

# CRYSTAL2-I TIME-ALIGN®

## APPLICATIONS

Stadium Sound Reinforcement      House of Worship  
Auditorium Sound Reinforcement      Theatrical Sound Reinforcement  
Nightclub Installations

## DESCRIPTION

The CRYSTAL2-I is a full range, long throw loudspeaker system offering high fidelity, high efficiency and high power handling capacity. It is designed for applications where high sound pressure and highly directive long throw capability are required. The CRYSTAL2-I includes permanent rigging attachment points and three forged steel eye bolts. Constructed from 15mm 13-ply birch plywood with a black textured finish, leaving it durable and attractive.



## SPECIFICATIONS

### System Type:

2-way vented 2.5 ft<sup>3</sup>

### Enclosure:

15 mm 13-ply birch plywood  
horizontally arrayable

### Finish:

Black Ro Tex™ True water born environmental  
finish

### Grille:

14 Gauge black powder coated perforated  
steel in a welded extruded aluminum frame

### Low Frequency Components:

2 - E-12 12" Transducers, 2.5" Voice coil,  
80 oz. Magnet

### High Frequency Components:

Transducer, 1.4" Exit compression driver,  
3" Titanium diaphragm, Elliptic conical  
waveguide

### Input Connector:

Cinch 142 screw terminal barrier strip

### Hardware:

F4 Fly points  
Forged steel eye bolts

### Fly Points Safe Working Load:

200 lbs Upper most rigging points

### Crossover Type:

Passive Time-Align® equalizer type @ 1.9 kHz

### Time Offset Between Driver:

< ± 25 Microseconds

### Sensitivity:

103 dB SPL (2.83 V @ 1m)

### Frequency Response:

80 Hz to 18 kHz ±3 dB

### Low Frequency Limit:

80 Hz

### Maximum Calculated Continuous Acoustic Output:

130 dBSPL @ 1m

### Power Handling:

2000 W continuous (IEC 60268)

### Recommended Amplifier Power:

1500 to 3000 W at rated impedance

### Rated Impedance:

8 Ohms

### Coverage Pattern:

55 degrees Horizontal (-6 dB)  
40 degrees Vertical (-6 dB)

### Recommended High Pass Filter:

60 Hz

### Polarity:

A positive asymmetrical signal applied to the +  
terminal will result in a positive asymmetrical  
acoustical pressure

### Dimensions:

38" h x 14" w x 16" d  
97 cm x 36 cm x 41 cm

### Weight:

103 lbs  
47 kg

### Custom Finishes:

Optional custom finishes include white,  
unfinished ready to paint and outdoor weather  
treatment.

### 70/100/140 Volt Operation:

Optional 600 Watt taped internal transformer

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# CRYSTAL2-I TIME-ALIGN®

## ABOUT TIME-ALIGN® TECHNOLOGY

Time-Align® assures that the fundamental and overtones of a complex, transient, acoustical signal are presented to the listener in the same relationship as the electrical signal at the input terminals of the loudspeaker. The conventional loudspeaker spreads out the sound in time. When a rapid series of transients occur the results are blurring and lost detail. With Time-Align®, a transient is presented as a tight package of energy, with the same time relationships as the natural sound. This means that a rapid series of transients will be heard clearly.



True Time-Alignment™ requires much more than just physically lining up the loudspeaker components. It requires consideration of the driver placement, driver delay and adjustment of the crossover delay parameters. This achieves the precise simultaneous acoustical arrival time of each driver throughout the crossover region.

The first Time-Aligned™ Loudspeaker was invented by EM Long Associates in 1976 utilizing the Time-Align® generator invented and built by Ronald Wickersham. In 1980 Bag End® incorporated Time-Align® technology into our full range loudspeaker systems. Along with state-of-the-art laboratory instruments, the proprietary Time-Align® generator is still in use today to verify the time domain performance of our loudspeaker systems. When comparing a genuine Bag End® Time-Aligned™ loudspeaker system to any other, our technology and design is easy to hear and appreciate. The dramatic clarity, realism, and overall pleasant sound of our Time-Aligned™ systems are well noted worldwide.

## ABOUT OUR RO TEX™ FINISH

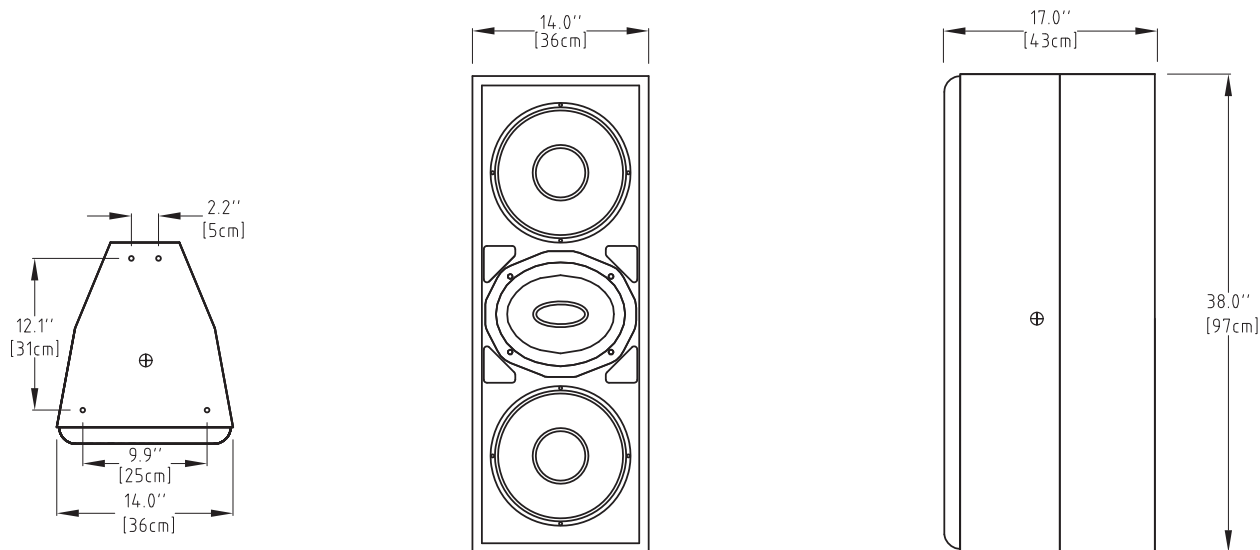
The durable Ro Tex™ finish is double layered on Bag End™ "R" series or Road cabinets. And single layered on installation or "I" cabinets. Ro Tex™ is a water born environmentally safe finish. It's uniquely strong and long

