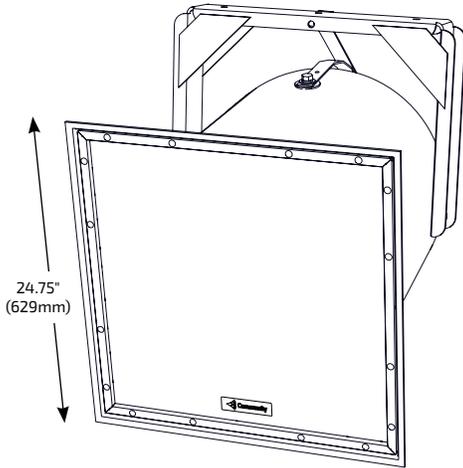


**R SERIES**

Voice and Music

# R2-52Z

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

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

 Athletic Fields · Arenas · Stadiums · Racetracks  
 Theme and Amusement Parks · Fairgrounds  
 Convention Centers · Factories and Warehouses  
 Air Shows · Rodeos · Electronic Carillons  
 Multipurpose Outdoor and Indoor Venues

**DESCRIPTION**

The R2-52Z full-range loudspeaker system is engineered to provide quality, long throw full-range sound projection in a variety of outdoor and indoor applications. Its wide, smooth frequency response and high efficiency ensures high-fidelity music reproduction along with superb projection of clear, intelligible speech at very low distortion.

The R2-52Z is an all horn loaded triaxial design using precision waveguides manufactured by Community of hand-laminated fiberglass. The outer enclosure forms a double wall construction with the internal bass horn, providing a completely weather-sealed chamber for the LF drivers. The mid/high frequency horn assembly is mounted in the mouth of the bass horn. A high quality passive crossover with dynamic driver protection is included. The result is a loudspeaker system that is extremely strong, non-resonant, weather-resistant, and easy to install.

**FEATURES**

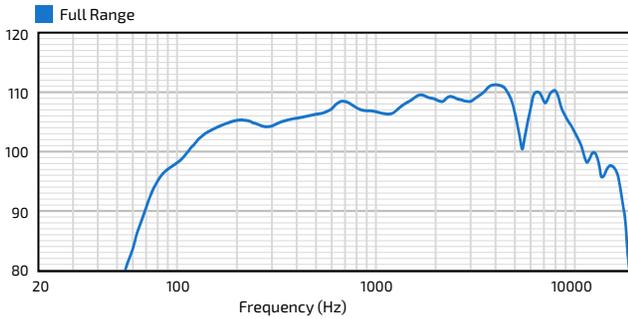
- High-fidelity, high efficiency, full-range reproduction of music and speech
- Application-specific coverage pattern
- 100% weather-resistant and corrosion-resistant construction
- Included weather-resistant mounting yoke
- Five-year product warranty / Fifteen-year enclosure warranty

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

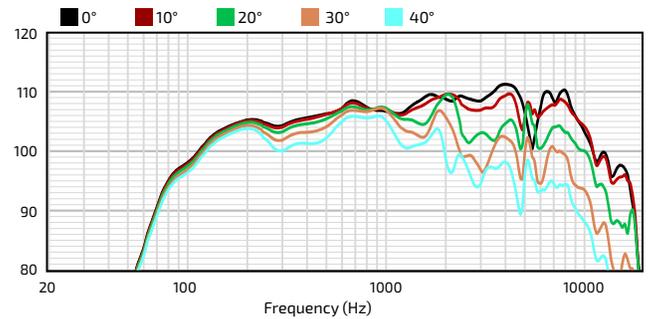
<b>Operating Mode</b>	Passive	
<b>Operating Environment</b>	Indoor / Continuous outdoor direct exposure	
<b>Operating Range<sup>2</sup></b>	70 Hz to 16 kHz	
<b>Nominal Beamwidth (H x V)</b>	50° x 20°	
<b>Transducers</b>	LF 2 x 12" (305mm) weather-treated, Ferrofluid-cooled MF 2 x M200 2" exit, non-metallic diaphragm, Ferrofluid-cooled HF - 1 x 1" exit, titanium diaphragm	
<b>Continuous Power Handling<sup>3</sup> @ Nominal Impedance</b>	40V	400W @ 4 ohms (1600W peak)
<b>Nominal Sensitivity<sup>4</sup></b>	@ 1W 107 dB	@ 2.83V 110 dB
<b>Nominal Maximum SPL<sup>5</sup> (Whole Space)</b>	Peak 139 dB	Continuous 133 dB
<b>Equalized Sensitivity<sup>6</sup></b>	@ 1W 107 dB	@ 2.83V 110 dB
<b>Equalized Maximum SPL<sup>7</sup></b>	Peak 139 dB	Continuous 133 dB
<b>Recommended Amplifiers</b>	400W - 800W @ 4 ohms, (40V - 57V)	
<b>PHYSICAL</b>		
<b>Input Connection</b>	12' (3.6m) SJOW #16 cable	
<b>Mounting Points</b>	(5) 1/2"-13 threaded rigging points, Steel zinc-rich epoxy dual-layer powder-coated mounting yoke; 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>	126 lbs (57.2 kg) loudspeaker and yoke	
<b>Finish</b>	Refer to the Technical Drawing (page 3)	
<b>OPTIONS</b>		
<b>Required Accessory</b>	70 Hz High pass filter	
<b>Accessories</b>	TRC400: External 400W transformer (70V/100V/140V)	
<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.

