# Calibrating Star Probes with Parameter Sets

1. Build Star Probe and add desired angles. Then select angles to be calibrated with first Tool position. You will need to find one angle that can be used with all desired Tool positions, so that it can link the calibrations together. Typically T1A0B0 works well for this, and so is selected as the first tip in the User Defined Calibration Order.
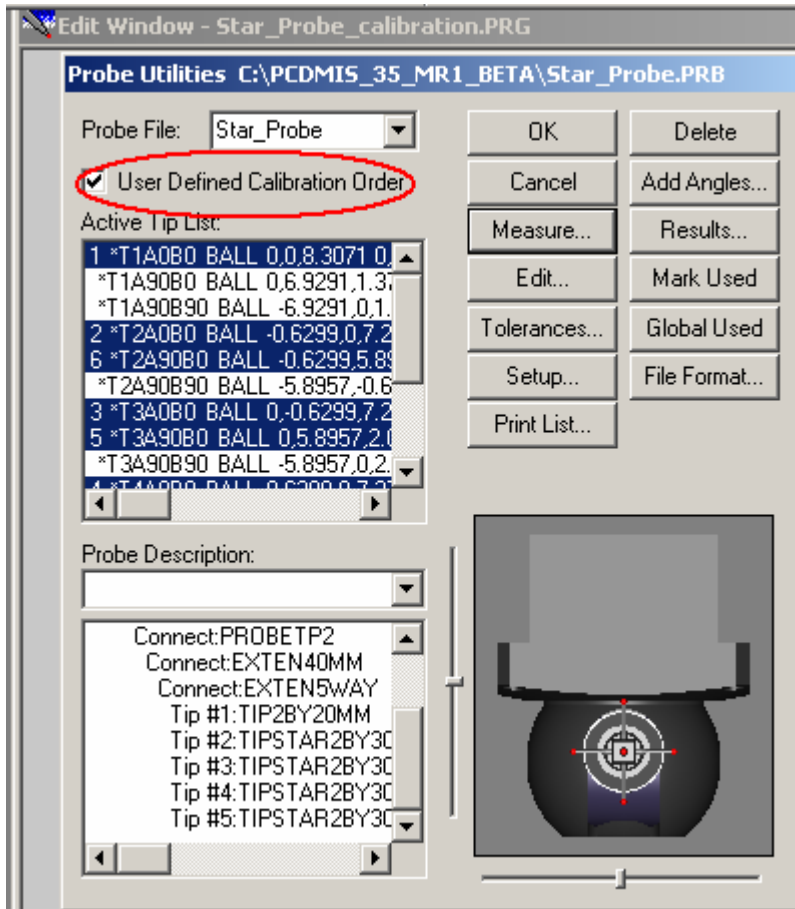
2. Add a Tool to be used with the first set of tips. All tips in this set must be able to clear the probe shank. Set any other desired calibration parameters, and then type in a name for this