

# OPAL2-I TIME-ALIGN®

## APPLICATIONS

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

## DESCRIPTION

The OPAL2-I is a full range, installation loudspeaker system offering high fidelity, high efficiency and high output. It is designed for applications where high sound pressure and highly directive long throw capability are required. The OPAL2-I includes permanent rigging attachment points and three forged steel eye bolts. Constructed from durable 15mm birch plywood with a black textured finish, the enclosure is durable and attractive.

The Time-Aligned™ studio quality sound provides detail and clarity at a distance. The OPAL2-I produces high definition sound over its narrow controlled coverage angle making audience coverage effective in various configurations. Engineered for mid and far field performance it is well known for its exceptional fidelity and high output capability.

Useful for performance and live sound applications, the OPAL2-I excels in speech projection at a distance.



## SPECIFICATIONS

### System Type:

2-way vented 1.6 ft<sup>3</sup>

### Enclosure:

15 mm 11-ply birch plywood horizontally arrayable

### Finish:

Black Ro Tex™ true water born environmental finish

### Grille:

14 Gauge black powder coated perforated steel

### Low Frequency Components:

1 – E-12F 12" Transducers, 2.5" Voice coil, Neodymium magnet

### High Frequency Components:

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

### Input Connector:

Cinch 142 screw terminal barrier strip

### Internal Amplification:

Optional self powered

### Hardware:

F4 fly points  
Forged steel eye bolts  
Optional connecting plate  
Optional steel yoke model CD12

### 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:

100 dB SPL (2.83 V @ 1 m)

### Frequency Response:

80 Hz to 18 kHz ±3 dB

### Low Frequency Limit:

80 Hz

### Maximum Calculated Continuous Acoustic Output:

130 dB SPL @ 1 m

### Power Handling:

1200 W continuous (IEC 60268)

### Recommended Amplifier Power:

900 to 1800 W at rated impedance

### Rated Impedance:

8 ohms

### Coverage Pattern:

55 degrees horizontal (-6 dB)

40 degrees vertical (-6 dB)

### Recommended High Pass Filter:

50 Hz

### Polarity:

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

### Dimensions:

25.5" h x 14" w x 16" d  
65 cm x 30 cm x 41 cm

### Weight:

68 lbs

31 kg

### Custom Finishes:

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

### 70/100/140 Volt Operation:

Optional 400 W taped internal transformer

INFRA™, INFRASUB™ and DYNAMIC FILTER™ are trademarks of Modular Sound Systems, Inc.  
BAG END® is a registered trademark of Bag End, Inc.

# OPAL2-1 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.

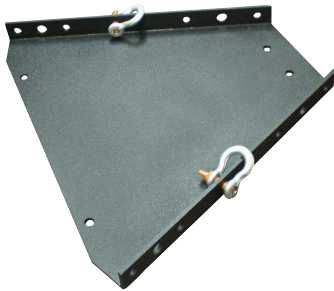
True Time-Alignment™ requires much more than just physically lining up the loudspeaker components. It requires consideration of the driver placement, driver

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 BAG END® LOUSPEAKERS

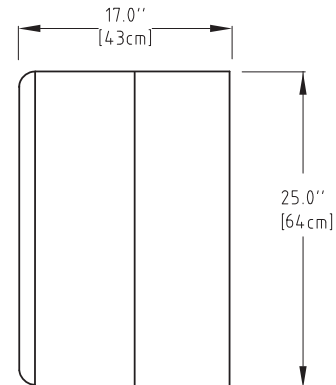
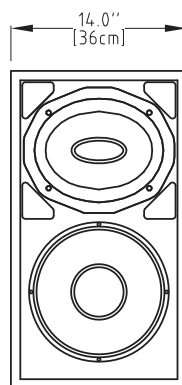
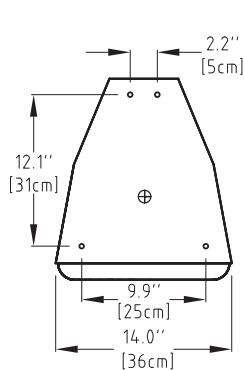
Bag End loudspeakers began in 1976 in a small shop by people dedicated to the pursuit of making high quality loudspeaker systems. Over the decades Bag End® has employed the very best construction techniques and innovative acoustical designs into their products. The ground breaking introductions of the 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.



## ABOUT OUR RO TEX™ FINISH

The durable Ro Tex™ finish is found on Bag End™ "R" series or Road cabinets. Ro Tex™ is a water base, environmentally safe finish that is made in Europe and is uniquely strong and long lasting. As it solidifies and attaches to the wooden cabinet it bonds with the wood to make a super hard permanent finish. It is lightly textured offering both an attractive and rugged finish.

## DIMENSIONS



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

