



SIGNALHAWK™ SPECTRUM ANALYZER

MODEL SH-36S: 100 KHz TO 3.6 GHz

High Performance in a Hand-Held Spectrum Analyzer:

- Fast, Accurate, and Sensitive: -135 dBm Noise Floor
- Large High-Resolution Display: Full Color, Indoor/Outdoor Viewable
- Easy-to-Use: Intuitive Menus, One-Button Setup, and On-Board Help
- Long Battery Life: 5.5 Hours per Charge, Field Replaceable Battery
- Rugged: Drop Tested per Military and European Standards
- USB Connectivity: USB Drive Stores 90,000 Traces

Worldwide Applications: Cellular, PCS, DCS, 2G, 3G, 4G, CDMA, cdmaOne, CDMA 2000, 1x, 1x EV-DO, GSM, GPRS, EDGE, UMTS, HSDPA, W-CDMA, TDMA, AMPS 802.11, Bluetooth, Broadcast, Emergency, Fire, GPS, HDTV, IBOC, In-Building, Microwave, NPSPAC, Paging, Police, Private, Project 25, Public Safety, Tactical Military, Telematics, Tetra, Trunking, Utilities, WiMAX, WLAN and WLL.

Spectrum Analysis: Analyzes radio frequency spectrum. Measures intended and interfering signals. Allows setup of parameters such as frequency, amplitude, and markers. Graphically displays signal amplitude vs. frequency and saves traces.

Performance Specifications:

Frequency Range	100 kHz to 3.6 GHz
Frequency Resolution	1 Hz
Frequency Uncertainty	± 1 ppm
Reference Aging	± 1 ppm / year
Temperature Drift	± 1 ppm / °C
Spectral Purity	-85 dBc @ 30 kHz
Sweep Time	2 s, full span; 1 ms, zero span
Resolution Bandwidth	100 Hz to 1 MHz RBW
Video Bandwidth	10 Hz to 300 kHz VBW
Amplitude Accuracy	± 1.0 dB typ, ± 1.5 dB max
Dynamic Range	66 dB, intermod-free
Noise Floor	-135 dBm DANL
Attenuator	0, 10, 20, or 30 dB; internal
Pre-Amplifier	+24 dB gain, internal
Power Meter	External Sensors, Optional

Display	8.4", SVGA, 800 x 600 pixels
Data Points	705 displayed
Single Button Measurement	Occ BW, Channel Power, ACPR, Field Strength., AM/FM Demod, C/I
Saved Trace Storage	300 internal, 90,000 USB drive
Win CE Viewers	Word, Excel, PPT, PDF, Image
Battery	5.5 hour, field replaceable
Drop Test	1 meter per EN 61010-1
Transit Drop Test	10 drops per MIL-PRF-28800F
CE Compliant	YES
RF Input, N(F)	+20 dBm (100 mW) max
USB Connectivity	PC; USB drive and accessories
Operating & Store Temp	0° to +50°C oper; -20° to +80° C st
Humidity & Altitude	95% humidity; 4600 m altitude
Size and Weight	11.5" x 10.5" x 3.8", 7.8 lbs



Power Meter Option: SignalHawk™ is compatible with Models 5012, 5010B, 5010T, 5011 and 5011-EF external power sensors. These sensors provide ± 5% (± 0.2 dB) forward average power accuracy. Other measurements include reflected power, VSWR, return loss (dB), peak power, burst average power, crest factor, and CCDF.



RF Measurement and Management in Your World



Bird® Technologies Group, consisting of Bird® Electronic Corporation and TXRX Systems®, is a global, innovative supplier of RF products, systems, services and educational solutions.

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Standard Accessories:

Model	Description
7002A220-1	Soft Carry Case
920-SH36-OPS	Operators Manual
920-SH36-REF	Start-Up Instructions
5A2653-10	USB Cable, 10 ft, USB A (M) to USB B (M)
5A2264-09-MF-10	RS-232 Cable, 10 ft, 9-pin, (M) to (F)
5A2743-1	AC Adapter/Charger
5A2238-3	Car Adapter/Charger
5A2720-2	Internal Li-Ion Battery, Field Replaceable
7002A210	PC Tool Software and Manual CD's
5A2745-1	USB Drive 256 MB, Win CE Compatible
5A2746-1	Headphones
7002A221	Connector Cover

Spare standard accessories are available as optional accessories.
Manuals and soft/firmware updates available at www.bird-electronic.com.