Parameter Set, and Save it. This will allow you to come back in to Probe Utilities and select that set. All parameters associated with that set are then recalled and used for calibration.
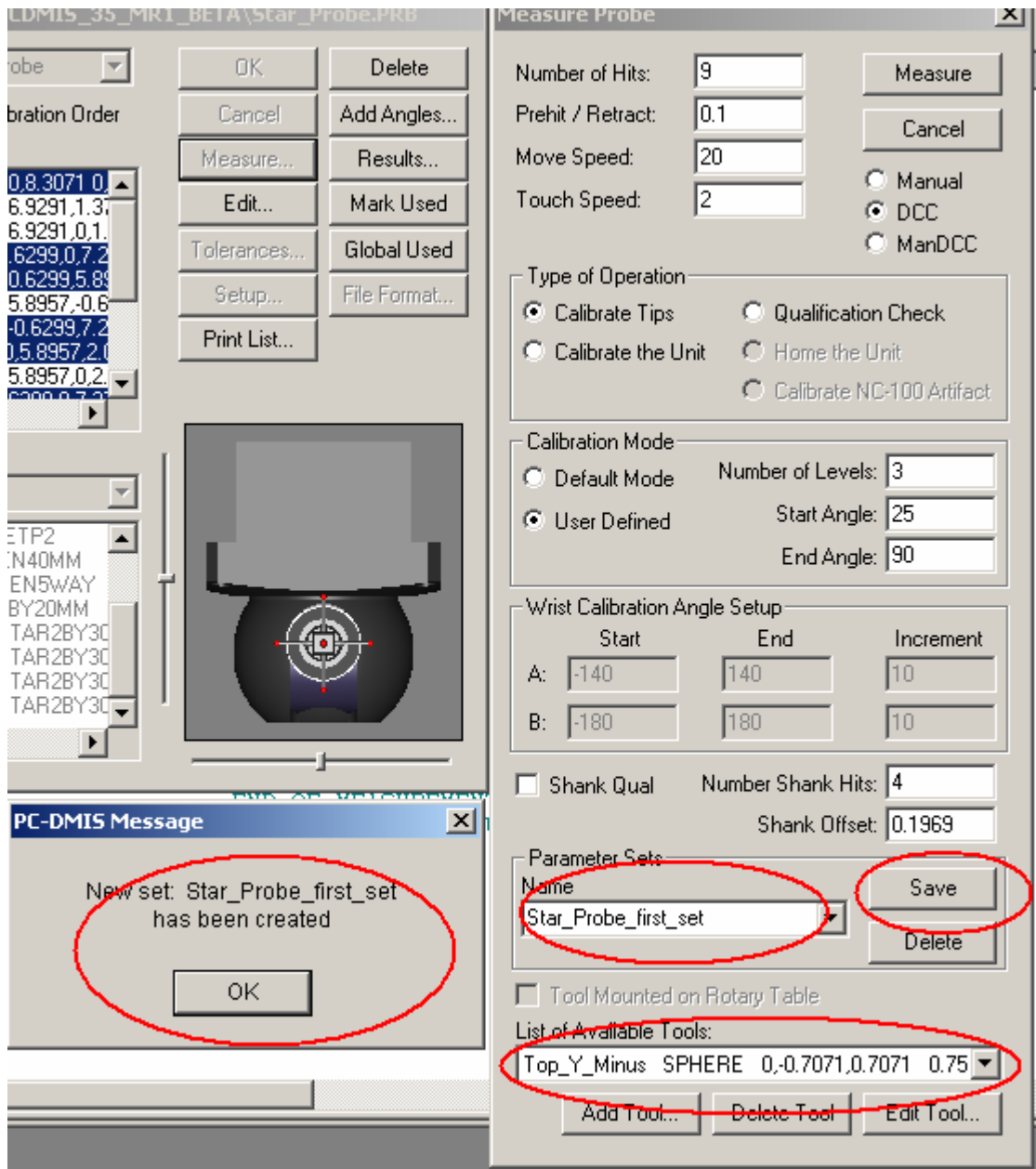
3. Calibrate the first set. You will see the standard message regarding the reference tip, make sure it is the one you intended to designate.
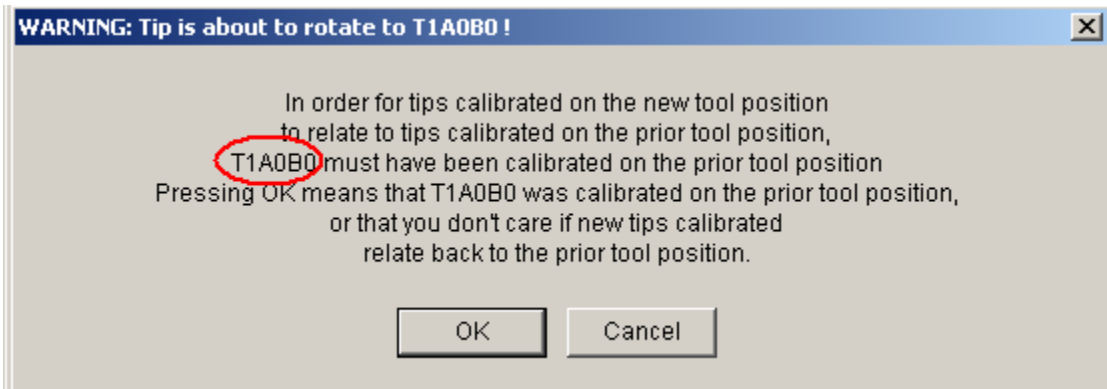

4. After calibrating the first set, move the tool to provide access for additional tips, and then select the desired additional tips. Remember to use the reference tip as the first tip in the calibration order.