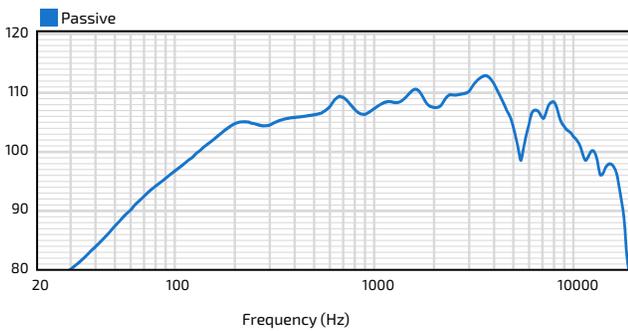
### AXIAL PROCESSED RESPONSE (dB)<sup>8</sup>



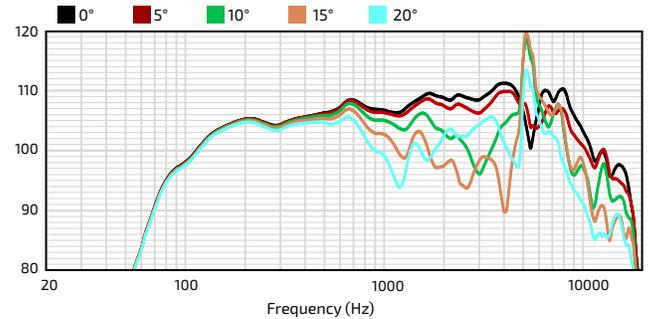
### HORIZONTAL OFF-AXIS RESPONSE (dB)<sup>10</sup>



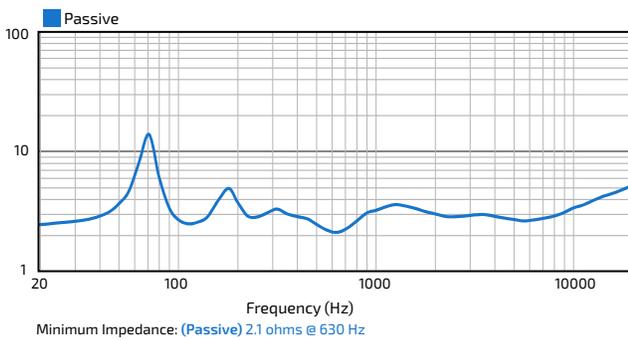
### AXIAL SENSITIVITY (dB SPL)<sup>9</sup>



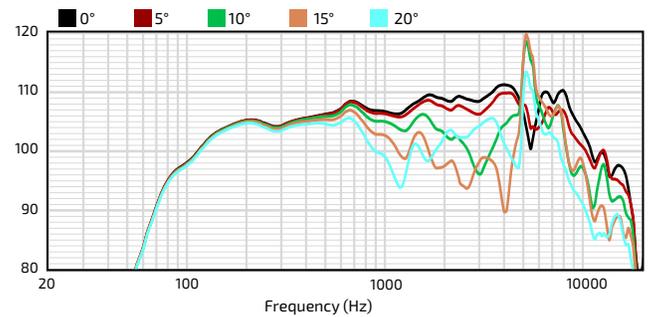
### VERTICAL OFF-AXIS UP RESPONSE (dB)<sup>10</sup>



