



User Guide

Fine Adjust is a feature that allows you to edit and precisely fine tune the position of individual poses after they have been taught or generated. The pose will be graphically represented, and any adjustments made to the pose will update the visual representation of the pose. Poses can be adjusted in World and End Effector coordinate systems. Additional features are also available in *Fine Adjust* including saving and loading previously taught positions, *Jogging*, and *Live Robot Tracking*.

Accessing the Fine Adjust Feature

You can access the feature by click on the *Fine Adjust* icon from the pose menu, or by right clicking on the pose.

Option: World Coordinate System

Select the *World* option to adjust the pose in the World coordinate system.

In this mode, you can update the pose position directly by entering a position value (in mm) in the fields Position X, Position Y, Position Z.

Alternatively, you can adjust the pose by adding or subtracting an offset by entering an offset value (in mm) in the fields Offset X, Offset Y, Offset Z and then clicking the corresponding '-' or '+' buttons.

The rotation of the pose can also be set by entering a rotation value (in degrees) in the fields Rotation X, Rotation Y, Rotation Z. The rotation specifies a rotation around the Tool Center Point (TCP) in World aligned axes.

Option: End Effector Coordinate System

Select the *End Effector* option to adjust the pose in the End Effector coordinate system.

In this mode, you can update the pose position and rotation relative to the current position of the End Effector.

To update the position of the pose, enter an offset value (in mm) in the fields Offset X, Offset Y, Offset Z and then clicking the corresponding '-' or '+' buttons. Once the offset has been added or subtracted from the pose, the grey box on the right representing the **Absolute values** will be updated to reflect the new pose.

To update the rotation of the pose, enter an offset value (in degrees) in the fields Rotation X, Rotation Y, Rotation Z and then clicking the corresponding '-' or '+' buttons. Once the rotation offset has been added or subtracted from the pose, the grey box on the right representing the **Absolute values** will be updated to reflect the new pose.

Feature: Live Robot Tracking

The toggle *Live Robot Tracking* at the bottom of the window turns the feature on and off. When the feature is on, the pose will be continuously updated with the current position of the End Effector, even when it is being moved in real-time. The pose will be visualised in the diagram in both *End Effector* and *World* modes and provides a live model of the robot. To save the pose, click the *Save* button, or revert to the initial pose by clicking the *Discard* button.

Feature: Move to Pose

When you have adjusted a pose, you can have the robot physically move to that new pose by clicking the *Move To Pose* button. The robot's brakes must be unlocked, and the robot should not be in the teach mode. In other words, the robot's LED should be blue for *Move To Pose* to work.

Feature: Saved Positions

This feature allows you to save positions and load them again at a later date. The feature works for all poses in all TQ Apps as long as you are accessing the Desk interface from the **same device** and **same browser**.

To access the *Saved Positions* feature, click the white arrow button at the top right of the Fine Adjust window. Click the button again to hide the *Saved Positions* menu.

To save the current position, type a name into the *New Position* text box, then click the '+' button.

To load a previously saved position, click the 'L' button next to the name of the position you want to load. Loading a position will overwrite the pose currently open in the Fine Adjust window.

To delete a previously saved position, click the 'D' button next to the position you want to delete. **Attention:** Positions will be deleted irretrievably and immediately, without a confirmation dialog.

Feature: Jogging

This feature allows you to precisely position the End Effector using multiple small intervals. For example if you want to position the End Effector exactly over a screw head, you can adjust the robot 1mm at a time in any direction until it is at the exact correct position.

To access the *Jogging* feature, click the jogging button at the top right of the Fine Adjust window, just below the Saved Positions button. Click the button again to hide the *Jogging* menu.

Enter the Jogging Distance in the input box (in mm). This will be the distance the robot moves each time you click a directional button.

In Translation Mode, click on the Z+ or Z- button to move the robot in the Z Axis, Y+ or Y- to move the robot in the Y Axis, or X+ or X- to move the robot in the X axis. You can also toggle between *End Effector* and *World* modes to control the robot in the respective coordinate systems.

To change the Jogging feature to Rotation mode, click the Translation/Rotation Mode button in the top right of the window.

In Rotation Mode, click on the Z+ or Z- button to rotate the robot around the Z Axis, Y+ or Y- to rotate the robot around the Y Axis, or X+ or X- to rotate the robot around the X axis. Rotation mode is always in relation to the End Effector coordinate system.

There are also keyboard shortcuts that can be used to move the robot along all axes and rotations. Hover over the keyboard shortcuts icon in the bottom right to see all keyboard shortcuts available.