

Tracking System Camera Calibration Manual

VOTANIC

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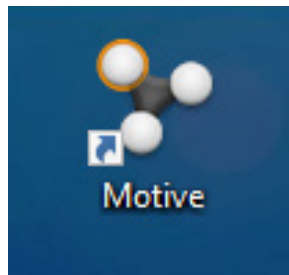
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Performing Camera Calibration

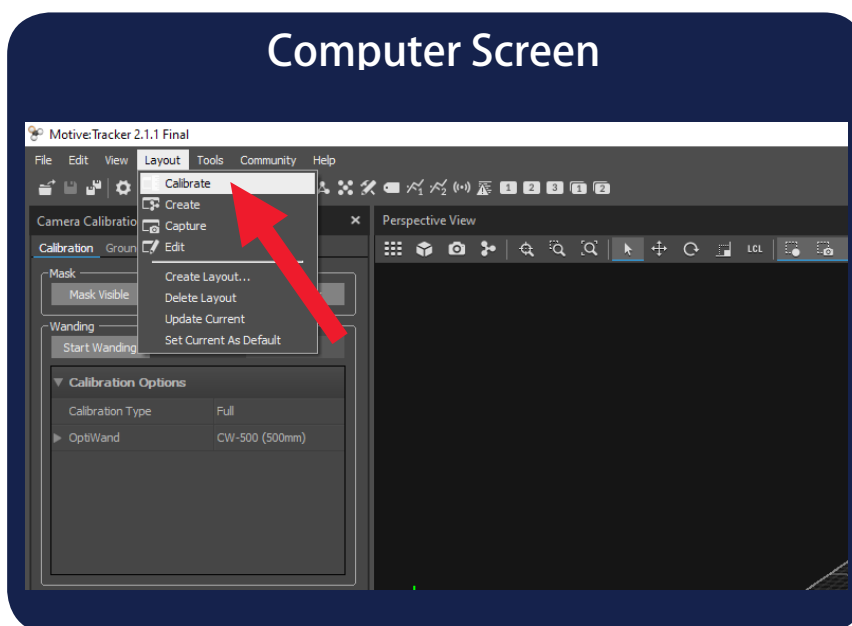
Performing Camera Calibration

1. Prepare for Camera Calibration

After the system is booted, start the "Motive" application. Skip this step if the application is already running.

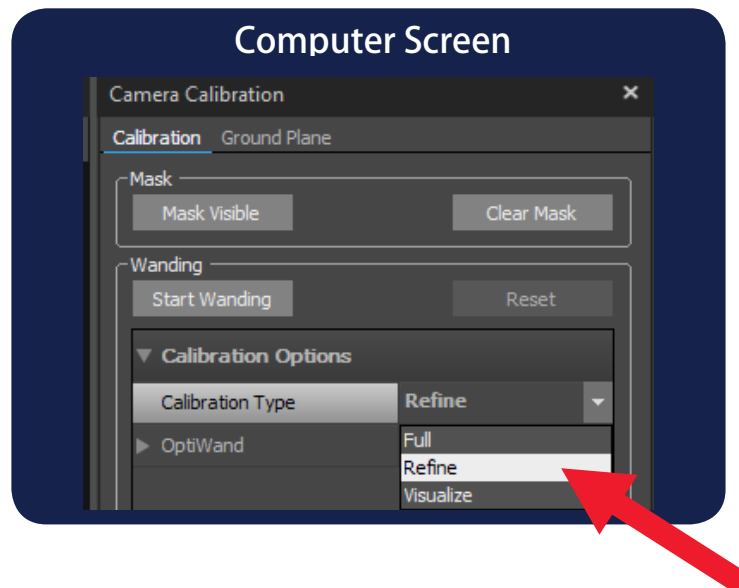


Open the "Camera Calibration" panel by selecting "Calibrate" under the "Layout" menu.



Performing Camera Calibration

At the Camera Calibration panel, change the Calibration Type to "Refine".



