

Installation and Maintenance Instructions

For use with the following models: **SYS-HSR-FIRE, SYS-STR-FIRE**



156-3690-004

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Selectable Output Strobes, and Horn Strobes

Product specifications

Operating Temperature:	32°F to 120°F (0°C to 49°C)
Humidity Range:	10~93% RH Non-condensing
Strobe Flash Rate:	1 flash per second
Nominal Voltage:	Regulated 24V DC/FWR
Operating Voltage Range:	16 to 33V (24V nominal)
Input terminal wire gauge:	14 to 18 AWG
Application Location :	Indoor

Dimensions For products and accessories

WALL	LENGTH	WIDTH	DEPTH
Strobes and Horn/Strobes (including lens)	5.15 in	5 in	2.464 in
	131 mm	127 mm	62.6 mm
SYS-CTPR-FIRE (Ceiling Trim Plate)	6.8 in diameter (173 mm)		1.5 in (38 mm)

Mounting box options

2×4, 4×4, single-gang, double-gang, 4" octagon, 105mm×105mm, 65mm round, 86mm×86mm, 60mm×60mm.

NOTICE: This manual shall be left with the owner/user of this equipment.

General Description

The System Sensor series of notification appliances offers a range of strobes and horn/strobes, for indoor wall and ceiling applications. They are designed to be used in 24 volt DC or FWR (full wave rectified) systems. To provide coverage for the broadest range of applications, products are offered with three selectable candela settings using a rotary switch on the back of the unit. The strobe is designed to meet the requirements of UL 1638. The horn is designed to meet the requirements of UL 464. High and low volume and temporal 3 or continuous tone are also selected on the back of the device using a rotary switch. Not compatible for use with MDL or MDL3 synchronization modules or coded power supplies.

For ceiling installations, use ceiling trim ring model number SYS-CTPR-FIRE for red lens devices.

Fire Alarm System Considerations

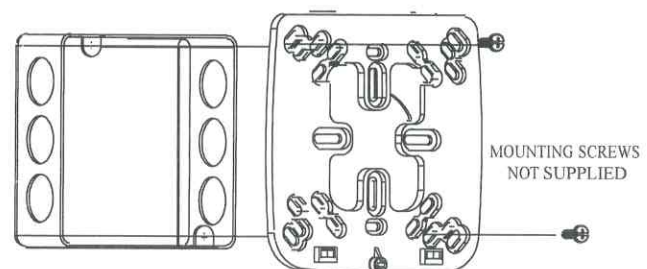
The National Fire Alarm Code, NFPA 72, requires that all horns, used for building evacuation produce temporal coded signals. Signals other than those used for evacuation purposes do not have to produce the temporal coded signal. System Sensor recommends spacing notification appliances in compliance with NFPA 72.

Loop Design and Wiring

The system designer must make sure that the total current drawn by the devices on the loop does not exceed the current capability of the panel supply, and that the last device on the circuit is operated within its rated voltage. The current draw information for making these calculations can be found in the tables within this manual.

When calculating the voltage available to the last device, it is necessary to consider the voltage drop due to the resistance of the wire. The thicker the wire, the smaller the voltage drop. Wire resistance tables can be obtained from electrical handbooks. Note that if Class A wiring is installed, the wire length may be up to twice as long as it would be for circuits that are not fault tolerant.

Figure 1. Mounting plate installation:

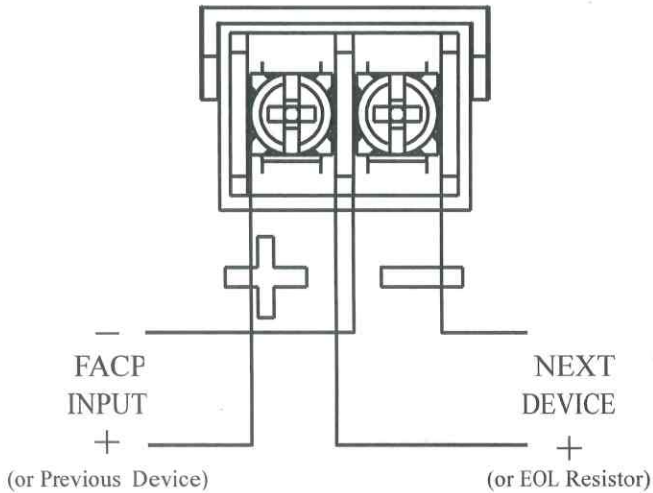


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Mounting Wall or ceiling product

1. Attach the mounting plate as shown in Figure 1 (mounting screws are NOT supplied). The mounting plate is compatible with the boxes shown in Figure 3.
2. Connect field wiring to terminals, located on back of product, as shown in Figure 2.

