



## Cinema Loudspeaker System

### SC-434

#### Features

- 4-way selectable, tri or quad-amplified screen channel system
- Unique HF/VHF diaphragm has less mass than traditional diaphragms resulting in exceptional dynamic range, extended high-frequency response and lower distortion
- LF-4315 is constructed of MDF and features single woofer chambers
- Low-distortion waveguides provide highly articulate dialogue
- Shallow depth (20") facilitates installation
- THX™ approved for professional cinema applications



Developed specifically for the unique requirements of professional motion picture playback, the SC-434 extends QSC's commitment to the cinema market. As a member of the DCS Digital Cinema Speaker Series, the SC-434 is a 4-way, selectable tri or quad-amplified screen channel loudspeaker system comprised of two main units—the MHV-1090 high-frequency system and the LF-4315 low-frequency system.

The MHV-1090 mid-high-very high system features a high output, horn loaded 10" midrange cone driver and a coaxial neodymium high-frequency/very high-frequency compression driver. The MHV-1090 includes a driver protection network and a passive crossover for tri-amp operation. The protection circuitry prevents low-frequency signals from damaging the high-frequency and very high-frequency driver. A high power 10" cone driver allows operation as low as 250 Hz and the advanced phase plug coupling permits a crossover point of up to 1800 Hz to the high-frequency horn. This ensures that most of the dialog range is reproduced by a single element, for unmatched intelligibility.

The coaxial neodymium high-frequency/very high-frequency compression driver provides a dramatic improvement in dynamic response, clarity and transparency. The annular high-frequency diaphragm covers the frequency range between 1800 and 7000 Hz with a smooth, linear response.

The large diaphragm excursion of +/-0.8 mm results in high output and increased power handling. The very high-frequency driver covers the frequency range from 7000 to 22,000 Hz and eliminates the dome break up of conventional drivers that can cause resonance and harsh, metallic sound.

The LF-4315 triple 15" (381 mm) low-frequency enclosure is designed specifically to address the extended low-frequency response required for cinema applications. The LF-4315 covers the frequency range from 35 Hz to 250 Hz. Close Coupled Woofers (CCW), with their tight spacing between woofers, improves coupling and keeps coverage angles wide over a greater frequency range than more widely spaced designs.

The SC-434 is designed for ease of installation. The MHV-1090 components come pre-assembled to reduce field assembly time. Three bolts are all that are required to secure the MHV-1090 to the top of the LF-4315 enclosure.

# SC-434 Details

## Specifications

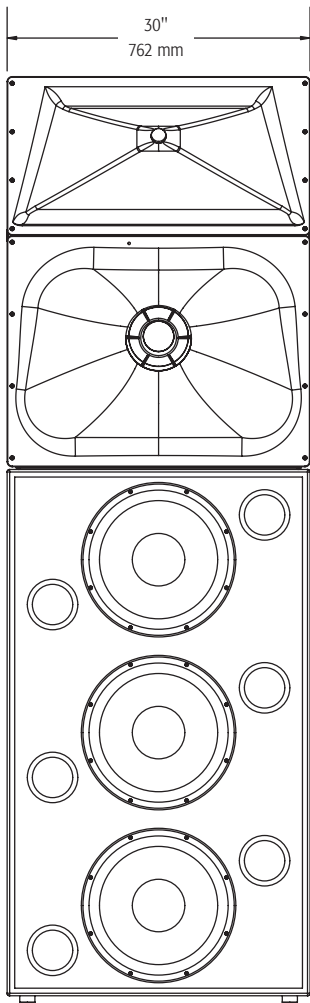
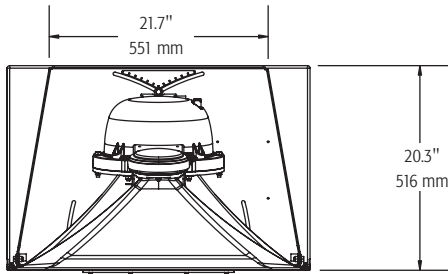
## SC-434

