

# Strobe Light User's Guide

**ATTENTION!** The model SL177 and SL177i strobe lights are designed to notify hearing impaired individuals of impending danger, they have no detection means and **MUST** be used in conjunction with operating Smoke, Heat, or Carbon Monoxide Alarms.

The model SL177i AC wire-in Strobe light can be directly interconnected with Kidde Safety 3-wire Smoke, Heat and CO alarms. It will produce an intermittent flash pattern (approximately 4 flashes, followed by approximately 5 seconds off) when triggered by a Carbon Monoxide alarm and a steady flash when triggered by a smoke or heat alarm.

The model SL177 is a 2-wire device that can be used to add strobe light capabilities to existing alarm systems produced by other manufacturers. A relay module or suitable switching device ( not included), which is compatible with the alarm system will be needed to energize the strobe light. Consult the alarm manufacturer to obtain the proper switching device for your specific alarm model.

Thank you for purchasing this strobe light. It is an important part of your family's home safety plan. You can trust KIDDE Safety to provide the highest quality safety products. We know you expect nothing less when the lives of your family are at stake.

***For your convenience, write down the following information. If you call our Consumer Hotline, these are the first questions you will be asked.***

<i>Strobe Light Model Number (located on back of alarm):</i>	<b>SL 177</b>	<b>SL 177i</b>
<i>Date Code (located on back of device):</i>		
<i>Date of Purchase:</i>		
<i>Where Purchased:</i>		

**SIGNALING**

**IMPORTANT! READ ALL INSTRUCTIONS BEFORE INSTALLATION AND SAVE THIS MANUAL FOR FUTURE REFERENCE**

**WARNING! THIS VISUAL SIGNALING DEVICE HAS NO DETECTION MEANS. IT MUST BE USED IN CONJUNCTION WITH OPERATING ALARMS.**

**WARNING! DO NOT TRY TO REPAIR THIS STROBE LIGHT YOURSELF. THIS DEVICE USES HIGH VOLTAGE AT ENERGY LEVELS THAT CAN KILL. REFER TO THE INSTRUCTIONS IN SECTION 11 FOR SERVICE.**

**WARNING! DISCONNECTING OR LOSS OF AC POWER WILL RENDER THIS SIGNALING DEVICE INOPERATIVE.**

**WARNING! THIS STROBE LIGHT IS EXTREMELY BRIGHT. DO NOT LOOK DIRECTLY AT THE LIGHT OR TOUCH THE LENS WHEN THE LIGHT IS FLASHING.**

## **CONTENTS OF THIS MANUAL**

- 1 -- SPECIFICATIONS**
- 2 -- APPLICATIONS**
- 3 -- RECOMMENDED APPLICATIONS OF STROBE LIGHTS**
- 4 -- LOCATIONS TO AVOID**
- 5 -- INSTALLATION INSTRUCTIONS**
- 6 -- OPERATION AND TESTING**
- 7 -- MAINTENANCE**
- 8 -- LIMITATIONS OF SIGNALING DEVICES FOR THE HEARING IMPAIRED**
- 9 -- GOOD SAFETY HABITS**
- 10 -- NFPA PROTECTION STANDARD 72**
- 11 -- SERVICE AND WARRANTY**

## **1. SPECIFICATIONS**

Model Number:	SL177i ( 3 WIRE INTERCONNECT UNIT )
Electrical Rating:	Special Application 110-130 VAC Maximum Operating RMS Current 420 mA

Note: This device was only tested over the range 110-130 VAC. Do not take 80% and 110% of these ratings into account during installation as this was not tested for.

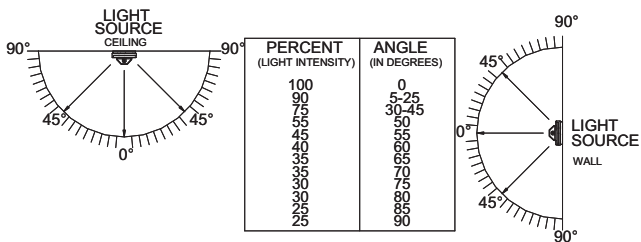
## **Multiple station (24) interconnect unit, interfaces directly with Kidde Safety:**

