

# THE MODEL 8718B SURVEY METER — the world's most popular RF Survey meter just got more powerful and easier to operate\*

### FEATURES

- Microprocessor-Based Design
- 4 Line x 20 Character Display
- One-Touch Zero
- Displays Fields in Any Unit:  
 $\text{mW}/\text{cm}^2$ ,  $\text{W}/\text{m}^2$ ,  $\text{V}/\text{m}$ ,  $\text{A}/\text{m}$ ,  $\text{V}^2/\text{m}^2$ ,  
 $\text{A}^2/\text{m}^2$ ,  $\text{pJ}/\text{cm}^3$  and Percent of  
International Standards
- Intuitive Operation with Help Screens
- Sophisticated Data-Logging
- Time and Spatial Averaging with Data  
Storage
- Fiber Optic and Cable Inputs
- RS232 Interface
- Calculates Percent of Standard
- Small, Lightweight, Ergonomic Design



**The revolutionary Model 8718B can satisfy the needs of almost  
anyone that needs to measure electromagnetic fields**

**Basic measurements made simple**

**Advanced measurements unmatched by any other instrument**

***\*Already own a Model 8718? See "Upgrade Options" to learn how it can be upgraded  
to take advantage of most of the new features of the 8718B.***

# Electric and Magnetic Field Measurement

## **BASIC MEASUREMENT:**

The 8718B was designed with the new or occasional user in mind so that the most common mistakes cannot happen.

- No range changes—the meter automatically displays a numeric value over the probe's entire measurement range.
- No confusing scales—simply select the correct probe (the meter even makes you double check) and the meter will display the correct reading

- No difficult zeroing procedure—just touch one key.
- No unit calculations—simply select the unit you want. Only units appropriate for the probe are allowed.
- No multiplication for probe correction factors—simply enter the frequency of the source you are surveying and the corrected measurement value is displayed.

## **ADVANCED MEASUREMENTS**

Even the occasional user will be able to make use of the 8718B's advanced features. Experienced surveyors can do everything with a single instrument—accurately and in considerably less time than with any other instrument. The key is to access the menu system which is always available via one of the four function keys.

The menu options are:

### **DATA LOG**

- Log data points with time & date stamp plus reference number
- Log spatially averaged points with reference number
- Continuous logging at various rates

### **TIME AVERAGE**

- Turns fixed time averaging (various duration) on or off
- Select "standards" averaging that automatically selects the averaging period to match the standard or guidance selected

### **SPATIAL AVERAGING**

- Turns the spatial averaging mode on or off

### **BATTERY/LITE**

- Check battery charge status and estimated time remaining
- Turn the back light on or off

### **UNITS**

- Select from all available units of measure for the probe in use.

### **RS232**

- Change the baud rate.

### **CORRECTION FACTOR**

- Enter a numeric probe correction factor so that the meter will automatically show the corrected value

### **SETTINGS**

- Check or set the meter's internal clock
- Enter a temperature (used when meter and probe are in different locations)
- Clear the memory of logged data
- Set the function keys for either left or right-handed operation
- Turn the low level noise blanking feature on or off
- Adjust the display contrast

### **CABLE/FIBER OPTIC**

- Select the meter input between cable and fiber optic receiver

### **LOCKOUT**

- Locks the keypad so that settings cannot be accidentally changed, as when climbing

### **ALARM**

- Turn the audio alarm on or off
- Set the alarm threshold
- Turn the variable alarm on and off

### **STANDARDS**

- Select the standard or guidance that is referenced for various measurement options

### **BLANK**

- Blanks the display and locks the keypad

## The 8718B has many unique features

### KEYPAD

- Positive, tactile feel keys
- Key functions identified by color
- Function keys located for easy reach with thumb
- Special function keys quickly operate most common operations
- Help is always available via a dedicated key

### DISPLAY

- 4 line x 20 character alphanumeric
- Backlighting allows use in dimly lit areas
- Anti-glare lens over display
- Fully shielded against strong electromagnetic fields



### HOUSING

- Rugged, cast aluminum housing
- Fully shielded against strong electromagnetic fields

### BUILT-IN TEST SOURCES

- Microwave waveguide output tests all higher frequency probes
- Low frequency source injects signal directly into the detectors of probes via probe test points.

