



# AD-C820/C821

## AcousticDesign™ High-output Ceiling Mount Loudspeakers

### Features

- 8" low-frequency woofer
- 1.4" diaphragm compression driver
- 200 watt continuous power rating
- 70V/100V multi-tap transformer included (system can operate in distributed or low-impedance mode)
- AD-C820 transducer/baffle assembly for separated backcan installation
- AD-C821 designed as a fully integrated blind-mount system



The AD-C820 and AD-C821 are acoustically identical and designed for music playback, public address and distributed audio in applications that require high output from a ceiling mounted loudspeaker. The AcousticDesign™ Series of installation loudspeakers has been designed for trouble free operation and versatility. Both models use custom designed transducers and crossover networks, in combination with an acoustically optimized enclosure (AD-C800BB), or as a fully integrated, sealed system (AD-C821). These loudspeakers continue the AD Series philosophy of bringing natural and accurate sound quality combined with versatility and reliability to high-ceiling applications.

The AD-C820 assembly includes the coenrant transducers, a 70V/100V transformer and a crossover mounted on an ABS baffle. When ordered as a system (AD-C820R SYSTEM; AD-C820S SYSTEM) the backbox (AD-C800BB) and a round or square grille are included.

The AD-821 is a fully integrated, factory sealed system using a "dog-ear" style mounting scheme. When ordered as a system (AD-C821R SYSTEM; AD-C821S SYSTEM) a set of tile rails and a c-ring are included as is a round or square grille.

The 8" woofer is equipped with a treated paper cone on a steel frame. In the optimized enclosure the usable low frequency of the system extends to 52 Hz. The 1.4" compression driver fires through the center of the woofer and is acoustically mated to the woofer for a smooth transition at crossover. The system achieves 90 degree axisymmetric coverage.

High-current, low tolerance network components provide smooth full-range, passive performance. The included 70V/100V, custom designed transformer is optimized for low line loss as well as accurate and transparent acoustic performance.

The AD-C820/C821 loudspeakers measure 91dB sensitivity (1W/1m) and at full continuous power are capable of producing 114 dB SPL (1W/1m) output.

