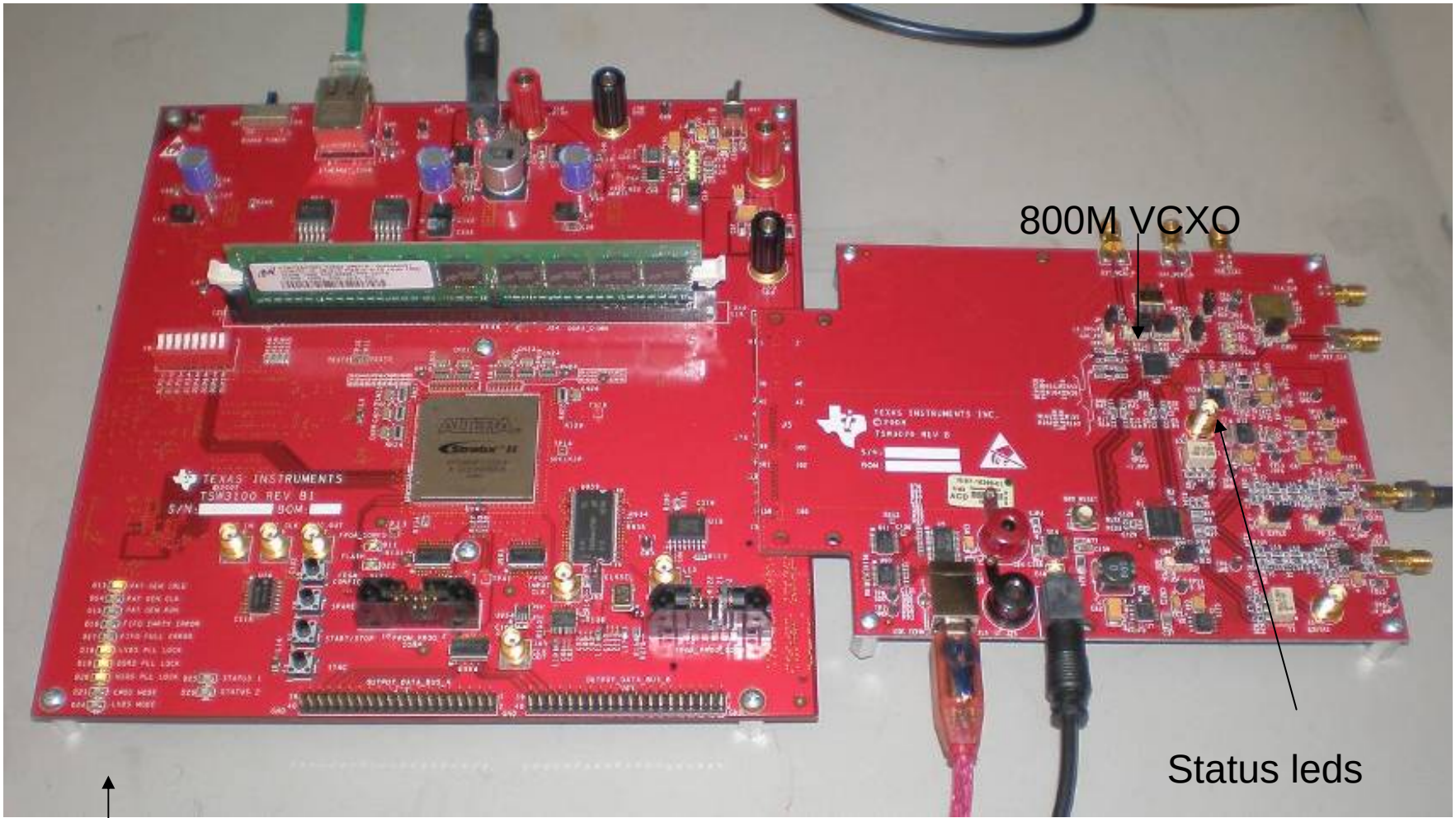
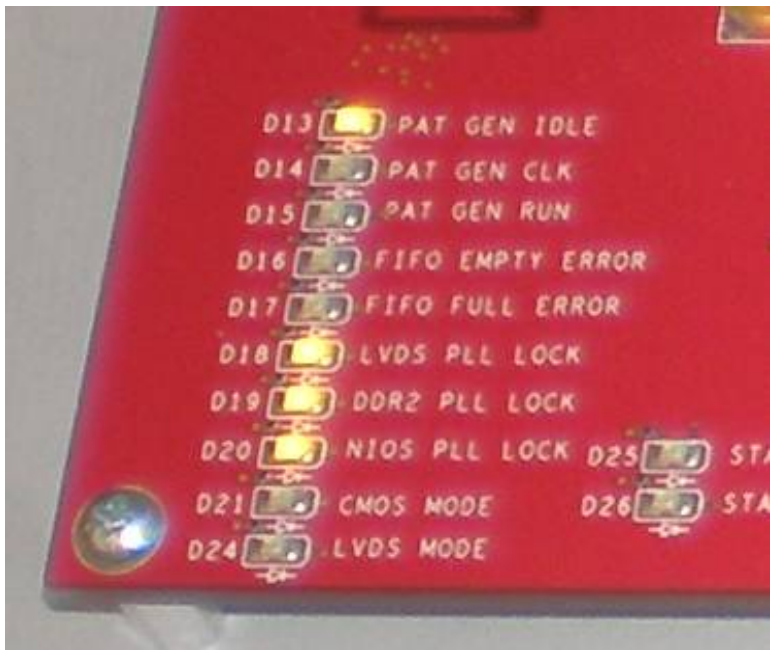
TSW3070 Setup Procedure