2. Assemble and Install Calibration Wand

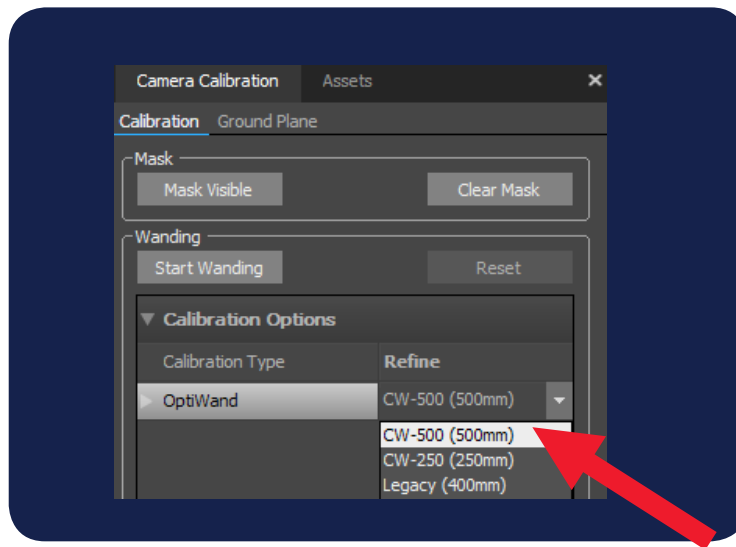
Assemble the "CW-500" calibration wand as shown in the pictures below.



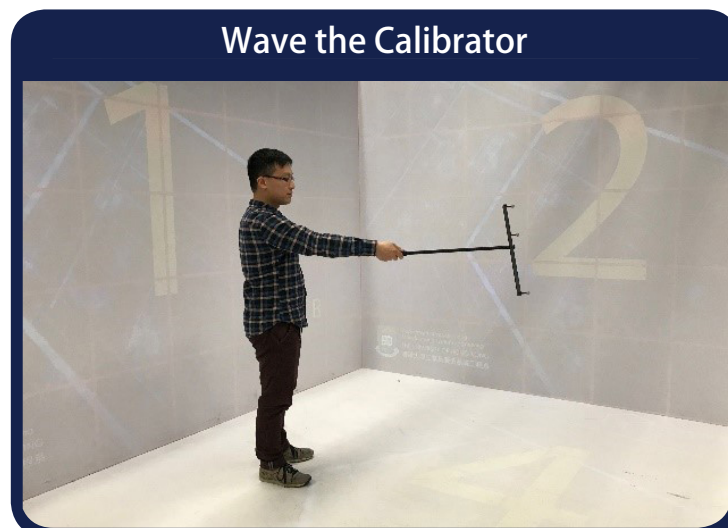
Performing Camera Calibration

3. Start the Camera Calibration

Set the "OptiWand" to "CW-500", and press "Start Wandering" to start the calibration.



Bring the calibrator inside the CAVE, and wave it at different positions.



Note:
Extend your arm as far as possible to prevent the body affect the calibration. To get the best result, wave the calibrator in a wide range.

