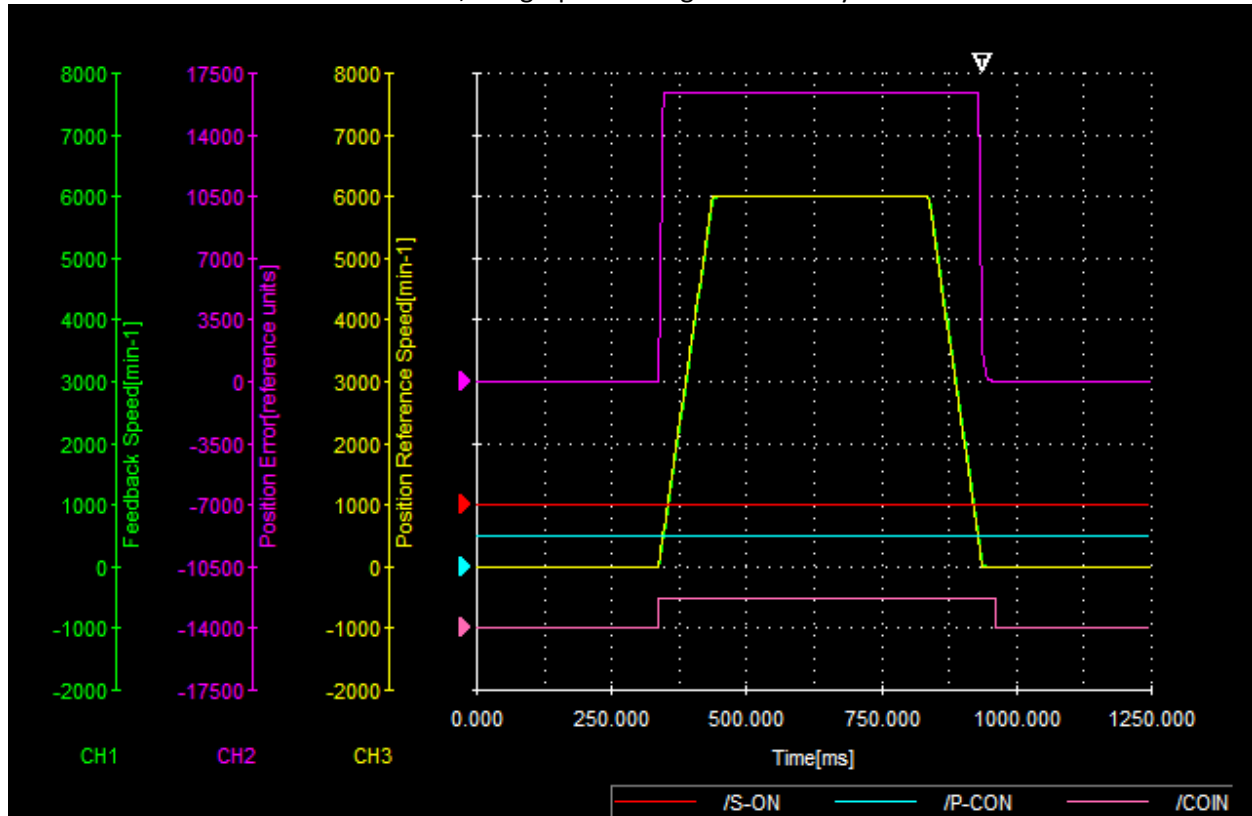


Related Products:

SigmaWin+ 5.62 or later

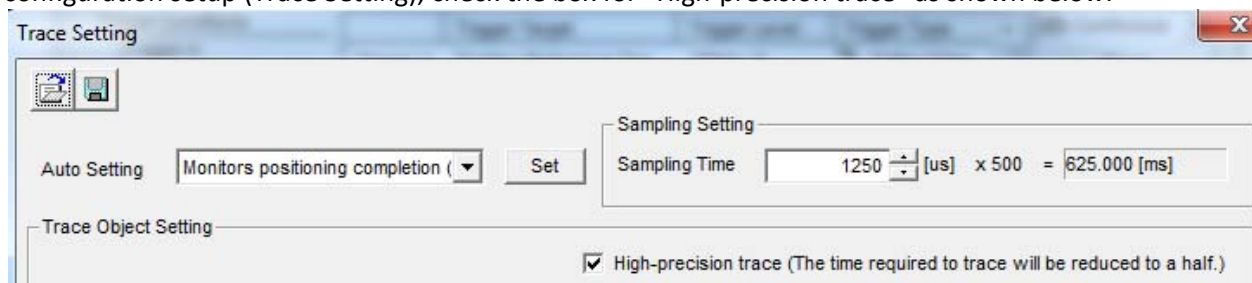
How can one read the actual position error larger than 16384 using SigmaWin+?

When reading the position error in SigmaWin+ trace with normal settings, the position error (following error) is limited to a 14-bit register (basically +/- 16384). With the introduction of 20-bit encoders with the Sigma-5 series, the position error display is limited. If Model Following Control (MFC) tuning is used a lag is introduced to the command trajectory, which can lead to position errors exceeding the 14 bit limite. If a trace is taken MFC enabled, the graph from SigmaWin+ may look like this:



As the figure shows, the position error is clipped. This makes it difficult to dial in following error limit PN520 in the SGD V ServoPack.

It is possible to view the full following error when the values are greater than 16384. In the trace configuration setup (Trace Setting), check the box for "High-precision trace" as shown below:



Now position error can be display for much larger values. This setting doubles the register size. The only downside to this selection is that the trace duration is reduced to half the original setting. In other words, if 1000ms trace time was configured originally, it will be reduced to 500ms. Below is a graph demonstrating a system that has been significantly de-tuned and resulted in 8,370,000 counts of following error. The full following error is displayed in this case.

