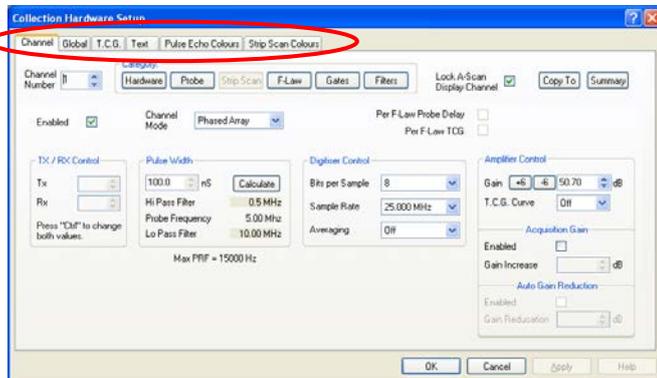


Collection Hardware Set-up

To open the *Collection Hardware Set-up* dialog box, from the *Setup* menu select *Collection Hardware*. (F2 hot key).

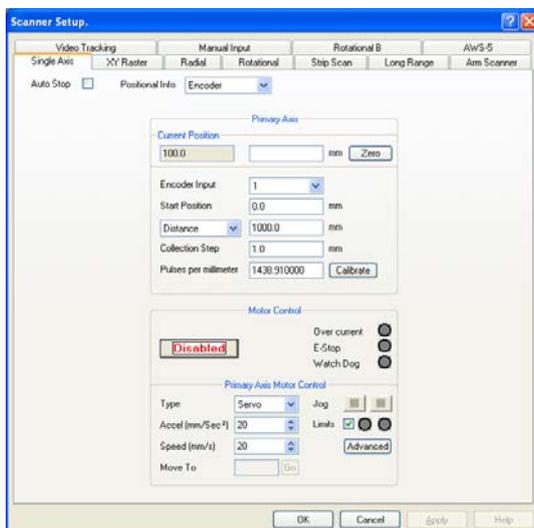


The **tabs** at the top of the dialog box control the viewed PAGE. They are:

Channel	The parameters that are programmable channel by channel	
Global	The parameters that are common to all channels	
D.A.C.	Depth Amplitude Correction curve configuration	The amplitude correction is displayed as a Time Corrected Gain curve (TCG). See: <i>Time Corrected Gain (TCG)</i> in Appendix A for guidance on setting up TCG.
Text	The text parameters that are saved in the ultrasonic data files	
Pulse Echo Colours	Set-up of the Pulse Echo Depth/Amplitude colour tables	
Strip Scan Colours	Set-up of Strip Scan / Long Range colours	

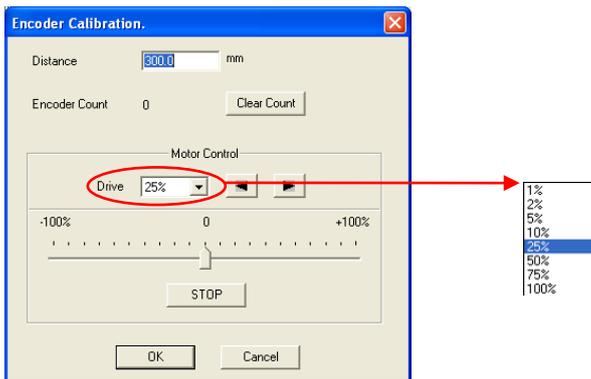
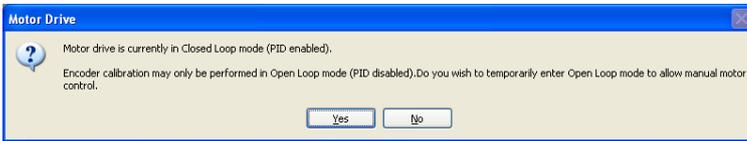
Scanner Set-up

The tabs at the top of the dialog box allow the selection of different scanner types. The scanner interfaces are all variations on the basic single or dual axis setup.



