



**holzworth**  
instrumentation

# HA7062C

## PHASE NOISE ANALYZER

### REAL TIME with 40MHz Measurement Offset

The HA7062C inherits the same ANSI Z540 calibrated accuracy as its predecessor; as well as industry leading data acquisition speeds, ease of use, and extremely high reliability. The additional features that come with revision C include: expanded measurement offsets to 40MHz, input splitter bypass ports for higher channel-channel isolation, independent baseband input ports and AM measurements with crucial AM immunity on the PM signal!



### REAL TIME CROSS CORRELATION COVERING 10MHz to 20GHz

### ELIMINATION OF CROSS-SPECTRUM COLLAPSE

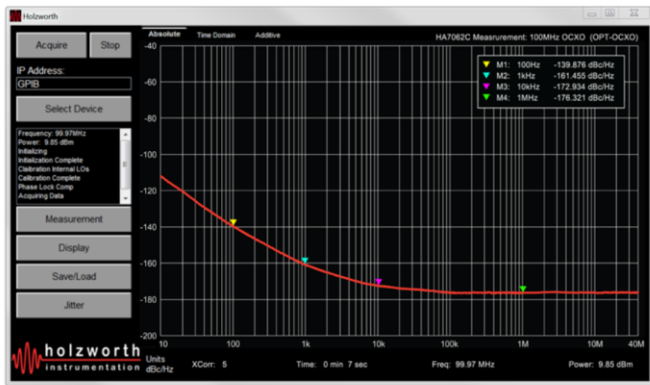
HA7062C AM/PM cross check eliminates data irregularities. Holzworth's latest real time cross correlation architecture offers simultaneous AM/PM measurements. This unique feature was integrated to eliminate cross-spectrum collapse which is now a proven phenomena causing false high/low measurements, nulling, and artificial bumps in the PM response.

### Z540 NIST TRACEABLE CALIBRATION

Make no assumptions. Accuracy of phase noise test data is a common speculation. All Holzworth analyzers come with a NIST traceable calibration. The ANSI z540 calibration standard is a mandatory procedure for Holzworth phase noise analyzers. Phase noise data that cannot be traced to an industry accepted standard is open to speculation.

### INTUITIVE INTERFACE

Holzworth Instrumentation has been measuring the phase noise of 100% of its own shipped products since the company was founded in 2004. There is an understanding that the user interface is as important as the capabilities of the actual hardware.



The highly intuitive HA7062C interface is a driver-free, MATLAB™ Runtime based GUI that will operate on any standard PC. No MATLAB™ license required.

Originally targeted for use in high throughput manufacturing, the HA7000C Series is optimized for accurate measurement speed while offering the flexibility to be controlled via LABVIEW™ or any other programmable interface.

### ARCHITECTURE OUTLINE

The HA7062C real time core combines the best of traditional analog phase noise measurement front-ends with the latest technology in real time cross correlation analysis. The digital analysis system uses an advanced DSP with a powerful cross correlation engine. Two different LO Modes help to achieve industry leading phase noise levels at the fastest possible acquisition speeds.

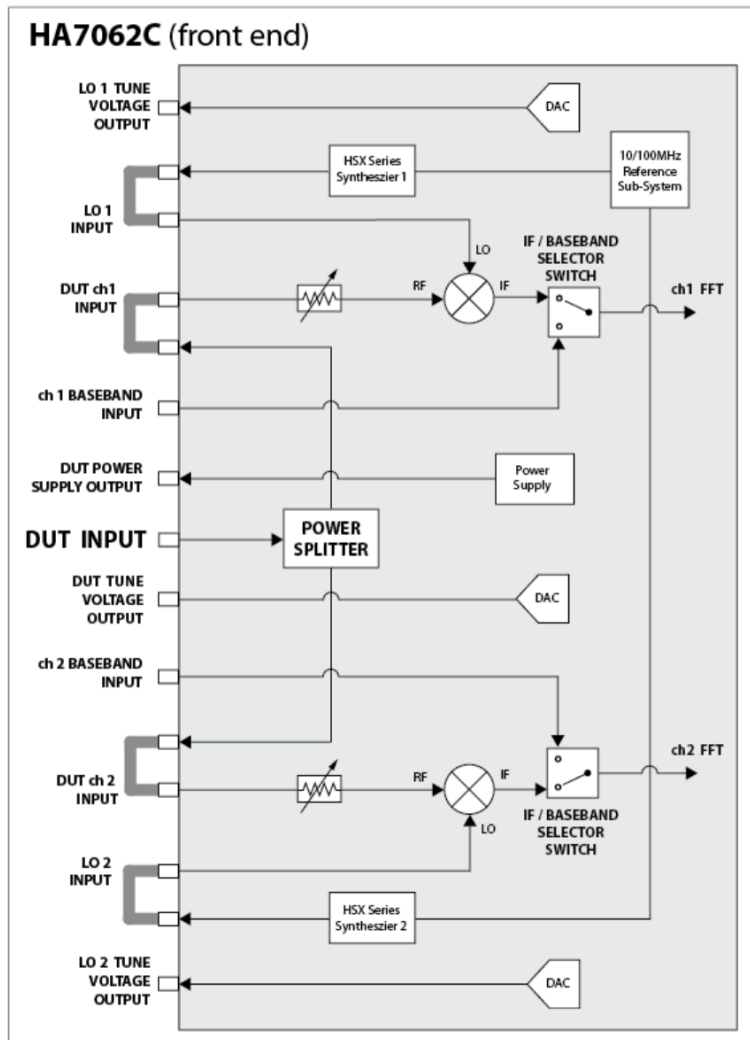
### LO TEST MODES

**1. INTERNAL LO MODE** uses a pair of Holzworth HSX Series RF synthesizers for LO generation. These HSX LOs provide the most optimal phase noise available on the market to further increase the acquisition speed of the already blazing fast HA7000 Series.

**2. EXTERNAL LO MODE** allows for the use of external LOs to achieve the lowest noise floors at the fastest acquisition speeds. The external LOs are calibrated by independently sweeping the LO Tune Voltages and are then incorporated into the automated test system.

### RESIDUAL PHASE NOISE

The HA7062C also offers ease of measurement for additive/residual measurements. Often the most complicated of phase noise measurements, the HA7062C highly automates the measurement while also utilizing built in standards to maintain the z540 NIST traceable level of accuracy.



### PERFORMANCE SUMMARY

<b>DUT Tuning Range</b>	10MHz to 6GHz (base), 10MHz to >20GHz (with downconverter)
<b>Measurement Floor</b>	
<b>Internal LO Mode</b>	< -185dBc/Hz
<b>External LO Mode</b>	< -190dBc/Hz
<b>Measurement Speed</b> (per correlation)	<1s (100Hz-40MHz), <5s (10Hz-40MHz)
<b>Measurement Offset</b>	0.1Hz to 40MHz
<b>Warranty</b>	<b>3 years</b>