QUELL

PHOTOELECTRIC SMOKE ALARM

9V DC Battery powered

User Manual

Model: Q501

PRODUCT CERTIFICATION

BSI Certified Product
AS 3786:2014   Lic:BMP No 811297
Australian Standard

Photoelectric smoke alarms are designed to detect visible particles (associated with slow smouldering fires).

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Model:140053,140054,140055,140056
P/N: 2030-7228-00

IMPORTANT: READ ALL INSTRUCTIONS BEFORE INSTALLATION
AND KEEP THIS MANUAL NEAR THE ALARM FOR FUTURE REFERENCE

CONTENTS OF THIS MANUAL

Thank you for purchasing this smoke alarm. It is an important part of your family's home safety plan. You can trust Quell to provide the highest quality safety products.

Please take a few minutes to thoroughly read this user guide, and save it for future reference. Teach children how to respond to the alarms, and that they should never play with the smoke alarm.

If you have any questions about the operation or installation of your alarm, please call our toll free Customer Service at 1800 654 435

1. Product Features

Model Q501 is powered from a 9V DC battery. The smoke alarms ensure protection at all times.

- Hush feature silences nuisance alarms for up to 9 minutes.
- The smoke alarm will sound a short beep about once every 60 seconds and the Red LED will flash every 2 seconds if the battery is low.
- Red LED Flashing every 60 seconds indicates smoke alarm is working normally, or is in alarm(Red LED will flash in sync with the sounder).
- Loud alarm sounder – 85 dB
- Test button checks smoke alarm operation.

⚠ **WARNING! REMOVAL OF SMOKE ALARM BATTERY WILL RENDER THIS UNIT INOPERATIVE.**

The smoke alarm is a sealed unit, return to supplier for any repairs.

2. Product Specifications

Model	Q501
Electrical Rating	9V DC battery
Sensor	Photoelectric
Operating Temperature	0 °C to 40°C
Operating Humidity	Up to 93% Humidity (Non-Condensing)
Storage and Transport Conditions	-20° C to +60° C, 5-95%RH (non-condensing)
Loud alarm	85 decibels at 3 metres

3. Recommended Locations for Alarms

Laws on smoke alarms vary from state to state and you should be aware of what the requirements are in your state - for more information please refer to your local fire emergency services or state regulations.

Recommended Locations

- In each room where an occupant sleeps with the door closed. (A closed door may prevent an alarm located outside the room from waking the occupant).

- In the immediate area of bedrooms and the exit path from all sleeping areas (Figure 1A).

- In stairwells, as stairwells act like chimneys for smoke and heat.

- In any room where large electrical appliances are operated (e.g. portable heaters or humidifiers).

- If a hallway or room is more than 7m long install alarms at both ends.

- For maximum household protection see Figure 1C.

Things to Consider

For Ceiling Mounting:

Smoke, heat and other combustion products will rise to the ceiling and spread horizontally. Mounting the alarm in the centre of the ceiling positions it closest to all points in the room.

- When mounting an alarm on the ceiling, locate it at a minimum of 300mm from the side wall (Figure 2A).

- For sloped, peaked or cathedral ceilings the alarm should be placed between 500mm and 1500mm from the highest point of the ceiling (Figure 2B).

- The alarms in rooms with ceiling slopes greater than 1m in 8m horizontally, should be located on the high side of the room (Figure 2C).
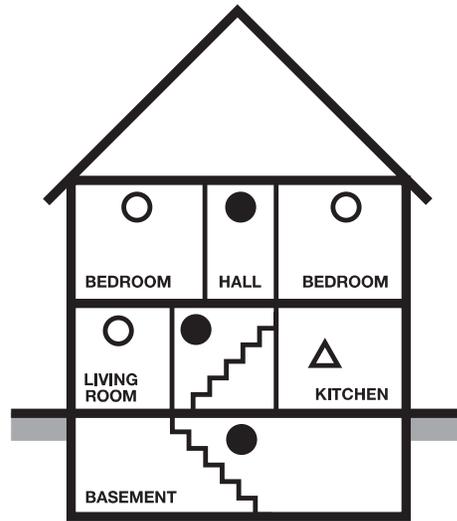
For Wall Mounting:

- When mounting the alarm on the wall, use an interior wall with the top edge of the alarm at a minimum of 100mm and a maximum of 300mm below the ceiling (Figure 2A).

