

TRANSCOM INSTRUMENTS

Product Brochure



SiteHawk Handheld Cable & Antenna Analyzer

Overview



SK-200

SK-4500

SiteHawk is the world first handheld intelligent cable and antenna analyzer powered by Android operating system and high-resolution touch screen. It is small, lightweight and easy to carry. SiteHawk can be used for testing the matching of the cable and antenna system, accurately evaluating system performance by measuring return loss, voltage standing wave ratio, cable loss and other parameters, and measuring the RF power with the optional ThruLine power sensor.

SiteHawk is preferred for system installation, maintenance and fault location in the mobile communication system, national defense communication and broadcast industry. Meanwhile, SiteHawk can be applied in cable production and inspection, ship communication testing, public communication security, semiconductor production and calibration and other RF related area. The use of a full touch screen HMI makes operation easy. Its performance is sufficient to achieve high-precision repeatable test, to meet all your communication test needs.

Key Facts

- Support wider range of test frequency, i.e. 300kHz to 6000MHz, and cover most of application spectrum
- The world smallest and lightest (0.9kg) instrument allows one-hand operation
- High measurement speed, up to 1ms/point and immediate display of measurement result
- Maximum 1500 meters DTF Range, SiteHawk is suitable for error checking and troubleshooting of long-distance cable system
- Built-in battery can be constantly operating for 10 hours, and additional portable battery can be applied to further extend battery capacity
- High frequency resolution (1kHz), simultaneous sweeping of 3201 data points at the same time, and high frequency accuracy: 2.5×10^{-6}
- HD color LCD screen, visible in sunlight and suitable for field work
- Built-in 16GB memory: measurement data can be shared via the WIFI cloud or recorded in the USB flash disk

Innovative Features & Benefits



Excellent Engineering Instrument

- Industrial grade design
- Engineering accessories
- Ergonomic instrument
- Powerful battery capability

Intelligent Platform and Cloud Application

- Android operating system
- Mass applications
- Data synchronization and cloud analysis
- GPS positioning function

Field Testing Functions

- Reflection characteristic measurement
- Single-port cable loss measurement
- DTF measurement

Flexible Test Solutions

- Feeder and antenna system maintenance/installation
- RF power measurement
- Indoor distribution test
- Semiconductor calibration load/RF cable test
- Trace background analysis

Solution Highlights



Excellent engineering instrument

SiteHawk's excellent ergonomic design provides the constant guarantee for field operators in routine maintenance and in-depth fault analysis. Accurate measurement results can be obtained in a short time under any condition.

Industrial grade design

By using integrated ergonomic design, SiteHawk is dust and water proof, and supports stable measurement in harsh environment. Temperature stability is up to 0.01dB/°C. SiteHawk is the smallest and lightest cable and antenna analyzer in the world, with the weight of only 0.9Kg including the battery.

Engineering accessories

SiteHawk is provided with waterproof suitcase and portable soft bag, where the host and all accessories can be assembled to facilitate carrying.

Ergonomic design

SiteHawk's anti-slip rubber protective cover helps engineers hold more comfortably. Its vertical longitudinal layout makes it easy to operate when held.

Powerful battery capability

SiteHawk's built-in battery supports continuous operation for 10 hours. With external portable charger or battery, SiteHawk provides user a long and stable working environment.





Intelligent Platform and Cloud Application

SiteHawk is powered by Android operating system. Its operation interface is simple and user-friendly. Various kinds of professional software can be installed to expand the instrument performance. SiteHawk also supports external storage devices, Bluetooth and WIFI. Data can be flexibly shared or analyzed via the built-in large-capacity memory and Internet “cloud” application, or synchronized between each other. With the built-in GPS module, location information of testing point can be recorded, in order to achieve integrated test in the true sense.

Android operating system

SiteHawk is powered by Android system and has a full-screen touch interface. User-friendly interface is easy to operate and supports intelligent operations such as stretching.

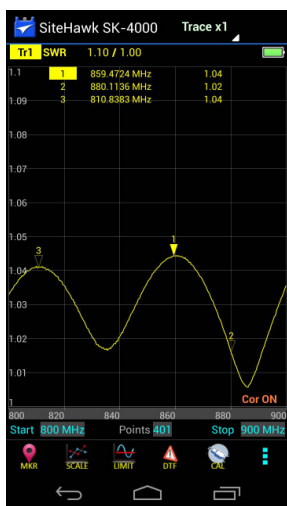
Mass applications

SiteHawk can install multiple professional Applications to achieve various test functions and enhance the extension performance.

Data synchronization and cloud analysis

With 16GB memory, SiteHawk is able to save thousands of screenshots or traces. Test records can be synchronized between SiteHawk and cloud, and can be analyzed on each one.





