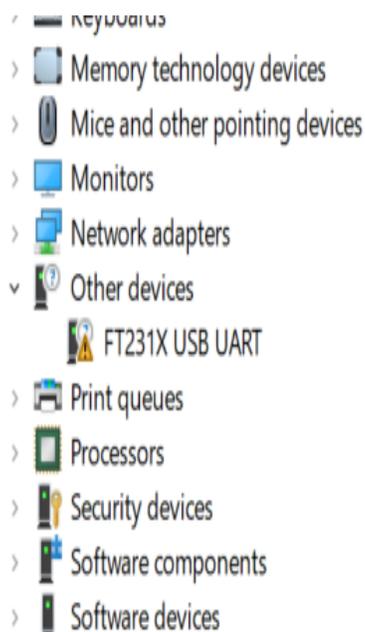
o If there is no Com Port number listed or if 'Other Devices' shows a yellow warning error on FT231X USB, you will need to close the Device Manager and load additional drivers for the motor controller cable.

Troubleshooting (Cont.)

- Re-open the CTW Copy To Desktop Folder.

- Find the program "Autoinstaller_WHQL_CDM2.12.26_Win 2K, XP, Vista, 7, 8, 8.1, 10, 32_64bit.exe" and install it by double-clicking. This is the driver for device communication to the motor / actuator, which is the black cable from the dyno.

- Now go back to Device Manager and find the Ports (COM & LPT) area and note the USB Serial Port (COM#). We need the COM # for Probe.

- Next, start Probe and go to the Configuration Tab. Scroll down to find the COM Port area and set the number to match what was listed in the Device Manager. Then click on the "Save" icon. Give the program a few moments to reset. You may need to click "Save" again. The Shock Dyno shield should change to green and you can begin testing.