

BAG END SELF-POWERED**P-OPAL-R TIME-ALIGN®**

S P E C I F I C A T I O N S

**SYSTEM COMPONENTS****Enclosure:**

18 mm 13-ply birch plywood
Horizontally arrayable

Low Frequency Transducer:

12" Cone
3" Voice coil
95 oz. Magnet

High Frequency Transducer:

1.4" Exit compression driver
3" Titanium diaphragm
Elliptic conical horn

Internal Amplification:

1 - Minima One

Grille:

14 Gauge black powder
coated perforated steel in an
extruded aluminum frame with
weather seal

Standard Hardware:

Rigging points
1 - 35 mm Stand adapter
2 - Recessed handles
4 - Machined aluminum
speaker mounting clamps

End Caps:

2 - 13-ply birch skid plates with
protective UHMW
polyethylene bumpers

ACOUSTIC AND ELECTRICAL**System Type:**

2-way vented 1.6 ft³

Input:

48k Ω Balanced XLR inputs
with loop through

Input CAL Sensitivity: +4 dBu

System Power:

500 W continuous
with system limiter

Frequency Response:

95 Hz to 18 kHz ± 3 dB
(4π Steradians)

**Hi Pass Filter Frequency
Switchable:**

-6dB @ 8 Hz, @ 50 Hz, @ 95 Hz

Dispersion:

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

Crossover Network:

Passive Time-Align® equalizer
type @ 1.9 kHz

Time Offset Between Drivers:

< ± 25 Microseconds

Maximum Acoustic Output:

127 dB SPL

LED Indicators:

Green, On
Yellow, System Limit
Red, System Fault or Sleep Mode

AC Power Requirements:

88 Volts Minimum
270 Volts Maximum
Auto sensing

PHYSICAL

Finish: Black Rotex finish

Dimensions:

25.5" h x 14.5" w x 17" d
65 cm x 37 cm x 44 cm

Weight:

83 lbs.
38 kg

Shipping Dimensions:

21" x 30" x 25"
54 cm x 77 cm x 64 cm

Shipping Weight:

96 lbs.
43.5 kg

APPLICATIONS:

Auditorium Sound Reinforcement

Church Sound Reinforcement

Audio Visual Presentations

Nightclub Applications

Portable Sound Reinforcement

P-OPAL-R The P-OPAL-R is a full range self powered, compact, long throw loudspeaker system offering high fidelity, high efficiency and high power handling capacity. The P-OPAL-R is designed for applications where high sound pressure and highly directive long throw capability are required. Units are designed to array for larger systems using BE Flyware. The P-OPAL-R includes protective end caps, handles, a stand adapter, and quick-release rigging attachment points. Constructed from 18 mm 13-ply birch plywood and finished in black RoTex™, the P-OPAL-R enclosure is durable and attractive. In addition, weatherproofing options are available.

About Time-Align® 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.

Along with state-of-the-art laboratory instruments, the proprietary Time-Align® generator, built by Ron Wickersham, is used in designing our loudspeaker systems. The Time-Align® generator is founded upon different underlying mathematical principles than are used in the more common Fourier based measurement equipment.

