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# PROSLIC® WINDOWS® GUI SOFTWARE USER'S GUIDE

1. Introduction

The ProSLIC® Windows® (graphical user interface) GUI software uses the parallel port of a PC to communicate with the ProSLIC's SPI port. This document applies to Rev 1.85 of the software. The program runs on Windows® 98/NT/2000. Invoking the ProSLIC Windows GUI software causes the device initialization sequence to take place. During device initialization, all the direct registers are read and put into the direct register table. Default values are written to the indirect registers and are read back into the indirect table. The device number, revision number and clock frequency are shown on the top left of the screen. (See Figure 1.)

1.1. Part Number Window
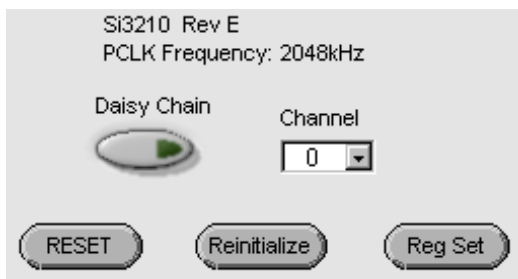
Figure 1. Top Left Corner

The *Reset* button pulls the ProSLIC reset pin to low causing a hardware reset.

The *Reinitialize* button repeats the device initialize sequence.

The *Reg Set* button carries out the register writes shown in Table 1.

Table 1. Register Writes

Direct Register	Value (Hex)	Function
92	7F	Set dc-dc converter
93	12	Set dc-dc converter
14	0	Turn on dc-dc converter
97	1E	Calibration
96	5F	Calibration
8	0	Turn off loopback
10	28	Impedance compensation
1	28	Enable PCM bus
34	18	Enable Ringing Cadence
48	80	Ring Cadence Timer
49	3E	Ring Cadence Timer
51	7D	Ringing Cadence Timer
69	0C	Loop Closure Debounce
71	1	Set current limit to 23 mA
108	EB	Enhancement Enable
97	1	Common Mode Calibration
96	40	Common Mode Calibration
19	FF	Clear and enable interrupts
22	FF	Clear and enable interrupts

When the *Continuous Read All* button is in the "on" position, the direct register table is continuously updated. The registers are updated until the *Continuous Read All* button is changed to the "off" position.

When the *Read All Indirect* button is pressed, the values in the indirect register table are updated instantaneously. Continuous read is not available for the indirect registers.

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1.2. Writing/Reading Registers

There are two ways to write to a register using the ProSLIC Windows GUI software:

- Type the value into the register table and press enter. *Continuous Read All* must be off to use this feature.
- Type the register number and value into the boxes on the left of the screen and then click *Write*. (See Figure 2.)
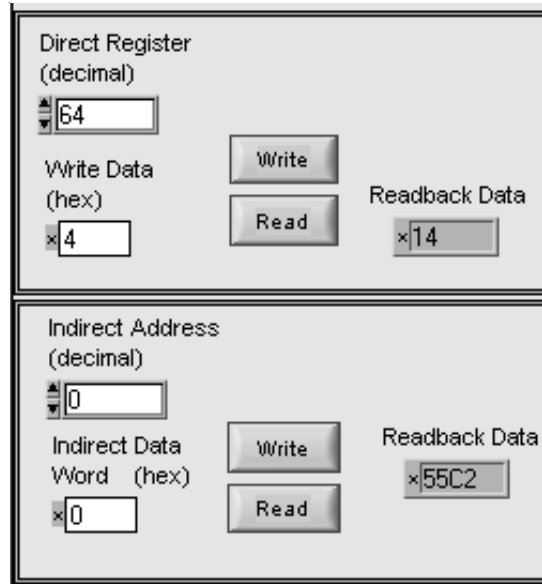

Figure 2. Read/Write Registers Box

To read a single register type the register number into the boxes shown in Figure 2 and click *Read*. To read all direct registers turn *Continuous Read All* on, and to read all indirect registers press *Read All Indirect*.

1.3. Daisy Chain Mode

To operate the ProSLIC Windows GUI software in daisy chain mode click the *Daisy Chain* button on the top left corner of the screen. (See Figure 1.) This writes to bit 7 of Register 0 in all connected ProSLIC devices. Select a channel using the control to the right of the daisy chain button. To turn off daisy chain mode, push the *Daisy Chain* button again so that the green light darkens.

