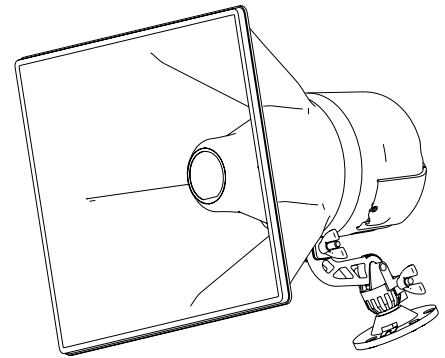




# SAH5, SAH15, SAH30

## High-Efficiency, Digital Switching, Self-Amplified Horn Loudspeakers



### Description

The SAH5 (5-watt), SAH15 (15-watt), and SAH30 (30-watt) horn loudspeakers incorporate digital switching amplifier technology, which provides low DC current draw and low heat dissipation. This in turn makes the loudspeakers more tolerant of long cable runs and allows them to run cooler, withstand higher ambient temperatures, and use fewer power supplies than conventional analog self-amplified horn loudspeakers.

The flared shape of the horn provides a controlled and consistent dispersion of sound, making for better intelligibility. The horn flare can rotate on its axis, offering wider dispersion patterns, vertically or horizontally, depending on its position. The horn typically offers 120° horizontal dispersion and 90° vertical dispersion. By rotating the horn 90° on its axis, a 90° horizontal and 120° vertical dispersion pattern is achieved.

### Installation Instructions

1. Use the base as a template for the mounting holes. Drill three mounting holes and attach the base using appropriate hardware (not included).

**IMPORTANT:** Make sure the base sits flat on the mounting surface. Tightening the base down on an uneven surface could cause the base to fracture.

An electrical box strap is included to allow easy mounting of the horn to an electrical box and cover. (See separate instruction sheet included.) The base can also be mounted to an I-beam flange using Bogen's BC1 beam clamp. The slot in the base allows strapping to be used as a means of mounting the horn (use a strapping material capable of supporting the weight of the speaker and any external loads on the horn such as wind). See Figure 1.

2. Assemble the horn on the mounting base and slide the tapered pin through the hole in the swivel mount. Secure the pin and assembly using the wing nut, but leave loose to allow positioning of the horn (See Figure 2).
3. Position the horn so that the access cover is easily accessible. Make the audio connections to the "T" and "R" terminals and the 24V DC connections to the "+" and "-" terminals. The horn will also work properly if the "+" and "-" connections are reversed.
4. Adjust the output level of the horn using the volume control knob and position the wires so that they exit through the bump in the front of the cover. Slide the cover into place and tighten the cover screw. Do not over tighten.
5. Tilt and swivel the horn to the desired orientation before tightening the wing nut\*. If necessary, the horn flare can be rotated on its axis by loosening the band clamp wing nut, rotating the flare to the desired position, and retightening the band clamp wing nut\* (See Figure 3). The horn will provide a wider horizontal angle of dispersion (120°) when its wider dimension is horizontal and a narrower horizontal dispersion angle (90°) when its narrow dimension is horizontal.

**IMPORTANT:** The horn is designed to be weatherproof only when the bump on the access cover is on a downward slope. The access cover is not sealed and is designed to shed water. This downward position assures that any water that enters the covered area will drain away. Depending on how it is mounted, the horn flare may need to be rotated to achieve this orientation. The rest of the horn is fully sealed against water infiltration.

\*Hand tighten wing nuts. Do not use pliers or tools.

