

## ELK-6052 Smoke Detector and ELK-6053 Heat Detector

### Instructions

Read and retain for as long as the product is being used. It contains vital information on the operation and installation of your Detector. The booklet should be regarded as part of the product.

If you are just installing the unit, the booklet must be given to the householder. The booklet is to be given to any subsequent user.

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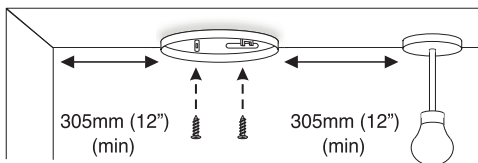
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# 1. Quick Start Guide

## 1

**LOCATE CORRECT SITING POINT**

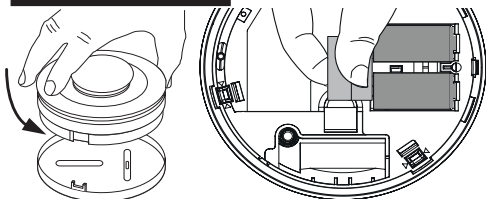
**FIX BASEPLATE TO CEILING**



DETECTOR SHOULD BE CEILING MOUNTED AT LEAST 305MM (12") FROM WALLS & OBSTRUCTIONS, IDEALLY CENTRALLY IN ROOM/AREA

## 2

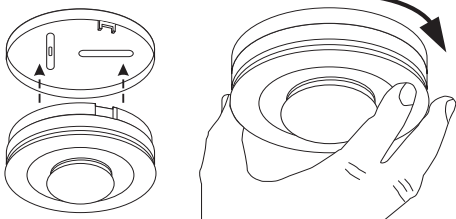
**CONNECTING THE BATTERIES**



DETACH THE DETECTOR FROM THE MOUNTING PLATE. REMOVE THE PULL TAB TO CONNECT BATTERY OR BATTERIES & POWER THE UNIT (Discard cardboard between base and detector)

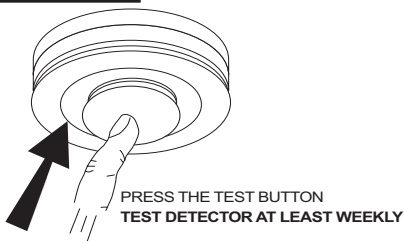
## 3

**PLACE DETECTOR & TWIST ON TO BASE**



## 4

**TEST DETECTOR**



**Installer shall conduct a go/no-go field test using approved canned smoke test product: "SMOKE CHECK, Model 25S, Smoke Detector Tester." Follow the Instructions printed on can.**

**Contact your Central Monitoring Station to notify them of the impending test.**

**Table 1**

Model	Description
ELK-6052	Wireless 900MHz Smoke Detector
ELK-6053	Wireless 900MHz Heat and Rate of Rise Detector

### Indicator Summary

Normal Operation	Action	Red LED	Yellow LED	Sounder
Power Up	Pull Battery tab or insert Battery	1 Flash	1 Flash	Off
Standby		Off	Off	Off
Sensing Fire		Rapid Flashing	Off	Full Sound
Fault Mode	Action	Red LED	Yellow LED	Sounder
Low Battery		Off	1 Flash every 48 sec	1 Beep with 1 Flash
Faulty Smoke Sensor		Off	2 Flashes every 48 sec	2 Beeps with 2 Flashes
Faulty Heat Sensor *		Off	2 Flashes every 48 sec	2 Beeps with 2 Flashes
End of Life		Off	3 Flashes every 48 sec	3 Beeps with 3 Flashes
Silence Sounding Detector	Press & Release Button	1 Flash every 8 sec	Off	Off for 10 mins
Silence End of Life indication (up to 30 days)	Press & Release Button	Off	Off for 72 hours	Off for 72 hours
Dusty Chamber	Press Test Button to activate beeps	Off	4 flashes every 48 seconds	Beep 4 times on test button press only
Test Mode	Action	Red LED	Yellow LED	Sounder
Test Smoke Detector	Press Button	Rapid Flashing	Off	Full Sound
Detector Memory	Action	Red Led	Yellow LED	Sounder
24 Hour Memory		2 Flashes every 48 sec for 24 hours	Off	Off
Long Term Memory	Press & Hold Button	Rapid Flashing	Off	Rapid Chirping

### Normal Operation Indicators Explained

#### Power Up

Twist off the Detector from the mounting plate (see Quick Start Guide). Remove the battery tab to power the Detector, the red LED will flash once followed by one flash of the yellow LED to indicate that the Detector has been powered successfully and is now in standby mode.

