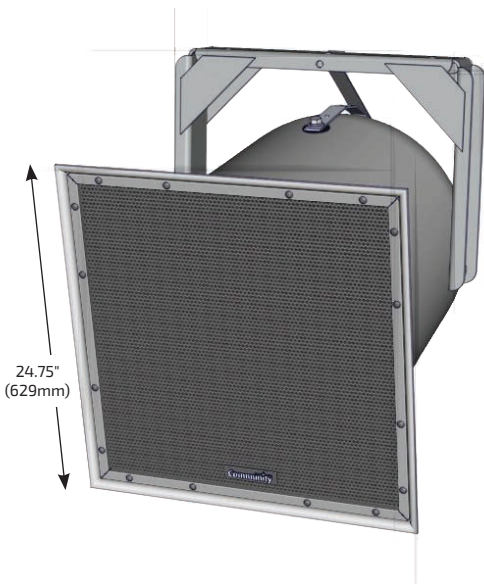


**R SERIES**

Premium Music

# R2-52MAX

 HIGH OUTPUT FULL-RANGE 50° x 20°  
 WEATHER-RESISTANT LOUDSPEAKER

**APPLICATIONS**
**MAIN PA ELEMENT**

 Arenas · Stadiums · Racetracks · Amusement Parks  
 Themed Entertainment Facilities · Fairgrounds  
 Rodeos · Air Shows · Convention Centers  
 Multipurpose Indoor and Outdoor Venues

**DESCRIPTION**

The R2-52MAX is a three-way, full-range loudspeaker system designed to provide "No Compromises" premium music reproduction at very high output levels, and also improves the legendary R2 voice projection and intelligibility capabilities. It is designed with the same materials and construction as the standard R2 for extreme weather resistance, and can withstand long-term exposure to tough environmental conditions.

The R2-MAX is constructed with premium components in a biamp format to maximally optimize its performance. It uses a very high sensitivity 1" HF compression driver that provides extended HF response and a balanced frequency response with the rest of the system. Operated with a high crossover frequency, the HF driver maintains very high headroom, delivering effortless performance. The dual, high power 12" LF drivers feature an aluminum demodulation ring for very clean, low distortion performance. The dual midrange drivers are higher performance versions of the legendary low compression ratio M200 2" exit compression driver, achieving 3dB greater output with extremely low distortion. The passive MF/HF horn signal aligns the drivers for the best possible music and speech performance. The result is an excellent loudspeaker system that is capable of exceeding expectations in any application.

**FEATURES**

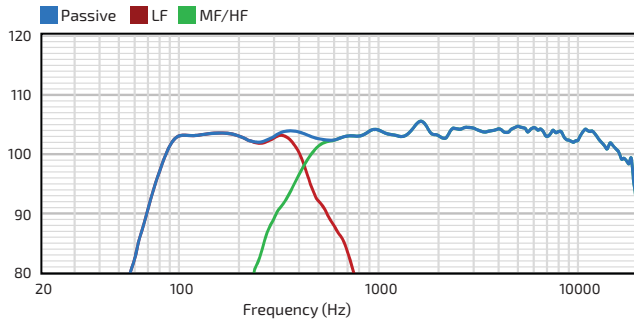
- Modern stadium loudspeaker, designed to meet the needs of today's sporting venues for superb musicality, excellent speech intelligibility and very high output
- Signal aligned passive MF/HF horn coaxially mounted in front of electronically signal aligned LF drivers
- Very high sensitivity HF driver for improved balanced response and extension
- High sensitivity and very high output (135 dB max), with flat extended frequency response

