

## Series E70 Speakers and Speaker Strobes



**SERIES E70  
STROBE**



**SERIES E90  
STROBE**



**SERIES E90  
SPEAKER**



**SERIES E70  
SPEAKER**

### Description

The Wheelock Series E Low Profile Speakers and Speaker Strobes are designed for high efficiency sound output, with 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.

The Series E Speaker Strobe models incorporate the Low Current draw Series 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.

Series E Speakers and Speaker Strobes provide high audio output with clear audibility and are designed to meet the critical needs of the life safety industry for effective emergency voice communications, tone signaling and visible signaling to alert the hearing impaired.

The strobe portion of all Series E Speaker Strobes may be synchronized when used in conjunction with the Wheelock SM, DSM Sync Modules or Wheelock PS-24-8MC power supply with Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

Series E Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances), and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visual signaling. All inputs are supervised and employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for the Series E Speakers and Speaker Strobes are red, white and nickel plated.

### Features

- Approvals include: UL Standard 1971, UL Standard 1480, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM) and Chicago (BFP) See approvals by model in Specifications and Ordering Information
- ADA/NFPA/ANSI compliant
- Complies with OSHA 29 Part 1910.165
- **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)**
- Strobes produce 1 flash per second over the regulated voltage range
- 24 VDC with wide UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Synchronize with Wheelock SM, DSM or Wheelock PS-24-8MC Power Supply with built-in sync protocol
- Field selectable taps for 25 or 70 VRMS operation from 1/8 watt up to 2 watts
- High efficiency design for maximum output at minimum wattage across a frequency range of 400 to 4000 HZ
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires



S5391



151-92-E



7125-0785:152

7320-0785:134 (Speaker)



APPROVED

**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.COOPERWHEELLOCK.COM](http://WWW.COOPERWHEELLOCK.COM) OR CONTACT COOPER WHEELLOCK 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.**

**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 Standard 1971.
- Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- **“Regulated Voltage Range” is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology “Listed Voltage Range”.**

<b>E70/E90 Speaker Strobes</b>	<b>E70 Strobe Current - Wall Mount</b>							<b>E90 Strobe Current - Ceiling Mount</b>					
	<b>241575W</b>	<b>24MCW</b>				<b>24MCWH</b>		<b>24MCC</b>				<b>24MCCH</b>	
	1575cd	15cd	30cd	75cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	115cd	177cd
<b>24 vdc</b>	<b>0.060</b>	<b>0.041</b>	<b>0.063</b>	<b>0.109</b>	<b>0.140</b>	<b>0.195</b>	<b>0.270</b>	<b>0.045</b>	<b>0.070</b>	<b>0.119</b>	<b>0.159</b>	<b>0.195</b>	<b>0.270</b>
UL max*	0.090	0.060	0.092	0.165	0.220	0.300	.0420	0.065	0.105	0.189	0.249	0.300	0.420

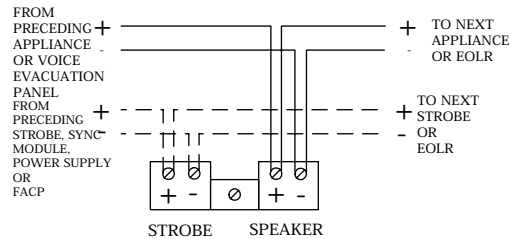
<b>watts</b>	<b>1/8</b>	<b>1/4</b>	<b>1/2</b>	<b>1</b>	<b>2</b>
<b>E Speaker</b>	77	81	83	86	89
<b>E Speaker Strobe</b>	76	80	82	85	88

\*\*dBA ratings are based on testing under UL Standard 1480.

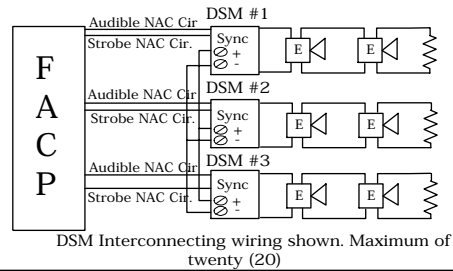
\* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum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

