# *The MotionMonitor xGen Software Guide:*
Getting Started Guide

The following is a guide for a common sequence of steps in configuring a biomechanical experiment.

1) The MotionMonitor xGen's Live window, pictured below, is the first thing you'll see after launching the software and creating a new user. This is where you'll see "live" data and the place where your experiment can be configured. The Components, Animation and Log windows are displayed below. The Setup Toolbar, Main Toolbar, and Activity Player Toolbar are also displayed. Each of these can be toggled on or off through your View menu and docked or undocked from the main application window.
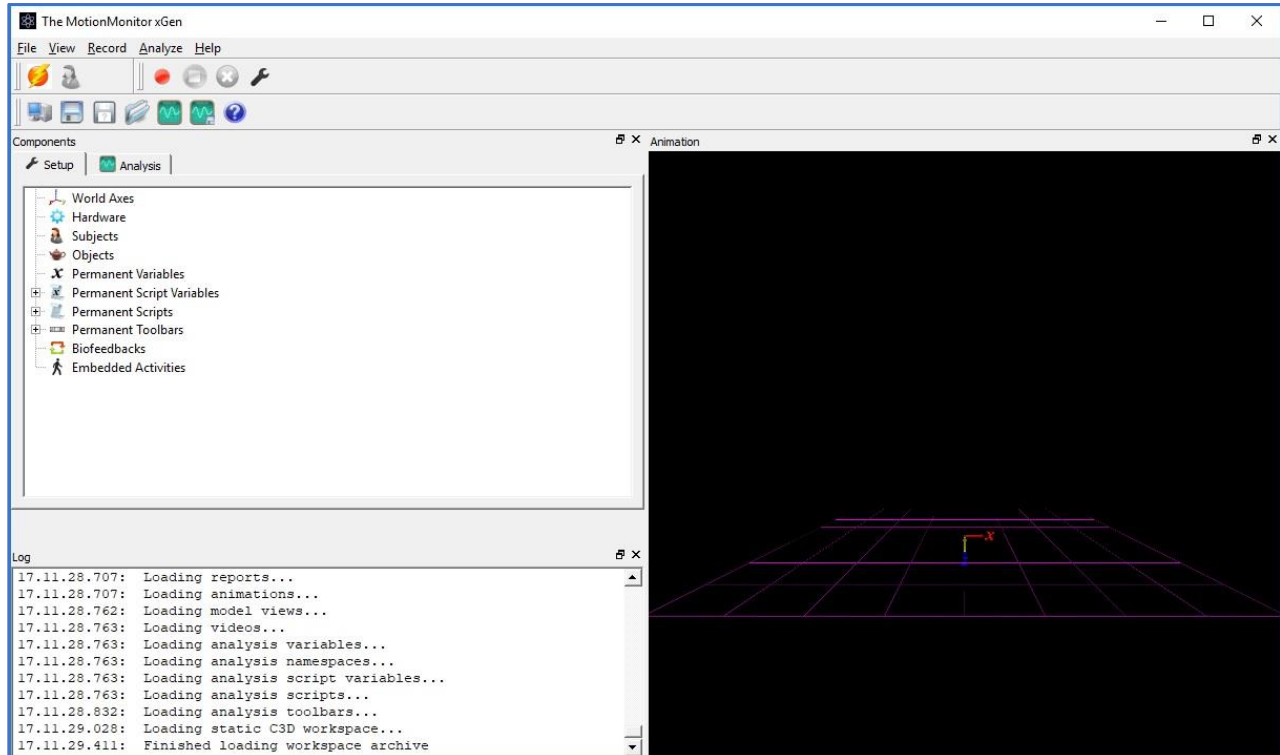
2) Specify the World axes orientation layout that you'll be using through the World Axes node in the Setup tab within the Components window. These settings can generally be set to match the layout for your hardware. (See your hardware manual if you have questions on the default X, Y, & Z layout)
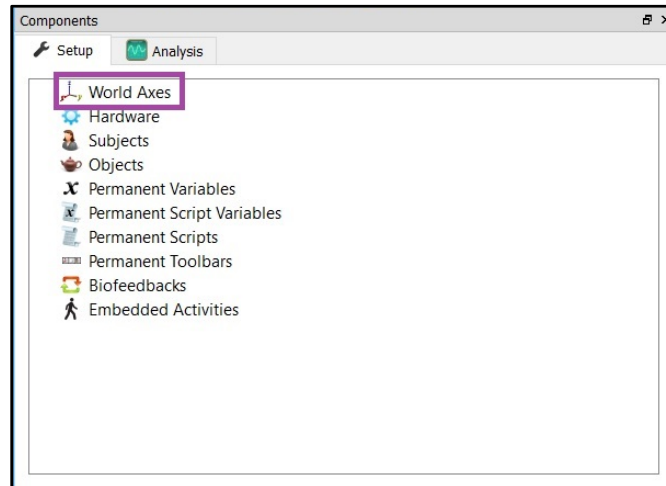
3) Add each of your hardware devices through the Hardware node in the Setup tab within the Components window. We recommend adding one component at a time, becoming comfortable with the following steps and then repeating them with each new hardware device. If starting from an existing Workspace, Hardware for your system may already be added and configured.
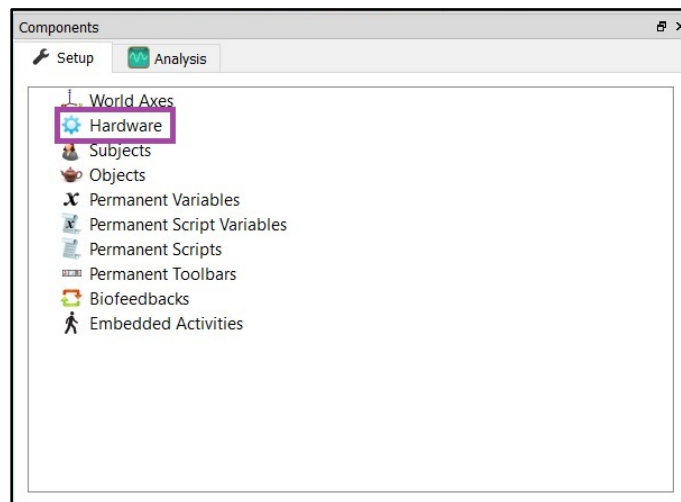