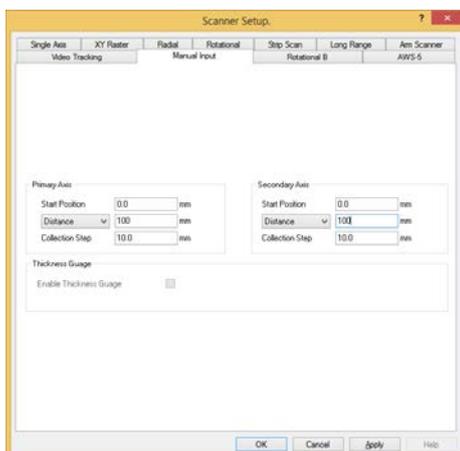
Scanner Set-up - Encoder Calibration

Click the **Calibrate** button for either the **Primary Axis** or **Secondary Axis** to activate the **Encoder Calibration** dialogue box. If the PID has been enabled, a dialogue box will appear as follows, warning that the PID will be disabled during calibration.



Distance	An arbitrary, measured distance selected by the operator.	The longer the calibration distance, the more accurate the calibration. 300mm is a reasonable distance.
Encoder Count	Displays the pulse count as the encoder wheel is turned	
Clear Count	Sets the encoder pulse counter to zero	Set this value to zero before moving the encoder for calibration.
OK	Ends the calibration procedure and closes the dialogue.	The pulses/mm will then be set in the system.
Motor Control:		
Drive	Applied percentage drive.	There are two methods to manually drive the motor in order to move the encoder for calibration: <ul style="list-style-type: none"> • Select the % drive from the dropdown list and click the left or right arrow buttons. • Move the slider either left or right. As the slider moves further from the centre (0) the % drive increases. A combination of both methods may be used if desired.
-100%...0...+100%	Applied percentage drive.	
Stop	Cuts power to the motor and brings the slider to the zero position abruptly.	

Scanner Set-up – Manual Input.



When the **Manual Input** tab is selected there is no encoder feedback therefore multiple A-scans are not recorded. Use this mode for manual 'free-hand' scanning with imaging when a record (snapshot) of the currently displayed data may be required. When the scan is terminated, only the data currently displayed is saved.

Manual Input may also be used to manually record a series of thickness gauge points on a grid matrix to produce a corrosion map similar in appearance to an X/Y encoded corrosion map. The grid mapping function is only available in the corrosion mapping software, i.e. SuperView disabled (see [Appendix B, item xxiii](#) for detailed instructions).

Primary and Secondary Axes		
Start Position	Allows the operator to specify the start position of the data collection grid.	This value is usually 0
Distance	Specifies the length of the data collection area in the given axis. There are two choices: <ul style="list-style-type: none"> • Distance • End Position 	<ul style="list-style-type: none"> • End Position is useful if the operator does not want to calculate the actual length of the scan. But knows the desired end position.
Collection Step	The size of each block or gauge point on the data collection grid.	The operator places the probe manually in each block to record the thickness

xii. Encoder Calibration

- a. This procedure is similar for all the scanner interfaces that allow positional encoding.
- b. *Click* the **Calibrate** button.
- c. The **Encoder Calibration** dialogue opens.
- d. Enter a measured distance in the **Distance** text box. (e.g. 300mm)
- e. Hold the encoder still at the beginning of the measured distance and *Click* the **Clear Count** button. The **Encoder Count** value is set to zero.
- f. *Move* the encoder the length of the measured distance and hold the encoder still.
- g. *Click* the **OK** button.
- h. The **Encoder Calibration** dialogue closes automatically.
- i. The value in the **Pulses per millimetre** text box is automatically corrected. If the correct pulses per millimetre value for the encoder being used is known then this value may be entered manually without using the calibration procedure. Note if the encoder is measuring in a negative direction after calibration, the sign (+ or -) of the pulses per millimetre value may be changed to reverse the measurement direction.
- j. Calibration may be verified by *clicking* the **Zero** button and observing the **Current Position** value while moving the encoder a measured distance.
- k. For a **two axis (XY) scanner**, the above procedure is repeated for both axes.