



**RENKUS-HEINZ**



**CEM64-1K  
CEM94-1K  
CEM125-1K  
CELF12-1K**

## Medium-Power **CoEntrant** Modules



### **EXCLUSIVE COENTRANT DESIGN (U.S. Pat. 5,526,456)**

provides true point source performance with outstanding resolution and tonal clarity

### **TIGHTLY CONTROLLED COVERAGE**

CoEntrant topology provides tightly controlled coverage with constant Q through crossover

### **CHOICE OF COVERAGE PATTERNS**

choose between 60° by 40°, 90° by 40° and 120° by 50° asymmetrical coverage

### **ASYMMETRICAL VERTICAL COVERAGE**

on the CEM125-1K reduces ceiling reflections and thereby improves intelligibility

### **BUILT-IN MID/HIGH FREQUENCY CROSSOVER**

eliminates the need for bi-amplification, thereby reducing system cost

### **Exclusive CoEntrant Design**

These mid/high modules were developed as replacements for conventional small and medium format horns in applications needing very high quality sound. They represent a modern, high performance alternative to the traditional horn/bass cabinet approach. They feature CoEntrant topology, a patented Renkus-Heinz breakthrough in loudspeaker design that offers true point source performance along with inherent signal alignment.

The CEM64-1K is a long throw 60° by 40° loudspeaker, the CEM94-1K a medium throw 90° horizontal by 40° vertical system and the CEM125-1K a wide angle loudspeaker with 120° horizontal by 50° asymmetrical vertical coverage. The wide-angle (120°) horizontal coverage of the CEM125-1K makes it ideal for the fan shaped and other similar wide, but shallow seating areas found in many churches, theaters and other venues. In many cases, its wide horizontal coverage eliminates the need to install two loudspeakers to adequately cover the seating area.

### **True Point Source Performance**

The unique CoEntrant design of these mid/high modules ensures constant directivity and Q through crossover with natural signal alignment. This enables them to provide tonal balance and resolution not attainable from other designs. Dual 6.5" carbon fiber low frequency drivers and an extended range 1" high frequency driver are integrated to form a wide bandwidth true point source.

### **Controlled Coverage**

The CoEntrant design of these mid/high modules provides extremely tight pattern control from 350 Hz to 18 kHz in both the horizontal and vertical planes. (The small high frequency horns used in most conventional compact loudspeakers offer relatively poor vertical control below 2 to 4 kHz.)

The CEM125-1K also provides asymmetrical vertical dispersion (20° coverage above axis and 30° below axis) to reduce ceiling reflections and thereby improve intelligibility. This allows the CEM125-1K to be "dead hung" in applications where this is desirable.

### **Matching Low Frequency Enclosure**

The matching CELF12-1K low frequency enclosure features a heavy-duty 700 Watt 12" woofer that enables it to provide solid bass down to 50 Hz.

### **Custom Flexibility**

All of these loudspeakers are available in a choice of finishes. Choices include black or white paint, custom paint colors and natural (unfinished) to allow customizing in the field. Weather resistant models are also available.

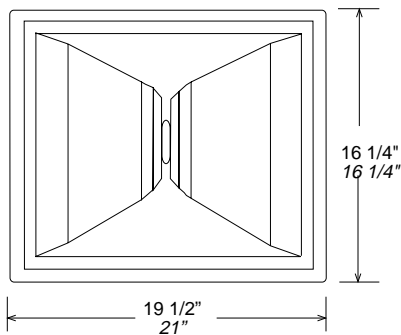
All come equipped with a unique universal mounting system that provides twelve 1/4-20 attachment points and allows the cabinets to be easily flown in any plane. Top and bottom mounted Aeroquip fly-track is also available as an added cost option.

