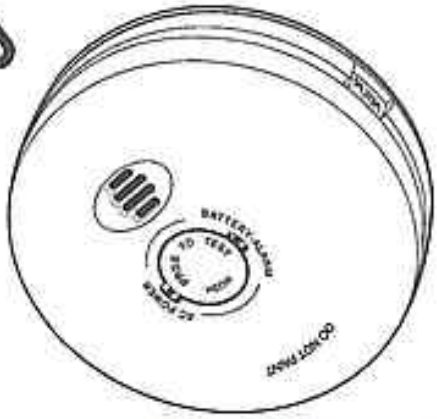
HPM Professional Smoke Alarm
USER MANUAL



WARNING: THIS DEVICE CONTAINS A SMALL AMOUNT OF RADIOACTIVE MATERIAL.

IMPORTANT:
READ ALL INSTRUCTIONS BEFORE INSTALLATION.
NO USER SERVICEABLE PARTS INSIDE THIS SMOKE ALARM.
Do not attempt to repair the smoke alarm yourself.

SPECIFICATIONS	
Cat no.	645/3
Supply Voltage:	230-240 V a.c.
Frequency:	50Hz
Type:	Ionisation
Backup Battery:	9V battery included (Recommended replacement: Energizer 522, Duracell MN1604 or MX1604)
Temperature Range:	0°C to ~+50°C
Humidity Range:	0-95% at 20°C
Siren Sound Level:	> 85 dB at 3 metres

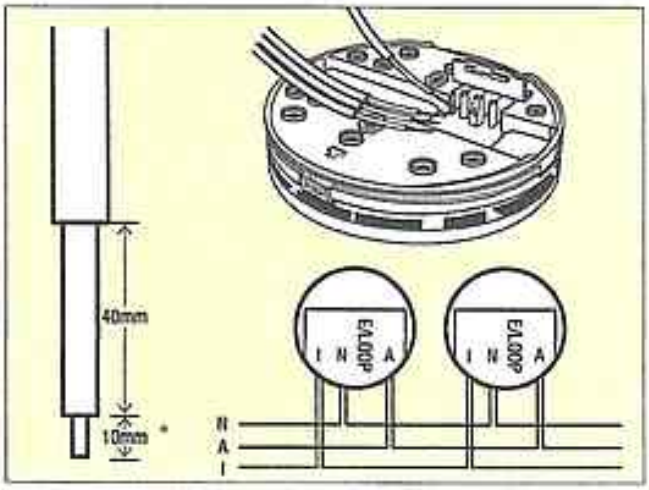
INSTALLATION

WARNING:
In the interest of safety, a licensed electrician, in accordance with the relevant requirements of AS/NZS 3000, must install this smoke alarm and all wiring.
WARNING: This alarm must be wired to a continuous 230-240V a.c. 50Hz circuit. Ensure any switching device cannot inadvertently override the unit.

NOTE:
See overleaf for recommended locations of alarms

INSTALLER PLEASE NOTE:
- Before you connect the mains power, check wiring polarity.
- If the alarm 'chirps ' press the Test button to check the battery condition. Replace Battery if necessary.
- If 'chirps ' persist, replace smoke alarm and return it to your supplier.

