

# SM-120-LR

## Slant Stage Monitor



### Application

The SM-120-LR fulfills the intense need for a compact stage foldback monitor enabling performers to hear the full sonic production while being clearly intelligible at high sound pressure levels. Its wide bandwidth and smooth response make it ideally suited for many types of stage applications, from simple voice foldback to complex vocal over instrument monitoring.

Qualitatively, the SM-120-LR provides more gain before feedback than the simple cone driver, tweeter based monitors often used for foldback applications.

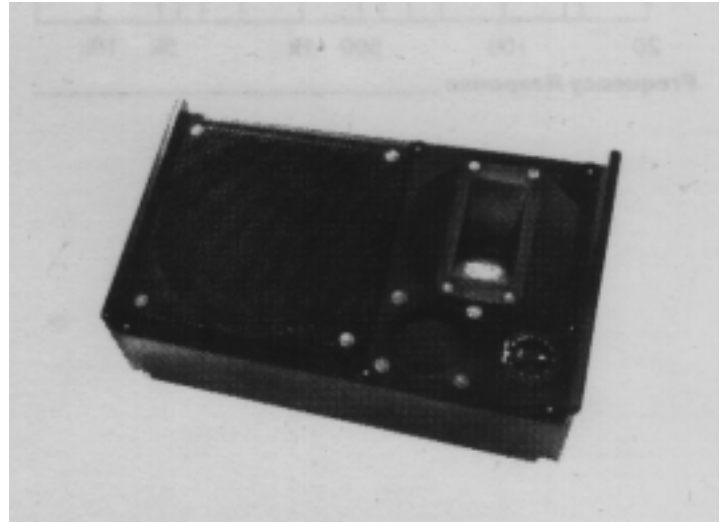
### Description

The SM-120-LR was designed to eliminate compromises in mid-band and bass response that plague most of the competitive monitors. Using rugged professional quality EAW/RCF drivers and a carefully designed third order equalized frequency dividing network, exceptionally smooth response is achieved through the critical mid-band region. This allows for superior gain before feedback and vocal articulation as compared with simpler designs.

Physical design and implementation benefits from EAW's years of touring concert equipment design experience, offering minimum stage height for excellent sight lines, four angle cabinet design for optimum monitor/performance geometry and complete road hardware including perforated steel speaker grill, feet and recessed handles. The SM-120-LR uses the same 18 ply per inch cross grain laminated baltic birch hardwood and black polyurethane scuff-resistant coating as EAW's larger systems. EAW's cabinets have acquired a reputation for being virtually indestructible.

### Mid/High Frequency Performance

The SM-120-LR uses the CD-2552 compression driver with a 17,500 gauss flux density magnetic structure mated to an 1000 Hz exponential horn. This driver uses a double suspension composite diaphragm for maximum power handling and field reliability. The phasing plug and compression chamber have been optimized to suppress the inherently rising mid-band output, resulting in smooth response to the 17,000 Hz region.

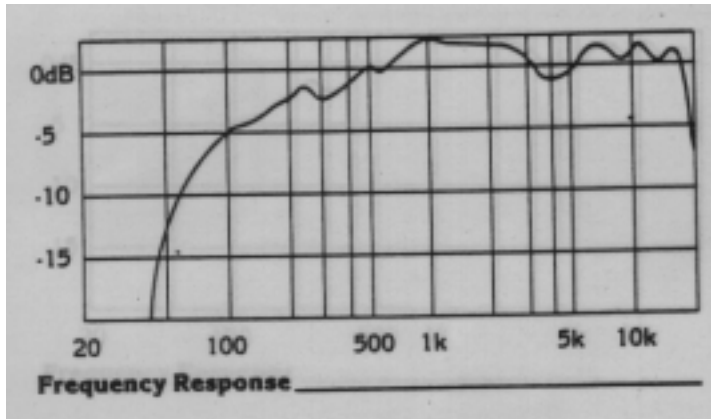


### Frequency Dividing Network

The crossover design of the SM-120-LR system is third-order with 18 dB octave slope. This unit, with two precision air core inductors, five percent capacitors and resistors, costs twice as much as the simpler designs offered in competitive systems, but EAW crossovers eliminate the measurable distortion that plagues the others. Ours have a dynamic headroom of three times the system's power rating, the greatest overload margin of any available crossover.

### Low Frequency Performance

Bass is provided by a 300mm (12") LF-300-R driver mounted in a vented enclosure for clean output down to the 50 Hz region. The cast frame driver has a large magnet providing 14,500 gauss flux in the gap for low distortion and high efficiency. The rigid curveilinear cone is coupled to a unique bifilar 75mm (Y) voice coil that exhibits excellent diaphragm control at high power levels. Excellent bass response unusual in **a compact monitor makes** it capable of reproducing kick drum and bass guitar for important stage rhythm.



## SM-120-LR Specifications

<b>Operating Range:</b>	45 Hz to 18,000 Hz
<b>Frequency Response</b> on axis $\pm 3$ dB:	58 Hz to 16,500 Hz
<b>Sensitivity:</b>	100 dB SPL 1 w at 1 m
<b>Power Handling</b>	
Maximum:	250 w Program
Nominal:	150 w RMS
<b>Maximum Output:</b>	121.5 dB SPL 150w at 1m
<b>Nominal Impedance:</b>	8 ohms
<b>Nominal Coverage Angle:</b>	90' x 40 , dependent on horn mounting.
<b>Enclosure Type:</b>	90 liter vented box
<b>Enclosure Volume:</b>	50 litre (1.77 cu. ft.)
<b>Construction Material:</b>	Cross-grain- laminated Birch Hardwood

<b>Crossover Network</b>	
Type:	Third order, equalized
<b>Frequency:</b>	1,500 Hz
<b>Driver Data</b>	
<b>LF Driver</b>	<b>HF Driver</b>
EAW Model:	LF-30OR      CD-2552
Diaphragm:	300mm(12")      52mm (2")
	paper      composit
Flux Density:	14,000 Gauss      17,500 Gauss
Voice Coil Diameter:	75mm (Y)      52mm (2")
<b>Cabinet Dimensions:</b>	15" x 23.75" x 14.25"
<b>Weight:</b>	70 lbs.
<b>Cabinet Finish:</b>	Catalyzed Black Polyurathane
<b>Driver Protection</b>	
Mechanical:	Perforated Steel LF driver grill
Electrical:	Individual Driver Fuses