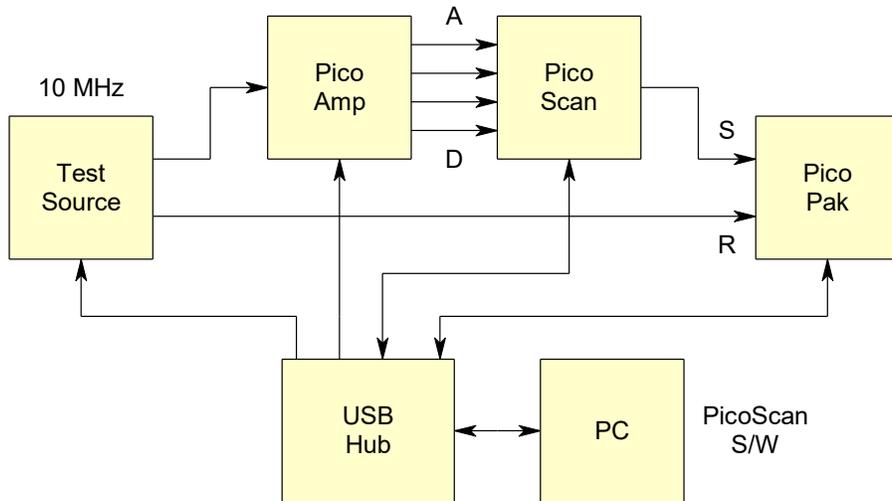# PicoScan Clock Measurement System Test Setup

W.J. Riley

Hamilton Technical Services

Beaufort, SC 29907 USA

This note describes a simple test setup for the PicoScan clock measurement system comprising a PicoPak clock measurement module, a PicoScan 4-channel RF switch, a PicoAmp 4-channel RF distribution amplifier and a 10 MHz coherent signal and reference source. The system is shown in the block diagram and photograph below.


Block Diagram of PicoScan Test Setup

Photograph of PicoScan Test Setup

The PicoScan system is a 4-channel clock measurement instrument that can make high resolution scanned phase measurements on one to four 5MHz to 15 MHz frequency sources versus a common 10 MHz reference with 5 second per channel dwell times. An example of its capabilities is shown in the adjacent stability plot showing its noise floor. The test setup shown here supports the demonstration of this capability when connected to a Windows® PC via a 4-port USB hub and running the PicoScan application program. The system can also optionally store its timetagged phase data to a PicoPak PostgreSQL database where it can be monitored and accessed by the PicoMon and PicoSQL programs.
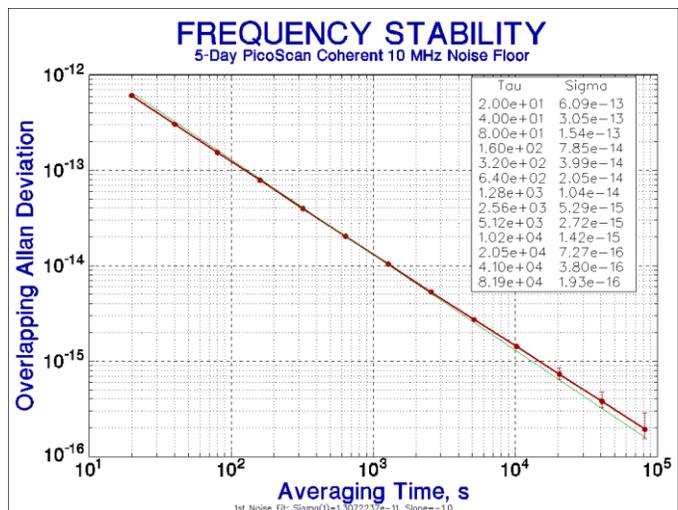
PicoScan System 10 MHz Coherent Noise Floor