## TECHNICAL SPECIFICATIONS

All specifications are with associated controller

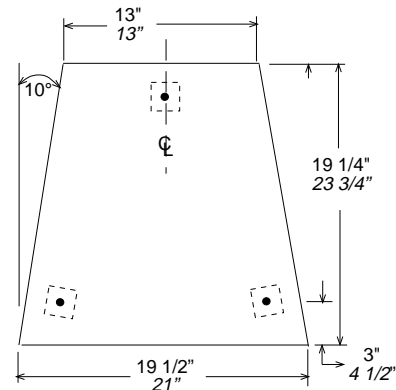
<p><b>SENSITIVITY (1w/1m):</b> CEM64-1K; 106 dB CEM94-1K; 105 dB CEM125-1K; 104 dB CELF12-1K; 95 dB</p> <p><b>MAXIMUM SPL:</b> CEM64-1K; 133 dB program CEM94-1K; 132 dB program CEM125-1K; 131 dB program</p> <p><b>CELF12-1:</b> 123 dB program</p> <p><b>DISPERSION:</b> <b>CEM64-1K:</b> 60° by 40° <b>CEM94-1K:</b> 90° by 40° <b>CEM125-1K:</b> 120° by 50° (+20° &amp; -30°)</p> <p><b>FREQUENCY RESPONSE:</b> <b>CEM64-1K/94-1K/125-1K:</b> 350 Hz to 18 kHz <b>CELF12-1K:</b> 50 Hz to 350 Hz</p> <p><b>HIGH FREQUENCY DRIVER:</b> SDA202-8, 40 W RMS at 8 Ohms, 80 Watts program</p> <p><b>MID FREQUENCY DRIVERS:</b> Two model SSL 6.5-3 6.5" cone drivers, 260 Watts RMS total @ 8 Ohms; 520 Watts pgm (total).</p>	<p><b>CELF12-1 LF DRIVER:</b> SSL12-7K 12" woofer, 350 W RMS @ 8 Ohms, 700 W prog.</p> <p><b>CROSSOVER POINTS:</b> 350 Hz and 2.2 kHz</p> <p><b>ENCLOSURE MATERIAL:</b> 13-ply hardwood with perforated metal grille</p> <p><b>CONNECTOR OPTIONS:</b> Neutrik NL4MPR or screw terminals</p> <p><b>FINISH OPTIONS:</b> Black or white paint; natural (unfinished), weather resistant</p> <p><b>MOUNTING HARDWARE:</b> UMH-12 mtg hdwr (12 1/4-20 points) Aeroquip track, top &amp; bottom</p> <p><b>DIMENSIONS:</b> <b>CEM125-1K &amp; CELF12-1K:</b> 16 1/4" H x 19 1/2" W x 19 1/4" D (41.3 cm x 49.5 cm x 48.9 cm) <b>CEM64-1K &amp; CEM94-1K:</b> 16 1/4" H x 21" W x 23 3/4" D (41.3 cm x 53.3 cm x 60.3 cm)</p> <p><b>NET WEIGHT:</b> <b>CEM125-1K:</b> 54 Lbs. (24.5 kg) <b>CELF12-1K:</b> 46 Lbs. (20.9 kg)</p> <p><b>ASSOC. CONTROLLERS:</b> X series controllers. D26 digital controller, R-H amplifiers with C &amp; PK-A controller modules</p>
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## DIMENSIONAL INFORMATION



Note:  
The attachment points have 1/4-20 threads and are positioned 1 3/4" from the cabinet edges, unless otherwise noted.

CEMH125-1B & CELF12-1 dimensions are shown in plain type; CEMH64-1B & CEMH94-1B dimensions are shown in *Italics*.



## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The loudspeaker shall be a Renkus-Heinz ( ) or approved equal 2-way loudspeaker system utilizing CoEntrant waveguide technology. It shall provide true point source performance with natural signal alignment and constant "Q" through the crossover region.

The loudspeaker system shall consist of dual 6.5" carbon fiber cone MF drivers and an extended range 1" HF driver coupled to a single mid/high frequency horn. The loudspeaker shall provide closely controlled ( ) horizontal dispersion and ( ) vertical coverage. Its high frequency power handling capacity shall be no less than 80 Watts program power @ 8 Ohms; mids shall have a 520 Watt @ 8 Ohms rating. Sensitivity shall be no less than ( ) dB @ 1w,1m with a program SPL of at least ( ) dB. The frequency response shall be 350 Hz to 18 kHz.

A matching 12" low frequency enclosure, Renkus-Heinz CELF12-1K or approved equal shall also be provided. It shall have a 700 Watt at 8 Ohms program power rating and deliver an output SPL of 123 dB from 40 to 350 Hz.

The enclosures shall be trapezoidal in shape and constructed from multi-ply hardwood. The finish shall be (black paint) (white paint) (natural) (weather resistant). Connectors shall be (screw terminals) (4-pin Neutrik connectors).

The loudspeakers shall be no larger than 16 1/4" high, 19 1/2" wide and 19 1/4" deep and shall weigh no more than 54 Lbs. (46 Lbs. on the CELF12-1). A matching perforated metal grille shall be included. The enclosures shall be equipped with universal mounting hardware providing a minimum of twelve 1/4-20 attachment points.



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