1) Open **Artec Studio 11 Professional**

2) Press the **Preview** button or press the Artec scanner’s toggle switch forward.

3) Watch the computer display as you line up the scanner with the object that you’re trying to scan. By adjusting your distance to the object, make sure the waveform stays centered within 274-196.

4) Press the **Record** button or press the Artec scanner’s toggle switch forward.

5) Press **Stop** or press the Artec scanner’s toggle switch downward.
3D Scanning with Artec Studio 11 Professional

**Note:** While scanning, you want to rotate your object a full 360 degrees on a rotating table for best results. Depending on your object’s complexity, you will want to make 2-4 complete scans. In our example, we did 3 full scans.

6) Close the scanning tab when you have completed all of your scans. You will see a progress window appear. Wait for the complete its calculations.

7) If there sections of your scan that need to be trimmed or removed, you use the **Eraser** function which is located in **Editor** button then **Eraser**.

**Navigation tips:**

Hold **Control** and **Shift** to enlarge/reduce objects by scrolling.

If multiple layers at visible, hold the **shift** key to adjust just the selected layer.

To move an object up/down/left/right on the screen, press both the **Left** and **Right** click buttons your mouse at the same time and move your mouse.

8) The next step is to align all the scans together. Press the **Align** button.
You’ll notice the scan layers on the left panel.

Blue circles mean the layer is registered, and the Green circles mean an unregistered layer. Only align 2 layers at a time. Rotate two scans on the screen side by side so that they laid out similarly (see example).

Tip: Again Hold Shift to move one scan at a time.

Next you will have to click on at least 3 common points between the two scans. You can press the space bar to deselect a point if you have made a mistake. See the example below.
3D Scanning with Artec Studio 11 Professional

Now click the align meshes.

You’ll notice now that Scan2 is now blue and registered.

Now do the same process for Scan3
9) When all of the alignments has been performed. Click **Apply** at the bottom of the window.

10) Next go to the **Tools** button **Registration** then **Global Registration**. Change **registration_algorithm** to **Geometry**. Lastly, click **Apply**.

11) Now go to the **Tools** button and **Fusion** then the **Outlier removal** section. Change the **std_dev_mul_threshold** to 2. Press **Apply**.

12) Next go to the **Tools** button then **Sharp Fusion** and change **Fill_holes** to **Watertight**, and press **Apply**.
13) Next go to the Tools button then Postprocessing and change the Small-object filter to Leave_biggest_object. Click Apply.

14) If you find additional parts of your model that need to be removed, you can use De-feature Brush. This option can be found in the Editor Button and the Defeature Brush.

15) Double click on the Sharp Fusion1 layer on the right side of the screen, this allows you to see the polygon count for your model. You want a target of 100,000 polygons.
3D Scanning with Artec Studio 11 Professional

For mechanical objects that depend on accuracy, go to the Tools Button and PostProcessing and Mesh simplification. Change stop_condition to Triangle_quantity. Set tri_num to 100000. Click Apply.

For other objects that are not dependent on accuracy, go to the Tools Button and PostProcessing and Fast mesh simplification. Set tri_num to 100000. Click Apply.
3D Scanning with Artec Studio 11 Professional

16) To check if your models has any holes, go to the Edges button. If there was any holes detected within the model they will show up on the list. You can press the Select all button then the Fill holes button to close them.

17) You can apply color textures to your model. Go the Texture button. Select all 3 raw scans one the left and press Apply.
3D Scanning with Artec Studio 11 Professional

You can also adjust the Brightness, Saturation, Hue, Contrast, and Gamma correction. Press Apply when done with adjustments.

18) To make texture corrections, go to the Editor Button and select Texture Healing for simple texture editing.

19) Time to export. Make sure that only the Sharp fusion layer is selected.
3D Scanning with Artec Studio 11 Professional

Go to File menu then Export Meshes...

20) Change Texture export format to jpg and click on the "..." box

21) Give the File a Name and select a file format. Typically you will want to select the STL file format. Be aware that STL does not save texture color information. If you require texture color information, select wavefront OBJ, VRML or ASTM E57 3D file formats. Click Save
22) Lastly Click on OK to complete your file save.