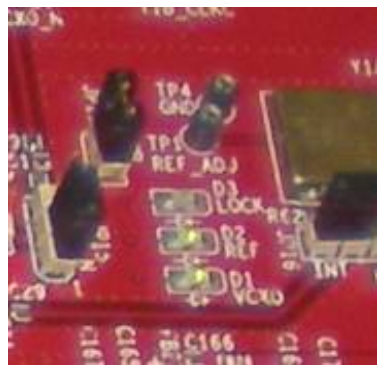
- Connect TSW3100 and TSW3070 as shown.
- Start up the DAC5682 GUI and TSW3100 Tone GUI

Default power up status

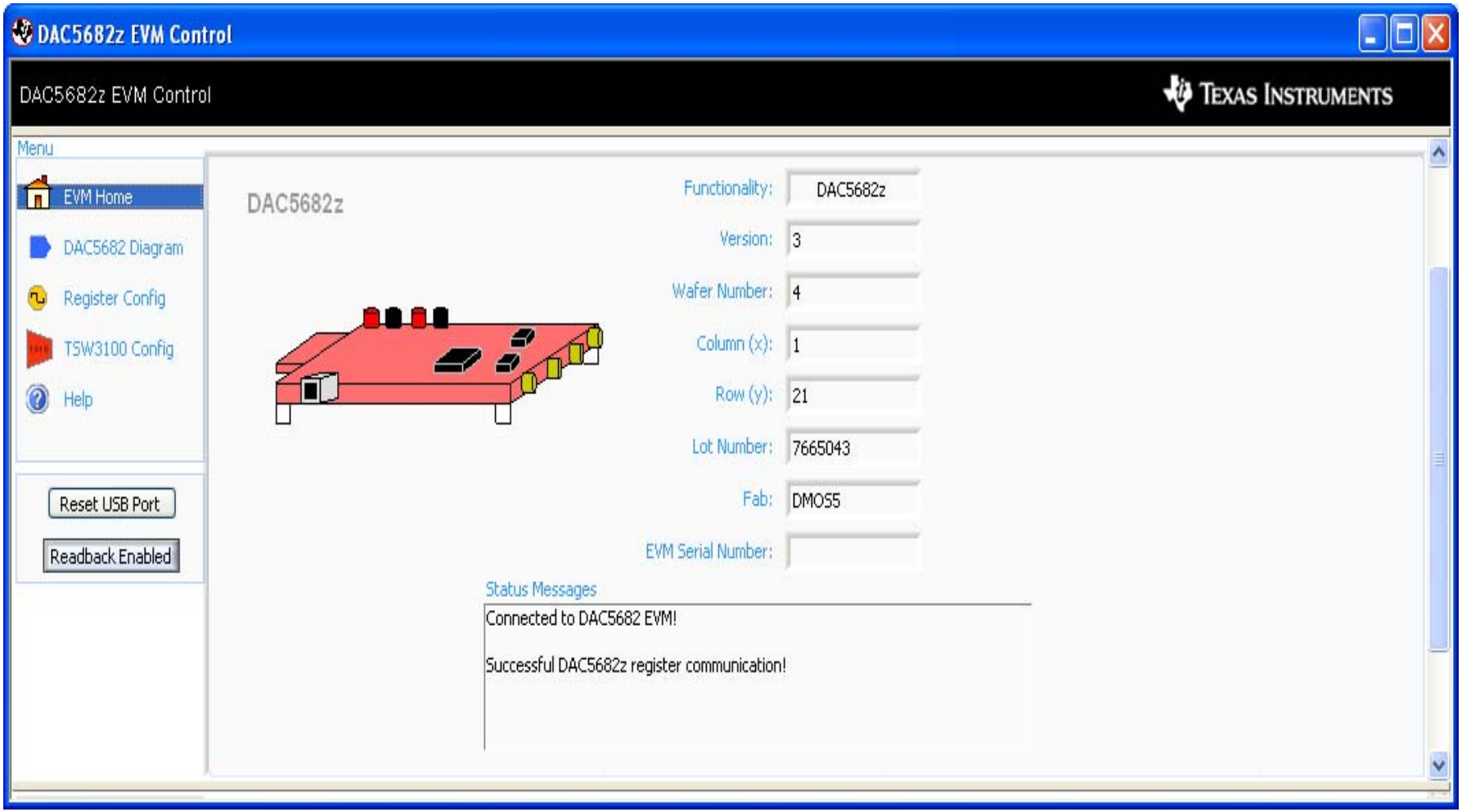


Default TSW3100+TSW3070 LEDs

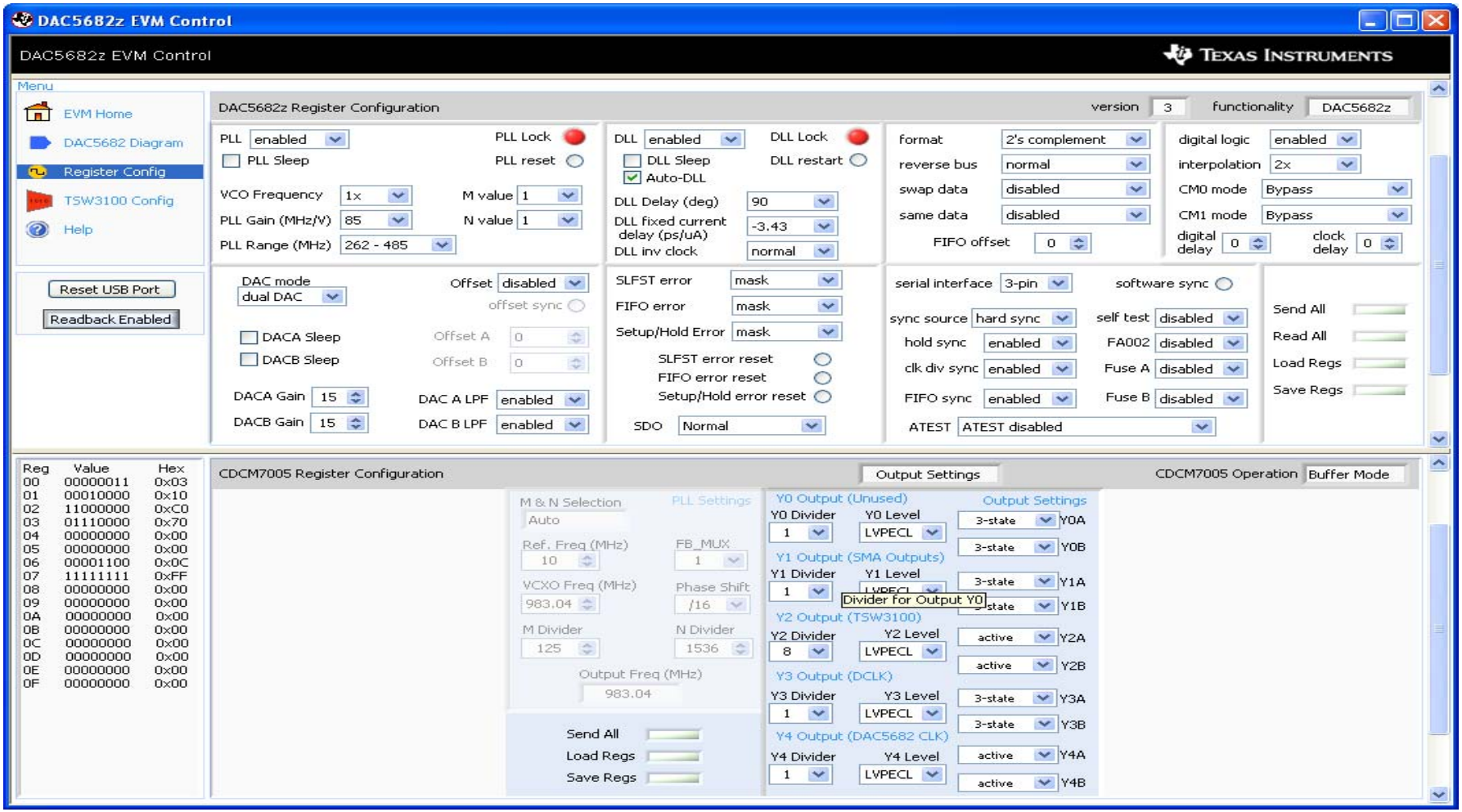




