

CALIBRATING A TWO SPEED BAMBI WITH VERSION 5.xx SOFTWARE

1. Open the S.P.A dynamometer software and click on the configure tab. Under that heading click 'options', a dialogue box appears with various options. Ensure that in this menu that the 'Low Speed Mode' is selected and the gearbox ratio of **10.00** is entered. Also under the subheading 'Dyno Type' ensure that 'dual speed dyno' is selected. When this is done Click OK.
2. With the Dyno on a 1 inch stroke re-click on the configure tab, select the calibration heading and then click 'motor speed'. The dyno will now start to slowly ramp up its speed and will finish automatically. When completed a dialogue box appears stating that the motor speed calibration is complete. Click ok and you have finished calibrating your motor speed.
3. Back in the calibration menu, select 'velocity' and the 'X5' gain. A dialogue box appears stating that the dyno will run at a speed of 0.6Hz and ensure that the stroke is noted at 1 inch. If this is correct click ok. The dyno will now run and when at the correct speed a small dialogue box appears showing computed and measured peak velocity. It is important that the operator pays no attention to the values being displayed. All the operator needs to allow is both figures to become Stable. When both figures are stable click confirm and the velocity x5 gain calibration is now complete.
4. In the calibration menu now select 'position' and the x4 gain. As before a dialogue box appears asking to set the dyno to a 1 inch stroke. As this is already done click ok and the dyno will now start to run at a constant speed. As before pay no attention to the figures just allow them to stabilize then click confirm.
5. **IMPORTANT: - NOW TURN THE DYN0 OFF!!**
6. With the dyno switched off remove the front carbon panel and change the stroke to 4 inches. When this is done replace the front carbon panel and turn the power to the dyno back ON.
7. In the calibration menu now select 'velocity' and the x0.25 gain. As before a dialogue box appears stating the dyno will run at a speed of 3.1Hz with a 4 inch stroke. If this is correct click ok and the dyno will begin to run. When it reaches the set speed a smaller dialogue box will appear showing the two figures. As before pay no attention to the values just allow them to stabilize and click confirm.
8. Back in the calibration menu click 'Position' and select the x1 gain. A dialogue box appears asking you the stroke of the dyno. If set to 4 inches click ok. As before a dialogue box appears showing minimum and maximum position, pay no attention to the values just allow them to stabilize and then click confirm.

9. In the calibration menu click 'Load cell'. A dialogue box appears asking for the sensitivity and the range. Both of these can be found on the load cell calibration certificate supplied in the manual folder. When the values have been entered click ok and two dialog boxes will appear one at a time. DO NOT apply loads as specified. With no damper installed click 'Zero load cell' then click ok in both of these boxes.

10. This has now calibrated your dyno but it has not yet been saved. To save your calibration close down the dyno software and a dialogue box appears stating that the calibration has changed and asking if you would like to save it. Click yes and a message will appear saying that the calibration has been saved and the previous calibration has been moved to SPA.BK1.

11. You can now begin to use your dyno.