### Specifications

|                                  | AD-C820                                                                                                                                                                                     | AD-C821                                                                                                                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Configuration                    | Passive                                                                                                                                                                                     |                                                                                                                                                                                                                                   |
| Transducers                      |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| Low-frequency                    | 8" (203 mm) ferrite woofer                                                                                                                                                                  |                                                                                                                                                                                                                                   |
| High-frequency                   | 1.4" (36 mm) neodymium compression driver                                                                                                                                                   |                                                                                                                                                                                                                                   |
| Frequency Range <sup>1</sup>     |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| Frequency Response (-6 dB)       | 61 Hz – 18 kHz                                                                                                                                                                              |                                                                                                                                                                                                                                   |
| Useable Frequency Range (-10 dB) | 52 Hz – 18 kHz                                                                                                                                                                              |                                                                                                                                                                                                                                   |
| Maximum Output <sup>2</sup>      |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| Calculated Peak Output           | 120 dB SPL                                                                                                                                                                                  |                                                                                                                                                                                                                                   |
| Calculated Continuous Output     | 114 dB SPL                                                                                                                                                                                  |                                                                                                                                                                                                                                   |
| Nominal Coverage                 | 90° horizontal and vertical                                                                                                                                                                 |                                                                                                                                                                                                                                   |
| Nominal Impedance                | 16Ω                                                                                                                                                                                         |                                                                                                                                                                                                                                   |
| Power Rating                     |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| RMS Power Handling <sup>3</sup>  | 200 W                                                                                                                                                                                       |                                                                                                                                                                                                                                   |
| Recommended Max Amp Power        | 400 W                                                                                                                                                                                       |                                                                                                                                                                                                                                   |
| Sensitivity                      | 91 dB SPL, 1W/1m                                                                                                                                                                            |                                                                                                                                                                                                                                   |
| Bass Loading                     | Ported                                                                                                                                                                                      |                                                                                                                                                                                                                                   |
| Transformers                     |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| Type                             | Custom low distortion laminated core, wide bandwidth design                                                                                                                                 |                                                                                                                                                                                                                                   |
| Taps                             | 100 V: 16Ω bypass, 100 W, 50 W, 25 W<br>70 V: 16Ω bypass, 100 W, 50 W, 25 W, 12.5 W                                                                                                         |                                                                                                                                                                                                                                   |
| Agency Rating                    | CE, UL 1480 (commercial/professional use) UL 2043 (air handling spaces)                                                                                                                     |                                                                                                                                                                                                                                   |
| Enclosure Volume                 | AD-C800BB: 18 L (0.64 ft <sup>3</sup> )                                                                                                                                                     | 18 L (0.64 ft <sup>3</sup> )                                                                                                                                                                                                      |
| Enclosure                        |                                                                                                                                                                                             |                                                                                                                                                                                                                                   |
| Connectors                       | Back box (AD-C800BB): ceramic block connector inputs and "through" connectors (rated for 400 W max). Loudspeaker Baffle (AD-C820): 10-pin MATE-N-LOK™ connector and faston connectors.      | Two 2-pin Euro-style connectors                                                                                                                                                                                                   |
| Mounting Hardware                | Pre-installed, suspended, back box, four vertical mounting straps. Loudspeaker Baffle: captive, integral Mounting Clamps.                                                                   | Captive, integral Mounting Clamps. Insert enclosure into mounting hole, and tighten. Suspended ceiling Split-ring and Suspended Ceiling Tile Rails - sold separately.                                                             |
| Weight - Net                     | AD-C820: 8 lb (3.6 kg)<br>AD-C800BB: 9.5 lb (4.3 kg)<br>System Weight: 17.5 lb (7.9 kg)                                                                                                     | 16 lb (7.3 kg)                                                                                                                                                                                                                    |
| Dimensions                       | Diameter: 14.9" (379 mm)<br>Enclosure only Depth: 8.3" (211 mm)<br>Enclosure with mounting straps Depth: 11.2" (284 mm)                                                                     | Diameter: 13.4" (340 mm)<br>Depth: 11.9" (302 mm)                                                                                                                                                                                 |
| System Packages                  | AD-C820R SYSTEM: includes AD-C820 speaker baffle, AD-C800BB backbox, AD-C800RG round grille<br>AD-C820S SYSTEM: includes AD-C820 speaker baffle, AD-C800BB backbox, AD-C800SG square grille | AD-C821R SYSTEM: includes AD-C821 loudspeaker system, AD-C800RG round grille, and set of tile rails and c-ring<br>AD-C821S SYSTEM: includes AD-C821 loudspeaker system, AD-C800SG square grille, and set of tile rails and c-ring |

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<sup>1</sup> All frequency ranges specified refer to measured half-space response (2 pi).

<sup>2</sup> Calculated maximum peak SPL at 1 m, half-space, speaker operating at rated rms power pink noise input, 50 Hz – 20 kHz.

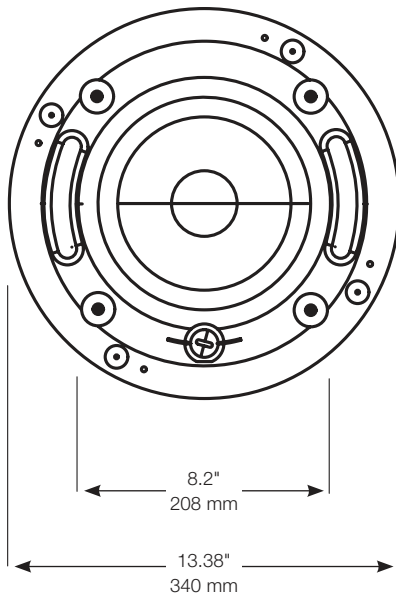
<sup>3</sup> Maximum input power tested in accordance with IEC recommendations; 50 Hz – 20 kHz band limiting, 6 dB signal crest factor.