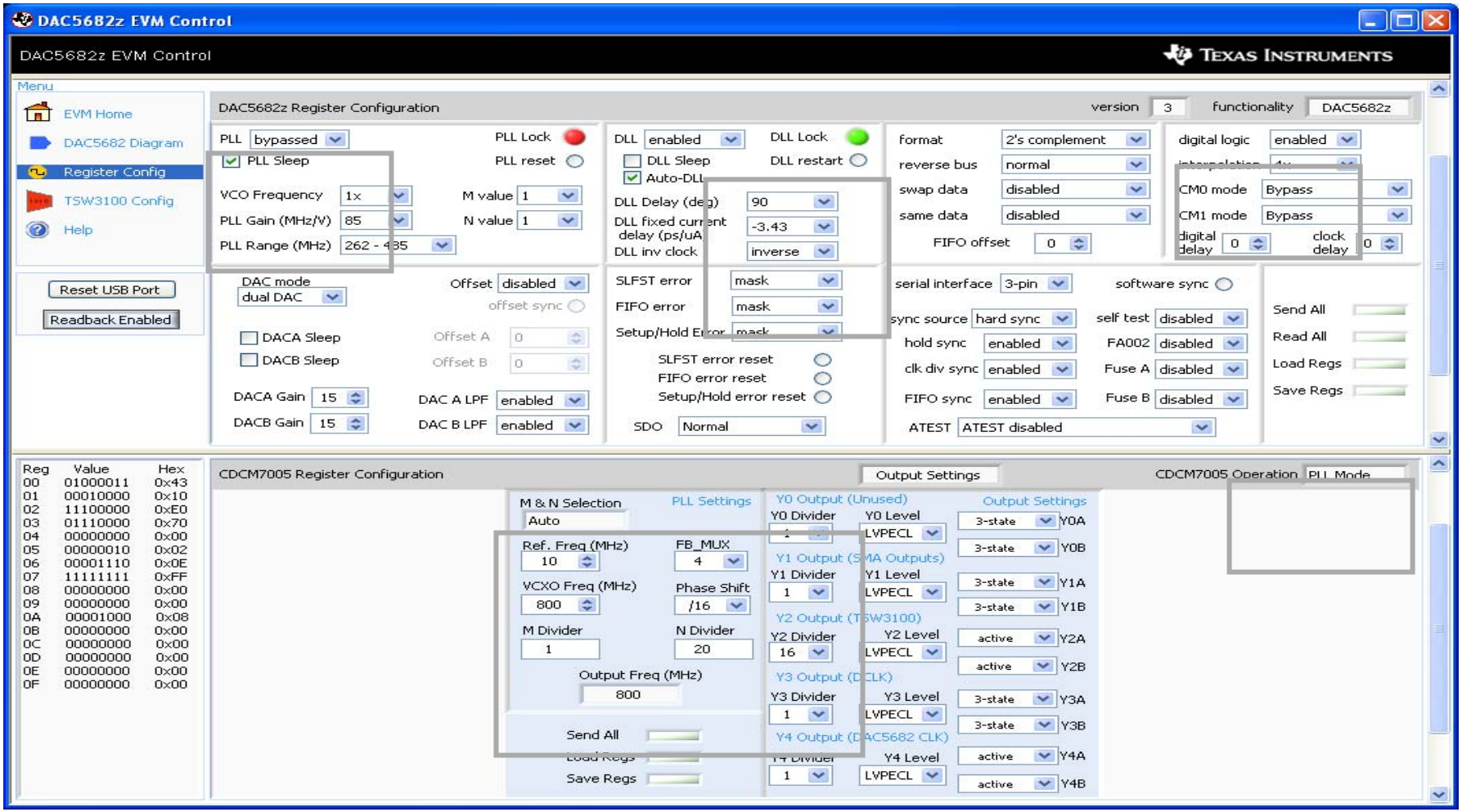
Default GUI settings



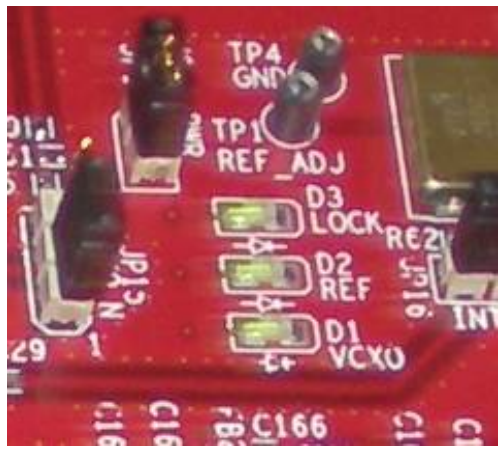
Default GUI settings for DAC and CDCM



