

1. Install Software

Download the latest Arena Expression installer from the website or use software CD if included. Run the installer and follow its prompts.

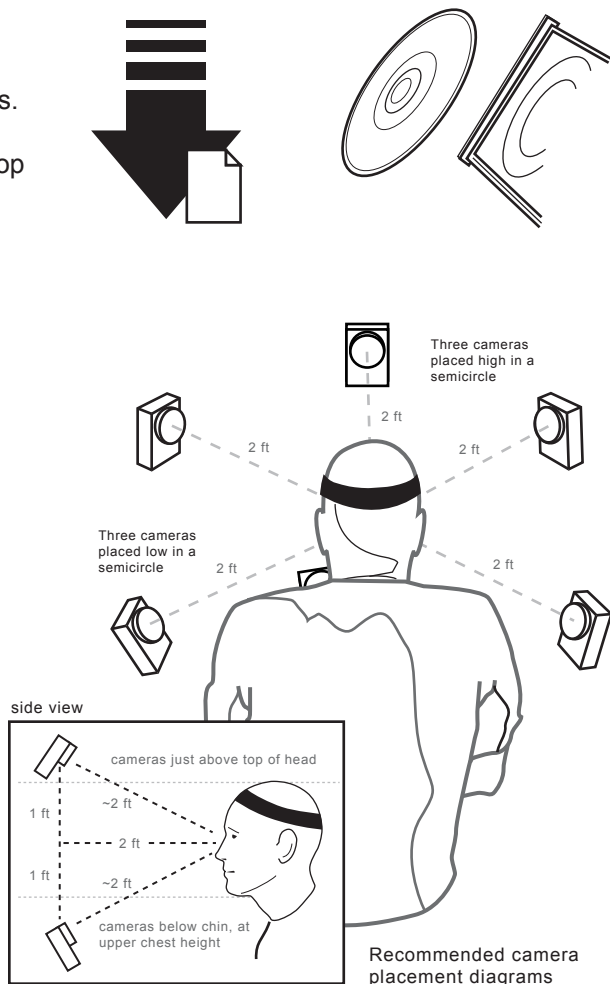
Activate your license using the activation link placed on your desktop by the installer, or by visiting the NaturalPoint website.

Note: Windows XP users must be logged in as an administrator to install software. If you only have one user setup on your computer, you probably already have administrator privileges.

2. Set Up Camera Rig

Place three cameras in a semicircle above head height and three cameras in a semicircle at chest level. All six cameras should be pointed at the individual's nose, about two feet from his/her face. This will center your intended capture volume (the overlapping area where 3D tracking will occur) on the person's facial features. Set up your cameras so that they do not shake and aren't easily moved, and avoid running cables through the capture volume. We recommend laying out all USB and Sync cables before securing cameras, to ensure that you can actually reach your desired placements.

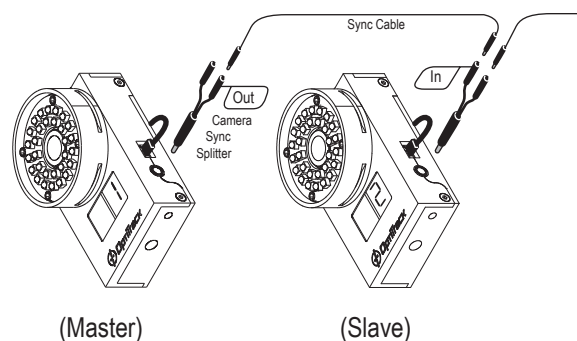
Notes: Make sure to strain-relief the cables so they do not pull on the cameras. Due to power consumption you cannot plug more than one camera into an unpowered hub.



3. Connect Cables

So that all frames are captured at precisely the same moment, all cameras should be connected with Sync cables to form a single open chain. The first camera sets the timing for all subsequent cameras, so **do not** create a closed loop (by plugging the final camera back into the first).

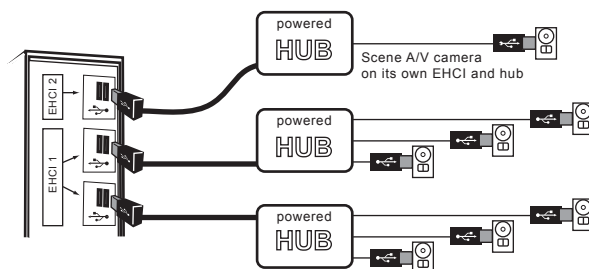
Plug a single Camera Sync Splitter into each camera. The splitter's "in" branch should connect to the preceding camera, and the "out" branch is for the following camera. It does not matter which camera starts the chain, only that every camera is included and that proper in/out connections are maintained.



USB Notes and Optional Scene A/V Camera Configuration

Try to balance the distribution of cameras across the available USB hubs and your computer's USB ports. Connect all the camera's USB cables, hubs, repeaters, and Sync cables before plugging into your computer. If using a scene A/V camera, make sure it has its own EHCl and hub. You can test this by connecting the cameras and using "Select Cameras" in Arena Expression to see how cameras are attached through the available EHCl.

