

## SERIES E LOW PROFILE SPEAKERS & SPEAKER STROBES



**SERIES E70  
STROBE**



**SERIES E90  
SPEAKER**



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STROBE**



**SERIES E70  
SPEAKER**

### *Description*

Wheelock's Series E Speakers and Speaker Strobes are designed to meet the critical needs of the life safety industry for effective emergency voice communications and tone signaling. Series E speakers provide high audio output with clear audibility at minimum wattage. They offer system designers the high quality, high performance and low installed cost required for fire protection systems. All models flush mount to electrical backboxes and are equipped with a blocking capacitor for DC supervision of audio lines and IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Series E Speaker Strobes are ULC Listed for indoor use, ceiling and wall mount, and use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum reliability for effective visible signaling.

### *Features*

- Approvals include: CAN/ULC-S541-99 for speaker appliances and CAN/ULC-S526-02 for visual appliances.
- High efficiency speakers designed for maximum output at minimum wattage across a frequency range of 400 to 4000 Hz
- 25 or 70 VRMS models with field selectable taps for operation from 1/8 watt up to 2 watts in 3 dB steps
- Series E Low Profile Speaker Strobe models are available with 15 candela strobe featuring a wide Listed Voltage range of 20-31 VDC with low current draw and low temperature compensation to reduce power consumption and wiring costs
- All audio and strobe inputs may be supervised with standard reverse polarity supervision from a Fire Alarm Control Panel (FACP)
- Attractive, compact grille styles for flush mounting to low cost electrical backboxes or surface mounting to Wheelock's SBB backbox
- Sealed back speaker construction for extra protection and improved audibility
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wiring

**WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTRUCTIOS CAREFULLY BEFORE USING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THE FOLLOIWNIG INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATIONS, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**

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

## Specifications and Ordering Information

Strobe Current Requirements (AMPS)			
Voltage	Rated Average Current	Rated Peak Current	Rated Inrush Current
	LS	LS	LS
24 VDC	.080	.190	.250
24 VFWR	.081	.216	.380

Model	Speaker Voltage (VRMS)	Speaker dBA at 10 Feet (Rated Watts)#					Strobe Voltage (VDC)	Strobe Candela
		1/8	1/4	1/2	1	2		
E-7025	25	75	78	81	84	87	-	-
E-9025	25	75	78	81	84	87	-	-
E-7070	70	75	78	81	84	87	-	-
E-9070	70	75	78	81	84	87	-	-
E-7025-LS-24	25	75	78	81	84	87	24	15
E-9025-LS-24	25	75	78	81	84	87	24	15

Note: All VFWR voltages in table are measured with DC volt meter. Multiply VFWR voltage by 1.11 to convert to VRMS.

#dBA ratings are based on UL testing under Standard UL 1480

**WARNING: ALTHOUGH ULC TESTING HAS VERIFIED THAT THESE STROBES FUNCTION EVEN AT 80% OF THEIR MINIMUM RATING AND 110% OF THEIR MAXIMUM RATING, WHEELock STRONGLY RECOMMENDS THAT THE VOLTAGE APPLIED TO THESE PRODUCTS BE WITHIN THEIR RATED INPUT VOLTAGE RANGE. THE APPLICATION OF IMPROPER VOLTAGE MAY RESULT IN DEGRADED OPERATION OR DAMAGE TO THESE PRODUCTS.**

The ULC Listed "Rated Input Voltage" uses either filtered (DC) or unfiltered full-wave-rectified (FWR) voltage. Check the minimum and maximum output of the power supply and standby battery and subtract the voltage drop from the circuit wiring resistance to determine the applied voltage to the strobes.

Use the highest value of rated average current to determine the maximum number of strobes and to establish power supplies and wire gauge requirements. Use the rated peak current or rated inrush current (whichever is higher) to verify fuse requirements.

Make sure that the average, peak and inrush currents do not exceed system power supplies or fusing limits. See "Installation Instructions".

**WARNING: CONTACT WHEELock FOR "INSTALLATION INSTRUCTIONS" AND "GENERAL INFORMATION" SHEET ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:**

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES
- FUSE RATINGS ON NAC CIRCUITS TO HANDLE MAXIMUM INRUSH OR PEAK CURRENTS FROM ALL APPLIANCES ON THOSE NAC CIRCUITS. THE TIME DURATION OF THE MAXIMUM STROBE INRUSH OR PEAK CURRENT IS 2 MILLISECONDS FOR LS
- INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES

**WARNING: USE STROBES ONLY ON NAC CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE STROBES ON CODED OR INTERRUPTED NAC CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF, AS THE STROBE MAY NOT FLASH.**

General Notes:

- Strobes are designed to flash at 1 flash per second minimum
- Series E Speaker Strobes are Listed for indoor use with a temperature range of 0°C to 49°C (32°F to 120°F) and maximum humidity of 95%RH.