## **Standby**

In standby mode there are no active visible or audible indications to the occupant. To confirm that the Detector is operational perform a weekly button test.

## **Weekly Button Test**

Press and hold the test button and verify that the red LED flashes rapidly and the Detector ramps up to full sound.

## **Sensing Fire**

As soon as the Detector senses smoke it will go into alarm (along with any interconnected Detectors). The red LED on the Detector sensing smoke flashes rapidly to indicate this is the Detector sensing smoke / fire. Follow the instructions in section 3 and evacuate the building.

## **Silence False / Nuisance Detector Activations**

Occasionally Smoke Detectors can be activated by phenomena other than fire, such as dust, insects, cooking smoke and shower steam. Once you are sure it is a nuisance activation press the large test button to silence the Detector for 10 minutes – the red LED will then flash every 8 seconds for 10 minutes. Pressing the test button will make the unit less sensitive, but if a large amount of smoke / steam / dust is observed the unit will remain in the activation condition.

## **Nuisance activation in an Interconnected System**

In the case of a real fire, the occupiers of the dwelling should proceed to evacuate as per instructions in section 3. However, if the system is responding to a recurring nuisance activation it is very important that the Detector at fault is identified so the problem can be eliminated by cleaning or replacing the Detector. The Detector at fault can be identified by a rapidly flashing red LED. Once it has been located follow directions for Silence False / Nuisance Detector Activations above.

## **Fault Condition Indicators Explained**

### **Low Battery**

The Detector will emit a short beep and flash the Yellow LED when it becomes partially depleted. Check the date when the Detector should be replaced which is given on the sidewall of the Detector. When electronic self testing indicates that the battery is becoming low the Detector will beep, and the yellow LED will flash at the same time (about every 48 seconds) to warn the user. This indicates that the battery or batteries must be replaced.

### **Contaminated Chamber**

If the Detector sounds with no apparent smoke present, press the test button to silence it for 10 minutes (as described above). If Detector sounds again it may be contaminated. Pressing the test button again, within 4 minutes of the Detector re-sounding, will cause the Detector to compensate for chamber contamination and normally resolve the problem.

If the Detector re-sounds a third time, it is likely that the Detector is excessively contaminated and needs replacing. If it is not convenient to replace it immediately, pressing the test button within 4 minutes of it going into alarm (for the third time) will silence the Detector for 8 hours – however it will give two short beeps (second apart) every 10 minutes to remind the user it has been disabled. If the contamination clears the Detector will return to normal operation.

(Note: this does not reduce the users fire protection, as a Smoke Detector in continuous alarm due to a fault, is useless and must be silenced – by taking the Detector down or as described here. This procedure has the added benefits that the user is reminded every 10 minutes by two short beeps that the Detector needs to be replaced and that if the problem clears the Detector will return to detecting fire).

The unit should flash the yellow LED 4 times if dust level is too high and user should clean the Detector as described in section 8.4.

### **Faulty Smoke Chamber**

In the unlikely event of the smoke sensing chamber becoming defective, the Detector will give 2 short beeps with 2 yellow LED flashes every 48 seconds. The Detector must then be replaced. If it is not convenient to replace it immediately, pressing the test button will silence the beeps and stop the yellow LED flashing for 12 hours. This can be repeated as required.

### **End of Life**

When the sensor has reached its End of Life the Detector will beep and flash the amber light 3 times every minute. The remedy for this failure is to replace the Detector.

## **2. Location, Positioning & NFPA Requirements**

The number of Detectors necessary for minimum protection is mandated by the NFPA (National Fire Protection Association) as shown below:

### **NATIONAL FIRE PROTECTION ASSOCIATION REQUIRED PROTECTION**

Where required by applicable laws, codes, or standards for the specified occupancy, approved single- and multiple-station Smoke Detectors shall be installed as follows:

- (1) In all sleeping rooms and guest rooms
  - (2) Outside of each separate dwelling unit sleeping area within 6.4m (21ft) of any door to a sleeping room, the distance measured along a path of travel
  - (3) On every level of a dwelling unit, including basements
  - (4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics.
  - (5) In the living area(s) of a guest suite
  - (6) In the living area(s) of a residential board and care occupancy (small facility)
- \* Where two or more Detectors are installed they shall be interconnected.

The equipment should be installed using wiring methods in accordance with the National Fire Protection Association's Standard 72, Chapter 11. (National Fire Protection Association, Batterymarch Park, Quincy, MA 02269).

ELK-6052 Smoke Detectors and ELK-6053 Heat Detectors are designed for use with ELK-M1 Alarm Control panels and ELK-M1XRFTWM Wireless Receivers and utilize Wireless Two-Way communications which provides for the required interconnection of two or more Detectors.