lasting. As it solidifies it attaches and bonds to the wooden cabinet to make a super hard and durable permanent finish. Its light texture offers an attractive and rugged finished look

## ABOUT BAG END® LOUSPEAKERS

Bag End loudspeakers began in 1976 in a small shop by people dedicated to the pursuit of making high quality loudspeaker systems. Over the decades Bag End® has employed the very best construction techniques and innovative acoustical designs into their products. The ground breaking introductions of the Time-Align® and ELF™ Technologies into sound reinforcement and studio monitor loudspeakers in the 1980's was followed by Minima One™ self-powered systems and the highly unique E-Trap™, electronic bass trap. Over the decades, Bag End® has been a leader in providing uniquely good sounding products and extraordinary service to our customers world wide.

## DIMENSIONS

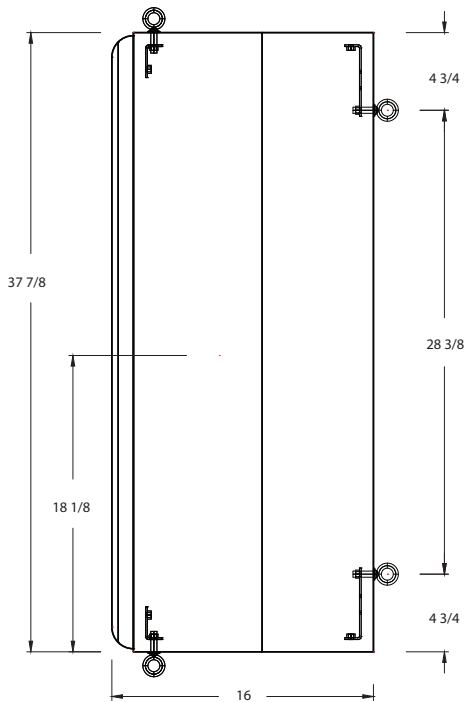


⊕ = Center of Gravity      ○ = 5/16"- 18 Threaded Rigging Point

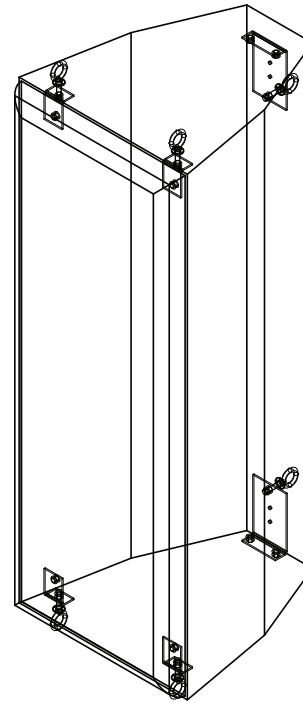


# CRYSTAL2-1 TIME-ALIGN®

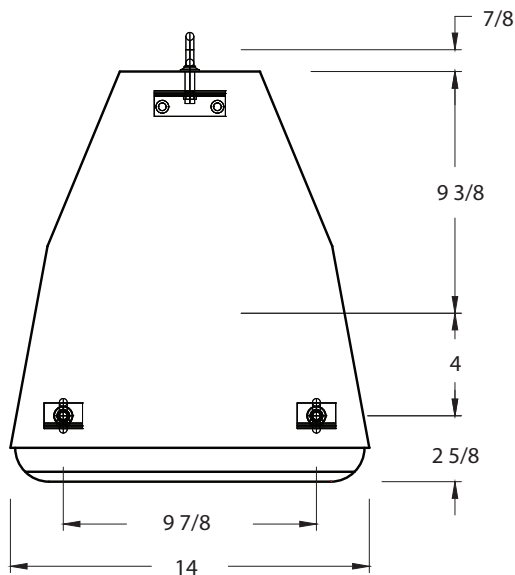
**SIDE VIEW**



**ISOMETRIC VIEW**



**TOP VIEW**



**KEY**

Center of Gravity: +

**WARNINGS**

Mounting and rigging loudspeakers requires experienced professionals. Improperly installed loudspeakers can result in property damage, personal injury, death and/or liability to the installing contractor.

**FLYPOINTS**

Includes flypoints as shown

plus 3 x 5/16"-18 forged shoulder eyebolts.