

# FMLR FlexMic™ Series



**FMRLR Series:** Gooseneck with Rigid Center and Flex at Both Ends with Light Ring

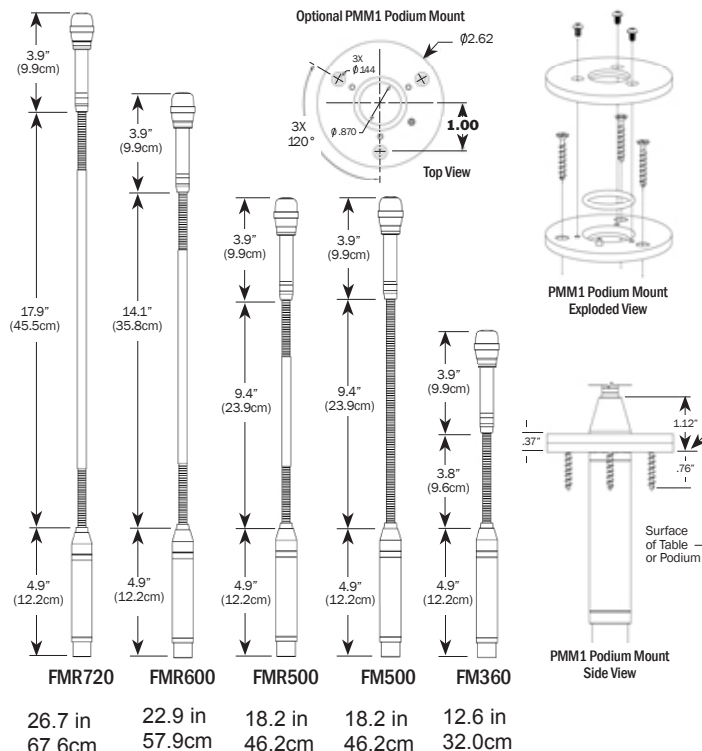
**FMLR Series:** Fully Flexible Gooseneck with Light Ring

Preliminary Data Sheet: Specifications Subject to Change without Notice



- Light Ring at Tip for Visual On/Off Indication
- Uniform Frequency Response out to 70° off-axis
- On or Off Axis, Always Hear the Orator
- High Intelligibility
- More Gain Before Feedback
- Low Handling Noise
- 139dB SPL Max Acoustic Input
- 20kHz High Frequency Response
- Incredible RFI Rejection
- Slim Gooseneck for Low Profile Appearance
- Available with either a red or green LED light ring
- Available in Cardioid or Hypercardioid
- Models Available with either Fully Flexible Gooseneck or Rigid Center Goosenecks with flex at both ends in Short, Medium or Long Lengths
- Optional PMM1 Podium Mount Accessory

*"I have installed sound systems for churches in over 38 states. The FlexMic is always my first choice for podium microphones. It maintains its incredible, clear, sound quality at the front as well as at the sides of the microphone with phenomenal gain before feedback"* Gary Emory, Brightwater Digital



The Earthworks FMLR Series offers versatile options that will provide the ideal choice for a spectacular podium microphone. These microphones are the choice of those who demand the very best. Earthworks FlexMics™ are in use in boardrooms, civic centers, theatres, churches, universities and government facilities.

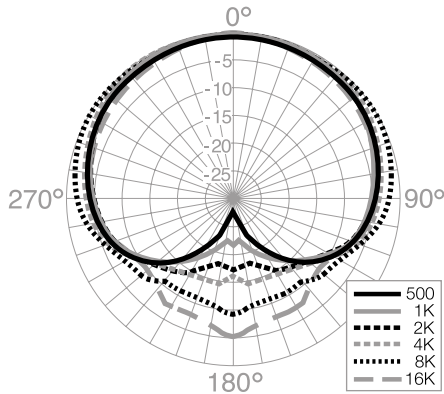
The LED light ring indicates on/off status and is programmable by an external media control system. Available in red or green.

Earthworks patented technologies provide high intelligibility and uniform off-axis response to ensure that the orator is always heard and well understood at the front, at the sides, below or above the microphone. This uniform off-axis response also provides more gain before feedback. With 139dB SPL max acoustic input, it is virtually impossible to overload the microphone. There is also minimal microphone handling noise in addition to incredible RFI rejection.

The Earthworks FMLR Series models provide a variety of choices with fully flexible goosenecks or goosenecks with rigid centers that have flex at both ends. All models have a low profile 7mm diameter gooseneck and are available in either cardioid or hypercardioid polar patterns. The optional PMM1 podium mount will work with any FlexMic™ Series model.