The required number of smoke Detectors may not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke Detectors. For this reason, it is recommended that the occupant consider the use of additional smoke Detectors for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by code mandated smoke Detectors. The installation of smoke detectors in bathrooms, shower rooms, kitchens, attics (finished or unfinished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation. Heat Detectors can be installed in kitchens, garages and other areas where Smoke Detectors are unsuitable.

### **IMPORTANT!**

Specific requirements for Smoke Detector installation vary from state to state and from region to region. Check with your local Fire Department for current requirements in your area.

## SMOKE DETECTION

Sufficient smoke must enter your Smoke Detector before it will respond. Your Smoke Detector needs to be within 6m (20ft) of the fire to respond quickly. Smoke Detectors also need to be in positions where they can be heard throughout the property, so they can wake you and your family in time for everyone to escape. A single Smoke Detector will give some protection if it is properly installed, but most homes will require at least two or more Detectors, interconnected to ensure that a reliable early warning is given. For recommended protection you should put individual Smoke Detectors in all rooms where fire is most likely to break out (apart from the kitchen and bathroom).

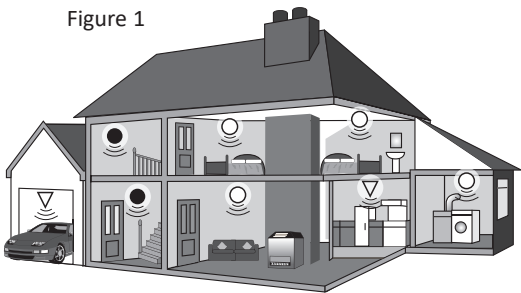
### Multi Level Dwellings

If your home has more than one floor, at least one Detector should be fitted on each level (see Figure 1) and still following the minimum NFPA requirements. When two or more Detectors are installed they shall be interconnected so as to provide sufficient warning throughout the property.

Figure 1 illustrates where Smoke and Heat Detectors should be located in a typical two story house. Note the spacings in "Protection Levels" which ensure the early detection of fire and that the warning will be heard.

Heat Detectors should be located in places where Smoke Detectors are unsuitable - i.e. kitchen, garage, furnace room, Single Story Dwelling

Figure 1



For minimum protection and as per NFPA requirements  
Smoke Detectors shall be installed as follows:



- In all sleeping rooms and guest rooms
- Outside of each separate dwelling unit sleeping area within 6.4m (21ft) of any door to a sleeping room, the distance measured along a path of travel
- On every level of a dwelling unit, including basements
- On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics.
- In the living area(s) of a guest suite
- In the living area(s) of a residential board and care occupancy (small facility)
- all units interconnected

For recommended protection (in addition to the above) Smoke Detectors may be installed in:

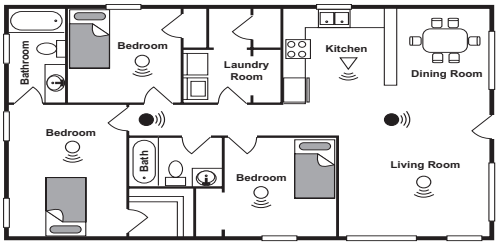


- All rooms (except unsuitable locations such as kitchen, baths, garage, etc.)



- In locations unsuitable for Smoke Detectors consider installing Heat Detectors placed within 5.3m (17ft) of potential fire sources.

Figure 2



If the premises is one story you should put your first Smoke Detector in a corridor or hallway between the sleeping and living areas. Place it as near to the living area as possible, but make sure that it can be heard loudly enough in the bedroom to wake someone. See Figure 2 for placement example.

In houses with more than one sleeping area, Smoke Detectors should be placed between each sleeping area and the living area and it is recommended that Heat Detectors should be placed in the kitchen and garage.

### Recommended Protection

#### Checking to Make Sure Detectors Can Be Heard

With the Detectors sounding in their intended locations check to make sure that the sound can be heard in each bedroom with the door closed, above the sound of any TV/audio systems. The TV/ audio systems should be set to a reasonably loud conversation level. If you cannot hear the Detector sounding its alarm over the sound of a TV/audio system, the chances are it would not wake you. Interconnecting the Detectors will help to ensure that the Detector sound will be heard throughout the property.

### Positioning

#### Ceiling Mounting

Hot smoke rises and spreads out, so a central ceiling position is the recommended location. The air is "dead" and does not move in corners, therefore Smoke Detectors must be mounted away from corners. Keep at least 305mm (12") from walls and corners (see Figure 3). Additionally, mount the unit at least 305mm (12") from any light fixture or decorative object that might prevent smoke from entering into the Smoke Detector.

