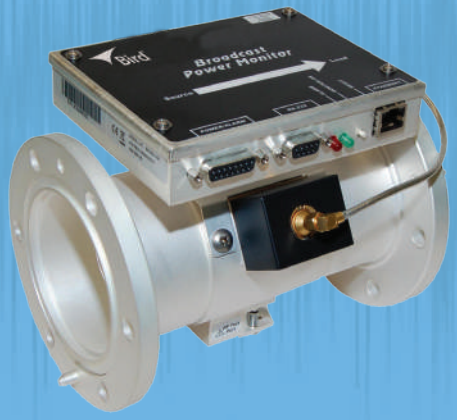
Bird®

Broadcast Power Monitor

BPME Series

The **RF** Experts



While the BPME provides the usual power and VSWR monitoring, it is much more than just a 'comfort' meter. One of the chief factors that sets BPME apart is the depth of its functionality. From remote monitoring via a user-friendly web interface to data logging capabilities, the BPME gives users a range of functions designed to make their jobs easier, while protecting the health of their investment.

In addition, the RF test port enables users to verify spectral compliance for applications such as IBOC or HDTV at the point in the transmission line where it matters most! The enhanced functionality of BPME puts complete analog and digital broadcast monitoring at the user's fingertips through user-friendly, around-the-clock, remote access from any web-enabled device. This 24/7 access ensures that problems are detected and dealt with easily and promptly-before they escalate into more costly situations.

FEATURES/BENEFITS

Integral Power Monitor System
- Integration of forward and reflected elements into the RF Detection/Control Circuit yields added stability and greater dynamic range.

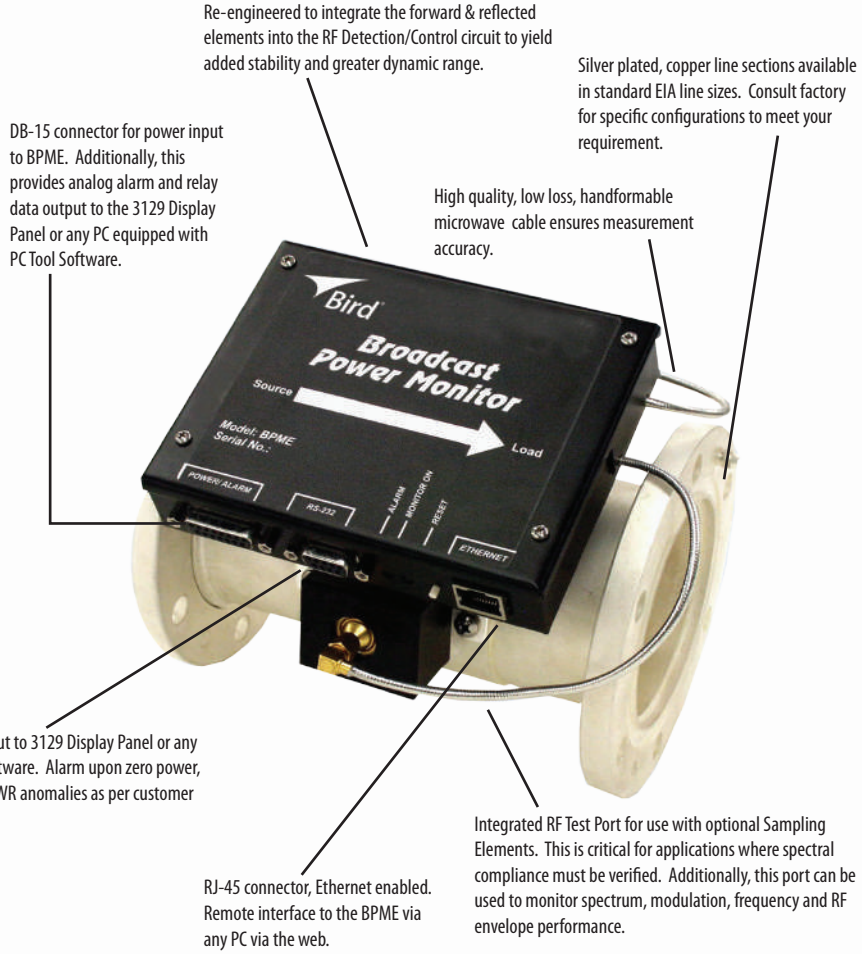
Frequency/Channel Field Configurable
- Provides channel flexibility when needed in the field.

