

## 230V Interconnectable Mains Operated Alarms For models: 123I, 123/9HI, 123/9HILL, 223I, 223/9I, 223/9ILL, 223/9HI, 223/9HILL, 323/9HI, 323/9HILL

Your home is protected with a Kidde Fyrnetics alarm.  
Please read through our guide in full. It should be retained for future reference.  
*Cut out page 6 and pin up near your Consumer Unit/Fuse Box.*

Kidde Fyrnetics recommends for maximum protection that both ionisation and optical (photo-electric) smoke alarms be installed. Ionisation technology is faster at detecting fast flaming fires that give off little smoke. Optical (photo-electric) technology is faster at responding to slow, smouldering smoky fires. Heat alarms are installed in environments where excessive steam, dust etc. make smoke alarms impractical e.g. kitchens/boiler rooms/lofts.

Electrical rating 230V AC,  
50Hz 80mA max per alarm  
(maximum 80mA for originating unit  
with 24 alarms interconnected).



BS 5446 Pt1; 2000

*\*Kite mark is not applicable to 300 series models.*

**Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK.**

**[www.kiddefyrnetics.co.uk](http://www.kiddefyrnetics.co.uk)**

© Kidde Fyrnetics 2003

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

## Contents

|             |  |    |
|-------------|--|----|
| Section 1.  | <b>Alarm Range</b>   | 2  |
| Section 2.  | <b>Important Information</b>                                     | 2  |
| Section 3.  | <b>Types of Alarm</b>  | 2  |
| Section 4.  | <b>How to Operate/Test the Alarm</b>                             | 3  |
| Section 5.  | <b>Battery Checking/Changing</b>                                 | 4  |
| Section 6.  | <b>Checking Battery Back-up on Rechargeable/Long Life Models</b> | 8  |
| Section 7.  | <b>Maintenance</b>   | 8  |
| Section 8.  | <b>What to do in an Emergency</b>                                | 8  |
| Section 9.  | <b>Troubleshooting</b>   | 9  |
| Section 10. | <b>Useful Hints</b>  | 9  |
| Section 11. | <b>Good Safety Habits (Cut off Section)</b>                      | 6  |
| Section 12. | <b>What to do when the Alarm Sounds (Cut off Section)</b>        | 6  |
| Section 13. | <b>Limitation of Smoke/Heat Alarms</b>                           | 10 |
| Section 14. | <b>Service and Guarantee</b>                                     | 10 |

Read this manual thoroughly and follow its instructions regards  
regular maintenance. – **it could save your life.**

## 1. Alarm Range *Interconnectable 230V Hard Wired Smoke Alarms*

---

|             |   |
|-------------|---|
| 1SF23/9HIR: | Mains ionisation alarm with sealed in rechargeable back-up cells        |
| 1SF23/9HI:  | Mains ionisation alarm with alkaline back-up cell                       |
| 2SF23/9HIR: | Mains optical alarm with sealed in rechargeable back-up cells           |
| 2SF23/9HI:  | Mains optical alarm with alkaline back-up cell                          |
| 3SF23/9HIR: | Mains heat alarm with sealed in rechargeable back-up cells              |
| 3SF23/9HI:  | Mains heat alarm with alkaline back-up cell                             |
| 423D/9HIR   | CO Alarm with digital display, Peak level Memory and Smart Interconnect |
| 423/9HIR    | CO Alarm with Smart Interconnect  |
| 123I        | Ionisation Smoke Alarm  |
| 123/9HI     | Ionisation Smoke Alarm with Battery Back-up and Hush                    |
| 123/9HILL   | Ionisation Smoke Alarm with Long Life Battery Back-up and Hush          |
| 223I        | Optical Smoke Alarm   |
| 223/9I      | Optical Smoke Alarm with Battery Back-up                                |
| 223/9ILL    | Optical Smoke Alarm with Long Life Battery Back-up                      |
| 223/9HI     | Optical Smoke Alarm with Battery Back-up and Hush                       |
| 223/9HILL   | Optical Smoke Alarm with Long Life Battery Back-up and Hush             |
| 323/9HI     | Heat Alarm with Battery Back-up and Hush                                |
| 323/9HILL   | Heat Alarm with Long Life Battery Back-up and Hush                      |

Also interconnectable to all Kidde Fyrnetics Slick Rechargeable & Hard Wired CO Alarms

## 2. Important Information

This alarm is designed for installation by a qualified electrician, in accordance with the latest I.E.E. Regulations and in regard to relevant Building Regulations/BS Codes of Practice.