Complete the required fields when you click on your added hardware, then Activate, and calibrate when necessary. Guides for individual hardware components can be accessed by searching at https://themotionmonitor.com/support/ or by contacting support@TheMotionMonitor.com.

4) Most hardware types provide data that can be displayed in the Animation window, you should be able to see this data at this point. Go ahead, take a look at your markers, sensor axes or force vectors. To control the animation window using a three-button scroll mouse:

	MOUSE FUNCTION
TRANSLATE PERSPECTIVE	Right click (hold) + drag
ROTATE PERSPECTIVE	Left click (hold) + drag
ZOOM	Scroll wheel

5) Live data for any of your hardware can also be graphed. Certain hardware data that couldn't be displayed in the Animation window, such as EMG, can be viewed here. Right click on the Graphs node in the Analysis tab within the Components Window. You can also click on the Add Graph button when the Graphs node has been selected.
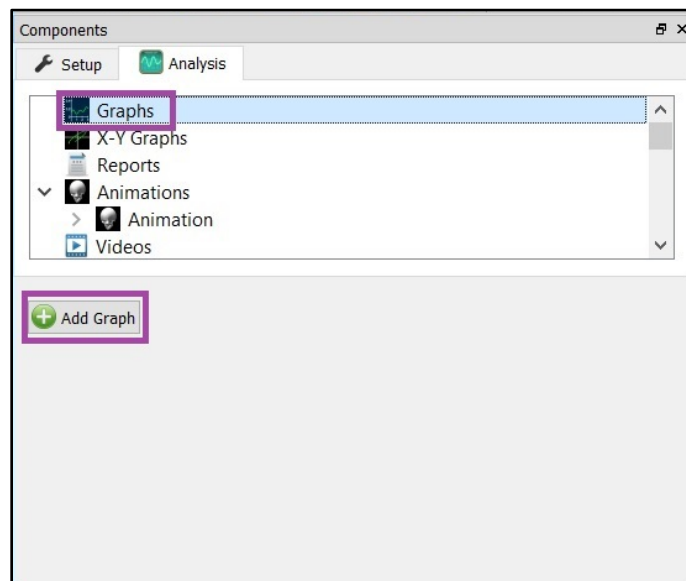

A tutorial video for configuring graphs can be found at https://themotionmonitor.com/support/.

