

## Why Do You Need a Smoke Alarm?

When you sleep you have no sense of smell; you will not wake up if there is smoke in your house! You need a working smoke alarm to wake you. With early warning of fire you can escape before the house fills with toxic smoke.

**Correctly located smoke alarms in your home give early warning of fire, providing you with the precious time which may be vital to your survival.**

## Home Fire Escape Plan

The installation of working smoke alarms is the first critical step in having a Home Fire Escape Plan.

**It is vitally important that every family has a Home Fire Escape Plan which is practised and understood by all occupants.**

Advice on the development of a Home Fire Escape Plan is available from the South Australian Metropolitan Fire Service (MFS) by telephoning **8204 3611** or visiting our website **www.mfs.sa.gov.au**

## Power for Smoke Alarms

Smoke alarms can be powered by disposable or long-life batteries or they can be hard-wired into the 240 volt power supply.

Hard-wired smoke alarms (mains powered) also have back-up batteries. The back-up battery can be a 9 volt disposable battery, a long-life battery or a constantly recharging battery. (Check with the manufacturer's instructions.)

## Types of Smoke Alarms

### Photo-Electric (Photo-Optical) Smoke Alarms

Photo-electric smoke alarms detect larger smoke particles, the visible products of combustion, and are most effective in the case of smouldering fires. They are less likely to cause nuisance alarms when installed near kitchens or in areas containing combustion heaters or open fires.

### Ionisation Smoke Alarms

Ionisation smoke alarms detect small diameter smoke particles, the invisible products of combustion, and are most effective in the case of flaming fires. They are **not** suitable for locations which are affected by cooking, combustion heating appliances or open fires.

**The MFS recommends that the best protection across a range of fires is provided by photo-electric smoke alarms which are hard-wired to the 240 volt power supply.**

For homes which already have ionisation alarms, we recommend that they be supplemented with additional, interconnected photo-electric alarms. When existing ionisation alarms reach 10 years of age, they should be replaced with photo-electric alarms.

## Interconnectable Alarms

All types of smoke alarms are available as interconnectable alarms.

**Where two or more alarms are installed, the MFS recommends that they be interconnected.**

The interconnection of alarms ensures that, if one alarm detects smoke, all interconnected alarms will activate to sound the warning. Ensure that the alarms you purchase are capable of this function.

## Quality Assurance

For assurance of quality in manufacture, the MFS recommends that you buy smoke alarms which comply with Australian Standard 3786. Look for 'AS3786' and/or the Standards Australia 'five ticks' symbol on the packaging.

## Installation

Legislation requires that a qualified electrician install hard-wired (240 volt) smoke alarms.

Battery-powered alarms may be installed by the householder, carefully following the manufacturer's instructions. See overleaf for the best places to locate your smoke alarms.

## Changing the Battery

If your smoke alarms are powered by a 9 volt disposable battery change the battery once a year or if a 'battery low' warning 'beep' is emitted. Ensure that the appropriate battery is used for the smoke alarm you have installed. (Refer to the manufacturer's instructions.)

It is strongly recommended that disposable batteries are changed each year. An ideal time to do this is when you change your clocks at the end of daylight saving.

### Change your clock...

### Change your smoke alarm batteries!

**Remember:** If the back-up battery in your hard-wired smoke alarm is a 9 volt disposable battery it should also be changed annually, or if a 'battery low' warning 'beep' is emitted.

## Testing Smoke Alarms

Press the test button once a month, and when you return from an extended absence, to ensure that the smoke alarms are working. Test the back-up battery of a hard-wired (240 volt) smoke alarm by isolating the power supply (main switch or circuit breaker) before pushing the test button.

To test smoke alarms which are connected to a security system, refer to the owner instruction manual or follow the testing advice which is displayed on the control panel.

## Cleaning

At least every six months, use the brush attachment on your vacuum cleaner to clean dust, lint or cobwebs from the outside of the smoke alarm.

Any other cleaning should be done in accordance with the manufacturer's instructions.

Test the smoke alarm after cleaning.

## Life Expectancy

Smoke alarms have a recommended service life of 10 years under normal operating conditions (AS 3786) by which time the MFS strongly recommends they should be replaced.