# Electric and Magnetic Field Measurement

## CABLE INPUT

- Quick-release connector compatible with all 8700D Series probes
- 8700 D-series probes can be connected directly or via included cable
- Older style 8700 series probes can be used with optional adaptor cable

## FIBER OPTIC INPUT

- Built-in fiber optic receiver

## RECORDER OUTPUT

- Analog output for various recording instruments

## SHAPE

- Easy to hold and well balanced
- No sharp corners

## STRAP

- Adjustable hook-and-loop allows user to hold without hand fatigue

## TRIPOD MOUNT

- 1/4-20 NC tapped hole tripod

## CHARGER INPUT

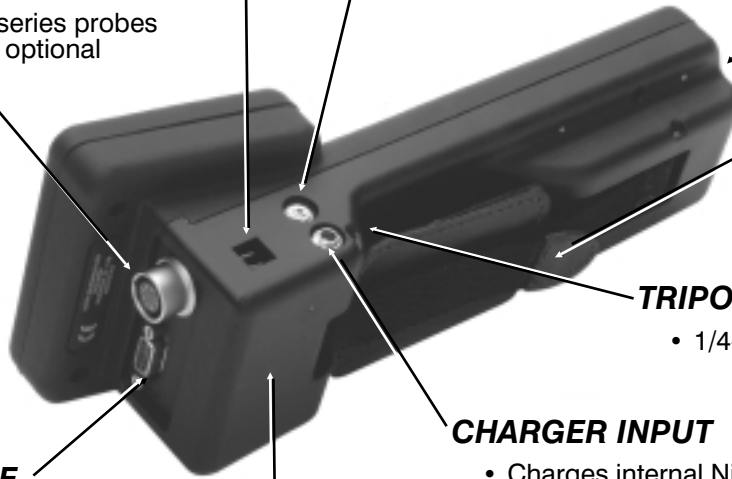
- Charges internal NiCad battery
- Connect to mains for long term monitoring

## RS232 INTERFACE

- Connect to PC to extract logged data or to input probe calibration information via Narda Windows™ compatible Interface Software
- Connect here for real time interface

## AUDIO ALARM

- Alarms at precise, preset level
- Variable tone mode available
- Alarms if input exceeds probe's measurement range



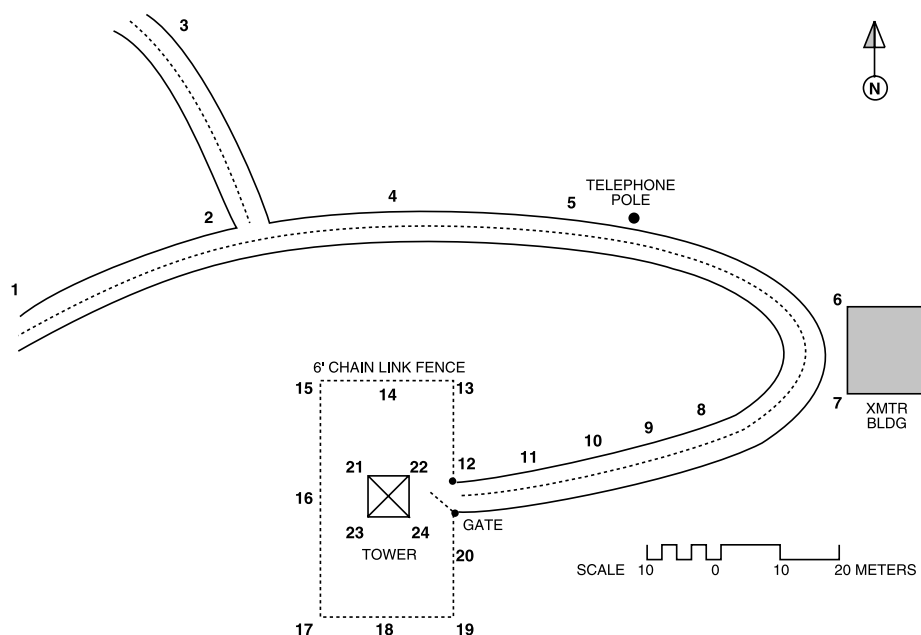
## Make measurements and log them at the same time

