IM-II Customer Encoder Calibration

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Purpose

This note explains how to calibrate the IM-II robot if the battery backup for the encoders dies.

Procedure

1.   Attach all cables to the robot and power on.

2.   Sign on to your controller via the Precise Automation software by typing the IP address of the controller into the URL of Internet Explorer and click **Admin**
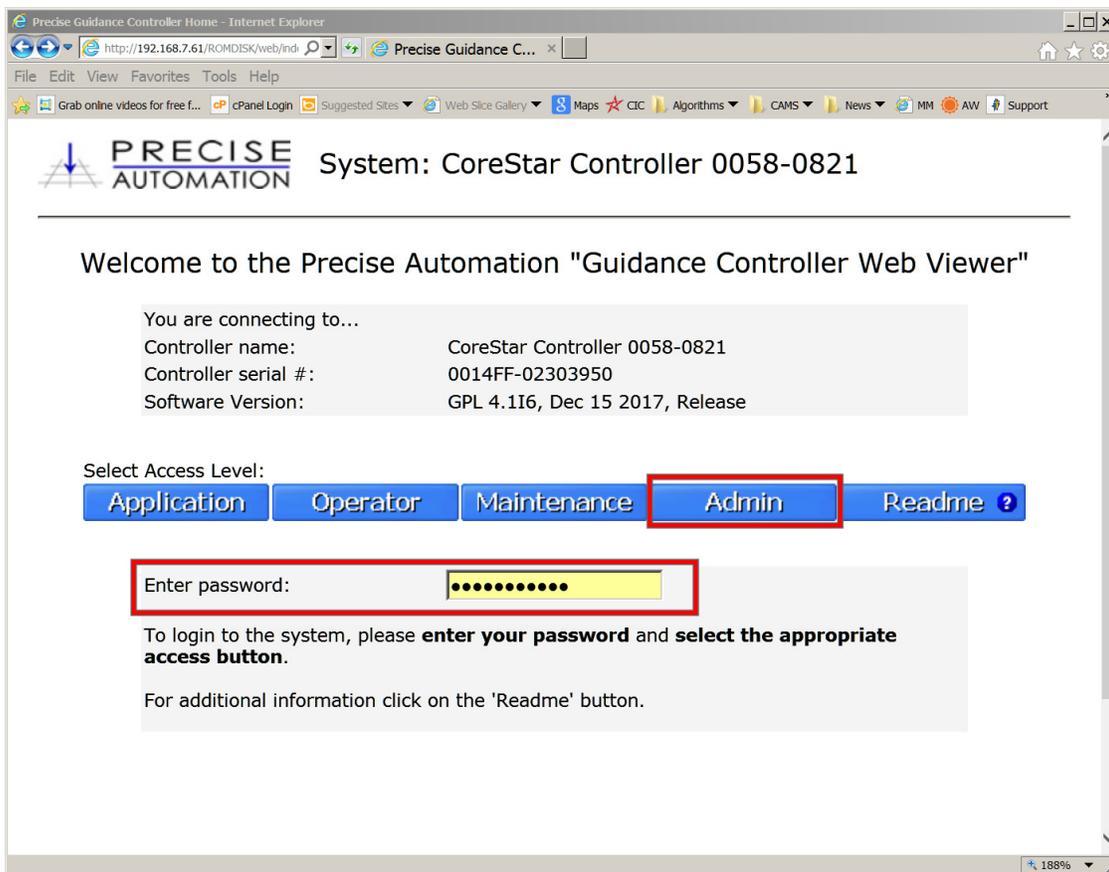
3.   Click **Control Panels**.

