

10 MHz
to 3 GHz

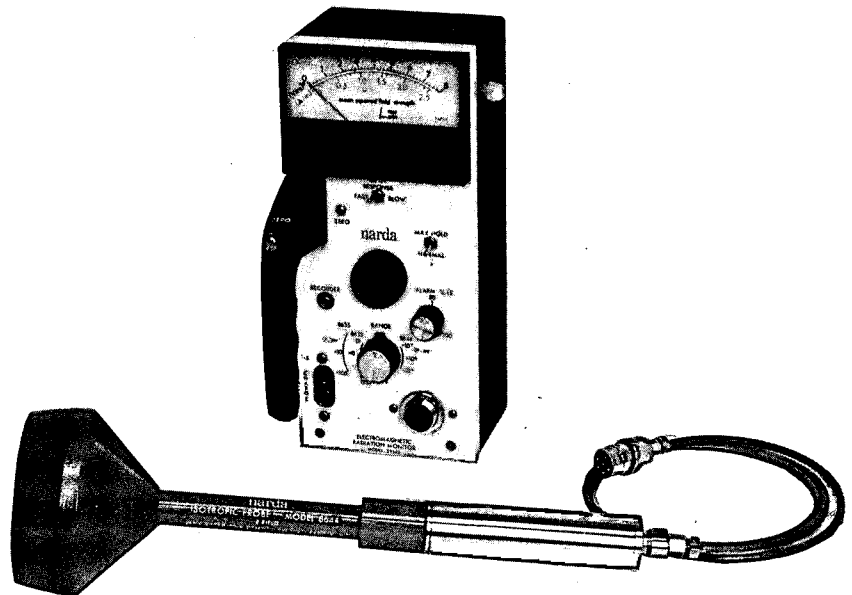
ELECTROMAGNETIC RADIATION MONITOR

10 MHz
to 3 GHz

Model
8609

FEATURES:

- Direct Reading Meter indicates (Volts/meter)² and (Amps/meter)²
- High Power Density Isotropic Probes are compatible with all Narda 8600 Series Meters
- Maximum Hold or Normal Operation
- Automatic Zeroing
- Adjustable, Audible Alarm



Another addition to the growing family of Narda Radiation Monitoring Systems is the Model 8609 Electromagnetic Radiation Monitor. Specifically designed to provide true readings of Mean Squared Field Strength in (V/m)² for E-field measurement or in (A/m)² for H-field measurement, the system detects and measures extremely high levels of radiation leakage from microwave equipment operating between 10 MHz and 3 GHz.

TOTAL SYSTEM COMPATIBILITY

Narda Model 8619 Meter, together with any one of the isotropic measurement probes (Models 8633, 8635 or 8644) comprise an 8609 System. As an added feature, the 8635 and 8644 high power density probes are fully compatible with Narda's other 8600 Series meters and may be purchased separately from the 8609 System. When purchased for use with an 8611 or 8616 meter, each probe is provided with the appropriate adhesive-backed decal to indicate the range correction. (See photo on page 4.)

CHARGEABLE BATTERIES ENHANCE PORTABILITY

Narda's versatile 8609 is a completely portable, hand-held unit. It is capable of operating in the field on its internal 25V battery power, or it can be operated using 115/230, 50/60 Hz AC line power. A 115/230 selector switch is located beneath a removable plate on top of the instrument.

To ensure that batteries are always ready for portable use, charging is automatically and conveniently accomplished when AC power is applied.

THREE EXCEPTIONAL FEATURES

As with Narda's sophisticated 8606/8607/8608 Systems, the 8609 has been designed to include MAXIMUM HOLD, AUTOMATIC ZERO and Audible Alarm features as standard equipment.

MAXIMUM HOLD enables the system operator to survey a suspected area for a maximum leakage level. When operated in this mode, the instrument will display and retain the highest level encountered during the survey. The instrument may be returned to the NORMAL mode of operation at any time to indicate varying leakage levels as they occur.

Zeroing of the instrument is accomplished automatically when the AUTO ZERO button in the handle is pushed. This allows the operator to quickly zero while holding the instrument with the same hand. Since zeroing is accomplished electronically, error by manual zeroing is eliminated. (The unit must be zeroed in the absence of RF power.)

A panel control allows an Audible Alarm to be set at any percentage of full-scale value. When power density exceeds the preset level, an alarm is sounded to alert the operator.

