



Hand-Held Spectrum Analyzer

SignalHawk SH-42S-TC



The RF Experts

Hand-held Spectrum Analyzer

The SignalHawk™ SH-42S-TC is a new generation of Spectrum Analyzer that offers superb functionality in a small, very affordable package. This highly portable unit fits easily in one hand and offers the user an amazing intuitive user interface. Built upon an Android platform, users will find a high-resolution touch screen with familiar, easy to use, methods for setting up and using the spectrum analyzer. Field engineers, technicians, wireless equipment manufacturers, service providers, contractors, tower erectors and military field personnel alike have come to trust the efficiency and precision results of SignalHawk.

PROBLEM AND SOLUTIONS

Need to equip your workforce

- Priced so that you can buy one of these for each of your technicians.

Varying field tech skill levels

- Easy-to-use, intuitive menus to simplify operation for the occasional or seasoned user.

Need faster sweeps

- More than 2x faster sweep times than the competition.

Poor lighting or bright light

- High-resolution, full-color display for indoor or outdoor viewing.

Require Power Measurement

- Includes the Bird RF Meter App that allows interoperability with a wide range of Bird Field sensors.

Lack of access to AC

- 10% longer battery life (6 hours per charge), with Lithium Ion battery.

MEASUREMENTS AND FEATURES

Measurement on Channel Power

Occupied Bandwidth

Adjacent channel power ratio

Phase Noise

N dB bandwidth

Two level Internal Preamplifier standard

Android operation system

Fully touch screen - support multi-touch operation

Light Weight & Small size

Long battery life - 6 hours battery operation time



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SH-42S-TC

SPECIFICATION

Frequency Range	10 MHz to 4.2 GHz
Frequency Span Accuracy	±1%
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
RBW Accuracy	≥1 MHz, ±10% <1 MHz, ±2%
Second harmonic distortion	1.6 GHz -70 dBc
Third-Order Intercept (TOI)	+15 dBm (-10 dBm tones , 1 MHz apart, Sensitivity LOW, Reference Level -10 dBm)
P1dB	+5 dBm Nominal
Phase Noise (1GHz)	-96 dBc/Hz,@10 kHz (typical -98 dBc/Hz) -118 dBc/Hz,@1 MHz (typical -120 dBc/Hz)
Compatible With	For a complete list of compatible sensors see Bird's Rf Meter Page http://bit.ly/rfmetrapp1
Measurement Range	DANL to +20 dBm
Input Attenuator Range	0 to 30 dB, 1 dB step
Max Safe Input Level	
Preamp Off	+20 dBm
Preamp +20 dB	0 dBm
Preamp +40 dB	-20 dBm
Reference Level Range	-140 dBm to +20 dBm -190 dBm to +70 dBm (Ref Level Offset: ON)
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.)
Switching Uncertainty	±0.3 dB
Input Attenuator Uncertainty	±0.6 dB
Reference Level Accuracy	≥ -60 dBm, ±0.8 dB

Display Average Noise Level (DANL)

Preamp Off	1 GHz, -131 dBm/Hz (typical -133 dBm/Hz)
Preamp +20 dB	1 GHz, -151 dBm/Hz (typical -153 dBm/Hz)
Preamp +40 dB	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

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Preamp Off	1 GHz, -131 dBm/Hz (typical -133 dBm/Hz)
Preamp +20 dB	1 GHz, -151 dBm/Hz (typical -153 dBm/Hz)
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Connectors

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

Display

5.5 inch, 1280 *720p

OS

Android

Languages

English, Chinese

Battery Type

Li-ion

Battery Operating Time

6 hours typical

Battery Charge Time

2.5 hours typical

Operating Temperature

0°C to 50°C

Storage Temperature

-20°C to 70°C

Size

7.8 x 3.9 x 2.6 inches (200 x 99 x 67 mm)

Weight

2.8 lb (1.25 kg)

STANDARD ACCESSORIES

Hard Carrying Case SPM-AS007

Soft Carrying Case SPM-AS008

AC Power Adapter SPM-AS001

AC Power cable (US standard) SPM-AS003

USB Cable SPM-AS004

USB OTG Cable SPM-AS005

Touch Pen SPM-AS006

USB Drive SPM-AS009

Manual 920-SH-42S

Battery SPM-021

OPTIONAL ACCESSORIES

5A5002-6

International Adapter