## Wiring Diagrams#

### SERIES E SPEAKER & STROBE OPERATE INDEPENDENTLY (NON-SYNC OR SYNC)



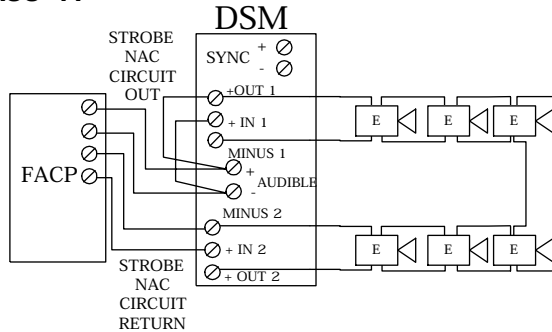
### SERIES E SPEAKER STROBES SYNCHRONIZED WITH MULTIPLE DSM MODULES



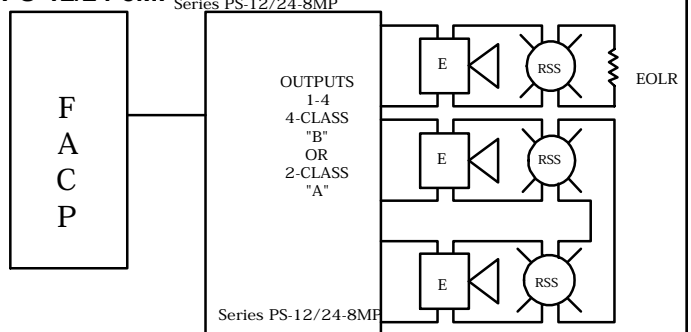
Note: Figure shows interconnection to strobe through sync module. Speaker portion requires 2 separate conductors to FACP.

DSM Interconnecting wiring shown. Maximum of twenty (20)

### SERIES E SPEAKER STROBE APPLIANCES SYNCHRONIZED WITH DSM MODULE SINGLE CLASS "A"



### SERIES E SPEAKER STROBE APPLIANCES & RSS STROBES SYNCHRONIZED WITH PS-12/24-8CP and PS-12/24-8MP



For wiring information on the PS-24-8MC power supply, please refer to Data Sheet #S8900.

# For detail using SM or DSM Sync Module refer to Data Sheet S3000 or Installation Instructions P83123 for SM and P83177 for DSM. For wiring information on the power supplies refer to Installation Instructions P84662.

## Specifications and Ordering Information

Model	Order Code	Wall Mount	Ceiling Mount	Strobe Sync w/ SM, DSM or PS-24-8MC	Strobe Candela	Model Color RED	Model Color White	Model Color Nickel	Mounting Options	Agency Approvals				
										UL	MEA	CSFM	FM	BFP
E70-24MCW-FR	9022	X	-	X	15/30/75/110	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-24MCW-FW	9023	X	-	X	15/30/75/110	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-24MCW-FN	3099	X	-	X	15/30/75/110	-	-	X	Q,U	X	X	X	X	X
E70-241575W-FR	7871	X	-	X	15 (75 on Axis)	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-241575W-FW	7876	X	-	X	15 (75 on Axis)	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-241575W-FN	3100	X	-	X	15 (75 on Axis)	-	-	X	L,O,P,Q,R,U,Y	X	X	X	X	X
E70-R	7866	X	X	-	-	X	-	-	Q,U	X	X	X	X	X
E70-W	7868	X	X	-	-	-	X	-	Q,U	X	X	X	X	X
E70-N	3108	X	X	-	-	-	-	X	Q,U	X	X	X	X	X
E70-24MCWH-FR	3470	X	-	X	135/185	X	-	-	L,O,P,Q,R,U,Y	X	X	X	X	*
E70-24MCWH-FW	3474	X	-	X	135/185	-	X	-	L,O,P,Q,R,U,Y	X	X	X	X	*
E70-24MCWH-FN	0059	X	-	X	135/185	-	-	X	Q,U	X	X	X	X	*
E90-24MCC-FW	3166	-	X	X	15/30/75/95	-	X	-	Q,U,V	X	X	X	X	*
E90-24MCC-FR	3165	-	X	X	15/30/75/95	X	-	-	Q,U,V	X	X	X	X	*
E90-24MCC-FN	3185	-	X	X	15/30/75/95	-	-	X	Q,U,V	X	X	X	X	*
E90-W	7869	X	X	-	-	-	X	-	Q,U,V	X	X	X	X	X
E90-R	7867	X	X	-	-	X	-	-	Q,U,V	X	X	X	X	X
E90-N	3109	X	X	-	-	-	-	X	Q,U,V	X	X	X	X	X
E90-24MCCH-FW	3471	-	X	X	115/177	-	X	-	Q,U,V	X	X	X	X	*
E90-24MCCH-FR	3481	-	X	X	115/177	X	-	-	Q,U,V	X	X	X	X	*
E90-24MCCH-FN	0062	-	X	X	115/177	-	-	X	Q,U,V	X	X	X	X	*

\*PENDING

## **Architects and Engineers Specifications**

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

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 400 to 4000 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 and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. 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 Standard 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. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance).

When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock SM, DSM sync modules or Wheelock PS-24-8MC power supply with built-in 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 E speakers and strobe speakers shall be white, red, or nickel plate.

All speaker and speaker strobe appliances shall be backward compatible.



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