PRECISION MICROWAVE AND RF TEST EQUIPMENT

THE NARDA MICROWAVE CORPORATION, Plainview, New York 11803

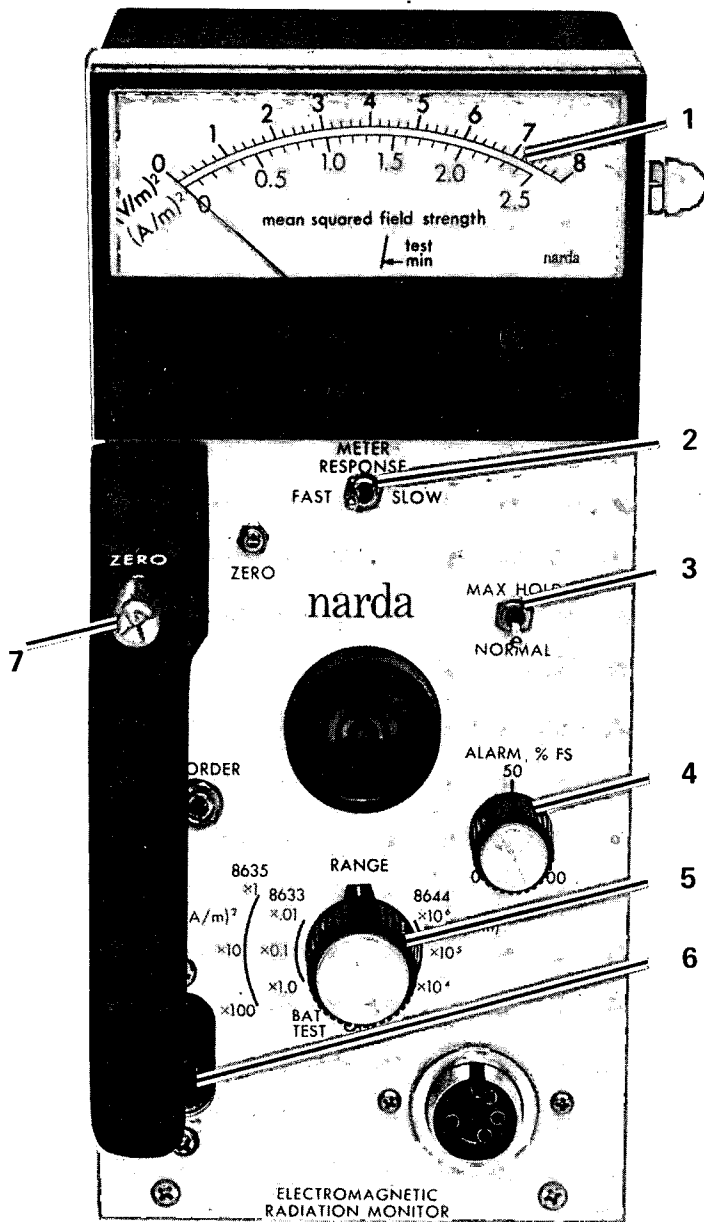
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DATA SHEET 21-6

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MODEL 8619 METER

1. METER

The face of Narda's 8619 Meter provides true readings of mean squared field strength from the source of radiation. Readout is either presented in (Volts/meter)² or (Amps/meter)², depending on whether the E-field or the H-field is being measured. A TEST MIN mark is also provided to indicate minimum acceptable battery charge requirements for field operation.

2. METER RESPONSE Switch

Two response times are available by front panel selection. A slow response time of 3 seconds is provided, for longer integration periods, in addition to the fast response. The one second fast response time is used during normal operation.

3. MAX HOLD/NORMAL Switch

A mode switch provides for selection of either the NORMAL or MAX HOLD mode of operation. When set to MAX HOLD, the meter will display the highest level reading measured during the survey allowing the operator to concentrate on the area being surveyed without memorizing the highest leakage levels as they are measured.

4. ALARM % FS Control

A panel control allows an audible alarm to be set at any percentage of full scale value. When the power density exceeds the preset level, an alarm is sounded to alert the operator.

5. RANGE Selector Switch

The 1000:1 (30 dB) dynamic range of the Model 8619 is utilized through the use of the range switch, which permits the selection of any one of the three ranges available. The BAT TEST position permits fast pre-operation testing of the 25 Volt rechargeable nickel-cadmium battery to insure proper operating voltage.

6. AC Receptacle

The front panel AC receptacle allows connection to 115V or 230V, 60 Hz or 50 Hz. The voltage range is selected at an internal switch. When the unit is AC powered, battery charging takes place automatically.

7. AUTOMATIC ZERO

The zero pushbutton mounted in the handle enables fast and accurate automatic zeroing of the meter.

(SEE PAGE 4 FOR MODEL 8619 SPECIFICATIONS.)

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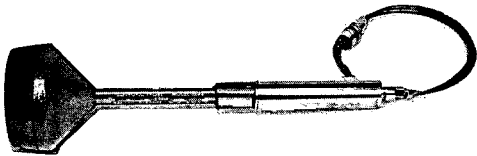
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MODEL 8635 H-FIELD ISOTROPIC PROBE



Frequency Range:	10 to 300 MHz
Equivalent Plane Wave Power Density:	10,000 mW/cm ² Fullscale
Mean Squared Field Strength:	250 (A/m) ²
Overload Rating:	100%, (20W/cm ² or 500 A ² /m ²)
Frequency Sensitivity	
13-200 MHz:	±0.75 dB
10-300 MHz:	2.5 dB maximum
Isotropic Response:	±0.5 dB
*Calibration Accuracy:	±0.5 dB
Calibration Frequencies (MHz):	10, 13.56, 27.12, 40.68, 50, 75, 100, 150, 200, 250, 300
Response Time:	1 second
Size:	17" long x 3-1/2" sphere (43 cm x 8.9 cm)