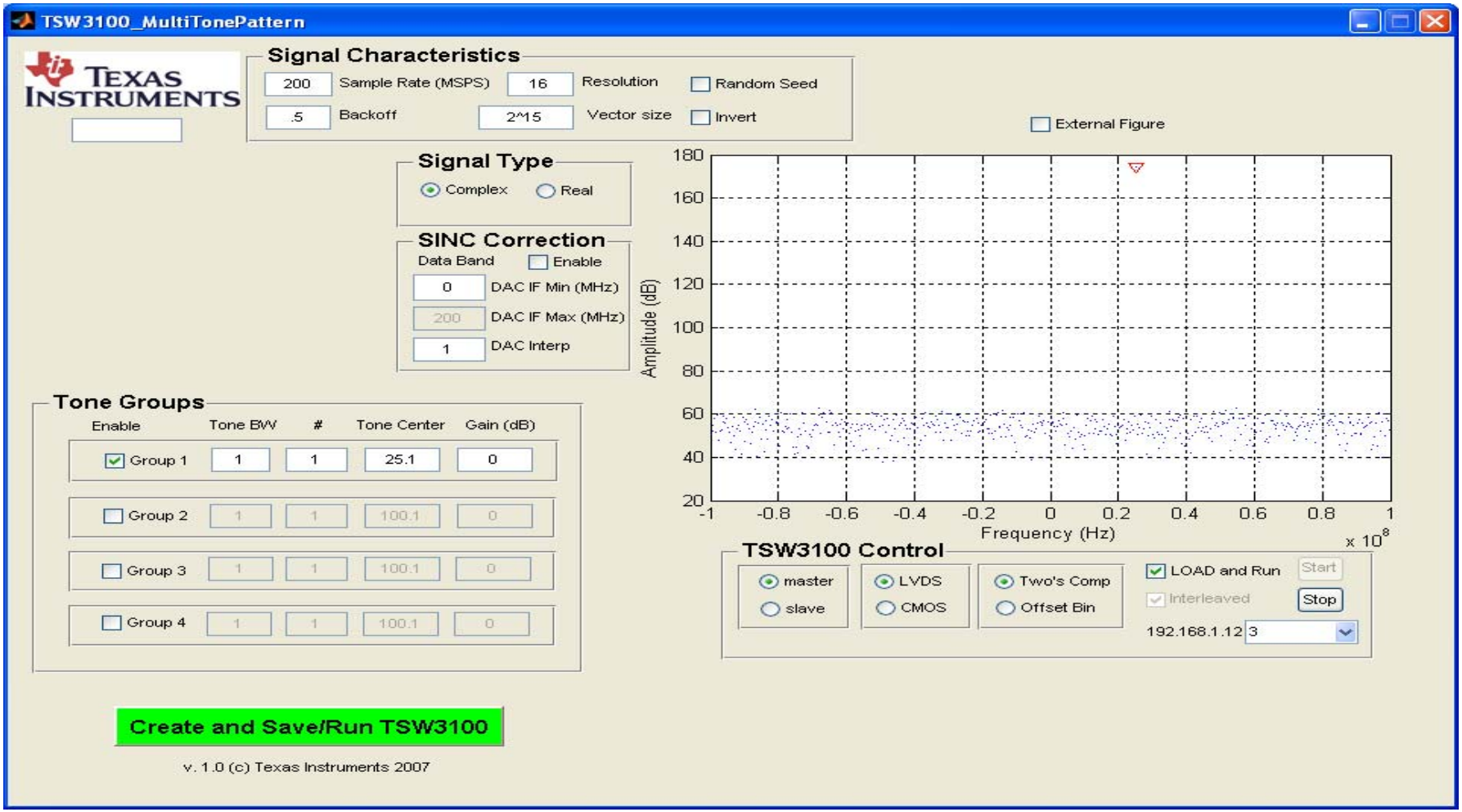
Change GUI settings to match, click SEND ALL for both, once data is loaded into TSW3100 the DLL lock will light up



