

RF MASTER TEST KITS

Spectrum/Cable & Antenna Analyzers

SK-SH-KIT, SK-SH-KITA



RF Total Coverage

The RF Master Test kits provide all the necessary equipment needed for field technicians and engineers for installation, troubleshooting, and maintenance of coaxial cable and antenna systems and analysis of system performance.

The comprehensive exclusive kits provide coverage with our SiteHawk® Cable and Antenna Analyzer, SignalHawk® Spectrum Analyzer, a power sensor, calibration combo, and an assortment of adapters and cables all housed in an organized case.

Master Kits provide all the equipment necessary for installation and maintenance of RF systems' cables & antennas for wireless service providers, contractors, military, aerospace & defence, and public safety applications. Optionally equipped with a SignalHawk-AOA, RF Master Test Kits can provide interference hunting capability for cellular, land mobile radio, and other wireless systems operating up to 7.5 GHz.

Ask about our Instructor led training.



Cable & Antenna Analyzer



Spectrum Analyzer

CABLE & ANTENNA ANALYZER HIGHLIGHTS

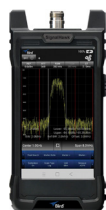
- Wide frequency range from 1 MHz to 9 GHz.
- Test RF cables and antennas at the frequency of operation.
- Distance to Fault, return loss, cable loss
- FDR (Frequency Domain Reflectometry) measurement method results in a highly reliable assessment of the health of critical components in your system; ultimately providing a "heads-up" before a failure occurs.

SPECTRUM ANALYZER HIGHLIGHTS

- Wide frequency range between 9 kHz to 7.5 GHz providing real-time spectrum monitoring and analysis of RF frequency circuits.
- Predefined Measurements: Channel Power, ACPR, OBW, Phase Noise, N dB Down Bandwidth, Field Strength, FM Demodulation and more.
- View the spectrum with trace display, spectrogram display, or both.
- Option available for interference hunting.

SK-SH-KIT

Specifications

SiteHawk
Cable & Antenna
AnalyzerSignalHawk
Spectrum Analyzer

5017D



SK-CAL-MN-C6



FH-AV-CC



Adapters



25-T-MN

SITEHAWK CABLE & ANTENNA ANALYZER

MEASUREMENT

Frequency Range	
SK-6000-TC	1 MHz to 6000 MHz
SK-9000-TC	1 MHz to 9000 MHz
Frequency Resolution	1 kHz
Output Power	-10 dBm, typical
Trace Noise Magnitude (IFBW 1kHz)	0.05 dB rms
Measurement Speed	1 ms/data point
Measurement Points	51 to 3201
Measure Bandwidth	100 Hz to 30 kHz
Temperature Stability	0.01 dB/°F (0.02 dB/°C)
Return Loss Measurement Range	0 dB to -60 dB
Resolution	0.01 dB
VSWR Measurement Range	1.0 to 65.0
Cable Loss Measurement Range	0 dB to 30 dB
DTF Range	0 to 5000 ft (0 to 1500 m)
Corrected Directivity	> 38 dB from 1 MHz to 8 GHz > 34 dB from 8 GHz to 9 GHz
Maximum Input Voltage	50 V
Immunity to Interfering Signals	+13 dBm
Power Measurement	Yes

ACCURACY

Frequency Accuracy	±2.5 ppm @25 °C
Reflect Amplitude Accuracy	
SK-6000-TC	-10 dB to 0 dB: ±0.6 dB -20 dB to -10 dB: ±0.8 dB -35 dB to -20 dB: ±3.0 dB
Reflect Amplitude Accuracy	
SK-9000-TC	-10 dB to 0 dB: ±0.6 dB -25 dB to -10 dB: ±1.5 dB -31 dB to -25 dB: ±4.0 dB

See SiteHawk Datasheet for full specifications.

SIGNALHAWK SPECTRUM ANALYZER

MEASUREMENT

Frequency Range	
SH-60S-TC	9 kHz to 6 GHz
SH-75S-TC	9 kHz to 7.5 GHz
Aging	±1 ppm
Resolution Bandwidth	10 Hz to 5 MHz in 1, 2, 3, 5, 10 steps
Phase Noise (1 GHz)	
SH-60S-TC	-95 dBc/Hz, @10 kHz (typical -97 dBc/Hz), -115 dBc/Hz, @1 MHz (typical -116 dBc/Hz)
SH-75S-TC	-88 dBc/Hz, @10 kHz (typical -90 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 vs. Pre-amp	All Amps Off : +20 dBm 1 Amp On : -20 dBm All Amps On : -40 dBm
Input Attenuator Uncertainty	±0.6 dB
Display Average Noise Level (DANL)	Preamp Off : 1 GHz, -129 dBm/Hz (typical -132 dBm/Hz) Preamp +20 dB : 1 GHz, -149 dBm/Hz (typical -152 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)

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

Some kits replace the SignalHawk with a SignalHawk-AOA with interference hunting capability.

