

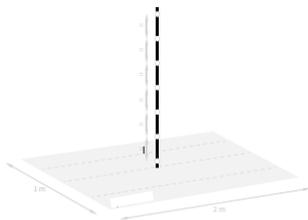
The Ekib 360º 3D capture system is a powerful and accurate tool that as other devices need to be calibrated. The calibration allows the software to set the 3D coordinates in order to enable the identification and tracking of markers.

The calibration is strictly required the first time you install the system and whenever the cameras have been moved. A faulty calibration will affect the system operation and cannot get the results or get them altered.

i TIP: You can check the quality of calibration doing a calibration test.

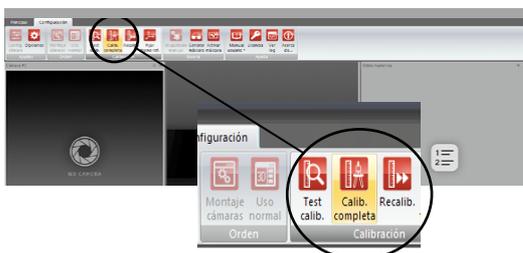
1 HOW TO CALIBRATE THE SYSTEM

To calibrate the system, we will use the “calibration bar”. This straight bar should be assembled in such way that all markers remain separated on a equidistant way, or the system will be calibrated incorrectly.

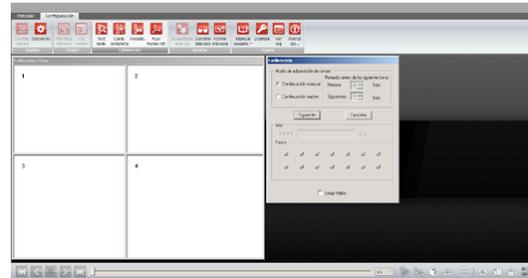


i TIP: Before starting the calibration process make sure that the number of markers of the calibration bar and the distance between them matches with the indications in the dialogue box “Configuration / Options / Calibration/ Number of calibration points” of the software.

Step 1. To begin the software calibration you will have to go to the calibration panel which you will find in the main screen of the software. You will find there a button called “Full calib.” which will allow you to start with a new calibration process.



Step 2. Calibration bar captures acquisition. It will be required to take several pictures of the calibration bar positioned throughout the capture area.



The basic rules to take the pictures correctly are the following:

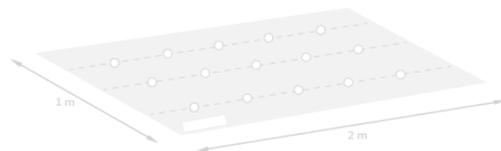
> Make sure that all markers are seen by all the cameras whenever you make a capture.

> It is important to take the captures with the calibration bar inclined, but no less than 45° from the ground.

> It is not necessary to place the calibration bar on specific points but be sure that you are positioning it at different points along the capture area and without forgetting any space.

> Do not place the calibration bar twice in the same place.

i TIP: A good way to make sure that you calibrate all the space of the capture area is to position the calibration bar drawing 3 lines. As a reference, the first point of the central line will be marked by the central marker of the floor/platform.



The number of captures is represented by small dots in the “calibration window”. The green dots represent the captures made with success, the gray dots are the captures that remain to take and if it some capture fails due to excess of markers or lack of them, the dot will be marked in red. If this happens the capture has to be taken again until the dots turns to green.

A window with views of the different cameras will represent the markers detected in the last made capture. Pay attention to this window in case you have any problem with the capture. It will give you useful information to get an effective capturing.



result is “bad calibration”. A complete calibration provides a greater precision to the system.

For more information about the EKIB 360° Motion Capture system check out our website www.ekibcycling.com, contact us in info@ekibcycling.com or follow us on:



Once all captures have been made, the software will take a few seconds to show you the calibration result and if it is successful the system will save the calibration.

- i* TIP: Before starting the calibration process it is advisable to check there is no extra glare, you can do it by taking a photo in the “Live Video” option.
- i* TIP: Remember to calibrate with the calibration bar tilted in order to allow the system calculates accurately the horizontal distances. Maximum 45° regarding to the horizontal.
- i* TIP: You can mark with tape a rectangle on the floor (2mx1m), in this way is easier to limit the capture area and position calibration bar along this.

2 HOW TO KNOW IF THE SYSTEM IS PROPERLY CALIBRATED

The calibration will not be valid if are camera moved or suffer any minimal change of position, even a minimum friction with tripods that hold them can cause the system loses calibration. To find out if the system is properly calibrated follow the following procedure:

> Place the calibration bar in the center of the capture area.

> Press the button “Test calibration” on the calibration panel, the system will tell you if the calibration is good or bad.

- i* TIP: Make a calibration test before every capture session.
- i* TIP: Although there is the option of “recalibration” we recommend if you have the time, to do a complete calibration if the test