3. Recommended Locations for Alarms
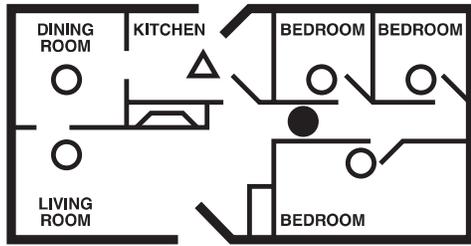
● Smoke Alarms for Minimum Protection

○ Smoke alarms for Additional Protection

△ Not within 3m of cooking appliances

SINGLE FLOOR PLAN

Figure 1A

MULTIPLE FLOOR PLAN

Figure 1B

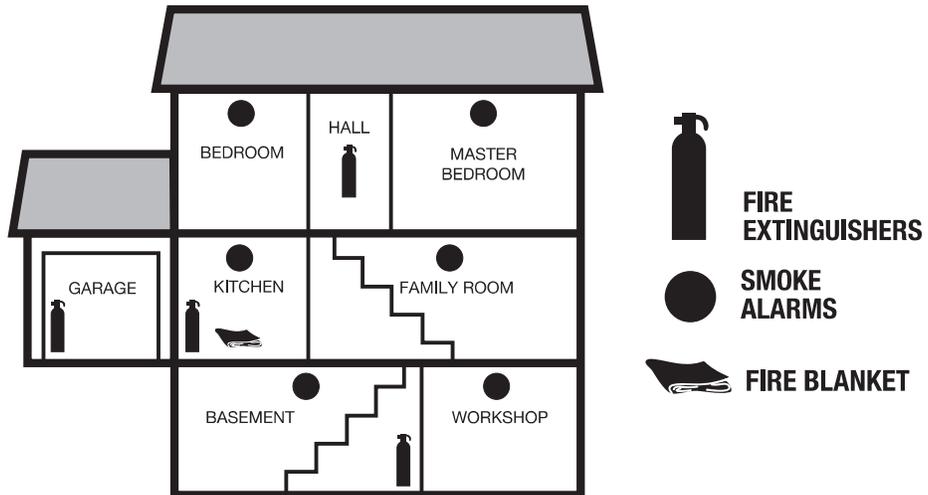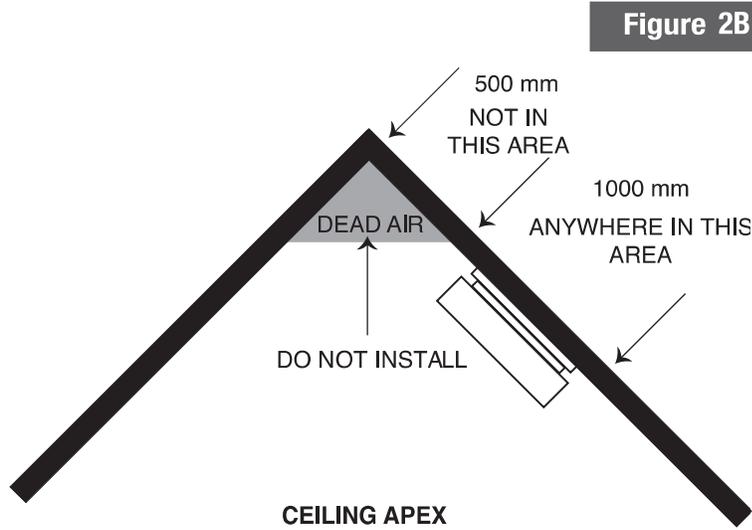FIRE EXTINGUISHERS

