

RF CALIBRATION KIT

Wideband, High Power

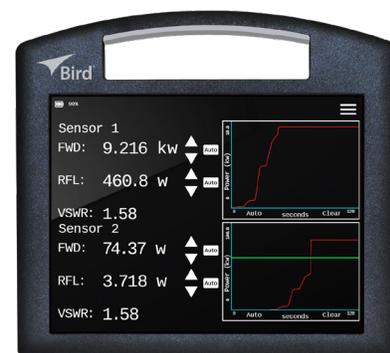
SMK-3000 KIT

Precise. Accurate. Dependable.

The SMK-3000 Kit contains precision, high power standards that are used to calibrate RF radios, wattmeters, directional couplers and other high-power RF test equipment in the field or metrology lab. Unlike other calibration solutions, the SMK-3000 calibration kit reduces the cost of ownership and provide a much faster time-to-calibration with lab precision and accuracy you've come to expect from Bird.

Covering a frequency range of 1 to 1000 MHz, the in-line calibration kit enable users to calibrate +/- 3% accuracy in just minutes.

Included in the SMK-3000 kit is the Model 4421A Multifunction Power Meter. This intuitive display unit clearly identifies the Forward and Reflected power measurements within the RF path. In addition, return loss readings can also be shown to provide additional insight into the RF system being monitored.



4421A SERIES

PRODUCT FEATURES

- Forward Power in W or dBm
- Reflected Power in W or dBm
- Return Loss in VSWR, RL, or Reflection Coefficient
- Graph of Power Over Time

INCLUDES

- Low band Directional Power Sensor
- Medium band Directional Power Sensor
- High band Directional Power Sensor
- 4421A Multifunction Power Meter
- Rugged carrying case
- Latch & Lock cable

PRODUCT SELECTION GUIDE

Kit Model #	Sensors Included	Frequency Range	Accuracy	Power Range
SMK-3003A (3% Kit)	SMK-3003-LB	1 to 10 MHz	+/- 3% of reading (2σ)	1 to 1000 W
	SMK-3003-MB	10 to 100 MHz		
	SMK-3003-HB	100 to 1000 MHz		

MEASUREMENT

Directivity	28 dB minimum
Impedance	50 ohms
Insertion loss	< 0.05 dB
Insertion VSWR	< 1.05:1

UNCERTAINTY

Forward Power Uncertainty* SMK-3003A series	± 3% of reading*, 2σ Calibration plane location: Connector output
Reflected Power Uncertainty*	± 3% of reading*, 2σ Calibration plane location: Connector output
VSWR Uncertainty	-27 dB to -10 dB, see chart

*Measurement conditions: Harmonics < 35 dBc, Load VSWR < 1.1:1, AM modulation < 1%

CONNECTORS

RF Input	N(m), Quick Change (QC)
RF Output	N(f), Quick Change (QC)
Display	1-meter Latch & Lock coiled cable

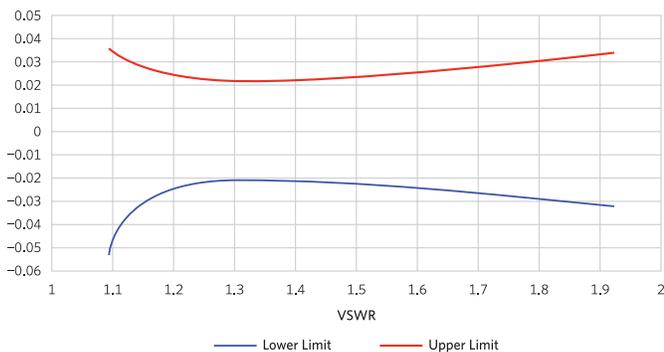
ENVIRONMENTAL

Operating Humidity	20% to 50%
Operating Temperature	19.4 °C to 26.1 °C (73 °F ± 6 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F ± 158 °F)

PHYSICAL

Weight (excluding 4421A)	5 lb (2.27 kg)
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VSWR UNCERTAINTY



RF CALIBRATION KIT

MODEL 4421A

Specifications

PRODUCT FEATURES

- Compatible with SMK-3000 sensors and all 402x RF sensor series.
- Automatic sensor detection for seamless integration.
- Large 9.7 in full color LCD touchscreen display for easy readability.
- Compact, lightweight and portable design enhances functionality.

MEASUREMENT

Compatible Bird Sensors	SMK-3000 Kit , 4021, 4022, 4023, 4024, 4025, 4027 Series, 4028 Series
Power Range	Sensor dependent
Frequency Range	Sensor dependent
VSWR Display	1.0 to 199.9
Return Loss Display	0 to 40 dB

SYSTEM

Display	9.7 in TFT full color LCD with touch screen
AC Power	100-240 VAC, 50 to 60 Hz, 0.5 A
Fuse rating	IEC (5 x 20 mm), time-delay
Battery Type	Internal, rechargeable
Battery Life	Up to 7 hours
Battery Charger	Built-in. Approximately 4 hours to fully recharge.

ENVIRONMENTAL

Humidity	95% max, noncondensing
Altitude	10,000 ft max
Operating Temperature	0 °C to 50 °C
Storage Temperature	-20 °C to 70 °C

PHYSICAL

Size	10.6 in x 9.7 in x 3.6 in (269 mm x 246 mm x 91 mm)
Weight	Less than 5 lb

CERTIFICATIONS

CE	CE Compliant
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MODEL 4421A
Side Views

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