Ion Smoke Alarm Models:	1235, 1235CA, 1275, 1275CA, 1276, 1276CA, 1285, 1285CA, 1296, i12020, i12020CA, i12040, i12040CA, i12060, i12060CA, i12080, RF-SM-ACDC
Photo Smoke Alarms:	PE120, PE120CA,
Photo / Ion Smoke Alarms:	PI12000, PI2000CA
Heat Alarm Models:	HD135F, HD135FCA
CO / Ion Smoke Alarm Models:	KN-COSM-I, KN-COSM-IB, KN-COSM-ICA, KNCOSM-IBCA
Carbon Monoxide Alarms Models:	KN-COB-IC, KN-COB-IC-CA, KN-COB-ICB-CA, KN-COP-IC, KN-COP-IC-CA
Flash Rate (smoke alarm event):	Constant 1 flash per second nominal
Flash Rate (CO alarm event):	Intermittent 1 flash per second nominal (approximately 4 flashes, followed by approximately 5 seconds OFF)
Model Number:	SL177 ( 2 WIRE DIRECT CONNECT UNIT )
Electrical Rating:	Special Application 110-130 VAC Maximum Operating RMS Current 389 mA

Note: This device was only tested over the range 110-130 VAC. Do not take 80% and 110% of these ratings into account during installation as this was not tested for.

Flash Rate:	Constant 1 flash per second nominal
Model Number:	SL177i & SL177
Temperature Limits:	32°F (0°C) TO 120°F (49°C)
Mounting:	Wall or Ceiling
Applications:	Primary Direct or Indirect and Supplementary
Light Output:	177 Candela minimum (on axis measurement)

The following diagram shows that the light intensity gradually decreases as the viewing angle is increased. Use this information to determine the best location for the strobe light.



## 2. APPLICATIONS

### PRIMARY DIRECT AND INDIRECT VISIBLE SIGNAL

Locate the strobe light on the ceiling in the center of the room or on the wall a minimum of 80" (2 m) above the floor.

For rooms larger than 250 sq. ft. (14 ft. by 16 ft. - 4.27m by 4.88 m) the notification device should be located within 16 ft. (4.88m) of the pillow.

### SUPPLEMENTARY VISIBLE SIGNAL

The strobe may be located less than 80" (2 m) above the floor.

## 3. RECOMMENDED LOCATIONS OF VISUAL SIGNALING DEVICES

- Locate the first strobe light in the bedroom in which the hearing impaired individual sleeps. If the bedroom door is kept closed at night, an interconnecting smoke detector must also be installed in that bedroom.
- Locate additional strobe lights in any lived-in room where a hearing impaired individual would need to be notified of an alarm condition.

## 4. LOCATIONS TO AVOID

- In direct sunlight or high ambient light areas; the bright light may reduce one's ability to notice the strobe light.
- In areas where the temperature may fall below 32°F (4.4°C) or rise above 100°F (37.8°C).
- In areas with high humidity.
- Avoid outdoor locations (This device is not listed for outdoor use).

## 5. INSTALLATION INSTRUCTIONS

### READ CAREFULLY – WIRING REQUIREMENTS

- This smoke alarm should be installed on a U.L. listed or recognized junction box. All connections should be made by a qualified electrician and all wiring used shall be in accordance with articles 210 and 300.3(B) of the U.S. National Electrical Code ANSI/NFPA 70, NFPA 72 and/or any other codes having jurisdiction in your area. The multiple station interconnect wiring to the alarms must be run in the same raceway or cable as the AC power wiring. In addition, the resistance of the interconnect wiring shall be a maximum of 10 ohms.
- The appropriate power source is 110-130 Volts AC single phase supplied from a non-switched circuit, which is not protected by a ground fault interrupter.

MODEL SL177i WIRING INSTRUCTIONS: For AC QUICK CONNECT 3 WIRE HARNESS.

**WARNING:** This alarm cannot be operated from power derived from a square wave, modified square wave or modified sine wave inverter. These type of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that will damage the alarm.

