



Cinema Loudspeaker System

SC-414

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-4115 is constructed of MDF and is heavily braced
- Low-distortion waveguides provide highly articulate dialogue
- Shallow depth (20") facilitates installation
- THX™ approved for professional cinema applications

SC-414



Developed specifically for the unique requirements of professional motion picture playback, the SC-414 extends QSC's commitment to the cinema market. As a member of the DCS Digital Cinema Speaker Series, the SC-414 is a 4-way, selectable tri or quad-amplified screen channel loudspeaker system comprised of two main units – the MHV-1090 mid-high-very high-frequency system and the LF-4115 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 7,000 to 22,000 Hz and eliminates the dome break up of conventional drivers that can cause resonance and harsh, metallic sound.

The LF-4115 single 15" (381 mm) low-frequency enclosure is designed specifically to address the extended low-frequency response required for cinema applications. The LF-4115 covers the frequency range from 35 Hz to 250 Hz.

The SC-414 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-4115 enclosure.

SC-414 Details

Specifications

SC-414

Nominal Coverage	90° horizontal x +20 to -30° vertical		
Frequency Range (-6 dB)	33Hz – 20 kHz		
Active Crossover Frequencies	250, 1700 and 6000 Hz, 24 dB per octave		
	LF-4115	MHV-1090	
Impedance	4Ω	MF: 8Ω HF: 8Ω VHF: 8Ω	
Sensitivity 1 watt/1 meter, half space	96.5 dB	Tri-amp MF:105 dB HF/VHF: 110 dB	Quad-amp MF: 105 dB HF: 110 dB VHF: 110 dB
Maximum Input Power ¹			
8 hours of 6 dB crest factor IEC 268 noise spectrum	400 W RMS	MF: 275 W RMS HF/VHF: 230 W RMS	MF: 275 W RMS HF: 150 W RMS VHF: 80 W RMS
2 hours of 6 dB crest factor pink noise, 50 Hz – 20 kHz, AES method	500 W RMS	MF: 800 W RMS HF/VHF: 500 W RMS maximum	
Recommended Amplifier Power	800 W RMS maximum	MF: 800 W RMS HF: 500 W RMS 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	One 15" (381mm) high efficiency, extended bass woofer featuring a 4" copper voice coil	MF: 10" high-efficiency, horn-loaded cone with phase plug 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 ±10° vertical tilt ±10° horizontal pan	
Dimensions (HWD)	18.5" x 30" x 20.3" (470 mm x 762 mm x 516 mm)	39" x 30" x 20" (990 mm x 762 mm x 508 mm)	
Weight – Net	83 lb (38 kg)	84 lb (38.5 kg)	
System Weight		167 lb (76.5 kg)	
Baffle Cut-Out		58.75" x 32"	

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