4.   On the **Control Panels** tab, click **Virtual Pendant** to control your robot.
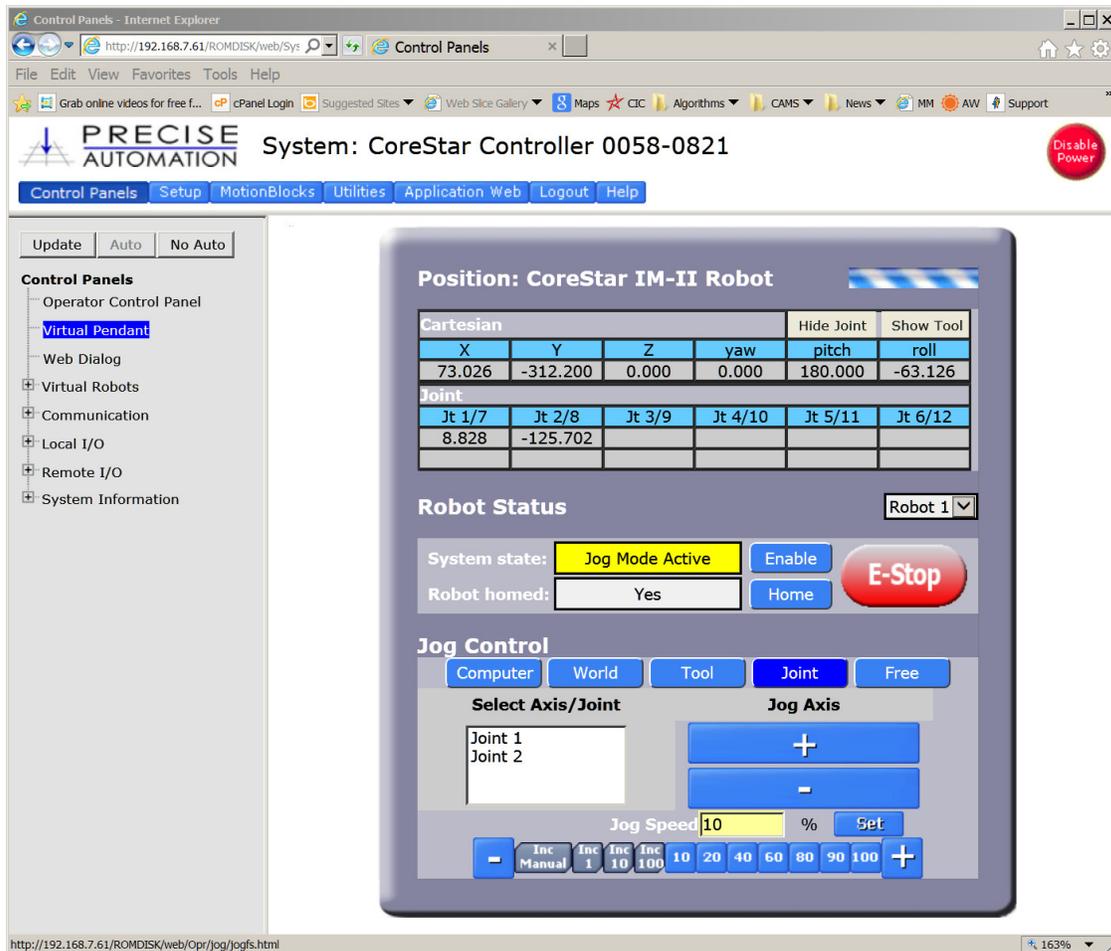
a. Under **Robot Status**, click **Enable** to the right of **System State.**
b. Click **Joint** tab under **Jog Control**
c. Selecting a joint allows control of that joint

5. Move robot into the park position (or at lease close).
    a. Joint 1 does not matter, only Joint 2's position relative to Joint 1
    b. Fold Joint 2 over Joint 1

6. Fine-tune park position
    a. Using a straight-edge, align the top and bottom halves of the second motor housing.
    b. Use the smaller increments to fine-tune the position of Joint 2
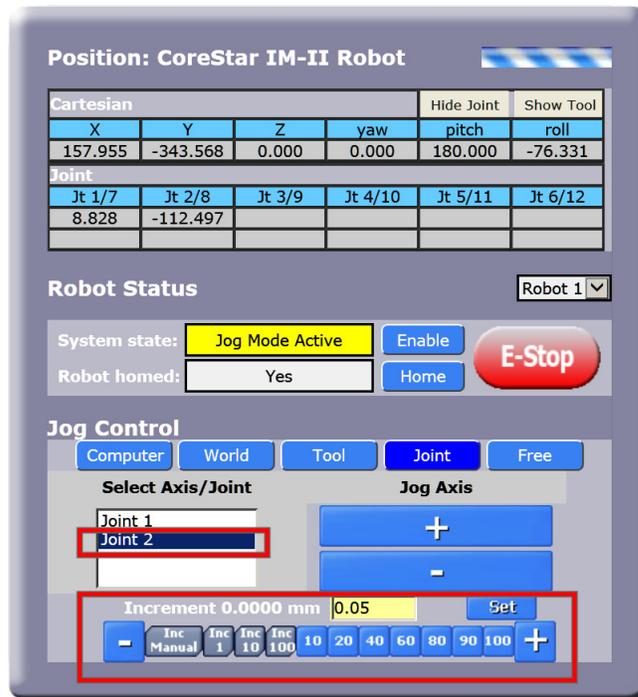
7.   Cycle the Controller power and return to the **Virtual Pendant** screen