### **CAUTION! TURN OFF THE MAIN POWER TO THE CIRCUIT BEFORE WIRING THE STROBE LIGHT.**

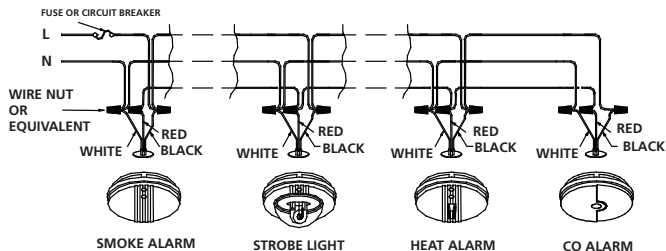
1. When Strobe lights and alarms are interconnected, all the interconnected devices must be powered from the same circuit.
2. A maximum of 24 Kidde Safety devices may be interconnected in a multiple station arrangement. The interconnect system should not exceed the NFPA interconnect limits of 12 smoke alarms and/or 18 alarms total (smoke, heat, Carbon Monoxide, etc). With 18 interconnected alarms it is still possible to interconnect up to a total of 6 remote signaling devices and/or relay modules.

**NOTE:** WHEN MIXING MODELS WHICH HAVE BATTERY BACKUP (1275, 1275CA, 1276, 1276CA, 1285, 1296, i12040, i12040CA, i12060, i12060CA, i12080, PE120, PE120CA, PI2000, PI2000CA, KN-COSM-IB, KN-COSM-IBCA, RF-SM-ACDC, HD135F, HD135FCA, KN-COB-IC, KN-COB-IC-CA, KN-COP-IC, KN-COP-IC-CA) WITH MODELS WITHOUT BATTERY BACKUP (1235, 1235CA, i12020, i12020CA, KN-COSM-I, KN-COSM-ICA, KN-COB-ICB-CA, CO120X, SM120X AND SL177i), BE ADVISED THAT THE MODELS WITHOUT BATTERY BACKUP WILL NOT FUNCTION DURING AN AC POWER FAILURE.

4. The maximum wire run distance between the first and last device in an interconnect system is 1000 ft.

- Figure 1 illustrates interconnection wiring. Improper connection will result in damage to the strobe light or alarms, failure to operate, or a shock hazard.
- Make certain that all devices in the interconnect system are wired to a continuous (non-switched, non-GFI or GCFI protected) power line.

**FIGURE 1: INTERCONNECT WIRING DIAGRAM FOR SL177i.**



**FIGURE 1**

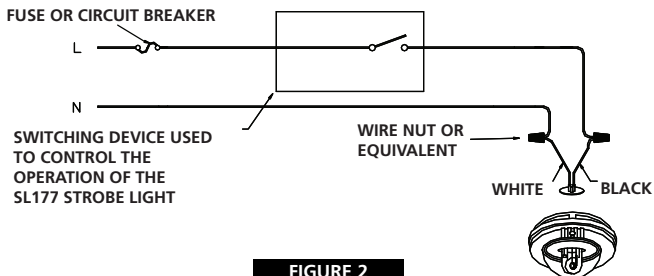
WIRE ON STROBE LIGHT HARNESS CONNECTED TO:

BLACK .....HOT SIDE OF AC LINE

WHITE ..... NEUTRAL AC LINE

RED ..... INTERCONNECT LINES (RED WIRES) OF THE OTHER UNITS  
IN THE MULTIPLE STATION SET UP

**FIGURE 2: MODEL SL177 WIRING INSTRUCTIONS FOR AC QUICK**



**FIGURE 2**

## CONNECT 2-WIRE HARNESS.

Figure 2 illustrates the proper SL177 wiring. Improper connection will result in damage to the strobe light or alarms, failure to operate, or a shock hazard.

WIRE ON STROBE LIGHT HARNESS CONNECTED TO:

BLACK . . . . .HOT SIDE OF AC LINE

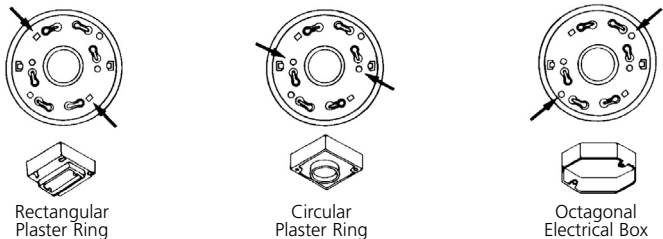
WHITE . . . . .NEUTRAL AC LINE

## MOUNTING INSTRUCTIONS:

- A trim ring is provided on the back of the strobe light. This trim ring is installed on the electrical box between the electrical box and the strobe light.
- Remove the trim ring from the back of the strobe light by holding the trim ring and twisting the strobe light in the direction indicated by the "OFF" arrow on the cover.

