

#### RF Test Instruments

## **RF Leak Detector/ Attenuation Meter**

Model MF-9F

#### **FEATURES:**

- Shielding Attenuation Measurements per:
  - MIL-STD-285
  - NSA 65-6
  - IEEE STD-299
  - EN 50147-1
- Stores / downloads up to 63 Attenuation Levels per Frequency
- Includes Windows® Compatible-Software
- Easy-To-Use, Portable



Model MF-9F-LF

# **ETS-LINDGREN'S MF-9F-LF AND MF-9F-HF LEAK DETECTOR KITS** are designed to simplify the performance evaluation of shielded enclosures. Both kits offer the ability to make measurements for military and commercial standards. The receiver module can store up to 63 attenuation levels per frequency to download to a PC. Familiar Windows® compatible software is included for viewing, processing, and printing data.

#### **MODELS**

The Model MF-9F-LF is intended for testing at lower frequencies: 10 kHz, 156 kHz, 1 MHz, 10 MHz. The Model MF-9F-HF is intended for testing at higher frequencies: 8 MHz, 16 MHz, 32 MHz, 64 MHz.

The Model MF-9F-VHF is intended for testing at 128 MHz frequency.

Each kit contains a receiver and matching transmitter, detachable antenna elements, spacers, battery chargers, manual, PC software and a carrying case.

#### **Operation**

Both transmitters and receivers feature backlit LCD displays, easy to use keypads, and rechargeable NiMh batteries. The receiver's LCD displays frequency, attenuation level and battery condition. The keypad can be used to select MIL-STD or EN testing, and to set an attenuation threshold level for activating an audio alarm.

The receiver also has USB port to download data to a PC. The transmitter LCD displays frequency and battery condition.

#### **APPLICATIONS**

#### Testing per NSA 65-6/IEEE STD-299/ EN 50147-1:

The receiver is placed inside the enclosure, at a point opposite the transmitter outside of the enclosure. Included spacers maintain correct distance from receiver and transmitter and the shield barrier. The attenuation can now be read on the receiver's LCD and stored in memory for later downloading.



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#### **Testing per MIL-STD-285:**

The receiver is placed inside the enclosure, at a point opposite the transmitter outside of the enclo- sure. Included spacers maintain correct distance from receiver and transmitter and the shield barrier. Place the transmitter and receiver in vertical orientation to each other to attain the minimum attenuation value. The attenuation can now be read on the re-

ceiver's LCD and stored in memory for later downloading.

### **Standard Configuration for both Kits**

- Transmitter
- Receiver
- Detachable antenna elements
- Battery chargers

- USB cable
- Windows® XP and 7 compatible software
- Manual
- Carrying case

#### **Options**

Additional antenna elements

#### **Electrical Specifications**

MODEL	MF-9F	LF ANTENNA	HF ANTENNA	VHF ANTENNA
Fequency Range	N/A	10 kHz	8 MHz	128 MHz
		156 kHz	16 MHz	
		1 MHz	32 MHz	
		10 MHz	64 MHz	
Fequency Accuracy	max. (5 ppm/10)	N/A	N/A	N/A
Dynamic Range				
MIL-STD-285	130 dB	120 dB	110 dB	130 dB
NSA 65-6	130 dB	130 dB	120 dB	130 dB
IEEE STD-299	130 dB	130 dB	120 dB	130 dB
EN 50147-1	130 dB	130 dB	120 dB	130 dB
Attenuation Accuracy	± 2 dB	± 2 dB	± 2 dB	± 2 dB
Output Power	N/A	2 W max.	2 W max.	1 W max.
Antenna	N/A	2 layer PCB antenna	1 layer PCB antenna	External Connector: BNC 50 Ω
Display		128 x 64 LCD matrix display with background light		
Memory		63 memory locations for attenuation values for each frequency		
Preset functions		Attenuation limit in dB		
Calibration		Auto Calibration		
Power Supply, both		6 x 1.2 Volt NiMh battery (D)		
Battery life		Transmitter 10 to 15 hours Receiver 15 to 20 hours		

#### **Physical Specifications**

PHYSICAL SPECIFICATION (FOR ALL KITS)			
Case Dimensions	530 mm x 190 mm x 400 mm ( L x W x H)		
Temperature Range	+5° C to + 40° C (41° F to 103° F)		
Storage Temperature	-5° C to + 45°C (23° F to 113° F)		