**TECHNICAL SPECIFICATIONS<sup>1</sup>**

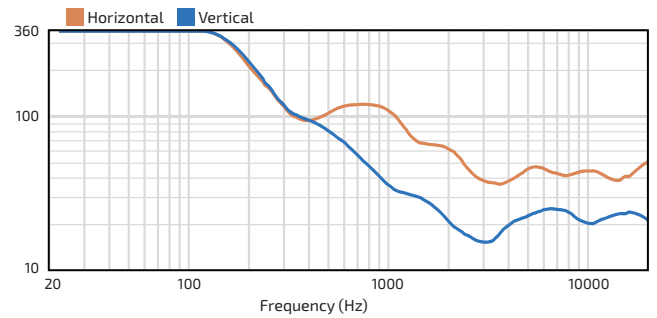
<b>Operating Mode</b>	Biamp with DSP (Passive MF/HF)		
<b>Operating Environment</b>	Indoor / Continuous outdoor direct exposure		
<b>Operating Range<sup>2</sup></b>	71 Hz to 19.5 kHz		
<b>Nominal Beamwidth (H x V)</b>	50° x 20°		
<b>Transducers</b>	LF - 2 x 12" inherently weather-resistant cones with 3" voice coil, neodymium motor and aluminum demodulation ring MF - 2 x 2" exit, M200HP compression, 3.5" diaphragm, 2.2" Voice coil, high temp non-metallic diaphragm HF - 1 x 1" exit compression, 1.7" voice coil, demodulation ring, ketone polymer diaphragm		
<b>Continuous Power Handling<sup>3</sup> @ Nominal Impedance</b>	LF	98V	1200W @ 8 ohms (4800W peak)
	MF/HF	53V	350W @ 8 ohms (1400W peak)
<b>Nominal Sensitivity<sup>4</sup></b>	LF	@ 1W	@ 2.83V
	MF/HF	102 dB	102 dB
	MF/HF	110 dB	110 dB
<b>Nominal Maximum SPL<sup>5</sup> (Whole Space)</b>	LF	Peak	Continuous
	MF/HF	139 dB	133 dB
	MF/HF	141 dB	135 dB
<b>Equalized Sensitivity<sup>6</sup></b>	System	@ 1W	@ 2.83V
	System	104 dB	104 dB
<b>Equalized Maximum SPL<sup>7</sup></b>	System	Peak	Continuous
	System	141 dB	135 dB
<b>Recommended Amplifiers</b>	LF	1200W - 2400W @ 8 ohms, (98V - 139V)	
	MF/HF	350W - 700W @ 8 ohms, (53V - 75V)	
<b>PHYSICAL</b>			
<b>Input Connection</b>	2 x 12' (3.6 m) 16-2 SJOW cables		
<b>Mounting Provisions</b>	(5) 1/2"-13 threaded rigging points, Steel zinc-rich epoxy dual-layer powder-coated bracket with (2) aluminum aiming straps to secure angle		
<b>Environmental</b>	IP55 per IEC 60529, conforms with MIL-STD-810G		
<b>Dimensions H x W x D</b>	24.75" x 24.75" x 30.75" (629 x 629 x 781 mm)		
<b>Weight</b>	99 lbs (44.9 kg) loudspeaker only 122 lbs (55.3 kg) loudspeaker and yoke		
<b>Finish</b>	Refer to the Technical Drawing (page 4)		
<b>OPTIONS</b>			
<b>Configure-to-Order (CTO)</b>	Custom color: Exterior grade paint finish, customer defined RAL# Custom cable length and gauge		

Community strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

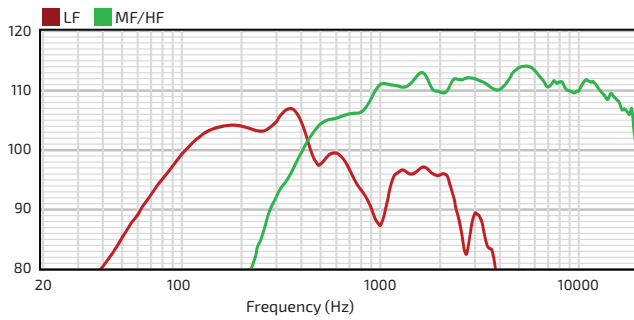
### AXIAL PROCESSED RESPONSE (dB)<sup>8</sup>



