



## AMETEK® MARK Series Audio Dosimeters

- ❑ **Meets MSHA 2G Safety Approval UL Listed**
  - Class 1: C, D
  - Class II: E, F, G
  - Class III: Hazardous Locations
  - FM
  - CSA
- ❑ **Simple Pushbutton Operation**
- ❑ **Data Export Capability to Personal Computer**
- ❑ **Lightweight, Convenient to Use**
- ❑ **Dosimeters May Be Upgraded with New Functions**
- ❑ **Complete Noise Monitoring Kits**

### PRODUCT DESCRIPTION

AMETEK MARK Series audio dosimeters are designed for accuracy, reliability and ease-of-use. Available in three models, these extremely portable and lightweight instruments are convenient and easy to wear. They can also be used as Sound Level Meters.

#### Easy-To-Use

The MARK Series feature simple pushbutton operation. Press a pushbutton and you sequentially display sampled data without disrupting the sampling process. Status indicators allow the user to see at a glance that the unit is operating or if the battery is needing to be charged. The instruments also include a large, easy-to-read display. A microphone boom is included allowing the instrument to be used in the sound meter mode.

MARK Series dosimeters can be used with the AMETEK CPI PLUS Computer Interface and Data Logger allowing data to be downloaded to your personal computer,

#### Safety Approvals

MARK Series dosimeters are UL® Listed for use in hazardous environments and they conform to the performance and intrinsic safety standards of the Mine Safety and Health Administration (MSHA).

#### Convenience

The MARK Series are extremely lightweight and comfortable to wear. Units weigh only 9 ounces (250g). They feature an impact resistant housing with tamper-resistant, lockable cover. There are no exposed keypads. The MARK Series feature field replaceable microphones that eliminate the need for time-consuming factory returns. And their commonality of components allow users to upgrade their MARK Series dosimeter with added features as their needs expand.

AMETEK has also developed convenient kits that include up to ten MARK Series dosimeters and all the accessories you'll need for a complete noise monitoring system.



*MARK Series dosimeters with AC Series Calibrators*

## SPECIFICATIONS

The following specifications are common to all MARK Series dosimeters whether uses as noise dosimeters or sound level meters.

### Dimensions

Dosimeter  
4.4 x 2.5 x 1.1-inches  
(11.2 x 6.4 x 2.8 cm)

Sound Level Meter with Boom  
10 x 2.5 x 1.1-inches  
(25.4 x 6.4 x 2.8 cm)

### Weight

9 ounces (250g)

### Microphone

1/2-inch (1.27) ceramic-type (replaceable)

### Approvals

MSHA 2G Safety Approval UL® Listed  
- Class 1: C, D  
- Class II: E, F, G  
- Class III: Hazardous Locations  
- FM  
- CSA

### Battery Life

40-hours, 9V alkaline

### Sensitivity to Vibration

No effects at levels of 0.1G (20-400 Hz) or less

### Sensitivity to Magnetic Fields

No effect at 3,000 A/m or less

### Temperature Range

For  $\pm 0.7$  dB 0° to 122°F (-18° to 50°C)

### Relative Humidity

5% to 95% R.H. noncondensing

## OPERATING PARAMETERS

When uses as an audio dosimeter, the MARK Series meets the specification requirements of ANSI S1.25-1978 over the range of 80 to 138 dB and fulfills ISO 1999.

### Class Designation

2A-(Lc)/(Lt)-D

### Weighting (User-Selectable)

"A" or "C"

### Criterion Level (Lc) (User-Selectable)

80, 84, 85 and 90 dB

### Threshold Level (User-Selectable)

None, 80, 85 and 90 dB

### Exchange Rate (D) (User-Selectable)

3, 4, 5 and dB

### Operating Range

80 to 148 dB (148 dB Peak)

### Criterion Duration

8-hours

### Response (User-Selectable)

"Slow" or "Fast"

### Crest Factor

Meets requirements of:  
- ANSI S1.25-1978  
- OSHA Hearing Conservation Amendment, January 1981 (30 dB  $\pm 1.5$  dB)

### Readout

Built-in liquid crystal display LCD

When uses as sound level meter, the MARK Series meets the Type S2A accuracy requirements of ANSI S1.4-1983 and IEC 651.

### Operating Range (User-Selectable)

80 to 140 dB  
60 to 120 dB  
50 to 100 dB

### Weighting (User-Selectable)

"A" or "C"

### Response (User-Selectable)

"Slow" or "Fast"

### Readout

Built-in liquid crystal display LCD

### SLM

50.0 to 140.0 dB

### Maximum Level ( $L_{max}$ )

50.0 to 140.0 dB

### Fast ( $L_{max}$ )

1/16 second average

## FUNCTIONAL DESCRIPTIONS

Feature	Description
Time	Exposure Time (HH:MM)
STBY	Stand By
DOSE %	Exposure DOSE (%) based on selected threshold level
Lavg	Average dB level based on selected threshold level
SLM	Sound Level Meter
$L_{max}$	Maximum Sound Level (Highest 1-second average)
DOSE % 90 dB Threshold	Exposure DOSE (%) based on 90 dB threshold
Lavg 90 dB Threshold	Average dB level based on 90 dB threshold
Time $L_{max}$	Time $L_{max}$ occurred
Fast $L_{max}$	Maximum sound level 1/16 second sample
Projected 8-hour DOSE	Projected 8-hr Exposure DOSE based on selected threshold level
Time of > 115 dB	Time when a value > 115 dB occurred
Lavg 1-minute Data	Average dB level collected for 1 minute
Lavg Time History	
Lavg Histogram	