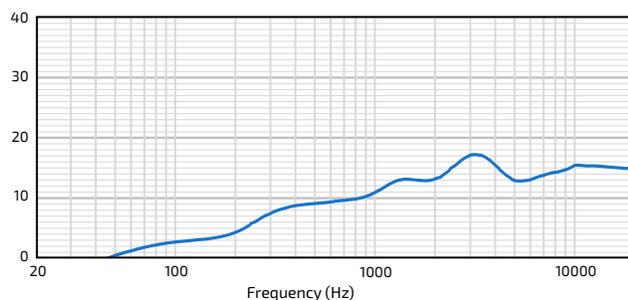
### IMPEDANCE (Ohms)



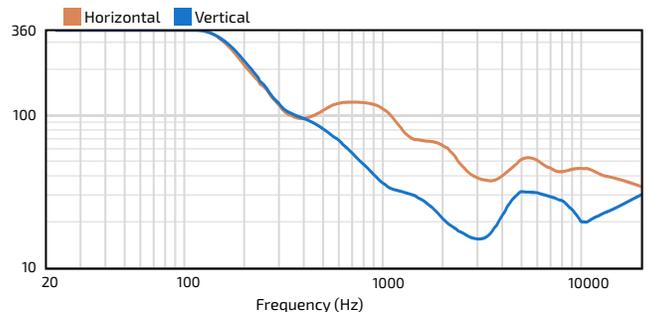
### VERTICAL OFF-AXIS DOWN RESPONSE (dB)<sup>10</sup>



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



### BEAMWIDTH (Degrees)<sup>12</sup>



## 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**

126 lbs (57.2 kg) loudspeaker with yoke

**Shipping Weight**

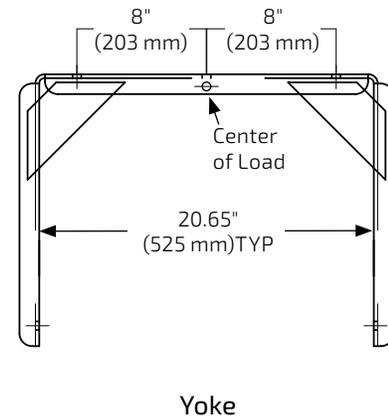
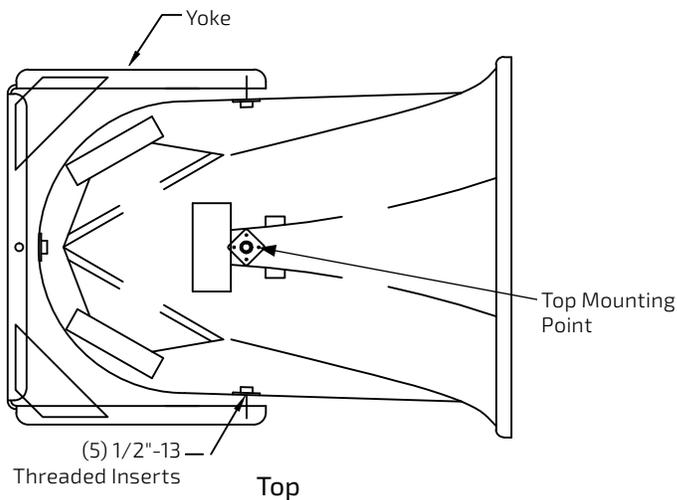
136 lbs (61.7 kg)

