

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



### SYSTEM COMPONENTS

**Enclosure:**

18 mm 13-ply birch plywood

**Low Frequency Transducers:**

4 - 18" INFRA cone  
3" Voice coil  
120 oz. Magnet

**Input Connectors:**

2 - Connector plates with:  
Dual Banana and Neutrik  
Speakon  
Custom connector  
configurations available

**Grille:**

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

**Standard Hardware:**

8 - Recessed handles  
4 - 3 1/2" Casters  
2 - 35 mm Pole mount adapters  
16 - Machined aluminum  
speaker mounting clamps  
4 - UHMW polyethylene feet

**Optional Hardware:**

Rigging points

### ACOUSTIC AND ELECTRICAL

**System Type:**

Infrasub 4 - sealed chambers  
(3 ft<sup>3</sup> each)

**Impedance:**

4  $\Omega$  each input

**Crossover Network:**

Requires INFRA Integrator

**Recommended Crossover Frequency:**

80 Hz

**Frequency Response:**

18 Hz to 65 Hz  $\pm 2$  dB  
( $2\pi$  Steradians, with  
8 Hertz Integrator)

**Sensitivity:**

99 dB SPL @ 45 Hz (1W @ 1m)  
(for additional information, see  
INFRA Speaker Sensitivity  
Technical Note)

**Power Handling:**

1600 W continuous program

### PHYSICAL

**Finish:**

Black textured paint

**Dimensions:**

40" h x 30" w x 31" d  
102 cm x 76 cm x 79 cm  
Trapezoidal, 6° taper per side

**Weight:**

237 lbs.  
108 kg

**Shipping Dimensions:**

45" x 35" x 39"  
115 cm x 89 cm x 99 cm

**Shipping Weight:**

289 lbs.  
132 kg

### APPLICATIONS:

**Concert PA systems**

**Auditorium Reinforcement**

**Discotheque Subwoofer**

**Cinema Subwoofer**

**QUARTZ-R** The QUARTZ-R is a very high output concert INFRA subwoofer system designed to minimize the space required to obtain extremely high level and high fidelity low frequency output. The QUARTZ-R provides perfectly flat response below 20 Hz when used in **conjunction with the INFRA Integrator**. The QUARTZ-R includes casters, handles, feet and pole mount adapters for support of upper range speakers.

**ABOUT INFRASUB TECHNOLOGY** Almost all specifications for subwoofer systems are fixated on the frequency response domain. However, the impression of power and quality is equally related to the time domain performance of a system. Because of the long wavelengths of low frequencies, this is 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 sound as a Time-Aligned™ INFRA system.

The reason that INFRA technology sounds dramatically better than the others is because of their superior time domain performance. 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 sub 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 low pass filter. Adding a low pass filter, analog or digital, will have a degrading effect on the time domain performance of the INFRA subwoofer. A low pass filter adds signal delay to the sound which varies with frequency. Also, narrowing the pass band increases the influence of the rolloff on both ends of the subwoofer spectrum. The result is the smearing of the arrival times of the low frequency sound components, changing the timbre and downgrading the impact of transient sounds.