1.4. Register Values

Clicking the *Registers to/from File* button brings up a dialog allowing you to choose to input register values from a text file or output register values to a tab delimited text file. (See Figure 3.) The input and output files are of the same format so that output files can be reloaded into the registers.
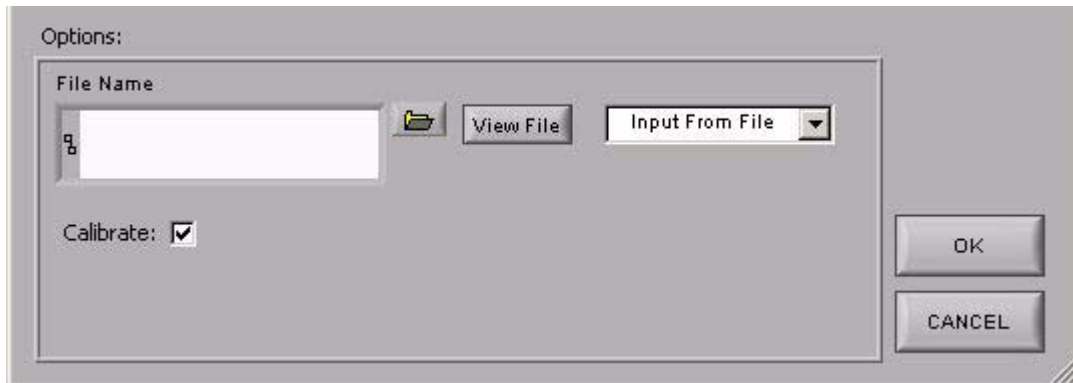

Figure 3. File Dialog

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Select a file using the *File Name* box. Clicking the folder icon brings up the standard windows file dialog. If *Input from file* is selected, the dialog will be an open file dialog. If *Output to file* is selected, the dialog will be a save file dialog.
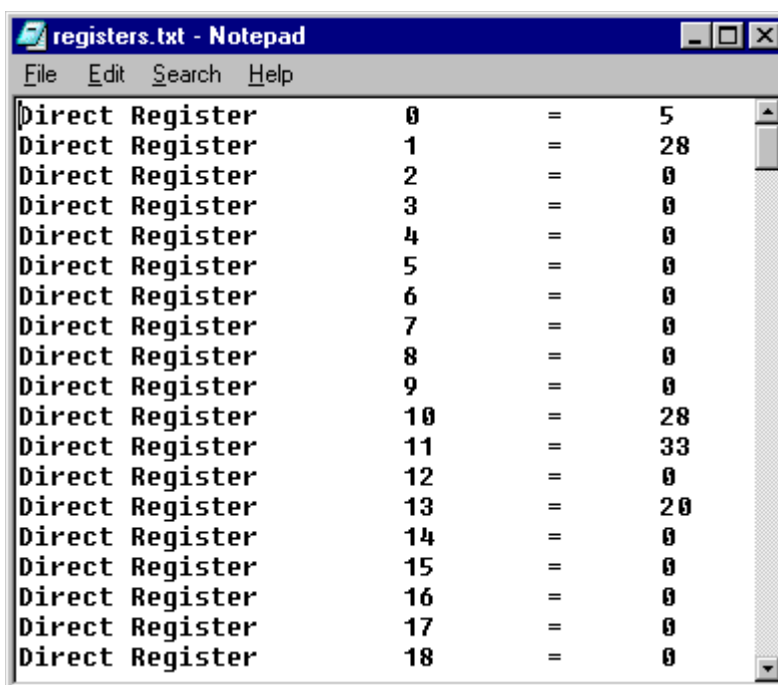

Figure 4. Input/Output File

When the software inputs register values from a file, the values are written in the order they appear in the file. The file can be arranged so that a specific sequence of direct and indirect register writes is performed. Bit 7 of Register 0 and any registers that are not mentioned in the file are not written. If the *Calibrate* box is checked, values for registers 96 and 97 are ignored and a full calibration is performed while inputting the file. If the software is in daisy chain mode, the register values are input or output from the current channel only. The *View File* button starts Microsoft® Notepad with the file in the *File Name* box. (See Figure 4.) The register numbers are in decimal, and the values are in hexadecimal.