### Package Contents:

SAH5, SAH15, or SAH30 horn speaker  
Mounting Base  
Tapered Pin  
Wing Nut

Access Cover  
Electrical Box Strap  
Instruction Sheet  
Electrical Box Strap Mounting Instruction Sheet

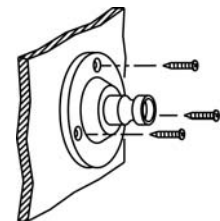


Figure 1. Mounting Base

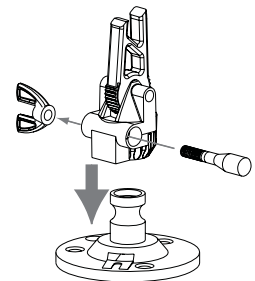


Figure 2

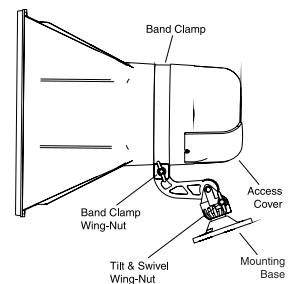
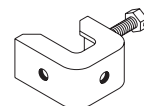


Figure 3



BC1 Beam Clamp (optional accessory)

Technical Specifications	SAH5	SAH15	SAH30
Typical Current Consumption:	4 CU (200 mA)	9 CU (450 mA)	17 CU (850 mA)
Power Supply Voltage (nominal)	24V DC	24V DC	24V DC
Max. Power Rating:	5W	15W	30W
Max. Sound Level:	119 dBspl	124 dBspl	127 dBspl
Input Sensitivity:	125 mVrms	125 mVrms	125 mVrms
Frequency Response:	275 Hz - 14 kHz	275 Hz - 14 kHz	275 Hz - 14 kHz
Input Impedance:	2k ohms	2k ohms	2k ohms
Dispersion:	120° x 90°	120° x 90°	120° x 90°
Dimensions (W x H x D):	10- <sup>5</sup> / <sub>8</sub> " x 12" x 11- <sup>1</sup> / <sub>2</sub> "	10- <sup>5</sup> / <sub>8</sub> " x 12" x 11- <sup>1</sup> / <sub>2</sub> "	10- <sup>5</sup> / <sub>8</sub> " x 12" x 11- <sup>1</sup> / <sub>2</sub> "
Weight:	6 lb.	6 lb.	6 lb.

## Limited Warranty

The SAH5, SAH15, and SAH30 are warranted to be free from defects in material or workmanship for two (2) years from the date of sale to the original purchaser. Any part of the product covered by this warranty that, with normal installation and use, becomes defective will be repaired or replaced by Bogen, at our option, provided the product is shipped insured and prepaid to: Bogen Factory Service Department, 50 Spring Street, Ramsey, NJ 07446, USA. The product will be returned to you freight prepaid. This warranty does not extend to any of our products that have been subjected to abuse, misuse, improper storage, neglect, accident, improper installation or have been modified or repaired or altered in any manner whatsoever, or where the serial number or date code has been removed or defaced.

**THE FOREGOING LIMITED WARRANTY IS BOGEN'S SOLE AND EXCLUSIVE WARRANTY AND THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. BOGEN MAKES NO OTHER WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED AND EXCLUDED TO THE MAXIMUM EXTENT ALLOWABLE BY LAW.**

Bogen's liability arising out of the manufacture, sale or supplying of products or their use or disposition, whether based upon warranty, contract, tort or otherwise, shall be limited to the price of the product. In no event shall Bogen be liable for special, incidental or consequential damages (including, but not limited to, loss of profits, loss of data or loss of use damages) arising out of the manufacture, sale or supplying of products, even if Bogen has been advised of the possibility of such damages or losses. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

Products that are out of warranty will also be repaired by the Bogen Factory Service Department -- same address as above or call 201-934-8500. The parts and labor involved in these repairs are warranted for 90 days when repaired by the Bogen Factory Service Department. All shipping charges in addition to parts and labor charges will be at the owner's expense. All returns require a Return Authorization number.

08/10/2004

**BOGEN®**  
**COMMUNICATIONS, INC.**

50 Spring Street, Ramsey, NJ 07446, U.S.A.  
201-934-8500; Fax: 201-934-9832  
www.bogen.com