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Artec EVA

Quick Start Guide
Scanning with Artec Eva



English

Version 2025.06A

In this document you will find a short description of how you can collect data with the Artec EVA.

A detailed description of the complete functionality can be found in the English manual that is installed on the computer during the installation of Artec Studio. You can open this with CTRL-F1. We strongly advise you to take time for this and especially to read the practical tips carefully.

Here are some practical tips that are important to consider before and during scanning.

Tip 1.

Make sure you prepare the Object you must scan

This means, among other things, that the model to be scanned must have sufficient structure, so that the scanner has sufficient overlap between the different images.

If there is insufficient structure, place or sticking something on or near it that the scanner can “see” while scanning. This then serves as a reference for the various recordings.

Do you need to scan an object with little relief and no color change like a car hood for example?

Then there are several possibilities:

- Add geometry to the object. E.g. wads of paper will work very well.
- Add shades of colour to the object. It is best to work with high-contrast images such as a newspaper advertisement or homemade tools. Think of an A4 with an irregular “pendulum pattern” drawn on it. This works best!
- **Note:** do **Not** use Fine Liners for this, but a thicker pen!
- For large surfaces such as a bonnet: stick crosses on the surface with coloured tape.
- Use Scanspray and spray it irregularly from close by, so that you can clearly see traces.

Tip 2.

Make sure you are well prepared HOW you are going to scan

- Make sure that you can ALWAYS see the screen of the computer clearly during the scanning process because the computer controls the scanning procedure. You have to keep looking at the screen 90% of the time!
- Move around with the scanner to get an idea of the distance you need to the object and practice the part you want to scan.
- Think in advance about which scan process you want to take. Also think of cables etc.
- If you notice any errors, stop scanning.
- If you move too far/too close/too fast, the display will turn red and start beeping. Go back to a spot on the object that has already been scanned and Artec Studio will attempt to recognize that location and continue scanning.
- Sometimes this does not work. Then stop and make a new scan.

Tip 3.

Scan in HD quality

With the EVA you can scan in HD (High Density) This gives a clearly better end result with more details in the scan.

You must indicate this in Artec Studio **before** you start scanning.

On the Scan tab, you'll see a slider for the **HD frame frequency** when the EVA is connected.

You can move this slider from **No HD** to **Only HD**

If you want to scan in HD, it is necessary that the **Neural Network** is calculated on the system you are going to scan with. This must be done before you want to make scans in HD quality for the first time.

Note

Scanning in HD is much more demanding on the computer. First, make sure that the system is capable of HD Scanning.

Settings EVA for HD Scanning

It is recommended:

- a. set the slider to **HD-frame frequency: every 4th frame.**
(Where the slider is in the image)
- b. **Do not** check **Launch reconstruction after scanning.** If you check this, you will have to wait for the calculation after each scan and that is better done later in Artec Studio.

Tip 4.

Scan as fast as possiblek

Move the scanner over the object as quickly as possible. Very slow scanning does not provide more information and neither does it provide closer. If the scanner is moved too quickly, the image will turn red during scanning. Then go back and “look up” the last scan position. If that doesn’t work, then stop and make a new scan.

Scanning Speed Setting: Always set the slider to maximum. This is 15 FPS (Frames per Second) for the EVA scanner.

Tip 5.

Don’t make the scans too large

If possible, make sure that the number of frames in a scan does not become too large. Better some more separate and smaller scans than large and massive files. Merging the separate scans is easy in Artec Studio.

In general, it is recommended not to scan longer than approx. 1 minute! With the EVA you get about 1000 Frames. Bigger is also possible, but then the calculation takes longer. Too small scans with only 15 frames is not recommended!

Try to keep scanning at as constant a distance as possible from the object to be scanned. To do this, you can enable the Distance Overlay before you start scanning.

Tip 6.

Overlap Scans

If you make multiple scans, make sure you have a large overlap in data, so that the scans can be properly aligned during post-processing!

Tip 7.

Accuracy scans

If the goal is to get the most accurate scan result possible, pay attention to the following:

- Let the scanner warm up for about 10 minutes.
- Optimal lighting conditions (subdued light - certainly not too much). In direct sunlight, provide shade by, for example, shielding the object.
- Scan as close as possible. For the EVA scanner, this means about 40-45 cm away from the object. Keep this distance as much as possible.
- Scan as perpendicular as possible to the surface to be scanned.
- If possible, scan the entire object around plus an overlap.

Tip 8.

Storing the Scan Data

The file is saved automatically. This is done by default in the user folder. So you never have to worry about losing data.

If you want to save the file in a project folder (File/Save or CTRL-S), the data will be removed from the user folder.

Note

When scanning, **always** save the data on the PC/Laptop you are working with and **never** on a network drive or in the cloud or the like! If you want to move the data there, you can do so when you're done with the scan.

When the scans have been made, read the document **Tips & Tricks Post-processing!** This briefly shows the method for each scanner how to post process and how you can eventually create your STL or OBJ file.

Have fun scanning with
ARTEC EVA



4C Creative Cad Cam Consultants

4C Creative CAD CAM Consultants is a company specialized in 3D technologies and is located in Emmen, Drenthe. 4C is your partner for delivering professional hardware and software for 3D scanning, reverse engineering, AR & VR and quality control.

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