CAUTION THIS UNIT IS SEALED. THE COVER IS NOT REMOVABLE! After selecting the proper strobe light location as described in section 3, and wiring the AC QUICK CONNECT harness as described in the WIRING INSTRUCTIONS, attach the trim ring to the electrical box (see fig. 3).

## FIGURE 3: SELECT PROPER MOUNTING HOLES ON THE TRIM RING



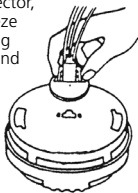
**FIGURE 3**

- Use a screwdriver to punch out only the pair of holes in the trim ring that match your type of electrical box or plaster ring. Mount the trim ring to the electrical box using the appropriate holes. NOTE: Use the circle, square, and octagon markings near each mounting hole in the trim ring to help you select the correct mounting holes (see fig. 3).
- Pull the AC QUICK CONNECTOR through the center hole in the ring and

mount the ring, making sure that the mounting screws are positioned in the small ends of the keyholes before tightening the screws (see fig. 3).

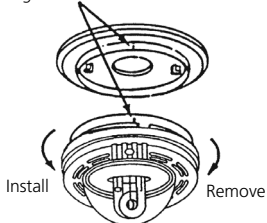
- Plug the AC QUICK CONNECTOR into the back of the strobe light, (see fig. 4) making sure that the locks on the connector snap into place.
- If you have finished all the WIRING AND TRIM RING MOUNTING STEPS, you

To remove AC connector, squeeze locking arm and pull.



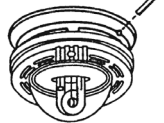
**FIGURE 4**

Alignment Marks



**FIGURE 5**

Tamper resistant locking pin



**FIGURE 6**

can install the strobe light on the trim ring. Alignment marks are provided on the side of the strobe light and on the Install the strobe light on the trim ring with the indicating marks aligned and rotate the detector in the direction of the ON arrow on the cover until the strobe light snaps in place. (See fig. 5)

- Turn on the AC power, The model SL177i strobe light has a green AC power on indicator which should be lit when the strobe is operating from AC power.

**TAMPER RESIST LOCKING PIN:** To make your strobe light tamper resistant a locking pin has been provided with your strobe light. Using this pin will help deter individuals from removing the strobe light from the trim ring. To use the pin insert it into the hole in the side of the strobe light after the strobe light has been installed on the trim ring (see fig. 6). **NOTE:** The tamper resist pin will have to be removed in order to remove the strobe light. This can be done easily with a long nose pliers. Using the long nose pliers, pull the pin out of the hole, it is now possible to remove the strobe light from the trim ring.

After installation **TEST** your strobe light by following the test procedure outlined in section 6.

**CAUTION!** Early warning fire detection and visual notification is best achieved by the installation of fire detection and visual notification equipment in all rooms and areas of the household as follows: A smoke alarm and visual notification device installed and interconnected in each separate sleeping area, and visual



notification equipment interconnected with heat, smoke, or CO alarms in the living rooms, dining rooms, kitchens, hallways, attics, furnace rooms, closets, utility storage rooms, basements, and attached garages.

## **6. TESTING AND OPERATION**

**WARNING! THIS STROBE LIGHT IS EXTREMELY BRIGHT. DO NOT LOOK DIRECTLY AT THE LIGHT OR TOUCH THE LENS WHEN THE LIGHT IS FLASHING.**

**TESTING:** Test by pushing the test button on one of the controlling alarms and hold it down for a minimum of 5 seconds after the alarms sounds. This will allow the controlling device to sound an alarm if all the electronics, circuitry, and horn are working. The controlling alarm will also send an activation signal through the interconnecting wiring to the strobe light, and cause the strobe light to flash if strobe light and the interconnection wiring are working properly.

If no alarm sounds check the fuse or circuit breaker supplying power to the alarm circuit.

If the alarm sounds but the strobe light does not activate, refer to section 5 to insure that the strobe light is wired properly.

**TEST THE STROBE LIGHT AND YOUR ALARMS WEEKLY TO ENSURE PROPER OPERATION.**

**OPERATION:** The strobe light is operating once AC power is applied, and testing is complete. When the strobe light is activated, it will flash for as long as the controlling alarm remains active.