● SMOKE ALARMS

FIRE BLANKET

Figure 1C TOTAL HOME PROTECTION

3. Recommended Locations for Alarms

Figure 2A

300 mm
MINIMUM

CEILING

DEAD AIR

100 mm
MINIMUM

300 mm
MAXIMUM

BEST
PLACEMENT

DO NOT INSTALL

ACCEPTABLE
PLACEMENT

SIDE WALL

Figure 2B

500 mm
NOT IN
THIS AREA

1000 mm
ANYWHERE IN THIS
AREA

DEAD AIR
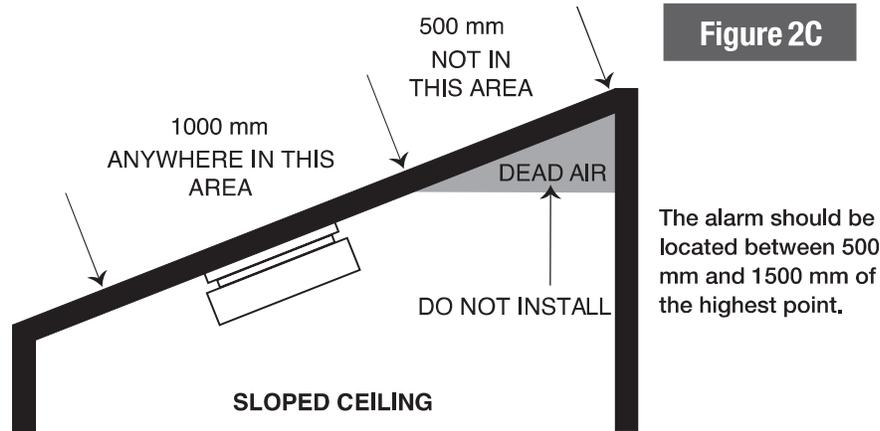
DO NOT INSTALL
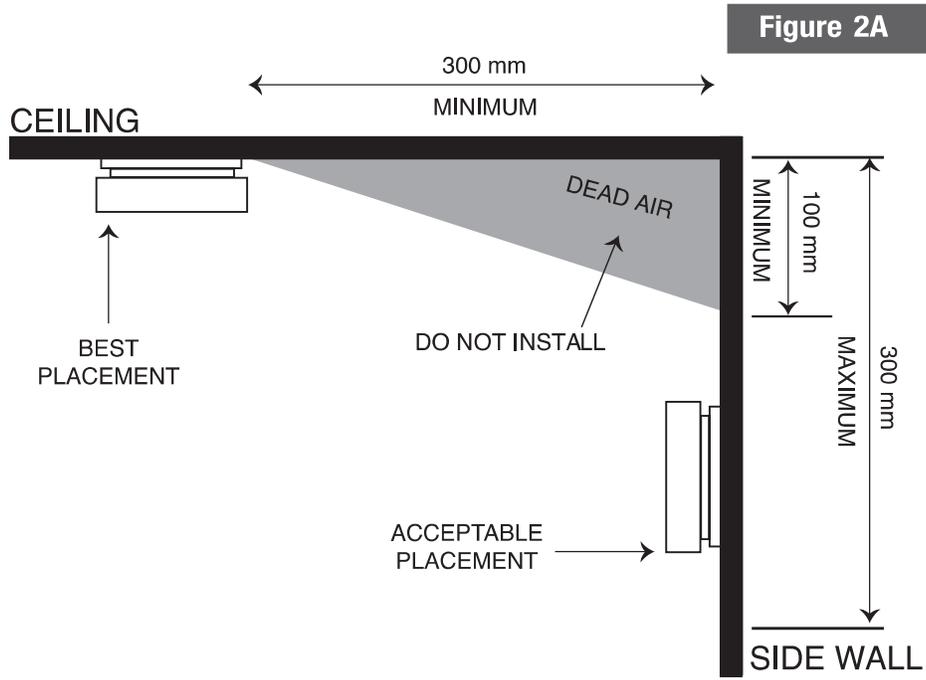
CEILING APEX

3. Recommended Locations for Alarms

- When mounting the alarm on a sloping ceiling, it should not exceed 1500mm away from the apex. The spacing of additional alarms, if any, should be based on a horizontal distance measurement, not a measurement along the slope of the ceiling (see Figure 2C)

Figure 2C

500 mm
NOT IN
THIS AREA

1000 mm
ANYWHERE IN THIS
AREA

DEAD AIR

The alarm should be located between 500 mm and 1500 mm of the highest point.