|   |   |  |  |
|---|---|--|--|
| Nominal Coverage  | 90° horizontal x +20 to -30° vertical   |  |  |
| Frequency Range   | 33 Hz – 16 kHz (-6 dB)  |  |  |
| Crossover Frequency   | 250, 1700 and 6000 Hz, 24 dB per octave   |  |  |
|   | <b>LF-4315</b>  | <b>MHV-1090</b>  |  |
| Impedance   | 5.5Ω  | MF: 8Ω HF: 8Ω VHF: 8Ω  |  |
| Sensitivity 1 watt/1 meter, half space                              | 99.5 dB   | Tri-amp<br>MF: 105 dB<br>HF/VHF: 110 dB  | Quad-amp<br>MF 105 dB<br>HF/VHF: 110 dB<br>VHF: 110 dB |
| Maximum Input Power <sup>1</sup>                                    |   |  |  |
| 8 hours of 6 dB crest factor IEC 268 noise spectrum                 | 1200 W RMS  | MF: 275 W RMS<br>HF/VHF: 230 W RMS   | MF: 275 W RMS<br>HF 150 W RMS<br>VHF: 80 W RMS         |
| 2 hours of 6 dB crest factor pink noise, 50 Hz – 20 kHz, AES method | 1500 W RMS  | MF: 800 W RMS<br>HF/VHF: 500 W RMS maximum   |  |
| Recommended Amplifier Power   | 2400 W RMS maximum  | MF: 800 W RMS<br>HF: 500 W RMS<br>VHF: 300 W RMS maximum   |  |
| Recommended Processing  | Subsonic filter below 30 Hz, > 18 dB per octave   | 4th order LR crossover at 250, 1700 and 6000 Hz via QSC processor  |  |
| Connectors  | Barrier strip screw terminals accept up to #10 AWG stranded wire  |  |  |
| Transducers   | Three 15" (381mm) high efficiency, extended bass woofers featuring 4" copper voice coils  | MF: 10" high-efficiency, horn-loaded cone with phase plug<br>HF/VHF: coaxial neodymium compression driver with 3.5" (90 mm) HF diaphragm and 1.75" (44 mm) VHF diaphragm |  |
| Enclosure   | Quasi B4 alignment, ported enclosure with fully flared ports, symmetrical port design, tuned to 36 Hz, constructed of MDF and heavily braced. Features vandal resistant woofer mounting bolts | Tilt/Pan Bracket<br>±10° vertical tilt<br>±10° horizontal pan  |  |
| Dimensions (HWD)  | 53" x 30" x 20.3" (910 mm x 762 mm x 516 mm)  | 39" x 30" x 20" (990 mm x 762 mm x 508 mm)   |  |
| Weight – Net  | 260 lb (118 kg)   | 84 lb (38.5 kg)  |  |
| System Weight   | 344 lb (155.5 kg)   |  |  |

1) Maximum input power tested in accordance with IEC 268-5 recommendations, 50 Hz – 20 kHz band limiting, 6 dB signal crest factor.

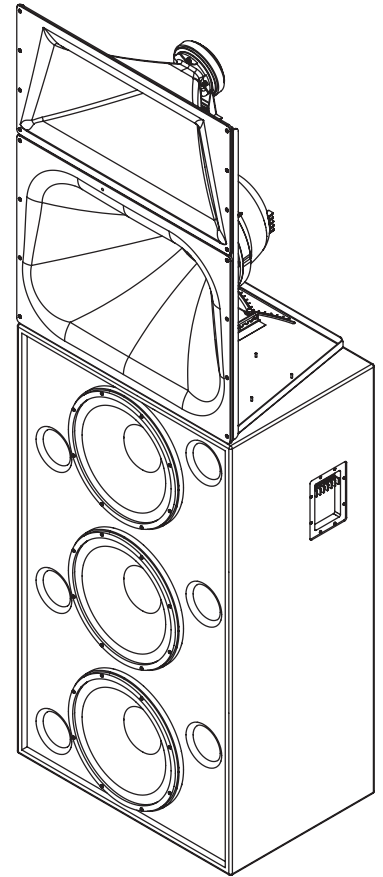
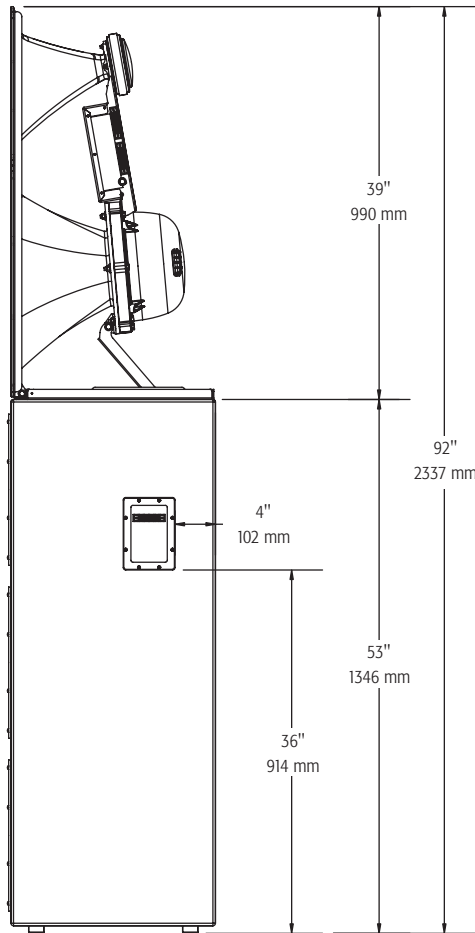
# SC-434 Technical Drawing

Top



Front

Side



Specifications subject to change without notice.

**QSC**<sup>™</sup>

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