

Wheelock E70H & E90H High Fidelity Speakers & Speaker Strobes



Description

The Wheelock E70H Wall and E90H Ceiling Speakers and Speaker Strobes are designed for high fidelity sound output for indoor applications. With the widest frequency response range (300 to 8000 Hz) in the industry, the EH features leading intelligibility with crisp, clear voice messages and tone signaling, ideal for emergency communications, mass notification, voice evacuation and fire alarm.

Providing a sleek aesthetic appearance, the Wheelock Series EH High Fidelity Speakers and Speaker Strobes feature dual voltage (25/70 VRMS) capability and field selectable taps from 1/8 to 2 watts. The low profile design incorporates a speaker mounting plate for faster and easier installation. Each model has a built-in level adjustment feature and an aesthetic two (2) screw grille cover.

For visible signaling to meet the hearing impaired, the EH Speaker Strobe models incorporate the Low Current draw RSS Strobes. Strobe options for wall mount models include 1575 or Wheelock patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd.

Ceiling mount models are available in Wheelock patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

The strobe portion of all EH Speaker Strobes may be synchronized when used in conjunction with the Wheelock DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

The EH Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances), and ULC listed under CAN/ULC-S526 (Visual-audible Signal Appliances, Fire Alarm) and under CAN/ULC-S541 (Speakers, Fire Alarm). All inputs employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for the EH Speakers and Speaker Strobes are red and white.

Features

- High Fidelity Sound Output
 - Efficient design for high intelligibility at minimum wattage across a frequency range of 300 to 8000 HZ
- 6 Field Selectable Settings
 - Wall mount models are available with Field Selectable Candela Settings of 15/30/75/110cd or 135/185cd (Multi-Candela models) or 1575cd (Single Candela model)
 - Ceiling mount models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd (Multi-candela models)
- Field Selectable Taps
 - 1/8 watt up to 2 watts
 - 25 or 70 VRMS operation
- Easy-to-Install
 - Low profile design incorporates speaker mounting plate for faster and easier installation
 - Built-in level adjustment feature and an aesthetic two (2) screw grille cover.
 - Quick installation with IN/OUT screw terminals using #12 to #18 AWG wires
 - 4" square backbox prevents wire damage
- Strobe Synchronization Components
 - Meet synchronizing standards with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPAATH products
- Compliance
 - UL 1971, UL 1480, ULC-S526, ULC-S541
 - Low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas
 - California State Fire Marshal (CSFM)
 - ADA/NFPA/ANSI/OSHA
 - FCC Part 15, ICES

Note: All CAUTIONS and WARNINGS are identified by the symbol ▲. All warnings are printed in bold capital letters.

▲ WARNING

PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. VISIT WWW.EATON.COM/MASSNOTIFICATION OR CONTACT EATON FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Drawings

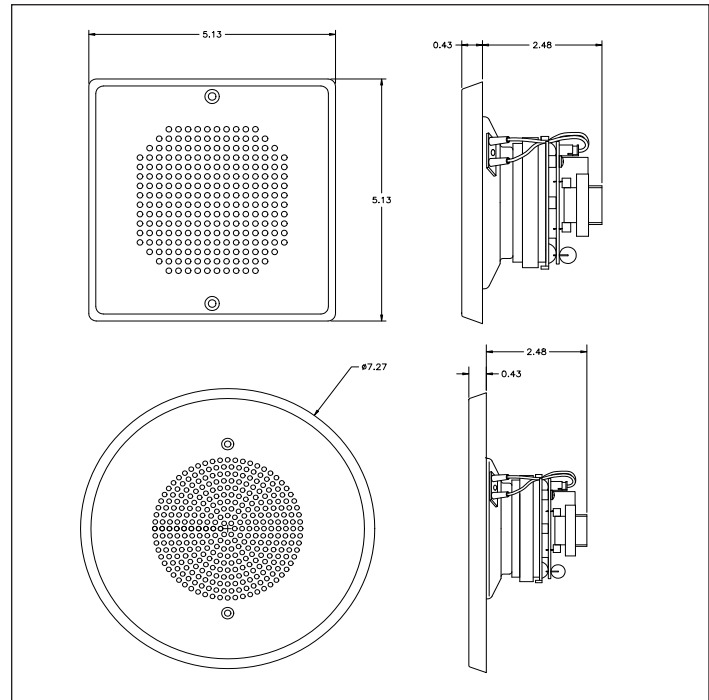


Figure 1. E70H (top) and E90H (bottom) Speakers - Front & Side Views

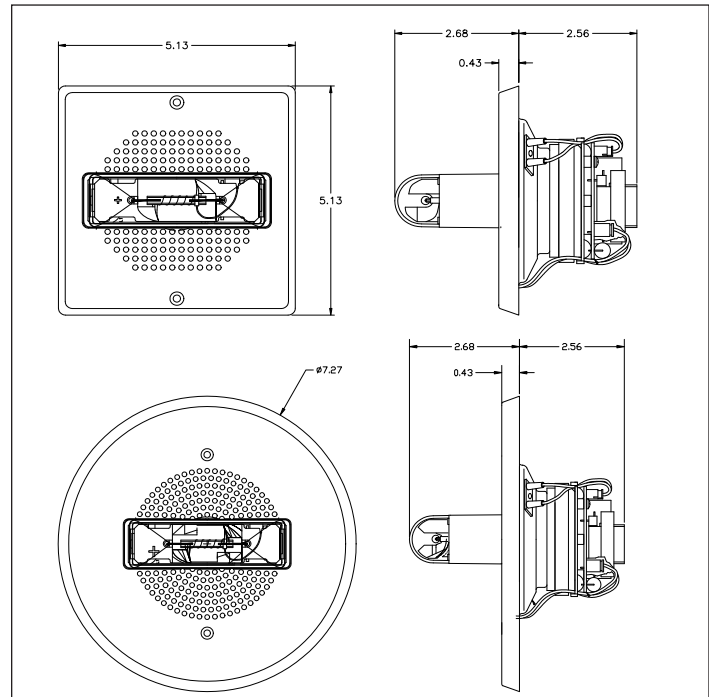


Figure 2. E70H (top) and E90H (bottom) Speaker Strobes - Front & Side Views

General Notes

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range." Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL 1971.

