

# IPS21E-R INFRASUB™

SELF-POWERED & SELF INFRA™ PROCESSED

## APPLICATIONS

Portable Sound Reinforcement      Low Frequency Drum Monitor  
Portable DJ Systems                  Low Frequency Special Effects  
Theatrical Sound Reinforcement

## DESCRIPTION

The IPS21E-R is a self-powered and internally Infra™ processed single 21" portable bass system. The internal Minima One™ amplifier and Infra™ processing provides for convenient implementation and wiring. The internal Infra™ integrator, amplifier and loudspeaker process the full range signal into a flat response low frequency acoustic output. The Dynamic Filter™ protection threshold is internally preset to eliminate distortion or accidental overload. This insures the maximum output and robust system protection with virtually no audible effect.

The audio input incorporates an InGenius® balanced line receiver, providing very high common mode rejection, to eliminate noise often present in systems with less optimized grounding and wiring schemes. Low voltage contacts are provided to remotely turn the amplifier on and off.



## SPECIFICATIONS

### System Type:

Infrasub™ sealed chamber 4.5 ft<sup>3</sup>

### Enclosure:

18 mm 13-ply birch plywood

### Finish:

Black Ro Tex™ True water born environmental finish

### Grille:

16 Gauge black power coated perforated steel

### Low Frequency Components:

EL-21A 21" Transducer, Infra™ cone, 4" Voice coil, 115 oz. Magnet

### Input Connector:

XLR 1/4" combo with XLR loop through

### Internal Amplification:

Minima One™

### Input Impedance:

48K Ohms

### Input CAL Sensitivity:

+4 dBu

### Maximum Continuous Amplifier Power:

1350 W into 4 Ohms

### High Pass Filter:

Switchable: -6 dB @ 8 Hz; @ 50 Hz; @ 95 Hz

### LED Indicators:

Green - On  
Yellow - Dynamic filter threshold  
Red - System fault or sleep mode

### Mains Voltage Requirements:

Auto sensing  
Universal voltage range  
88 Volts minimum to 270 Volts maximum

### Mains Current Requirements:

4.6 Amps @ 120 Volts  
2.3 Amps @ 240 Volts

### Hardware:

2 - Recessed handles  
35 mm Pole mount adapter  
4 - Machined aluminum speaker mounting clamps  
4 - UHMW polyethylene feet

### Crossover Type:

Internal Infra™ Integrator Inside

### Frequency Response:

8 Hz to 95 Hz ±3 dB

### Low Frequency Limit:

8 Hz

### Polarity:

A positive asymmetrical signal applied to pin 2 will result in a positive asymmetrical acoustical pressure

### Dimensions:

24"h x 24"w x 20"d  
63 cm x 63 cm x 53 cm

### Weight:

83 lbs  
38 kg

### Custom Finishes:

Optional custom finishes include white or unfinished ready to paint.

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

# IPS21E-R INFRASUB™

## ABOUT INFRASUB™ TECHNOLOGY

Almost all designs and specifications for subwoofer systems are fixated on the frequency response domain. However, the impression of power and quality of a loudspeaker is equally related to the time domain. The long wavelengths associated with low frequencies, make this particularly true with subwoofers. Likewise, the maximum SPL is not a very reliable way to judge the impact of a subwoofer. A poor time domain performer will not have the same impact or natural musically connected sound as a Time-Aligned™ Infra™ system. The reason that an Infra™ subwoofer sounds dramatically better is because of its superior time domain performance, as well as its extended low frequency response. The Infra™ subwoofer maintains the bass energy in a tight packet, aligned with the upper range signal, providing a greater body impact and a seamless musical connection with the main loudspeakers. Conventional subwoofer designs perform so poorly in the time domain because designers have used methods that sacrifice the phase response for more control over the frequency response (e.g.: steep low pass filter slopes, vented speaker enclosures, and narrow bandwidth systems). With the Infra™ technique, we do not degrade the phase response while extending the frequency response. While the Infra™ dual Integrator

does function as the system crossover, it does so without using a conventional low pass filter. The Infra™ integrator applies an inverse electrical response to the acoustical response of the Infra™ loudspeaker in its sealed enclosure. This provides both the upper frequency roll off and the extended frequency response while maintaining the hi sound quality often associated with a sealed box design. When comparing a genuine Bag End® Infra™ loudspeaker system to any other, our technology and design is easy to hear and appreciate. The dramatic clarity, realism, and overall pleasant sound of an Infra™ system is well noted throughout the world.

## ABOUT MINIMA ONE™ AND INFRA™ SELF PROCESSING

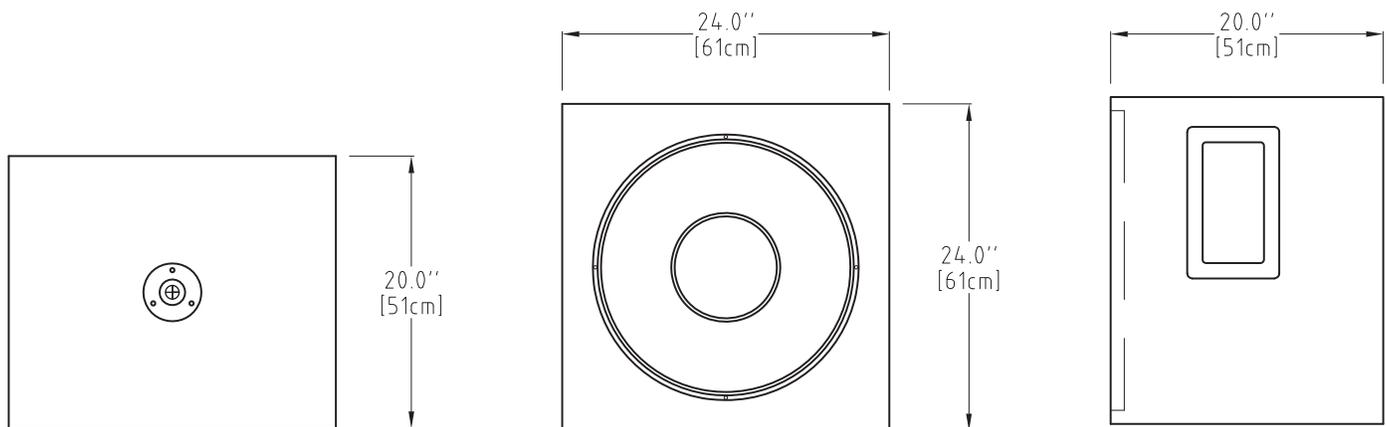
Infra™ self processed systems incorporate our analog Infra™ dual integrator, as used in our rack mount processors, into the Minima One™ input circuit. The Dynamic Filter™ protection is included and preset to the amplifiers sensitivity requiring no external setup. Infra™ Self Powered systems accept a full range line level audio signal, to provide the extended low frequency acoustical response, as well as a uniform roll off of the upper range of the subwoofer. The upper response of the Infra subwoofer is not adjustable, so blending the upper range speaker system into an Infra™ subwoofer is

typically accomplished by high passing the upper range speaker, to properly blend with the subwoofer. The Minima One™ amplifier is both a high fidelity and a high efficiency amplifier. With efficiency well over 80%, it 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 it requires no cooling fan. Switching at 250 kHz with 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 making the Minima One™ convenient and stable to operate on any power grid in the world.

## 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

## DIMENSIONS



⊕ = Center of Gravity