DO NOT INSTALL

SLOPED CEILING

- In rooms with open joists or beams not exceeding 300 mm, ceiling mounted alarms shall be located on the bottom of such beams. (See Figure 2C)

- Alarms installed on an open-joist ceiling shall have the smooth ceiling spacing reduced to no more than half of the listed spacing when measured at right angles to the solid joist. (See Figure 2D)

Figure 2D

25 ft (7.6 m)

12½ ft (3.8 m)

50 ft (15 m)

25 ft (7.6 m)

6
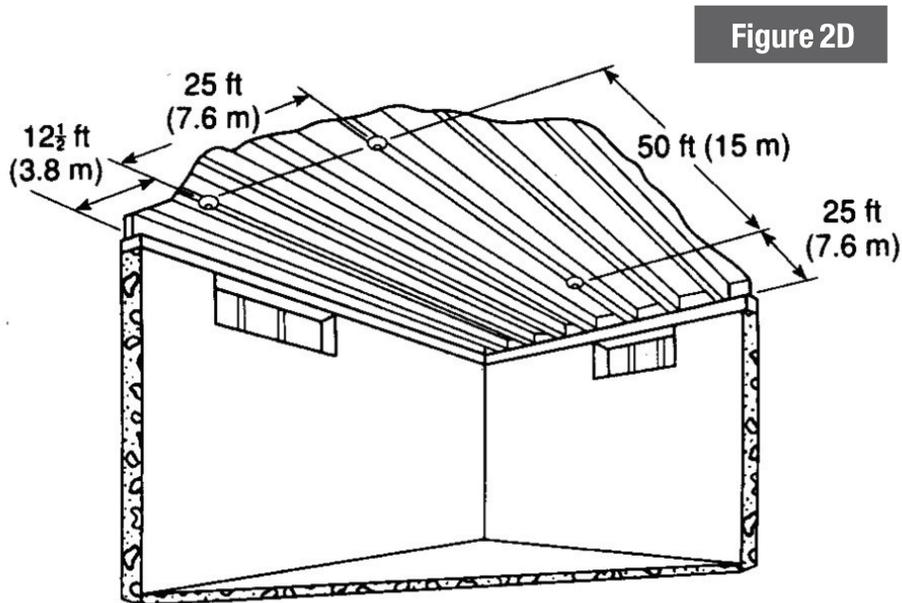
4. Locations To Avoid

- Smoke alarms should not be installed within 0.9m(3 ft)
  - of the door to a bathroom containing a tub or shower
  - forced air supply ducts used for heating or cooling
  - ceiling or whole house ventilating fans
  - other high air flow areas

- Areas where curtains or other objects will block the sensor. Smoke must be able to reach the sensor to accurately detect conditions.

- Install at least 300mm away from a light fitting.

- No closer than 400 mm outside the circumference of a ceiling fan.

- Keep out of insect infested areas.

- Avoid excessively dusty, dirty or greasy areas.

- Do not install in areas where the temperature is colder than 0°C or hotter than 40°C.

- Do not install in areas where the relative humidity (RH) is greater than 93%.

- Normal cooking may cause nuisance alarms. If a kitchen alarm is desired, it should have an alarm silence feature and should not be installed within 3m of cooking appliances.

- Avoid dead air spaces such as the peak of an "A" frame ceiling. "Dead Air" at the top may prevent smoke from reaching the alarm in time to provide early warning. Refer to Figure 2A , Figure 2B and Figure 2C.

4. Locations To Avoid

Note: Smoke alarms are not to be used with detector guards unless the combination (alarm and guard) has been evaluated and found suitable for that purpose.

Installation

Mounting

⚠ **CAUTION: This unit is sealed. The cover is not removable!**
- Remove the mounting plate from the back of the alarm by holding the plate and twisting the alarm clockwise. As indicated by the "OFF" arrow on the alarm cover.
- Hold the mounting plate against the selected installation location (wall or ceiling) and mark the centre of the holes with a pencil. To ensure aesthetic alignment of the alarm with the hallway, or wall, the "A" line on the mounting plate should be parallel with the hallway when ceiling mounted, or horizontal when wall mounted (Figure 3A).
- Drill a hole through the pencil marks and use the enclosed screws and anchors to secure the mounting plate.

⚠ **WARNING:** Please ensure batteries are inserted correctly with positive and negative terminals connected to the corresponding point on the smoke alarm.

Place the alarm onto the mounting plate, making sure the alignment marks are lined up. Twist the alarm anti-clockwise in the direction indicated by the "ON" arrow on the alarm cover (Figure 3B) until it locks in place.

5. Installation

When mounting on the ceiling, please align both line of the side.