Log continuously for up to 24 hours  
(You can store over 3,000 data points)

- 1 sample per second
- 10 samples per minute
- 1 sample per minute
- 10 samples per hour
- 2 samples per hour

## Measure point by point and tie data to a site plan or machine diagram

- Log instantaneous values
- Make whole body average measurements and log the average and peak values
- Turn on the tone generator so you don't even have to look at the meter, like around high voltage or when climbing



Typical Site Plan with Measurement Locations Keyed to logged Data File

# Electric and Magnetic Field Measurement

## Download the survey data using your personal computer and Windows™\* compatible software

- View the data in tabular and bar graph formats
- Print the screen data
- Export and convert to either text or spreadsheet formats
- Retain a permanent record of meter and probe model numbers, serial numbers, calibration dates, and date of survey

### PRESENTATION

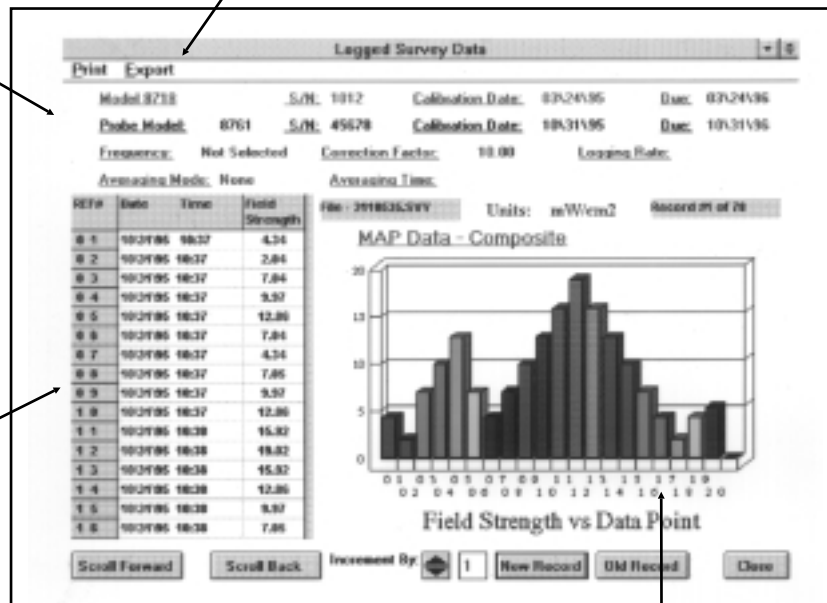
- On Screen
- Print Screen
- Export as Spread Sheet file (\*.csv)
- Export as ASCII text (\*.txt)

### PERMANENT RECORD

- Meter Model, S/N, and Calibration Date
- Probe Model, S/N, and Calibration Date
- Frequency Correction
- Averaging Mode
- Logging Rate
- Unit of Measure

### DATA POINTS

- Date
- Time
- Reference Number
- Field Strength



### BAR GRAPH

- Range Automatically Adjusted
- View up to 32 Data Points
- Scroll Forward or Backward

Sample of Survey Data Collected One Data Point at a Time

\*Windows 3.1, Windows 95, Windows 98, and Windows NT

## User's Guide

- **Comprehensive**
- **Easy to Use**

### DESCRIPTION

The User's Guide for the new 8718B is modeled after the best software manuals. Read only the first few pages and you will understand all the features of the 8718B and how to make basic measurements. When you are ready to make advanced measurements such as spatial averaging, data logging or time averaging, it is easy to go directly

to the appropriate chapter and find detailed, step-by-step instructions with views of the various display screens.

The applications sections includes detailed applications notes that cover some of the more demanding measurement situations.