1.5. Tabs

There are tabs in the lower right-hand corner of the screen. Clicking on the tabs will show various panes.
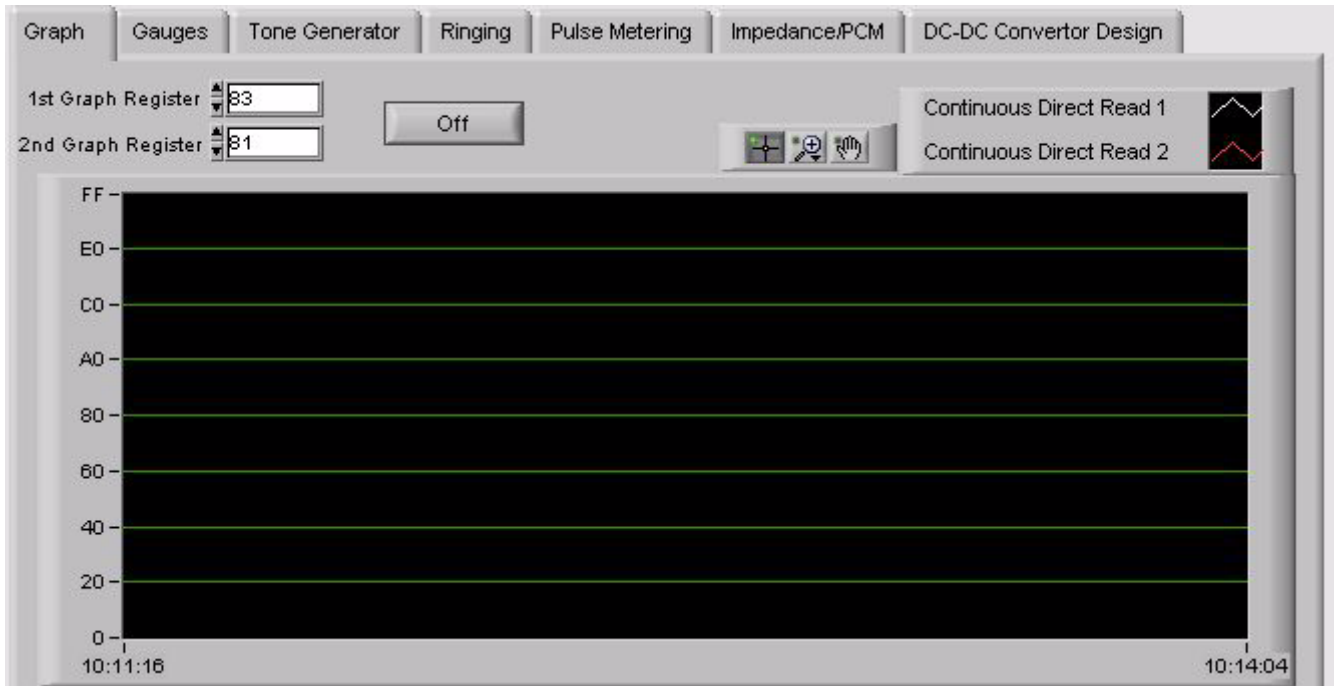
Figure 5. Graph Window

