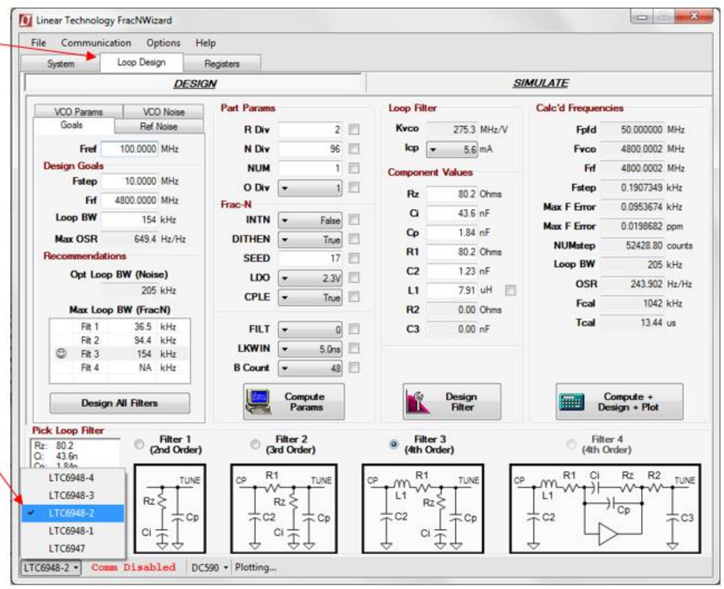
<u>SIMULATING PHASE NOISE WITH FRACNWIZARD</u>

1. Download FracNWizard from ADI website
   http://swdownloads.analog.com/fracnwizard/fracnwizardsetup.exe

2. Start FRACNWizard

Step 3: Select 'Loop Design'

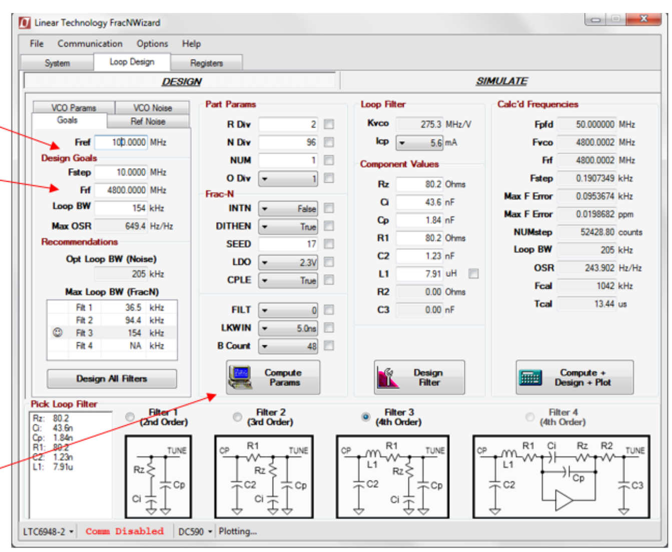
Step 4: Select Desired Part Number



Step 5: From Goals Tab enter desired Fref

Step 6: From Goals Tab enter desired Frf

Step 7: Click 'Compute Params' (this calculates the optimal register settings and loop filter bandwidths)

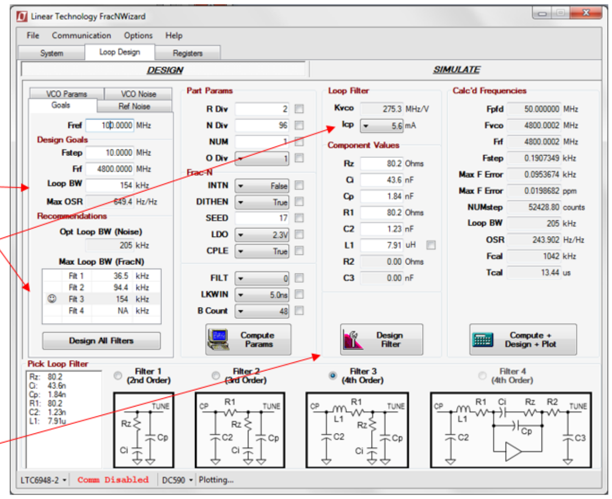


Step 8: Click desired filter # under calculated Max Loop BW.
(Filter 3 is recommended)

Step 9: Ensure Loop BW, matches that of the filter selected in step 8

Step 10: If desired change Icp.
(5.6mA optimizes performance and power)

Step 11: Select Design Filter

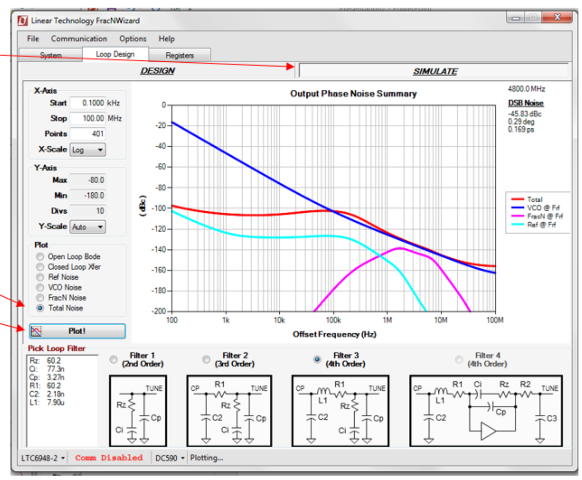


Step 12: Select 'SIMULATE' tab

Step 13: Select 'Total noise'

Step 14: Click 'Plot' button

*The red curve is the Phase Noise response of the LTC6948 output.



At this point if you want to test the loop filter with a LTC6948.

Step 15: Install Loop Filter designed in step 11 onto DC1959A demo board. (real component values may vary slightly from those calculated in step 11)

Step 16: Power up board and connect DC590B as described in demo manual.

Step 17: Enable communications by clicking 'Comm Disabled', which should turn green.

Step 18: To program part, select 'Options' → 'Copy Loop to System' (switch to system tab to validate settings were programmed)