#### Wall Mounting

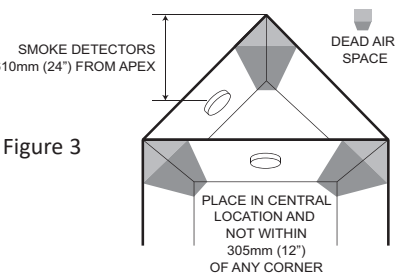


Figure 3

If ceiling mounting is impractical, Smoke Detectors may be mounted on a wall, provided that:

- a) the top of the smoke Detector is between 150mm (6") and 305mm (12") below the ceiling;
- b) the bottom of the smoke Detector is above the level of any door openings;

Wall mounting should only be considered where closely spaced beams or similar obstructions may preclude ceiling mounting. It is considered to be the responsibility of the installer/client to determine if the presence of asbestos in the ceiling material would make ceiling mounting 'impractical'.

### On a Sloping Ceiling

With a sloping or peaked ceiling install a Smoke Detector within 610mm (24") of the peak (measured vertically). If this height is less than 610mm (24") the ceiling is regarded as being flat (see Figure 4).

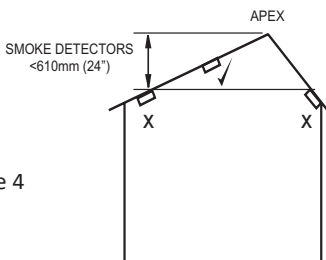


Figure 4

### Locations to avoid

DON'T place Smoke Detectors in any of the following areas:

- Bathrooms, kitchens, showers, garages or other rooms where the Smoke Detector may be triggered by steam, condensation, cooking smoke, etc. Keep at least 6m (20ft) away from potential sources of cooking smoke, fireplaces, etc.
- Locate away from very dusty or dirty areas as dust build-up in the chamber can impair performance. It can also block the insect screen mesh and prevent smoke from entering the smoke Detector chamber.
- Do not locate in insect infested areas. Small insects getting into the Smoke Detector chamber can cause intermittent Detector alarming conditions.
- Places where the normal temperature can exceed 100°F (38.7°C) or be below 40°F (4.4°C) such as attics, furnace rooms, directly above ovens or cooktops, bathrooms, etc., as mounting in such locations could cause nuisance Detector alarming conditions.
- Near a decorative object, door, light fixtures, window molding etc., that may prevent smoke from entering the Detector.
- Surfaces that are normally warmer or colder than the rest of the room (e.g. attic access). Temperature differences might stop smoke from reaching the Detector.
- Next to or directly above heaters or air conditioning vents, windows, wall vents etc. that can change the direction of airflow.
- In very high or confined areas (e.g. over stairwells) where it may be difficult to reach the Detector (for testing, hushing or battery replacement).
- Locate the Detector at least 900mm (3ft) from dimmer controlled lights and wiring as some dimmers can cause interference.
- Locate Detector at least 1.5m (5ft) and route wiring at least 1m away from fluorescent light fixtures as electrical "noise" and/or flickering may affect the unit.

## 3. Fire Safety Advice

When using household protective devices, basic safety precautions should always be followed, including those listed below

- Please read all instructions.
- Rehearse emergency escape plans so everyone at home knows what to do in case the Detector sounds.



- Use the Test Button to familiarize your family with the Detector sound and to practice fire drills regularly with all family members. Draw up a floor plan that will show each member at least two escape routes from each room in the house. Children tend to hide when they don't know what to do. Teach children how to escape, open windows, and use roll up fire ladders and stools without adult help. Make sure they know what to do if the Detector sound goes off.
- Constant exposures to high or low temperatures or high humidity may reduce battery life.
- Nuisance Detector sounds can be quickly silenced by fanning vigorously with a newspaper, by removing the Detector from its base or pressing the test / hush button.
- Do not attempt to recharge, or burn the battery, as it may explode.
- In the event that the batteries may have leaked or corroded, handle carefully to avoid possible eye damage or skin irritation.
- To maintain sensitivity to smoke, do not paint or cover the Detector in any manner; do not permit accumulation of cobwebs, dust, or grease.
- If Detector has been damaged in any way or does not function properly, do not attempt a repair - see section 5 'Getting Your Detector Serviced'.
- Smoke Detectors must be mounted following the instructions provided in this manual.
- Smoke Detectors are not a substitute for insurance. The supplier or manufacturer is not your insurer.

#### Fire Safety Hints

Store fuel and other flammable materials in proper containers.

Discard oily or flammable rags.

Always use a metal fireplace screen and have chimneys cleaned regularly.

