# Signal Hound®

# BB60D Real-Time Spectrum Analyzer & RF Recorder

## 9 kHz to 6.0 GHz



**BB60D** 9 kHz to 6 GHz
Real-Time Spectrum Analyzer

**MADE IN USA**
Patent 9,086,438

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**Now Includes Preselector Filters from 130 MHz to 6 GHz**

**Major Performance Increase of 10dB More Dynamic Range Vs. BB60C**

**Selectable Streaming Bandwidths from 4 kHz up to 27 MHz**

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**Exceptionally Clean Spurious and Residual Responses**

**Includes powerful Spike™ spectrum analyzer software**

**Sweeps 24 GHz / sec**

**-40°C to +65°C Operating Temperature Range Available**

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# BB60D Real-Time Spectrum Analyzer

20 May 2022

The Signal Hound BB60D is a high speed real-time spectrum analyzer (RTSA) and RF recorder. With a tuning range from 9kHz to 6GHz, it collects 80M samples/second, and streams I/Q data to your computer via USB3.0 at 140MB/sec.

The BB60D comes with the Spike™ API and spectrum analyzer application, wtih selectable color persistence display mode, 2-D color waterfall, spectrum emission masks, and the following analysis modules: analog/digital/WLAN modulation analysis, EMC precompliance measurements, noise figure, and interference hunting measurements.

## FREQUENCY

• Range: 9 kHz to 6.0 GHz
• Streaming calibrated I/Q data: 4 kHz to 27 MHz of selectable IF bandwidth that is amplitude corrected
• Resolution Bandwidths (RBW): 10 Hz to 10 MHz
• Internal Timebase Accuracy: ±1ppm per year
• Sweep Speed (RBW ≥30 kHz): 24 GHz/sec
• VSWR: < 1.4 typical

## AMPLITUDE (RBW ≤100 KHZ)

• Range: +10 dBm to Displayed Average Noise Level (DANL)
• Absolute Accuracy:

      ±2.0 dB (arbitrary & non-native RBW's)

      +2.0dB/−2.6dB (native RBW's-faster DSP)

## DISPLAYED AVERAGE NOISE LEVEL

| Input Frequency Range | DANL |
| --- | --- |
| 9 kHz to 500 kHz | −140dBm/Hz |
| 500 kHz to 30 MHz | −154dBm/Hz |
| 30 MHz to 6 GHz | −158dBm/Hz + 1.0dB/GHz |

## RESIDUAL RESPONSES: REF LEVEL ≤ -30dBm, 0dB ATTENUATION

| Input Freq. Range | Residual Level |
| --- | --- |
| 500 kHz to 6 GHz | −120dBm |

## LO LEAKAGE ≤ −80 dBm

## PHASE NOISE AT 1 GHz

| Frequency Offset | dBc/Hz |
| --- | --- |
| 100 Hz | −80 |
| 1 kHz | −90 |
| 10 kHz | −93 |
| 100 kHz | −97 |
| 1 MHz | −117 |

## SPURIOUS & IMAGE REJECTION (any ref level from -30dBm to +10dBm, using 5dB increments and input signal 10dB below ref level) [Auto ATTEN, ≤30kHz RBW]

| Input Frequency Range | Spurious Level |
| --- | --- |
| 9kHz to 6GHz | −50dBc |

## IP2 (-10dBm ref level)

| | |
| --- | --- |
| 100 k-30 M | +55 dBm |
| 30 M-130 M | +36 dBm |
| 130M-6 GHz | +55 dBm |

## IP3 (-10dBm ref level)   +10 dBm

## SYNCHRONIZATION (≤ 20MHz IBW)

1 PPS GPS input port enables ±50ns time stamping

## OPERATING TEMPERATURE

32°F to 149°F (0°C to +65°C) Standard;

−40°F to 149°F (−40°C to +65°C) for Option-1

## SIZE AND WEIGHT

• 8.63" x 3.19" x 1.19" (219mm x 81mm x 30mm)
• Net, 1.10 lbs. (0.50 kg)

## POWER

• One USB 3.0 port and one adjacent USB 2.0 or USB 3.0 port
• 6 W active, 1 W idle

## CONTROL AND COMMUNICATION

• USB 3.0 serial bus

## SYSTEM REQUIREMENTS

Intel i7, 3rd generation or later with a quad core processor, Microsoft® Windows® 10 or Ubuntu™ Linux, one USB 3.0 port, and one adjacent USB 2.0 or USB 3.0 port Note: RF recording using streaming I/Q bandwidths > 8MHz requires the computer's mass storage drive to have at least 250MB/sec of sustained write speed such as an SSD, RAID-0, or RAID-5.