

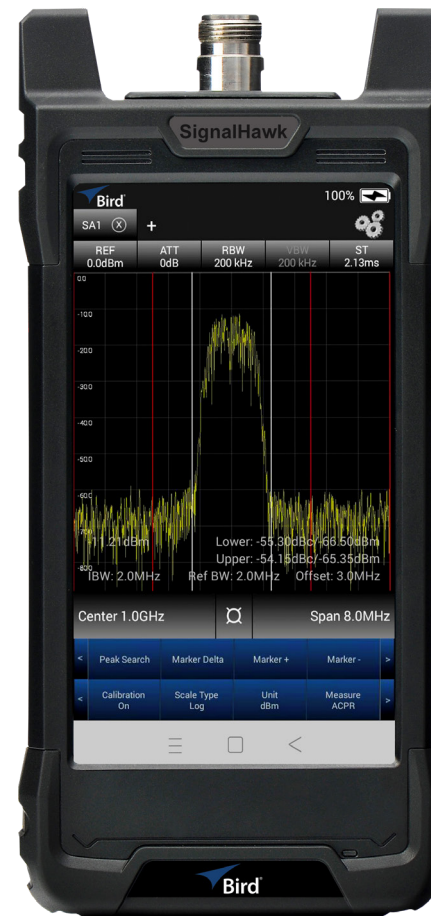


BIRD RF Spectrum Analyzers

Birds' latest offering in the SignalHawk™ family of handheld RF spectrum analyzers.
RF SPECTRUM AT YOUR FINGERTIPS!



SH-60S-TC



Operates between 9 KHz - 6 GHz

Predefined Measurements:

- FM demodulation
- GNSS Signal Quality
- Field Strength
- Spectrum Masking
- Channel Power
- Adjacent Channel Power Ratio (ACPR)
- Phase Noise
- N dB Down Bandwidth
- Occupied Bandwidth (OBW)

SH-60S-AOA



Operates between 9 KHz - 6 GHz

Everything of the SH-60S-TC, including spectrogram (waterfall) display

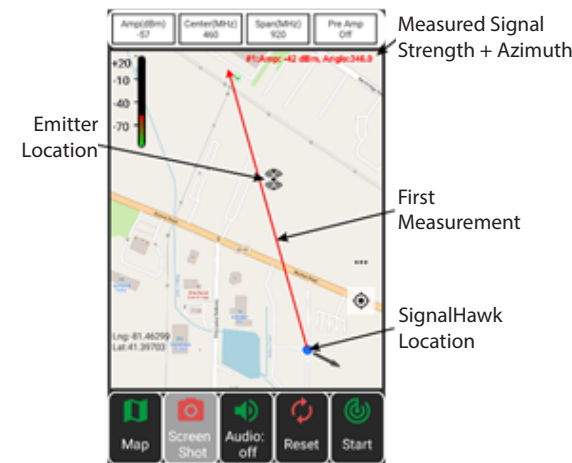
Interference analysis and triangulation functionality to locate source of interferers

Bird® SignalHawk™
QUICK START GUIDE
SH-60S-AOA

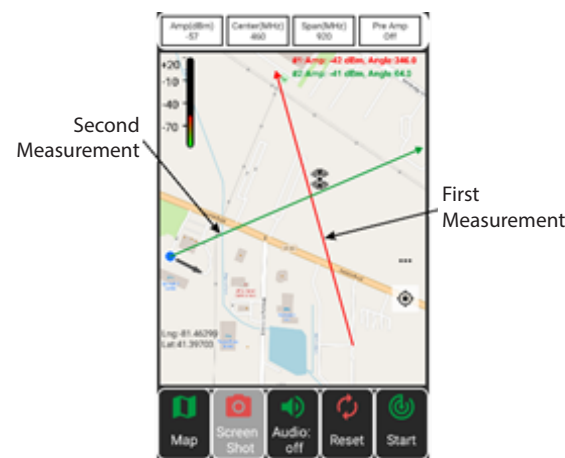
SH-60S-AOA Triangulation

Triangulation is one technique you may use to determine the location of an of an RF emitter. The principle is to take three or more measurements from different locations, with each measurement location being 80 to 100 degrees in azimuth away from the location of the previous measurement. See below for an example of the triangulation technique.