- Hard wired smoke or heat alarms require a constant 230V AC supply. *Battery Back-up models additionally require a healthy battery too.*
- A healthy mains supply is indicated by a constant green L.E.D. (mains) indicator.
- Test the alarm weekly by pressing (and holding) the test button. The alarm and all those interconnected to it will sound.
- Vacuum your alarms regularly to reduce the likelihood of nuisance alarms, caused by dust contamination.
- Never paint or expose alarm to water – this is a 230V alarm. (If painting or building work is being carried out close to alarm, temporarily cover with a plastic bag, or the dust cover supplied.)
- If the alarm chirps every 30-40 seconds, it indicates the battery needs replacing. *(If you are in rented property, advise your Landlord.)*

Smoke and heat alarms will only function if properly selected, located, installed and maintained as per KIDDE Fyrnetics instruction manuals.

## 3. Types of Alarm

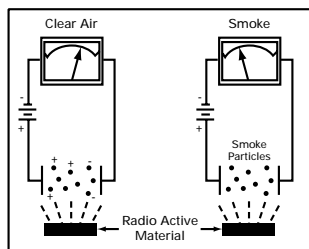
---

### a. Power Supply

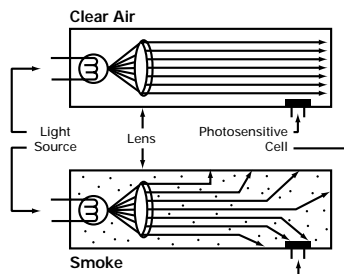
- *DC alarms*  
9V battery powered units, but will only function if battery is in good condition – check regularly. (BS5839 Pt6: Grade F).
- *AC alarms*  
230V mains – for professional installation.  
(Minimum required by UK Building Regulations in new homes.)  
Interconnectable to other Kidde Fyrnetic AC Alarms, so all will sound when one is triggered.  
*Will not function if mains power lost.* (BS5839 Pt6: Grade E).
- *AC/DC alarms*  
230V mains – for professional installation. Interconnectable to other Kidde Fyrnetic AC Alarms, so all will sound when one is triggered. If mains power is lost, will operate via battery power if batteries are fresh/properly installed. Some models use replaceable 9V (PP3 type) batteries, others sealed-in rechargeable/Long Life batteries. (BS5839 Pt6: Grade D)

## b. Alarm Types

- **Ionisation (Ion) alarms** are the most common type and provide early detection, especially against fast flaming fires. Most suitable for dining and living room areas. Ion alarms contain 0.9 microcurie of Americium 241, a radioactive material. UK Home Office and BS5839 Pt6 recommend however, that optical alarms are also used especially in locations where steam or cooking fumes, from a nearby room could cause nuisance alarms.  
**No one type of alarm is considered suitable for all locations.**



- **Optical (Photo-Electric) alarms** are increasingly used and are less prone to nuisance alarms from cooking fumes. They are therefore the recommended type in BS5839 Pt6, for fitting near kitchen areas and on escape routes/circulation spaces.



- **Heat alarms** are for use in areas where Ion or Optical smoke alarms would be unsuitable e.g. kitchens, boiler rooms, garages. However, they must always be used interconnected to smoke alarms – *do not use in isolation*. (They will typically go into alarm when the temperature reaches 57°C.) Suitable for new Building Regulations applicable 1/7/2000 regarding use in kitchens.

## 4. How to Operate/Test the Alarm

### a. Operation and L.E.D. Status

- When your alarm is correctly installed to the mains supply, the green L.E.D. light will be on. The red L.E.D. will blink about once a minute to indicate the sensor is operating correctly. If the alarm senses products of combustion, it's 85dB horn will be activated. *The red L.E.D. will flash rapidly on the alarm sensing smoke/heat.* (Other interconnected alarms will also sound to warn those in other parts of the property.) This will continue until the sensor chamber is clear. In the case of a **heat alarm**, it will be triggered when the temperature reaches 57°C and return to its standby mode when the temperature drops to normal levels. On optical alarms if the red L.E.D. blinks every 30-40 seconds and the alarm chirps inbetween, it indicates failure of the sensing chamber.

