FB2 setup as position loop feedback
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Material used:

AKD-P01207-NACN-0000, 1.13.0.4 Firmware

AKM63x-ASCSC-00 motor w smart feedback

Huge inertia load with more than 300:1 inertia mismatch.

Dynapar incremental quadrature encoder, 2048 lines/8192 counts/rev, 1:1 ratio to the motor, wired to X9 of the drive

Step 1:

Setup and run motor in position mode with just FB1 feedback.

Nothing special at this point. Just run the motor as you would if you intended to use only the primary encoder as feedback. Be sure to set DRV.DIR so positive direction is what you want to be positive direction.

Step 2:

Setup the FB2 feedback page.

What's important here is that you set FB2.ENCRES to the counts/ one motor revolution. In my case, I have a 1:1 ratio so my counts would be 8192. If I had a 2:1 ratio (2 motor revolutions to one FB2 encoder revolution), then I would set FB2.ENCRES to 4096.

Step 3:

Now run a test in the scope using FB1.P and FB2.P
Do not worry about scaling or resolution. The AKD will automaticly "normalize" the feedback data to internal 64 bit integer, 32 bits/rev, no matter what the feedback type.
FB1.P and FB2.P will be the same scale.
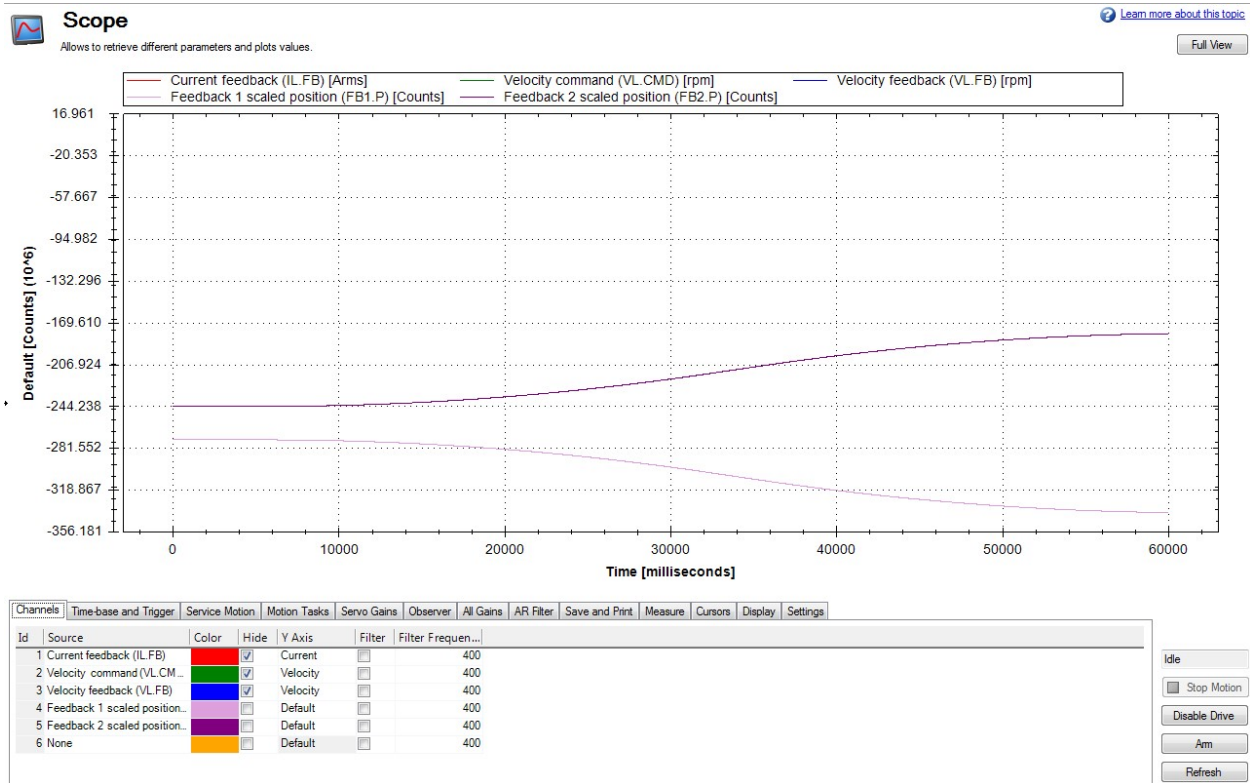
In this case, my FB2 is the incorrect slope direction so I toggle FB2.DIR to a "1" so it will match FB1.P.