# AD-C820/C821

## Dimensions

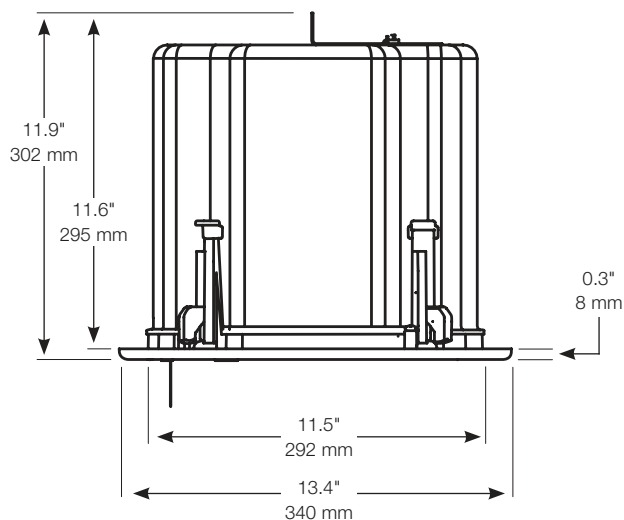
AD-C820/AD-C821

Front



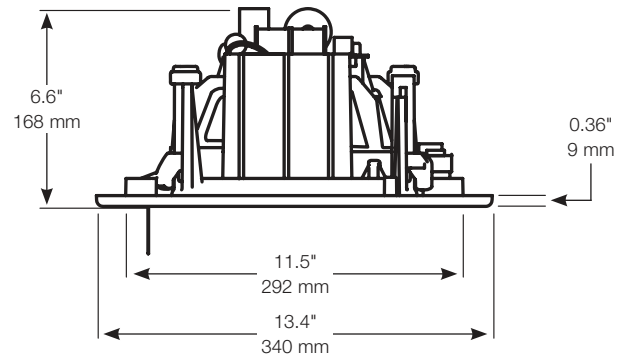
AD-C821

Side



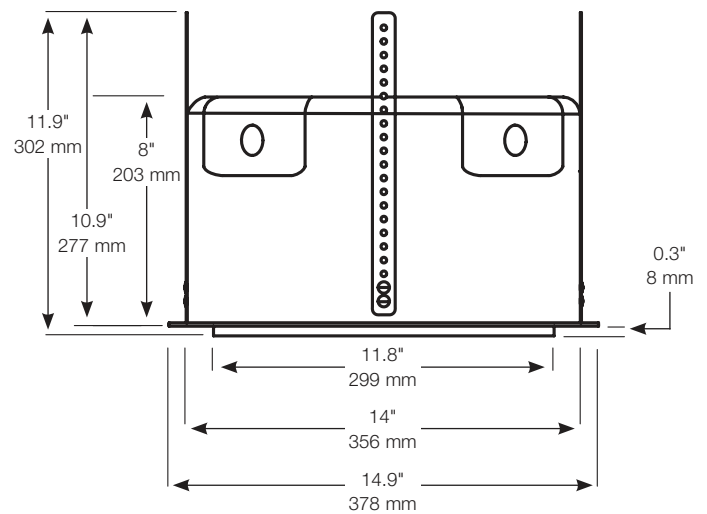
AD-C820

Side



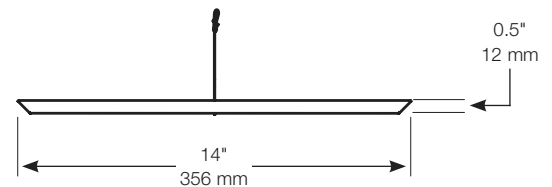
AD-C800BB

Side



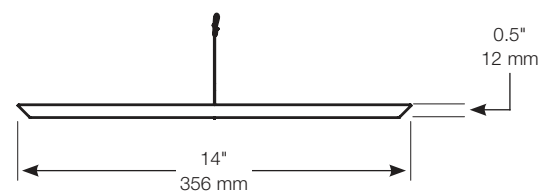
AD-C800RG

Side



AD-C800SG

Side



Specifications subject to change without notice.



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