The *Graph* window allows the user to graph the values of two direct registers. (See Figure 5.) Enter the register numbers in the boxes labeled *1st Graph Register* and *2nd Graph Register*. To activate the graph push the on/off button. The color, plot style, line style, and line width can be adjusted by right-clicking on the plot legend above the graph. Zoom and pan tools are available to the left of the plot legend. To change the scale of the graph, click on the maximum and minimum numbers on the y-axis and type in new values.
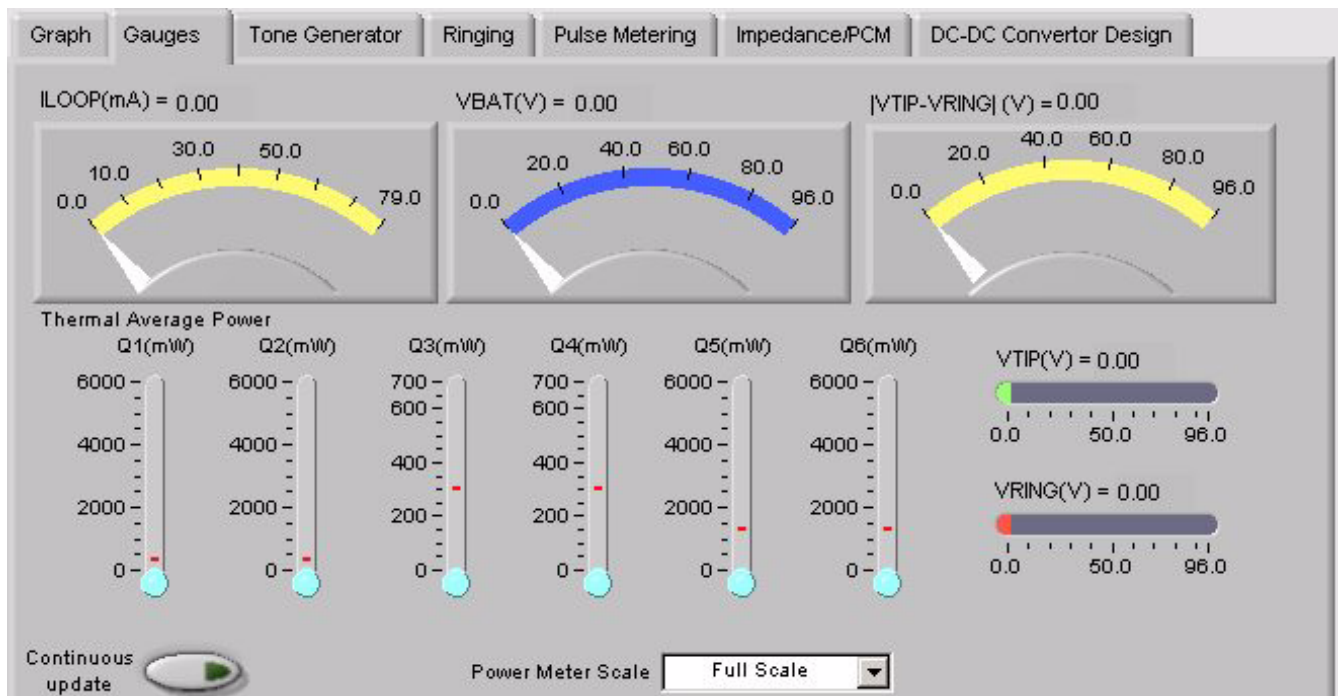
Figure 6. Gauges Window

