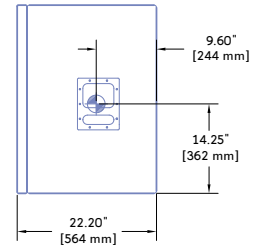
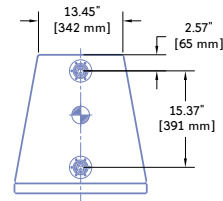
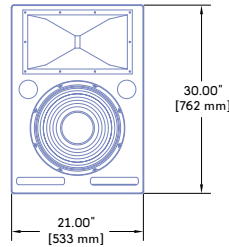




CQ-1 : Wide Coverage Main Loudspeaker



- Dimensions** 21.00" w x 30.00" h x 22.20" d (533 mm x 762 mm x 564 mm)
- Weight** 130 lbs (58.97 kg); shipping 150 lbs (68.04 kg)
- Enclosure** All birch multi-ply
- Finish** Black textured
- Protective Grille** Perforated hex metal grille frame with charcoal-grey foam
- Rigging** Ring and stud pan fittings, two on both top and bottom. Working load for each fitting is 500 lbs (226.80 kg), which is 1/5 the cabinet breaking strength (with straight tensile pull); 3/8" or metric M10 nut plates optional

The CQ-1 wide coverage main is a self-powered, phase-corrected reinforcement loudspeaker offering precise, low-Q coverage. The CQ-1 features a patented constant-Q horn design — the result of extensive research using Meyer Sound’s calibrated anechoic chamber. The frequency response of 40 Hz to 16 kHz is uniform over the entire coverage area in both the horizontal and vertical axes, with no side lobes even when measured at a one-sixth octave frequency resolution.

The CQ-1 loudspeaker’s unique combination of precise pattern control, compact size, low distortion and high power make it suitable for a wide variety of installed and rental applications. The CQ-1 is perfect as the main PA in small- to mid-sized auditoriums, houses of worship, clubs and hotel ballroom settings, and is highly effective in delayed fill applications for arenas and outdoor concert systems.

The CQ-1 loudspeaker’s low-frequency section comprises a single 15-inch Meyer Sound cone driver, and the high-frequency section utilizes a 4-inch diaphragm com-

pression driver coupled to an 80-degree by 40-degree constant-Q horn.

The sophisticated MP-2/CQ-1 power amplifier is integrated into an accessible, lightweight rear module. The amplification, processing and protection circuitry produces consistent and predictable results in any system design. The proprietary two-channel amplifier employs Meyer Sound’s proven class AB/H design with complementary MOSFET output stages, and delivers 1240 watts burst power (620 watts per channel). Audio is processed through an electronic crossover and correction filters for phase and frequency response, as well as driver protection circuitry.

Each amplifier channel has TruPower® limiting technology which maximizes loudspeaker reliability, minimizing power compression and extending component life. TruPower also affords higher continuous SPL capability at all frequencies with maximum headroom and regulates voice coil temperature. Limiter activity is easy to monitor with the limit LEDs on the rear panel.

The MP-2/CQ-1 amplifier’s power supply incorporates Meyer Sound’s Intelligent AC™ system, which performs automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Intelligent AC allows fail-safe operation worldwide, with no need to manually select the AC mains voltage.

The compact CQ-1 system is housed in an all-birch multi-ply enclosure with a textured, hard shell black finish. It is flyable and arrayable using standard ring and stud pan fittings on top and bottom rated at 500 lbs (226.80 kg) with a 5:1 safety factor. An optional mounting yoke allows flexible, quick installation and easy aiming in theatrical and permanent applications.

Options for the CQ-1 cabinet include weather protection and finishes in custom colors for fixed installations and other situations requiring specific cosmetics.

The CQ-1 integrates with the optional RMS™ remote monitoring system, which displays signal and power levels, driver status, limiter activity, and amplifier temperature on a remote Windows® computer.

FEATURES & BENEFITS

- Extremely smooth horizontal pattern for consistent sound
- Ultra-low distortion yields remarkable fidelity
- Extraordinarily flat amplitude and phase response for tonal accuracy and precise imaging
- Extended low-frequency response for stand-alone applications
- Constant-Q horn affords uniform response throughout the coverage area.
- Predictable performance ensures system design flexibility

APPLICATIONS

- Concert halls, theatres and houses of worship
- Downfill and delays in large-scale reinforcement
- Stage monitoring side fill
- Paging and announcing
- Cinema and 5.1 applications