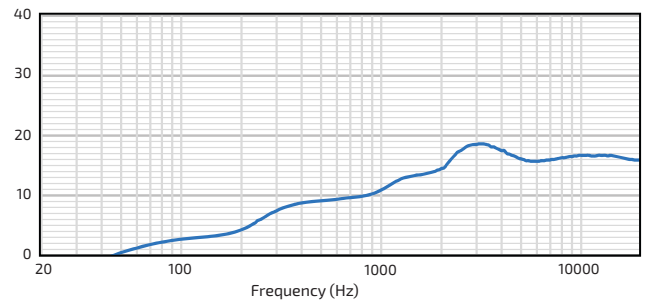
### BEAMWIDTH (Degrees)<sup>10</sup>



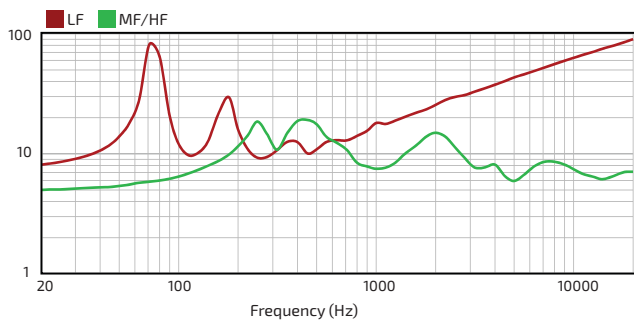
### AXIAL SENSITIVITY (dB SPL)<sup>9</sup>



### DIRECTIVITY INDEX (dB)<sup>11</sup>



### IMPEDANCE (Ohms)



Min Impedance: (LF) 9.3 ohms @ 250Hz, (MF/HF) 5.9 ohms @ 5000 Hz

## TECHNICAL DRAWING / DIMENSIONS / FINISH

**H x W x D**

24.75" x 24.75" x 30.75"  
(629 x 629 x 781 mm)

**Unit Weight**

99 lbs (44.9 kg) loudspeaker only  
122 lbs (55.3 kg) loudspeaker and yoke

**Shipping Weight**

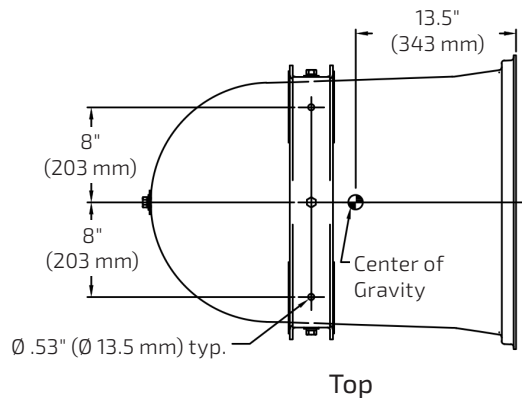
132 lbs (59.9 kg)

**Grille:**

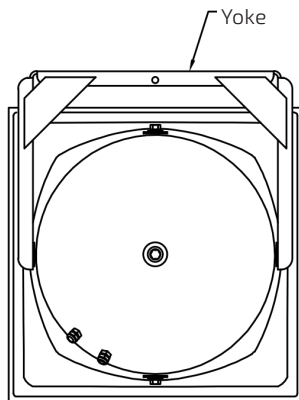
3-layer Weather-Stop™ with polyester mesh, foam, zinc-rich epoxy dual-layer powder-coated perforated steel color-matched to enclosure

**Enclosure / Finish**

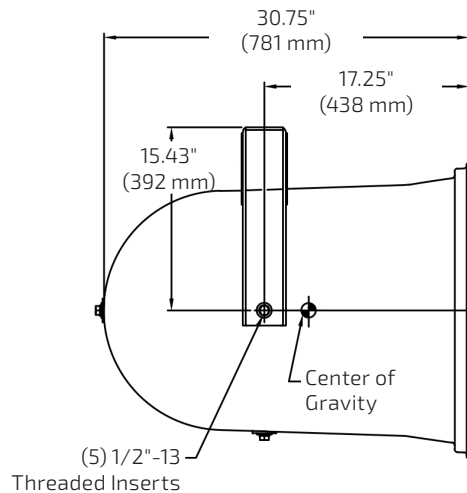
Hand-laminated multilayer fiberglass with paintable light grey gel-coat (RAL# 7038)