Step 4:

Scope again and check for correct FB2.ENCRES setting
What you should be looking for is that the slope is the same and the FB1.P and FB2.P
counts are the same. If not, you may have to change FB2.ENCRES and try this test
again. I used the cursors to measure the start and end of the trace.
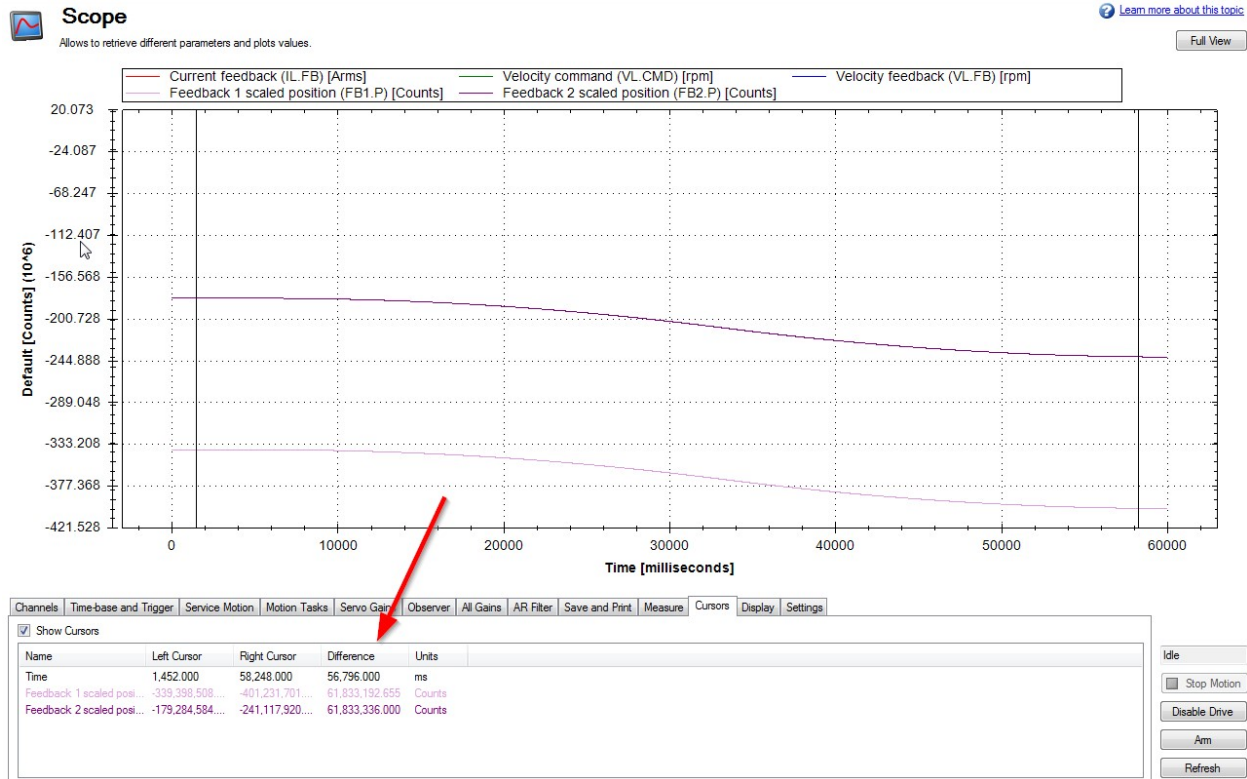
Step 5:

Disable the drive and enable FB2 as the position loop feedback
In the Workbench terminal screen, set PL.FBSOURCE to '1".
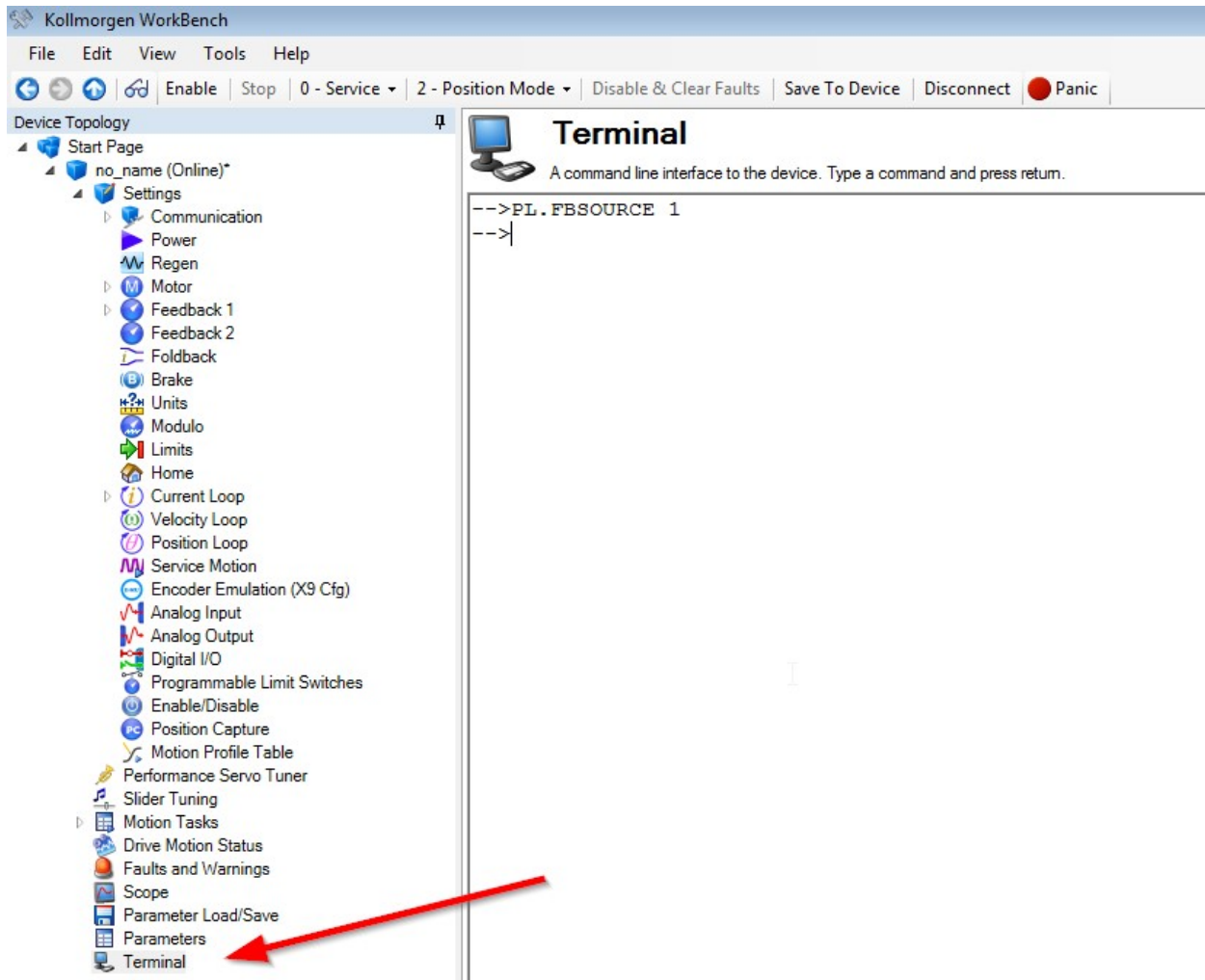
Step 6:

Setup gains so position loop is only a velocity loop.
Set PL.KP to 0 and set VL.KVFF to 1.00 so the drive can remain in position mode but not correct position using FB2. Run another scope plot to be sure that your actual velocity matches your commanded velocity.
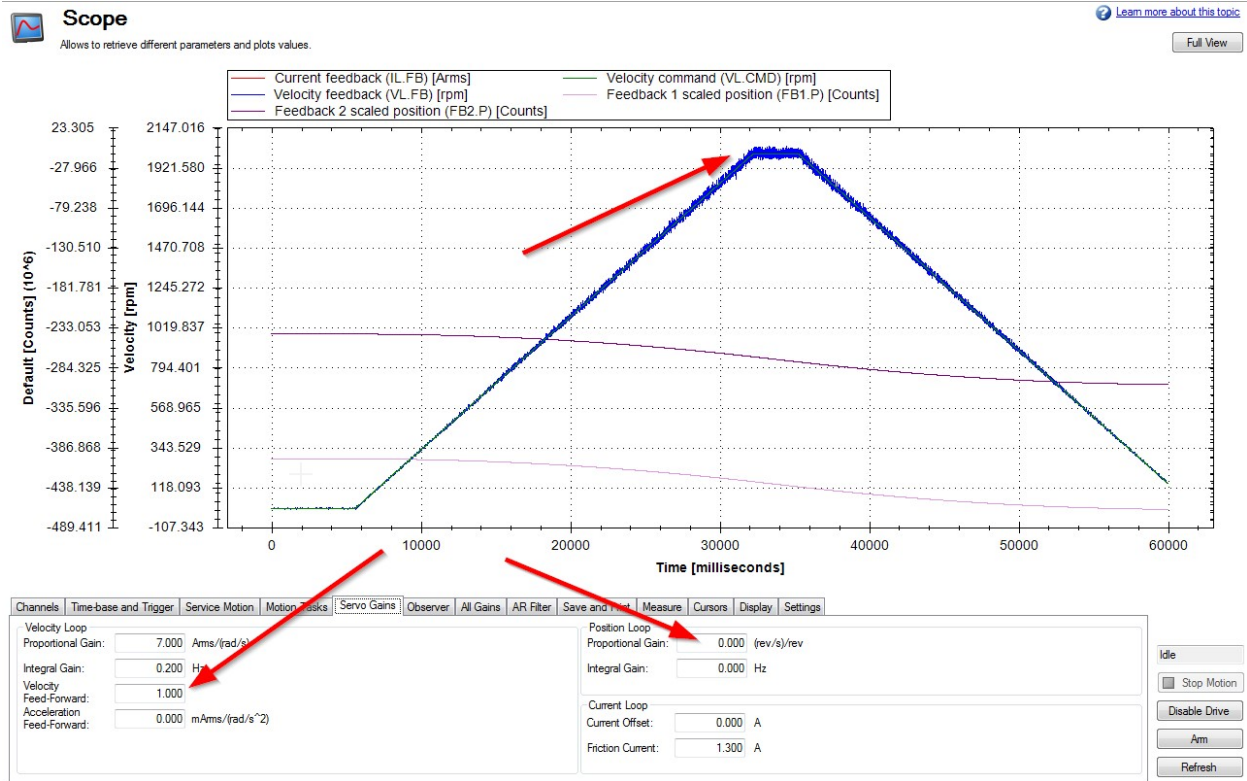
Step 7:

Tune the position loop gain
Setup Service motion reversing for low RPM and very quick acceleration/deceleration. The acceleration needs to be much more than your expected application rate. You just need to check the current feedback trace in your plot to be sure your not in current limit during the acc. Increase PL.KP until you find the point of instability, then back it off by 20%. Here is my point of instability:
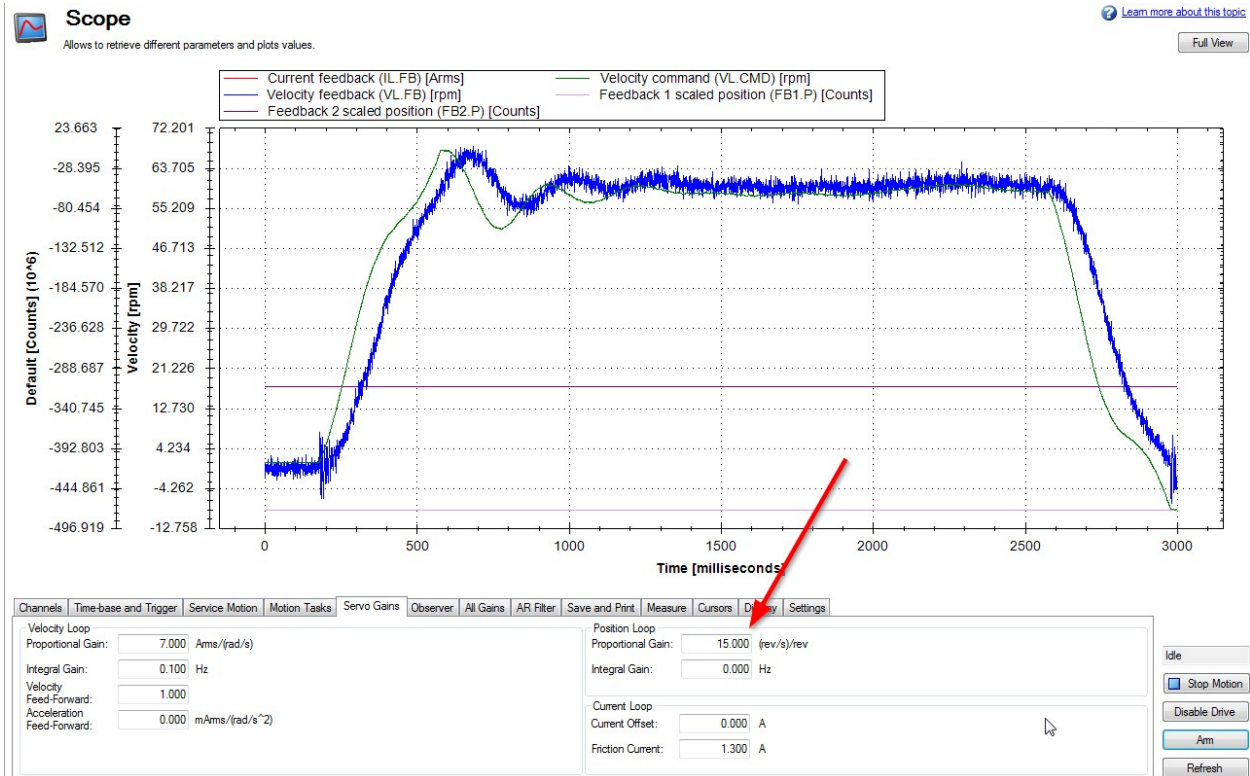
Step 8:

Final test
Remember, you have a high acceleration rate so some overshoot is expected. You just want to see quick recovery. My application has a huge load inertia so I have huge overshoot.