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The *Gauges* window displays several real-time values of the device. (See Figure 6.) To activate the gauges press the *Continuous Update* button. The power meters display the measured value in blue and the threshold value with a red line. *Scale to Threshold* changes the maximum of these meters to be the threshold value. *Full Scale* sets the maximum of these meters to be 6 W for Q1, Q2, Q5, and Q6 and 700 mW for Q3 and Q4. The scales for all of the gauges can be changed using the method described for changing the graph's scale.
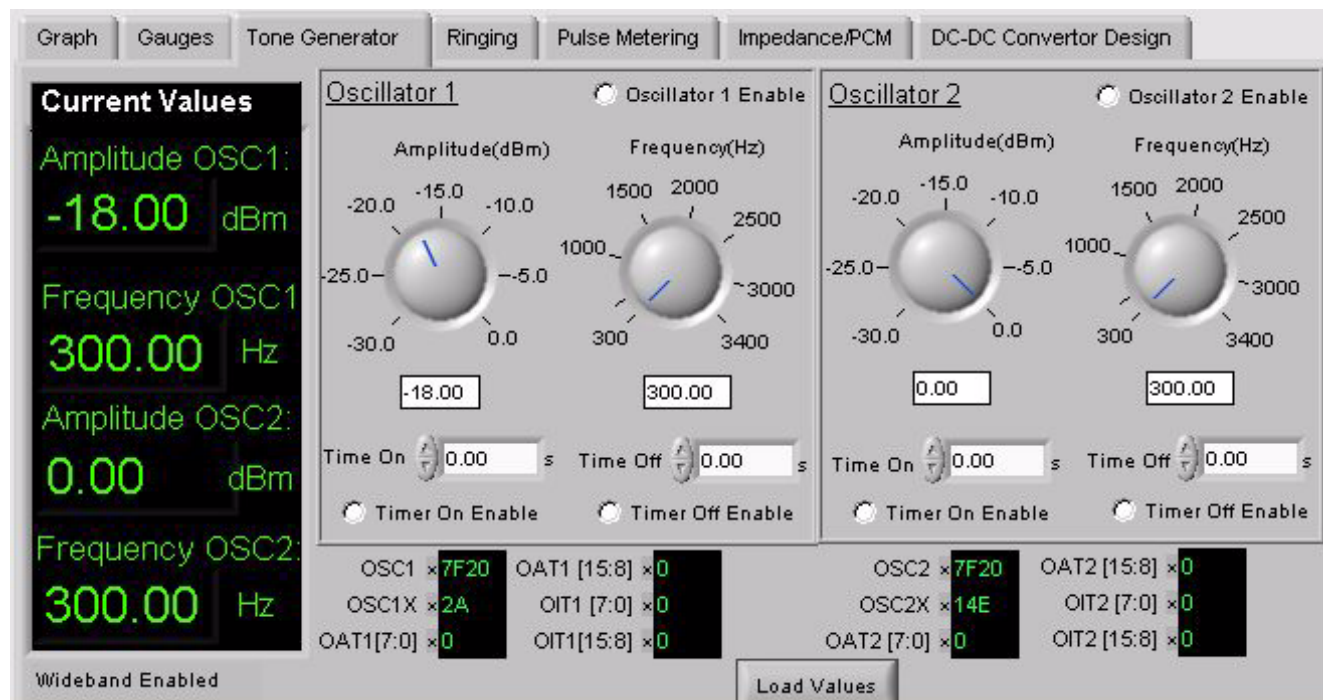
Figure 7. Tone Generator Window

The *Tone Generator* window loads the values needed to generate the specified tones into the appropriate registers. (See Figure 7.) The amplitude and frequency may be selected using the knobs or by typing the value in the box below the knobs. The amplitude is in units of dBm based on a 600 Ω load. Each timer and oscillator can be enabled or disabled using the radio buttons. Pressing *Load Values* causes the program to calculate the necessary register values, display them, update the *Current Values* box, and load the values into the registers.
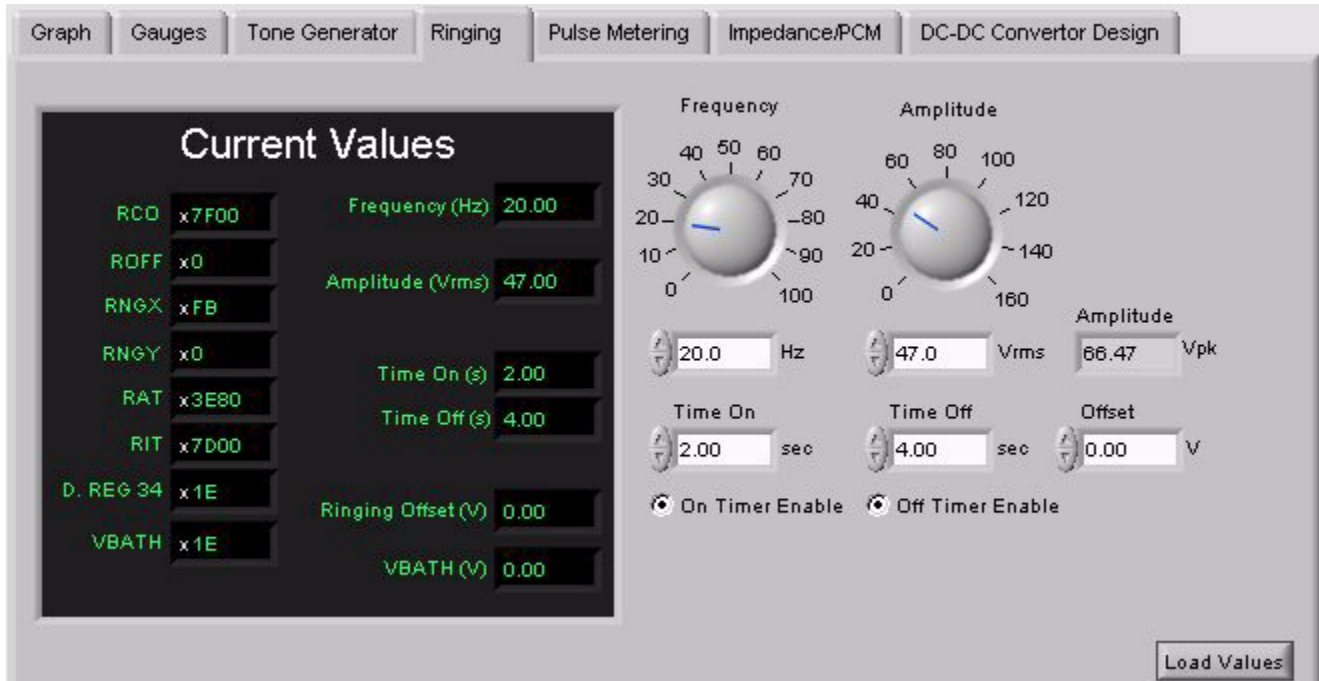
Figure 8. Ringing Window