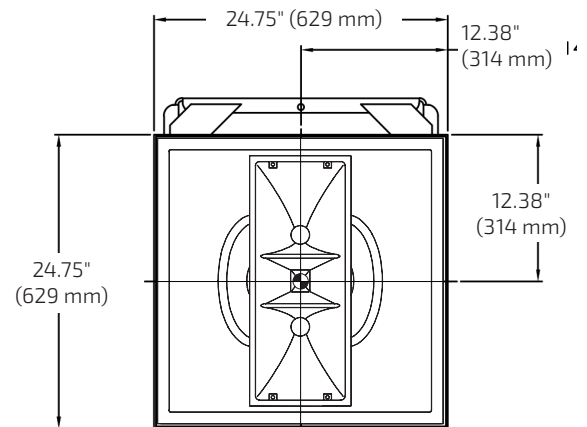
*Note: Cabinets are hand-laminated and measurements vary slightly due to the thickness of the fiberglass. Dimensions shown should not be used to fabricate hanging fixtures. Mounting points are approximate.*



Rear



Sides



Front

## ARCHITECTURAL SPECIFICATIONS

The loudspeaker system shall be a horn-loaded, three-way, full-range triaxial design with two 12" inherently weather-resistant neodymium low frequency drivers on a bass horn, two 2" exit Ferrofluid-cooled midrange compression driver with a nonmetallic diaphragm and one 1" exit HF driver with a ketone polymer diaphragm mounted on respective fiberglass horns built within the bass horn. MF/HF drivers shall be connected to an integral passive crossover with a crossover frequency of 3300 Hz, the electronic biamp LF/MF crossover frequency shall be at 450 Hz. The biamp input connection shall be two 16-2 12 ft. (3.6 m) SJOW cables with stripped ends, one for LF and one for MF/HF. The loudspeaker enclosure shall be an integral double-wall weather-sealed light grey fiberglass bell with a three-layer weather-resistant grille. The steel grille shall be powder-coated with a proprietary zinc-rich epoxy dual-layer powder-coating process color-matched to the enclosure. A steel yoke powder-coated with the same proprietary process, and color-matched, shall be included with the system. The system shall have an IEC 60529 IP rating of IP55W with a minimum 5-degree downward aiming angle. There shall be five 1/2"-13 threaded mounting points. The system shall have an operating range of 71 Hz to 19.5 kHz (-10 dB), LF input capability of 98V, an LF sensitivity of 102 dB at 1W/1m with a nominal impedance of 8 ohms; MF/HF shall have an input capability of 53V, an MF/HF sensitivity of 110 dB at 1W/1m with a nominal impedance of 8 ohms. The nominal dispersion shall be 50°H x 20°V. The loudspeaker shall be 24.75 in. (629 mm) H x 24.75 in. (629 mm) W x 30.75 in. (781 mm) D and weigh 122 lbs (55.3 kg) including the yoke.