Alignment Marks
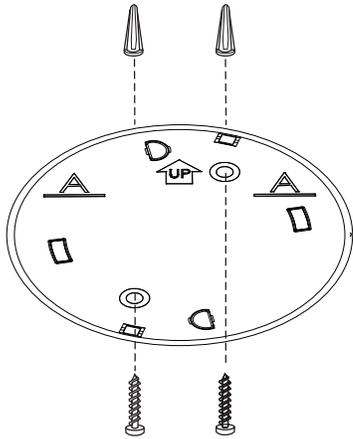
When Mounting In A Hallway, The "A" Line Should Be Parallel With The Hallway.
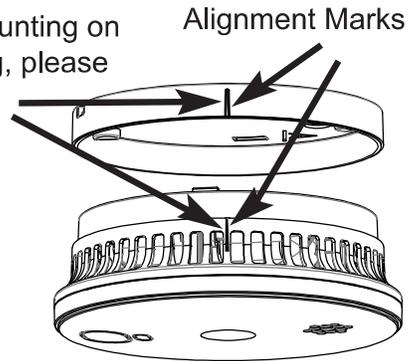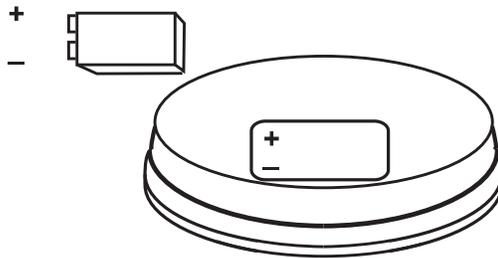
Figure 3A

Figure 3B

BATTERY REPLACEMENT

Figure 3C

NOTE: Please ensure that battery is installed prior to mounting of smoke alarm.

9

5. Installation

Alarm Tamper-Resist Feature

• A tamper resist feature has been provided. Activate the smoke alarm tamper resist feature by breaking out both small posts in the square hole in the mounting bracket (see Figure 4A).

• Using this feature will inhibit the removal of the alarm from the mounting plate.

• The tamper-resist tab will have to be released in order to change the battery. Using a tool (small screwdriver) Press down on the tamper resist tab and rotate the alarm in the direction indicated by the arrows on the cover of the alarm. (See Figure 4B)

• After installation, test the alarm by depressing and holding down the Test/Hush button for several seconds. This should sound the alarm.
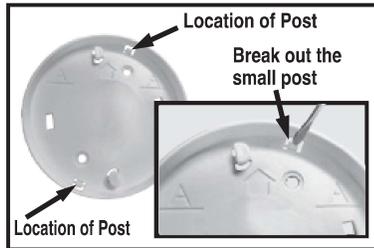

Location of Post
Break out the small post
Location of Post

Figure 4A

Press down on the tamper resist tab
Tamper resist tab
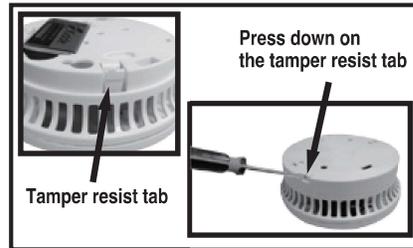
Figure 4B

6. Operation And Test

The smoke alarm is operating once new battery is installed and testing is complete. When the smoke alarm senses smoke, the horn will sound a loud (85db) pulsating alarm(3 beeps repeating).

Red LED indicator:

This smoke alarm features a red LED indicators that can be seen above the Push-to-Test button.

RED

Red LED Flashes every 60 seconds
– Indicating normal operation.

Red LED Flashes in sync with the beep patern
– Smoke alarm senses smoke and simultaneously sounds an audible alarm

Red LED Flashes once every 2 seconds
– Smoke alarm is in hush mode.

Testing the smoke alarm

Test the unit, to ensure proper operation, by pressing the Test/Hush button for at least 5 seconds (or until the unit sounds). This will sound the alarm if the electronic circuitry, horn, and battery are working.

⚠ **CAUTION:** Due to the loudness (85 decibels) of the alarm, stand at arm's length from the smoke alarm when testing. The alarm sounder is loud to alert you to an emergency and can be harmful to hearing when you are too close.

Test the smoke alarm weekly and upon returning from holiday, or when the house has been unoccupied for several days.

NOTE: WEEKLY TESTING IS RECOMMENDED.