Field Testing Functions

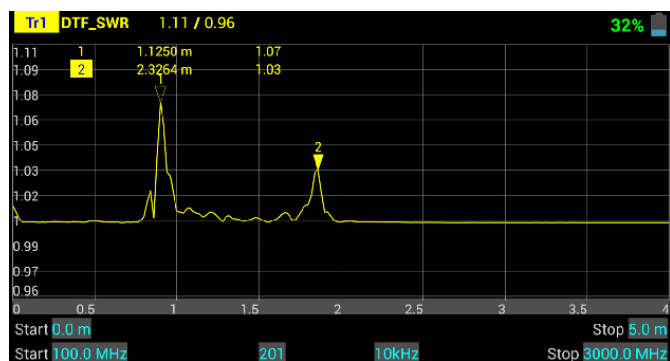
SiteHawk has all functions of field test: cable loss measurement, VSWR measurement, return loss measurement, DTF VSWR measurement and DTF return loss measurement.

Reflection characteristic measurement

SiteHawk can be used for measuring reflection characteristic parameters based on frequency-domain reflection. Reflection characteristic parameters indicate specific matching of the antenna, feeder and other passive devices/systems. High-accuracy measurement results are shown in the VSWR or return loss form.

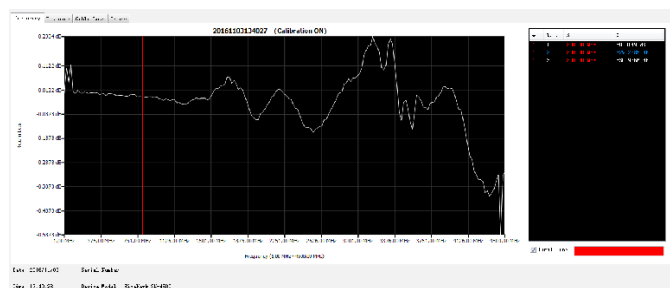
Single-port cable loss measurement

The cable insertion loss of the RF system has significant influence on power transmission characteristics. Poor cable loss also affects the overall matching of the antenna system. SiteHawk supports single-power cable loss measurement. With the built-in cable parameter table, true results can be automatically calculated according to the rated attenuation of each cable, which is conducive to overall evaluation of the RF system.



DTF VSWR/return loss measurement

The DTF test is carried out to determine the specific positions of nonconforming cables, components and connectors of the cable system, in the form of VSWR or return loss change along with the distance, in order to eliminate faults and risks.



Trace background analysis

SiteHawk has the powerful function of field test. SiteHawk software in PC supports playback and analysis of test curves saved in the S1P format, with no upper limit of traces on one screen. Using SiteHawk, the laboratory-level accurate analysis can be truly achieved.

Flexible test solutions

SiteHawk can be widely applied in various RF measurement occasions. It can also provide flexible test solutions when combined with other RF test instruments.

• Feeder and antenna system maintenance/installation

When impedance of the antenna, feeder and other passive devices are not matched with each other or the impedance of the feeder and transmitter are not matched with each other, reflection will be caused as a result of high-frequency energy. In the case of poor return loss/VSWR, the transmitter will be damaged, the coverage area of the base station will be reduced, the call drop rate and blockage will be increased, and the data traffic rate will be decreased. SiteHawk is able to reflect actual results of antenna and feeder VSWR/return loss measurement, to facilitate prompt processing.

• RF power measurement

For the antenna and feeder system, SiteHawk supports accurate measurement of RF power with the optional RF power meter. The actual RF energy in the current position of the system can be accurately obtained by means of through type power measurement, to evaluate actual operation of the system.

(Power sensors include Bird 7020, 7022, 5012D, 5014, 5015, 5015-EF, 5016D, 5017D, 5018D and 5019D).

• Indoor distribution test

For the indoor distribution system, SiteHawk can examine the reception and transmission states when combined with SpecMini spectrum analyzer. The built-in signal source of SiteHawk can be used as a substitute of indoor distribution RF signal source. At the same time, relevant parameters such as the terminal channel power can be measured by the spectrum analyzer. SiteHawk is able to locate and measure faults of the indoor distribution system to effectively solve the problem of indoor distribution layout.

• Semiconductor calibration load/RF cable test

If the impedance of the cable system does not match in the semiconductor calibration process, the transmitter output and semiconductor production quality will be affected. SiteHawk can be applied to rapidly and accurately evaluate the RF cable and load.