The ringing tab loads the register values needed for the specified ringing values (see Figure 8). The amplitude and frequency may be selected using the knobs or by typing in the box below the knobs. The amplitude is in units of Vrms, but the V_{PEAK} value is also displayed. Each timer can be enabled or disabled using the radio buttons. The pulse metering tab (see Figure 12) operates in a similar manner. The "Force Power-On" radio button sets bit 5 of register 14.
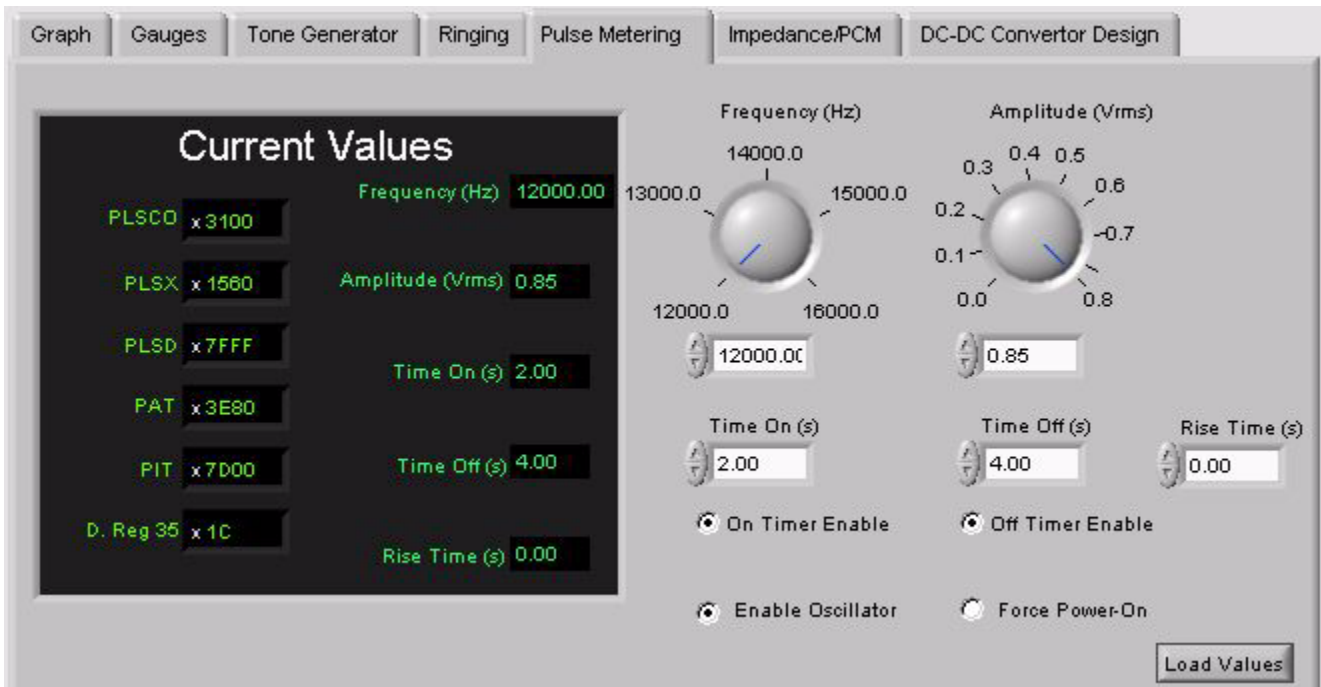