#### Part I. Operating the Meter

Hardware Description  
Basic Operation and Measurements  
Advanced Features  
User Interface Software

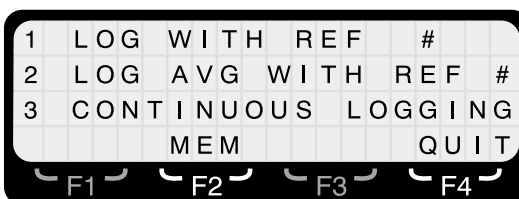
#### Part II. Applications

Basic Measurement Techniques  
Surveying Communications Sites  
Radar Measurements  
Low Frequency Measurements  
Millimeter Wave Measurements

### ◆◆◆◆ Mode 2 Logging

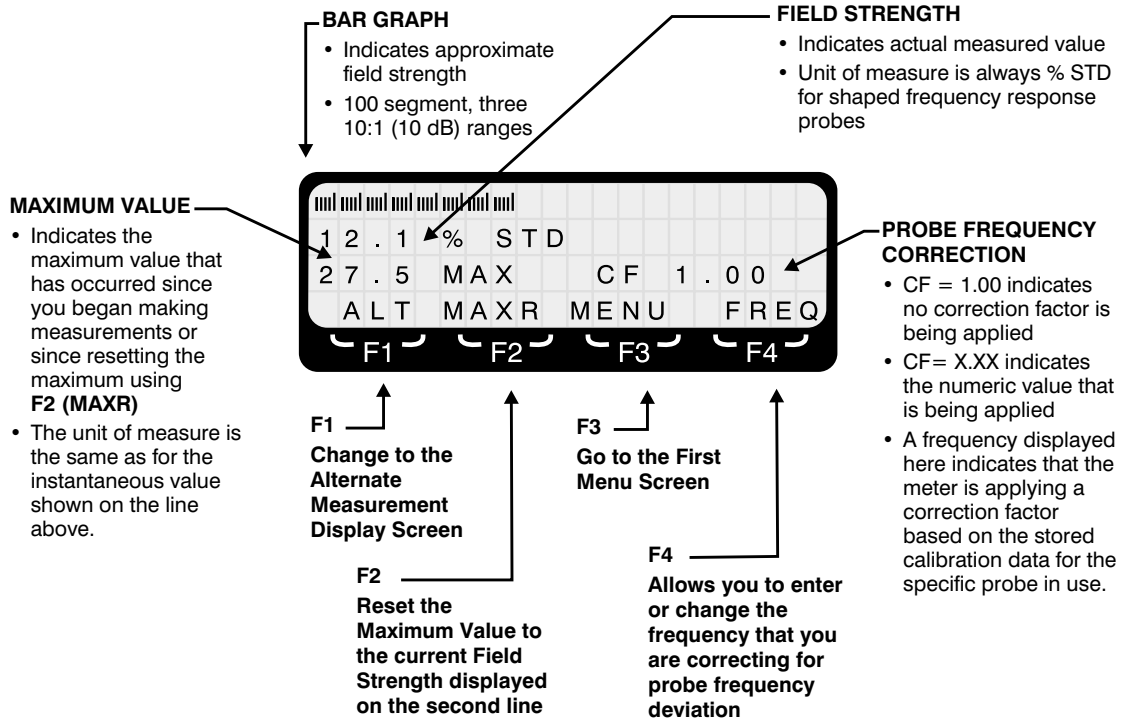
**To initiate Mode 2 logging (a series of spatially-averaged data points with a reference number assigned to each data point)...**

1. From the main data-logging screen, press the number **2** on the keypad to select **LOG AVG WITH REF #** from the logging menu screen.