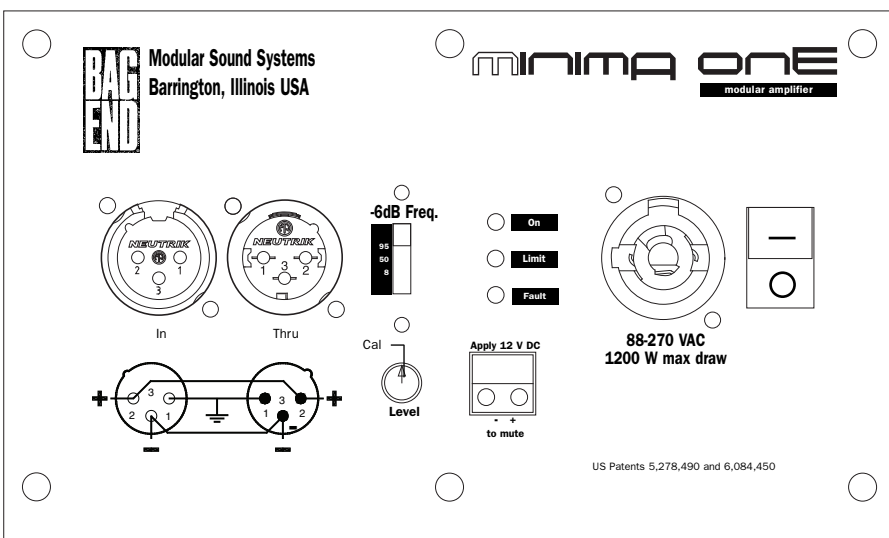
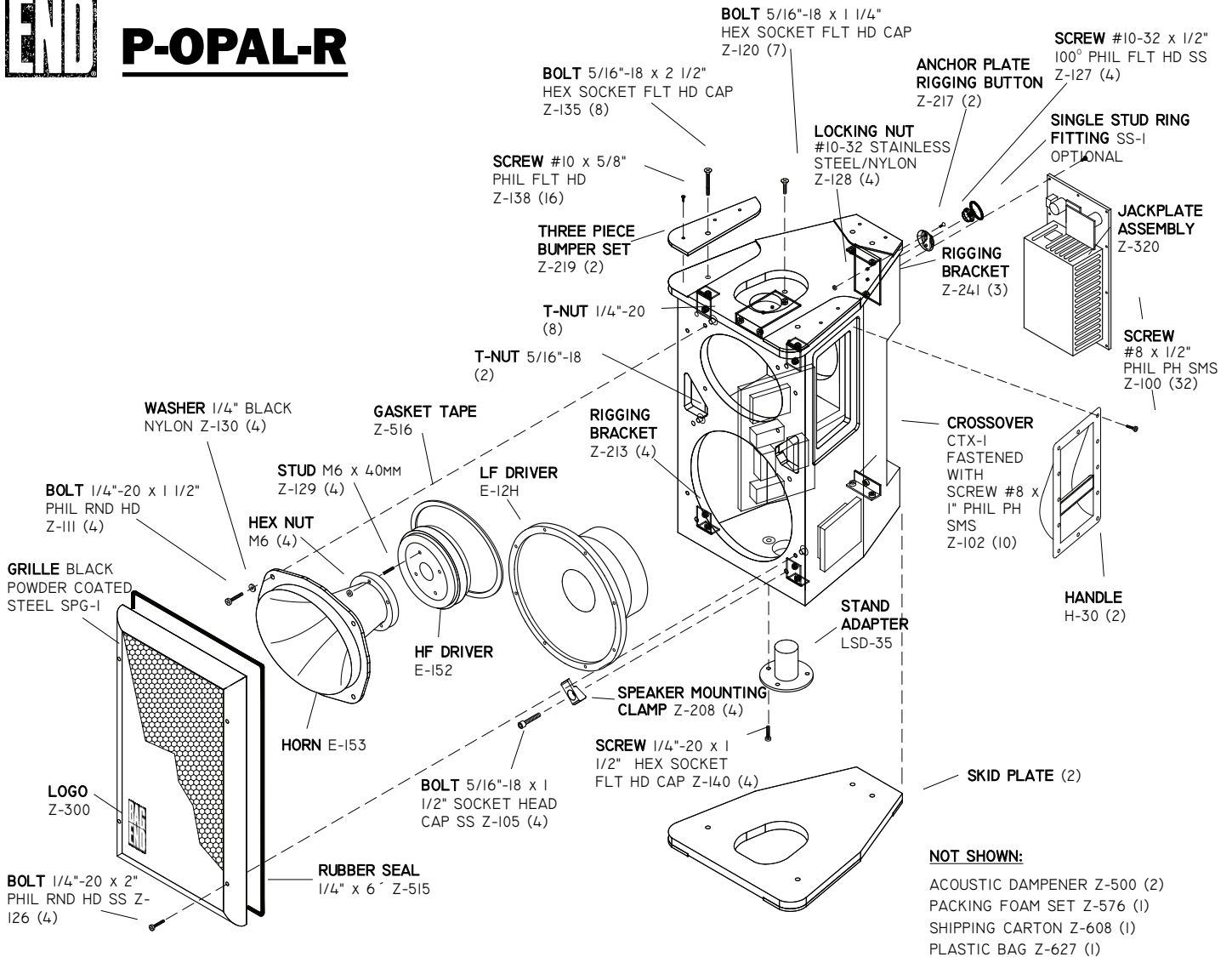
When comparing a genuine BAG END Time-Aligned™ speaker system to any other, our additional design work is easy to hear and appreciate. The dramatic clarity, realism, and overall pleasant sound of our Time-Aligned™ loudspeakers is noted throughout the world.

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P-OPAL-R



ABOUT MINIMA ONE AMPLIFIER TECHNOLOGY

The Minima One amplifier is both a hi fidelity and a high efficiency amplifier. More than 80% efficient the Minima One provides more power to the loudspeakers and creates less heat in the amplifier. In real world applications there is practically no heat emitted from the amplifier and thus requires no cooling fan. Incorporating patented technology the comparison circuit of the Minima One corrects every single cycle to drive error to zero at the end of each cycle. On average every 4 microseconds the one cycle modulator transforms and amplifies the input signal into the ideal natural pulse width modulation. Switching at 250KHz with the single cycle error correction insures extremely low distortion and high reliability.

The power factor corrected AC power input automatically and continuously adapts to any voltage between 88 and 270 volts. The Minima One is convenient to power and stable to use on any power grid in the world.