

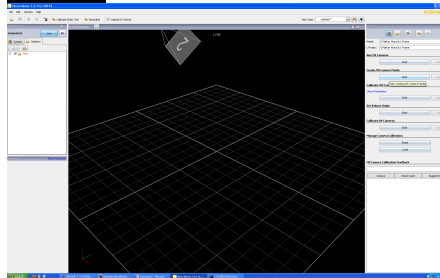
Vicon Nexus Tutorial (8/15/10)

Calibrate Cameras

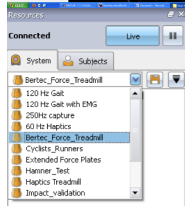
1. Open Vicon Nexus from the Desktop



2. The main screen of the program looks like this:

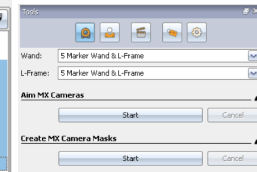
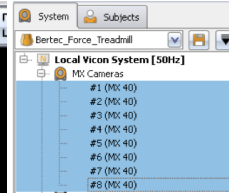
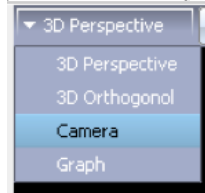


3. On the lefthand panel, click Live, select the System tab, then Haptics_Treadmill from the drop down menu



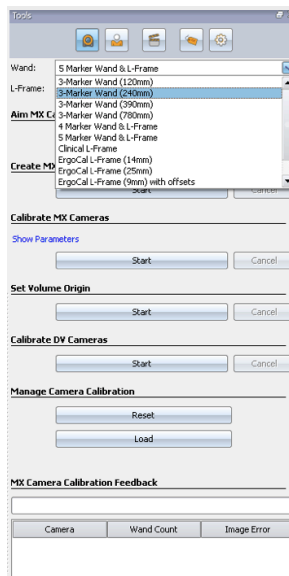
4. Create Camera Masks

- A. Change perspective view to *Camera*
- B. On System menu, select all cameras
- C. On the Tools menu, select Camera tab and click Start under Create MX Camera Masks menu
- D. When all the markers in white are masked in blue, click stop.



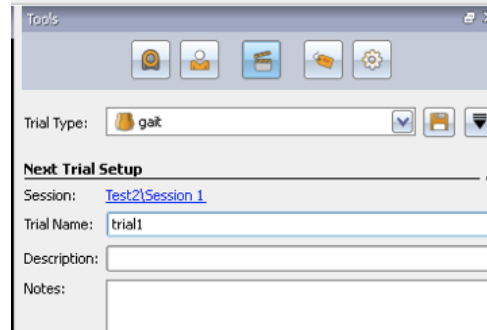
5. Calibrate Cameras

- A. On the righthand Camera tab, select the **3-Marker (240mm) Wand** from Wand menu
- B. Click Start under the Calibrate MX Cameras menu
- C. Pass the wand through the entire marker space for your experiments
- D. Stop the calibration when you collect ~1000 wand counts on each camera. Wand counts will be displayed at the bottom of the righthand menu.
- E. If the image error (bottom right) for each camera do not appear in a yellow or green color, repeat calibration and try to collect more wand counts for each camera.



4. Setup Trial

- A. On the Tools menu, open the clapperboard tab
- B. Set Trial Type to **gait**
- C. Add a new session based on what you setup in Subject Management
- D. Add a trial name to the Trial Name field



Create Model for Subject

1. On the Tools menu under the clapperboard tab, capture ~100 frames of the subject while he/she is standing still. You should make sure you can see all the markers (and that there are no extraneous ones) before you do this. Ensure all markers (and no extraneous ones) are visible after frames are captured.

2. Create Segments

- A. On Tool bar, select X tab.
- B. Label segment, click create segment, selected the three (or more) markers which make up the segment, then create segment. The first markers selected should be on either end of the segment, and the last markers the ones in the middle of the segment.

3. Define Joints

- A. On Tool bar, select X tab.
- B. X

4. Label Markers

5. Calibrate Markers

6. Save, click live, and ensure that subject shows up (joints are yellow-colored and markers appear in black on left-hand menu). If not, delete subject from Subject tab, close Vicon and repeat static trial procedure

