

Absolute Encoder Troubleshooting

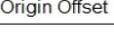
I. Background

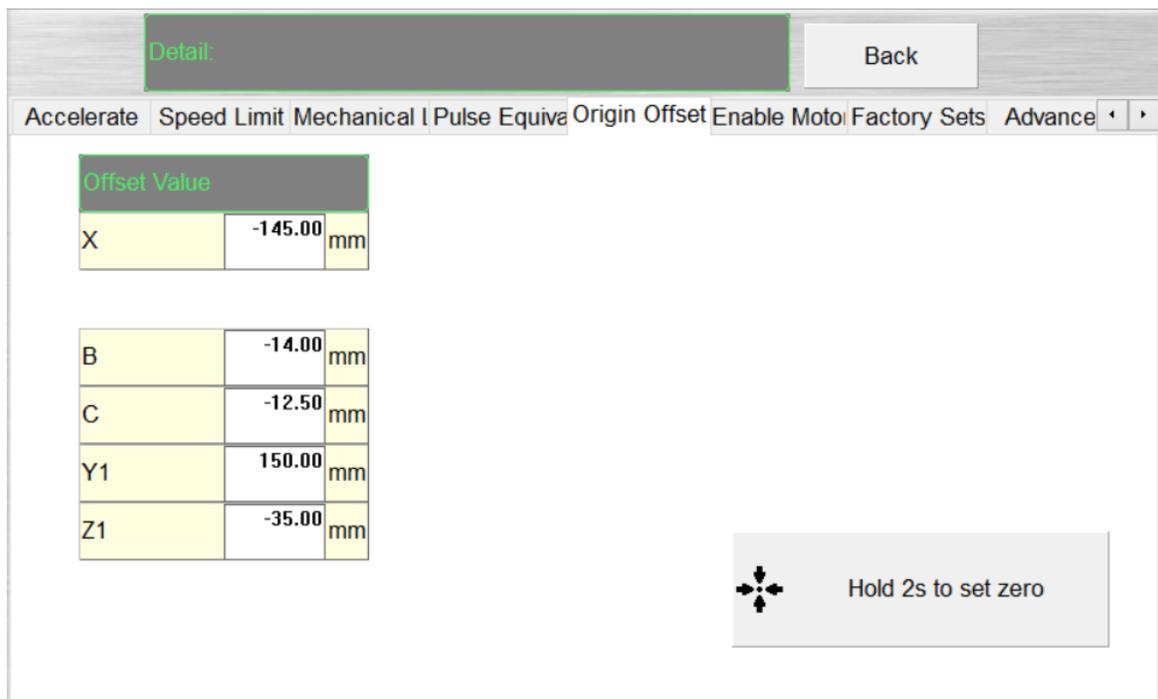
1. Robots equipped with absolute encoders do not need to use “Reset” to confirm the zero position.
2. The “Reset” button is no longer present in any robot equipped with absolute encoders

Some situations require the position in the absolute encoders to be reset including:

1. Robot manually moved while powered down
2. Encoder batteries need to be replaced

II. Resetting Encoder Position

1. Start the robot and sign into your designated level of access .
2. Push or manually drive the axis to the correct position with the arrows aligned. Then shut off the motors.
3. Navigate to the following go into “Function” , then “Function Set” . Once in “Function Set”, select “Advanced” , now select the “Origin Offset” Tab .



New Function

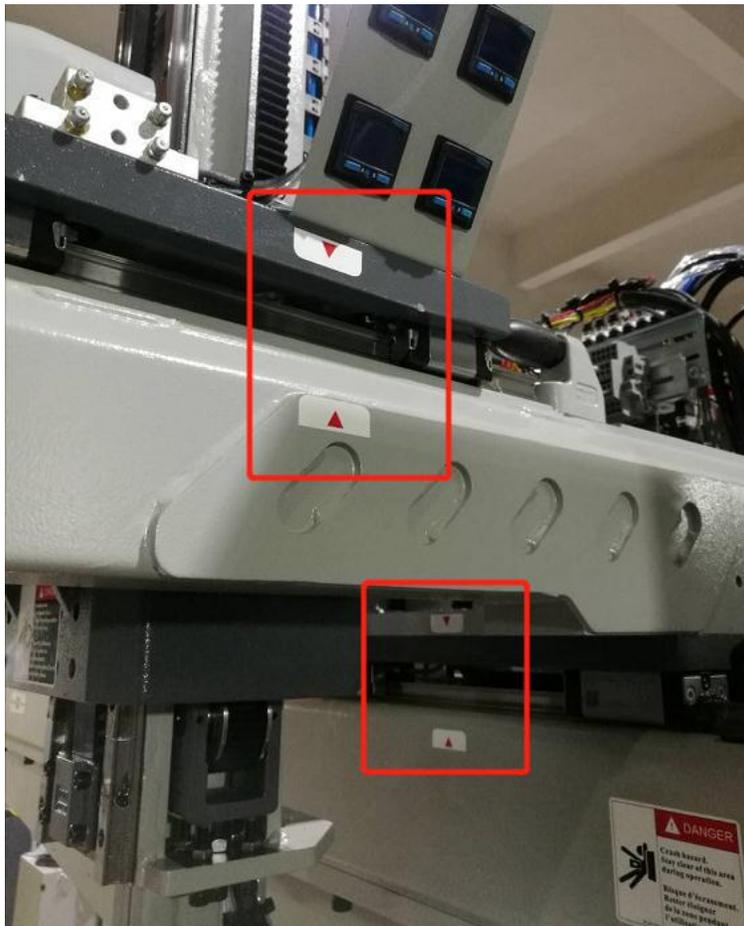
4. Confirm the robot arm is in the desired zero position. If not at the correct position, follow instructions to **Set Zero Position**.
5. Press and hold “Hold 2s to set zero”  for 2 seconds. Press confirm and the current position of the robot arm in all axes will now be at their new “zero” position.