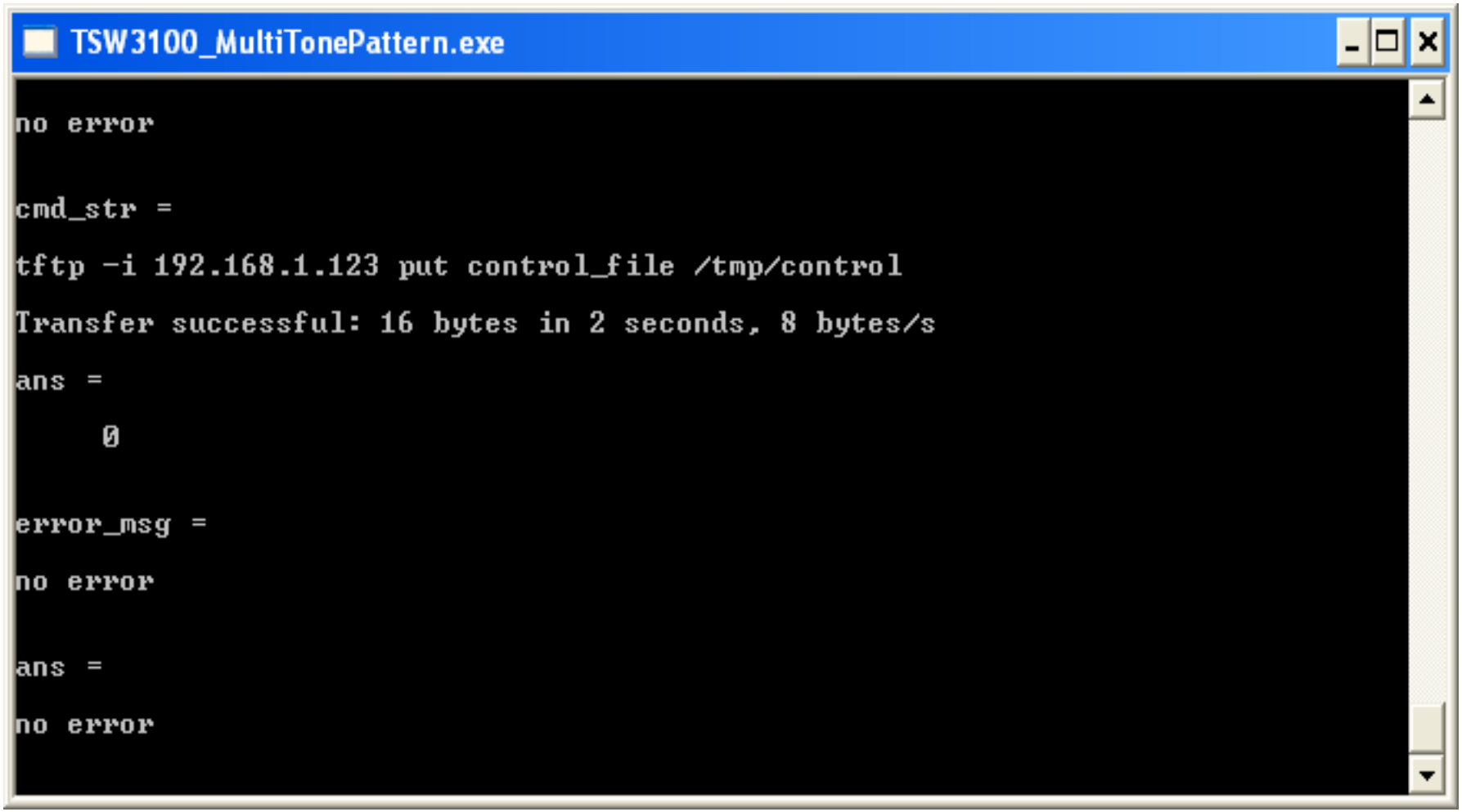
TSW3070 LED D3 should LOCK once the CDCM7005 is programmed



