'PROBE SETUP' functions:

Set zero: This function cycles the probe, touching the target spring, and recording the measurement as a Zero reference. It is not necessary that the spring needs to be the exact target length, as the final fine tune of the zero reference is accomplished in the 'SETUP MENU' using the 'LONGER' and 'SHORTER' functions.

Extend: This function extends the probe outward. It can be used in conjunction with the stroke limiters to more easily set up the probe. (1) extend the probe by pressing enter while 'extend' is highlighted. (2) adjust the stroke limiter to limit the probe position to something less than the maximum stroke. Allowing enough room for springs that are short of the minimum length. (3) position the probe so it is aligned with the spring and just touching the spring. (4) readjust the stroke limiter so the spring is compressed to just under the minimum allowable length. The idea here is to avoid pressing the spring to the point where we might damage it.

Cycle & graph: The Cycle and Graph function is for adjusting and verifying speed of the probe. A graph is produced that displays the time/ position relationship. In addition, there is a velocity graph above the position graph. Excess velocity can cause premature failure of some moving parts. A properly adjusted probe has similar extend and retract speeds, even speeds, and maximum extend and retract speeds of 10mm/50ms. Most slower production speeds do not require the maximum speed. i.e.: for 100 springs per minute might do well at 5mm / 50ms. The velocity graph allow you to see the smoothness of the travel. Using these graphs, you can vary air pressure and flow controls and actually see the effect. The vertical marks are drawn every 50 ms and horizontal marks for 0, 2.5mm, 5mm, 7.5mm, and 10mm.

Calibration: This allows you to fine tune the sensitivity of probe. Initial factory settings should function nicely for most needs, but, if you regularly notice that spring variation is less or more than displayed, you can alter the Calibration more (to increase measured variation) or less (to reduce measured variation).

General Observations: Air pressure should usually be from 1.5 to 2.5 Bar (22psi to 37psi). Average velocity should be less than 10mm/50ms. Velocity graph should generally stay within a 2:1 range (majority graph should be more than half on the maximum. If this can not be achieve, there is a chance that a problem exists.