



## Smoke and Heat alarm Owner's Manual



230V Interconnectable Mains Operated Alarms For models:  
1SFW, 1SFWR, 2SFW, 2SFWR,  
3SFW and 3SFWR

Your home is protected with a KIDDE Fyrnetics alarm/s  
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 photo-electric (optical) smoke alarms be installed. Ionisation sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow smouldering fires) sooner than ionisation alarms. Home fires develop in different ways and are often unpredictable. For maximum protection, Kidde recommends that both Ionisation and Photoelectric alarms be installed. Heat alarms are useful in areas with condensation/dust/high humidity, such as kitchens and lofts.

Heat alarms **MUST ALWAYS** be interconnected to smoke alarms.

Electrical rating 230V AC,  
50Hz 80mA max per alarm  
(maximum 80mA for originating unit  
with 24 Devices interconnected).  
These alarms may be used with  
the Kidde Wireless base accessory,  
enabling interconnection between  
alarms, wirelessly. The Remote,  
Test & Hush accessory will also  
work with alarms on Wireless bases.



EN14604: 2005  
Licence No. KM524754



0086-CPD-535595



BS 5446: Pt. 2: 2003  
Lic No: KM503753



*\*Applicable to 1SF & 2SF Series*

*+Applicable to 3SF Series*

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

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

© Kidde Fyrnetics 2008

INSTALLER, PLEASE LEAVE IN SAFE PLACE FOR HOUSEHOLDER  
SAVE THIS MANUAL FOR FUTURE REFERENCE

### Contents

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

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

## ENVIRONMENTAL PROTECTION

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.



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

1SFWR: Mains ionisation alarm with sealed in rechargeable back-up cells

1SFW: Mains ionisation alarm with alkaline back-up cell

2SFWR: Mains optical alarm with sealed in rechargeable back-up cells

2SFW: Mains optical alarm with alkaline back-up cell

3SFWR: Mains heat alarm with sealed in rechargeable back-up cells

3SFW: Mains heat alarm with alkaline back-up cell

Also interconnectable to all Kidde Fyrnetics, Hard Wired 230V Smoke, Heat & CO Alarms.

Models with RF reference “-i” are compatible with the RF-SFTP wireless base and remote

KN-RTH-RF for wireless interconnect, remote test and Hush operations.

### 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.)*
- *If there is any question to the cause of an alarm, it should be assumed that the alarm was due to an actual fire and the dwelling should be evacuated immediately.*

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

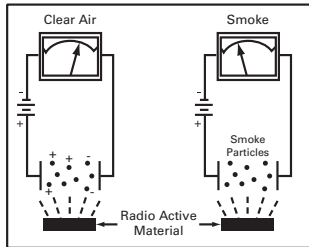
- *DC alarms*  
9V battery powered units, but will only function if battery is in good condition – check regularly. (BS5839 Pt6: Grade F).
- *AC/DC alarms*  
230V mains – for professional installation. Minimum required to comply with relevant local Building Regulations. Interconnectable to other Kidde Fyrnetics 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 batteries. (BS5839 Pt6: Grade D). This type is the minimum grade acceptable on new or materially altered dwellings.

#### **WARNING:**

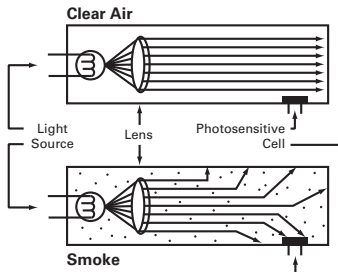
This alarm cannot be operated from power derived from a square wave or modified sine wave inverter. These types of inverters are sometimes used to supply power to the structure in off grid installations, such as solar or wind derived power sources. These power sources produce high peak voltages that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

## b. Alarm Types

- **Ionisation (Ion) alarms** are the most common type and provide early detection against fast flaming fires and other fires. Most suitable for dining and living room areas. Ion alarms contain 0.9 microcurie of Americium 241, a radioactive material. 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 approximately 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 every 30-40 seconds to indicate the sensor is operating correctly. If the alarm senses products of combustion, its 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 is a class A2 device and will alarm between 54°C and 70°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 or ignite combustible materials and start a structure fire.