Replace worn or damaged sockets, switches, home wiring and cracked or frayed electrical cords and plugs.

Do not overload electrical circuits.

Keep matches away from children.

Never smoke in bed. In rooms where you do smoke, always check under cushions for smoldering cigarettes and ashes.

Be sure all electrical appliances and tools have a recognized approval label. Smoke Detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

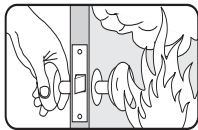
This device cannot protect all persons at all times. It may not protect against the three most common causes of fatal fires:

- Smoking in bed.
- Leaving children at home alone.
- Improper use of flammable liquids.

Further information can be obtained from the Fire Department.

#### What to Do In The Event Of A Fire

1. Check room doors for heat or smoke. Do not open a hot door. Use an alternate escape route. Close doors behind you as you leave.



2. If smoke is heavy, crawl out, staying close to floor. Take short breaths, if possible, through a wet cloth or hold your breath. More people die from smoke inhalation than from flames.



3. Get out as fast as you can. Have a prearranged meeting place outside for all family members. Check to make sure everyone is accounted for.



4. Call the Fire Department from a neighbor's house or mobile phone. Remember to give your name and address.



5. NEVER re-enter a burning house.



## 4. Detector Limitations

### Limitations of Smoke Detectors

While Smoke Detectors are extremely effective, independent authorities have stated that under some circumstances they may become ineffective. A number of reasons for this are:

- Smoke Detectors will not work if the batteries are depleted or if they are not correctly installed. Replace the batteries if necessary. Also check the replace by date on the side of the Detector.
- Smoke Detectors will only work when sufficient smoke reaches the Detector. Smoke may be prevented from reaching the Detector if the fire is too far away, for example, if the fire is on another floor, behind a closed door, in a chimney, in a wall cavity, or if the prevailing air drafts carry the smoke or heat away. Installing Smoke Detectors on both sides of closed doors and installing more than one Detector as recommended by code, may significantly improve the probability of early detection.
- The Smoke Detectors may not be heard due to other loud noise, hearing impairment, etc.
- A Smoke Detector may not wake a person who has taken drugs or alcohol.
- Certain types of fires may be difficult to detect in time to provide sufficient early warning. Examples include; fires caused by smoking in bed, gas leaks, explosions, poor storage of flammable rags and/or liquids, for example fuels, paint, paint thinner, etc., overloaded electrical circuits, or children playing with matches.
- Current studies have shown that Smoke Detectors may not awaken all sleeping individuals. It is the responsibility of individuals in the household who are capable of assisting others, to provide assistance to those who may not be awakened by the Detector alarming sound, or to those who may be incapable of safely escaping the area unassisted.

### Limitations of Heat Detectors

There are various situations where a Heat Detector may not be effective:

- Fires where the victim is directly exposed to flame for example; clothes catching fire while cooking.
- Fires where the heat is prevented from reaching the Heat Detector due to a closed door or other obstruction.
- Incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located Heat Detectors

## 5. Getting Your Detector Serviced

If your Detector fails to work after you have read the sections on "Installation", "Testing and Maintenance", then contact Customer Service at the address given at the end of this manual.

## 6. Warranty

Elk Products warrants the Elk-6052 Smoke Detector (excluding batteries) for 2 years from date of purchase against any defects that are due to faulty materials or workmanship. This warranty only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorized dismantling, or contamination howsoever caused. This guarantee excludes incidental and consequential damage. Further the warranty does not cover Acts of God, such as fire, flood, hurricanes and tornadoes. If this Detector should become defective within the guarantee period, it must be returned to Elk Products, with proof of purchase, carefully packaged, with the problem clearly stated. We shall at our discretion repair or replace the faulty unit.

Elk Products shall not be liable for any incidental or consequential damages caused by the breach of any express or implied warranty. Any implied warranty of merchantability or fitness for purposes is limited to the duration of the above warranty period. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Some states or jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, or limitations on how long an implied warranty last so the above limitation may not apply to you.

Do not interfere with the Detector or attempt to tamper with it. This will invalidate the warranty, but more importantly may expose the user to shock or fire hazards. This warranty is in addition to your statutory rights as a consumer.

Elk Products makes no warranty, expressed or implied, written, or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery.

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

## 7. Installation

1. Select a location complying with the advice in Section 2.
2. Enroll Detector into the Control Panel following the instructions that accompany the ELK-M1XRFTWM Wireless Receiver. Insert the battery or batteries per the Quick Start Guide.
3. Temporarily place Detector in the intended mounting location and perform a quick test by pressing the Test button on the front of the Detector. This should be done PRIOR to permanent mounting to ensure the location is suitably in range of the Transceiver and/or the Control.
4. Remove the mounting plate and align on the ceiling. Try to orient Detectors in the same orientation relative to the wireless receiver. This means picking a part of the building, say the front wall of the building and aligning with respect to this (see Figure 5).

