



# Channel Power Monitor

The RF Experts



Be assured that your communication system is up and running at all times with Bird's new Channel Power Monitor. It provides you with continuous information on the health of each component of your system that is accessible on any computer or tablet on the network or even the phone in your pocket.

The Channel Power Monitor is comprised of a 1 RU central processor and a variety of sensors, which work together to monitor all components of a radio system, including each individual radio, the combiner, the feed lines and antenna. These inexpensive sensors are placed throughout the system, with a 5% accuracy that is traceable to NIST and as reliable as you have come to expect from Bird.

The Channel Power Monitor hosts its own webpage for setup and display of all measurement parameters. This enables you to access the system from any computer, tablet or phone on your network, only limited by your network security. The webpage displays all measurements and easily allows you to set up alarms for failure conditions such as high or low power or poor antenna VSWR. The unit includes both software and hard contact alarms and can even be configured to send you an SNMP Trap message to alert you to an emergency condition. Also standard is Data Logging, which takes reliability one step further by enabling you to see degraded performance before it becomes an emergency.

When you need to be certain that your radio communication system is working when you need it, trust the Bird Channel Power Monitor.

## FEATURES

- Monitor up to 16 channels simultaneously, with expansion units available to cover the largest systems.
- Measures forward, reflected, composite and individual channel power as well as antenna system VSWR.
- Configurable with multiple options for sensors and meters, purchase only what you need.
- Easy remote connection using a built-in web server for setup and monitoring.
- Push-to-talk input for each radio.
- Configurable alarming for high and low level power and high antenna VSWR, utilizing hard contact and SNMP formats.

# Channel Power Monitor

Monitor all aspects of your land mobile radio system with the Bird Channel Power Monitor. Continuously monitor radio performance, combiner loss and antenna/feedline characteristics to identify and alarm on critical changes. With the data logging function, long term performance monitoring can be used to identify performance changes before they negatively impact system performance – enabling your preventative maintenance team to address problems before they occur. Solutions are available for the entire range of Land Mobile Radio frequencies from 144 MHz to 940 MHz.

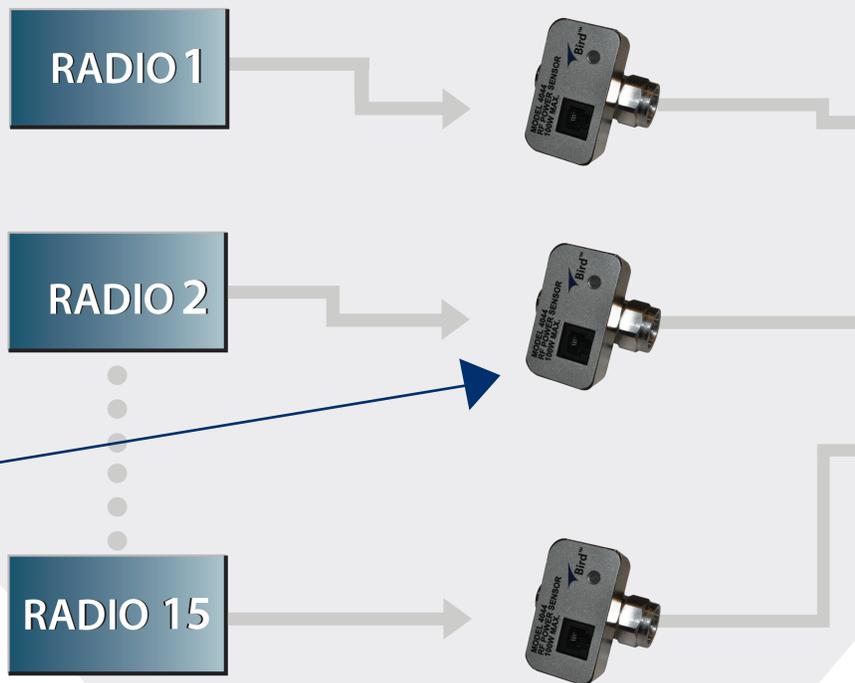
## Features include:

- Data logging
- Slim 1RU package
- Built-in web Server provides SNMP messaging
- Push-to-talk (PTT) compatibility is standard
- Full control of alarm and data logging settings
- 16 channels with expansion modules to cover your largest radio systems
- Software and hard contact alarms



*Directly measure the power output of each **RADIO** simultaneously. Alarm on failure and record measurements for later analysis.*

**Model 4044 Power Sensor** is an economical sensor capable of measuring the output power of either analog or digitally modulated radios, at power levels up to 100 watts. The Model 4044 is accurate to within +/-5% of reading with traceability to NIST. This sensor is a non-directional sensor that is ideal for use at the input to each channel of the transmit combiner where the VSWR is well controlled.



# Channel Power Monitor

Setup and monitoring is simple with the **BUILT-IN WEB SERVER**. Available anywhere there is an internet connection and a web browser, so it is as close as the computer on your desk or the phone in your pocket. Receive SNMP alerts or just check up on your system at your convenience. Also comes with an **ANDROID APP**.

