USB-SA44B Spectrum Analyzer
Measuring Receiver
1Hz to 4.4GHz

The perfect tool for general field and lab use, electronic engineering students, ham radio enthusiasts, and electronic hobbyists alike.

Write automated testing and/or data collection applications with included API that is Windows®-based and Matlab®/LabVIEW® compatible.

Use over the entire operating temperature range with full accuracy. Standard temperature range of 0°C to +70°C and optional extended temperature range of -40°C to +85°C.

Phase noise, harmonics, and modulation measurement utilities included.

Now with real-time mode for spans of 250 kHz or less.
USB-SA44B Spectrum Analyzer/Measuring Receiver

6 March 2015

**FREQUENCY**
- Frequency Range: 1Hz to 4.4GHz (RF Preamp Off); 500kHz to 4.4GHz (RF Preamp On)
- Internal Frequency Reference Accuracy: ±1 ppm
- Counter Accuracy: ± (1Hz + timebase error)
- Resolution Bandwidth: 0.1Hz to 250kHz and 5MHz

**AMPLITUDE**
- Range: +10dBm to Displayed Average Noise Level (DANL)
- Absolute Accuracy: ±1.5dB (0dBm to DANL); ±2.0dB (+10dBm to >0dBm)

Displayed Average Noise Level: (dBm/Hz with 0dB input attenuation)

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>RF PREAMP OFF</th>
<th>RF PREAMP ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>10Hz</td>
<td>-124 dBm</td>
<td>NA</td>
</tr>
<tr>
<td>100Hz to 1kHz</td>
<td>-135 dBm</td>
<td>NA</td>
</tr>
<tr>
<td>10kHz to 500kHz</td>
<td>-142 dBm</td>
<td>NA</td>
</tr>
<tr>
<td>500kHz to 10MHz</td>
<td>-142 dBm</td>
<td>-153 dBm</td>
</tr>
<tr>
<td>10MHz to 100MHz</td>
<td>-148 dBm</td>
<td>-161 dBm</td>
</tr>
<tr>
<td>100MHz to 1GHz</td>
<td>-144 dBm</td>
<td>-158 dBm</td>
</tr>
<tr>
<td>1GHz to 2.6GHz</td>
<td>-139 dBm</td>
<td>-151 dBm</td>
</tr>
<tr>
<td>2.6GHz to 3.3GHz</td>
<td>-135 dBm</td>
<td>-151 dBm</td>
</tr>
<tr>
<td>3.3GHz to 4.4GHz</td>
<td>-128 dBm</td>
<td>-134 dBm</td>
</tr>
</tbody>
</table>

**MEASURING RECEIVER**
- Operating Frequency 150kHz to 4.4GHz
- FM Accuracy ±1% typical
- AM Accuracy ±1% typical
- Synchronous Level Detector ±0.25dBc ([0dBm to –125dBm, 150kHz to 1GHz] and [0dBm to – 115dBm, 1GHz to 4.4GHz])

**CALIBRATION INTERVAL** 1-year

**OPERATING TEMPERATURE**
- 0°C to +70°C (Standard); -40°C to +85°C (Option-1)

**OPTIONAL ACCESSORIES**
- 20dB Fixed Attenuator, Mini Circuits Part # VAT-20+
- DC Block, Mini Circuits Part # BLK-89+
- SMA(m) to BNC(f) Adapter, Mini Circuits part# SM-BF50+
- 3GHz RF Probe, p/n P-20A (made by Auburn Technology, www.auburntec.com, phone 316-529-4520)

The Signal Hound USB-SA44B is a USB-powered, 1Hz to 4.4GHz, economy spectrum analyzer and measuring receiver. The Signal Hound SA44B has the sensitivity, accuracy, and dynamic range you’d expect in a unit many times its cost. The Signal Hound SA44B is powered from the USB cable, eliminating the need for a separate power supply. Measuring less than 8 inches long and weighing only 10 ounces, the Signal Hound SA44B can be used virtually anywhere!

Signal Hound’s Spike™ software allows the SA44B to function as a real-time spectrum analyzer (RTSA), using its real-time mode, for sweeps of 250 kHz and less—that means every RF event will be captured when using spans that are ≤250 kHz. Graphics include color persistence and a 2D waterfall display.

**SYSTEM REQUIREMENTS**
Signal Hound’s Spike™ software is compatible with Windows® 7 or Windows® 8 operating systems. You must have at least 200MB of free disc space, 4GB of RAM, one USB 2.0 port, and a minimum of an Intel® Atom™ N2600 or Intel® Core™ i3 processor.