MODEL 8644 E-FIELD ISOTROPIC PROBE



Frequency Range:	10 MHz to 3 GHz
Equivalent Plane Wave Power Density:	2000 mW/cm ²
Mean Squared Electric Field Strength:	8 x 10 ⁶ (v/m) ²
Overload Rating:	100%, (4W/cm ² or 16 x 10 ⁶ V ² /m ²)
Frequency Sensitivity	
10 MHz-3000 MHz:	+1, -3 dB
27 MHz-1000 MHz:	±1 dB
Isotropic Response:	±0.5 dB (except when E-field is aligned with handle)
*Calibration Accuracy:	±0.5 dB
Calibration Frequencies (MHz):	10, 13.56, 27.12, 40.68, 50, 100, 200, 300, 500, 750, 915, 1000, 2450
Response Time:	1 second (nominal)
Size:	16-1/2" long x 4" sphere (41.9 cm x 10 cm)

MODEL 8633 H-FIELD ISOTROPIC PROBE



Frequency Range:	10 to 300 MHz
Equivalent Plane Wave Power Density:	100 mW/cm ² Fullscale
Mean Squared Field Strength:	2.5 (A/m) ²
Overload Rating:	300%, (300 mW/cm ² or 7.5 A ² /m ²)
Frequency Sensitivity	
13 MHz to 200 MHz:	±0.5 dB
10 MHz to 300 MHz:	2 dB maximum
Isotropic Response:	±0.5 dB maximum deviation
*Calibration Accuracy:	±0.5 dB
Calibration Frequencies (MHz):	10, 13, 27, 40, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300
Size:	16-1/4" long x 3-1/2" sphere (41.3 cm x 8.9 cm)

*At the calibrated frequencies

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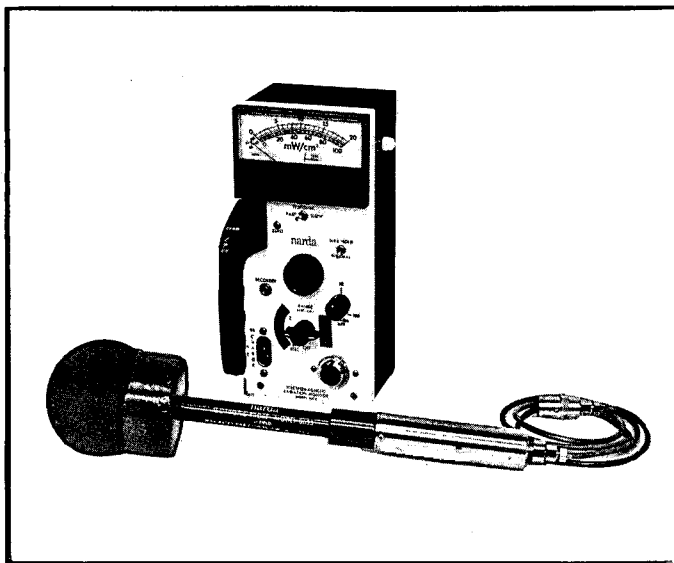
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MODEL 8619 METER SPECIFICATIONS

Dynamic Range:	30 dB				
	PROBE	RANGES			
Full Scale Ranges:	8644	8×10^4	8×10^5	8×10^6	(V/m) ²
Mean Squared Field Strength	8635	2.5	25	250	(A/m) ²
	8633	.025	.25	2.5	(A/m) ²
Accuracy:	±3%				
Response Time (approx.):	1 second in fast position 3 seconds in slow position				
Recorder Output:	+3V nominal at full scale into minimum load of 1000				
Power Density Alarm:	An adjustable audible alarm pre-set by panel control for a percentage of full scale				
Battery Type:	25 volt rechargeable nickel cadmium; 40 hours use time; 3:1 use to charge time				
Additional Features:	Automatic zero and Maximum Hold				
Size:	10" x 4-1/4" x 4" (not including handle) (25.4 cm x 10.8 cm x 10.2 cm)				
Weight:	5.5 lbs. (2.26 kg.)				
Equipment Supplied As Set	One Broadband Isotropic Probe (selected by customer), Model 8619 Meter, 25 volt nickel-cadmium rechargeable battery, power cable, carrying case and Model 8630 probe mount				



MODEL 8616 METER WITH MODEL 8635
HIGH POWER PROBE & NEW RANGE DECAL

HIGH POWER PROBES CAN BE USED WITH ALL 8600 SERIES METERS

Model 8635 and 8644 High Power Density Isotropic Probes are interchangeable within all Narda 8600 Series Systems. Either probe may be purchased separately from the 8609 System for use with Model 8611 or 8616 Meters. An adhesive-backed, metal decal will be provided (free-of-charge) with each probe. This decal may be applied in the vicinity of the Range switch on the front panel of either meter to indicate the higher ranges.

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