**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.) Immediately after completing the test cycle, the 2SFW AND 2SFWR models will enter into Hush mode and the red LED will flash approximately every 10 seconds.

## c. Hush Button

-  This feature 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 and releasing the “HUSH” button on the alarm cover. If the smoke is not too dense, the alarm will silence immediately and the red LED will flash every 10-11 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 and releasing. The “HUSH” feature can be used repeatedly until the air has been cleared of the condition causing the alarm. The triggering alarm is signified by a rapidly flashing red LED. For safety reasons, the triggering alarm signal can only be silenced by activating the Hush button on that unit.

**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\*

## Loose Battery Models

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

If you hear the alarm chirp continuously every 30-40 seconds at the same time as the led flashes (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

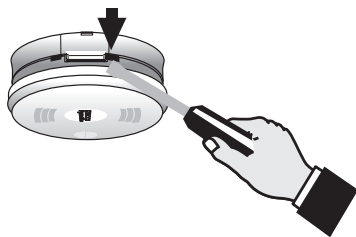
- Firstly isolate the mains supply at the consumer unit by identifying the appropriate circuit. This may be a dedicated fuse marked “Fire/Smoke Alarms” or with a symbol such as  .  
(If you rent your property, your Landlord may arrange this service for you.)



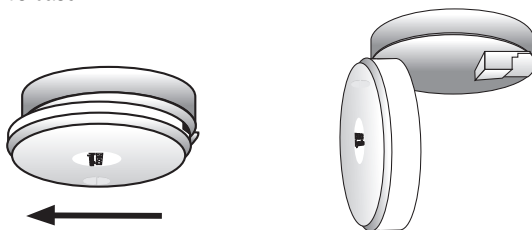
**The green L.E.D. should now be out.** If not, recheck before proceeding.

\* See page 5, section “v”

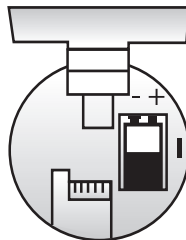
- ii. Slide screwdriver blade in recess to unlock from base, as indicated by arrow to release locking tab



- iii. With screwdriver still inserted push alarm hard with palm of hand in direction of arrow, to slide off its base.



- iv. Note correct position of battery and install replacement type as listed below. The alarm cannot be replaced without a battery installed.



- v Reverse procedure to re-install alarm.



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

**Battery type/code nos.**

*Alkaline type:* Duracell MN1604; Duracell Ultra MX1604; Energizer 6LR61;

**NOTE: TEST ALARM USING TEST BUTTON AFTER BATTERIES ARE REPLACED.**

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

- 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 (Section 11)



## 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.
- 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.
- 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, 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.

## 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 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.
- There are situations where a smoke alarm may not be effective to protect against fire. For instance:
  - a) smoking in bed
  - b) leaving children unsupervised.
  - c) cleaning with flammable liquids, such as gasoline
  - d) fires where the victim is intimate with a flaming initiated fire; for example, when a person's clothes catch fire while cooking.
  - e) incendiary fires where the fire grows so rapidly that an occupant's egress is blocked even with properly located detectors.

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

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

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

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

 **Kidde**  
Fynnetics

Kidde Safety Europe,  
Mathisen Way, Colnbrook, SL3 0HB, UK.  
[www.kiddefynnetics.co.uk](http://www.kiddefynnetics.co.uk)

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

- There is no user replaceable battery on rechargeable models. This will be indicated on the product; additionally there is no battery compartment. 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.