Ethernet & RS-232 Enabled
- Future-ready remote monitoring, control & instant alarm alert.

Integral RF Test Port
- Enables mask compliance testing, as well as monitoring of spectrum, modulation, frequency & RF envelope performance.

Data Logging Capabilities
- System trends and anomalies can be detected before failures.

PRODUCT HIGHLIGHTS



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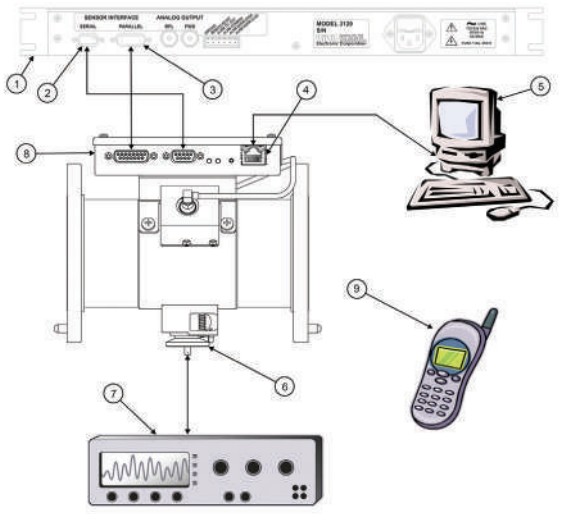
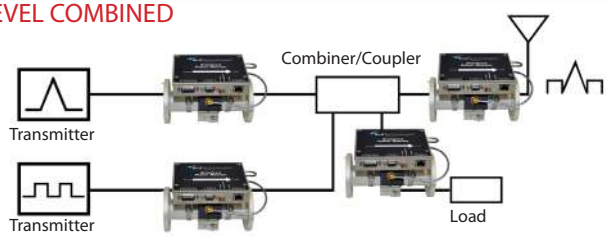
1. 3129 DIGITAL DISPLAY
2. RS-232 COMMUNICATION PORT, DB-9
3. POWER/ALARM CONNECTOR, DB15
4. ETHERNET CONNECTOR (FOR NETWORK OR LOCAL PC)
5. COMPUTER (NOT ON A NETWORK)
6. MONITOR PORT
7. MONITOR DEVICE (SPECTRUM ANALYZER, MODULATION MONITOR, OSCILLOSCOPE)
8. DETECTION/CONTROL MODULE
9. CELL PHONE OR PDA-INSTANT MESSAGE NOTIFICATION OF ALARM



APPLICATIONS

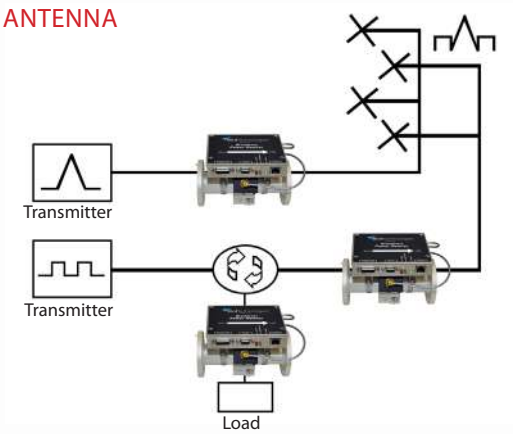
Measuring RF power and system match characteristics can be made with the BPME in any installation, regardless of the signal waveform. Complex waveforms such as 8-VSB and COFDM, used in IBOC, DAB and HDTV systems, as well as FM, AM and CW signals are accurately measured to ensure total power output requirements.

HIGH-LEVEL COMBINED



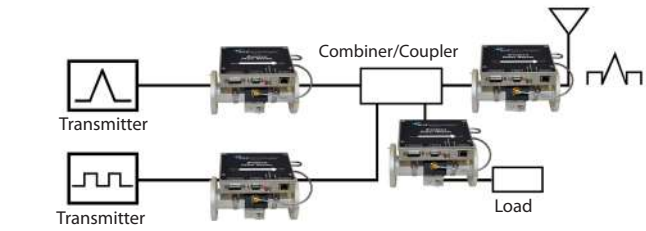
HD Radio is combined with the analog signal at the input to the antenna. Analog powercoupled to the digital transmitter must be considered when specifying the BPME. The 20 dB dynamic range of the BPME will allow for easy high-level combined installations. HD Radio is combined with the analog signal at the input to the antenna. Analog power coupled to the digital transmitter must be considered when specifying the BPME. The 20 dB dynamic range of the BPME will allow for easy high-level combined installations.