Regularly check and ensure that the green L.E.D. is lit – if not, check the consumer unit/circuit breaker connection. As with previous point above, if in doubt, consult an electrician or your Landlord.


## b. Testing

- Utilise the test button to test the alarm. Do not use naked flames as this does not replicate smoke and may cause physical damage to the alarm.

**Test all your alarms weekly** – remember they are life saving devices, protecting the family and home.

Press and hold the **test** button until the alarm sounds. All interconnected alarms will also sound. (Do not stand too close to the alarm during testing – hearing may be damaged.)

## c. Hush Button

-  If this feature is fitted it temporarily desensitises the alarm circuit for approximately 7 minutes. This feature is to be used only when a known alarm condition, such as fumes from cooking, activates the alarm. The alarm is desensitised by pushing the “HUSH” button on the alarm cover. If the smoke is not too dense, the alarm will silence immediately and “chirp” every 30-40 seconds for approximately 7 minutes. This indicates that the alarm is in a temporarily desensitised condition. The alarm will automatically reset after approximately 7 minutes and sound the alarm if particles of combustion are still present. The “HUSH” feature can be used repeatedly until the air has been cleared of the condition causing the alarm.

**Note:** Dense smoke will override the hush control feature and sound a continuous alarm.

**Caution:** Before using the alarm hush feature, identify the source of the smoke and be certain a safe condition exists. (On heat alarms with hush, the alarms sensor has detected a high temperature – e.g. 57°C. Check for possible causes carefully.)

## d. Nuisance Alarms


**Warning:** Persistent nuisance alarms indicates incorrect type and/or siting of alarm. Review with your installer or Landlord after cleaning as described in Section 7 (Maintenance).

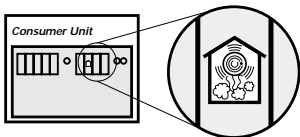
# 5. Battery Checking/Changing\*

## a. Low Battery Indicator (AC models with loose battery only)

If you hear the alarm chirp continuously every 30-40 seconds (and have not just pressed the hush button) it indicates the battery voltage is at an unacceptably low level. Replace the battery at the next possible opportunity.

## b. Battery Change

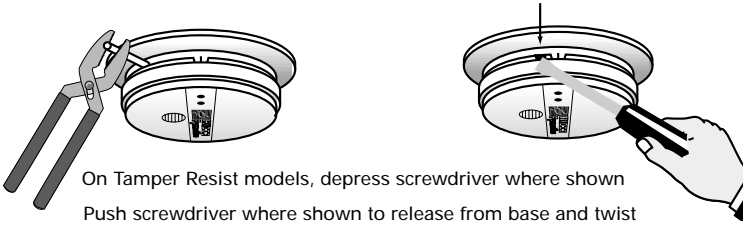
- Firstly isolate the mains supply at the consumer unit by identifying the appropriate circuit. This may be a dedicated fuse marked “Fire/Smoke Alarms” or with a symbol such as . (If you rent your property, your Landlord may arrange this service for you.)



The green L.E.D. should now be out. If not, recheck before proceeding.

\* See page 5, section “v”

- ii. Next pull out with pliers, the locking pin and retain for reinserting later - Twist and remove.

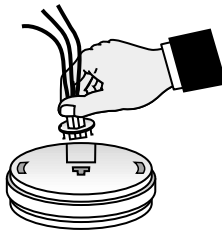


On Tamper Resist models, depress screwdriver where shown  
Push screwdriver where shown to release from base and twist

- iii. Twist alarm as indicated on housing to remove from mounting base plate.

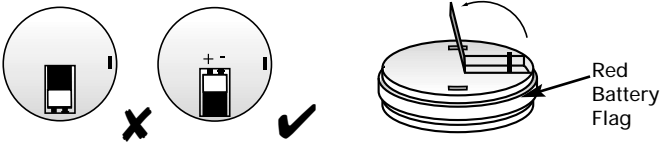


- iv. Finally, carefully pull off cable harness, by squeezing on side, to reveal battery compartment. (Do not touch the pins on back of alarm.)



- v. Flip up lid and note position of red plastic bar, under battery. When you remove battery, the red door stop bar prevents the door closing unless a battery is reinstalled.

This safety feature also prevents the cable harness from being reconnected,



and prevents the alarm from being mounted back on its mounting base plate.

