

## RRFTS RF Test Solutions. Customizable for user applications

Front panel 4RU x 15" deep:

- Cell Phone test
- DMR Digital test
- Lab Test equipment
- BITE: Built in Test Equipment
- Production line testing
- Automated Test
- Field testing



**RADITEK's new line of RF Test Systems, includes (other options can be quoted / provided on request):**

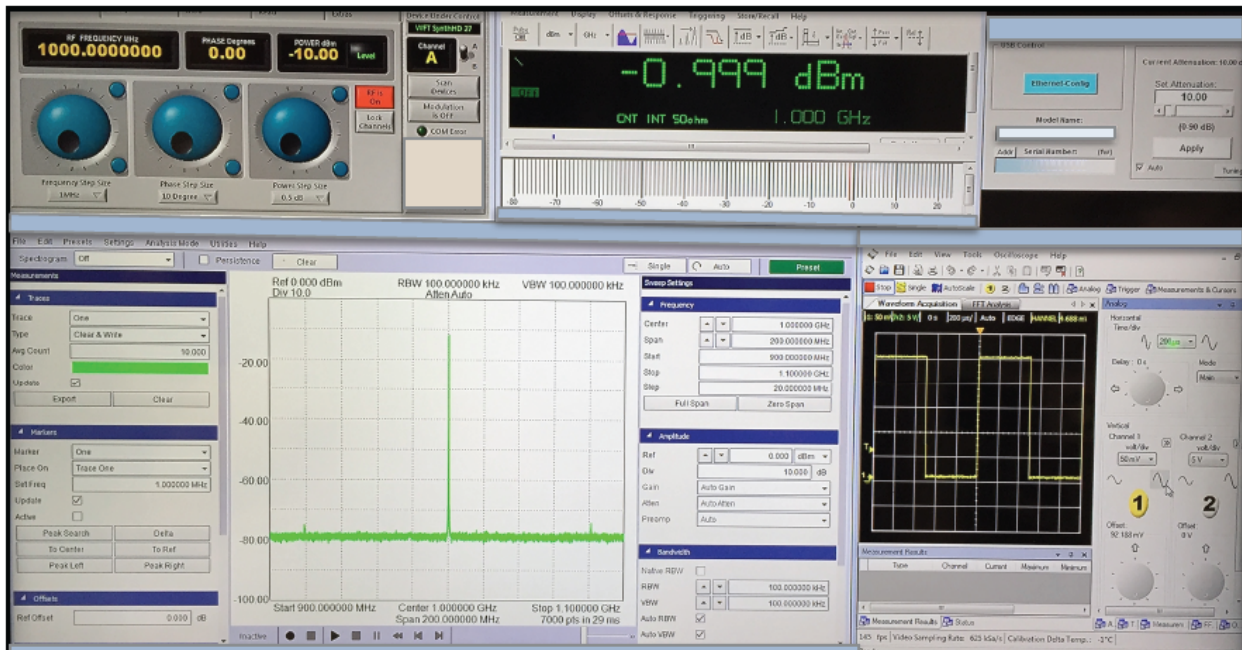
1. **SPECTRUM ANALYZER: 100 KHz-12.4 GHz(+20dBm Max Input)**
  2. **TRACKING GENERATOR : 110 KHz-12.3 GHz (+20dbm output) for spur free spectrum display**
  3. **POWER METER: 10MHz to 8 GHz, (+20dBm Max Input) measures Average and peak/pulse power**
  4. **DUAL SIGNAL GENERATOR: 55 MHz-13.5 GHz (+15dBm OP), suitable for IMD linearity testing etc.**
- **USB based test set modules, can be integrated with other custom setups**
  - **Use with any display with HDMI interface!**
- Optional POWER AMPLIFIER: such as: 500 MHz-6 GHz (5 watts Output, 40dB gain)**

**GUI Display on a standard HDMI Display:**

Dual Signal Generator  
55 MHz – 13.5 GHz  
+15 dBm Output

Power Meter CW / Pulse  
10 MHz - 8 GHz  
+20 dBm Max Input

Power Amplifier (Many options)  
500 MHz – 6 GHz  
5 Watts Output 40 dB Gain



Spectrum Analyzer  
110 KHz - 12.4GHz

Tracking Generator  
110 KHz - 12.3 GHz  
+15dBm Output

Dual Scope (Optional)

**All items shown are optionally included.**

---

**Order Example: RRFTS-M1-L21 RF Test System, M1 Fully Equipped, Including:**

1. **SPECTRUM ANALYZER: 100 KHz-12.4 GHz**
2. **TRACKING GENERATOR / PRESELECTOR: 100 KHz-12.3 GHz for spur free spectrum display**
3. **POWER METER: 10MHz to 8 GHz, measures Average and peak/pulse power**
4. **DUAL SIGNAL GENERATOR: 55 MHz-13.5 GHz (suitable for IMD linearity test etc)**
5. **Optional POWER AMPLIFIER: 500 MHz-6 GHz / 5 watts (for Example)**
6. **Optional DUAL CHANNEL SCOPE 200MHz**
7. **GUI Display on an optional standard any size HDMI TV (we can supply 30" model or you can use your own).**
8. **Wireless (Bluetooth) mouse**
9. **Wireless (Bluetooth) keyboard**