## SELECTION GUIDE

FEATURES	MARK 1	MARK 2	MARK 3
Time	Standard	Standard	Standard
Stand By	Standard	Standard	Standard
DOSE %	Standard	Standard	Standard
Lavg	Standard	Standard	Standard
SLM	Standard	Standard	Standard
Lmax	Standard	Standard	Standard
DOSE % 90 dB Threshold	Optional	Standard	Standard
Lavg 90 dB Threshold	Optional	Standard	Standard
Time Lmax	Optional	Standard	Standard
Fast Lmax	Optional	Standard	Standard
Projected 8-hour DOSE	Optional	Standard	Standard
Time of > 115 dB	Optional	Standard	Standard
Lavg 1-minute Data	Optional	Optional	Standard
Lavg Time History	Optional	Optional	Standard
Lavg Histogram	Optional	Optional	Standard



### **MARK Series Dosimeter Kits**

Self-contained dosimeter kits complete with:

- MARK Series Dosimeter
- AC-94 Calibrator (AC-1 optional)
- Microphone Boom
- Windscreen
- Tool Kit
- Two 9V Alkaline Batteries
- Carrying Case



### **MARK Series Survey Packs**

Self-contained dosimeter kit complete with:

- MARK 3 Series Dosimeter
- CPI PLUS Computer Interface and Data Logger



### **MARK Series Travel 5 Packs**

Complete kits MARK Series dosimeters and all accessories including:

- Five (5) MARK Series Dosimeters
- AC-94 Calibrator (AC-1 optional)
- Seven (7) Windscreens
- Five (5) Microphone Booms
- Six (6) 9V Alkaline Batteries
- Tool Kit
- Carrying Case

The Travel 10 Pack comes with ten (10) MARK Series dosimeters, Eleven (11) batteries, Fourteen (14) windscreens and ten (10) microphone booms.

Note: Travel kits may be specified with any MARK Series dosimeter. The AC-1 acoustical calibrator may also be optionally specified.

---

## ORDERING INFORMATION

### MARK SERIES DOSIMETERS

Order Number	Description
	<b>Complete Single Units</b>
	Single units are shipped complete with microphone boom, windscreen, tool kit, batteries and carrying case.
H5300	MARK-1 Audio Dosimeter
H5325	MARK-2 Audio Dosimeter
H5335	MARK-3 Audio Dosimeter
	<b>Dosimeter Kits</b>
	Single units are shipped complete with microphone boom, windscreen, tool kit, batteries, AC Series acoustical calibrator and carrying case.
H5317	MARK-1 Kit with AC-94 Acoustical Calibrator
H5331	MARK-2 Kit with AC-94 Acoustical Calibrator
H5337	MARK-3 Kit with AC-94 Acoustical Calibrator
H5351	MARK-1 Kit with AC-1 Acoustical Calibrator
H5352	MARK-2 Kit with AC-1 Acoustical Calibrator
H5353	MARK-3 Kit with AC-1 Acoustical Calibrator
	<b>Travel Packs</b>
	Travel Packs include MARK Series dosimeters, AC Series acoustical calibrator, microphone booms, windscreens, batteries, tool kit and carrying case.
H5305	5 Pack, MARK-1 Series with AC-94 Acoustical Calibrator
H5329	5 Pack, MARK-2 Series with AC-94 Acoustical Calibrator
H5339	5 Pack, MARK-3 Series with AC-94 Acoustical Calibrator
H5354	5 Pack, MARK-1 Series with AC-1 Acoustical Calibrator
H5355	5 Pack, MARK-2 Series with AC-1 Acoustical Calibrator
H5356	5 Pack, MARK-3 Series with AC-1 Acoustical Calibrator
H5304	10 Pack, MARK-1 Series with AC-94 Acoustical Calibrator
H5330	10 Pack, MARK-2 Series with AC-94 Acoustical Calibrator
H5340	10 Pack, MARK-3 Series with AC-94 Acoustical Calibrator
H5357	10 Pack, MARK-1 Series with AC-1 Acoustical Calibrator
H5358	10 Pack, MARK-2 Series with AC-1 Acoustical Calibrator
H5359	10 Pack, MARK-3 Series with AC-1 Acoustical Calibrator
	<b>Survey Packs</b>
	Survey packs include MARK-3 Series dosimeter with CPI PLUS computer interface and data logger
H5388	MARK-3 with CPI PLUS Computer Interface/Data Logger, No Carrying Case
H5460	MARK-3 with CPI PLUS Computer Interface/Data Logger, AC-94 Acoustical Calibrator, No Carrying Case
H5485	MARK-3 with CPI PLUS Computer Interface/Data Logger, AC-1 Acoustical Calibrator, No Carrying Case
H5439	MARK-3 with CPI PLUS Computer Interface/Data Logger, AC-94 Acoustical Calibrator and Carrying Case
H5440	MARK-3 with CPI PLUS Computer Interface/Data Logger, AC-1 Acoustical Calibrator and Carrying Case