Figure 9. Pulse Metering Window

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The Impedance PCM tab loads and displays register values associated with the PCM interface and the impedance synthesis (See Figure 12). The wideband button can be used to enable wideband mode for the Si3216 only.
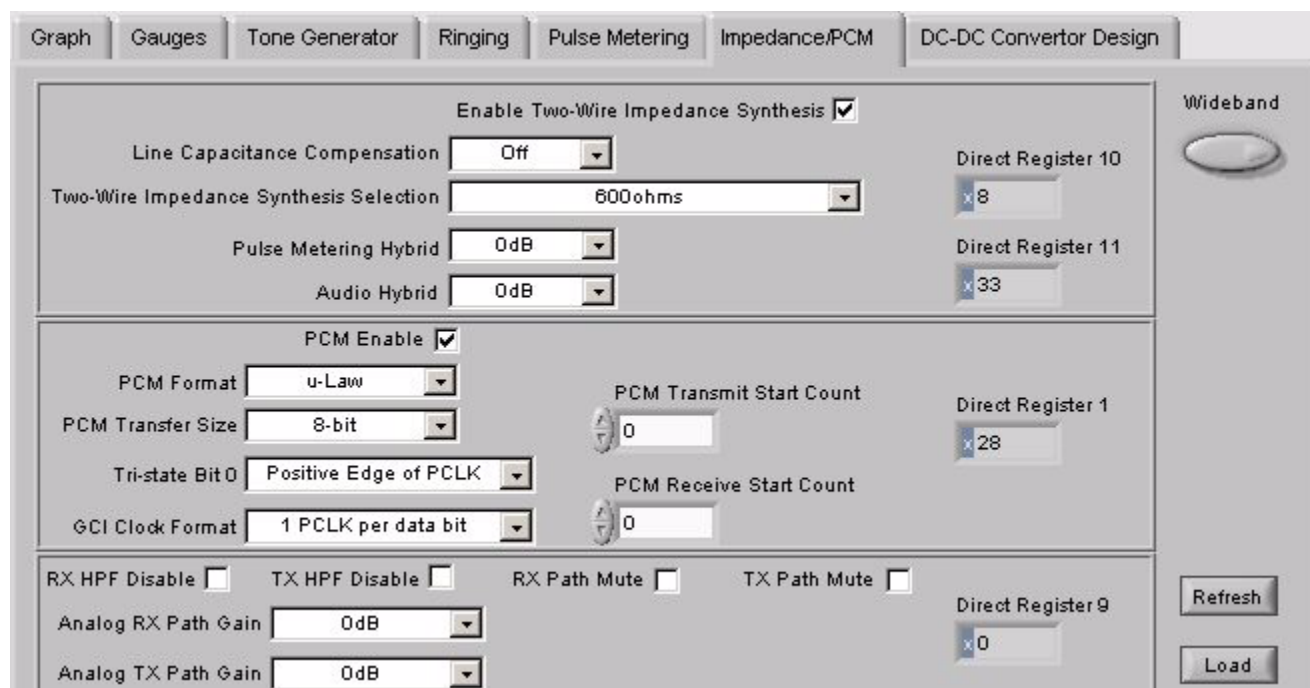
Figure 10. Impedance/PCM Window

