

# Bird® Wideband Power Sensor

## 5012A, 5016, 5017

The Bird **Wideband Power Sensor (WPS)** is a true hand-held product; you can hold the sensor in one hand and comfortably operate the meter in the other. Operation couldn't be easier, simply connect the sensor in-line, connect the sensor to the meter and you can access a host of measurements in moments with our intuitive, menu-driven interface.



### PROBLEMS

Downtime is necessary

Have analog, digital, and multi-carrier signals to measure

Tight budgets

Varying field tech skill levels

Need greater confidence in measurement

### SOLUTIONS

- Monitor and perform maintenance for monitoring while DUT is in-service
- Measure forward and reflected power to troubleshoot system failures

- Modulation independent measurements

- USB connectivity, no meter required
- Complimentary Virtual Power Meter (VPM2) software

- Sensor plugs and plays with 5000-XT meter.

- No field calibration required
- NIST traceable calibration

### APPLICATIONS

WPS measures: Analog Cellular, Digital Cellular, 3G, 4G, Tetra, APCO/P25, Trunking, CDMA, TDMA, WCDMA, GSM, Transportation, Tactical Military, Radar, Avionics, Marine, LMR, Analog Broadcast, Digital Broadcast, GSM, GPRS, EDGE, UMTS, HSDPA, Bluetooth, Fire, GPS, NPSPAC, Paging, Project 25, Public Safety, Telematics, Utilities, WIMAX and WLAN.

Measurements performed: Peak power, true average power and Duty Cycle.

Calculations Performed: VSWR, Return Loss, Reflection Coefficient, Crest Factor, Average Burst Power and CCDF.

# Bird® Wideband Power Sensor

5012A, 5016, 5017



## WPS SPECIFICATIONS

<b>Frequency Range</b>	<b>5012A</b>	350 MHz - 4.0 GHz
	<b>5016</b>	350 MHz - 4.0 GHz
	<b>5017</b>	25MHz - 1.0 GHz
<b>Power Range</b>	<b>5012A</b>	150mW - 150 Watts Avg. 400 Watts Peak
	<b>5016</b>	25mW - 25 Watts Avg. 60 Watts Peak
	<b>5017</b>	500mW - 500 Watts Avg. 1300 Watts peak
<b>Impedance</b>		50 Ohms (nominal)
<b>Reflection Measurement Characteristics</b>		Measurement Range: Return Loss, 0.0 to 23 dB (VSWR, 1.15 to 99.9 Rho, 0.07 to 1.0)
<b>Minimum Forward Power for Reflected Measurement</b>	<b>5012A</b>	0.5W
	<b>5016</b>	0.1W
	<b>5017</b>	1.5W
<b>Accuracy</b>		Average Power = ±5% of Reading (+15 °C to +35°C), Burst Average Power = ±6% of Reading (+15 °C to +35°C), Peak Envelope Power = ±7% of Reading (+15 °C to +35°C), CCDF = ±0.2%
<b>Insertion VSWR</b>	<b>5012A</b>	<1.05 from 0.35 to 2.5 GHz, <1.10 from 2.5 to 4 GHz
	<b>5016</b>	<1.05 from 0.35 to 2.5 GHz, <1.10 from 2.5 to 4 GHz
	<b>5017</b>	<1.05
<b>Insertion Loss</b>	<b>5012A</b>	<0.05 dB from 0.35 to 1.0 GHz, <0.1 dB from 1 to 4 GHz
	<b>5016</b>	<0.05 dB from 0.35 to 1.0 GHz, <0.1 dB from 1 to 4 GHz
	<b>5017</b>	<0.05 dB
<b>Connector(s)</b>		N Female (Both)
<b>Power Supply</b>		USB Port: Less than one low-power USB load DC Input Connector: 7-18 VDC at less than 0.1A
<b>Interface(s)</b>		DPM Interface: DB9 proprietary interface PC Interface (1): RS -232, 9600 Baud, no parity, 8 data bits, 1 stop bit, DB9 PC Interface (2): USB 1.1 Type B, compliant interface
<b>Weight</b>		1.2 lb. maximum
<b>Dimensions HxWxD [inches (mm)]</b>		4.8" x 4.6" x 1.3" (122 mm x 117 mm x33 mm)
<b>Directivity</b>	<b>5012A</b>	30 dB up to 3.0 GHz, 28dB up to 4.0 GHz
	<b>5016</b>	30 dB up to 3.0 GHz, 28dB up to 4.0 GHz
	<b>5017</b>	30 dB
<b>Data Logging</b>		Requires 5000-XT or VPM2
<b>Operating Temps [°C(°F)]</b>		-10° to +50°C (+14° to +122°F)
<b>Storage Temps [°C(°F)]</b>		-40° to +80°C (-40° to +176°F)
<b>Mechanical Shock &amp; Vibration</b>		IAQ MIL-PRF-2880F class 3

## ACCESSORIES

<b>PTA-MNMN</b>	Precision Test Adapter Male N to Male N
<b>PTA-MNME</b>	Male N to Male 7/16 (DIN)
<b>PTA-MNFE</b>	Male N to Female 7/16 (DIN)
<b>5A2226</b>	Power Supply, Intl
<b>5A2229</b>	Power Supply, US
<b>5A2653-10</b>	USB Cable, 10'
<b>5A2264-09-MF-10</b>	DB9 Cable, 10'

## COMPATIBLE DEVICES

<b>5000-XT</b>	Hand-Held Digital Power Meter
<b>SH-36S</b>	Signal Hawk Spectrum Analyzer/VNA
<b>SH-361S</b>	
<b>SH-362</b>	
<b>SH-362S</b>	
<b>SA-1700 EX</b>	Site Analyzer
<b>SA-1700 EXP</b>	
<b>SA-2500 EX</b>	
<b>SA-6000 EX</b>	
<b>VPM2</b>	PC VIA Virtual Power Meter



**YOU'RE HEARD, LOUD AND CLEAR.**

30303 Aurora Rd. :: Solon, OH 44139 :: 866.695.4569 :: [www.bird-technologies.com](http://www.bird-technologies.com)

Bird® Technologies Group combines the industry leading brands of both Bird Electronic and TX RX Systems and is a global, innovative supplier of RF products, systems, services and educational solutions. Bird® Technologies Group reserved the right to modify specifications or discontinue any product without notice.