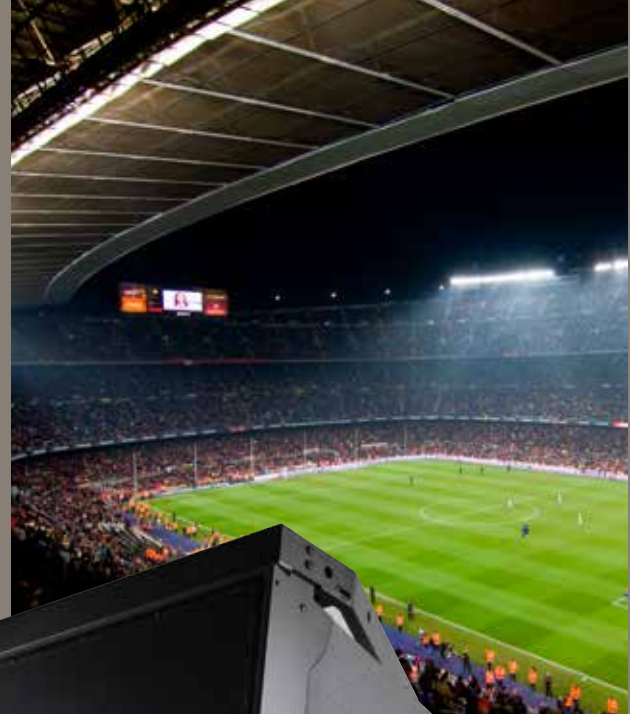


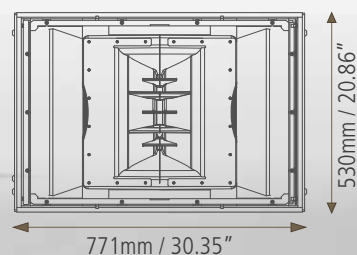
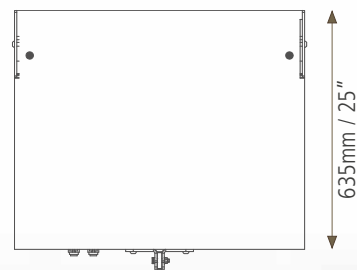
HL SYSTEM

HORN LOADED ARRAY SYSTEM

The HL 2260 (2240, 2290) is a horn loaded two-way full range array system that incorporates a 2 x 12" woofer and a 2.0" exit 4.0" voice coil titanium compression driver for mid distance and long throw applications. The system is very compact and provides very high output and accurate voice and sound reproduction. The system is equipped with the latest generation of RCF precision transducers. The system has a vertical dispersion of 22.5° and is ideally used in point source configuration for mid distance applications or can be clustered with narrower angles for long throw applications. The loudspeaker enclosure shape is trapezoidal and offers a 22.5° coupling angle each side. Connections to the amplifier are made through a watertight Amphenol multi-pole connector. The grille is in custom perforated steel, epoxy coated, with open-cell fibres and water repellent woven fabric backing. The cabinet is constructed of multi-ply Baltic birch marine plywood and finished in a very resistant, textured, polyurea black paint.



- Horn Loaded two-way Array System
- Fully Horn-loaded, 60° x 22.5° (40° x 22.5°, 90° x 22.5°) directivity
- 2 x 12" RCF Precision woofers with 3.5" voice coil
- RCF Precision 4.0" voice coil compression driver, titanium dome
- Horn loading on RCF waveguide
- 141 dB Max SPL
- System Power rating 1500 Watt RMS (1350 Watt LF, 150 Watt HF)
- Safe and solid variable array mechanics
- Baltic Birch Plywood enclosure with internal structural metal bracings



HL 2260

HORN LOADED TWO-WAY ARRAY
22.5° x 60°

HL 2240

HORN LOADED TWO-WAY ARRAY
22.5° x 40°

HL 2290

HORN LOADED TWO-WAY ARRAY
22.5° x 90°

HS 2200

ARRAY SUBWOOFER

HS 2200 p/n 130.00.406

ARRAY FITTINGS

The HL SYSTEM is equipped with standard array fittings and IP 55 weather protection.



| ACOUSTICAL SPECS. | HL 2260 | HL 2240 | HL 2290 | HS 2200 |
|----------------------------------|--|---------|---------|-------------------------------|
| FREQ. RANGE (-10 dB): | 60 Hz - 20 kHz | | | 30 Hz - 200 Hz |
| FREQ. RANGE (-3 dB): | 80 Hz - 20 kHz | | | 35 Hz - 200 Hz |
| HORIZ. COVERAGE ANGLE (-6 dB): | 60° | 40° | 90° | - |
| VERTICAL COVERAGE ANGLE (-6 dB): | 22.5° | 22.5° | 22.5° | - |
| DIRECTIVITY FACTOR; Q: | 14 | 16 | 13 | - |
| SYSTEM SENSITIVITY: | LF 104 dB, HF 113 1W @ 1m ⁽¹⁾ | | | 100 dB 1W @ 1m ⁽¹⁾ |
| RATED MAXIMUM SPL: | 141 dB, @ 1m | | | 136 dB, @1m |
| SYSTEM NOMINAL IMPEDANCE: | 8 Ohm | | | 8 Ohm |
| SYSTEM INPUT POWER RATING RMS: | LF 1350W, HF 150W | | | LF 900 W |
| SYSTEM INPUT POWER RATING PEAK: | LF 5400W, HF 600W | | | LF 3600 W |
| RECOMMENDED AMPLIFIER: | LF 2700W, HF 300W | | | LF 1800 W |
| HF PROTECTION: | - | | | - |
| CROSSOVER: | Recommended 600 Hz | | | - |