Control Elements



Specifications

Specifications		
Frequency Range	SK-200-TC	300kHz to 200MHz
	SK-4500-TC	1MHz to 4500MHz
	SK-6000-TC	25MHz to 6000MHz
Frequency Accuracy	$\pm 2.5 \times 10^{-6}$	
Output Power	SK-4500, SK-6000	-10dBm
	SK-200	-5dBm
Reflect Amplitude Accuracy	-15dB to 0dB	0.4dB
	-25dB to -15dB	1.5dB
	-35dB to -25dB	4.0dB
Trace Noise Magnitude(IFBW 1kHz)	0.5dB rms	
Measurement Speed	1ms/data point.	
Measurement Points	51 to 3201	
Temperature Stability	0.01dB/ °F 0.02dB/°C	
Return Loss Measurement Range	0dB to -60dB	
Resolution	0.01dB	
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)	
Test Port Connector Impedance	N-type, Female 50 ohms	
Connector	SK-200-TC	Micro USB, USB 2.0
	SK-4500-TC, SK-6000-TC	USB Type-C, USB 3.0
Languages	English, Chinese, Espanol	
Recommended Calibration Interval	3 year	

Dimensions(L×W×H)	SK-200-TC SK-4500-TC, SK-6000-TC	7.2×3.8×1.9(in) 182×95×46.5(mm) 7.7×3.6×2.4(in) 195×90×60(mm)
Weight	1.98lbs (0.9kg)	
Maximum Input Voltage	50V	
Operates In Temperature	14 °F to 131 °F -10°C to +55°C	
Storage Temperature	-40 °F to 176 °F -40°C to +80°C	
Battery Charging Temperature	32 °F to 95 °F 0°C to +35°C	
Storage Capacity	16GB built-in storage	
Directivity	45dB	
Immunity to Interfering Signals	+13dBm	
CE	EMC-Standard EN 61326-1:2006 Safety-Standard EN 71010-1:2001 Standard EN61000-3-2:2006+A1:2009+A2:2009 EN61000-3-3:2013	
Battery (Lithium-ion rechargeable)	SK-200-TC SK-4500-TC, SK-6000-TC	4 hours typical operating time 10 hours typical operating time
Battery Charge Time	5 hours for full charge	
Power Measurement	Yes 7020, 5012D, 5014, 5015, 5015-EF, 5016D, 5017D, 5018D, 5019D	

Ordering List

STANDARD ACCESSORIES PROVIDED SK-200-TC, SK-4000-TC	
SK-CAL-MN-C	Calibration Combo
SK-TP-112	Stylus
5B2229-510H-3	AC ADAPTER (5V DC Output)
7002A218-1	Hard Carrying Case
5A2653-3R5NL4	RF Cable, 1 meter long
920-SK-4000	Instruction Manual
7002A219-1	Soft Carrying Case
5A2745-1	USB Drive
5A2653-0R5NL5	USB Interface Cable, 15cm long
STANDARD ACCESSORIES PROVIDED SK-4500-TC,SK-6000-TC	
SK-CAL-MN-C	Calibration Combo
SK-TP-112	Stylus
APL336-1230	AC ADAPTER (12V DC Output)
7002A218-2	Hard Carrying Case
SK-TC-MNFN-1M	1m RF Cable
920-SK-4500	Instruction Manual
7002A219-2	Soft Carrying Case
5A2745-1	USB Drive
SK-CONN-OTG-2	USB OTG Connector
Battery	SK-BTY-7468
OPTIONAL Accessories	
PA-MNFE	Adapter, N(m) to 7/16 DIN(f)
PA-FNFE	Adapter, N(f) to 7/16 DIN(f)
PA-FNME	Adapter, N(f) to 7/16 DIN(m)
PA-MNME	Adapter, N(m) to 7/16 DIN(m)

Keep innovating for excellence!

About us

Transcom Instrument Co., Ltd. founded in 2005 and headquartered in Shanghai, is a leading manufacturer and provider of RF and wireless communication testing instruments and overall solutions in China. Based on its independent brands and a wide range of core patented technologies, Transcom became national high-tech enterprise with independent intelligent property rights and has been listed into Shanghai Enterprise Recognition Award for High Growth SMEs in Technology.

Transcom is backed by a experienced and dedicated research team in mobile communication, radio frequency and microwave, and network optimization testing instrument. Through "Industry-University-Research" cooperation with universities, Transcom founded Southeast University-Transcom Electronic Measurement Technology Center at Southeast University to futher ensure technology and talent reserve, and secure future visionary and sustainable technology development.

Transcom's product portfolios focus 4 areas: cellular network critical communication planning/maintenance/optimization, Manufacturing testing solution, educational instrument/equipment, spectrum monitoring sensor for



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Company Profile