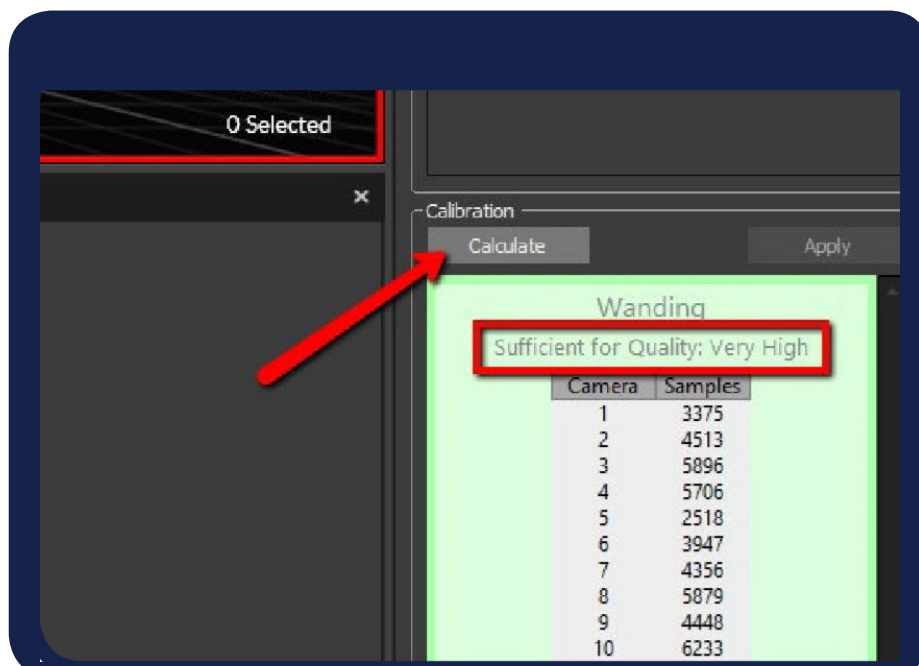
Performing Camera Calibration

Wave the Calibrator



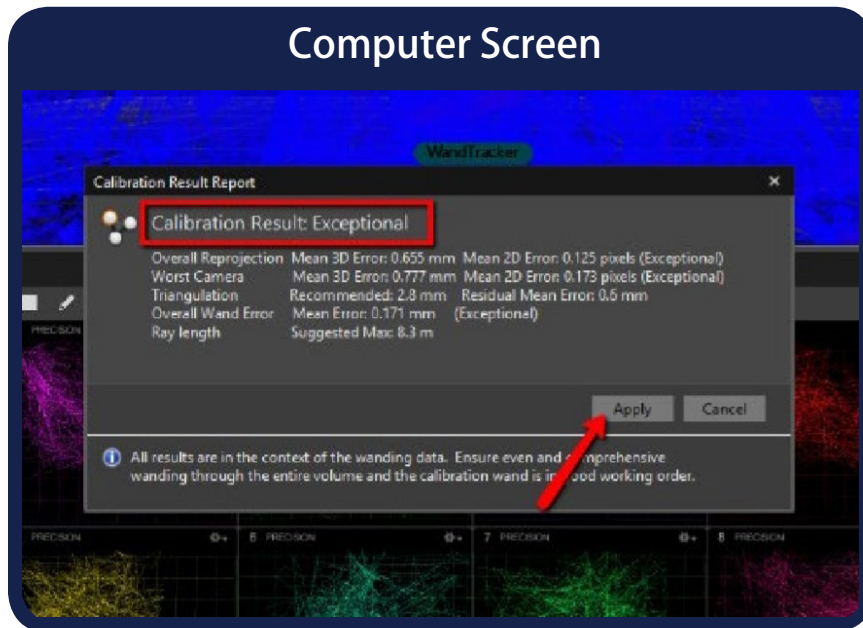
4. Check the Calibration Result

After collecting enough calibration data, click "Calculate" to calculate the result.



Performing Camera Calibration

After going through the calculation, a Calibration Result Report will pop up, and detailed information regarding the calibration will be displayed. If the results are acceptable, press Apply to use the result. If not, press cancel and repeat the wandling process.



5. Setup Ground Plane and Origin

Place the "CS-200" ground plane calibrator at the center of the CAVE, as shown below.



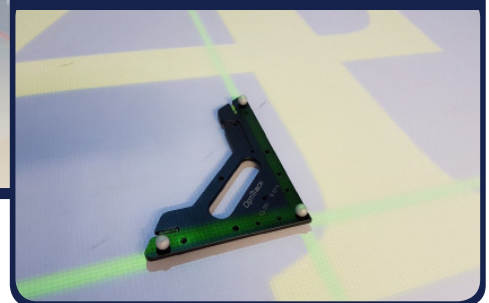
Performing Camera Calibration

Place the ground plane calibrator on the center the longer leg should be pointing forward and the shorter leg pointing to the left. Adjust the leveling of the calibrator so that the leveling indicator stays at the centre. (Figure1 & Figure2)