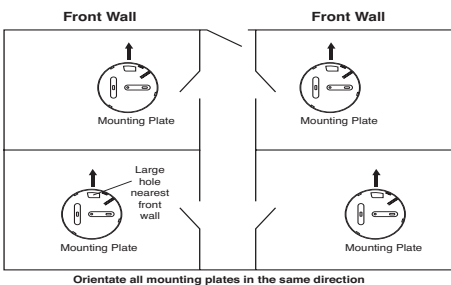
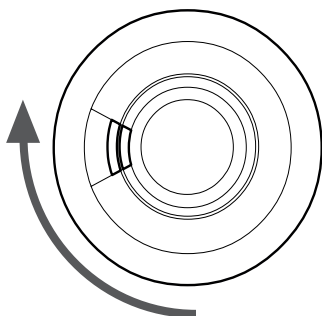


Figure 5

5. Mark and drill holes using a 3/16" (5.0mm) drill bit through center of the marks. Insert plastic anchors provided and screw mounting plate to ceiling.
6. Carefully line up the Detector on to the mounting plate, gently press to the base and twist clockwise (see Figure 6).

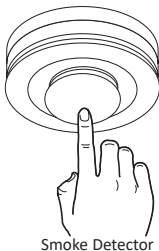
Figure 6

ROTATE UNIT CLOCKWISE



7. Press the Test button on each Detector to ensure that the Detector works (see Figure 7).

Install all the other Detectors similarly.



Smoke Detector

Figure 7

**Installer shall conduct a go/no-go field test using approved canned smoke product: "SMOKE CHECK, Model 25S, Smoke Detector Tester." Follow Instructions printed on the can. Contact your Central Monitoring Station to notify them of the impending test.**

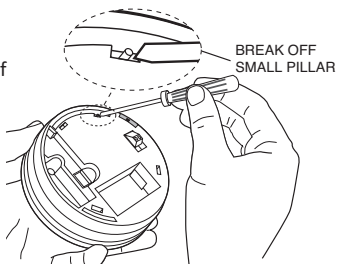
#### Tamper Proofing the Detectors

The Detector can be made tamper proof to prevent unauthorized removal of the Detector.

Break off the small pillar on the base as shown in Figure 8a.

Figure 8a

How to Tamperproof



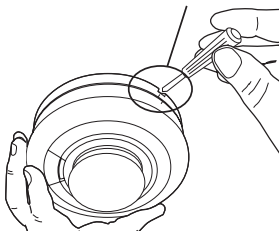
BREAK OFF SMALL PILLAR

To remove the Detector from the ceiling it is now necessary to use a small screwdriver, to release the catch (push catch towards the ceiling) and then twist off the Detector (see Figure 8b).

Figure 8b

How to Remove

PUSH UP CATCH & TWIST ALARM ANTI-CLOCKWISE TO REMOVE



If necessary, it is possible to further secure the Detector by using a 2-3mm (1/8") diameter x 6-8mm (1/4") long self tapping screw (not supplied) to firmly lock the Detector and its' mounting plate together (see Figures 8c and 8d).

Attach the Detector to the mounting plate.

Line up the screw (not supplied) on the "U" shaped recessed area shown in Figure 8c and install screw until fully secured.

To remove the Detector from the ceiling, remove the screw first, and then twist off counterclockwise.

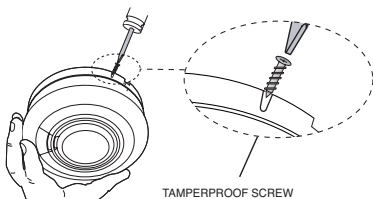


Figure 8c

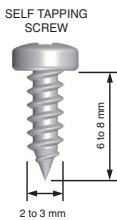


Figure 8d

## 8. Testing and Maintenance

Your Detector is a life safety device and should be checked periodically.

### Manually Testing your Detectors

It is recommended that you test your Detectors after installation and then at least weekly to ensure the units are working. It will also help you and your family to become familiar with the Detector alarming sound.

- Press and hold the Test Button until the Detector sounds and the red LED flashes (see Figure 7). The Detector will stop sounding shortly after the button is released.
- Repeat this procedure for all other Detectors in the system.

**WARNING:** Do not test with flame. This could set fire to the Detector and damage the house. We do not recommend testing with actual smoke as the results can be misleading unless special apparatus is used.