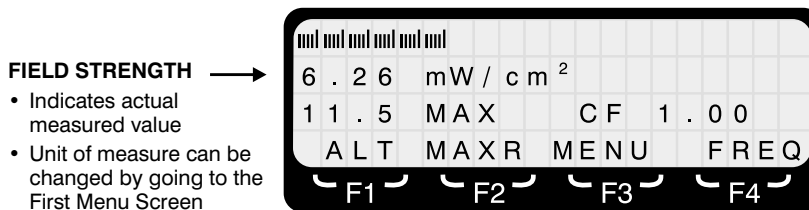
2. A screen will appear requesting that you assign a two-digit *survey number* to this logging run of data points. Use the numeric keypad to enter the two-digit number and then press **F1 (OK)** or **ENTER**. Make note of this number so that you can later associate this survey number with the data points collected. If you make a mistake, press **F2 (CLR)** to clear the screen and enter a new survey number.

## ◆◆◆◆ Main Measurement Display Screen (Shaped Probes)



## ◆◆◆◆ Main Measurement Display Screen (Flat Probes)

The Main Measurement Display Screen for flat frequency response probes is the same as the screen for shaped frequency response probes except as indicated below.



## SPECIFICATIONS

<b>Model</b>	8718B-XX <sup>a</sup>
<b>Display</b>	4 Line x 20 character alphanumeric dot matrix liquid crystal display with back light
<b>Size</b>	11.3" x 3.4" x 2.2" (28.9 cm x 6.0 cm x 5.5 cm) nominal.
<b>Weight</b>	3.0 lbs (1.36 kg)
<b>Controls</b>	22 Key membrane keypad
<b>Input/Output</b>	Probe cable input Fiber optic link input RS232 Input/Output Probe RF Test Sources (dual frequency) Recorder output
<b>Zeroing</b>	One touch auto-zero
<b>Measurement Range</b>	Single, 30 dB dynamic range Bar graph autoranges or select one of three 20 dB ranges Compatible with all Narda 8700 Series probes
<b>Units</b>	mW/cm <sup>2</sup> , W/m <sup>2</sup> , V/m, A/m, V <sup>2</sup> /m <sup>2</sup> , A <sup>2</sup> /m <sup>2</sup> , pJ/cm <sup>3</sup> and Percent of International Standards
<b>Data Logging</b>	Log any data point with time/date stamp from primary measurement mode Log with time/date stamp and reference number Continuous logging at user defined rate and duration for up to 24 hours
<b>Averaging</b>	Time and spatial averaging capabilities with variable time periods and update rates
<b>Audible Alarms</b>	Multilevel adjustable audio output proportional to field strength Probe overload warning
<b>Maximum Level Hold</b>	Continuously available
<b>Battery</b>	7.2V rechargeable <sup>b</sup> , approximately 20 hours per charge (backlight off)
<b>Built-in Test Features</b>	Unit has dual frequency RF sources for system check and selfdiagnostics at turn on with continuous monitoring
<b>Temperature Operating</b>	-10°C to +50°C
<b>Non-Operating</b>	-20°C to +70°C
<b>Humidity</b>	0% to 95%, non-condensing
<b>Accessories Supplied</b>	Storage case that holds meter and up to four probes and optional fiber optic link, charger, probe extension cable Model 8744-04, electric field attenuator Model 8713B, PC interface cable, manual, and Windows™ compatible software for survey and calibration data transfer
<b>Optional Accessories</b>	Tripod and Insulated Handle Adaptor, Insulated Handle/Tripod

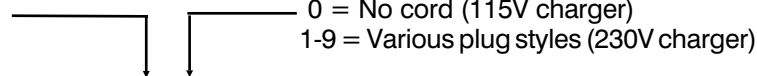
<sup>a</sup> Specify the appropriate charger and power cord option

<sup>b</sup> Dispose of properly

## ORDERING INFORMATION

When ordering a Model 8718B meter, select the appropriate battery charger and line cord option and add it to the basic instrument model number. For 230V, 50-60 Hz options and line cord plug outlines, refer to *Battery Charger and Line Cord Options*.

- 1 = 115V, 50/60 Hz charger with integral plug. No cord required (specify option 10).
- 2 = 230V, 50/60 Hz charger. Cord required .



8718B- \_ \_

Examples: 8718B-10 = 115V, integral plug (no line cord) for North America, Japan  
8718B-23 = 230V, line cord for United Kingdom