



### SETTING UP

Decide on an item to scan. Be sure it is within the recommended part size range of 1 – 10 ft. Now plug in the various inputs into their respective outputs. The power cord should be connected to the scanner (with the white arrow pointing up), the USB, and power supply as shown in the following figures:

Plug the USB into the laptop (must use the HP Elitebook). Place the dots (positioning targets) on your object and ensure that at any angle, the scanner will be able to see at least 3 dots.

Open "VXelements" on the laptop. You are now ready to scan!

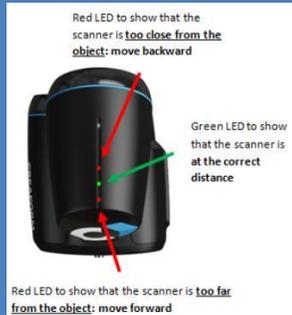
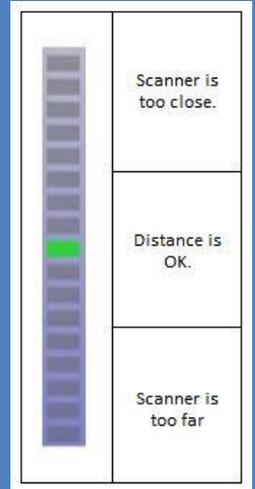


### SCANNING AN OBJECT

Click "Scan"  on the laptop. Point at the object and push the trigger to begin the scan. While the scan is in process, signals on the screen and on the scanner will alert you if you are too close or too far. Continue scanning until you are satisfied with the solid figure. Click "Pause." 

3D scanner  
Tips

Check your  
distance!



Note: If both red LEDs are on, signal was lost.

### EDITING THE SCAN (AN OVERVIEW)

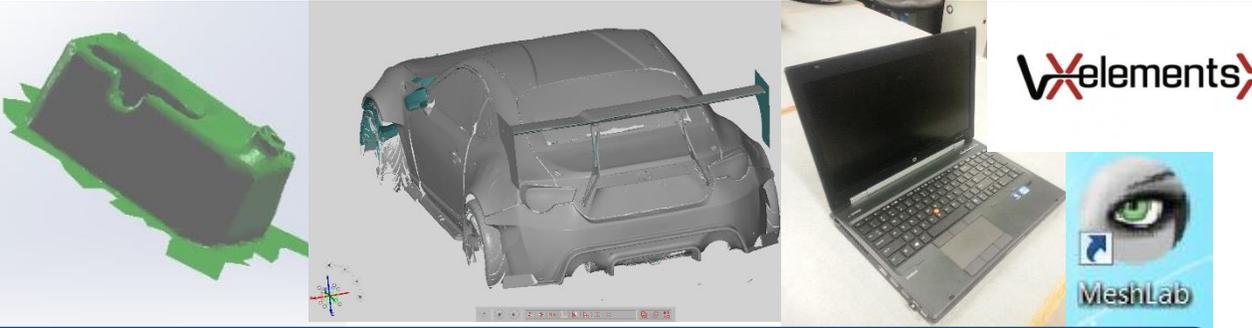
From this point, there are many options. Using VXelements, you can decimate triangles, smooth out or get rid of some surfaces, and save the project as a: .dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, x3dz, .zpr We recommend .obj or .stl to open them in Mesh Lab, Solidworks, or Netfabb; all of which could be used to edit the scan to more solid body (which can later be 3D printed). More info on editing available on next page.

#### Tech Specs:

- Weight: 2.4 lb
- Dimensions: 5x6.2x10.3 in
- Measurement rate: 550,000 meas./sec.
- Resolution: 0.500 mm (0.004 in.)
- Accuracy: Up to 0.100 mm (0.004 in)
- Scanning area: 380x380 mm (15x15 in)
- Standard USB 2.0 connection
- Part size range: 0.3 – 3.0 m (1 – 10 ft)



[Quick-start Guide](#)



### VX ELEMENTS AND MESH LAB

With VX Elements open, you can do some minor editing. Primarily, you can select “Facets (1)” and then manage the parameters to obtain a simpler mesh (2). You can also select “Edit Facets” near the top to select portions of the mesh and delete them. Now the facets can be saved as a “.obj” file or another 3D file format. We recommend “.obj” for now.



From here, you can do some extra finishing and smoothing in

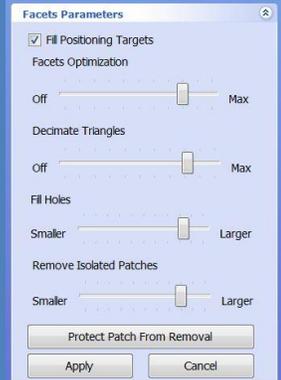
MeshLab or skip straight ahead to Solidworks. In MeshLab, it is possible to fix holes by clicking Filters > Remeshing, Simplification, and Reconstruction > Surface Reconstruction: Poisson. Set Octree to between 10 and 12 and Solver between 8 and 10. This closes some gaps in your mesh. Be warned that large holes can come out more “bubbly.” If you are experienced with MeshLab, or just enjoy exploring, feel free to experiment with varying options. For beginners, simply export the file as a “.obj” and open it in Solidworks.

### Quick Editing Steps

(1)



(2)



(3)

Export as .obj

(4)

Mesh Prep

### SOLIDWORKS

For this portion of editing, be sure that the add-in “Scanto3D” is enabled. Open up the “.obj” mesh. Go to Tools > Scanto3D > Mesh Prep wizard. Select the mesh. Click the arrows to navigate through the wizard and select various options to customize your mesh. From here, the editing becomes subjective to your expectations for the finished product. The mesh can be oriented, simplified, smoothed, and holes can be filled if they weren’t already in MeshLab. The wizard takes you through various windows, most of which have sliders that allow you to apply a spectrum of choices to perfect your model. Once you’ve completed the Mesh Prep wizard, the Surface wizard shapes surfaces to fit your mesh mold. This can be done automatically, or with step by step guidance from the wizard.