When you press the Test button it simulates the effect of smoke in a Smoke Detector which it could experience in a real fire.

### Test/Silence Button to Control Nuisance Detectors

The Smoke Detector has a combined Test/Silence button to help you control nuisance/false detections.

When the Detector sounds if there is no sign of smoke or noise to indicate that there is a fire, it should be assumed that it is due to an actual fire, the dwelling should be evacuated immediately and contact the local Fire Department.

It is possible that cooking smoke, steam, etc., may be the source of a nuisance/false detection.

If there are frequent nuisance/false detection of alarms, it may be necessary to re-locate the Detector away from the source (cooking smoke, shower steam, etc.)

1. To cancel a false detection from a Detector (which has its red light flashing rapidly), press the Test/Silence button and the Smoke Detector will automatically switch to a reduced sensitivity condition.

The Smoke Detector will be silenced for a period of approximately 10 minutes. The red light on the cover of the Smoke Detector will flash every 8 seconds to indicate that the unit has been silenced.

2. The Smoke Detector will reset to normal sensitivity at the end of the 10 minute silenced period. If additional silenced time is required, simply push the Test/Silence button again.

3. If kitchen usage/layout is such that there is an unacceptable level of nuisance detection of alarms, re-locate the Smoke Detector further away where it will be less affected by cooking smoke, steam, etc.

We recommend the use of a Heat Detector in the Kitchen area to avoid such nuisance detection of alarms.

What to do when a Detector is beeping:

Detector will beep twice every 48 seconds and yellow LED will flash if the smoke chamber is degraded. See Smoke Detector Auto Self-Test for details.

Detector will beep once every 48 seconds and yellow LED will flash for at least 30 days when the battery power is low. This indicates that it is time to replace the Battery(s). Battery replacement should also be done if the Detector does not sound when the Test Button is pressed.

#### Battery Replacement

Use only specified battery model: Panasonic CR123A

Use of a different battery may have a detrimental effect on Detector operation.

After replacing the battery always press the Test button to check that the Detector is functioning correctly.

#### WARNING!

CONSTANT EXPOSURES TO HIGH OR LOW TEMPERATURES OR HIGH HUMIDITY MAY REDUCE BATTERY LIFE.

These batteries are intended for use at ordinary temperatures where anticipated high temperature excursions are not expected to exceed 212°F (100°C).

Prolonged periods of Detector sounding will also reduce battery life.

CAUTION: The battery used in this device may present a fire or chemical burn hazard if mishandled. Do not recharge, disassemble, heat above 212°F (100°C) or dispose of in fire. Replace battery with Panasonic CR123A, use of another battery may present a risk of fire or explosion.

Dispose of used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.

#### Cleaning your Detector

Clean your Detector regularly. Use a soft bristle brush or the brush attachment of your vacuum cleaner to remove dust and cobwebs from the side slots where the smoke enters. To clean the cover, wipe with a damp cloth and dry thoroughly.

WARNING: Do not paint your Detector.

Other than the maintenance and cleaning described in this manual, no other customer servicing of this product is required. Repairs, when needed, must be performed by the manufacturer.

## Chamber Cleaning

Cleaning or replacing of the chamber cover should only be carried out by suitably trained personal.

1. Remove the Detector from the mounting plate.
2. Remove the battery or batteries.
3. With a flat screwdriver unclip the three cover clip points (see figure 9a).
4. Remove the cover (see figure 9b).
5. If the unit is a model containing a thermistor you will need to unplug the thermistor by holding the thermistor PCB and pulling the pins out of the sockets (see figure 9c).
6. To remove the chamber top turn the chamber anti-clockwise approx. 15 degrees (see figure 9d).
7. Blow out or use a soft bristled brush to remove dust and dirt from the chamber base.
8. Fit a new chamber top and clip in place by turning clock-wise 15 degrees.
9. Insert the thermistor PCB into the sockets and ensure the thermistor is perpendicular to the chamber (see figure 9e).
10. Place the cover back on the Detector taking care to ensure the thermistor is protruding through the cover (see figure 9f).
11. Replace the battery / batteries and reattach to the mounting plate.

