



LINE SOURCE SERIES



# PREMIUM LARGE FORMAT

Premium Large Format (PLF) is one of the fastest growing and most active areas of cinema exhibition, with significant potential to grow in size over the next ten years. The market for PLF is continually evolving, driven by further demand for new technologies and experiences.

Although successful PLF includes a mix of technology, marketing and service, the technology element is a key battleground in this space.

The surge in new PLF screens comes as exhibitors are upgrading ever larger portions of their screen estates to premium, with PLF representing the optimal configuration of sight, sound and seating experiences.

Ultimately, incremental revenues are a core driver for investment in next generation cinema technologies and screens. The main role of PLF (and other premium formats) is to succeed in driving customers to higher priced seating options. RGB laser is also playing its role, quickly becoming a crucial and discernible attribute of a new PLF screen, which serves to reinforce PLF screens as the most technologically advanced in the business.

In general, cinema is moving towards an array of premium tiers and experiences based on a superior technology proposition, in combination with service, marketing and branding elements as well as improving the overall customer experience. Nevertheless, the superior attributes of PLF screens and the accompanying technology upgrades are increasingly seen by exhibitors as a primary driver of revenues. Investment in next generation technology and experiences is seen as pivotal in regards to remaining both competitive and relevant in the wider entertainment mix.

## LINE SOURCE SYSTEM

A Line Source System features a number of identical loudspeakers arranged in a vertical line array which allows sound waves to constructively interfere with each other so that they can transmit sound waves farther than single source loudspeakers, in a directional pattern.

When correctly installed, with fewer number of boxes a Line Source System allows even frequency response and clear sonic coverage throughout the range of the system. Line Source Systems can have wide horizontal coverage and narrow vertical coverage.

The vertical dispersion of these systems can be controlled as per the desired vertical angle to optimize the audience coverage and minimizing sound radiation to ceiling.

Unlike, conventional systems which produces waves with 6dB drop, Line Source Systems drop only 3dB with every doubling of distance.

Line Source Speakers can reproduce very high SPL at large distances and can be configured depending on the size of the auditorium.

# QUARTET QM1



### **FEATURES:**

- High performance and very high SPL
- Wide horizontal dispersion and variable vertical dispersion
- Configurable array length depending on the distance to be covered
- Very low SPL gradient from front to back
- Coverage pattern optimizable to focus sound on audience and avoid sound radiation to ceiling
- Compact design and easy installation

Pulz Quartet QM1 is an advanced true Line Source System capable of high SPL and linear frequency response.

Quartet QM1 is designed for easy powering, convenience in deployment and to deliver outstanding sound quality in large cinemas. The system is powered with two high performance 8" Low-Mid drivers, the best in its class in conjunction with a 1.75" voice coil compression driver of superior sonic quality.

A specially designed waveguide loads the HF driver to create a true line source with minimum internal diffraction and associated distortions.

The LF section is loaded both in front and rear for optimum coupling and extended LF response. A minimum loss passive crossover integrates the HF and LF sections further assisted by external advanced digital processing to achieve flat frequency response.

Quartet QM1 is built using 15 mm Marine Grade Birch Plywood finished with abrasion resistant polyurethane paint. The speakers can be ground, stacked or flown with optional rigging accessories. Each box can be tilted individually from 0.5° to 12° with fine increments to achieve desired vertical coverage. Speakon connection on the back plate ensures secure speaker connections. Upto four Quartet QM1 boxes can be powered by a single channel of a high power amplifier, making the system easy to wire and deploy efficiently.

The Quartet QM1 is designed taking into consideration all the practical aspects of Line Source deployment yet not compromising on the ultimate sonic quality and long term consistent reliable performance.