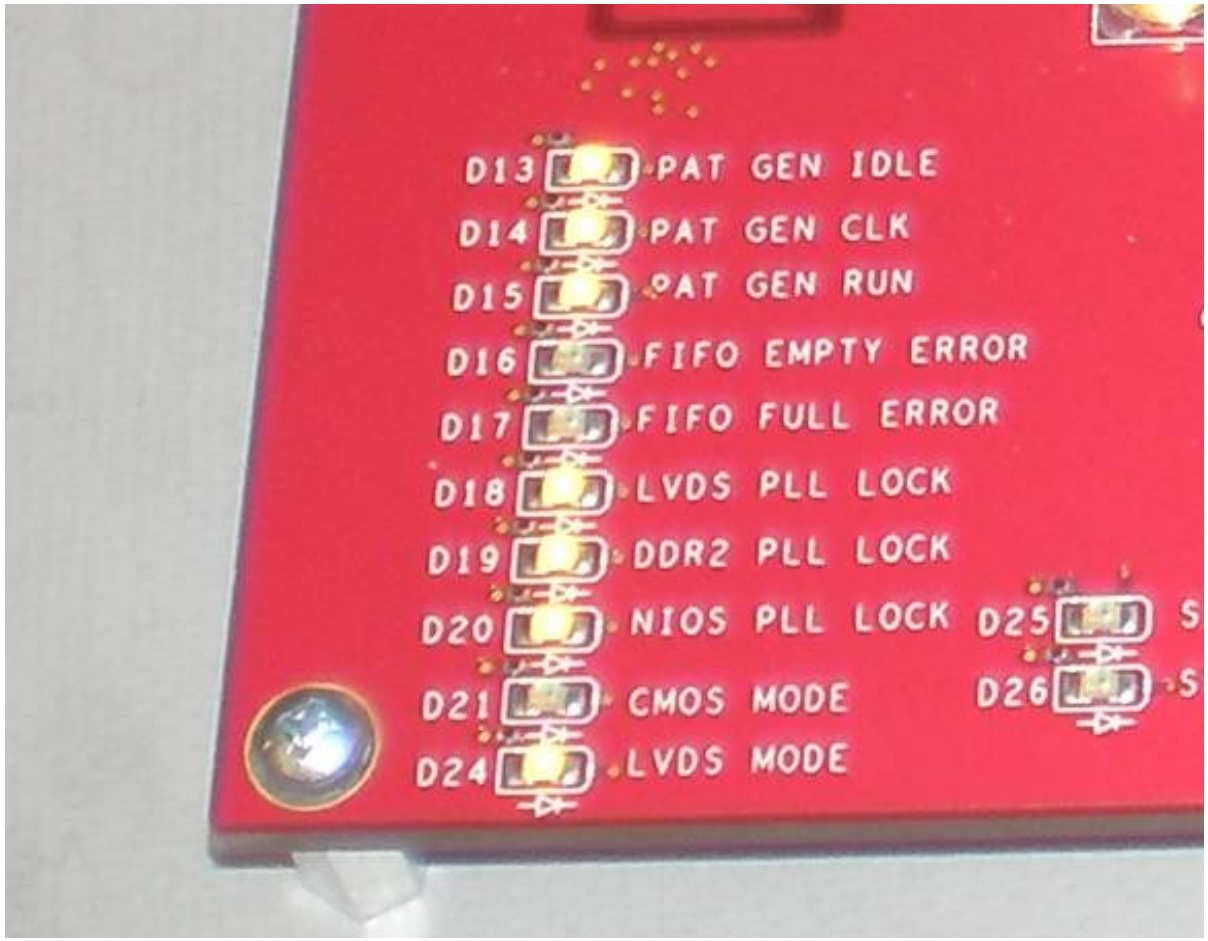
TSW3100 Tone GUI



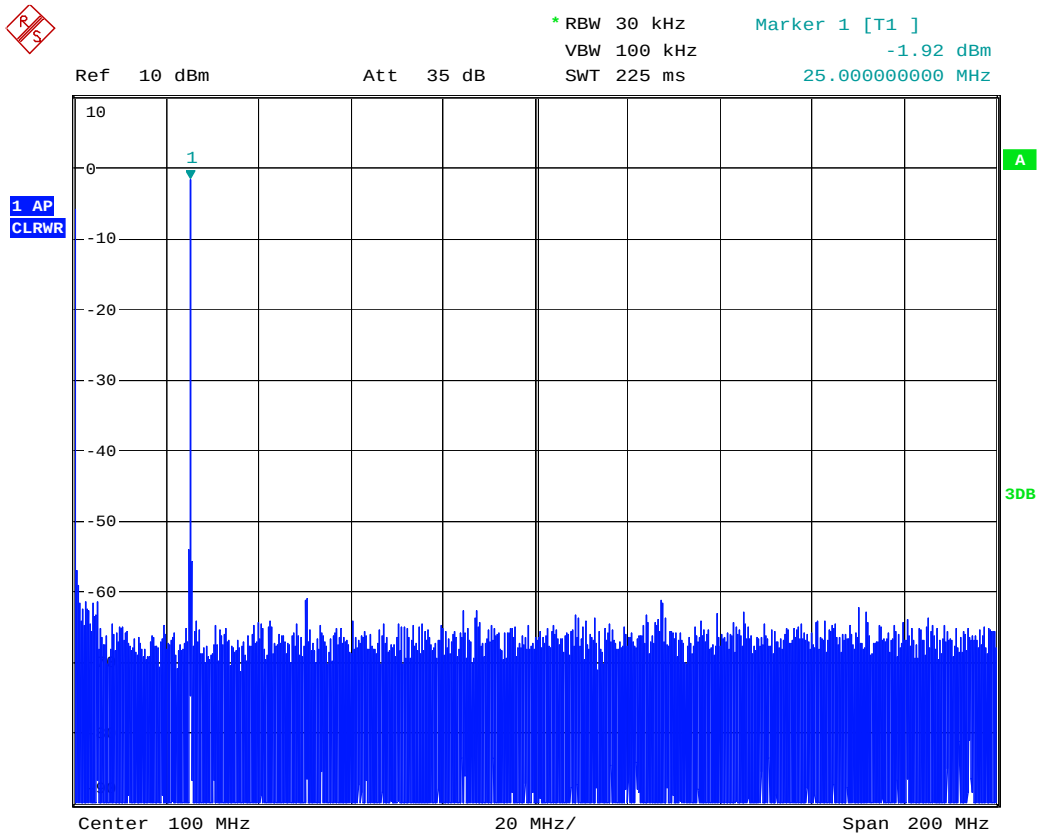
TSW3100 Tone GUI
DOS window OK – no errors



TSW3100 LED status once the Tone is generated and loaded



Spectral Plot from the analyzer showing 25M tone as expected.



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Communications signal generation

- Due to the onboard VCXO of 800M, the exact sampling rates for the different communications standards will not be exactly matched.
- For example the WCDMA baseband rate is 3.84Msps. Using 4x interpolation, the datarate into the DAC is 200Msps, the closes multiple is 52x of 3.84=199.68M
- Although this is clocked into the DAC 200Msps the spectral shape will be different by less than 0.2%
- Other standards can also be generated using the various TSW3100 pattern generators, keep in mind the baseband rates, and the vector lengths when generating signals.
- For best results and to do demodulation of the generated signals, an exact frame of data is needed (vector length) and the sampling rates have to match. This will require an external clock at some clock rate that is matched to the baseband rate of the signal. For the case of WCDMA an external VCXO source based on 3.84M would be adequate. A nice number for the DAC5682 is 983.04M (256x3.84) or 491.52M (128x3.84)

Comms Signal Generator Settings