See the SignalHawk and SignalHawk-AOA Datasheets for full specifications.

5017D WIDEBAND POWER SENSOR

Specifications

MEASUREMENT

Frequency Range	100 MHz to 1 GHz
Power Measurement Range	500 mW to 500 W average, 1300 W Peak
Impedance	50 Ohms nominal
Insertion Loss	<0.05 dB
Insertion VSWR	<1.05
Directivity	28 dB up to 100 MHz 30 dB from 100 to 1300 MHz

CONNECTORS

DPM	D89 proprietary interface
PC interface (1)	RS-232, 9600 Baud, no parity, 8 data bits, 1 stop bit, D89
PC interface (2)	USB 2.0 Type B
Connector	N(f) Both

Some kits replace the 5017D with a 5017D-AV, which has a frequency range of 100 MHz to 1.3 GHz.

See the Wideband Power Sensors Datasheet for full specifications.

SYSTEM

Power Supply	
USB Port	Less than one low-power load
DC Input Connector	7 to 18 VDC at less than 0.1 A
Data Logging	Requires 5000-NG, or Bird RF Meter App

ENVIRONMENTAL

Operating Temperature	-10 °C to 50 °C (14 °F to 122 °F)
Storage Temperature	-40 °C to 80 °C (-40 °F to 176 °F)

PHYSICAL

Size	4.8 in x 4.6 in x 1.3 in (122 mm x 117 mm x 35.5 mm)
Weight	1.2 lb (.27 kg)

CERTIFICATIONS

Mechanical Shock & Vibration	IAQ MIL-PRF-28800F class 3
CE	EMC EN 61326-1-2006

SK-CAL-MN-C6 CALIBRATION COMBO

MEASUREMENT

Frequency	DC to 6 GHz
Resistance	50 Ohm
Average Power	≤ 1 W
Load Return Loss	-35 dB
Load VSWR	≤ 1.025
Open Phase Deviation	≤ ± 0.6°
Short Phase Deviation	≤ ± 0.6°

INTERFACE

Connectors	N (m)
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ENVIRONMENTAL

Operating Temperature	15 °C to 35 °C (49 °F to 95 °F)
Storage Temperature	-40 °C to 75 °C (-40 °F to 167 °F)

In kits with a SK-9000-TC, a SK-CAL-MN-C9 with a frequency range of DC to 9 GHz replaces the SK-CAL-MN-C6.

FH-AV-CC HARD CASE

PHYSICAL

Size	15.27 in x 12.13 in x 6.69 in (38.8 cm x 30.8 cm x 17 cm)
Weight	4.5 lb (2.04 kg) without foam
Body	Polypropylene

CERTIFICATIONS

Compliance	IP67, MIL-STD, 810F, 512.4, Drop Tested Per MIL-STD-3010C Method 5007
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ADAPTERS

Specifications

4240-401	(1) Male, (1) Female, Type N	4240-500-23	N (male) to SMA (male)
	(1) Male, (1) Female, Type BNC	4240-500-10	N (male) to SMA (female)
	(1) Male, (1) Female, Type TNC		
	(1) Male, (1) Female, Type UHF		
	(1) Male, (1) Female, Type SMA		
	(5) 50 Ohm couplers		

25-T-MN TERMINATION/LOAD RESISTOR

MEASUREMENT

Power Rating	25 W
Frequency	DC - 4 GHz
VSWR DC - 1 GHz	1.10:1 max
VSWR 1 GHz - 4 GHz	1.15:1 max
Impedance	50 Ohms, Nominal

INTERFACE

Connectors	N (m)
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ENVIRONMENTAL

Temperature Range	-40 °C to 40 °C (-40 °F to 104 °F)
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PHYSICAL

Product Type	Dry (Convection-Cooled)
Operating Position	Any
Finish	Black Anodized
Size	4.7 in L x 2.3 in Dia (119.4 mm x 58.5 mm)
Weight	7 oz (198 g)

KITS

Kits are available that substitute the SK-6000-TC and SH-60S-TC for other SiteHawks and SignalHawks.

MODEL	SITEHAWK	SIGNALHAWK	SENSOR
SK-SH-KIT	SK-6000-TC	SH-60S-TC	5017D-AV
SK-SH-KIT-3	SK-6000-TC	SH-75S-TC	5017D
SK-SH-KITA	SK-6000-TC	SH-60S-AOA	5017D
SK-SH-KITA-1	SK-9000-TC	SH-60S-AOA	5017D-AV
SK-SH-KITA-3	SK-9000-TC	SH-75S-AOA	5017D