## 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	<p>a. <i>Loss of mains power – check at Consumer Unit for Blown Fuse or tripped Circuit Breaker.</i></p> <p>b. <i>Check cables at back of alarm, are correctly seated / wired in and the alarm is pushed fully home (see “Battery Changing” section).</i></p>
2. Frequent nuisance alarms	<i>See sections 2,3,4 and 7. If sited incorrectly/not regularly cleaned as section 11, nuisance alarms can occur.</i>
3. Alarm chirps every 30-40 seconds	<i>Verify green LED is lit continuously then see section 5 to replace battery if applicable. If unit has rechargeable battery or problem persists after installing a new battery, contact customer service.</i>
4. Alarm does not sound when test button pressed and held.	<i>See parts 1a and 1b above. Have installer re check wiring if Green LED is illuminated, but alarm does not appear to function. If no Green LED check consumer unit. Alarm with still function on battery power, if battery is in serviceable state. &lt;Red LED will blink about once a minute to confirm&gt;. Check via Test Button.</i>
5. Interconnected alarms do not sound when test button is pressed and held.	<i>See part 1b above – consult a qualified electrician or your Landlord to remedy as soon as possible.</i>


Consult our website for additional information and help

[www.smoke-alarms.co.uk](http://www.smoke-alarms.co.uk)


## 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, who fitted your alarm/s.
- Building Regulations** require new homes to have 1 hard wired smoke alarm per floor and to be interlinked. From 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.**

 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**.
- At the end-of-life for recycling purposes, contact Kidde for instructions on removing the rechargeable batteries from models so equipped as these batteries are not designed for user removal.



## 13. Limitations of Smoke/Heat Alarms

**Warning!** Smoke alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. Ionisation sensing alarms may detect invisible fire particles (associated with fast flaming fires) sooner than photoelectric alarms. Photoelectric sensing alarms may detect visible fire particles (associated with slow smouldering fires) sooner than ionisation alarms. Home fires develop in different ways and are often unpredictable. For maximum protection, Kidde recommends that both Ionisation and Photoelectric alarms be installed.

Heat alarms are useful in areas with condensation/dust/high humidity, such as kitchens and lofts. Heat alarms **MUST ALWAYS** be interconnected to smoke alarms.

The heat alarm it is a class A2 device and will alarm between 54°C and 70°C. - they are not suitable for use as a fire safety device independently, 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.

Life safety from fire in residential occupancies is based primarily on early notification to occupants of the need to escape, followed by the appropriate egress actions by those occupants. Fire warning systems for dwelling units are capable of protecting about half of the occupants in potentially fatal fires. Victims can be involved with the fire, too old or young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue are necessary.

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.

Fire-warning equipment for residential occupancies are capable of protecting about half of the occupants in potentially fatal fires. Victims are often intimate with the fire, too old or too young, or physically or mentally impaired such that they cannot escape even when warned early enough that escape should be possible. For these people, other strategies such as protection-in-place or assisted escape or rescue would be necessary. If the alarm is located outside the sleeping room or on a different floor, it may not wake up a sound sleeper. The use of alcohol or drugs may also impair one's ability to hear the smoke alarm. For maximum protection, a smoke alarm should be installed in each sleeping area on every level of a home.

If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Refer to Section 14. Contact your Installer, Wholesale Distributor or Landlord.

## 14. Service and Guarantee

### Guarantee

Kidde Fyrnetics guarantees to you as a purchaser that the enclosed alarm will be free of defects in material, workmanship or design under normal use and service for a period of 6 years, excluding any loose battery supplied. This extends to 10 years on Hard Wired Rechargeable, products (from the date of purchase) including the back up battery/powercell.

The Guarantee is not assignable. Our liability to you, 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, who is situated within the UK, upon sending the alarm with proof of date of purchase, postage prepaid, to Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK.

The terms of this guarantee will not apply in the following circumstances: If alarm has been damaged, modified, neglected, dismantled, contaminated, 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, or damage caused by failure to abide by the instructions supplied.

The liability of Kidde Fynetics, 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 damages caused by failure to abide by the instructions supplied. This guarantee does not affect your statutory rights.

Kidde Fynetics makes no guarantee, express or implied, written or oral, including that of satisfactory quality or fitness for any particular purpose, with respect to the battery, except built-in rechargeable cells.