Perform real-time data collection with no post-processing.
- Use pre-defined 6 degree of freedom rigid bodies for fast, easy and accurate set-up.
- Define virtual joint centers using Bell, Davis or Leardini functional methods or from user defined anatomical landmarks.
- Output all kinematic and kinetic data using simple drop-down menus.
- Trigger data collection with forceplate impact or foot switches for hands-free collection.
- Normalize data by body weight, height, percentage of gait cycle, and stride length.
- Automatically ensemble average output data. Display with standard deviations and/or scatter plots.
- Create user parameterized databases for comparative analysis of subject data.

The MotionMonitor base unit is shown here with PTI's VisualEyez active optical system.

The image on the right shows a stair stepping collection which utilized eye tracking, force and full-body kinematic data. The data displays the 3D gaze intersection with the stair as well as the force the subject exerts on the stair step.

A gait collection with graphs of common lower extremity gait variables is displayed in the image on the left. The graphs present the Grood and Suntay angle for right knee flexion, the Ground Reaction force and the raw EMG signal for the right gastrocnemius muscle. A user-defined event marker was created to indicate the occurrence of Right Heel Strike and, similarly, a user-defined formula using kinetic data variables was used to compute Right Ankle Power.

Real time data acquisition, analysis, and 3D visualization. Turnkey hardware solutions. Upgradeable as your needs change. Research Design & System Engineering consultation.