6) Click the Add Plot button to add single or multiple plots for the same graph. Define your variable using the traditional drop-list method or formula where you can right click within the formula field to add variables, operators and customized equations. Notice how your hardware device is listed in the first drop-down list after the Use drop-list/Use formula drop-list.
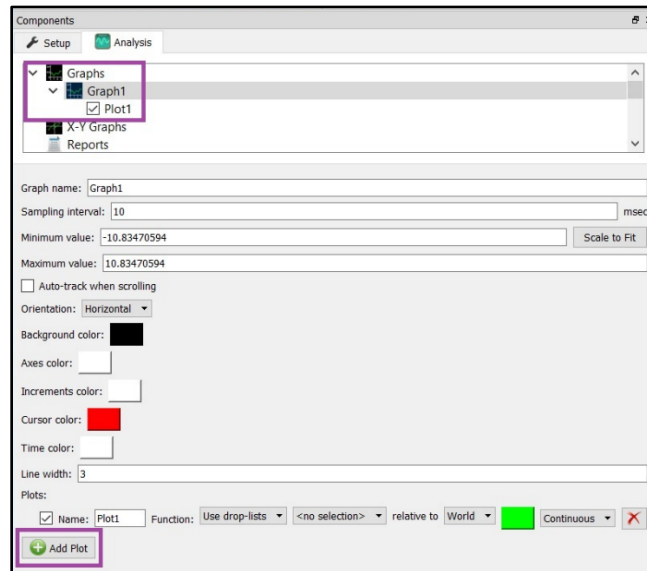

Customize your graph by updating the various color options, line width and orientation. Find the options that suit your preference.

7) Add additional hardware to further customize your workspace.

8) Perform Recordings using the Activity Player Toolbar. Control the recording parameters using the Edit Recording Parameters icon.
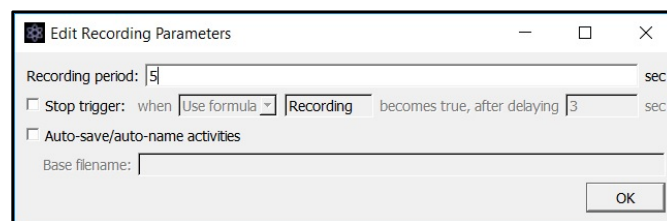

"Recording" is an automatically defined Boolean variable that becomes True when performing a recording. This, or other custom Boolean variables, can be used as a stop trigger to control when an activity ends.