## **SPECIFICATIONS:**

Frequency Response: 65Hz to 19kHz

Power Rating: 260W AES, 1040W peak

Sensitivity: 97.5dB @ 1W/1m

Sensitivity (4 boxes): 103.5dB @ 1W/1m

Maximum SPL: 121.5dB continuous, 127.5dB peak @ 1m

Maximum SPL (4 boxes): 133.5dB continuous, 139.5dB peak @ 1m

Nominal Impedance: 16Ω

Nominal Impedance (4 boxes):  $4\Omega$ 

**Transducers:** 2 X 8" (200 mm) driver,

1.75" (44 mm) voice coil compression driver

Crossover: 1kHz Passive, Air core inductors,

MKP capacitors, Wire wound resistors

**Dispersion:** 100° horizontal, 0° to 12° vertically configurable

Finish: Black impact resistant structured coating

Connector: 2 X Neutrik NL4MP Speakon connectors

**Enclosure:** 15 mm Marine Grade Birch Plywood

Grill: Perforated heavy duty metal grill

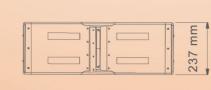
**Dimensions (H X W X D):** 237 mm X 689 mm X 414 mm

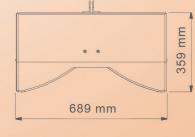
(9.3" X 27.1" X 16.3")

Net Weight: 25 kg (55 lb)

Packed Weight: 27 kg (59 lb)







SIDE VIEW

FRONT VIEW

TOP VIEW

# **QUARTET QM2**



#### **FEATURES:**

- High performance and very high SPL
- Wide horizontal dispersion and variable vertical dispersion
- Configurable array length depending on the distance to be covered
- Very low SPL gradient from front to back
- Coverage pattern optimizable to focus sound on audience and avoid sound radiation to ceiling
- Compact design and easy installation

Pulz Quartet QM2 is an advanced true Line Source System capable of high SPL and linear frequency response.

Quartet QM2 is designed for easy powering, convenience in deployment and to deliver outstanding sound quality in large cinemas. The system is powered with two high performance 8" Low-Mid drivers, the best in its class in conjunction with a 1.75" voice coil compression driver of superior sonic quality.

A specially designed waveguide loads the HF driver to create a true line source with minimum internal diffraction and associated distortions.

The LF section is loaded both in front and rear for optimum coupling and extended LF response. A minimum loss passive crossover integrates the HF and LF sections further assisted by external advanced digital processing to achieve flat frequency response.

Quartet QM2 is built using 15 mm Marine Grade Birch Plywood finished with abrasion resistant polyurethane paint. The speakers can be ground, stacked or flown with optional rigging accessories. Each box can be tilted individually from 0.5° to 12° with fine increments to achieve desired vertical coverage. Speakon connection on the back plate ensures secure speaker connections. Upto four Quartet QM2 boxes can be powered by a single channel of a high power amplifier, making the system easy to wire and deploy efficiently.

The Quartet QM2 is designed taking into consideration all the practical aspects of Line Source deployment yet not compromising on the ultimate sonic quality and long term consistent reliable performance.

### **SPECIFICATIONS:**

Frequency Response: 65Hz to 19kHz

Power Rating: 400W AES, 1600W peak

Sensitivity: 97dB @ 1W/1m

Sensitivity (4 boxes): 103dB @ 1W/1m

Maximum SPL: 123dB continuous, 129dB peak @ 1m

Maximum SPL (4 boxes): 135dB continuous, 141dB peak @ 1m

Nominal Impedance:  $16\Omega$ 

Nominal Impedance (4 boxes):  $4\Omega$ 

**Transducers:** 2 X 8" (200 mm) driver,

1.75" (44 mm) voice coil compression driver

Crossover: 1kHz Passive, Air core inductors,

MKP capacitors, Wire wound resistors

**Dispersion:** 100° horizontal, 0° to 12° vertically configurable

Finish: Black impact resistant structured coating

Connector: 2 X Neutrik NL4MP Speakon connector

**Enclosure:** 15 mm Marine Grade Birch Plywood

Grill: Perforated heavy duty metal grill

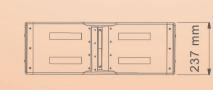
**Dimensions (H X W X D):** 237 mm X 689 mm X 414 mm

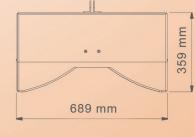
(9.3" X 27.1" X 16.3")

Net Weight: 25 kg (55 lb)

Packed Weight: 27 kg (59 lb)







SIDE VIEW

FRONT VIEW

TOP VIEW

## sound matters



#### **Pulz Electronics Ltd.**

Kailashpati, 2nd Floor, Plot 10A, Veera Desai Road, Andheri (W), Mumbai 400 053, India

Tel: +91 22 2673 2593

www.pulz.co.in