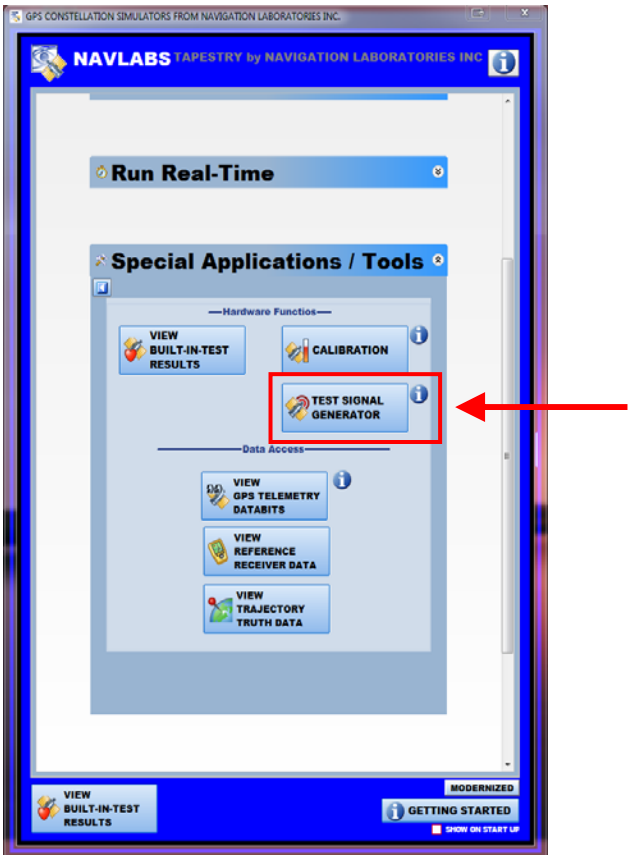
THE TEST SIGNAL GENERATOR

Overview

Tapestry provides a capability to use the hardware as a **Programmable Test Signal Generator [SIGGEN].** The SIGGEN will output one-channel of valid GPS $L_1/L_2/L_5$ RF with complete Legacy/Modernized SubFrames, programmable Doppler, Attenuation, and Z-count.

Access SIGGEN by clicking on the special applications/tools button located on the Tapestry Shell Form.



The **SIGGEN** application operates in two modes: as a Calibration Tool or a Single Channel Test Signal Generator. This document describes the Test Signal aspect of the SIGGEN, see the Calibration document for details of other uses of the SIGGEN.

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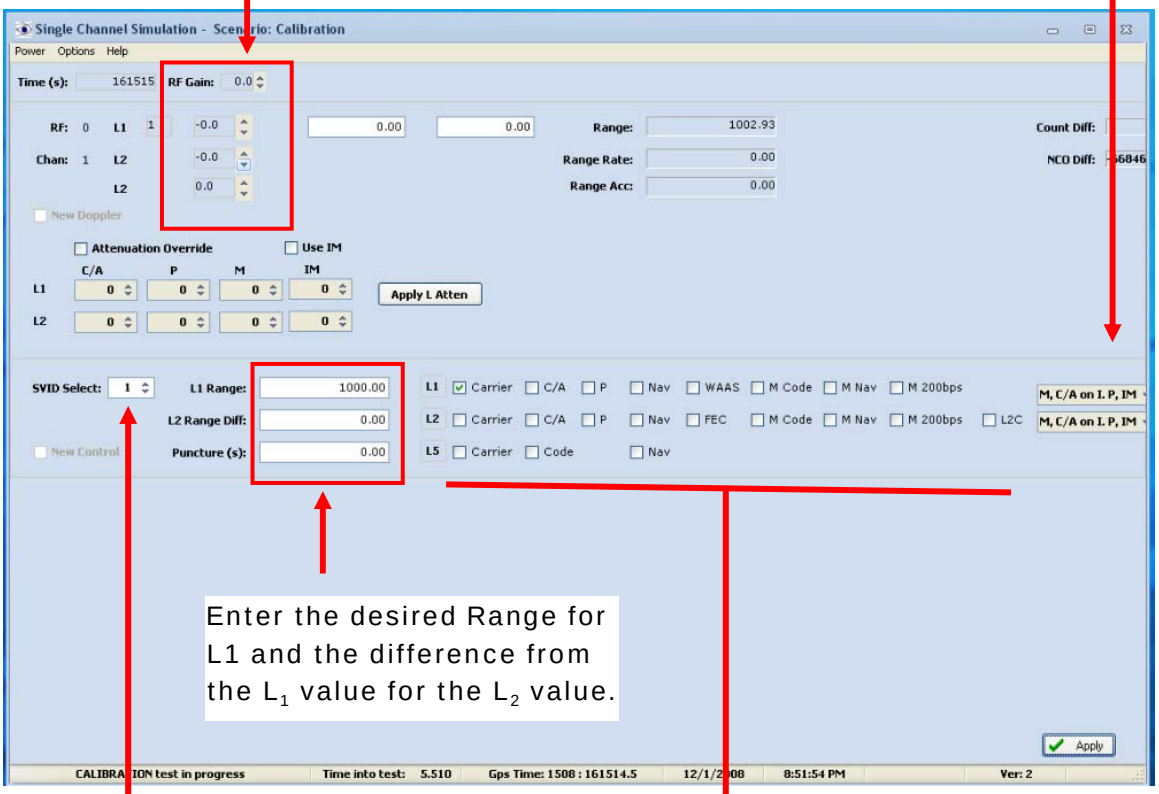
Adjust the power with these controls. - You can switch from absolute to relative power using the Power pull down

Use these check boxes to control the modulated signal for MCODE < APPLY >



Enter the desired Range for L1 and the difference from the L_1 value for the L_2 value.

Select the SVID you want generated. Note this automatically changes the output NAV data to correspond to the selected SV.

Check the signals you want generated,

press APPLY

Specifying the initial time (Z-Count)

The **SIGGEN** Time settings of this screen determine the initial Z-count output by the simulator. When your receiver tracks the *Test Signal* it will set time based upon the Entered value in this control. Input the desired time or accept the default values.

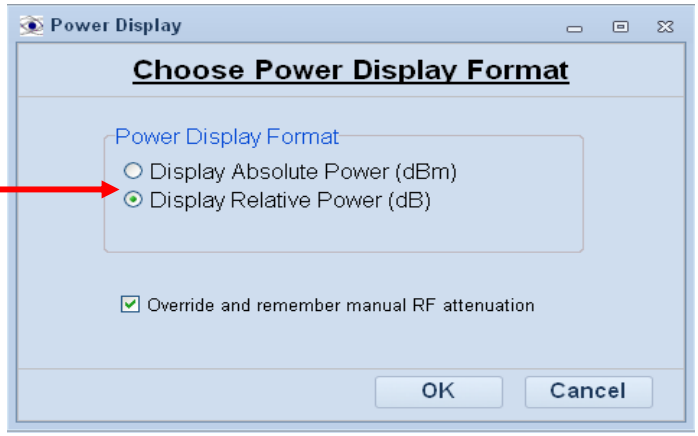
Using the Main Display

The Main display has all the features you will need. Unless you have selected the *Auto Start* configuration, you will need to use the Apply button before your changes (with the exception of the attenuation) will be reflected in the RF output signal.

Changing the Power Display Format

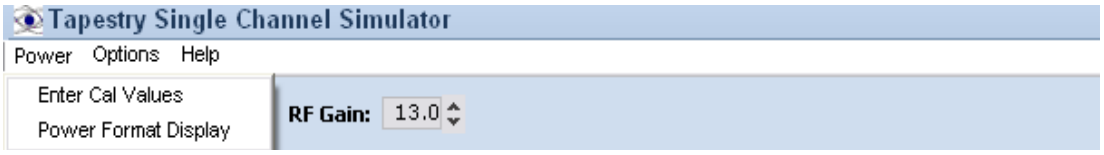
The application can display power either absolutely in dBm or as an attenuation. To switch between these two displays Select the *Power* pull down menu item and select Power format Display. The following form will be presented – select Display Relative Power (dB) as shown to display attenuation values, or Absolute power to display dBm values.

Select this check box. Power will be displayed from 0-36 db on the main form

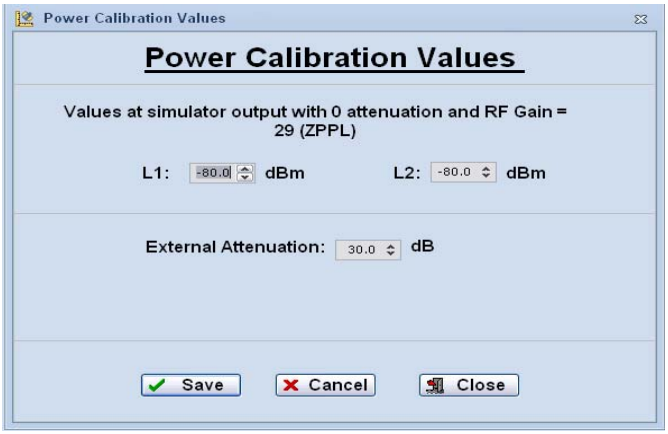


Click OK.

If you want the displayed output power to be correct you must specify the value of any external attenuator you have connected to the simulator. To enter this value use the *Power* pull down menu.



From the *Power* pull down menu item select “Enter Cal Values” and the following menu will be displayed



Enter the value for the external Attenuator into the edit box provided. Don't change the calibration values, as they have been determined with a spectrum analyzer - see the "Calibration Procedures" documentation for the steps required to calibrate your simulator.

Press OK and the external pad values will be updated in the calibration file and the absolute power output display will now be correct.