9) Add a biomechanical model to your experiment through the Subjects node in the Setup tab within the Components window. Right click on the Subjects node or click the Add Subject button when the Subjects node is highlighted. If starting from an existing Workspace, a Subject may already be added and configured.
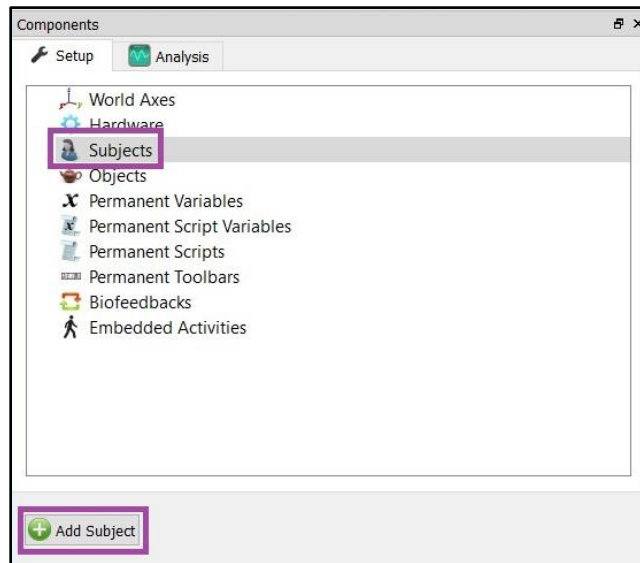
10) Define the subject to your specifications by enabling segments under the segments node, assigning rigid bodies (Axes) to each segment and defining joint center locations under the Joints node. Click the Calibrate button and follow the software prompts to calibrate your biomechanical model. A tutorial video for configuring a subject can be found at https://themotionmonitor.com/support/.
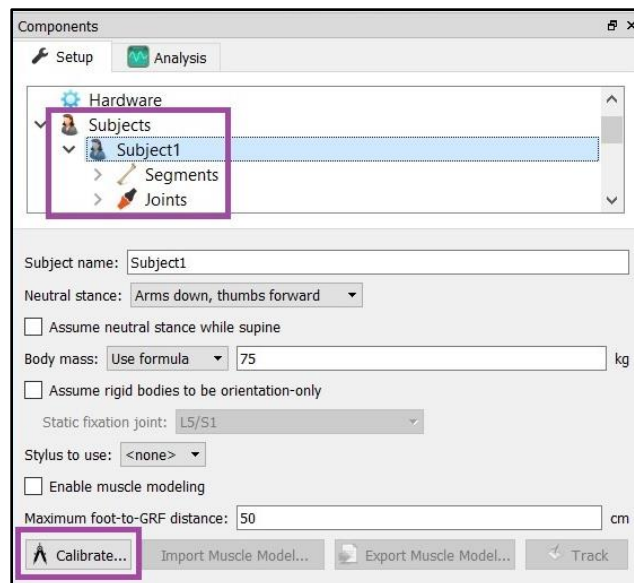
11) Your Subject is now viewable within the Animation window and can be selected from your drop-list and formula right click lists for variable definitions, at the same level from where hardware was previously selected. Define your segment joint angles, positions, joint forces and moments relative to the World or adjacent segments by updating the drop-list selections that follow relative to, as seen below.
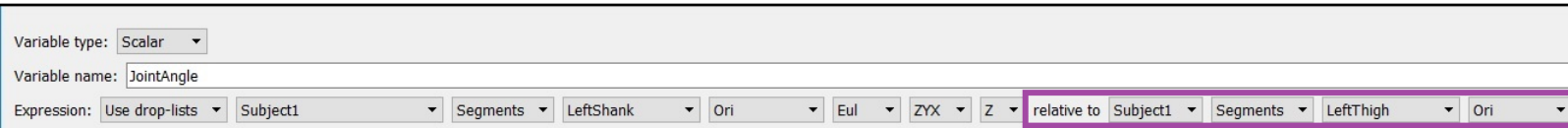
Note: The following Hardware components may need to be added and configured to properly proceed with the setup, calibration or alignment of various hardware devices.

Stylus – Hardware device used for digitizing. This device is related to the alignment of hardware devices, force plates and can also be associated with defining joint centers or other landmarks of interest for your subject calibration. A tutorial video for calibrating a stylus can be found at https://themotionmonitor.com/support/**.**

Rigid Body Collection – Hardware component used for generating 6DoF Rigid bodies (Axes) from 3 DoF markers. These can be used when a hardware device doesn't support the creation of or streaming of 6DoF data or for other circumstances where it might not be advisable or preferred to setup and stream 6DoF data. A tutorial video for configuring Rigid Body Collections can be found at https://themotionmonitor.com/support/**.**

For further configuration of your software, visit https://themotionmonitor.com/support/ where you can…

- Download The MotionMonitor xGen Elements PDF, a written manual explaining key features of the software
- Review tips for Best Practices in configuring your MotionMonitor xGen software for optimal performance
- Take a video tour of The MotionMonitor xGen basic elements.
- Review training and tutorial videos, including basic software functionalities, importing C3D and existing MotionMonitor activity files.

If you have any questions, comments or suggestions, please contact us at support@TheMotionMonitor.com or speak directly with a Client Support Engineer at 773-244-6470.