The dc-dc converter design tab (see Figure 11) can be used to find component values and register settings for a custom board.
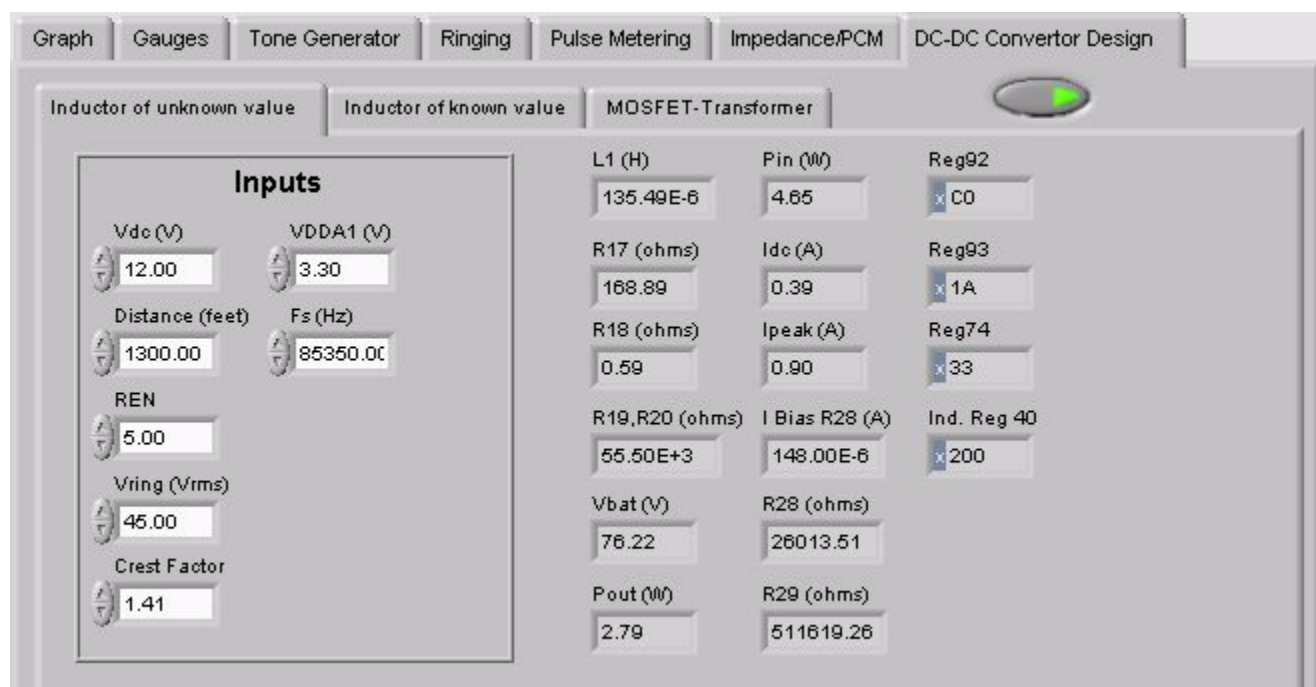

Figure 11. DC-DC Converter Window

1.6. Tone Generator Example

Follow the steps below to generate a tone:

1. Connect power to the ProSLIC evaluation board.

2. Connect a phone to the ProSLIC evaluation board.

3. Start the ProSLIC Windows GUI software.

4. Click the *RESET* button in the ProSLIC Windows GUI software panel.

5. Click the *Reinitialize* button.

6. Click the *Reg Set* button.

7. Write "1" to register 64 (sets ProSLIC in Active state).

8. Click on the *Tone Generator* tab.

9. Type –18 for the amplitude of oscillator one on the Tone Generator panel.

10. Move the frequency knob of oscillator one until the box below it reads 300.

11. Make sure the *Timer On Enable* and *Timer Off Enable* radio buttons for oscillator one are not checked.

12. Make sure the *Oscillator 1 Enable* radio button is checked.

13. Click *Load Values*.

14. Pick up the phone.

A continuous tone should be heard and the screen should look similar to Figure 12.

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Figure 12. Tone Generator Window

2. Document Change List

Revision 1.4 to Revision 1.5

- Updated for rev 1.85 of Windows GUI software.
- Figure 5 on page 4 updated.
- Figure 6 on page 4 updated.
- Figure 7 on page 5 updated.
- Figure 8 on page 6 updated.
- Figure 9 on page 6 added.
- Figure 10 on page 7 added.
- Figure 11 on page 7 added.
- Figure 12 on page 9 added.

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NOTES:

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