Handheld Cable & Antenna Analyzer

SiteHawk

Transcom Instruments
What Does Cable & Antenna Analyzer Do?

- Tests the overall integrity of an antenna system installation
- Verifies antenna system components meet manufacturer’s design specifications
- Verifies the antenna system meets the system engineer’s design specifications
- Pinpoints the location of antenna system problems prior to usage
Overview of SiteHawk

SiteHawk is the world first hand-held 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.
Overview of SiteHawk

SK 200

- HD screen
- Anti-slip rubber protective cover
- USB I/O & Power interface
- RF out/reflection
- On/Off button
- Calibration Combo
Product Features

- Support wider range of test frequency, 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
- Built-in battery can be constantly operating for 10 hours (SK-4500), 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: $2.5 \times 10^{-6}$
- 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
**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 weight of only 0.9Kg including the battery.
Excellent Engineering Instrument

**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 has anti-slip rubber protective cover helps to be held more comfortably. With build-in gravity sensor, SiteHawk can be easily operated as a regular cellphone that provide convenient testing environment.

Powerful battery capability: SiteHawk built-in battery supports 10 hours continuous operation (SK-4500). With external portable charger or battery, SiteHawk provides user a long and stable working environment.
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 communication and WIFI communication. Data can be flexibly shared via the built-in large-capacity memory and Internet “cloud” application. Data and cloud server can be synchronized and analyzed.
Intelligent platform and cloud application

**Mass applications:** SiteHawk can be installed with multiple professional APPs 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 transmitted by Bluetooth, USB or WIFI cloud to synchronize and analyze data.
**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.
Field Testing Functions

**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 list, true results can be automatically calculated according to the rated attenuation of each cable, which is conducive to overall evaluation of the RF system.
Field Testing Functions

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 of return loss change along with the distance, in order to eliminate faults and risks.
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.
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).
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.
## Comparison

<table>
<thead>
<tr>
<th></th>
<th>Transcom SiteHawk SK-4500</th>
<th>Anritsu S331L</th>
<th>Agilent N933B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency Range</strong></td>
<td>1-4500MHz</td>
<td>2-4000MHz</td>
<td>25-4000MHz</td>
</tr>
<tr>
<td><strong>Frequency Resolution</strong></td>
<td>1kHz</td>
<td>1kHz</td>
<td>100kHz</td>
</tr>
<tr>
<td><strong>Frequency Accuracy</strong></td>
<td>±2.5ppm</td>
<td>±5ppm</td>
<td>±50ppm</td>
</tr>
<tr>
<td><strong>Measurement Points</strong></td>
<td>51, 101, 201, 401, 801, 1601, 3201</td>
<td>130, 259, 517, 1033</td>
<td>131, 261, 521</td>
</tr>
<tr>
<td><strong>Measurement Speed</strong></td>
<td>1ms/data point</td>
<td>1.5ms/data point(RL)</td>
<td>1.7ms/data point(DTF)</td>
</tr>
<tr>
<td><strong>Directivity</strong></td>
<td>45dB</td>
<td>38dB(Electronic Calibration)</td>
<td>42dB(Mechanical Calibration)</td>
</tr>
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</thead>
<tbody>
<tr>
<td>Screen Resolution</td>
<td>1920*1080</td>
<td>800*482</td>
<td>640*482</td>
</tr>
<tr>
<td>Screen Size</td>
<td>5.5</td>
<td>7.05</td>
<td>6.5</td>
</tr>
<tr>
<td>Weight</td>
<td>0.9Kg</td>
<td>2Kg</td>
<td>2Kg</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Operating Time</td>
<td>10 hours</td>
<td>8 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Size</td>
<td>195mmx 90mm x 60mm</td>
<td>250 x 177 x 61mm</td>
<td>317 x 207 x 69mm</td>
</tr>
<tr>
<td>Traces</td>
<td>60000</td>
<td>1000 (Traces + Screenshots)</td>
<td>200</td>
</tr>
<tr>
<td>Screenshots</td>
<td>10000</td>
<td>1000 (Traces + Screenshots)</td>
<td>10</td>
</tr>
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Preparing Today for 5G of Tomorrow

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