A special exemption under the *Radiation Protection and Control Act 1982* allows homeowners to dispose of up to two domestic ionisation smoke alarms (ie those showing the yellow and black radiation symbol) into domestic waste in any seven day period.

There are no restrictions on the disposal of old photo-electric smoke alarms (no radiation symbol).

## Large Domestic Dwellings

Contact the MFS for specific advice in relation to large domestic dwellings or situations where multiple unrelated people occupy a house.

## Specialised Smoke Alarm Systems

For people who are deaf or hearing impaired there are smoke alarm systems available which incorporate strobe lights and vibrating elements in addition to the audible alert signal.

If you rely on others for movement (eg paraplegic) a smoke alarm system may be interfaced with equipment which will send a pre-recorded message or signal to the service provider so that the Fire Service and a designated carer can be notified to respond immediately.

## For Further Advice

For further information and advice relating to home fire safety contact the MFS Community Safety & Resilience Department.

Web: **mfs.sa.gov.au**

Email: **communitysafety@samfs.sa.gov.au**

Phone **1300 737 637**

Hearing or speech impaired?

Contact us via the National Relay Service

TTY **133 677**

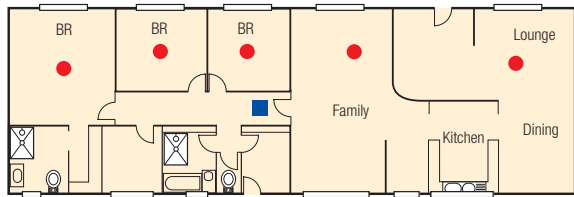
Other contact options available at

**www.relayservice.gov.au**

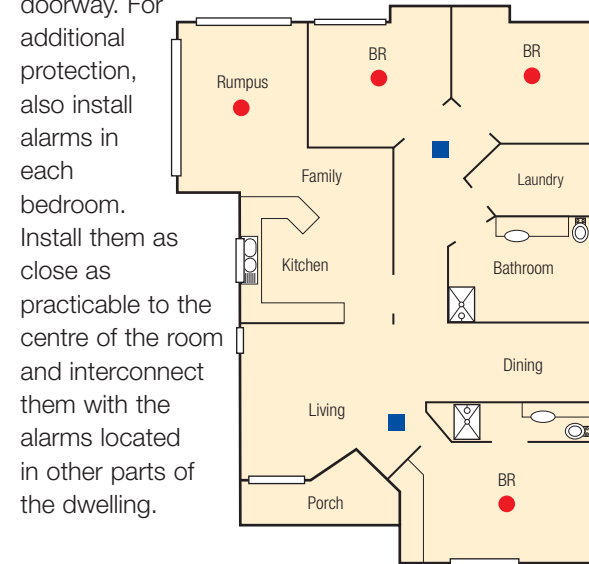
## Location of Smoke Alarms

If you have a **passageway** leading to the bedrooms, install the alarm at the end closer to the living area.

If you **sleep with your bedroom doors closed** the MFS recommends additional alarms in the bedrooms, interconnected with those located in passageways and other parts of the dwelling, to ensure that you are alerted by the activation of any alarm.



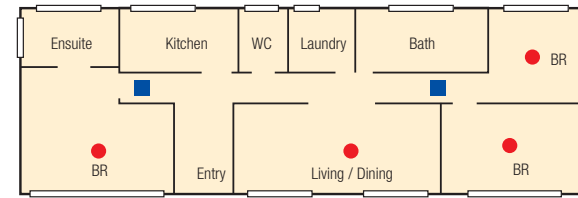
If there is **no passageway** but the bedrooms are accessed directly from the living area, install the alarm outside each bedroom 900mm from the doorway. For additional protection, also install alarms in each bedroom. Install them as close as practicable to the centre of the room and interconnect them with the alarms located in other parts of the dwelling.



**LEGEND** (Applies to all diagrams)

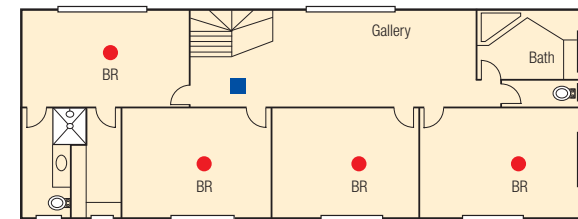
- Absolute minimum requirement
- MFS recommendation for additional protection

If there are bedrooms at both ends of the house install smoke alarms in the passageway to each of these areas. The MFS recommends that the smoke alarms be interconnected.