## **7. MAINTENANCE**

**STROBE LIGHT REMOVAL:**

**IF TAMPER RESIST PIN HAS BEEN USED, REFER TO "TAMPER RESIST LOCKING PIN" IN SECTION (5) FOR PIN REMOVAL INSTRUCTIONS.**

**CLEANING YOUR STROBE LIGHT:**

To clean your Strobe light remove it from the mounting bracket and disconnect the AC Quick Connect power harness as outlined in section 5.

You can clean dust from your strobe light by using a vacuum cleaner hose and vacuuming around the cover and lens openings on the strobe light.

The outside of the strobe light can be wiped with a damp cloth.

**AFTER CLEANING, REINSTALL YOUR STROBE LIGHT AND TEST YOUR STROBE LIGHT BY ACTIVATING ONE OF THE CONTROLLING ALARMS.**

## **8. LIMITATIONS OF ALARM CONTROLLED VISUAL SIGNALING DEVICES**

VISUAL SIGNALING DEVICES CAN PROVIDE EARLY WARNING TO HEARING IMPAIRED INDIVIDUALS AT A REASONABLE COST; HOWEVER, IN ORDER FOR THE VISUAL SIGNALING DEVICE TO FUNCTION, IT MUST BE ACTIVATED BY AN OPERATING ALARM. ALARMS CANNOT PROVIDE AN ACTIVATION SIGNAL TO THE VISUAL SIGNALING DEVICE IF SMOKE, HEAT OR CARBON MONOXIDE DO NOT REACH THE SPECIFIC ALARM. THEREFORE, ALARMS MAY NOT SENSE A CONDITION ON A DIFFERENT FLOOR, OR ON THE OTHER SIDE OF A CLOSED DOOR. ALARMS DO HAVE LIMITATIONS. AC POWERED ALARMS WILL NOT OPERATE IF AC POWER HAS BEEN CUT OFF BY AN ELECTRICAL FIRE OR AN OPEN FUSE.

HOME EMERGENCIES DEVELOP IN DIFFERENT WAYS AND ARE OFTEN UNPREDICTABLE. NO ONE TYPE OF CONTROLLING ALARM; HEAT, FIRE (IONIZATION OR PHOTOELECTRIC) OR CARBON MONOXIDE IS ALWAYS BEST. FOR MAXIMUM PROTECTION, ALARMS MUST BE INSTALLED IN EACH SLEEPING AREA, AND ON EVERY LEVEL OF A HOME. ALARMS MUST BE INTERCONNECTED WITH EACH OTHER AND THE SIGNALING DEVICES AND BE TESTED REGULARLY TO INSURE THE ALARMS AND INTERCONNECTING CIRCUITS ARE IN GOOD OPERATING CONDITION.

IN A UNDERWRITERS LABORATORIES STUDY, THIS TYPE OF VISUAL SIGNALING APPLIANCE WAS ONLY SUCCESSFUL IN WAKING 92% OF THE SLEEPING RESPONDENTS.

HEARING IMPAIRED INDIVIDUALS MAY NOT SEE THE VISUAL WARNING DEVICE IF WALLS, DOORS, DISTANCE, HIGH AMBIENT LIGHT, OR OTHER OBSTRUCTIONS BLOCK THE STROBE LIGHT. IF THE STROBE LIGHT IS LOCATED OUTSIDE THE BEDROOM OR ON A DIFFERENT FLOOR, IT WILL NOT WAKE UP A SOUND SLEEPER. THE USE OF ALCOHOL OR DRUGS MAY ALSO IMPAIR ONES ABILITY TO RESPOND TO THE VISUAL SIGNAL.

ALTHOUGH VISUAL SIGNALING DEVICES CAN HELP SAVE LIVES BY PROVIDING AN EARLY WARNING OF AN EMERGENCY SITUATION, THEY ARE NOT A SUBSTITUTE FOR AN INSURANCE POLICY. HOME OWNERS AND RENTERS SHOULD HAVE ADEQUATE INSURANCE TO PROTECT THEIR LIVES AND PROPERTY.

