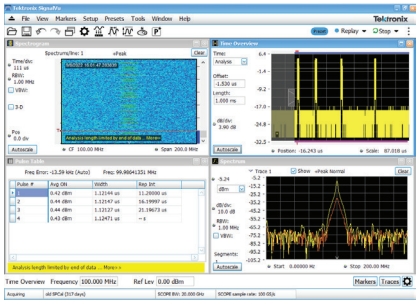
Tektronix®

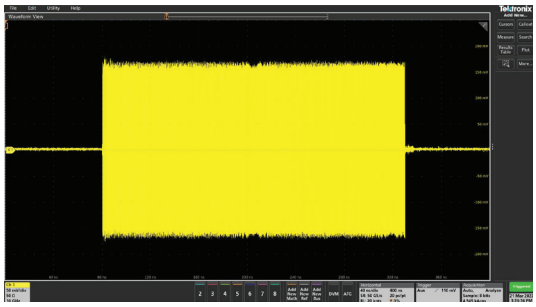
GENERATING RADAR SIGNALS

AWG RADAR PLUG-IN

Flexibility to create real-world radar signals with Tek Arbitrary Waveform Generators

Radar designs continue to grow in complexity with greater detection capabilities in more demanding environments. To meet the design, validation and test needs of modern radar systems, Tektronix Arbitrary Waveform Generators (AWGs) include a powerful radar waveform plug-in that takes advantage of very fast sampling rates (from 2.5 GSamples/s to 50 GSamples/s) to produce very high bandwidth radar signals. The radar plug-in gives you the power to craft and customize realistic radar signals, from basic FMCW to intricate intra-pulse modulations.





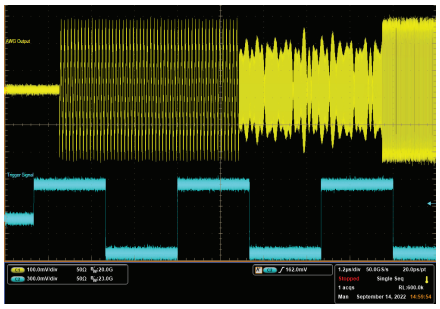
CUSTOMIZE PULSE SUITES

- Simulate scenarios like Multiple Target Returns and Antenna Scanning with multiple pulses and pulse groups.
- Implement a variety of compression schemes with intra-pulse modulations and codes (frequency, phase, digital, or custom).
- Apply staggered PRI to resolve range and doppler ambiguity.
- Simulate electronic counter-countermeasures (ECCM) with frequency hopping.
- Implement various RCS models with pulse-to-pulse amplitude variation.
- Characterize design performance with custom pulse envelopes.

DEFINE SIGNAL PROPAGATION CHARACTERISTICS

- Emulate cascaded channels and activate aggressor signals with S-parameters.
- Define and manipulate signal impairments and interference noise.
- Integrate multipath effects.
- Apply circular and custom antenna scan types.

AWG5200
AWG70002B



FLEXIBLE SEQUENCING AND AUTOMATION

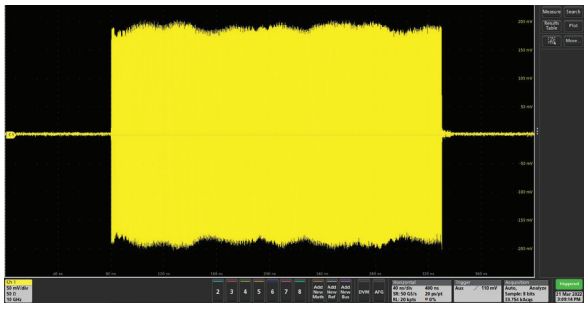
- With over 16,000 unique steps, users can generate complex testing scenarios.
- Take advantage of branching techniques such as event and pattern jump to easily allow switching between waveforms with minimal interruption.
- Automate your tests with SCPI commands using Python, Matlab, C#, and other programming environments.
- Import waveforms from modeling and simulation environments, like Matlab.
- Configure and export compiled waveforms with just a click.

Learn more:

Try out the
Radar Plug-in ›

Explore
Arbitrary Waveform Generators ›

Simplify signal generation
with SourceXpress ›



LONGER PLAY TIME AND RELIABLE SIGNALS

- Take advantage of industry-leading memory with 32 GSamples to facilitate longer waveform duration at all rates.
- Store larger sets of waveforms for instant playback with nimble sequencing.
- Maximize signal bandwidth, equalization, and quality at the DUT interface by running Tek's precompensation algorithms.

MULTI-CHANNEL GENERATION

- Take advantage of the Tek Sync Hub to configure multi-channel systems with customizable phase shifts.
- Achieve better alignment with a common clock for all channels.

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