TRANSDUCERS

| | | |
|---------------------|---------------------------|----------------------|
| LOW FREQUENCY: | 2 x 12" woofer, 3.5" v.c. | 18" woofer 4.0" v.c. |
| NOMINAL IMPEDANCE: | 8 Ohm | 8 Ohm |
| INPUT POWER RATING: | 1350 W AES | 900 W AES |
| SENSITIVITY: | 104 dB, 1W @ 1m | 100 dB, 1W @ 1m |
| HIGH FREQUENCY: | 1.5" throat, 4" v.c. | - |
| NOMINAL IMPEDANCE: | 8 Ohm | - |
| INPUT POWER RATING: | 150 W AES | - |
| SENSITIVITY: | 113 dB, 1W @ 1m | - |

PHYSICAL

| | |
|-------------------------|---|
| ENCLOSURE: | Trapezoidal, 15 mm birch plywood construction |
| RIGGING INSERTS: | Side and rear array rigging point |
| COLOR: | Polyurea Black, weather and scratch resistant paint |
| GRILLE: | Custom perforated steel grille |
| INPUT CONNECTORS: | Amphenol eco/mat IP 67 |
| DIMENSIONS (H x W x D): | 20.87" x 30.35" x 25.00" 530 x 771 x 635 mm |
| WEIGHT: | 60 Kg 62 Kg 62 Kg 60 Kg |

1) Measured on axis in the far field with 1 watt (2.83V RMS, 8 Ohm) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300 Hz to 3 kHz.

2) Using 20 Hz to 20 kHz, Pink Noise Spectrum, 2 hours, + 6 dB crest factor, with RMS voltage calculated on speaker minimum impedance.

3) Recommended Amplifier is a power capability value that should be taken as a guide.

HL20 WP

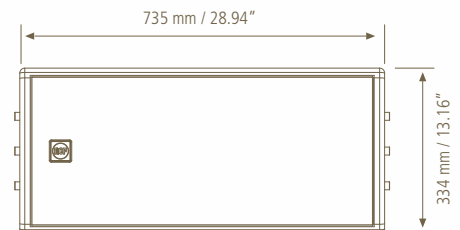
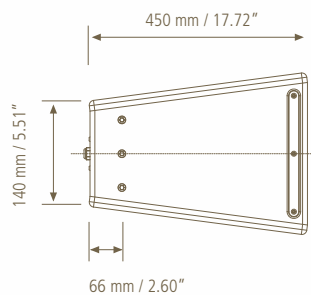
WEATHERPROOF PASSIVE LINE ARRAY MODULE

The HL 20 WP is a compact, wide dispersion, 2 way passive line array module that offers the highest performance from a small size line array. The incredible high output and dynamics, the extreme accuracy and high frequency extension plus the compact size makes the HL 20 WP the ideal tool for outdoor sound reinforcement, live performances and events as well as fixed installations in theatres, concert halls or auditoriums. Connections to the amplifier are made through a watertight multi-pole connector. The grille is in custom perforated aluminum with open-cell fibers and water repellent woven fabric backing. The cabinet is constructed of multiply baltic birch plywood and finished in a fire resistant, textured coating.

- Outdoor sound reinforcement
- Touring sound reinforcement for mid-sized venues
- High quality reinforcement of music and speech
- Medium to large theatres and night clubs
- Stadiums, arenas, concert halls
- Corporate A/V presentation



- Very compact size
- Maximum output per size available on the market
- Wide, constant directivity, horizontal coverage angle
- Minimum weight
- Watertight multi-pole connector IP67
- Baltic birch cabinet



CSI PRODUCT SPECIFICATIONS FOR DESIGNERS, SPECIFIERS, AND CONSULTANTS (ALSO KNOWN AS "A&E SPECIFICATIONS")

The following are "Part 2 Products" CSI-type specifications. It is assumed that "Part 1 General – Administrative and Procedures" and "Part 3 Execution – Installation and Maintenance" are part of an overall audio system or project specification.

PART 2 PRODUCTS

2.01 Approved Manufacturer/Product

A. RCF, Via Raffaello 13, 42124, Reggio Emilia, Italy. B. Model number: HL20-WP

2.02 Design

Configuration: Compact 2 way speaker. LF Sub-section 2x10", 2.5" voice coil., HF Sub-section 1.5", 3" voice coil.

