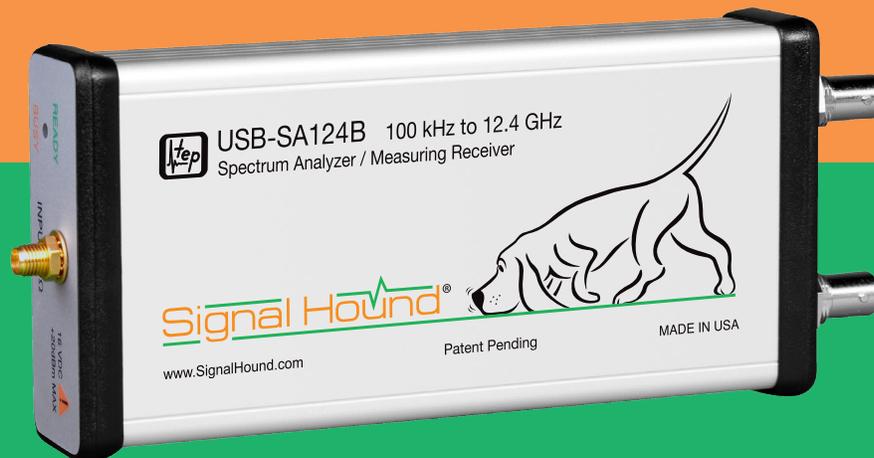




# Signal Hound<sup>®</sup>

products by Test Equipment Plus

## USB-SA124B Spectrum Analyzer *and* Measuring Receiver 100 kHz to 12.4 GHz



- The perfect tool for general lab use, electrical engineering students, ham radio enthusiasts, and electronic hobbyists alike.
- Write automated testing and/or data collection applications with included API that is Windows<sup>®</sup>-based and Matlab<sup>®</sup> / LabVIEW<sup>®</sup> compatible. A Linux<sup>®</sup>-based API is also included.
- Use as a down-converter with a 63 MHz IF Output and a 6 MHz Resolution Bandwidth.
- Use over the entire 0°C to +50°C Operating Temperature Range without the need to de-rate published specifications.

[www.SignalHound.com](http://www.SignalHound.com)

# Signal Hound®

## USB-SA124B Spectrum Analyzer & Measuring Receiver Specifications

### 100 kHz to 12.4 GHz

#### Frequency:

Frequency Range: 100 kHz to 12.4 GHz  
Timebase: 10 MHz reference in and out  
Internal Frequency Reference Accuracy:  $\pm 1$ ppm (standard);  $1 \times 10^{-7}$  (option-02)  
Resolution Bandwidth: 1 Hz to 250 kHz and 6 MHz

#### Amplitude (RBW $\leq 100$ kHz):

Range: +10 dBm to Displayed Average Noise Level (DANL)  
Absolute Accuracy (0dB to DANL):  $\pm 1.5$  dB (100 kHz to 6 GHz)  
 $\pm 2.5$  dB (6 GHz to 12.4 GHz)

#### Displayed Average Noise Level (dBm/Hz):

100 kHz to 10 MHz	-147 dBm
10 MHz to 100 MHz	-151 dBm
100 MHz to 3.0 GHz	-152 dBm
3.0 GHz to 5.5 GHz	-145 dBm
5.5 GHz to 7.0 GHz	-149 dBm
7.0 GHz to 8.0 GHz	-147 dBm
8.0 GHz to 11.0 GHz	-134 dBm
11.0 GHz to 12.4 GHz	-129 dBm

#### Residual Responses (RBW = 6.5kHz):

100 kHz to 10 MHz	-100 dBm
10 MHz to 8.0 GHz	-93 dBm
8.0 GHz to 11.0 GHz	-82 dBm
11.0 GHz to 12.4 GHz	-85 dBm

#### SSB Phase Noise at 10 GHz (Typical):

Frequency Offset	dBc/Hz
100 Hz	-72
1 kHz	-80
10 kHz	-87
100 kHz	-87
1 MHz	-110

#### Measuring Receiver: (Typical after 30 min warm-up and $\pm 3^\circ\text{C}$ of ref. start temp.)

Operating Frequency: 100 kHz to 12.4 GHz  
Modulation Measurement Accuracy:  $\pm 1\%$  for AM and FM  
Synchronous Level Detector:  $\pm 0.25$  dBc (+0 dBm to -127 dBm, 100 kHz to 1.0 GHz)  
 $\pm 0.25$  dBc (+0 dBm to -117 dBm, 1.0 GHz to 6.0 GHz)  
 $\pm 0.25$  dBc (+0 dBm to -102 dBm, 6.0 GHz to 12.4 GHz)

#### IF Output:

63 MHz with 6 MHz bandwidth for down conversion of NTSC, PAL, SECAM, ATSC, and DTV formatted signals

#### Calibration Interval: 1-year

#### Operating Temperature: 0°C to +50°C without de-rating specifications

#### System Requirements:

Correction data is now stored in the USB-SA124B hardware, eliminating the need for retrieval from the internet. The Signal Hound Graphical User Interface, or GUI, is compatible with Windows XP® and Windows®7 operating systems. You must have at least 1GB of free disc space, 1GB of RAM, two adjacent USB 2.0 ports, and a minimum of an Intel® Core™ i3 processor or equivalent. Netbook computers with an Intel® Atom™ N450 processor, or higher, can be used with minor limitations.

The Signal Hound USB-SA124B is a USB-based, 100 kHz to 12.4 GHz, economy spectrum analyzer and measuring receiver. Using recent innovations in RF technology, the Signal Hound has the sensitivity, accuracy and dynamic range you'd expect in a unit many times its cost. The Signal Hound is powered from the USB cable, eliminating the need for a separate power supply. Measuring less than 8 inches long and weighing only 12 ounces, the Signal Hound can be used virtually anywhere!

The Signal Hound® graphical user interface, or GUI, is used to communicate with the Signal Hound, sending commands and receiving data over the USB. The user sends commands using the control panel and menu. The data is streamed back to the PC over the USB and displayed on the graticule as a signal trace. For precision measurements, markers may be used as well.