III. Set Zero Position

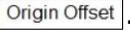
This is to manually move your robot in order to align the axes.

1. Enable your motors press “Function” (FN), press “Enable Motors
2. Press “Manual” . Now individually job each axis until the X, Y, and Z axes line up with their corresponding arrows (picture below).

*****Be careful not to crash the robot as it can move in the negative and hit the rubber stops*****

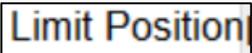


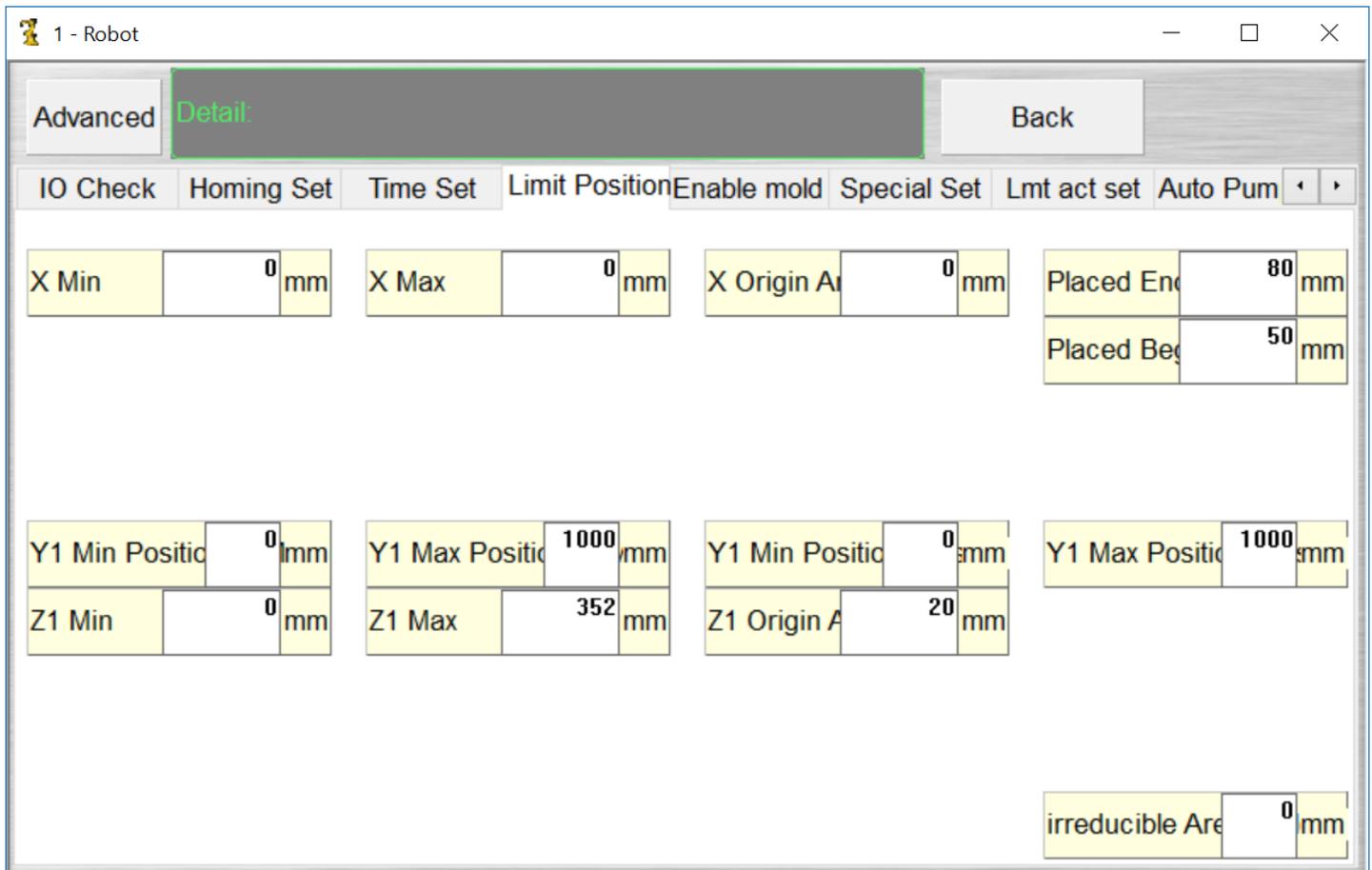
IV. Home Position Not Adjusted

1. Navigate to the following, go into “Function” , then “Function Set”  .
2. Once in “Function Set”, select “Special Set” , next press “Advanced” , now select the “Origin Offset” Tab  .
3. Now press “Set Zero”  .

V. Set Limit Position

Because the absolute encoders remove the “Limit signal”, it is necessary to set the limit position the according to the real position of “Zero”.

1. Navigate to the following, go into “Function”  , then “Function Set”  .
2. Press “Limit Position”  .
3. Set the limit data accordingly.



VI. Replace Absolute Encoder Batteries (AL060 or AL061)

If the driver alarm shows AL060 or AL061, it means the battery voltage of the driver is too small. In order to prevent data loss, change the battery, and reset the “Zero” position.

Note: During the battery change, suggest keeping the driver power, or the absolute position will be lost.

- Move the robot to the start point. Press “Go to Start Point” . (This will ensure that the robot is in the right precision once it is reset.)