8.   Rotate Joint 2 until it is exactly 180.000 ° from its original position.
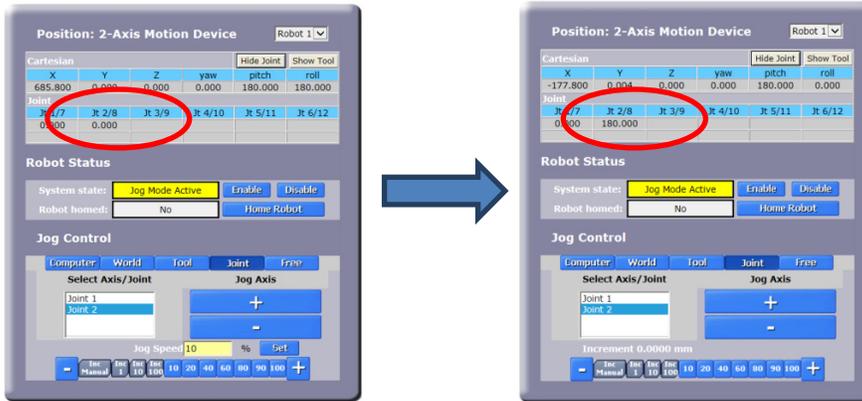
9. (Optional) Disable the controller power and replace the encoder batteries at this time.

10. Under the **Setup Tab** in the Precise Automation Software, go to **Parameter Database > Robot: 2-Axis Motion Device > Calibration parameters > Servo Settings.**
   a. Replace the contents of the yellow box to the right of **16120** with **0,0**
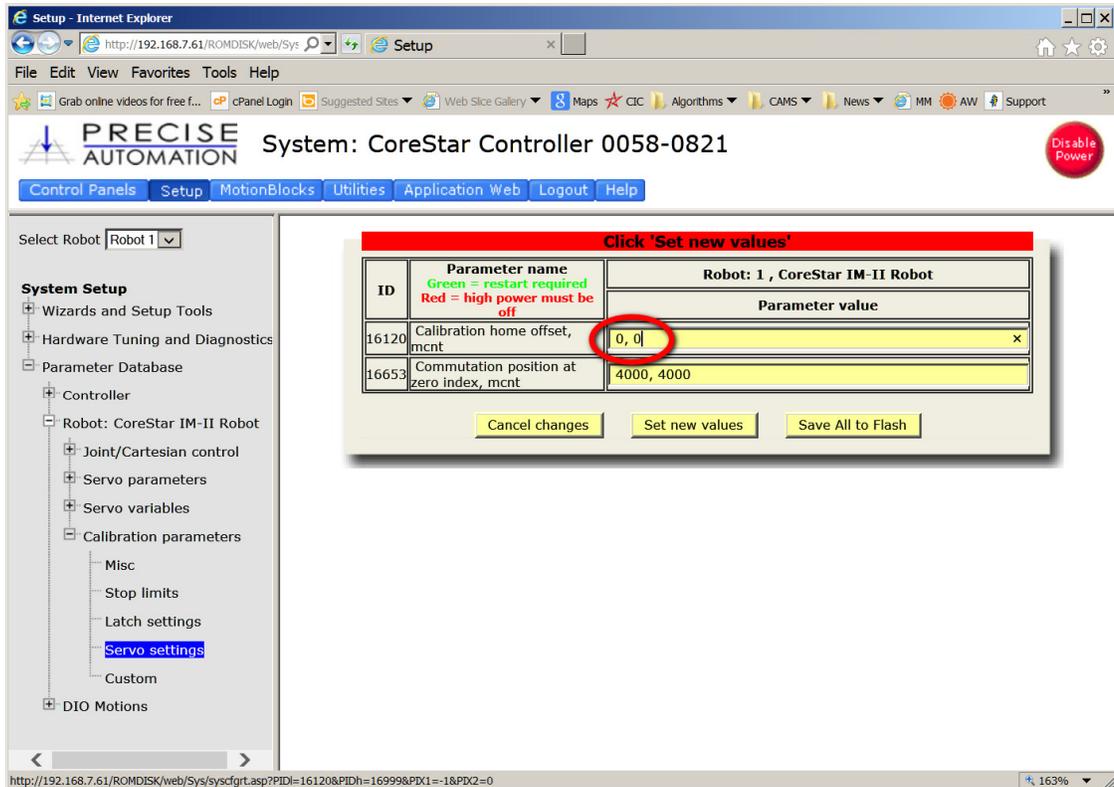
   b. Click **Set new values**
   c. Click **Save All to Flash.**

