



# 108/NAT™

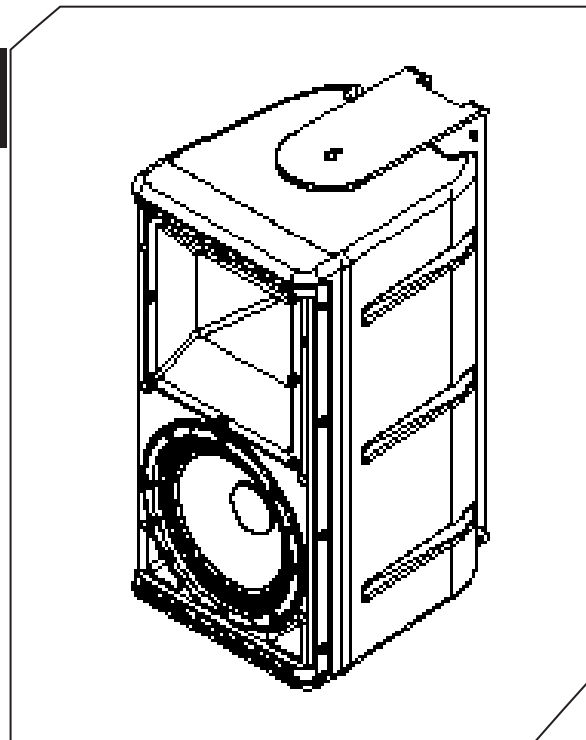
## LIGHTWEIGHT COPOLYMER-BASED NATATORIUM LOUDSPEAKER SYSTEM

### ONE SYSTEMS®

One Systems has developed an application specific set of products designed for use in indoor swimming pool (Natatorium) environments. The 108/NAT is constructed using very high molybdenum content stainless steel for all internal and external structural rigging members.

Indoor swimming pool environments can present very high relative humidity and harsh chemical atmospheres. The combination of humidity and airborne chemical composition restricts the mounting of the 108/NAT to wall mounting in solid or block wall (CMU) concrete walls ONLY! One Systems does not allow wire rope suspension or direct mounting to the structural steel of the indoor swimming pool building. One Systems offers recommendations for installation on solid concrete, grout filled block and hollow core block walls. Installation instructions (February 2014 edition) for the 108/NAT and 112/NAT Natatorium Speakers are available on the One Systems website by going to <http://www.onesystems.com/technical-papers.php>. For specific application information on One Systems Natatorium Loudspeakers, please email [engineering@onesystems.com](mailto:engineering@onesystems.com).

Stainless steels such as 304 and 316 known as austenitic steels, offer good corrosion resistance and strength in typical harsh environments, but will not protect against Stress Crack Corrosion (SCC). SCC is a particular problem in indoor pools and can result in structural failure of rigging components. Chlorine based chemicals in the water react with "human" sweat and produce chloramines. These chloramines pass into the atmosphere and are deposited on ALL surfaces in the Natatorium. They move via venue air handling systems. This is problematic above the pool surface that are not routinely washed down or cleaned. Loudspeakers



### FEATURES & BENEFITS

- » Designed for use in Natatorium (Indoor Swimming Pool) Environments
- » 8-Inch Two-Way High-Performance Sealed Enclosure Design
- » Two Fully Rotatable and Interchangeable High-Frequency Horns
- » Available in White Finish
- » Low Impedance (8-Ohm) High Power Design
- » U-Bracket Suspension Supplied

### SPECIFICATIONS

<b>Frequency Response:</b>	65 – 16kHz	<b>Nominal Impedance:</b>	8 ohms
<b>Coverage Pattern:</b>	60H x 40V (ETS60/40) 105 H x 60V (ETS105/60)	<b>Low Frequency:</b>	One Systems ONE-134 woofer
<b>Passive Crossover Freq.:</b>	2,000 Hz (ETS-60/40) 1,600 Hz (ETS-105/60)	<b>High Frequency:</b>	One Systems ETS Driver
<b>Inputs:</b>	Barrier Strip (Full Range Only)	<b>Suspension/Mounting points:</b>	2 Each "U" Bracket Mount Only (Supplied) 5/16"
<b>System Sensitivity (1watt / 1meter):</b>	92 dB	<b>Dimensions (H x W x D) mm:</b>	483.84 mm x 243.2mm x 270.77 mm
<b>Power Handling:</b>	200 watts continuous, 400 watts program, 800 watts peak*	<b>Dimensions (H x W x D) in:</b>	19 in x 9.6 in x 10.7 in
		<b>Net Weight:</b>	16.5 KG (36.3 LB)
		<b>Optional Accessories:</b>	No optional accessories allowed



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and their rigging are typically mounted above the “splash zone” and these chloramines are left to settle on structural surfaces, whereby SCC can progress to critical levels. There are no visual inspection methods that detect SCC, so careful monitoring will not ensure that structural members are free from this effect. Fortunately, there are several grades of stainless steels that are extremely resistant to Chloride SCC. Molybdenum 6% super austenitic stainless steels are excellent choices. These grades are recognized by several European countries as being the only acceptable stainless steels for use in Natatorium environments, where they are load bearing, above the “splash” zone and not routinely washed or cleaned. One Systems uses AL-6XN (N08367) material for rigging components, grilles, screws and the included U-Bracket.

The 108/NAT features an 8” LF woofer and a medium format compression driver. The 108/NAT is supplied with two high frequency horns, both of which are fully rotatable and interchangeable. The ETS-60/40 has a 60 by 40 pattern and is mounted at the factory. The 108NAT also includes an ETS-105/60 horn that features a 105 by 60 degree pattern. It is a high performance system designed for use in indoor swimming pool environments. Its peak power handling is 800 watts and

is available in an 8-ohm configuration only. There are only two mounting points (AL-6XN) and the 108/NAT may be suspended using the supplied “U” bracket only.

The procedure for changing the high frequency horns may be found on the One Systems web site in the documentation section under the “tech papers and install guides” tab. (One Systems Interchangeable High Frequency Horns (for the 108IM loudspeaker). This same procedure should be followed for the 108/NAT.

The 108/NAT is a closed box design. This acoustic configuration allows for simple low frequency equalization using mixer strip EQ or other shelving style filters. The 108/NAT is supplied with an external weather cover and IP68 gland nut for simple wiring. The input is via a barrier strip. The enclosure color is available only in white.

It is necessary to read and understand the One Systems document “One Systems Natatorium Series Speakers Installation Guide” found on the One Systems web site.

