

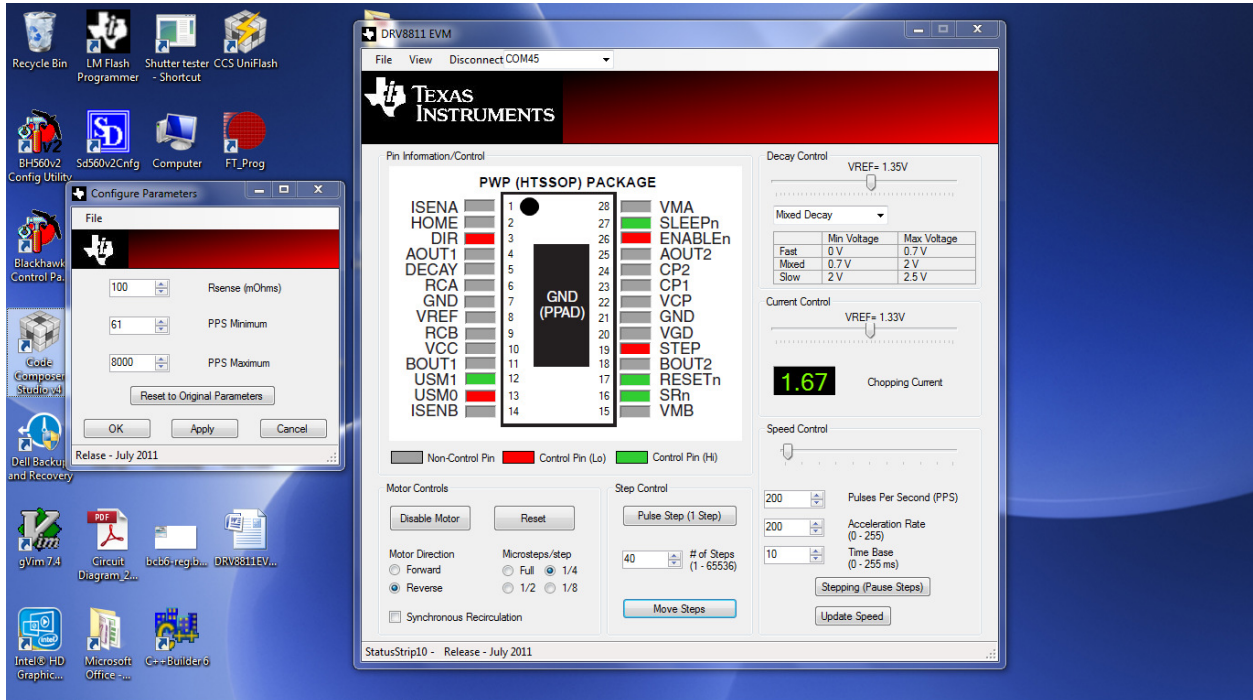
On 10/17/2017

First experiment with DRV8811EVM board:

Skip steps was observed in signal step mode, it responded to 2 clicks and went 2 steps and then did not respond next 2 clicks and skipped 2 steps, and then respond to the next 2 step to go 2 steps and then didn't respond... It went on and on very repetitively.

On 10/18/2017

The first time turn on stepper motor responded to every click and went 1 step per click. Uneven step size was observed. As observer, 2 clicks produced 2 smaller steps and next 2 clicks generated 2 larger one and it went on alternately. It seemed to repeat every 4 steps as a cycle.



A while later the symptom changed back to what was seen on 10/17/2017 after we played with the parameters. This symptom persisted even we changed the parameters back to what we had on 10/17/2017.

It seems to us that this may be a parameter setting issue. Some parameters/configuration might have been set too marginally and therefore proper performance cannot be obtained.

We have also tested the motor in different modes. It seemed to work fine without skipping step in full step mode and half step mode but not in quarter step mode and 1/8 step mode. In 1/8 step mode it went 2 steps and skipped 6 steps.

One more experiment was done to measure the Aout1 and Bout1 signals with respect to the step signal (CPU output to trigger the stepper driver).

One the next page, the first GUI screen shot shows the parameter setting used in the experiment. The 2<sup>nd</sup> one was oscilloscope screen shot showing the waveform. It explained why it went 2 steps and skipped 2 steps in quarter mode but doesn't tell the root cause.