⚠ **WARNING: If alarm sounder activates, and smoke alarm is not being tested, the smoke alarm is sensing smoke. THE ACTIVATION OF THE ALARM SOUNDER REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION.**

7. Nuisance Alarms and Hush Function

This alarm is designed to minimise nuisance alarms. Cigarette smoke will not normally cause the unit to alarm, unless the smoke is blown directly into the alarm. Combustion particles from cooking may set off the alarm if it is located too close to a cooking appliance. Large quantities of combustible particles are generated from spills or when boiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help prevent nuisance alarms from occurring by removing these combustible products from the kitchen.

HUSH

If you know why the alarm is sounding, and you can verify that it is not a life threatening situation, you can push the button on the alarm to silence the alarm for up to 9 minutes. If the smoke is not too dense, that alarm will silence. After the Hush period, the smoke alarm will automatically reset and sound the alarm if particles of combustion are still present. You can use Hush repeatedly until the air has been cleared of the condition causing the alarm.

Note: Dense smoke will override Hush and sound a continuous alarm. If no fire is present, check to see if one of the reasons listed in page 7. LOCATIONS TO AVOID may have caused the alarm. If a fire is discovered, exit the building and call the fire brigade.

Operational Mode	Visual Indications	Audible Indications	Action/Note:
Normal (standby)	Red LED blinks every 60 sec.		
Test (button press when no alarm condition is present)	• 3 patterns of Red. • Test: Red LED blinks in sync with beep pattern.	• Button press sound • 3 long beeps	Perform button press once a week to verify proper alarm operation.
Smoke Alarm Memory (unit has experienced a smoke alarm event within the last hour)	Red LED blinks every 15 sec.	None.	Push button to clear Alarm Memory.
Smoke Alarm Hush Mode	Red LED blinks every 2 sec.	After button push, Smoke alarm pattern stops	This feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm.

8. Troubleshooting

Trouble Condition	Visual Indications	Audible Indications	Action:
Low Battery	Red LED blinks every 30 sec.	Chirp every 60 sec.	* Push button once to silence for 24 hrs. * Replace battery as soon as possible.
End of Unit Life	Red LED blinks 2 times every 30 sec.	2 chirps every 30 sec	* Push button once to silence for 24 hrs. (Push button again to clear Hush.) Note: 7 days after End of Unit Life begins, the chirps cannot be silenced. * Remove, dispose unit, and replace as soon as possible.
Memory Fault	Red LED blinks 3 times every 30 sec.	Chirp every 30 sec.	* Contact Product Support.
MCU Failure	None.	Constant tone.	* Replace alarm. * Contact Product Support.
Stuck Button	Red LED blinks every 4 sec.	Chirp every 4 sec.	* Push button to dislodge it from being stuck. If button cannot be released, please contact product support.
Fault Mode	Red LED blinks 4 times every 30 sec.	Chirp every 30 sec.	* See Cleaning Your Alarm section. * Push button once to attempt to reset the unit. * Red LED will give an error code of 4 blinks when button is pushed/released once. Report the number of blinks to customer service if needed.

NOTE: Contact Customer Service at 1800 654 435, if your alarm does not seem to operate correctly.

9. Battery Replacement

This smoke alarm uses a 9 volt battery. A fresh battery should last for one year under normal operating conditions.
This alarm has a low battery monitor which will cause the alarm to "chirp" approximately every 60 seconds for a minimum of 30 days when the battery gets low.
Replace the battery when this condition occurs. The low battery chirp will occur at the same time as the red LED flash.

Smoke Sensing Chamber Operation
This alarm will "chirp" if it detects a problem with the smoke sensing chamber. This chirp will occur approximately 30 seconds and the Red LEd flashes 4 times every 30 seconds.

Clean the alarm. If the issues still occurs, replace the alarm.

Use only the following 9 volt batteries for replacement:
Alkaline Type   Energizer 522
                       Duracell MN1604, MX1604
                       Gold Peak 1604A
Carbon Zinc Type: Gold Peak 1604P or 1604S

These batteries can be purchased at your local retailer.

⚠ **WARNING!** Use only the batteries specified above.
• To the extent permitted by law, Kidde Australia Pty Ltd excludes all liability for loss or damage to the extent caused by the use of batteries other than Energizer 522; Duracell MN1604 or MX1604; Gold Peak 1604A; Gold Peak 1604P or 1604S.
• The use of other batteries may have a detrimental effect on operation of the smoke alarm or may cause the battery to explode resulting in injury or fire.