**Equipment can be used seperately or in conjunction with each other  
RRFTS-M2-L21 RF Test System, Spectrum Analyzer only)**

---

## Detailed Description:

- ✓ The RADITEK RFTS-family of customizable test equipment allows a user to specify their exact test equipment selection incorporated in one compact unit.
- ✓ In addition, a custom amplifier can be included, to cover the exact bandwidth and power level they actually need.
- ✓ We can provide a cell phone test set, that can include custom modulators and demodulators, if needed. **The Spurious, EMC, phase noise, power level and linearity and frequency selection can all be tested with the SAME test system.**
- ✓ The RFTS-M1 test set's operation can be automated and is fully compatible with Windows XP and 7 etc.
- ✓ It uses USB 2, running at 480Mbps, and includes a 72MHz ARM processor.
- ✓ The RFTS-M1 can run Open source LabView GUI software, via USB.
- ✓ It can run hardware functions with or without an external PC.
- ✓ Operates with a universal 110-250V AC, 50-60Hz power source
- ✓ It shows absolute power on the display GUI.
- ✓ Any HDMI display can be used to display the GUI, and function selection via wireless mouse and/or wireless keyboard
- ✓ Application Programming to Customer's Specifications

## #1. Spectrum Analyzer / Scalar Network Analyzer options

This RFTS test system includes an advanced, high dynamic range, Spectrum Analyzer with preselector, operating to 12.3GHz. It is suitable for performing intermodulation (2 tone) testing, in addition to other spurious and spectral analysis.

Additionally, it includes adjustable audio filters and demodulators for accurate AM, FM, SSB and CW measurements.

Alternatively the Spectrum Analyzer function can be replaced by a Scalar Network Analyzer function. If the customer needs both Spectrum and Scalar analyzer in one unit, we can optionally supply that too!

### Performance:

RF Frequency Range	100 kHz to 12.4 GHz
Resolution bandwidths (RBW)	0.1 Hz to 250 KHz and 6 MHz
Relative accuracy	0.25 dB
High Dynamic Range	-151 dBm to +10 dBm 0 dBm to -125 dBm, 100 kHz to 1 GHz 0 dBm to -115 dBm, 1 GHz to 4 GHz
6 MHz RBW available as an analog IF output centered at 63 MHz Corresponds to U.S. analog / digital TV Channel 3 Demodulates AM/FM/SSB/CW audio in real-time	
Adjustable digital audio filters	Accurate AM and FM measurements
I/Q Data	To 240 KHz bandwidth
Frequency Sweeps	To 140 MHz per second

## #2. 12.3GHz Tracking Generator / Preselector performance:

Works with the Spectrum Amplifier to measure filters, attenuators, amplifiers and other 2 port devices.

RF Frequency Range	100 kHz to 12.3 GHz
Amplitude range	-30 dBm to -12 dBm
Up to 19 selectable frequency step sizes in a 1-2-5 sequence	
Below 4 GHz	10 Hz to 10 MHz steps
Above 4 GHz	100 Hz to 10 MHz steps
Sweep rate	up to 700 frequency points per second

## #3 Power Meter Detector/Sensor

The sensor has exceptionally fast measurement speed, broad dynamic range and a feature rich Power Meter Applications capability.

In addition to average power, the sensor can show: statistical peak & pulse power, duty cycle and crest factor. The fast statistical measurements are valuable for manufacturing operations where numerical verification is desired.

The sensor can be used for radar, R&D and manufacturing as well as servicing.

Recommended for average, peak and pulse power measurements within the sensor's 10 MHz video bandwidth.

### Highlights:

- 10 MHz to 8 GHz with service to 10 GHz
- Ideal for fast CW and pulse RF measurements
- Statistical pulse measurements
- Patented No Zero No Cal before use
- A variety of options such as triggering & analog outputs
- Excellent dynamic range
- ATE Support
- Connector type can be customized too.
- Logger application is included
- Optional external triggering capability

## #4. RF Dual Channel Signal Generator: 54MHz-13.6GHz

The dual channel, signal generator can be used for Quadrature (or other phase) local oscillator functions.

### Signal generator features include:

- Two channel: Full frequency, phase and amplitude control
- Up to +22dBm output power
- 0.1Hz or less frequency resolution
- 2.5ppm generator frequency accuracy
- External Sweep and Step Trigger
- Over 50dB of power control
- 100 point Frequency and Amplitude Hop Table
- Dual Channel Frequency and Amplitude Lock
- 24 bit phase control on each channel
- 4ms RF lock time standard
- 50us RF lock time
- 16 bit, 0.01dB amplitude resolution
- 10MHz – 100MHz external reference input
- Selectable 10 or 27 MHz internal reference output
- FM, AM, Pulse and Phase Modulations
- Pulsed FMCW Chirp
- High Speed External Analog FM Hack
- Calibration option