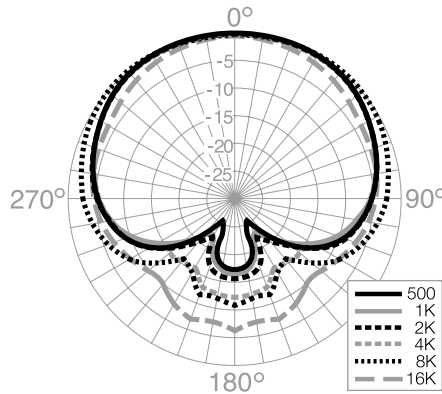
See full specifications on back of page

# SPECIFICATIONS



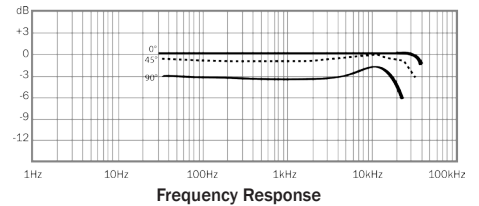
**Cardioid  
Polar Response**

Above polar applies to all  
Cardioid models in the  
FMLR and FMRLR Series

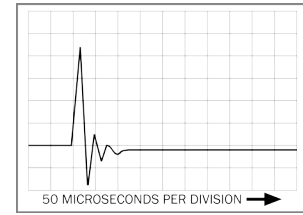


**Hypercardioid  
Polar Response**

Above polar applies to all  
Hypercardioid models in the  
FMLR and FMRLR Series



**Frequency Response**



**Impulse Response**

Above graphs apply to all cardioid  
and hypercardioid models in the  
FMLR and FMRLR Series

## FMLR Series

Fully Flexible Gooseneck with Light Ring

FM360-LR & FM500-LR  
FM360/HC-LR & FM500/HC-LR

### Specifications

**Frequency Response:** 100Hz - 20kHz  
**Polar Pattern:** Cardioid or Hypercardioid  
**Sensitivity:** 20mV/Pa (-34dBV/Pa)  
**Power Requirements:** 24-48V Phantom, 10mA  
**Max Acoustic Input:** 139dB SPL  
**Connector:** XLR-5 (audio pin 5+, pin 3-)  
**Output Impedance:** 65 ohms balanced (between pins 3 & 5)  
**Min Output Load:** 600 ohms between pins 3 & 5  
**Noise:** 16dB SPL equivalent (A weighted)  
**LED Color:** Choice of Green or Red  
**LED Voltage:** 9-12VDC (pins 2+ & 4-)  
**LED Current:** 18mA at 12V  
**Gooseneck:** Fully flexible gooseneck  
Diameter .275 in. (7mm)  
**Dimensions:** Base diameter is .860" (22mm)  
Lengths: FM360-LR 12.6in. (32.0cm) &  
FM500-LR 18.2in. (46.2cm)  
**Weight:** 0.3 lb. (137g)

### Architectural & Engineering Specifications

The microphone shall be a back-electret condenser type with a wide-range uniform frequency response of 100 Hz to 20 kHz. The microphone shall have an output level of 10 mV/Pa. The microphone shall be of a single capsule, single membrane design. The microphone shall have an impulse response with the rise time no longer than 25 microseconds, and total settling time, including the rise time, no longer than 120 microseconds. The microphone shall have polar characteristics uniform in all planes to form either a cardioid or hypercardioid of revolution. Response at any angular position up to 70° away from the major axis within frequency range from 500 Hz to 16 kHz shall deviate by no more than ±3 dB from the ideal cardioid or hypercardioid pattern as described by the following equation:  $SPL(a)=20 \cdot \log(1/2+\cos(a)/2)$  (dB), where a is the angle in radians between the measurement source position axis and the major axis. The microphone shall accept sound pressure levels up to 139 dB producing no more than 3% THD. Overall length above the XLR connector shall be 12.6 in. (32.0cm) long for FM360-LR, 18.2 in. (46.2cm) long for the FM500-LR. The maximum head diameter shall be 1.0 in (25 mm). The microphone shall be terminated with a professional gold-plated 5 pin XLR connector. The microphone shall include an external metal mesh windscreen. The microphone shall require 24-48V phantom power. The Earthworks FM360-LR, FM500-LR or FM360/HC-LR, FM500/HC-LR is specified.

