

Recalc

Overview

The **Recalc** command is used to rebuild and update all model-based data for every file in the workspace. It performs a wide range of recalculations including models, landmarks, kinematics, kinetics and more.

This command is especially important after making changes to:

- A model definition
- A pipeline command affecting landmarks and forces
- Any updates that alter segment pose, orientation, or relationships.

The command also executes the **user-defined Recalc pipeline**, which can include any custom commands (e.g. additional calculations or filtering) that the user wants to run automatically during recalculation.

Understanding the Recalc Pipeline

When the command is executed (or the button is clicked), Visual3D performs the following in order:

1. Reprocess Force Platforms: If the setting for “Use Processed Analog” is enabled, force plate data is recomputed.
2. Rebuild All Models: All models in the workspace are regenerated.
3. Compute Landmarks and Pose: All landmarks and segment positions/orientations are recalculated.
4. Assign Force Platforms: Forces are re-mapped to the correct foot segment based on location/contact.
5. Compute Assigned Forces: Net force and moment vectors are recalculated at the assigned foot.
6. Compute Kinematics and Kinetics: Joint angles, moments and forces are recalculated.
7. Compute Center of Mass: Whole-body center of mass is updated.
8. Execute Recalc Pipeline: Any user-added commands in the Recalc pipeline list box are executed (e.g., filters, custom metrics)
9. Update UI and Report Graphs: Any new data is shown in the UI, and graphs are refreshed.

Pipeline Command

The command below is as seen on the Visual3D application, it has many parameters as there are

many options to manipulate this command.

Recalc

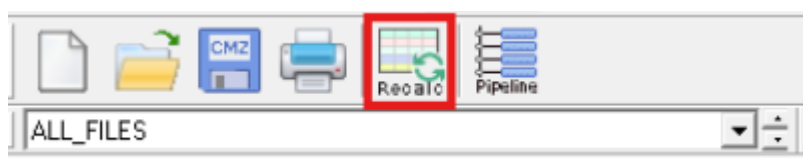
;

Command Parameters

This command does not have any parameters. It will always execute the default and user-defined Recalc processes on all files in the workspace.

Dialog

There is no dialog box for this command due to it being a stand-alone function. The application interface alternative option is the recalc button on the toolbar:



Examples

The following examples will go through the use of the Recalc command in the Visual3D application.

Example 1: Recalculate model and landmark changes

```
! Create left foot midpoint landmark and then rebuild model-based data Add_Landmark
/LANDMARK_NAME=LF_MIDPT ! /CALIBRATION_FILE= ! /USER_GENERATED=TRUE !
/USE_PERCENTAGE=FALSE ! /CALIBRATION_ONLY=FALSE ! /USE_TARGETS=FALSE !
/SEGMENT_NAME= ! /TARGET_TYPES= ! /TARGET_NAMES= ! /MCS_ML=0.0 ! /MCS_AP=0.0 !
/MCS_AXIAL=0.0 ! /LANDMARK_LOCATION= ! /REFERENCE_LOCATION_TYPE= !
/REFERENCE_LOCATION_NAME= ! /USE_REFERENCE_LOCATION=FALSE ;
```

The **Recalc** command is used to rebuild and update all model-based data for every file in the workspace. It performs a wide range of recalculations including models, landmarks, kinematics/kinetics, and more.

This command is especially important making changes to:

- A model definition
- A pipeline command affecting landmarks or forces
- Any updates that alter segment pose, orientation, or relationships.

The command also executes the user-defined RECALC pipeline, which can include any custom commands (e.g. additional calculations or filtering) that the user wants to run automatically during recalculation.

When the Recalc command is executed (or the Recalc button in the GUI is clicked), Visual3D performs the following in order:

1. Reprocess Force Platforms

If the setting for “use processed analog” is enabled, force plate data is recomputed.

2. Rebuild All Models

Recalculates the Workspace.

```
Recalc  
;
```

Rebuilds any model(s) and any landmarks dependent on the model(s). The Recalc command also executes the [RECALC Pipeline](#). In addition if any changes have been made to the Events then Recalc will update any Report Graphs dependent on these events. As a general rule, anytime a change has been made to the EVENT LABELS or to PROCESSED signals that may effect the results in the report, it is always safest to RECALCULATE the workspace before printing the report or saving the CMO file.

[Back to Pipeline Commands Reference](#)

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