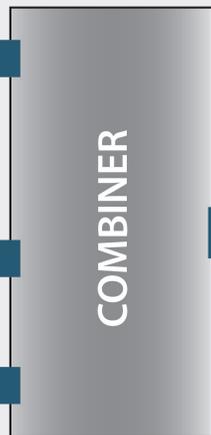


## Model 3141

Channel Power Monitor display is a 1RU central processor that consolidates and communicates information from a variety of sensors. This display hosts its own webpage for setup and display of all measurement parameters and alarm functions.



Utilizing the forward and reflected power measurements of the 4042 or 4043 sensors, determine the VSWR of your **ANTENNA** and cable feedline. Know immediately when your antenna is damaged and your transmission is compromised.



Sensors on both the input and output side of the **COMBINER** enable combiner performance to be measured continuously.

**4042 Power Sensor**  
Provides power by individual channel.  
Supports up to 16 channels simultaneously.

**4043 Power Sensor**  
Provides composite power.

**Model 4042 & 4043 Power Sensors** provide both forward and reflected power measurements with +/-5% of reading accuracy, at power levels of up to 500 watts and are also NIST traceable. These sensors are intended for use at the transmit combiner output, in order to provide both combiner power, as well as antenna VSWR information.

# Channel Power Monitor



## CHANNEL POWER MONITOR DISPLAY

<b>Model</b>	3141
<b>Operating Voltage</b>	115/230 VAC @ 50/60 Hz
<b>Operating Power</b>	Less than 10 watts
<b>Dimensions</b>	5.25" X 19" X 1.75" (133.35 x 483 x 44.5 mm)
<b>Weight</b>	Approximately 2 lbs. (0.85 kg)
<b>Operating Temp.</b>	0°C to +50°C (32°F to 122°F)
<b>Storage Temp.</b>	-20°C to + 80°C (-4°F to 176°F)
<b>Humidity</b>	95% ±5% max. (noncondensing)
<b>Altitude</b>	up to 10,000 feet (3,048 m)



## NON-DIRECTIONAL POWER SENSOR SPECIFICATIONS

<b>Model</b>	4044
<b>Frequency by Part Number</b>	
4044-1-440404-0201	144 MHz to 174 MHz
4044-1-450404-0201	380 MHz to 450 MHz
4044-1-460404-0201	450 MHz to 512 MHz
4044-1-470404-0201	762 MHz to 806 MHz
4044-1-480404-0201	806 MHz to 869 MHz
4044-1-490404-0201	896 MHz to 940 MHz
<b>Power Range</b>	2.5 - 100 W
<b>Accuracy</b>	+/- 5% of reading
<b>Impedance</b>	50 OHM
<b>Insertion Loss</b>	< 0.1 dB
<b>Insertion VSWR</b>	<1.10:1 max
<b>Intermodulation Distortion (PIM)</b>	<-140 dBc
<b>Instrument Interface</b>	0-4 VDC via RJ-25 Connector
<b>RF Connectors</b>	N(M) / N(F)
<b>Power Supply</b>	15 VDC, 5 mA max (from 3141)
<b>Operating Temperature</b>	0 to 50°C
<b>Dimensions</b>	2.3" x 2.2" x 1.7" (50 x 56 x 43 mm)
<b>Weight</b>	0.2 lbs (0.1 kg)
<b>Compliance</b>	CE, RoHS



## CHANNEL & DIRECTIONAL POWER SENSOR SPECIFICATIONS

<b>Model</b>	4042 Channel Power Sensor 4043 Directional Power Sensor
<b>Frequency by Part Number</b>	
4042-1-430505-0201	100 MHz to 1000 MHz
4043-1-440505-0201	144 MHz to 174 MHz
4043-1-450505-0201	380 MHz to 450 MHz
4043-1-460505-0201	450 MHz to 512 MHz
4043-1-470505-0201	762 MHz to 806 MHz
4043-1-480505-0201	806 MHz to 869 MHz
4043-1-490505-0201	896 MHz to 940 MHz
<b>Forward Power Measurement Power</b>	
4042	1 W to 500 W
4043	25 W to 500 W
<b>Reflected Power Measurement Range</b>	
4042	0.1 W to 50 W
4043	2.5 W to 50 W
<b>Dynamic Range</b>	13 dB
<b>Accuracy</b>	+/- 5% of reading
<b>Impedance</b>	50 OHM
<b>Insertion Loss</b>	< 0.2 dB
<b>Insertion VSWR</b>	<1.15:1
<b>Intermodulation Distortion (PIM)</b>	<-145 dBc
<b>Instrument Interface</b>	RS-485 via RJ-25 Connector
<b>RF Connectors</b>	N(M) / N(F)
<b>Power Supply</b>	
4042	7/18 VDC, <500 mA (from 3141)
4043	7/18 VDC, <50 mA (from 3141)
<b>Operating Temperature</b>	0 to 50°C
<b>Dimensions (LxWxH)</b>	5.2" x 3.8" x 1.4" (132 x 96.5 x 35.5 mm)
<b>Weight</b>	0.5 lbs (0.23 kg)
<b>Compliance</b>	CE, RoHS

## STANDARD ACCESSORIES

<b>5A2968T</b>	Termination (ships with 3141)
<b>5A2286S-KIT1</b>	Label kit (ships with 3141)
<b>5A2968-CS10</b>	Cable RJ25 (ships with sensors)

## OPTIONAL ACCESSORIES

<b>5A2968A-11</b>	CABLE EXTENDER
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