Force_Platform_Jig

When defining a jig, the data collection procedure is the same as the data collection procedure to locate the force platform corners (explained below):

Instructions to Collect Data Trials (click to expand)

In order to use the CalTesterPlus program you need a set of properly collected data for each force platform you wish to calibrate. To collect a useful static trial for CalTester follow the following process.

- Set up your capture volume making sure that all force platforms and cameras are in the positions that they will remain in for following data collections.
- Place the CalTester base plate on the force platform before you begining the collecting the trial.
- Zero the force platform so that it will not record the force produced by the CalTester base.
- Begin the trial with the CalTester Rod on the CalTester base plate OFF the force platform.
- Press down firmly on the Rod with a load of at least 200 N.
- Keep the Rod aligned vertically and motionless during the trial.
- The trial needs to be at least 1 second long.
- There should be a minimum of three trial collected per force platform. Ideally there should be 8 or more, with at least one near each corner of the force platform and one near the center of the force platform.

Defining a Jig (click to expand)

By creating a jig the user can identify the location of a force plate without having to repeating the entire CalTesterPlus platform protocol each time. In order to use this function you need to have a set of permanent markers (i.e. a template or a jig) which have a consistent position relative to the force platform.

- Load the files into Visual3D while the CalTester tab is active.
- Click on the Force Platform Locator button in order to open the Force Platform Locator dialogue box.
- Make sure that the Define Jig tab is selected.
- In the Select Jig section, click the Add New Jig button.
- In the Define Jig Targets section, use the drop down menu at the left of the section to select the targets that are included in the jig and click Add Targets. Do this until all of the targets that are in the jig are listed in the Target list to the right of the section.
- In the Force Platform section, select from the FP drop down menu that you wish to locate with the Jig.
- In the Define Force Platform Dimension section, check that the FP Length and FP Width are correct. If they are, make sure that the Use Current Dimension radio box is selected. If they are not, select Use New Dimension radio box and change the FP Length and FP Width to the correct values.
- In the file list at the bottom of the box, select the C3D files that have both the force plate and the jig. A minimum of 3 C3D files must be used to create the Jig File.
- Click on the Calculate Results button in order to produce the CalTester Results window. This window can be exported by using the Export to text button in the bottom left of the screen.

A sample of the output that should be created is provided below:

==== Fixed marker locations in force platform space (MKS units) ====

/JIG_NAME = Jig_1

/FP_TESTED = 1

/USE_FP_DIMENSIONS = FALSE

Locating the Force Plate with a Jig (click to expand)

The CalTester tab can define the location of the Force Plates in lab coordinate system based on the location of the Jig (how to define the location of the Jig is described above).

- Load the files into Visual3D while the CalTester tab is active.
- Click on the Force Platform Locator button in order to open the Force Platform Locator dialogue box.
- Make sure that the FP Loc (Jig) tab is selected.
- In the Select Jig section, if the Jig you wish to use is already listed in the text box, select it, otherwise click on the Load Jig File button and select the Jig File that you created using the Defining a Jig tutorial above.
- At the bottom of the dialogue box, select the C3D files that should be updated using the selected jig.
- Click on the Calculate Results button.

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