We recommend the use of alkaline or lithium batteries for a longer service life.



**Battery type/code nos.**

*Alkaline type:* Eveready 522; Duracell MN1604; Duracell Ultra MX1604; Gold Peak 1604A;

*Lithium type:* Ultralife U9VL

\*On rechargeable/Long Life models there are no user serviceable batteries to be changed. (See Section 6.)

**CAUTION FOR LITHIUM ONLY**

Danger of explosion if battery is incorrectly replaced.  
Replace only with the same or equivalent type.

- vi. When you have fitted a fresh battery, check test button; if horn sounds then reverse the process above, reconnect to the mains and switch circuit back on at Consumer Unit.

*If in any doubt, consult a qualified electrician as mains electricity can be hazardous.*

# Good Safety Habits



## Develop and practice a plan of escape:

- Make a floor plan indicating all doors and windows and at least two escape routes from each room. Second storey 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 a fire.
- Determine a place outside your home where you can meet if a fire occurs.
- Familiarise everyone with the sound of the alarm and train them to leave your home when they hear it.
- Practice a fire drill at least every six months. Practice allows you to test your plan before an emergency. You may not be able to reach your children. It is important they know what to do.

## What to do when the Alarm Sounds

- 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 you see smoke seeping through cracks, *don't open that door!* Instead use your alternative 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 brigade on 999 from your neighbour's home or a call box – not from yours.
- Don't return to your home until the fire officials say that it is all right to do so.

Installation Date: \_\_\_\_\_

Alarm Model(s): \_\_\_\_\_

Installer/Landlord: \_\_\_\_\_

Tel: \_\_\_\_\_



Kidde Safety Europe,  
Mathisen Way, Colnbrook, SL3 0HB, UK.  
Replacement manuals available at:  
[www.kiddefyrnetics.co.uk](http://www.kiddefyrnetics.co.uk)

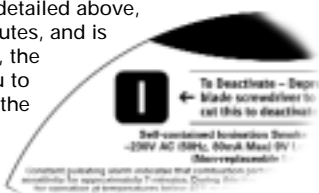


## 6. Checking Battery Back-up on Rechargeable/Long Life Models

- There is no user replaceable battery on rechargeable/Long Life models. These models will be indicated on the product's label on the underside; additionally there is no battery drawer. To check charge on these models, switch off the alarms AC supply at the Consumer Unit/Fuse Box. **The green L.E.D. will go out.** Push the test button to check battery only mode works. If the rechargeable battery is depleted, the low battery beep will be heard once every 40 seconds. If the alarm has received AC mains power for a minimum of 3 days prior to this, you will need to have the unit changed by your installer or Landlord.

**Deactivation:** The alarms battery will chirp as detailed above, when its power is low. If this lasts over 60 minutes, and is not a result of the HUSH button being pressed, the alarm needs replacing. However, to enable you to silence the alarm, there is on the underside of the alarm, a deactivation tab: *see illustration.*


To safely access the rear of the alarm, refer to Section 5.



## 7. Maintenance

- Your alarm is a life saving device. Spending a few minutes each month in vacuuming off any excess dust will enhance its performance and reduce the likelihood of nuisance alarms.
- Vacuum up to the grill and through the slots where dust/talc etc. can enter. Wipe off with a very mildly damp cloth. Never use cleaning agents/polishes etc..



 **Never attempt to open the inside of the alarm - this will invalidate its guarantee.**

## 8. What to do in an Emergency

- If an alarm sounds without anyone pressing the test button you have a potential emergency.
- Don't panic - you will need to think clearly to ensure all family members escape as soon as possible. Never stop to collect belongings etc. - they are replaceable.
- Check the temperature of door handles or doors to check if hot - **if hot do not open them** - a fire will be raging the other side of the door. Find an alternative escape route.
- Keep doors/windows closed to contain the fire after you have passed through them.
- **Call 999 from a neighbour's phone or call box. This is preferable to using a mobile.**
- Do not re-enter the property until advised it is safe to do so by a Fire Brigade Officer.

Always be aware of the dangers of fire and ensure your alarms are functioning, together with equipment such as fire extinguishers/fire blankets etc..