Table 1. Maximum RMS Current

		Table1: Maximum RMS Current - Series E70H					Table 2: Maximum RMS Current - Series E90H				
		24MCW/24MCC					24MCWH/24MCCH				
Model	Regulated Voltage Range VDC	15	30	75	95	110	115	135	177	185	15/75
E70H	16.0-33.0	0.060	0.092	0.165		0.220		0.300		0.420	0.090
E90H	16.0-33.0	0.065	0.105	0.189	0.249		0.300		0.420		

Table 2. UL Listed Models and Ratings

UL Reverberant dBA at 10 Feet ②					
Model	1/8 watts ③	1/4 watts	1/2 watts	1 watts	2 watts
E70H Speaker	72	75	78	81	83
E90H Speaker	72	75	78	81	82
E70H Speaker Strobe	71	75	78	81	83
E90H Speaker Strobe	74	77	80	82	85

Table 3. Specification & Ordering Information

Model	Order #	Strobe Candela	Red	White	Lettering	Wall	Ceiling	Mounting Options	Sync w/ DSM or Wheelock Power Supplies
Speakers									
E70H-R	9865		X		No Lettering	X		P, Q	
E70H-W	9866			X	No Lettering	X		P, Q	
E90H-R	9875		X		No Lettering		X	P, Q	
E90H-W	9876			X	No Lettering		X	P, Q	
Speaker Strobes									
E70H-24MCW-FR	0183	15/30/75/110	X		FIRE	X		P, Q	X
E70H-24MCW-FW	0184	15/30/75/110		X	FIRE	X		P, Q	X
E70H-24MCW-ALW	3580	15/30/75/110		X	ALERT	X		P, Q	X
E70H-24MCWH-FR	0185	135/185	X		FIRE	X		P, Q	X
E70H-24MCWH-FW	0186	135/185		X	FIRE	X		P, Q	X
E90H-24MCC-FR	0191	15/30/75/95	X		FIRE		X	P, Q	X
E90H-24MCC-FW	0192	15/30/75/95		X	FIRE		X	P, Q	X
E90H-24MCC-ALW	3586	15/30/75/95		X	ALERT		X	P, Q	X
E90H-24MCCH-FR	0194	115/177	X		FIRE		X	P, Q	X
E90H-24MCCH-FW	0193	115/177		X	FIRE		X	P, Q	X

Table 4. Specifications

Physical	
Material	Red or white textured UV stabilized, galvanneal steel. Exceeds 94V-0 UL flammability rating.
Weight	E70H Speaker: 1.7 lbs (0.77 kg); E70H Speaker Strobe 1.8 lbs (0.82kg); E90H Speaker: 1.5 lbs (0.68 kg); E90H Speaker Strobe 1.6 lbs (0.73 kg)
Lens (Material type)	GE Lexan 943A
Dimensions	E70H Speaker: 5.13" W x 5.13" H x 0.43"D; E70H Speaker Strobe: 5.13" W x 5.13" H x 2.56"D; E90H Speaker: 7.27" Diameter x 0.43" D; E90H Speaker Strobe: 7.327 Diameter x 2.68" D
Operating Temperature	Indoor: 33.8°F to 120.2°F (0°C to 49°C) and maximum humidity of 93%
Mounting & Wire Connections	
Mounting (indoor only)	4" square backbox with extension ring prevents wire damage; SBB for surface mount of E70H
Wire Connections	#12 through #18 AWG
Power & General	
Operating voltage	25/70 VRMS
Strobe Output Rating	UL 1971, ULC S526
Strobe Flash Rate	Strobes are designed to flash at 1 flash per second
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
Frequency Range	300 Hz to 8000 Hz

① RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum listed voltage (33v for 24v units). For unfiltered FWR ratings, see installation instructions.

b dBA ratings are based on testing under UL Standard 1480.

c 1/8 watt tap is for private mode only.

Architects and Engineers Specifications

The speaker appliances shall be Wheelock Series E70H or E90H High Fidelity Speakers and Speaker Strobe appliances or approved equals. The speakers shall be UL Listed under UL 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL 1971 for Emergency Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class A.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts. All models shall have listed sound output of up to 87 dB at 10 feet and a listed frequency response of 300 to 8000 Hz. The speaker shall also incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range. The strobe shall be of low current design. Where Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL 1971 at 15/30/75/110cd or 135/185cd for wall mount and 15/30/75/95cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. Models with 1575 candela shall also be offered for wall-mount applications.

When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock DSM sync modules, Wheelock

Power Supplies or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor surface or flush mounting. The speaker and speaker strobe shall incorporate a speaker mounting plate with a grille cover which is secured with two screws for a level, aesthetic finish and shall mount to standard electrical hardware requiring no additional trimplate or adapter.

The finish of the Series EH speakers and strobe speakers shall be red or white.

All speaker and speaker strobe appliances shall be backward compatible.

The speaker shall be listed to the low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas.

UL 1971, UL 1480, ULC-S526, ULC-S541, CSFM, FCC.

Note: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc., dba Eaton standard terms and conditions.



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