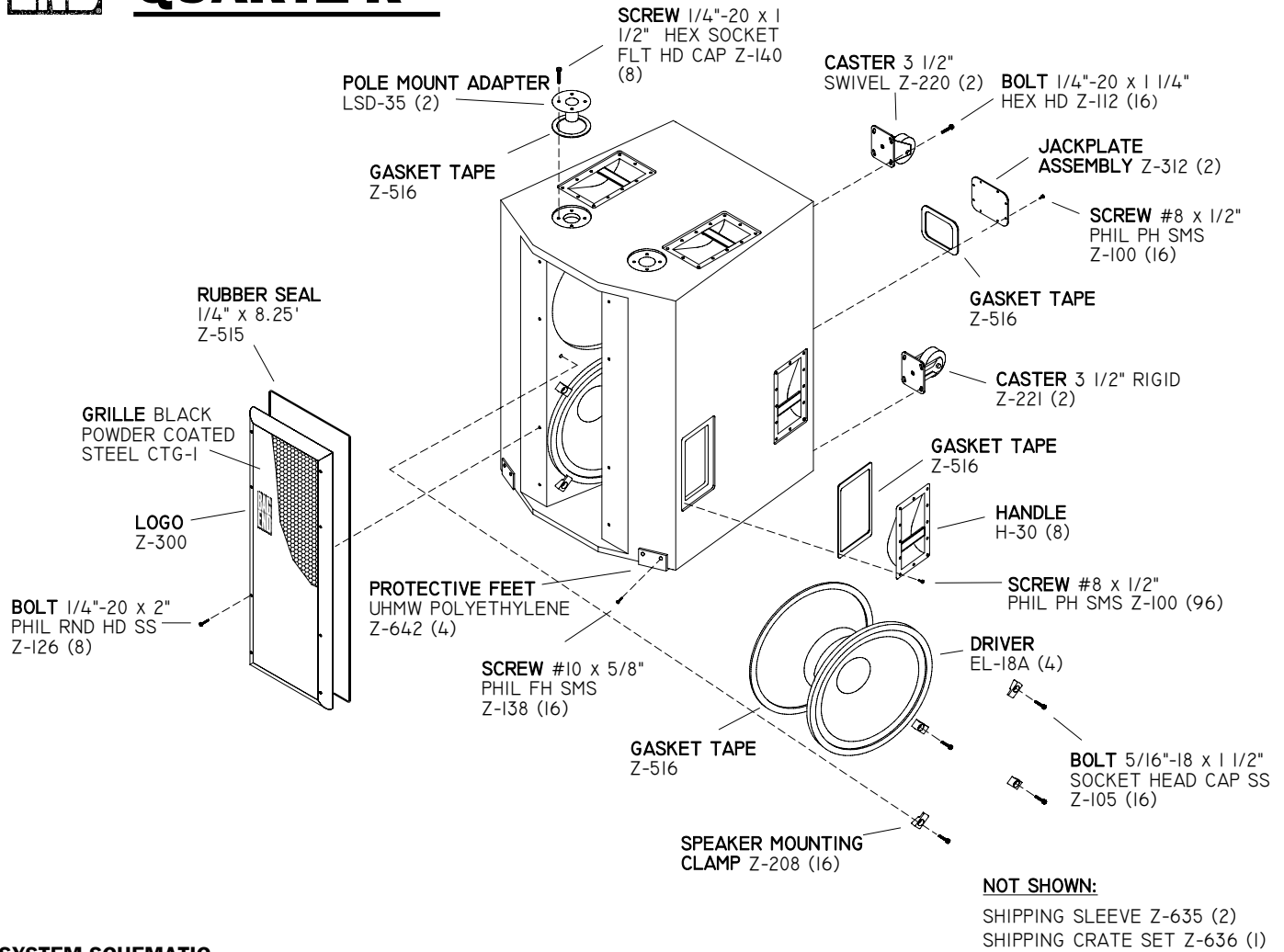
The Bag End INFRA subwoofers are designed as no-compromise, high fidelity reproduction systems. We believe they are the finest subs available, regardless of price.

**BAG END Loudspeakers**  
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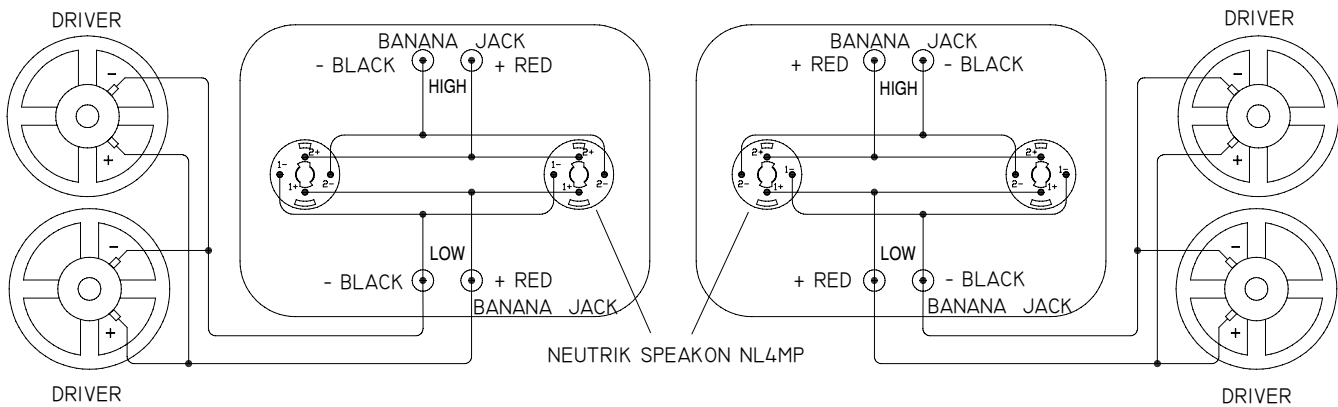




# QUARTZ-R



## SYSTEM SCHEMATIC



The Neutrik Speakon NL4MP connector is a keyed, high current, four conductor device which allows both the high and low frequency signals for a bi-amped loudspeaker system to run through the same multi-conductor cable. Note that all four conductors on both connectors are wired in parallel, but only two conductors are connected to the drivers in the enclosure. This permits an easy parallel connection to other similar loudspeakers (if your amplifier can handle the low impedance load!) and allows the use of a short "jumper" to connect to the mid/high speakers in a bi-amped system. Banana jacks are also provided on each circuit.

The Quartz has 2 input jackplates, each circuit with an impedance of 4 ohms, each powering 2 parallel 8 ohm drivers.