2.03 Acoustical Proprieties

Nominal dispersion angle: Horizontal: 100° - Vertical: 15°. Axial frequency range: 55 Hz - 20 kHz Axial sensitivity: 98 dB LF, 109 dB HF, 1W @ 1m. Power handling: Applicable power 600 W RMS LF, 110 Watt RMS HF. Applicable power 700W, Musical power 1400 W, Peak power 2800 W. Nominal impedance: 16 Ohm LF, 16 Ohm MF/HF.

2.04 Physical Properties

Enclosure: Trapezoidal, 21 mm birch plywood construction. Rigging inserts: 6 x Side M10 rigging points. Color: White, Custom color. Grille: Custom perforated stel grill with open cell poly fiber and waterproof cloth backing. Input Connectors: Amphenol eco/mat IP 67. Dimensions (H x W x D): 334 x 735 x 450 mm.

ACOUSTICAL SPECIFICATIONS

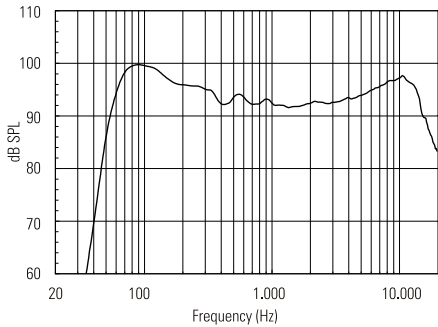
| | |
|---------------------------------|---------------------------------------|
| FREQ. RANGE (-10 dB) | 55 Hz - 20 kHz |
| FREQ. RANGE (-3 dB) | 65 Hz - 20 kHz |
| HORIZ. COVERAGE ANGLE (-6 dB) | 100° |
| VERTICAL COVERAGE ANGLE (-6 dB) | 15° |
| DIRECTIVITY FACTOR; Q | 16 |
| SYSTEM SENSITIVITY | 102 dB,1W @ 1m ⁽¹⁾ |
| RATED MAXIMUM SPL | 135 dB, @ 1m |
| SYSTEM NOMINAL IMPEDANCE | 16 Ohm |
| SYSTEM INPUT POWER RATING RMS | LF 900 W, HF/MF 400W ⁽²⁾ |
| SYSTEM INPUT POWER RATING PEAK | LF 3600 W, HF/MF 1600W ⁽²⁾ |
| RECOMMENDED AMPLIFIER | LF 1800 W, HF/MF 800W ⁽²⁾ |
| HF PROTECTION | Active Mosfet compression driver |
| CROSSOVER | Recommended 800 Hz |

TRANSDUCERS

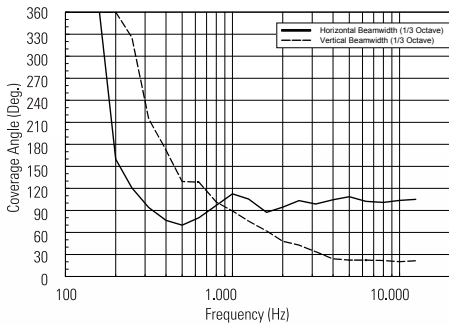
| | |
|--------------------|--|
| LOW FREQUENCY | 2 x 10" (254 mm) woofer 3" (76 mm) coil |
| NOMINAL IMPEDANCE | 16 Ohm |
| INPUT POWER RATING | 600 W AES |
| SENSITIVITY | 98 dB, 1W @ 1m |
| HIGH FREQUENCY | neo 1,5" (38mm) throat, 3" (75mm) coil |
| NOMINAL IMPEDANCE | 16 Ohm |
| INPUT POWER RATING | 110 W AES |
| SENSITIVITY | 109 dB, 1W @ 1m |

PHYSICAL

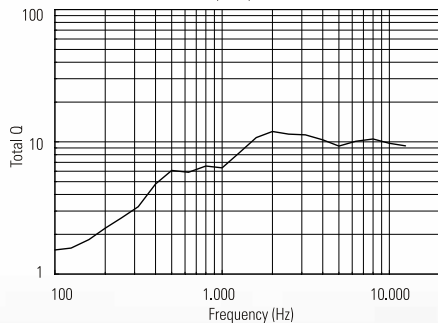
| | |
|-------------------------|---|
| ENCLOSURE: | Double Trapezoidal, 21 mm birch plywood construction |
| RIGGING INSERTS: | 6 x Side M10 rigging points |
| COLOR: | White, Custom color, scratch resistant paint |
| GRILLE: | Custom perforated stel grill with open cell poly fiber and waterproof cloth backing |
| INPUT CONNECTORS: | Amphenol eco/mat IP 67 |
| DIMENSIONS (H x W x D): | 13.14"x 28.93"x 17.71" 334 x 735 x 450 mm |
| WEIGHT: | 74.95 lb - 34 Kg |



RESPONSE WITH DX4800 PROCESSOR



BEAMWIDTH vs. FREQUENCY



DIRECTIVITY INDEX AND Q

1) Measured on axis in the far field with 1 watt (2.83V RMS, 8 Ohm) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300 Hz to 3 kHz.
2) Using 20 Hz to 20 kHz, Pink Noise Spectrum, 2 hours, + 6 dB crest factor, with RMS voltage calculated on speaker minimum impedance.
3) Recommended Amplifier is a power capability value that should be taken as a guide.