CQ-1 SPECIFICATIONS

ACOUSTICAL	<p>Operating Frequency Range¹ 35 Hz – 18 kHz Frequency Response² 40 Hz – 16 kHz ±4 dB Phase Response 50 Hz – 16 kHz ±90° Maximum Peak SPL³ 136 dB Dynamic Range >110 dB</p>
COVERAGE	80° Horizontal x 40° vertical
CROSSOVER ⁴	700 Hz
TRANSDUCERS	<p>Low Frequency One 15" cone driver Nominal impedance: 8 Ω Voice coil size: 3" Power-handling capability: 600 W (AES)⁵</p> <p>High Frequency One 4" diaphragm driver Nominal impedance: 8 Ω Voice coil size: 4" Diaphragm size: 4" Exit size: 1.5" Power handling capability: 250 W (AES)⁵</p>
AUDIO INPUT	<p>Type Differential, electronically balanced Maximum Common Mode Range ±15 V DC, clamped to earth for voltage transient protection Connectors Female XLR input with male XLR loop output or VEAM all-in-one (integrates AC, audio and network) Input Impedance 10 kΩ differential between pins 2 and 3 Wiring Pin 1: Chassis/earth through 220 kΩ, 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 2: Signal + Pin 3: Signal - (Polarity can be changed on user panel) Case: Earth ground and chassis</p> <p>DC Blocking None on input; DC blocked through signal processing CMRR >50 dB, typically 80 dB (50 Hz – 500 Hz) RF Filter Common mode: 425 kHz; Differential mode: 142 kHz TIM Filter <80 kHz, integral to signal processing Nominal Input Sensitivity 0 dBV (1 V rms, 1.4 V pk) continuous average is typically the onset of limiting for noise and music. Input Level Audio source must be capable of producing a minimum of +20 dBV (10 V rms, 14 V pk) into 600 Ω to produce maximum peak SPL over the operating bandwidth of the loudspeaker</p>
AMPLIFIER	<p>Type Two-channel complementary MOSFET output stages (class AB/H) Output Power⁶ 1240 W (620 W/channel) THD, IM, TIM <.02% Load Capacity 8 Ω each channel Cooling Forced air cooling, two fans total (one ultrahigh-speed reserve fan)</p>
AC POWER	<p>Connector 250 V AC NEMA L6-20 (twistlock) inlet, IEC 309 male inlet, or VEAM Voltage Selection Automatic, two ranges, each with high-low voltage tap (uninterrupted) Safety Agency Rated Operating Range 95 V AC – 125 V AC; 208 V AC – 235 V AC; 50/60 Hz Turn-on and Turn-off Points 85 V AC – 134 V AC; 165 V AC – 264 V AC; 50/60 Hz Current Draw: Idle Current 0.640 A rms (115 V AC); 0.320 A rms (230 V AC); 0.850 A rms (100 V AC) Max Long-Term Continuous Current (>10 sec) 8 A rms (115 V AC); 4 A rms (230 V AC); 10 A rms (100 V AC) Burst Current (<1 sec) 15 A rms (115 V AC); 8 A rms (230 V AC); 18 A rms (100 V AC) Ultimate Short-Term Peak Current Draw 22 A pk (115 V AC); 11 A pk (230 V AC); 25 A pk (100 V AC) Inrush Current 7 A pk (115 V AC); 7 A pk (230 V AC); 10 A pk (100 V AC)</p>
RMS NETWORK (OPTIONAL)	Equipped for two conductor twisted-pair network, reporting amplifier operating parameters to system operator's host computer.

NOTES:

1. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
2. Free field, measured with 1/3-octave frequency resolution at 4 meters.
3. Measured with music at 1 meter.
4. At this frequency, the low- and high-frequency transducers produce equal sound pressure levels.
5. Power handling is measured under AES standard conditions: transducer driven continuously for two hours with band-limited noise signal having a 6 dB peak-average ratio.
6. Amplifier wattage rating is based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance. Both channels 70 V rms (100 V pk) into 8 ohms

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N775

CE

UL 3K59 COMMERCIAL AUDIO SYSTEM US LISTED

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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full range system. The transducers shall consist of a 15-inch diameter cone driver and a 1.5-inch throat, 4-inch diaphragm compression driver on an 80-degree horizontal by 40-degree vertical constant-Q horn.

The loudspeaker system shall incorporate internal processing electronics and a two-channel amplifier. Processing functions shall include equalization, phase correction, driver protection and signal division for the high- and low-frequency sections. The crossover point shall be 700 Hz. Each amplifier channel shall be class AB/H with complementary MOSFET output stages. Burst capability shall be 620 watts each channel (1240 watts total) with nominal 8-ohm resistive load. Distortion (THD, IM, TIM) shall not exceed 0.02 percent. Protection circuits shall include TruPower limiting.

Performance specifications for a typical production unit shall be as follows: Operating frequency range shall be 35 Hz to 18

kHz. Phase response shall be ±90 degrees from 50 Hz to 16 kHz. Maximum peak SPL shall be 136 dB at 1 meter. Beamwidth shall be 80 degrees horizontal from 500 Hz to 16 kHz and 40 degrees vertical from 1500 Hz to 12 kHz.

The audio input shall be electronically balanced with a 10 kOhm impedance and accept a nominal 0 dBV (1 V rms, 1.4 V pk) signal (+20 dBV to produce maximum peak SPL). Connectors shall be XLR (A-3) type male and female or VEAM all-in-one (integrates AC, audio and network). RF filtering shall be provided. CMRR shall be greater than 50 dB (typically 80 dB 50 Hz to 500 Hz).

The internal power supply shall perform automatic voltage selection, EMI filtering, soft current turn-on and surge suppression. Powering requirements shall be nominal 100 V, 110 V or 230 V AC line current at 50 Hz or 60 Hz. UL and CE operating voltage ranges shall be 95 to 125 V AC and 208 to 235 V AC. Current draw during burst shall be 15 A at 115 V AC and 8 A at

230 V AC. Current inrush during soft turn-on shall not exceed 7 A at 115 V AC. AC power connectors shall be locking NEMA L6-20 connector, IEC 309 male or VEAM.

The loudspeaker system shall provide facilities for installing the optional RMS remote monitoring and control system.

All loudspeaker components shall be mounted in an acoustically vented trapezoidal enclosure constructed of birch plywood with a hard black textured finish. The front protective grille shall be perforated hex metal covered by charcoal gray foam. Dimensions shall be 21.00" wide x 30.00" high x 22.20" deep (533 mm x 762 mm x 564 mm). Weight shall be 130 lbs (58.97 kg). Rigging points shall be four ring and stud pan fittings, two each top and bottom, rated at 500 lbs (226.80 kg) per fitting at a 5:1 safety factor; 3/8-inch or metric M10 nut plates are optional.

The loudspeaker shall be the Meyer Sound CQ-1.