11. Open the **Operator Control Panel** under the **Control Panels** tab
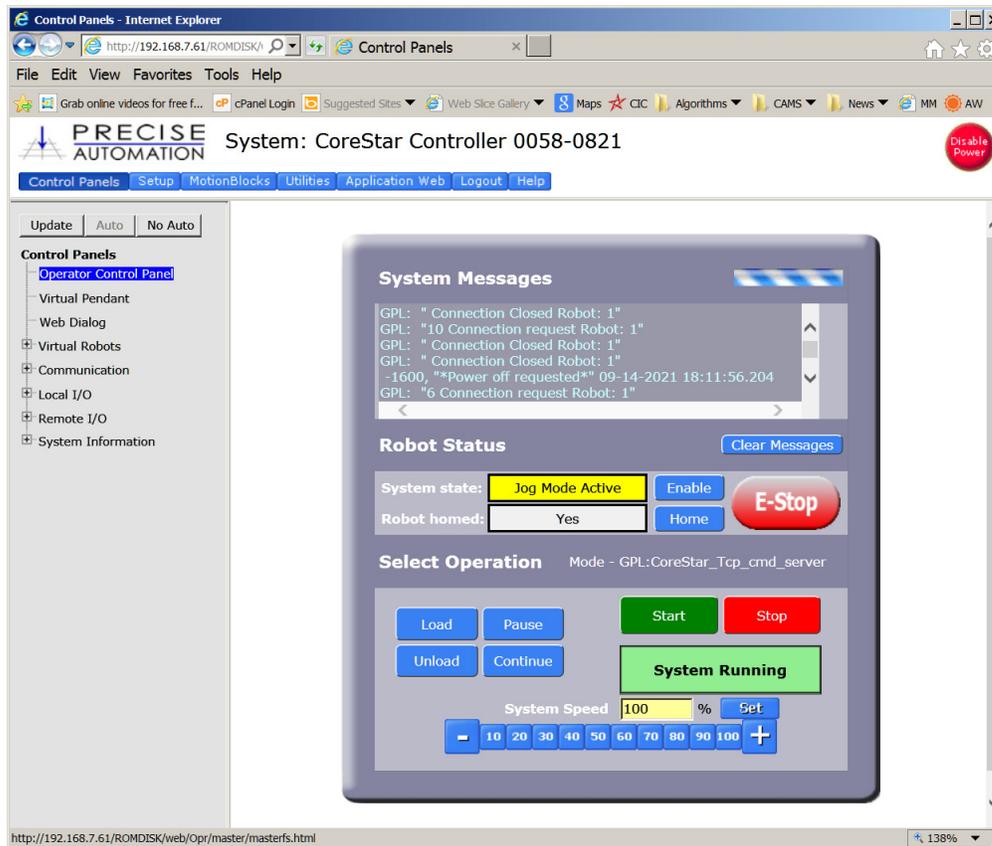
12. Using the Select Operation section of the control panel, perform the following
    a. Select "Stop application", click **Perform Operation**
    b. Select "Unload", click **Perform Operation**
    c. Select "Load", click **Perform Operation**
    d. Select "CoreStar_Cal_pp_rev1", click **Select**
    e. Select "Start application", click **Perform Operation**
    f. A new GPL dialog box should appear. Click on **Factory Calibration**
    g. Click **Continue** on the Encoder Warning box
    h. Click **Clear multi-turn counters and set axis zero positions**
    i. Click **Execute**
    j. Click **Finish**
    k. Click on **Exit**

13. Cycle power to the controller box.