Figure 9a

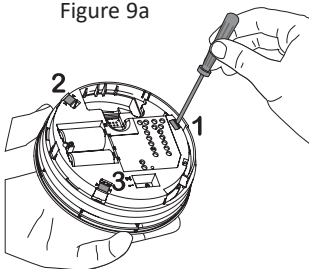


Figure 9b

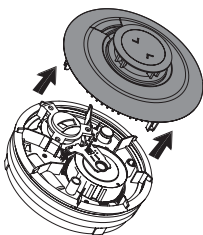


Figure 9c

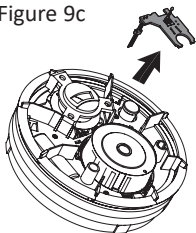


Figure 9d

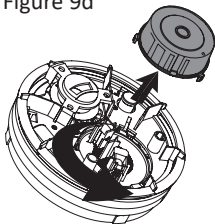


Figure 9e

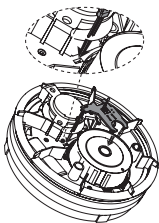
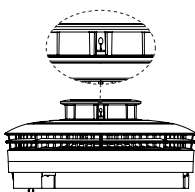


Figure 9f



12. Press the test button to ensure the Detector is working correctly.

#### Smoke Detector Automatic Self-Test

The smoke chamber in the Smoke Detector automatically tests itself every 16 seconds. If the chamber is degraded it will beep twice every 48 seconds with 2 yellow LED flashes at the same time. If this happens clean the unit. If the beeping persists and the beep does not coincide with a yellow light flash, return the unit for service (see Section 5 - Getting Your Detector Serviced).

#### Dust and Insect Contamination

All Smoke Detectors and particularly the optical (photoelectric) type are prone to dust and insect ingress which can cause a nuisance/false detections.

The latest design, materials and manufacturing techniques have been used in the construction of Detectors to minimize the effects of contamination. However, it is impossible to completely eliminate the effect of dust and insect contamination, and therefore, to prolong the life of the Detector you must ensure that it is kept clean so that excess dust does not build up. Any insects or cobwebs in the vicinity of the Smoke Detector should be promptly removed.

Excessive dust may cause the unit to fault with 4 amber flashes every 48 seconds and 4 chirps with 4 flashes on test button.

In certain circumstances even with regular cleaning, contamination can build up in the smoke sensing chamber causing the Detector to sound. If this happens the Smoke Detector must be returned for servicing or replacement. Contamination is beyond our control, it is totally unpredictable and is considered normal wear and tear. For this reason, contamination is not covered by the guarantee and a charge is made for all such servicing work.

#### End of life

The entire Detector must be replaced if:-

- The unit is installed for over 10 years (check the “replace by” date marked on the side of the unit).

Before the Detector is safely discarded, remove from the mounting plate and disconnect the batteries.

Do not put the Detector into a fire.

The Detector should be disposed in a safe and environmentally sound manner at your local recycling center.

## 9. Troubleshooting

#### Detector sounds for no apparent reason

- Enrolling your Detectors - see relevant RF Module instructions. If the Detectors are in the default factory settings neighboring units may cause them to sound.
- Check for smoke, steam, etc. from the kitchen or bathroom. Paint and other fumes can cause nuisance alarms.
- Check for any sign of contamination such as cobwebs or dust. Clean Detector as described in Section 8 if necessary.
- Press the Test/Silence button on the Smoke Detector causing the alarm (this can be identified as the Detector with the red light flashing rapidly) – this will silence the Smoke Detector for 10 minutes.

The Detector fails to sound when the Test button is pressed

- Check the age of the unit - see the “replace by” label on side of unit.
- If necessary, replace the battery or batteries with Panasonic CR123A.



## 10. Technical Specification

Power : 3V CR123A Lithium Battery (replaceable)

Test/Silence Button: Test horn & silences Detector for 10 min.

Operating Temperature : 4.4°C to 37.8°C (40°F to 100°F)

Humidity Range : 15% to 95% R.H. (non-condensing)

Audible Sounder: >85dB(A) at 3m (10ft) minimum

RF Frequency: 900MHz Two-way

Current Drain : Typical 9µA Standby

Heat Sensor Fixed Rating : 57°C +/- 2°C (135°F +/- 5°F)

Heat Sensor Rate of Rise : >40°C (104°F) 8.3°C (15°F) / min

Panel Compatibility: ELK-M1 Control with ELK-M1XRFTWM

Two-Way Wireless Receiver for Interconnection.

Dimensions: 120mm (4.7") x 46mm (1.8")

Weight (grams): 210g (0.46 lbs)

### **FCC AND IC COMPLIANCE STATEMENT:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

**NOTE: ELK PRODUCTS IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATION NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.**

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

*Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

FCC ID: TMAELK-6052

IC: 4353A-6052

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body. This device must not be collocated or operating in conjunction with any other antenna or transmitter.

*Cet équipement est conforme aux limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec tout autre antenne ou transmetteur.*

## 11. Contact Us

*Customer Service*  
**Elk Products, Inc.**  
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**Connelly Springs, NC 28612**

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