## 9. Troubleshooting


- Always turn off the mains supply to AC alarms before checking connections etc..

| Symptom   | Possible cause/solutions   |
|---|--|
| 1. Green L.E.D. not lit   | <i>a. Loss of mains power – check at Consumer Unit for Blown Fuse or tripped Circuit Breaker.</i><br><i>b. Check cable harness at back of alarm, is properly plugged in (see “Battery Changing” section).</i><br><i>See sections 4d and 7.</i> |
| 2. Frequent nuisance alarms   | <i>See section 5 (if the hush button has been pressed the unit will chirp for 7 minutes to indicate it is in hush mode).</i>   |
| 3. Alarm chirps every 40 seconds  | <i>See parts 1a and 1b above.</i>  |
| 4. Alarm does not sound when test button pressed and held.                  | <i>See part 1b above – consult a qualified electrician or your Landlord to remedy as soon as possible.</i>   |
| 5. Interconnected alarms do not sound when test button is pressed and held. |  |

## 10. Useful Hints

- Smoke/heat alarms can **only operate correctly if smoke particles/heat reach the unit**. Correct selection/siting and installation are covered in the installers manual.
- **UK Building Regulations** require new homes to have 1 hard wired smoke alarm per floor and to be interlinked. During 2000 they will additionally require an interlinked heat alarm to be fitted in most kitchens too. i.e. 3 alarms per property.
- With the exception of garages/kitchens/bathrooms **it is recommended that smoke alarms are fitted in every room** and outside all sleeping areas too. *A professional electrician should be employed for all mains powered (hard wired) alarms.*

 If you are **redecorating** your home, paint fumes can contaminate the alarm – *temporarily* cover the unit with a plastic bag (during this time the alarm will not function). **Never paint the alarm itself.**  
Only remove the bag when the paint is thoroughly dry.

 If you **extend your property**, review your alarm requirements.

- Smoke/heat alarms **should be replaced every 10 years** or sooner.
- These products are designed for **domestically scaled premises**.

## 13. Limitations of Smoke/Heat Alarms

---

**Warning!** Alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. *Ionisation* type alarms offer a broad range of fire sensing capability but are better at detecting fast flaming fires than slow smouldering fires. *Optical (Photo-electric)* alarms sense slow smouldering fires better than flaming fires. Home fires develop in different ways and are often unpredictable. Neither type of alarm (Photo-electric or Ionisation) is always best, and a given alarm may not always provide warning of a fire.

Heat alarms are triggered when a temperature of 57°C is reached – they must always be used in conjunction and interconnected to smoke alarms.

Loose batteries, where fitted must be of the specified type, in good condition and installed properly.

AC only powered alarms will not operate if AC power has been cut off such as by an electrical fire, an open fuse or loss of mains supply.

All alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.

Smoke alarms cannot provide an alarm if smoke does not reach the unit. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor. If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper. Equally heat alarms will only be triggered if they are correctly sited to detect heat. The use of alcohol or drugs may also impair ones ability to hear the alarm. For maximum protection a smoke alarm should be installed in each sleeping area on every level of a home. Hearing impaired occupiers should consider fitting additional strobe accessories to give a visual alarm.

Although smoke/heat alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their property.

## 14. Service and Guarantee

---

If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Return it prepaid for servicing to: Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK – Email: [info@kiddesafety.co.uk](mailto:info@kiddesafety.co.uk), or refer to your installer or Landlord.

### Guarantee

Kidde Fyrnetics warrants to the purchaser that the enclosed smoke alarm (but not any loose batteries) will be free of defects in material, workmanship or design under normal use and service for a period of 6 years, 10 years on Long Life [LL] products (from the date of purchase). The obligation of Kidde Fyrnetics, under this guarantee is limited to repairing or replacing any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the alarm with proof of date of purchase, postage prepaid, to Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK.

This guarantee shall not apply to the alarm if it has been damaged, modified, abused or altered after the date of purchase, or if it fails to operate due to incorrect selection, siting, installation, maintenance or inadequate AC or DC electrical power.

The liability of Kidde Fyrnetics, arising from the sale of this alarm or under the terms of this guarantee shall not in any case exceed the cost of replacement of the alarm, in no case, shall be liable for consequential loss or damaged resulting from the failure of the alarm or for the breach of this or any other guarantee, express or implied, or for damaged caused by failure to abide by the instructions supplied.

This guarantee does not affect your statutory rights.

Kidde Fyrnetics makes no guarantee, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery, except built-in rechargeable/Long Life cells.