



DON'T FAIL ON THE RANGE

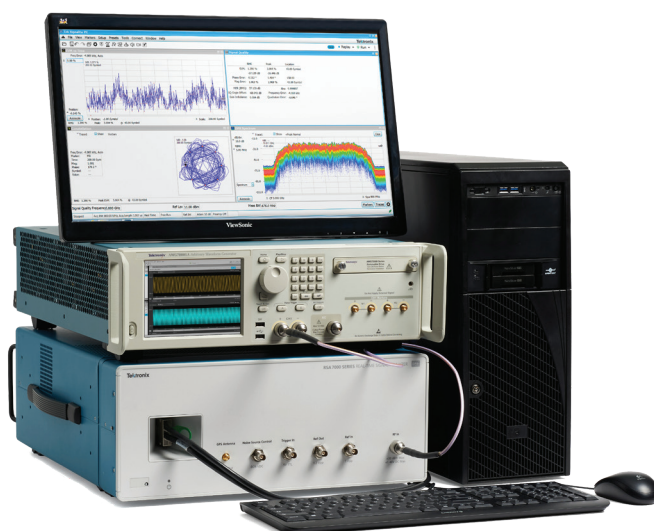
Succeed with High-Fidelity Range Recording, Analysis and Verification

The test and evaluation (T&E) phase of a program can be expensive and time consuming. Effective data collection with excellent data integrity is the core of this phase. As a contractor, you want to deliver a system that you've fully qualified in your lab or at your own test range. As a government organization, executing an effective T&E campaign at a land or sea range means meticulous logistical planning, the deployment of expensive assets, and hundreds of support staff to ensure that the data collection can be representative of a realistic operational environment. Many T&E phases have time and cost overruns, sometimes costing hundreds of millions of dollars due to electromagnetic interference, erratic unanticipated device-under-test (DUT) behavior or incorrect measurement setups.

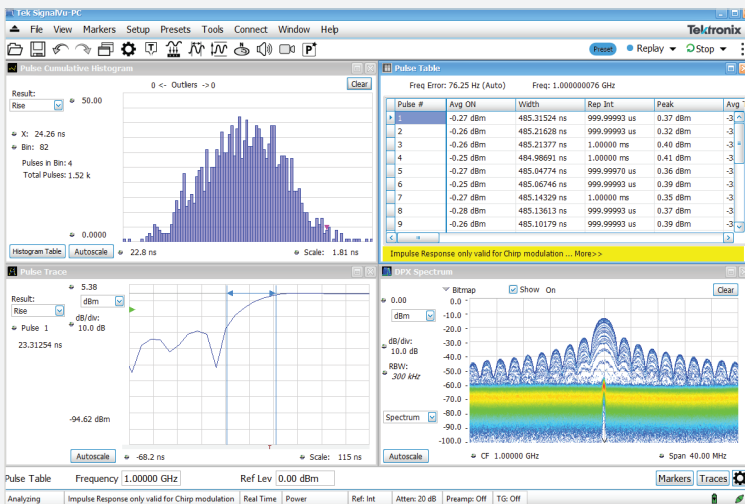
Good data collection means addressing the following requirements: record the highest quality data to disk, completely understand the situational environment, and provide real-time feedback to the DUT – simultaneously. The Tektronix RSA7100A Real-Time RF/Microwave receiver and recording system addresses all of these requirements. With a frequency range of 26.5 GHz and a maximum receiver bandwidth of 800 MHz, it can capture key radar, countermeasure and telemetry signals and store at least 2.75 hours of spectrum data at full rate on its own solid-state RAID storage system. While recording, you can also simultaneously analyze signals of interest in both the frequency and time domains. Using SignalVu®-PC software, with its in-depth pulse analysis capability, you can verify in real-time radar modes and deploy countermeasure techniques. Then, using its comprehensive suite of communications standards, you can measure the quality of data links or communication channels, providing complete situational awareness during the exercise.

Once the data has been collected, DataVu-PC can be used to scan through the recorded data to confirm effective collection while on the range, ensuring that quality data is delivered to the analysis team.

In addition, recent advancements in radar and electronic warfare (EW) systems now require that the DUT receives immediate feedback from the test system. The RSA7100A is hardware-in-the-loop (HIL) ready. Utilizing its unique IQFlow™ data stream technology, measurement data can be simultaneously streamed to interfaces such as custom API, 40 GbE, and RAID. This makes it possible to perform real-time digital signal processing (DSP) for advanced radar and electronic warfare systems.



The Tektronix RSA7100A Real-Time RF/Microwave receiver and recording system with a frequency range up to 26.5 GHz and maximum bandwidth of 800 MHz. Event duration is 418 nsec and SFDR is 65 dBc.



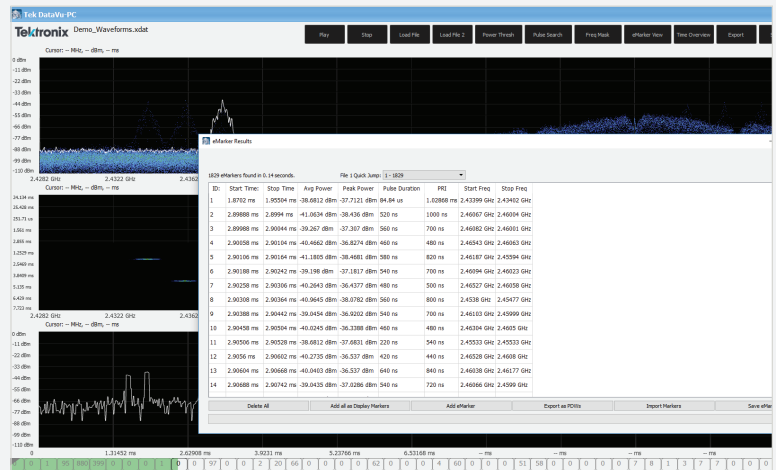
PRE-PROCESSING

While recording, you can:

- Run tools that automatically characterize pulses with up to 27 different vector and scalar measurements.
- View a pulse table presenting results of all measurements.
- Statistically analyze acquisition data over many pulses.

POST-PROCESSING

The pulse analysis application license for DataVu-PC illustrated to the right enables you to search for pulses and return all results with start/stop time, average power, peak power, pulse duration, PRI and start/stop frequencies. Pulse parameters can be exported to a .csv file for use with other tools.



ENSURE T&E SUCCESS

With the RSA7100A, you save time and reduce risk during test with a fully-integrated range recorder that offers the following key capabilities:

- Acquire – Signal acquisition with high fidelity – 800 MHz of receiver bandwidth with <-65 dBc of SFDR.
- Record – Seamless recording of up to 2.75 hours of data at full bandwidth.
- Analyze – SignalVu-PC provides simultaneous signal analysis, while recording.
- Verify – DataVu-PC provides a comprehensive suite of post-acquisition tools.



To learn more, contact your local sales person or visit tek.com/spectrum-analyzer/rsa7100a