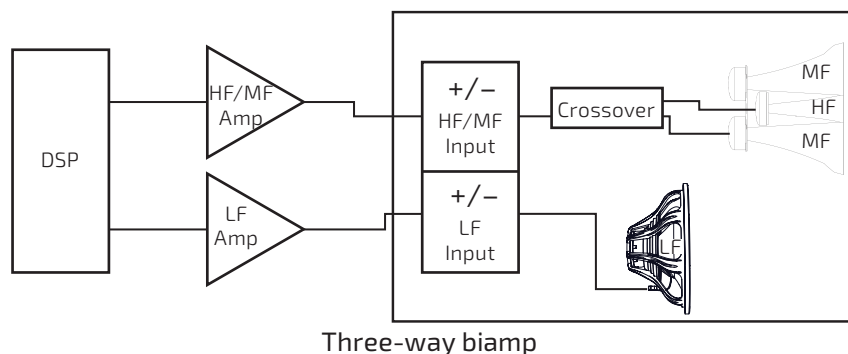
## R SERIES

Premium Music

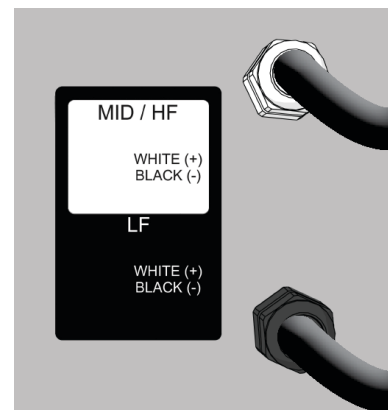
# R2-52MAX

HIGH OUTPUT FULL-RANGE 50° x 20°  
WEATHER-RESISTANT LOUDSPEAKER

## CONNECTION DIAGRAMS



Three-way biamp



Cable Connections

## NOTES

- PERFORMANCE SPECIFICATIONS** All measurements are taken indoor using a time-windowed and processed signal to eliminate room effects, approximating an anechoic environment, a distance of 6.0 m. All acoustic specifications are rounded to the nearest whole number. An external DSP with settings provided by Community Professional Loudspeakers is required to achieve the specified performance; further performance gains can be realized using Community's dSPEC226 loudspeaker processor with FIR power response optimization.
- OPERATING RANGE** The frequency range in which the on-axis processed response remains within 10dB of the average SPL.
- CONTINUOUS POWER HANDLING** Maximum continuous input voltage (and the equivalent power rating, in watts, at the stated nominal impedance) that the system can withstand, without damage, for a period of 2 hours using an EIA-426-B defined spectrum; with recommended signal processing and protection filters.
- NOMINAL SENSITIVITY** Averaged SPL over the operating range with an input voltage that would produce 1 Watt at the nominal impedance and the averaged SPL over the operating range with a fixed input voltage of 2.83V, respectively; swept sine wave axial measurements with no external processing applied in whole space, except where indicated.
- NOMINAL MAXIMUM SPL** Calculated based on nominal / peak power handling, respectively, and nominal sensitivity; exclusive of power compression.
- EQUALIZED SENSITIVITY** The respective SPL levels produced when an EIA-426-B signal is applied to the equalized loudspeaker system at a level which produces a total power of 1 Watt, in sum, to the loudspeaker subsections and also at a level which produces a total voltage, in sum, of 2.83V to the loudspeaker subsections, respectively; each referenced to a distance of 1 meter.
- EQUALIZED MAXIMUM SPL** The SPL produced when an EIA-426-B signal is applied to the equalized loudspeaker system, at a level which drives at least one subsection to its rated continuous input voltage limit, referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6dB) crest factor of the EIA-426-B test signal.
- AXIAL PROCESSED RESPONSE** The on-axis variation in acoustic output level with frequency of the complete loudspeaker system with recommended signal processing applied. 1/6 octave Gaussian smoothing applied.
- AXIAL SENSITIVITY** The on-axis variation in acoustic output level with frequency for a 1 Watt swept sine wave, referenced to 1 meter with no signal processing. 1/6 octave Gaussian smoothing applied.
- BEAMWIDTH** The angle between the -6dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands. 1/6 octave Gaussian smoothing applied.
- DIRECTIVITY INDEX** The ratio of the on-axis SPL squared to the mean squared SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB. 1/6 octave Gaussian smoothing applied.

Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker's performance please download the GLL file and/or the CLF file from our website: [communitypro.com](http://communitypro.com)

### Community Professional Loudspeakers

333 East Fifth Street, Chester, PA 19013-4511 USA

Phone (610) 876-3400 • Fax (610) 874-0190

[www.communitypro.com](http://www.communitypro.com) • [info@communitypro.com](mailto:info@communitypro.com)

**CAUTION:** Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.