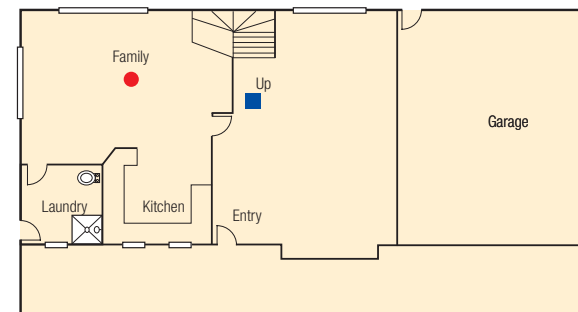


In passageways, the installation point should be at the end closest to the living area and certainly before the door of the first bedroom is reached so that when the alarm sounds, there will be sufficient time to allow evacuation through doors.

If you have **two or more storeys**, smoke alarms should be installed on each level and the MFS recommends that they be interconnected.



UPPER LEVEL



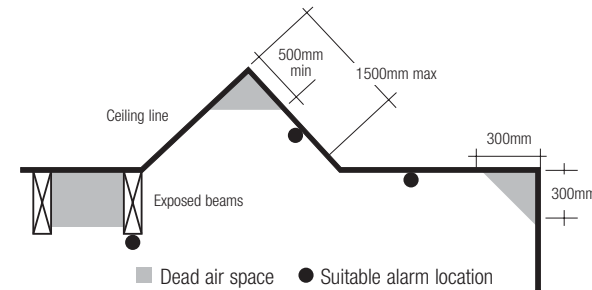
LOWER LEVEL

If you have **ducted air conditioning or ceiling fans** the air movement can slow smoke alarm response times. Install smoke alarms at least 400mm from the tip of the fan blade or 400mm diagonally from the corner of the air vent. Position the smoke alarms at least 300mm from the walls.

## Dead Air Space

Corners between walls, between a wall and ceiling and at the apex of a sloping ceiling, contain dead air space which smoke may not readily penetrate.

**Alarms placed in these spaces may not activate.**



**Above:** Examples of the correct installation of smoke alarms with exposed beams, sloping ceilings and flat ceilings.

Note: The MFS **does not** recommend side wall installation.

## Legislative Requirements

In South Australia, legislation is in place to make smoke alarms compulsory for all residential buildings.

Home owners are required, by Regulation 76B under the *Development Act 1993*, to install battery powered or hard-wired (240 volt mains powered) smoke alarms\*.

*\*Houses built since 1 January 1995 must be equipped with hard-wired smoke alarms.*

*All other houses must be equipped with at least 9 volt battery powered smoke alarms. From 1 February 1998 when a house with 9 volt battery powered smoke alarms is sold the new owner has six months to install alarms which are hard-wired to the 240 volt power supply or powered by 10 year life, non-replaceable, non-removable batteries.*

Penalties apply for non-compliance.

## Smoke Alarms

- It is **vitaly important that every family has a Home Fire Escape Plan which is practised and understood by all occupants.**
- **Smoke alarms must be located to provide reasonable warning to the occupants of all sleeping areas so that they may safely evacuate in the event of a fire.**
- **The MFS recommends smoke alarm systems that are:**
  - **photo-electric**
  - **hard-wired (240 volt power supply)**
  - **in passageways leading to sleeping areas**
  - **in every sleeping area**
  - **in living areas**
  - **and interconnected.**
- **Change your smoke alarm batteries every year at the end of daylight saving when you turn your clocks back.**
- **Test your smoke alarms every month.**
- **Clean your smoke alarm at least every six months.**

**Always ensure that smoke alarms:**

- **Are not painted over.**
- **Are located away from continual draughts.**
- **Are not disconnected from the power supply to overcome nuisance alarms.**
- **Are replaced within 10 years of manufacture. Check the manufacturer's instructions.**



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