A good safety measure is to replace the battery at least once a year, or at the same time you change your clocks for daylight saving time.
Be sure to follow the battery installation instructions printed on the back of the alarm.

Note: Weekly testing is recommended

10. Cleaning Your Alarm

YOUR ALARM SHOULD BE CLEANED AT LEAST ONCE A YEAR

To clean your alarm, remove it from the mounting bracket as outlined in "page 15 Battery Replacement and page 9, Figure 3E". You can clean the interior of your alarm (sensing chamber) by using compressed air or a vacuum cleaner hose and blowing or vacuuming through the openings around the perimeter of the alarm. The outside of the alarm can be wiped with a damp cloth.

After cleaning, reinstall your alarm and test your alarm by using the test button. If cleaning does not restore the alarm to normal operation the alarm should be replaced.

After cleaning, reinstall your alarm and check that the Red LED flashes once every 60 seconds. Then test your alarm by using the test button.

11. Limitations Of Smoke Alarms

⚠ **Warning! Smoke alarms are devices that can provide early warning of possible fires; 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, subject to applicable legal requirements in each State and Territory, Quell recommends that both ionisation and photoelectric alarms be installed.

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. 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. 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. Hearing impaired occupiers should consider fitting additional accessories to give a visual or tactile(Vibrating pad) alarm.

Although smoke alarms can help save lives by providing an early warning of a fire, they do not prevent property damage. Home owners and renters should have adequate insurance to protect their property.

If after reviewing this user guide you feel that your smoke alarm is defective in any way,do not tamper with the unit. Refer to Section 14 Warranty and Contact Details.

12. Good Safety Habits

DEVELOP AND PRACTICE A PLAN OF ESCAPE:

- Install and maintain fire extinguishers on every level of the home and in the kitchen, basement and garage. Know how to use a fire extinguisher prior to an emergency.

- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.

- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.

- Determine a place outside your home where you all can meet if a fire occurs.

- 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.

- Current studies have shown alarms may not awaken all sleeping individuals. 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.

13 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.

- While leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead, use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.

- Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.

- Once outside, go to your selected meeting place and make sure everyone is there.

- Call the fire department from your neighbour's home - not from yours!

- Don't return to your home until the fire officials say that it is all right to do so.

- There are situations where a smoke alarm may not be effective to protect against fire.

For instance:
    a) smoking in bed
    b) leaving children home alone
    c) cleaning with flammable liquids, such as petrol

FIVE YEAR WARRANTY

Warranty

Quell warrants to the original consumer purchaser that each new alarm will be free from defects in materials and workmanship under normal use for a period of 5 years from the date of purchase. To the extent permitted by law, Quell agrees to repair or replace (at our discretion) any defective product on presentation of the proof of purchase.

Australia warranty claims:

Where the goods are offered for sale in Australia, the benefits to the consumer given by this warranty are in addition to other rights and remedies of the consumer under the Australian Consumer Law and other applicable laws relating to the goods. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

New Zealand warranty claims:

Where the goods are offered for sale in New Zealand, the benefits to the consumer given by this warranty are in addition to other rights and remedies of the consumer under relevant New Zealand consumer protection laws and other applicable laws relating to the goods. Our goods come with guarantees that cannot be excluded under relevant New Zealand consumer protection laws. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Exclusions

Subject to non-excludable laws, this warranty does not cover:
- normal wear and tear to the product or parts
- batteries or other consumables included with this product (excluding sealed non replaceable battery models)
- damage to the product caused by accidents, misuse, abuse, lack of reasonable care, tampering or repair by a person not authorised by Quell
- any product that has not been installed, operated or maintained in accordance with the manual or operating instructions provided with the product
- any damage caused by improper power input or improper cable connection
- any indirect, special or consequential loss or damage of any kind

To make a claim

If a defect in the product appears within the time frame stated, you are entitled to submit a warranty claim by returning your product to place of purchase. Please provide proof of purchase and brief explanation of the problem. Where necessary, any postage and packaging expenses incurred to return the product will be at your cost.

If a defect is found, the place of purchase can elect to replace the product, repair the product or refund you for the product.

If it is elected to repair the product, goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

This warranty is provided by:

Kidde Australia Pty Ltd

ABN 68 006 252 428

Building F, Unit 1

3-29 Birnie Ave.

Lidcombe, NSW, 2141

Telephone: 1800 654 435

Website: www.quell.com.au

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