Figure 2. Wiring:

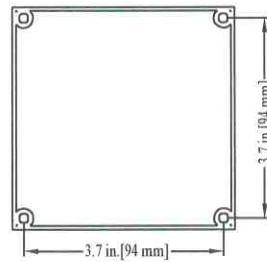


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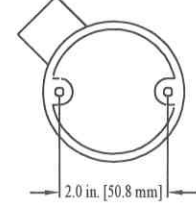
3. To attach product to mounting plate, hook the tabs on the product housing into the grooves on the mounting plate shown in Figure 4A.
4. Next, swing product into position while making sure that the tabs on the back of the product housing fully engage with the mounting plate and then secure by tightening the supplied mounting screw as shown in Figure 4A and 4B. (see Figures 4A, 4B and 4C on page 2)
5. If the round trim ring is required, it must be installed before tightening the front mounting screw. To install, align the round trim ring with the product housing and push into place. Once installed, secure the product with the mounting screw as shown in Figure 5 on page 2.

Figure 3. Compatible back boxes:

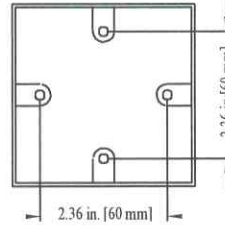
BACK BOX A- 105mm X 105mm



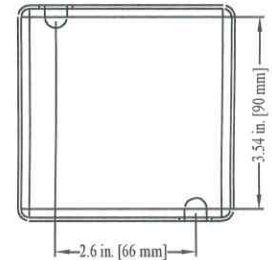
BACK BOX B- 65mm ROUND



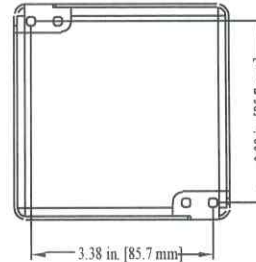
BACK BOX C- 86mm X 86mm



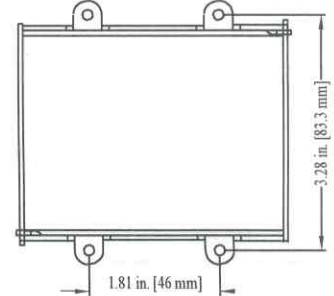
BACK BOX D- 4X4



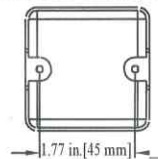
BACK BOX E- 4X4



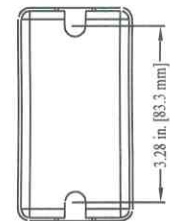
BACK BOX F- DOUBLE-GANG



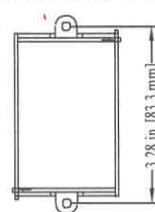
BACK BOX G- 60mmX 60mm



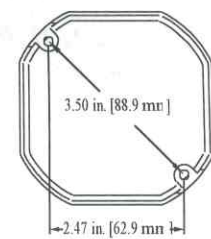
BACK BOX H- 2X4



BACK BOX I- SINGLE-GANG

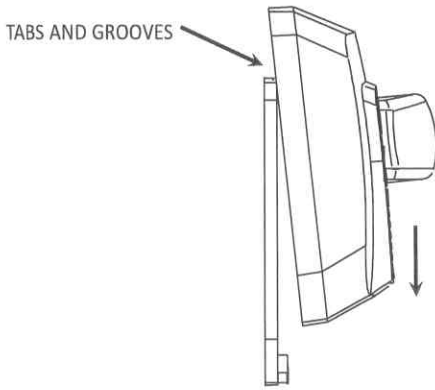


BACK BOX J- 4 inch OCTAGON



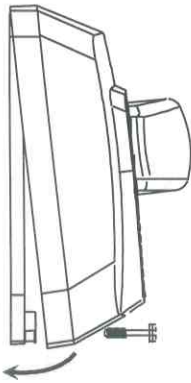
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Figure 4A. Mounting plate attachment:



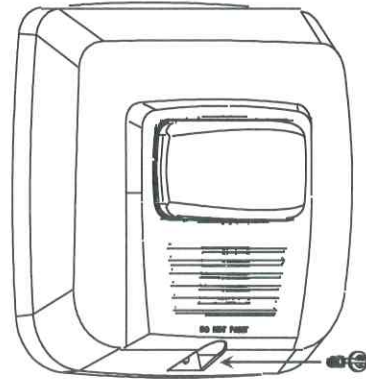
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Figure 4B. Secure mounting plate:



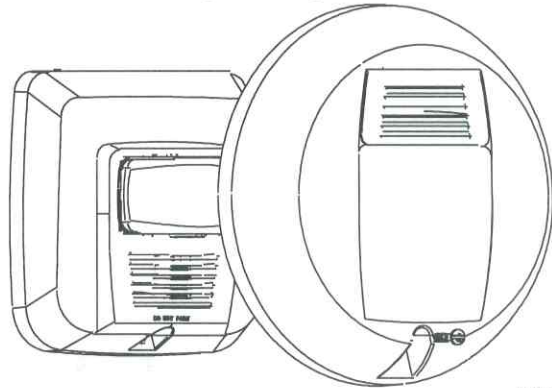
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Figure 4C. Secure plate with mounting screw:



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Figure 5. Round trim ring for ceiling installation:

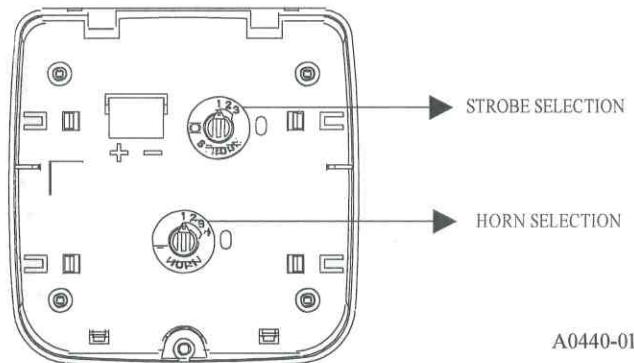


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Candela and Horn selection

Adjust the rotary dial on the rear of the product to position the desired candela setting. Adjust the other rotary dial for the horn selection. The selections are high or low volume and continuous or temporal tone.

Figure 6. Horn and strobe settings:



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Table 1. strobe current DRAW (mA)

	Switch Position	Candela	16-33 Volts	
			DC	FWR
Standard Candela Range	Position 1	15	37	45
	Position 2	75	71	71
	Position 3	115	89	92

Table 2. candela derating for red lens strobes:

Listed Candela	Candela rating with red lens strobe
15	3
75	16
115	25

Table 3. Horn/strobe current DRAW (mA)

DC Input	16-33 Volts		
	15 cd	75 cd	115 cd
Temporal High	48	80	98
Temporal Low	43	75	95
Continuous High	48	80	98
Continuous Low	43	75	95
FWR Input			
Temporal High	55	89	108
Temporal Low	50	84	103
Continuous High	55	89	108
Continuous Low	50	84	103

Table 4. Horn output (dBA) in UL reverberant room:

Switch Position	Sound Pattern	Volume	16 Volts**		24 V Nominal Measurements			
			DC	FWR	Reverberant		Anechoic	
					DC	FWR	DC	FWR
1	Temporal	High	75	73	78	77	103	104
2	Temporal	Low	72	71	74	73	100	101
3	Continuous	High	80	78	82	80	103	104
4	Continuous	Low	77	75	80	78	100	101

** Minimum dB rating for Operational Voltage Range as per UL 464.

Product Nameplate Date Code Note

 X
 XX
 X

The end number of the producing year
the producing month
the week of the producing month

The Limitations of Horn/strobes

The horn and/or strobe will not work without power. The horn/strobe gets its power from the fire/security panel monitoring the alarm system. If power is cut off for any reason, the horn/strobe will not provide the desired audio or visual warning. The horn may not be heard. The loudness of the horn meets (or exceeds) current Underwriters Laboratories' standards. However, the horn may not alert a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages. The horn may not be heard if it is placed on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise such as traffic, air conditioners, machinery or music appliances that may prevent alert persons from hearing the alarm. The horn may not be heard by persons who are hearing impaired. NOTE: Strobes must be powered continuously for horn operation. The signal strobe may not be seen. The electronic visual warning signal uses an extremely reliable xenon flash tube. It flashes at least once every second. The strobe must not be installed in direct sunlight or areas of high light intensity (over 60 foot candles) where the visual flash might be disregarded or not seen. The strobe may not be seen by the visually impaired. The signal strobe may cause seizures. Individuals who have positive photoic response to visual stimuli with seizures, such as persons with epilepsy, should avoid prolonged exposure to environments in which strobe signals, including this strobe, are activated. The signal strobe cannot operate from coded power supplies. Coded power supplies produce interrupted power. The strobe must have an uninterrupted source of power in order to operate correctly. System Sensor recommends that the horn and signal strobe always be used in combination so that the risks from any of the above limitations are minimized.

Three-year Limited Warranty

Xi'an System Sensor warrants its enclosed strobe and horn strobe to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. Xi'an System Sensor makes no other express warranty for those strobe and horn strobe. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the strobe and horn strobe which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning Xi'an System Sensor for a Return Authorization Number and faxing a copy of the filled form of CUSTOMER RETURNS with authorized RA# to Xi'an System Sensor, send defective units with a copy of the form postage prepaid to: Xi'an System Sensor Electronics, Ltd./ 28 Tuan Jie South Road/ Xi'an National Hi-tech Industrial Development Zone, 710075/ China. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of dam-age, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault.