



# 108IM™

## LIGHT-WEIGHT COPOLYMER-BASED ALL-WEATHER LOUDSPEAKER SYSTEM

**ONE SYSTEMS®**

The 108IM™ is a light weight copolymer based all weather loudspeaker system. The 108IM may be used in direct weather outdoor installations as well as indoor applications where high vocal intelligibility and accuracy are required. Like all ONE SYSTEMS® products, the 108IM was designed to not only offer excellent full range fidelity but superior vocal reproduction and intelligibility as well. The system consists of a single 8" woofer and ETS driver coupled to a fully rotatable high frequency horn.

The 108IM system offers a complete selection of array and flying/suspension hardware. The enclosure is also available with a 75 watt 3 tap line matching transformer. The 108IM transformer version may be ordered with either a 100V or 70.7V primary.

The 108IM is optimized for outdoor applications such as football stadiums, baseball stadiums, race tracks and other sports venues where permanent installation is required as well as a direct weather exposure. The high acoustic output to size ratio makes the system ideal for short throw (105x60) or defined coverage medium Q (60x40) applications. The system is also well suited for outdoor general public address applications. The system is equally suited for general purpose indoor applications in multipurpose rooms, indoor sports venues and general performance or vocal intensive applications.

The 108IM enclosure is a copolymer optimized for high UV exposure and long life in harsh environments. All internal and external rigging and suspension hardware, as well as the metal grill are stainless steel or high strength aluminum.

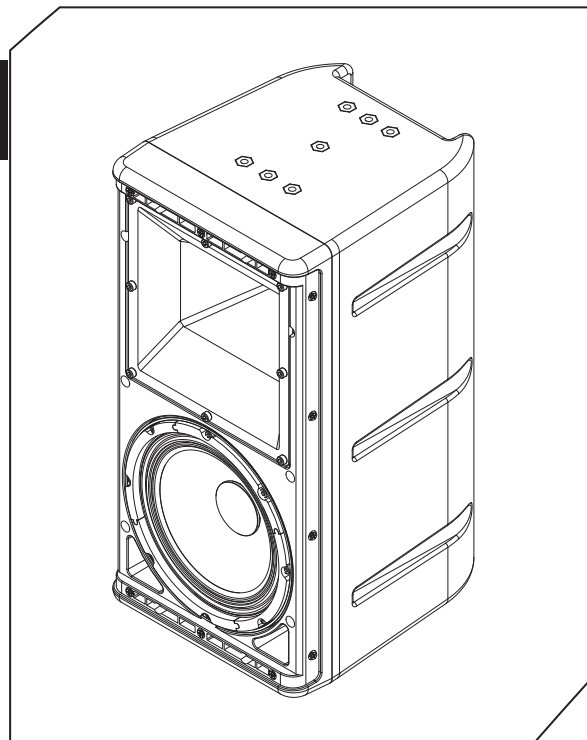
The grill is a 3 layer "rain shield" design that will minimize direct rain contact with the systems transducers. The unique

vent design also allows for easy moisture drainage from the interior of the enclosure. The enclosure and grill design are rated to IEC 529 IP45 (solid object penetration to 1 mm (0.04 inches) and water jets from any direction). The enclosures and components are also rated to Mil Spec 810

The input section consists of both 4 pin Neutrik Speakons as well as a stainless steel hardware barrier strip. A weather cover is provided with an integral gland nut connector for outdoor applications. In the outdoor configuration connections are made thru the 4 position barrier strip.

The gland nut is weather proof and is rated NEMA 6P (IP68). The connector will accommodate cable outside diameters from 7mm to 12mm (0.236" to 0.472"). The maximum diameter will accommodate most 2 conductor AWG 12 cable assemblies.

The basic design utilizes a patent pending high frequency driver that will accommodate a variety of high frequency radiation patterns. There are two fully rotatable high frequency horns available. Both horns are ETS designs that offer extended bandwidth polar control and very low distortion. The ETS-105/60 is a 105 degree horizontal by 60 degree vertical pattern and may be rotated to also provide a 60 degree horizontal by 105 degree vertical for downfill applications. The second horn is the ETS-60/40. It offers a 60 degree horizontal by 40 degree vertical radiation pattern and is also fully rotatable. Although the 108IM is shipped with the ETS-60/40 horn installed the ETS-105/60 is also included. A simple internal jumper optimizes the crossover for either high frequency horn. (For details related to changing high frequency horns see the "HOW TO" section in the ONE SYSTEMS web site, [www.ONESYSTEMS.com](http://www.ONESYSTEMS.com))



### FEATURES AND BENEFITS

- Direct weather 8" two-way system.
- Optimized for high intelligibility and vocal articulation.
- ETS Fully rotatable and interchangeable high frequency horns.
- Patent Pending titanium/neodymium compression driver.
- Multiple M8 flying points.
- Available Pan and Tilt, and "U" brackets.
- Gland nut and Speakon inputs (Weather cover for Gland nut installations).
- Optional version (108IM-100 or 108IM-70) with 75 watt 3 tap 100V or 70V line matching transformer
- Available in black and white colors

### SPECIFICATIONS

Frequency Response:	65Hz – 16kHz
Coverage Pattern:	105H x 60V (ETS105/60) 60H x 40V (ETS60/40)
Passive Crossover Frequency:	2000 Hz (ETS-60x40) 1600 Hz (ETS-105x60)
Inputs:	4 position barrier or 2 each 4 pin Speakon
System Sensitivity: (1watt-1meter)	92dB
Power Handling:	200 watts Continuous 400 watts Program 800 watts Peak*
* All power handling ratings are amplifier headroom dependent	
Nominal Impedance:	8 ohms



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The patent pending ETS driver (full details are available at the ONE SYSTEMS web site, [www.ONESYSTEMS.com](http://www.ONESYSTEMS.com)) is a unique “equivalent throat” design that allows the radiation pattern to be controlled by the phase plug summation plane rather than the conventional “exit diameter” at the end of the driver structure. The ETS driver has a titanium diaphragm and a close spaced circumferential ring phase plug to insure extended high frequency bandwidth.

Because the ONE SYSTEMS 108IM is designed for permanent installation applications a variety of rigging and suspension options are available. The 108IM has multiple M8 mounting points.

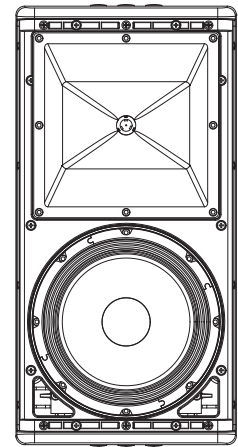
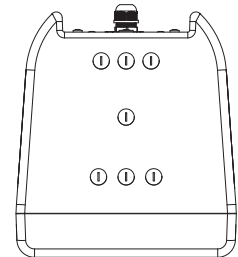
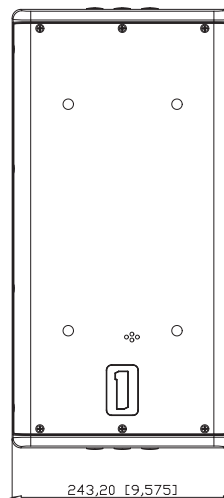
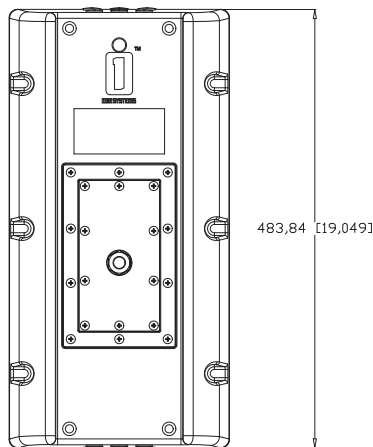
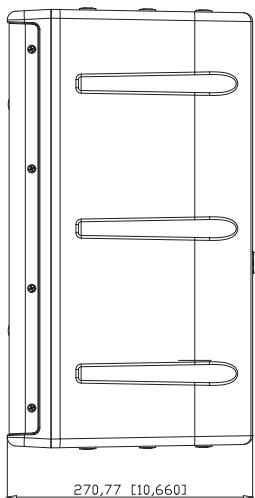
An M8 forged shoulder eye bolt kit is available for all M8 suspension points.

The 108IM may be mounted in selected installations (when permitted by local codes and appropriate substrates) using either a ONE SYSTEMS pan and tilt bracket (PT-35). Bracket or the 108IM-U.

The 108IM is also available in a line matching transformer version in both 100V and 70.7V ratings. The internal transformer is a 75 watt 3 tap (75 watts, 37.5 watts, and 18.75 watts). This is the 108IM-100 or 108IM-70 version.

### SYSTEM SPECIFICS

Low Frequency:	ONE SYSTEMS 8
High Frequency:	ONE SYSTEMS ETS Driver
EASE 4.0 data	<a href="http://www.ONESYSTEMS.com">www.ONESYSTEMS.com</a>
Suspension/Mounting points:	M8
Weather Performance:	IEC 529 IP 45 Mil Spec 810
Dimensions (H x W x D):	483.84mm x 243.2mm x 270.77mm (19.05 in x 9.56 in x 10.66in)
Net Weight:	15 kg (33 lb) 16.5 kg (36.4 lb) transformer ver.
Optional Accessories:	108IM-U “U” bracket kit PT-35 Pan and Tilt M8 Forged Shoulder Eye Bolt



# Constant Voltage Transformer Wiring

All ONE SYSTEMS enclosures that feature constant voltage transformers may be wired as shown below. There are two basic versions, a 100 volt version and a 70.7 volt version. Each model feature three taps, 75 watts, 37.5 watts, and 18.7 watts. All wiring is via the 4 position barrier strip. The wiring is shown in Table 1.

INPUT	POWER LEVEL
1+	Ground
1-	75 Watts
2+	37.5 Watts
2-	18.7 Watts

Table 1

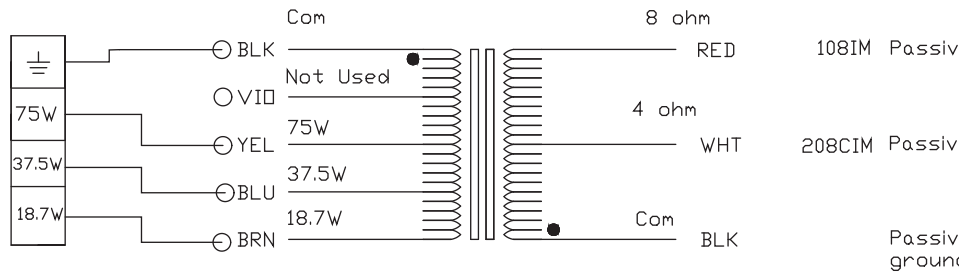
NOTE: The Neutrik Speakon connectors are not connected in the transformer based systems. Although it is common to parallel the Speakon connectors and the barrier strip due to the high voltages present when using the 100 volt and 70.0 volt transformers it is necessary to use the barrier strip only.

**CAUTION: The weather cover must be installed (even if the enclosure is not installed in an outdoor venue) after the connections to the barrier strip are made. Installation of the weather cover is mandatory and will isolate the high voltages present on the terminal strip from contact.**

Figure 1 is a schematic diagram of the transformer wiring for both the 100 volt and 70.7 volt models.

Figure 1

## 100V Wiring



## 70.7V Wiring