**Grille:**

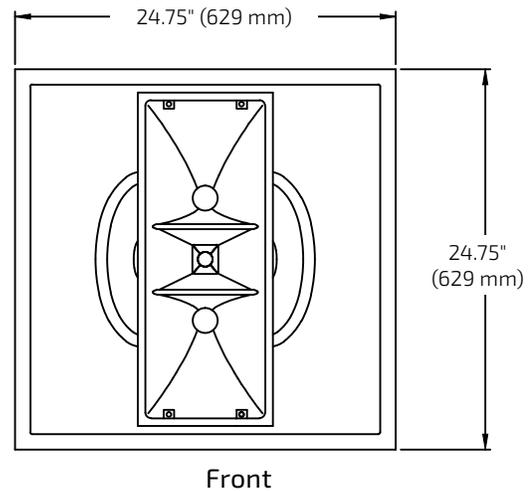
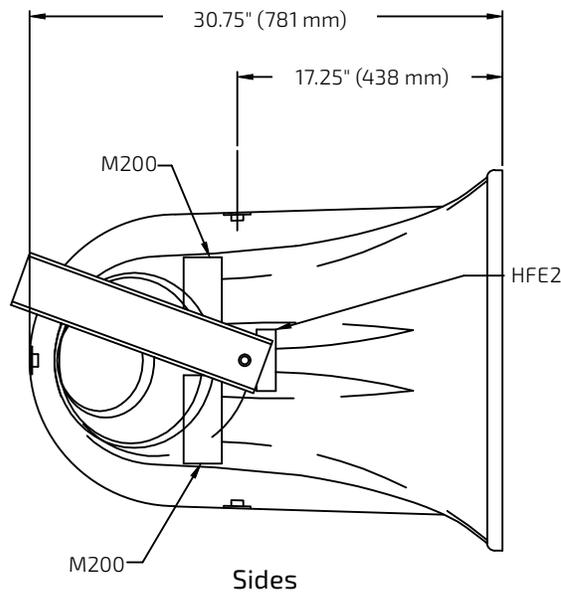
3-layer Weather-Stop™ with polyester mesh, foam, zinc-rich epoxy dual-layer powder-coated perforated marine-grade aluminum color-matched to enclosure

**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.*



## ARCHITECTURAL SPECIFICATIONS

The loudspeaker system shall be a horn-loaded, three-way, full-range triaxial design with two 12" Ferrofluid-cooled woofers treated with moisture repellent on a bass horn and two 2" exit Ferrofluid-cooled midrange compression drivers with a nonmetallic diaphragm and one 1" exit HF driver with a titanium diaphragm mounted on respective fiberglass horns built within the bass horn. Drivers shall be connected to an integral crossover with crossover frequencies of 600 Hz and 3.5 kHz and integral multi-stage, self-resetting, over-current protection circuitry using a combination of a fast-acting relay, solid state thermal limiting circuit and high positive current coefficient resistors. The input connection shall be one 16-2 12-foot (4m) SJOW Cable with stripped ends. The loudspeaker enclosure shall be an integral double-wall weather-sealed light grey fiberglass bell with a three-layer weather-resistant grille. The marine-grade aluminum grille shall be powder coated with a proprietary zinc-rich epoxy dual-layer powder coating process in light grey to color match the enclosure. The system shall have an IEC 60529 IP rating of IP55W (with a minimum 5° downward aiming angle). There shall be five 1/2"-13 threaded mounting points. The system shall have an amplitude response of 70 Hz to 16 kHz, input capability of 40V RMS, 107 dB sensitivity at 1W/1m and 4 ohms nominal impedance. The nominal dispersion shall be 50°H x 20°V from 1250 Hz to 10 kHz. 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 126 lbs. (57.2 kg) with the yoke.

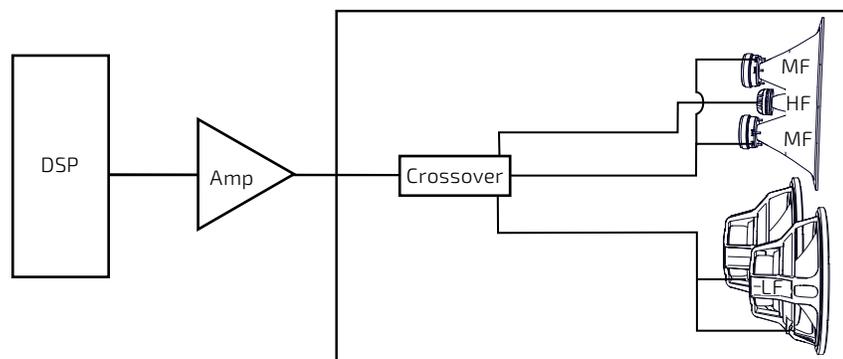
## R SERIES

Voice and Music

# R2-52Z

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

## CONNECTION DIAGRAM



Two-way single amp

## 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.
- HORIZONTAL / VERTICAL OFF-AXIS RESPONSES** The loudspeaker's magnitude response at various angles off-axis, with recommended signal processing applied 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.
- 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.

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)