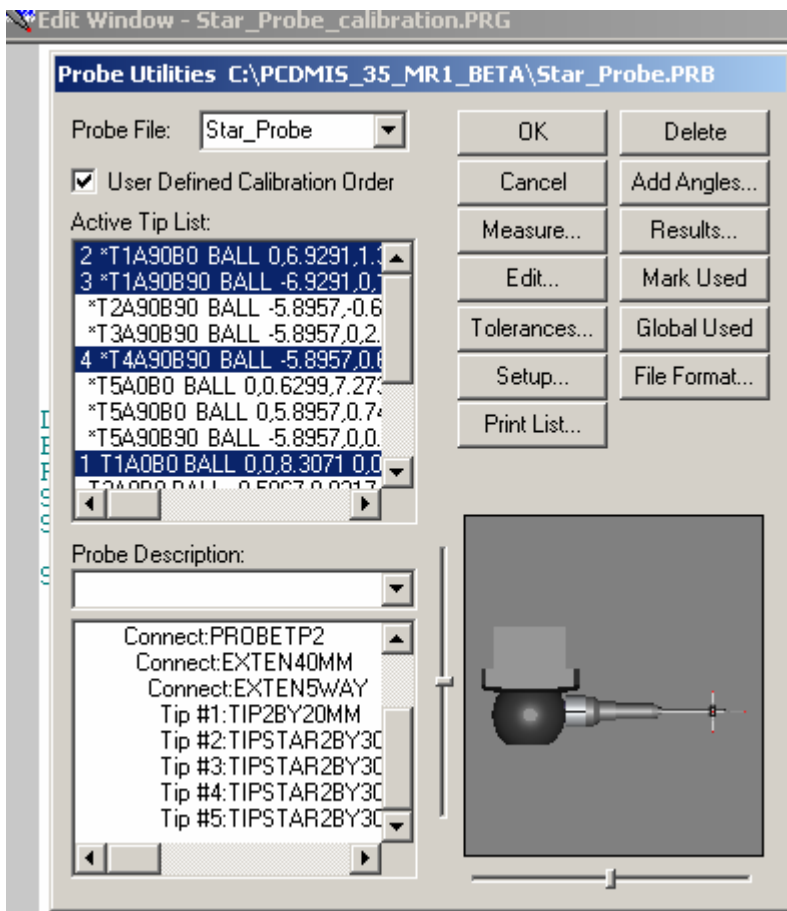
5. Once the tips are designated, select measure and then add a new tool definition for the new position.
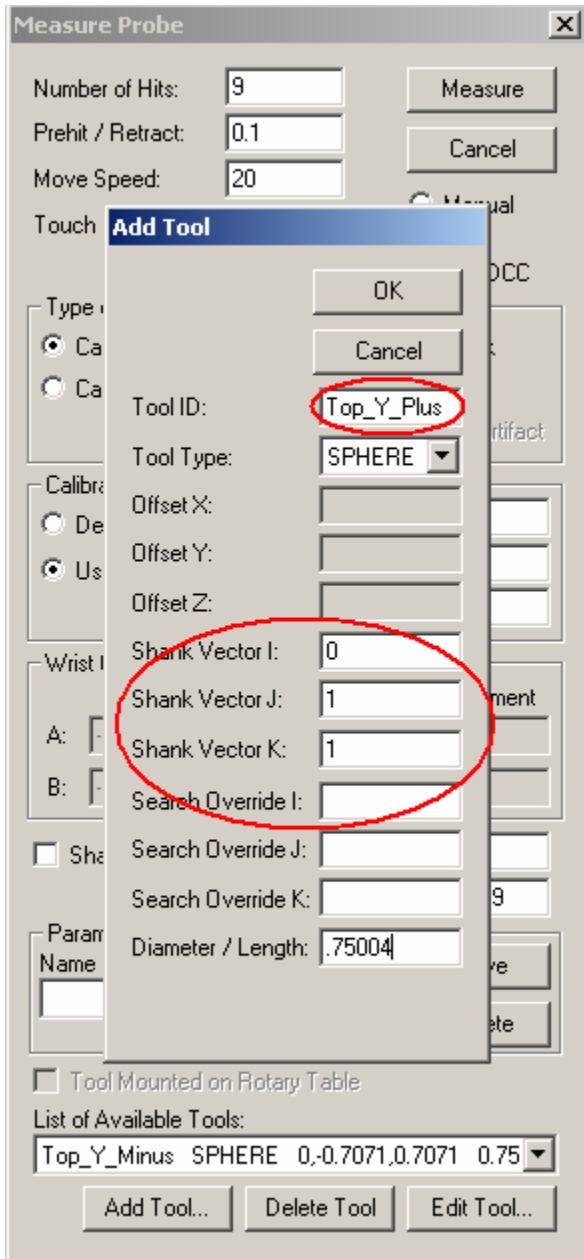
6. Select the additional parameters, and as before, enter a name for this new parameter set.
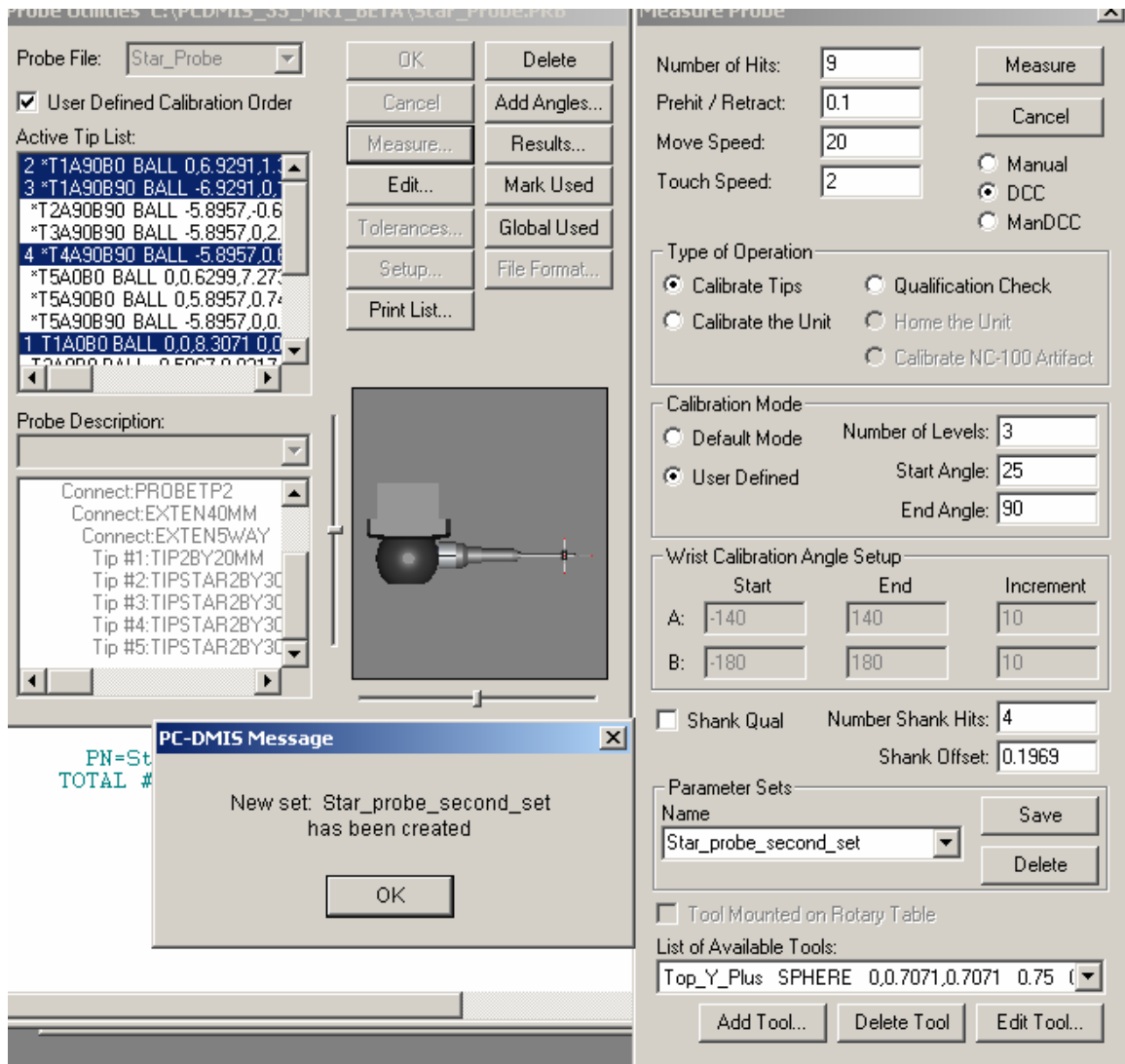
7. Calibrate the second tip and then repeat the procedure for any additional tip sets/tool positions.

8. You can also insert Auto-Calibrate commands into the part program. The first line is an example of the default code, the next two have been changed to reflect the example files used above. The key is that the parameter set store all of the associated calibration parameters selected by the user.

```
AUTOCALIBRATE/PROBE, PARAMETER_SET=ALL-TIPS-WITH-DEFAULTS, QUALTOOL_MOVED=NO,
           SHOW_SUMMARY=NO, OVERWRITE_RESULTSFILE=NO
AUTOCALIBRATE/PROBE, PARAMETER_SET=STAR_PROBE_FIRST_SET, QUALTOOL_MOVED=YES,
           SHOW_SUMMARY=NO, OVERWRITE_RESULTSFILE=NO
AUTOCALIBRATE/PROBE, PARAMETER_SET=STAR_PROBE_SECOND_SET, QUALTOOL_MOVED=YES,
           SHOW_SUMMARY=NO, OVERWRITE_RESULTSFILE=NO
COMMENT/OPER,
```