## FMRLR Series

Gooseneck with Rigid Center  
and Flex at both ends with Light Ring

FMR500-LR, FMR600-LR & FMR720-LR  
FMR500/HC-LR, FMR600/HC-LR & FMR720/HC-LR

### Specifications

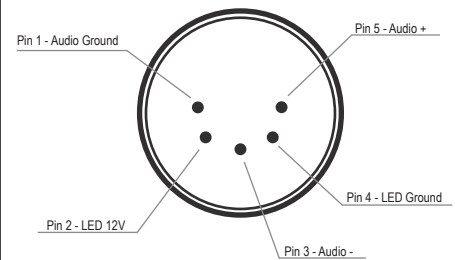
**Frequency Response:** 100Hz - 20kHz  
**Polar Pattern:** Cardioid or Hypercardioid  
**Sensitivity:** 20mV/Pa (-34dBV/Pa)  
**Power Requirements:** 24-48V Phantom, 10mA  
**Max Acoustic Input:** 139dB SPL  
**Connector:** XLR-5 (audio pin 5+, pin 3-)  
**Output Impedance:** 65 ohms balanced (between pins 3 & 5)  
**Min Output Load:** 600 ohms between pins 3 & 5  
**Noise:** 16dB SPL equivalent (A weighted)  
**LED Color:** Choice of Green or Red  
**LED Voltage:** 9-12VDC (pins 2+ & 4-)  
**LED Current:** 18mA at 12V  
**Gooseneck:** Rigid center with 2.5in. to 3in. flex on both ends. Diameter .316 in. (8mm)  
**Dimensions:** Base diameter is .860" (22mm)  
Lengths: FMR720-LR 26.7 in. (67.6cm),  
FMR600-LR 22.9 in. (57.9cm),  
FMR500-LR 18.2 in. (46.2cm)  
**Weight:** 0.3 lb. (137g)

### Architectural & Engineering Specifications

The microphone shall be a back-electret condenser type with a wide-range uniform frequency response of 100 Hz to 20 kHz. The microphone shall have an output level of 10 mV/Pa. The microphone shall be of a single capsule, single membrane design. The microphone shall have an impulse response with the rise time no longer than 25 microseconds, and total settling time, including the rise time, no longer than 120 microseconds. The microphone shall have polar characteristics uniform in all planes to form either a cardioid or hypercardioid of revolution. Response at any angular position up to 70° away from the major axis within frequency range from 500 Hz to 16 kHz shall deviate by no more than ±3 dB from the ideal cardioid or hypercardioid pattern as described by the following equation:  $SPL(a)=20 \cdot \log(1/2+\cos(a)/2)$  (dB), where a is the angle in radians between the measurement source position axis and the major axis. The microphone shall accept sound pressure levels up to 139 dB producing no more than 3% THD. Gooseneck will have a rigid center section with flexible gooseneck at both ends. Overall length above the XLR connector shall be 18.2 in. (46.2cm) long for FMR500-LR, 22.9 in. (57.9cm) long for FMR600-LR and 26.7 in. (67.6cm) long for the FMR720-LR. The maximum head diameter shall be 1.0 in (25 mm). The microphone shall be terminated with a professional gold-plated 5 pin XLR connector. The microphone shall include an external metal mesh windscreen. The microphone shall require 24-48V phantom power. The microphone shall be made of metal with black finish. The Earthworks FMR500-LR, FMR600-LR or FMR720-LR cardioid or FMR500/HC-LR, FMR600/HC-LR or FMR720/HC-LR is specified.

## Pin Out Diagram

Pin 1 Audio Ground  
Pin 2 LED 12V  
Pin 3 Audio -  
Pin 4 LED Ground  
Pin 5 Audio +



## LED Notes

**LED Voltage:** 9V - 12VDC

**LED Current** 18mA at 12VDC

**LED Color:** Choice of Green or Red

*Red LED is indicated by a -R at the end of the model number. Green LED is indicated by a -G at the end of the model number. (i.e. Red LED: FM500-LR-R).*

The LEDs are to be operated off of an external power supply from 9VDC - 12VDC. No current limiting is needed.

The LED ground and Audio ground are connected inside the microphone's body. Using an external LED supply will ensure no ground loops and unwanted hum.

Use of shielded cables is recommended.

## Green LED Models

FM360-LR-G  
FM360/HC-LR-G  
FM500-LR-G  
FM500/HC-LR-G  
FMR500-LR-G  
FMR500/HC-LR-G  
FMR600-LR-G  
FMR600/HC-LR-G  
FMR720-LR-G  
FMR720/HC-LR-G

## Red LED Models

FM360-LR-R  
FM360/HC-LR-R  
FM500-LR-R  
FM500/HC-LR-R  
FMR500-LR-R  
FMR500/HC-LR-R  
FMR600-LR-R  
FMR600/HC-LR-R  
FMR720-LR-R  
FMR720/HC-LR-R

Specifications Subject to Change without Notice

