

CALIBRATING A WORKSHOP/PSD DYNO WITH A LOW SPEED KIT RUNNING VERSION 6.XX SOFTWARE

During the life of your SPA Dynamometer it maybe necessary to recalibrate it for any reason such as corrupt or lost files e.t.c.

The first process before calibration starts is to arrange the dynamometer into its 1 inch stroke position.

- 1) Click on Configure, click on System, Click on Dyno, Click on Single Speed Dyno, Tick the low speed option and enter a value of 7.0 as the gearbox ratio. Then click 'Apply' then click OK and the window will close.
- 2) Click on configure, click calibration, click re-calibrate, and then click Motor Speed. A warning dialog will appear saying that the motor will start running. Click ok and the computer will now control the dyno and slowly ramp up its speed. When the motor speed calibration is completed the dyno will stop automatically.
- 3) Return to the re-calibration menu, click on velocity, click on the x5 option. A dialog box will appear asking you to set the stroke to 0.5 inch .Click next and the dyno will accelerate to 0.6HZ. A window will appear showing you the calibration taking place. (IMPORTANT: - at this stage the calibration readings will not match). When the calibration readings have stabilised click OK and then re-do this process and the calculated velocity and the actual reading should now be similar. Click ok and the x5 calibration is now complete.
- 4) Return to the re-calibration menu, click on velocity, click on x1, it will now ask for the stroke to be change to 1 inch. Click next and the dyno will accelerate to a speed of 3.1HZ. As before when the original readings steady you must click ok and then re-do this process to gain the correct values.
- 5) Return to the re-calibration menu, click on Position, click x4, Click next, It will now ask you to set the stroke to 1", Click Next. It now asks you to enter the stroke the dyno is on (i.e. 1") Click next; It then asks what motor speed to use. Enter 1 then click next. The software will then inform you that the dyno is ready to run. Click next and it will start. When the readings are steady you must click ok and then re-do this process to gain the correct values.
- 6) You must now turn your dyno into the OFF position and change the stroke to 4 inches or its maximum setting.
- 7) Now your dyno is in the maximum stroke setting you must return to the re-calibration menu, click on velocity, click on x0.25, a dialog box will appear asking you to enter the size of the stroke. As before it will show you the calibration taking place and you must wait for the readings to steady and click ok then repeat the process like before.
- 8) Return to the re-calibration menu, click position, click x1, click next, it will then ask you to enter the maximum stroke of the dyno. Click next; the dyno will now accelerate to 2HZ. As before you must wait for the readings to steady, click ok and then re-do the process.

- 9) Return to the recalibration menu, click on load cell, a dialog box appears containing the load cell calibration data. It asks you to input the mV/V reading from your load cell calibration sheet and its rating, e.g. 1500Kg.
- 10) This has now recalibrated your workshop dyno but it has not yet been saved. To do this you must go to calibration and click 'Save as' then enter a filename for your calibration and save the file. You are now ready to start using your dyno.