

# SIGNALHAWK™

## Handheld Spectrum Analyzer

# SH-60S-AOA



## Defeat RF Interference

The SH-60S-AOA provides the ability to triangulate the location of an interferer on a map for signals between 9 kHz and 6 GHz. Integrating digital maps, GPS location and signal strength vectoring, the SignalHawk AOA provides an easy-to-use interface to pinpoint potential in-band interferers, "rogue" broadcast locations and dead spots.

Field engineers, technicians, wireless equipment manufacturers, service providers, contractors, and military personnel can triangulate the source of an interferer by utilizing our AOA (Angle of Arrival) technology. Being highly portable allows the user to go remote locations to accurately pinpoint the signal origination. In today's crowded RF spectrum this cutting edge technology can quickly and efficiently stop unwanted, accidental or prohibited interface that can degrade RF communication or completely disrupt signal quality and system performance.



### PRODUCT FEATURES

- Leverages mapping technology from OpenStreetMap allowing users to triangulate the source.
- Two level internal preamplifier.
- View the spectrum with trace display, spectrogram display, or both.
- Easy-to-use, intuitive menus with multi-touch operation.
- More than 2x faster sweep times than the competition with multi-touch technology.
- High-resolution, full-color display for indoor or outdoor viewing.
- Rugged and weather resistant.
- 5 hours of continuous battery operation.
- Includes the Bird RF Meter App for interoperability with a wide range of Bird Field sensors.



### PREDEFINED MEASUREMENTS

- Channel Power
- Adjacent Channel Power Ratio (ACPR)
- Phase Noise
- N dB Down Bandwidth
- Occupied Bandwidth (OBW)
- Field Strength
- FM Demodulation
- CNR Loss (GNSS Signal Quality)
- Spectrum Masking and Limit Lines

## MEASUREMENT

Frequency Range	9 kHz to 6 GHz
Aging	±1 ppm
Sweep Time	1.1 ms to 1600 s Full Span, 2.69 ms to 1600 s Settable Zero Span
Resolution Bandwidth	10 Hz to 5 MHz in 1, 2, 3, 5, 10 Steps
Second Harmonic Distortion	1.6 GHz -70 dBc
Third Order Intercept (TOI)	+15 dBm (-10 dBm tones, 1 MHz apart, Preamp Off, Reference Level -10 dBm)
P1dB	+5 dBm Nominal
Phase Noise	-95 dBc/Hz,@10 kHz (typical -97 dBc/Hz), -115 dBc/Hz,@1 MHz (typical -116 dBc/Hz)
Measurement Range	DANL to +20 dBm
Input Attenuator Range	0 to 30 dB, 1 dB step
Max Safe Input Level	<b>Preamp Off</b> : +30 dBm <b>Preamp +20 dB</b> : 0 dBm <b>Preamp +40 dB</b> : -20 dBm
Reference Level Range	-140 dBm to +20 dBm, -190 dBm to +70 dBm (Ref Level Offset: ON)
RBW Switching Uncertainty	±0.3 dB
Input Attenuator Uncertainty	±0.6 dB
Display Average Noise Level (DANL)	<b>Preamp Off</b> : 1 GHz, -129 dBm/Hz (typical -132 dBm/Hz) <b>Preamp +20 dB</b> : 1 GHz, -149 dBm/Hz (typical -152 dBm/Hz) <b>Preamp +40 dB</b> : 1 GHz, -168 dBm/Hz (typical -169 dBm/Hz) (Input terminated, Detector set to Positive, Trace Average set to 1000, Span set to 50 kHz, Reference level of -100 dBm, all other settings auto-coupled, 23±5 °C normalized to 1 Hz RBW)
Residual Responses	-75 dBm

## ACCURACY

Frequency Span Accuracy	±1%
RBW Accuracy	≥1 MHz, ±10%, <1 MHz, ±2%
Amplitude Accuracy	±1.5 dB (ATT set to 0 dB, input signal -5 to -30 dBm, Detector set to Positive, Sensitivity set to Low, RBW auto-coupled, all other settings auto-coupled, 23±5 °C. Half hour warm-up required.)
Reference Level Accuracy	≥ -60 dBm, ±0.8 dB

## CONNECTORS

RF In	N (f)
USB	USB type C
Power Interface	Slim Tip, DC20V

## SYSTEM

Display	5.5 inch, 1280 *720p
OS	Android
Languages	English, Chinese
Battery Type	Li-ion
Battery Operating Time	5 hours typical
Battery Charge Time	6 hours typical
Compatible With	For a complete list of compatible sensors see Bird's RF Meter Page <a href="http://bit.ly/rfmeterrapp2">http://bit.ly/rfmeterrapp2</a>

## ENVIRONMENTAL

Operating Temperature	0°C to 50°C
Storage Temperature	-20°C to 70°C

## PHYSICAL

Size	7.8 x 3.7 x 2.4 inches (197 x 93 x 61 mm)
Weight	1.98 lb. (0.9 kg)

## STANDARD ACCESSORIES

Hard Carry Case	7002A218-2
Soft Carry Case	7002A219-1
AC Adapter (12Vdc Output)	SK05T-1200300Z
Stylus	SK-TP-112
USB Drive	5A2745-1
USB Adapter	SK-CONN-OTG-2
Manual	920-SH-60S
Battery	SK-BTY-7468

[birdrf.com/products](http://birdrf.com/products)

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