

SMT Alignment System Operating Steps

1. Drag the option down to **“Extra function”**, press enter and select **“Calibrate Tool”** and press enter to start the calibration process.
2. Move to the interface of **“SMT Alignment System”** program.
3. Select the corresponded SMT driver model listed on the right top corner of the interface.
Select **“CW”** & **“Process Calibration”**
Select the torque unit and click **“SET”**.
Select correct COM port and click **“OPEN”** in the bottom right-side column.
4. Go to the top side of the program interface, click **“Read”** and the corresponded serial number of SMT driver should show up.

Check whether the serial number of the actual driver is consistent with it, if it is, click **“Write”**.
5. For initiating the driver alignment process, first, select the **“Dynamic”** (this mode is for checking the status of the forward / reverse action) and click **“Start”**.

Move to the SMT driver, press and hold the trigger to run it in forward direction till it stops, then press the reverse button (red light comes up) and follow the same steps as above.

When the driver reverse action stops, the process is completed, click **“Cal Save”** to end it.
6. Next, select **“Static”** (this mode is for checking the status of speed levels from low to high), keep the driver stay in reverse mode (red light up), click **“Start”** and the SMT driver will run different level of speeds automatically, then click **“Cal Save”** when the driver stops once the process is completed.

7. Thirdly, select “**Intercept**” (this mode is for detecting the beginning of the test point of the slope), click “**Start**” to initiate it and click “**Cal Save**” once the process is completed.
8. Finally, initiate the most important process: calibrating the slope of the transducer. Setup the corresponded external joints and connect the external torque test device to the SMT driver.
9. Select “**Slope**”, and select the “**AutoReConnect**” to the right bottom corner, this column is for filling the torque data detected by external torque test device as formal test data.

Enter the “**Calibration Torque**” data, always take 80% of maximum torque capacity for slope alignment, in this interface, the torque unit is fixed at kgf.cm only, so do the pre-calculation to transfer the target torque data to be with kgf.cm unit is necessary.

Click “**Start**”, and move to the driver and make it in forward tightening action to the test joints till its shut off action occurs, the detected torque data by SMT1 should show in the middle black column.

Go back to “**AutoReConnect**” to fill the torque data detected by external torque test device, here the torque unit is the same as the initial setting one, click “**Send**” in order to transfer the torque data by kgf.cm unit and show it in the middle black column, beside of SMT1’s data for comparison.

Adjust the slope by filling the data into the column “**Reference slope**”, and click “**Send**”.

Adjust the slope data to be lower if the formal test torque data from external test device is higher than the torque data detected by SMT1, on the contrary, adjust it to be higher.

Repeat the above actions, and constantly adjust the slope data until both contrast torque data (external’s vs SMT1’s) are with in less +/-2% difference, then click “**Cal Save**”, directly move to interface of “**Write Slope**”.



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10. In the interface of **“Write Slope”**, click **“Strat”** while **“Read”** button is selected, then the detected slope & Intercept data from previous steps will be filled in automatically, finally, select the **“Write”** button and click **“Start”** to over-write the detected/correct slope and Intercept data into the SMT unit.

11. Exit **“SMT Alignment System”** program.