Optional External Power Sensors:

Model	Description
5012	Wideband Power Sensor, 350 MHz to 4 GHz, 150 mW to 150 W Avg, 400 W Peak. Measures fwd/rfl avg, VSWR, return loss (dB), peak, burst avg, crest, CCDF. Forward average power accuracy is 4% (0.2 dB).
5010B	Directional Power Sensor, 2 to 2700 MHz, 100 mW to 10 kW, requires elements. Measures fwd/ rfl avg, VSWR, return loss (dB), and peak. Forward average power accuracy is 5% (0.2 dB).
5010T	Directional Power Sensor, Tetra Version, 2 to 2700 MHz, 12.5 mW to 10 kW, req elements. Measures fwd/ rfl avg, VSWR, return loss (dB), and peak. Forward average power accuracy is 5% (0.2 dB).
5011	Terminating Power Sensor, 40 MHz to 4 GHz, 10µW to 10 mW (-20 dBm to +10 dBm). Measures forward average power. Accuracy is 5% (0.2 dB).
5011-EF	Terminating Power Sensor, 40 MHz to 12 GHz, 10µW to 10 mW (-20 to +10 dBm) Measures forward average power. Accuracy is 5% (0.2 dB).

Optional Accessories:

Model	Description
7002A225-1	Hard Transit Case, Watertight, Crushproof, Dustproof
920-7002A300	Reference Manual
USB-MOUSE	USB Mouse, Ultra-Portable, Optical
USB-HUB	USB Hub, 4-Port, Micro
ANT-100	Field Strength Antenna, 136 to 221 MHz, SMA(M)*
ANT-400	Field Strength Antenna, 400 to 512 MHz, SMA(M)*
ANT-800	Field Strength Antenna, 824 to 894 MHz, SMA(M)*
ANT-900	Field Strength Antenna, 890 to 960 MHz, SMA(M)*
ANT-1800	Field Strength Antenna, 1710 to 1880 MHz, SMA(M)*
ANT-1900	Field Strength Antenna, 1850 to 1990 MHz, SMA(M)*
ANT-2400	Field Strength Antenna, 2400 to 2500 MHz, SMA(M)*
100-SA-MFN-40	Attenuator, 100 W, 40 dB, N(M) to N(F), 2.4 GHz
50-A-MFN-30	Attenuator, 50 W, 30 dB, N(M) to N(F), 4 GHz
25-A-MFN-30	Attenuator, 25 W, 30 dB, N(M) to N(F), 4 GHz
10-A-MFN-30	Attenuator, 10 W, 30 dB, N(M) to N(F), 4 GHz
5-A-MFN-20	Attenuator, 5 W, 20 dB, N(M) to N(F), 4 GHz
2-A-MFN-20	Attenuator, 2 W, 20 dB, N(M) to N(F), 4 GHz

Optional Test Cables and Adapters:

Model	Description
TC-MNFN-1.5	Test Cable, 1.5 m, N(M) to N(F)
TC-MNFN-3.0	Test Cable, 3.0 m, N(M) to N(F)
TC-MNMN-1.5	Test Cable, 1.5 m, N(M) to N(M)
TC-MNMN-3.0	Test Cable, 3.0 m, N(M) to N(M)
TC-MNFE-1.5	Test Cable, 1.5 m, N(M) to 7/16 DIN(F)
TC-MNFE-3.0	Test Cable, 3.0 m, N(M) to 7/16 DIN(F)
TC-MNME-1.5	Test Cable, 1.5 m, N(M) to 7/16 DIN(M)
TC-MNME-3.0	Test Cable, 3.0 m, N(M) to 7/16 DIN(M)
PA-MNME	Adapter, N(M) to 7/16 DIN(M)
PA-FNME	Adapter, N(F) to 7/16 DIN(M)
PA-MNFE	Adapter, N(M) to 7/16 DIN(F)
PA-FNFE	Adapter, N(F) to 7/16 DIN(F)
4240-550	Adapter Kit, 7/16 DIN
4240-500-1	Adapter, N(F) to N(F)
4240-500-6	Adapter, N(M) to N(M)
4240-500-10	Adapter, N(M) to SMA(F)*

*Recommend N(M) to SMA(F) adapter (model 4240-500-10) for field strength antennas.