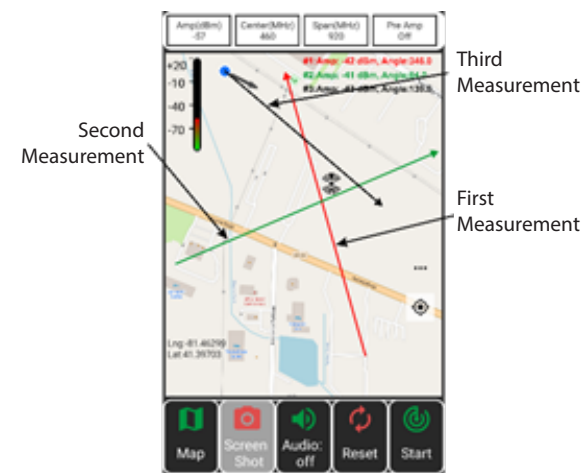
Due to reflections of the emitter's RF signal (multi-path) and the gain and directivity of the antenna used with the SignalHawk, the exact location of the emitter may not be pinpointed with the first three measurements. However, the measurements will form a triangle in the area of the emitter. Making additional measurements in the vicinity of the triangle formed by the initial measurements, will help refine the location.



First Measurement



Second Measurement



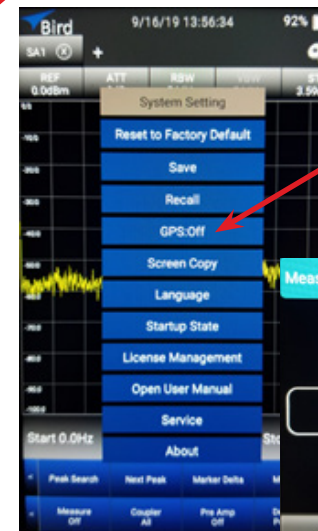
Third Measurement



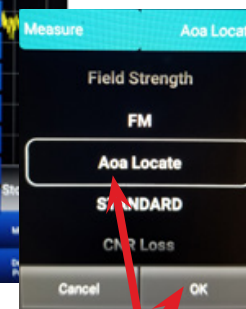
AoA Locate (Angle of Arrival)

① Turn on SignalHawk's WiFi and connect to a WiFi network.

② Tap the System Settings icon.



③ Tap the GPS button to turn GPS on.

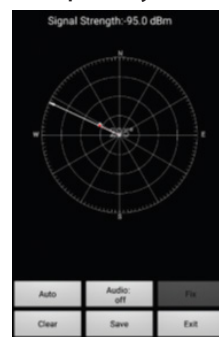


④ Tap Measure

⑤ Select AoA Locate

⑥ Press OK

⑨ Connect a handheld directional antenna, tuned to the frequency of the interfering signal to the SignalHawk.



Red line indicates direction of strongest signal.

Repeat until 3 or more measurements have been completed & form a triangle shape near the assumed position of the emitter.



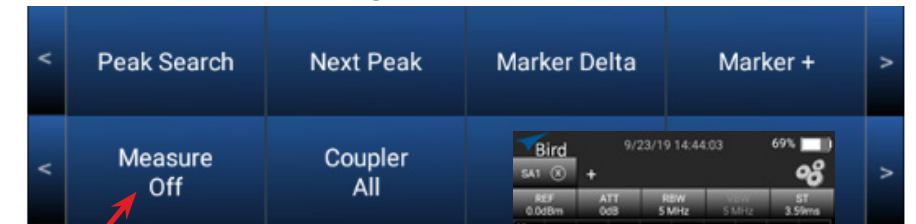
⑦ Tap MAP to download an offline map.

⑧ Tap to START measurement.

