

CIELO™ Mockingbird Software: Radar Waveform Toolbox

MOCKINGBIRD SOFTWARE DEFINED RF TEST SYSTEM

Mockingbird RF Test System is a rugged, software defined RF test system, providing emulated RF scenes, arbitrary RF waveform generation, spectral analysis, and signal capture enabling rapid indoor lab and outdoor field testing with the simplicity and efficiency of a software simulation.

MOCKINGBIRD RADAR WAVEFORM TOOLBOX

The Mockingbird Radar Waveform Toolbox is an optional software toolbox that extends the built-in capabilities of the Mockingbird System. The Radar Waveform Toolbox provides the ability to emulate various radar waveforms including pulsed and Continuous Wave (CW). Pulsed waveforms include tone, stepped-frequency, LFM (Linear Frequency Modulation), and phase-coded pulse. For all pulsed waveforms, the user can set the Pulse Duration (PD) and Pulse Repetition Interval (PRI). The system will calculate and display the Pulse Repetition Frequency (PRF). CW waveforms include FMCW (Frequency Modulated CW), which is an LFM that continuously repeats the frequency sweep creating a sawtooth frequency pattern.



WAVEFORM	DESCRIPTION
Pulsed Tone	Transmits a single frequency tone during each pulse (unmodulated pulse).
Pulsed Stepped-Frequency	Transmits a single frequency tone during each pulse that steps through the user configured frequency list.
Pulsed LFM	Transmits a LFM or chirp signal during each pulse duration. The user specifies the LFM bandwidth or frequency sweep range.
Phase-Coded Pulse	Transmits a single, phase modulated code word during each pulse duration. The user can select from several code word families (Barker, Frank, Maximum Length Sequence, Zadoff-Chu).
FMCW	Transmits a LFM or frequency sweep signal that continuously repeats from the start frequency (sawtooth frequency pattern).

ABOUT SYNCOPATED

Syncopated Engineering is a creative solution provider of software-driven capabilities and purpose-built embedded systems for wireless communications, signal processing, and machine learning. Our solutions enable you to start further down the development path, reducing time-to-market and allowing you to focus on your innovative solution. Unlike most vendors, customization of our products for your specific needs is embraced not discouraged.

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