

# R2-77Z-EN DEFINED COVERAGE, TYPE B, THREE-WAY

Application Solutions

# LOUDSPEAKER SYSTEM WITH 75° X 75° COVERAGE

### **SPECIFICATIONS (EN54-24 Compliant)**

-	Specifications to meet EN54-24 requirements	Standard Specifications
Loudspeaker Type:	3-way horn loaded triaxial, weather-resistant	3-way horn loaded triaxial, weather-resistant
Operating Range (-10dB):	100 Hz to 10 kHz	70 Hz to 16 kHz
Rated Noise Power:	200W continuous, 24.5 volts RMS (EN54-24 100 hr. test, 6dB crest factor)	400W continuous, 1600W peak, 40 volts RMS (2 hr., 6dB crest factor pink noise 89 volts momentary peak
Broadband Sensitivity (1W/1m):	99 dB SPL (100Hz to 10 kHz 1/3 octave bands, EN54-24 frequency response requirements applied, EN54-24 impedance)	104 dB SPL (80Hz to 16kHz 1/3 octave bands, no EQ applied, nominal average impedance) 105 dB SPL (250Hz to 4kHz speech range)
(1W/4m):	87 dB SPL (100Hz to 10 kHz 1/3 octave bands, EN54-24 frequency response requirements applied, EN54-24 impedance)	Not Applicable
Maximum Average Output (1m):	122.1 dB (EN54-24 frequency response requirements applied, 100 hr. rated noise power applied, EN54-24 Broadband Sensitivity)	130 dB SPL (no EQ, 2 hr. rated noise power applied, Standard Broadband Sensitivity)
(4m):	110.1 dB (EN54-24 frequency response requirements applied, 100 hr. rated noise power applied, EN54-24 Broadband Sensitivity)	Not Applicable
Maximum Peak Output (1m):	128.1 dB (EN54-24 frequency response requirements applied, 100 hr. rated noise power applied, EN54-24 Broadband Sensitivity, 6dB crest factor momentary peak)	136dB SPL (no EQ, 2 hr. rated momentary peal noise power applied, Standard Broadband Sensitivity)
Nominal Impedance:	3 ohms (to satisfy EN54-24 criteria)	4 Ohms (nominal average impedance)
Minimum Impedance:	2.5 ohms @ 450 Hz	2.5 ohms @ 450 Hz
Crossover Frequency:	600 Hz / 3.5 kHz	600 Hz / 3.5 kHz
Drivers:	LF 2 x 12" weather-treated, Ferrofluid-cooled MF 1 x M200 2" exit, non-metallic diaphragm, Ferrofluid-cooled HF 1 x 1" exit, titanium diaphragm	LF 2 x 12" weather-treated, Ferrofluid-cooled MF 1 x M200 2" exit, non-metallic diaphragm, Ferrofluid-cooled HF 1 x 1" exit, titanium diaphragm
Driver Protection:	DYNA-TECH protection circuitry	DYNA-TECH protection circuitry
Input Connection:	12 foot (4 m) SJOW #16 gauge	12 foot (4 m) SJOW #16 gauge
Controls:	None	None
Enclosure:	Hand-laminated fiberglass, light grey gelcoat	Hand-laminated fiberglass, light grey gelcoat
Mounting/Rigging Provisions:	(5) 1/2-13 rigging points	(5) 1/2-13 rigging points
Grille:	3-layer WeatherStop™, light grey (Zinc-rich epoxy dual-layer powder coated perforated steel grille, foam, woven poly mesh)	3-layer WeatherStop <sup>™</sup> , light grey (Zinc-rich epoxy dual-layer powder coated perforated steel grille, foam, woven poly mesh)
Environmental Performance:	IEC529 IP55W rating with a minimum 5-degree downward aiming angle	IEC529 IP55W rating with a minimum 5-degree downward aiming angle
Required Accessories:	70 Hz high pass filter*, Equalization curve as specified on this spec sheet	70 Hz high pass filter
Supplied Accessories:	Weather-resistant mounting yoke, light grey	Weather-resistant mounting yoke, light grey
Optional Accessories:	No optional accessories are available with products intended for EN54-24 installations	TRC400 400-watt 70/100/140-volt transformer
Width:	24.75 inches (629 mm) 24.75 inches (629 mm) 30.75 inches (781 mm)	24.75 inches (629 mm) 24.75 inches (629 mm) 30.75 inches (781 mm)
Weight:	96 lbs (43.5 kg)	96 lbs (43.5 kg)
Shipping Weight:	124 lbs (56.2 kg)	124 lbs (56.2 kg)

#### NOTES:

All measurements made in outdoor half-space free-field conditions.
Watts: All wattage figures are calculated using the rated nominal impedance.

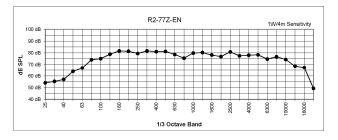
\* Not required to meet EN54-24 requirements. Required to control the low frequency excursion limits of the loudspeaker system.

Community Professional Loudspeakers, 333 East Fifth Street, Chester, PA 19013-4511 USA Phone (610) 876-3400 · Fax (610) 874-0190 · www.communitypro.com · info@communitypro.com

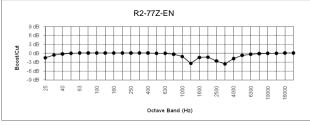


## R2-77Z-EN DEFINED COVERAGE, TYPE B, THREE-WAY LOUDSPEAKER SYSTEM WITH 75° X 75° COVERAGE

### FREQUENCY RESPONSE



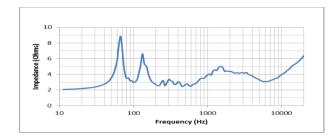
#### EQUALIZATION CURVE



Settings: 1255Hz, -4dB, Q=4.8, BW=0.3 Oct; 3044Hz, -4dB, Q=2.39, BW=0.6 Oct



#### **IMPEDANCE**



#### BEAMWIDTH

	Beamwidth (Degrees)	
Frequency	Horizontal	Vertical
500 Hz	120	98
1000 Hz	90	69
2000 Hz	58	58
4000 Hz	56	53

#### DESCRIPTION

The R2-77Z-EN 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 R2-77Z-EN is an all horn loaded triaxial design using precision waveguides manufactured by Community of handlaminated 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.

#### ARCHITECTURAL SPECIFICATIONS (for EN54-24 applications)

The loudspeaker system shall be a horn-loaded, three-way, full-range tri-axial design with two 12" Ferrofluid-cooled woofers treated with moisture repellant on a bass horn and one 2" exit Ferrofluid-cooled midrange compression drivers with a non-metallic 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 over-current protection circuitry using Dyna-Tech protection circuitry. 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 steel 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 IEC529 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 a 100 Hz to 10 kHz amplitude response that complies with the frequency response limitations specified in EN54-24, section 4.2. For EN54-24 system applications, the input capability shall be 24.5V RMS, 87 dB sensitivity at four meters, 99 dB sensitivity at one meter and 3 ohms nominal impedance. The rated dispersion shall be 120°H x 98°V @ 500Hz, 90°H x 69°V @ 1000Hz, 58°H x 58°V @ 2000Hz, 56°H x 53°V @ 4000Hz. 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 102.5 lbs (46.5 kg).

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

communitypro.com R2-77Z-EN [8JUN2014]