SH-60S-AOA, RF Spectrum Analyzer

SH-60S-AOA extends the capability of the SH-60S-TC by adding the ability to triangulate the location of an interferer on a map for signals between 9 kHz & 6 GHz.

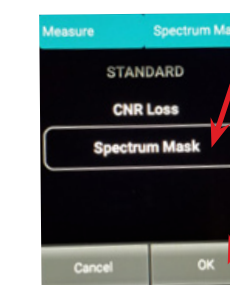
Spectrum Mask



① Tap on Measure

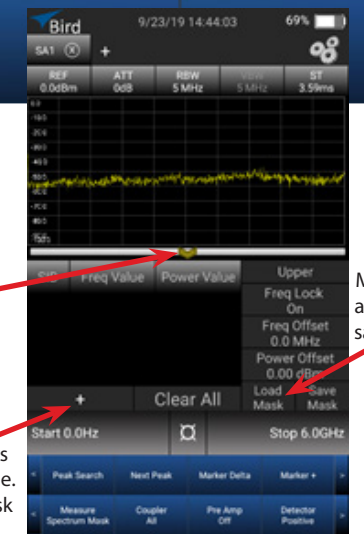
② Scroll to Spectrum Mask

③ Press OK



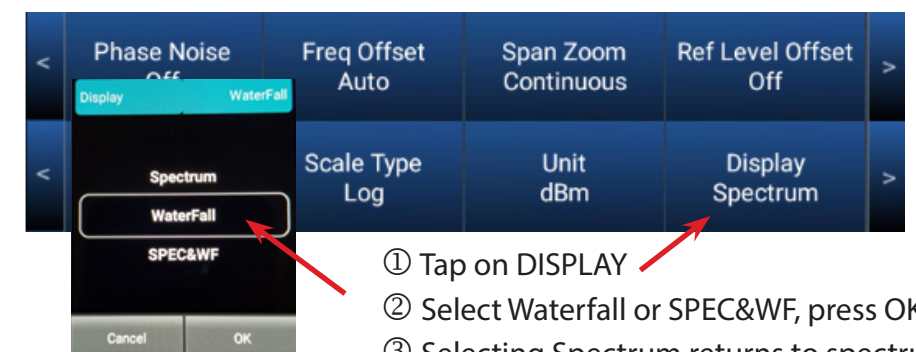
Tap here to collapse or expand screen.

Tap here to create your own mask. Press Save Mask when done. Clear All to erase mask settings.



Tap Load Mask to use a previously saved mask.

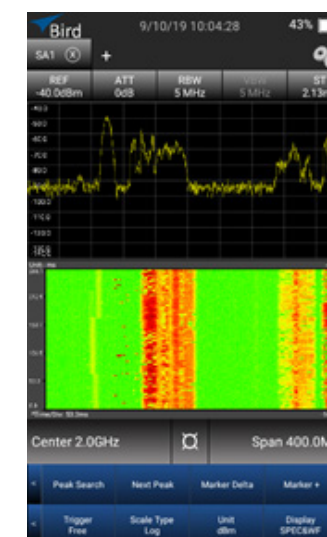
Waterfall/spectrogram Display



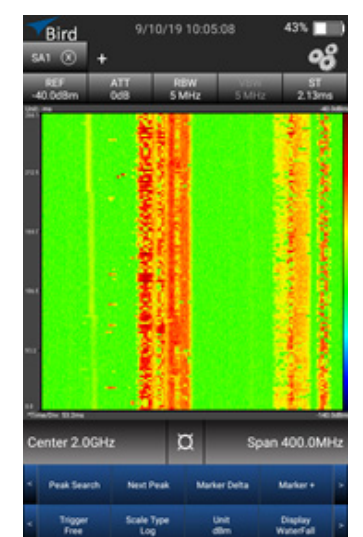
① Tap on DISPLAY

② Select Waterfall or SPEC&WF, press OK

③ Selecting Spectrum returns to spectrum analyzer display



SPEC&WF



Waterfall



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