

# Calibration

## Purpose of Calibration

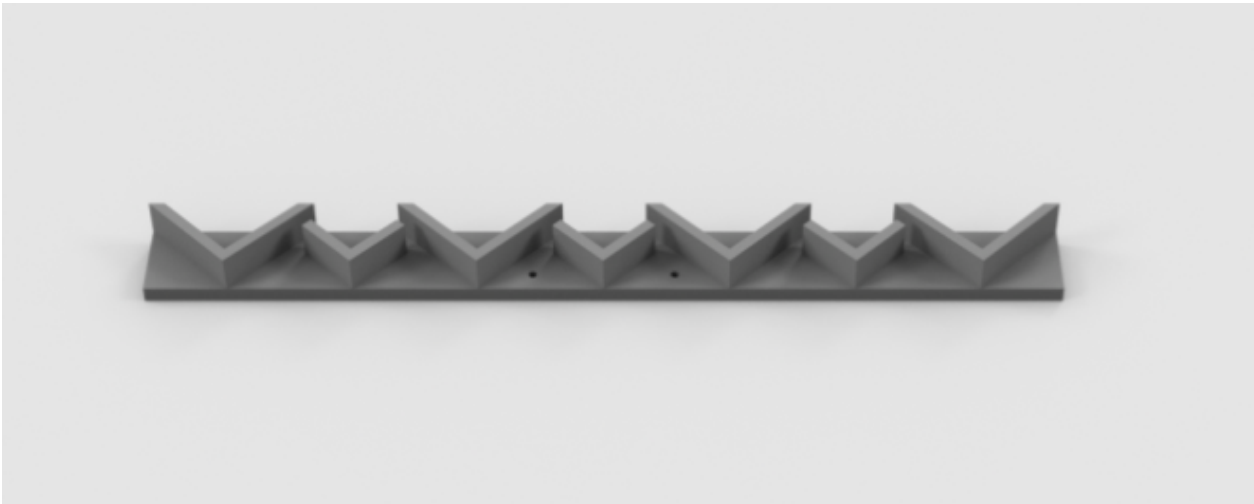
Each scan head needs to know its orientation and position in space relative to the object being scanned, and possibly to other scan heads. The process of establishing a common coordinate system is called "Calibration."

On an un-calibrated head, the orientation and origin of the coordinate system is unknown, so the measured points can't be related to the scanned object or merged with points from other heads.

## Calibration Fixtures

Considering that all profile points are in one plane (the laser plane), determining the position and rotation angle of this system becomes fairly simple: correlating the measured profile of well-known object with the expected profile. This is where a calibration fixture comes in.

A calibration fixture is an object with a well-known and stable geometry that allows the calculation of rotation and offset for each head.



**Figure 6. Example of a calibration fixture.**

There is no single calibration fixture suitable for all scanning zone layouts, but JoeScan Support can help you find an economical and accurate design for your purposes. It is advisable to keep the original fixture so you can perform routine calibration checks.

The physical mounting of your scanners must be done in such a way that the calibration remains stable during operation.