

Rev. B

**APPLICATION NOTE****SYNCHRONIZED CLOCK OSCILLATOR****(SXO)****U.S. Patent Number 7,812,682**

- Jitter- Demo shows that multiple SXO's in sync together has better jitter performance than one individual SXO. This can be accomplished by starting with a jitter measurement with just one SXO running, then turning on two or more other SXOs making sure that at least one odd and one even SXO is on.
- Synchronization- Demo shows SXO's in an ensemble working in sync both frequency and phase wise. Using one SXO as a reference for the others, the frequency and phase can be compared between SXO units that are powered up.
- Scalability- Allows for experimentation of adding or dropping off SXO's without losing synchronization. The switches provided can be used to add or eliminate units from the overall operating group.
- Redundancy- Demo allows for simulating clock failure via dropping off multiple SXO's. The switches provided can be used to add or eliminate units from the overall operating group.
- Hot Swap- Robustness experiments can be performed. Units can be physically removed from their sockets and replaced to simulate the hot swap feature operation.

**FREQUENCY  
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