INTERLEAVED ANTENNA



HD Radio and an analog signal can use interleaved antennas for separate but simultaneous transmission. High isolation reduces the mutual coupling however, analog power coupled to the digital transmitter must be considered when specifying the BPME. With 20 dB of dynamic range, the BPME is ready to handle this type of installation.

MULTI-STATIONS



Multi-station operation will have a high peak-to-average power ratio, depending on the number of stations combined. Power meters not equipped to handle this high ratio will display accuracy errors up to 20%. With the ability to accurately read greater than 10 dB peak-to-average power, the BPME is your choice for multi-station applications.

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BPME OPERATING CHARACTERISTICS

Frequency Range	See chart
Forward Power Range	See chart
Measurement Type	In-line, True Average Power
Peak/Average Ratio	10 dB
Coupler Directivity	26 dB min., 30dB Typical
Accuracy	±5% of reading
Alarms	VSWR, No/Low Forward Power, High Forward Power
Outputs	SPDT relay contact
Display Options	BPME PC Software, 3129
Remote Interface	Ethernet 10BASE-T or 100BASE-TX (auto-sensing) Ethernet Version 2.0/IEEE 802.3 Protocols: ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, and HTTP Security: 256-bit encryption Serial RS-232, 9600 baud, no parity, 8 data bits, 1 stop bit, no handshake

BPME OPERATING CHARACTERISTICS

Operating Voltage	See chart
Operating Power	See chart
Dimensions	In-line, True Average Power
Weight	10 dB
Supplied with	26 dB min., 30dB Typical
LINE SECTION	
Operating Temp.	0°C to +50°C (32°F to 122°F)
Storage Temp.	-20°C to + 80°C (-4°F to 176°F)
Humidity	95% ±5% max. (non condensing)
Altitude	up to 10,000 feet (3,048 m)
Calibration cycle	Annual

FORWARD POWER RANGE

Line Size	Power Designator	VHF (45-230 MHz)	UHF (470-890 MHz)
7/8"	Low Medium High	5W – 500 W 20 W – 2000 W 50 W – 5000 W	2.5 W – 250 W 10 W – 1000 W 25 W – 2500 W
1 5/8"	Low Medium High	20 W – 2000 W 80 W – 8 kW 200W – 20 kW	5 W – 500 W 20 W – 2000 W 50 W – 5000 W
3 1/8"	Low Medium High	50 W – 5000 W 200 W – 20 kW 500 W – 50 kW	25 W – 2500 W 100 W– 10 kW 250 W – 25 kW
4 1/16" & 4 1/2"	Low Medium High	100 W – 10 kW 400 W – 40 kW 1000 W – 100 kW	40 W – 4 kW 150 W – 15 kW 400 W – 40 kW
6 1/8"	Low Medium High	200 W – 20 kW 800 W – 80 kW 2000 W – 200 kW	80 W – 8 kW 300 W – 30 kW 750 W – 75 kW

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MODEL NOMENCLATURE (7/8" LINE SECTIONS)

BPME 7 ____

Line Section	Input Connector	Output Connector	Frequency Band	Power*	P = Panel Mount
7 = 7/8"	A = N (F) B = N (M) C = LC (F) D = 7/8" EIA H = DIN (F) J = DIN (M) K = UHF (F) L = UHF (M)	A = N (F) B = N (M) C = LC (F) D = 7/8" EIA H = DIN (F) J = DIN (M) K = UHF (F) L = UHF (M)	VL = 45-88 MHz V = 88-230 MHz U = 470-890 MHz	L = Low M = Medium H = High *see chart for power ranges	*leave blank for no panel

MODEL NOMENCLATURE (1 5/8", 3 1/8", 4 1/16", 4 1/2 AND 6 1/8" LINE SECTIONS)

BPME ____ ____

Line Section	Input Interface*	Frequency Band	Power*
1 = 1 5/8" 3 = 3 1/8" 4 = 4 1/16" 4A = 4 1/2 6 = 6 1/8"	U = Unflanged, Recessed Center Conductor UF = Unflanged, Flush Center Conductor D = Dielectric Flanged M = Myat Flanged *For Flanged, leave blank	VL = 45-88 MHz V = 88-230 MHz U = 470-890 MHz	L = Low M = Medium H = High *see chart for power ranges