## Ordering Information

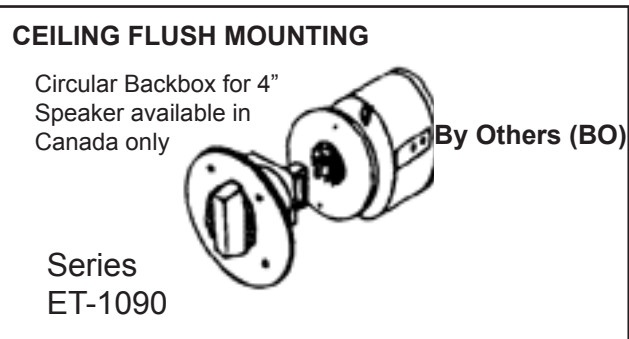
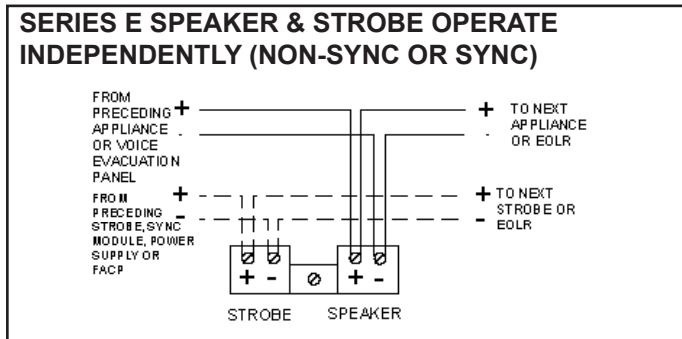
Series	Model Number	Order Code	Strobe Candela	Speaker dBA at 10 Feet	Average Current @ 24 VDC*
E Speakers 25 VRMS	E-7025-R-ULC	4782	-	(81-90)	-
	E-7025-W-ULC	4943	-		-
	E-9025-W-ULC	4734	-		-
E Speakers 70 VRMS	E-7070-R-ULC	4240	-		-
	E-9070-W-ULC	4239	-		-
	E-7070-W-ULC	4241	-		-
E Speaker Strobes 25 VRMS	E-9025-LS-24-CFW-ULC	6332	15		0.74
	E-7025-LS-24-VFR-ULC	6331	15		0.74
	E-7025-LS-24-VFW-ULC	8208	15		0.74
E Speaker Strobes 70 VRMS	E-9070-LS-24-CFW-ULC	6317	15		0.74
	E-7070-LS-24-VFR-ULC	6316	15	0.74	
	E-7070-LS-24-VFW-ULC	7706	15	0.74	

\*Average Current per actual Wheelock Production Testing @ 24 VDC nominal. For rated average, peak and inrush across the listed voltage range for both filtered DC and full-wave-rectified (FWR), see installation instructions.

\*\*Refer to Data Sheet #S7000 for mounting options. WARNING: SERIES E SPEAKERS DO NOT FIT ALL CANADIAN EXTENSION RINGS. Call factory for assistance. (Example if Extension Ring Manufacturer that fits is TEMCO).

Speaker Notes: 1. Series E speakers have separate 25 VRMS and 70 VRMS models. All Series E models have field selectable taps for 1/8, 1/4, 1/2, 1, or 2 watt operation. 2. Models code suffix V= vertical lens; C= ceiling lens; F= fire lettering; R= red plate; W= white plate. 3. Approval codes: ULC= Underwriter Laboratories of Canada.

## Wiring Diagrams



## Application Notes:

CAUTION: Check that the installed product will have sufficient clearance and wiring room prior to installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

1. Mounting hardware for each mounting option is supplied.
2. Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. When extension rings are required, conduit should enter through the backbox, not the extension ring. Note not all Canadian Extension Rings fit Series E. Call factory for assistance.
3. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the signaling device.
4. Use care and proper techniques to position the field wires in the backbox so that they use minimum space and produce minimum stress on the product. This is especially important for stiff, heavy gauge wires and wires with thick insulation or sheathing.
5. Do not pass additional wires (used for other than the signaling device) through the backbox. Such additional wires could result in insufficient wiring space for the signaling appliance.
6. Frequency range of speakers is 400-4000 Hz.
7. A blocking capacitor for DC supervision of audio lines by the FACP is factory wired in series with the speaker input 1.5uF for 25 VRMS speakers and 0.15uF for 70 VRMS speakers.

CAUTION: Always operate audio amplifiers and speakers within their specified ratings. Excessive input may distort sound quality and may damage audio equipment. Do not exceed =130% of speaker rated voltage per CS 243. Improper input voltage can damage speaker. If distortion is heard, check for clipping of the audio signal with an oscilloscope and reduce the amplifier input level or gain level to eliminate any clipping.

Wheelock products must be used within their published specification and must be properly specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instruction at the time of installation and at least twice a year or more often and in accordance with local, state, and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL & ULC), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to all appendices and amendments and the requirements of local authority having jurisdiction (AHJ).

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

**WARNING! PLEASE DO NOTE THAT THE E SERIES DO NOT FIT ALL CANADIAN EXTENSION RINGS.**

## Architects and Engineers Specifications

The speaker appliance shall be a Wheelock Series E low profile speaker and speaker strobe appliance or equivalent. The speaker and strobes shall be ULC Listed under CAN/ULC-S541-99 and CAN/ULC-S526-02 for Fire Protective Service. All speakers shall be either 25 or 70 VRMS inputs with field selectable power taps from 1/8 to 2 watts with Listed sound output up to 90 dBA at 10 feet, and a listed frequency response of 400 to 4000 Hz. Strobes shall use filtered power or unfiltered power supply (full-wave-rectified). All models shall have provisions for standard reverse polarity type supervision and IN/OUT field wiring using terminals that accept #12 to #18 AWG wiring.

Combination speaker strobe appliances signals shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens or equivalent with solid state circuitry. Strobe shall meet ULC and produce a flash rate of one (1) flash per second minimum over the Listed input voltage range (20-31 VDC). The strobe intensity shall be rated per ULC for 15 candela. The strobe shall be certified to meet FCC Part 15 Class B and shall incorporate low temperature compensation to insure lowest possible current consumption.

The combination speaker strobe appliances shall be installed indoors and surface or flush mounted. They shall mount to standard electrical hardware requiring no additional trimplate or adapter. The appliance shall be finished in a textured red or white color.



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3 YEAR WARRANTY

### S1600 E70/E90 06/11

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