holzworth instrumentation

HX5200

TIME DELAY STANDARD

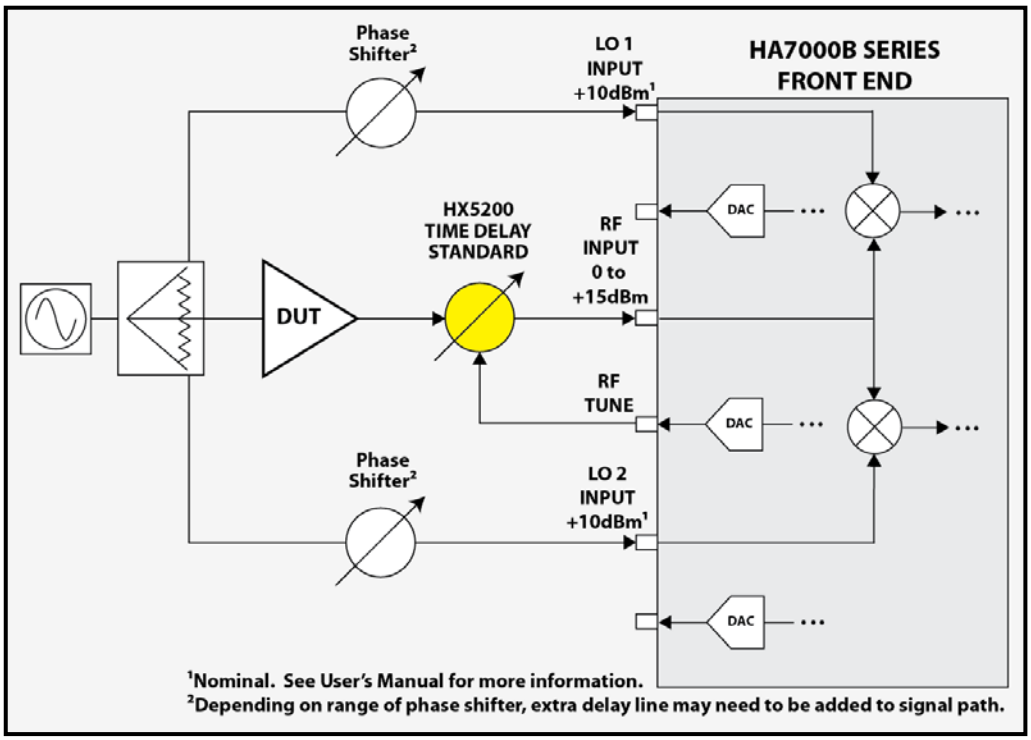
NEW! Z540 CALIBRATED TIME DELAY STANDARD FOR ADDITIVE PHASE NOISE MEASUREMENTS

Every HX5200 Time Delay Standard is sold with ANSI z540 calibration and is designed to be used with the Holzworth HA7000 Series Phase Noise Analyzers. When used in conjunction with mechanical phase shifters, the HX5200 enables a highly automated phase noise test calibration.

TEST SETUP

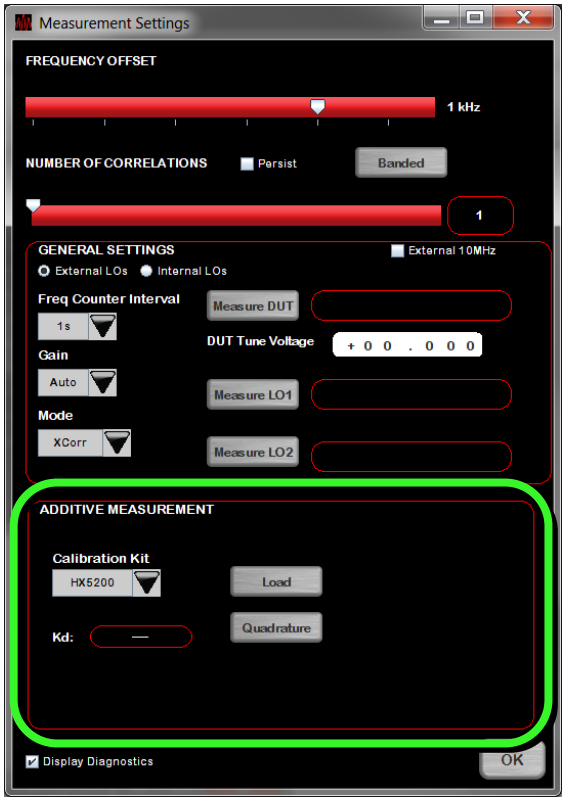
For broadband measurements, user supplied phase shifters are adjusted to quickly and accurately set system quadrature with the HA7000B Series *Quadrature Monitor.* Calibration and test is then fully automated via a single HX5200 in the signal path of the DUT.