Note: Our USB hubs are rated for no more than six cameras.

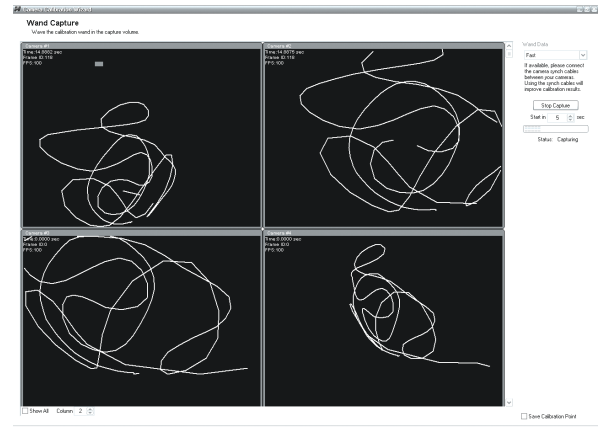


4. Camera Calibration Wizard

Start the Arena Expression software and choose Camera Calibration Wizard from the Wizard menu. This will guide you through the process of optimizing each camera's direction, calibrating, and setting the ground plane. Once you've completed the wizard, your capture volume* is ready to use.

* The capture volume type is set during the wizard. When loading saved calibrations, don't forget to restore the capture volume type (check Facial in the Volume menu).

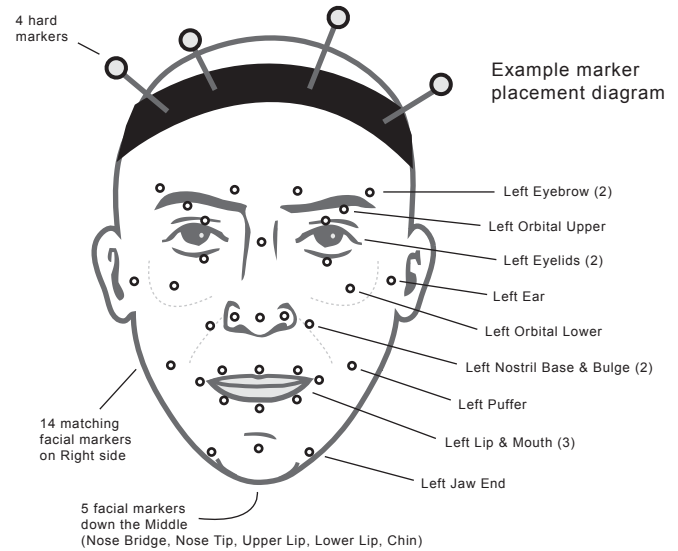
Note: Avoid moving the cameras once calibrated. If any camera is moved, tracking accuracy will be affected and the cameras should be recalibrated.



5. Apply Face Markers

Affix facial markers according to desired marker set and directions. See example diagram at right, using 33 facial markers and four hard markers/bases. Hard markers should be placed in an asymmetric semicircle pattern on the head.

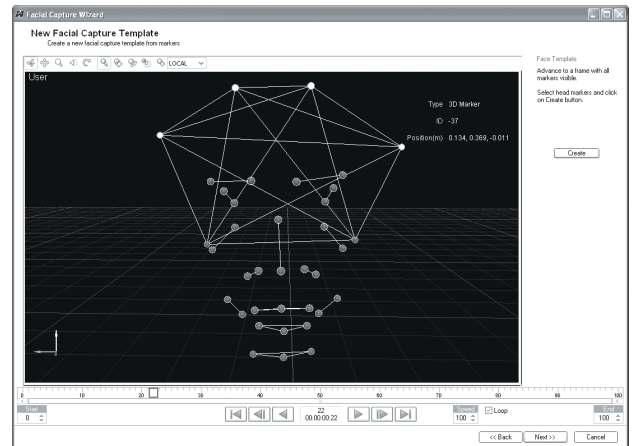
Note: Facial markers are limited to 1-2 uses. Use standard prop spirit gum for regluing. Facial markers adhere best when there is minimal oil on skin.



6. Facial Capture Wizard

Choose Facial Capture Wizard from the Arena Expression software's Wizard menu. This will guide you through the process of placing the facial markers.

Once all markers have been placed, the wizard will guide you through the process of mapping your markers to a supported or custom (user-defined) marker set, and allow you to adjust for maximum precision.



7. Press

Press the software's play button and enter the capture volume.

Now that you are up and running, enjoy the power of your new facial motion capture studio!

Video tutorials are available online at www.OptiTrack.com.

Friendly Customer Support

If you have any difficulties after reviewing the documentation, please:

visit our website
www.OptiTrack.com

call our main office
1.541.753.6645
open 9^{AM} - 5^{PM} PT.