## **9. GOOD SAFETY HABITS**

### **DEVELOP AND PRACTICE A PLAN OF ESCAPE**

- Install and maintain Fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency.
- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the smoke alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months, including fire drills at night. Ensure that small children hear the alarm and wake when it sounds. They must wake up in order to execute the escape plan. Practice allows all occupants to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.
- Current studies have shown smoke alarms may not awaken all sleeping individuals, and that it is the responsibility of individuals in the household that are capable of assisting others to provide assistance to those who may not be awakened by the alarm sound, or to those who may be incapable of safely evacuating the area unassisted.

### **WHAT TO DO WHEN THE ALARM SOUNDS**

- Alert small children in the home.
- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.

- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the fire department from your neighbor's home - not from yours!
- Don't return to your home until the fire officials say that it is all right to do so.

There are situations where a smoke alarm may not be effective to protect against fire as stated in the NFPA Standard 72. For instance:

- a) smoking in bed
- b) leaving children home alone
- c) cleaning with flammable liquids, such as gasoline

## **10. NFPA REQUIRED PROTECTION**

For your information the National Fire Protection Association's Standard 72, provides information regarding the fire detection equipment required within the family living unit. And reads as follows:

Smoke Detection. Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station smoke alarms shall be installed as follows: (1) In all sleeping rooms Exception: Smoke alarms shall not be required in sleeping rooms in existing one- and two-family dwelling units. (2) Outside of each separate sleeping area, in immediate vicinity of the sleeping rooms. (3) On each level of the dwelling unit, including basements Exception: In existing one- and two-family dwelling units, approved smoke alarms powered by batteries are permitted.

Smoke Detection - Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms. The installation of the smoke alarms in the kitchen, attic (finished or unfinished), or garage is normally not recommended, as these locations occasionally experience conditions that can result in improper operation.

This equipment should be installed in accordance with the National Fire Protection Association's Standard 72 (NFPA, Batterymarch Park, Quincy, MA 02269).

**NOTIFY YOUR LOCAL FIRE DEPARTMENT AND INSURANCE COMPANY OF YOUR SMOKE ALARM INSTALLATION.**

## **11. SERVICE AND WARRANTY**

If after reviewing this manual you feel that your Visual Signaling Device is defective in any way, do not tamper with the unit. Return it for servicing to: KIDDE SAFETY, 1016 Corporate Park Dr., Mebane, NC. 27302 (See Warranty for in-warranty returns).

## FIVE YEAR LIMITED WARRANTY

KIDDE Safety warrants the original purchaser that the enclosed Visual signaling Device will be free of defects in material and workmanship or design under normal use and service for a period of five years from the date of purchase. The obligation of KIDDE Safety under this warranty is limited to repairing or replacing the Visual Signaling Device or any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the Visual Signaling Device with proof of date of purchase, postage and return postage prepaid to: Warranty Service Department, Kidde Safety, 1016 Corporate Park Dr., Mebane, NC 27302.

This warranty shall not apply to the Visual Signaling Device if it has been damaged, modified, abused, or altered after the date of purchase or if it fails to operate due to inadequate AC electrical power.

THE LIABILITY OF KIDDE SAFETY OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS ARISING FROM THE SALE OF THIS VISUAL SIGNALING DEVICE OR UNDER THE TERMS OF THIS LIMITED WARRANTY SHALL NOT IN ANY CASE EXCEED THE COST OF REPLACEMENT OF THE VISUAL SIGNALING DEVICE, AND IN NO CASE SHALL KIDDE SAFETY OR ANY OF ITS PARENT OR SUBSIDIARY CORPORATIONS BE LIABLE FOR CONSEQUENTIAL LOSS OR DAMAGE RESULTING FROM THE FAILURE OF THE VISUAL SIGNALING DEVICE OR THE BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, EVEN IF THE LOSS IS CAUSED BY THE COMPANIES NEGLIGENCE OR FAULT.

Since some states do now allow limitations on the duration of an implied warranty or do now allow the exclusion of limitations or incidental or consequential damages, the above limitation or exclusions may not apply to you. While this warranty gives you specific legal rights, you may also have other rights which vary from state to state.

The above warranty may not be altered except in writing signed by both parties hereto.

### QUESTIONS OR FOR MORE INFORMATION

Call our Consumer Hotline at **1-800-880-6788** or contact us at our website at **[www.kidde.com](http://www.kidde.com)**



Kidde, 1016 Corporate Park Drive, Mebane, NC 27302