These broadband delay standards are designed to cover the full frequency range of the HA7000 Series Phase Noise Analyzers from 10MHz to 6.4GHz. Resultant test data is NIST traceable via an ANSI z540 calibration.

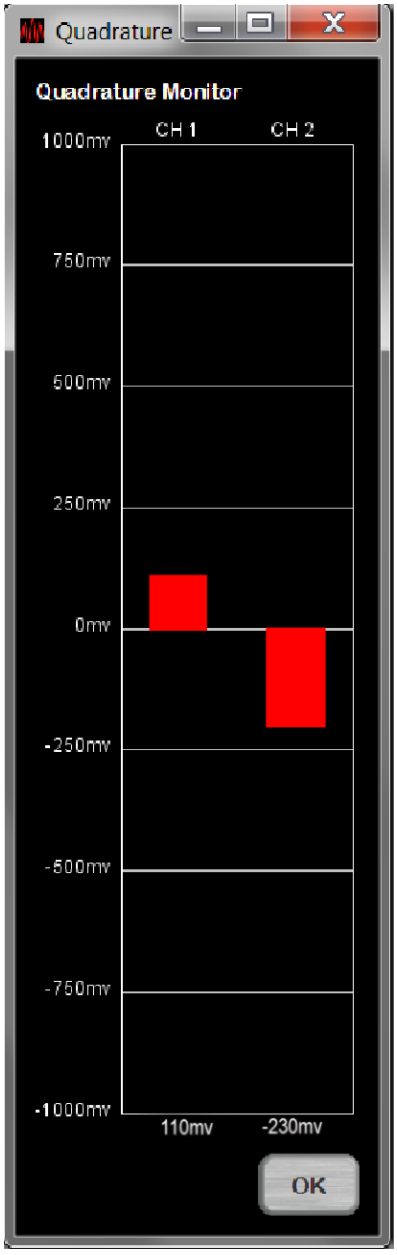


Block Diagram of Additive Measurement Setup with HX5200

Every HX5200 shipped has a calibration table which is unique to the serial number of that device. Prior to making a measurement, this calibration table must be loaded using the Holzworth HA7000 Series GUI. The calibration table is loaded using the option under the *Additive* section of the *Measurement Settings* window. NOTE: *Additive* must be selected from the main page of the GUI for this section to be visible.



The *Measurement Settings* section contains the option to enable the Holzworth quadrature monitor, accessible by selecting the *Quadrature* button. The *Quadrature Monitor* provides visual feedback which easily enables the user to set the two LO signals to be 90° out of phase with the DUT signal by utilizing a pair of mechanical phase shifters in the signal path of the two LO inputs. Setting proper phase offset is necessary to enable the onboard phase detectors to function.



Optimal quadrature is reflected in the monitor as a value of $0V_{DC}$. <1mV is ideal for the best measurement sensitivity. However up to 5mV is adequate for noisier signals. With the HX5200 calibration file loaded into memory and quadrature achieved using the phase shifters on the LO paths, simply click the *Acquire* button on the main page of the GUI and the software will automatically calculate K_D and begin taking the additive measurement.

OPERATING SPECS

Contact Holzworth or your local sales representative for pricing and availability.

Part Number	Frequency Range	DC Tune Voltage Range
HX5200	10MHz to 6.4GHz	0V to +10V

2 YEAR WARRANTY