Figure 1

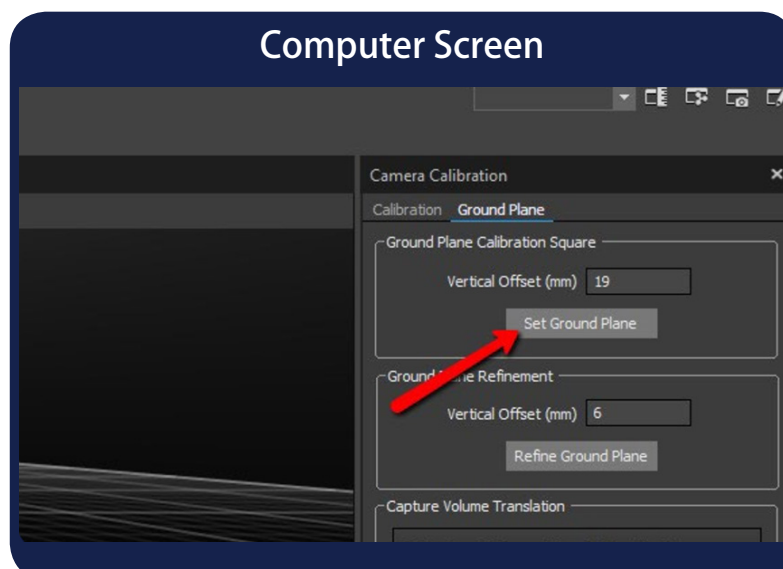


Figure 2



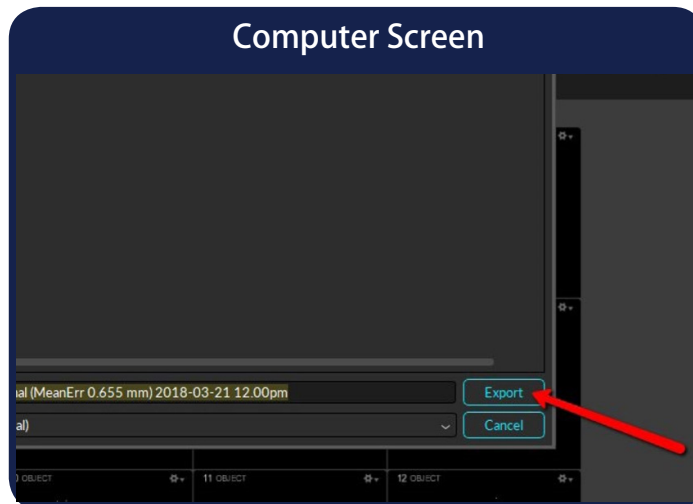
Press "Set Ground Plane" ◦

Computer Screen

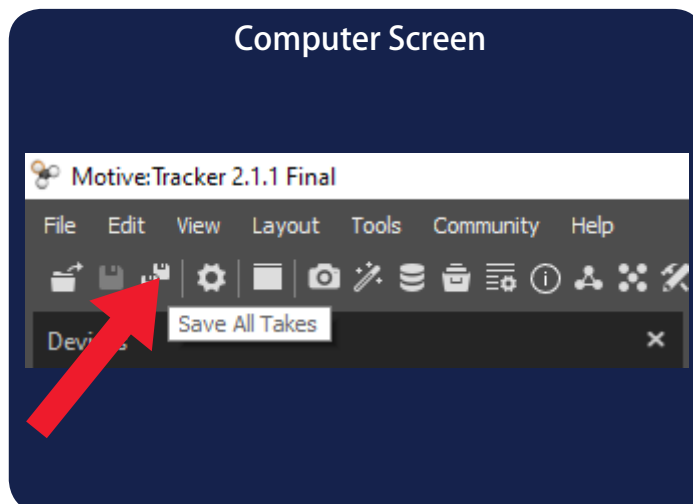


Performing Camera Calibration

Press "Export", to save the ground calculation result.



Press "Save All Tasks", to finish the camera calibration.



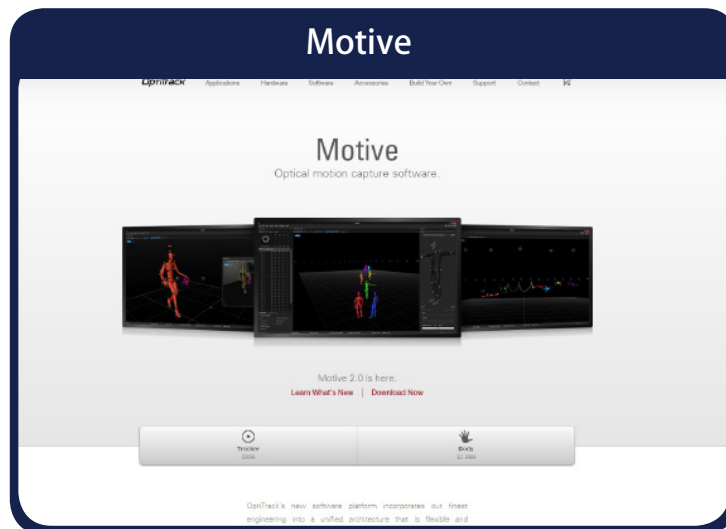
Reference

Reference

1. About Motive Capture Software

Reference:

<http://optitrack.com/products/motive/>



2. About Calibration Device Model

The model of the calibrator is CW-500. And the model of the ground plane calibrator is CS-200.