WIRING INSTRUCTIONS:
- This Smoke alarm can be interconnected with other 645/3 Smoke alarms. Interconnection with other brands or models may cause damage or result in a shock or fire risk.
- Up to a limit of 20 smoke alarms may be interconnected.
- There are four terminals in the supply terminal block, marked A, I, N and E/LOOP. It is important that the alarm be wired correctly to ensure correct operation. Incorrect wiring to the Smoke alarm will damage the unit and invalidate the warranty. See Wiring Diagrams.
- A maximum of 300 metres of wire can be used in interconnecting smoke alarms.
- All final sub-circuit conductors including the signal conductor must be a minimum size of 1mm² with 250V grade insulation.
- Interconnected Smoke alarms must be connected to the same final sub-circuit.
- Do not use any wire that could later be confused with the normal house wires for the interconnect wire. For example, green/yellow earth wire.
- Do not connect AC power wires to I interconnect terminal. This will damage smoke alarms.
- Do not connect the I interconnect wire to any device, except the I interconnect terminal of another 645/3 smoke alarm or interface 645A. Otherwise, smoke alarms will be damaged.
- Smoke alarms should be interconnected only within the confines of a single-family living unit. If smoke alarms are interconnected between different units, there may be excessive nuisance alarms. Residents may not be aware that smoke alarms are being tested or that it is a nuisance alarm caused by cooking, etc.
- Terminals at back of mounting base are marked as follows:
  A - Active
  I - Interconnect
  N - Neutral
  E/Loop - Earth or Loop



EXAMPLE OF MULTIPLE ALARM WIRING
When interconnected, all Smoke alarms will sound upon activation. However, only the originating Smoke alarm will have flashing Red LED.

WARNING:
Connecting the Interconnect terminal to any supply conductor will result in damage to the alarm, failure to operate or shock hazard and will void the warranty of the alarm.

WARNING: INSULATION TEST
UNDER NO CIRCUMSTANCES MUST AN INSULATION RESISTANCE TEST BE CARRIED OUT ON A CIRCUIT TO WHICH A SMOKE ALARM IS FITTED.

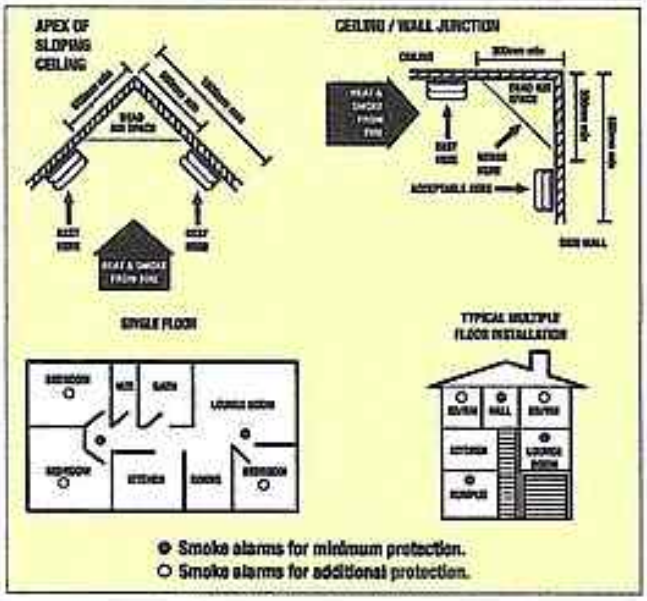
THE TEST COULD CAUSE IRREPARABLE DAMAGE TO THE INTERNAL CIRCUITRY OF THE SMOKE ALARM AND MAKE IT INOPERATIVE.

THE WARRANTY WOULD BE VOID UNDER SUCH CIRCUMSTANCES.

RECOMMENDED LOCATIONS OF ALARMS

- Install at least one alarm for each separate sleeping area. Try to cover the exit path as the bedrooms are usually farthest from an exit. If there is more than one sleeping area, install additional alarms in each sleeping area in the immediate vicinity of bedrooms.
- Install at least one alarm to protect any stairway as stairways act like chimneys for smoke and heat.
- Install at least one alarm on every floor level.
- Install an alarm in every room where a smoker sleeps as additional protection.
- Install an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers) as additional protection.
- Install an alarm in every room where someone sleeps with the door closed as additional protection. The closed door may prevent the alarm from waking the sleeper.
- Smoke, heat and other combustion products rise to the ceiling and spread horizontally. Mounting the alarm on the ceiling in the centre of the room places it closest to all points in the room. Ceiling mounting is preferred in ordinary residential construction.
- For mobile home installation select location carefully to avoid thermal barrier that may form at the ceiling. For more details see Mobile Home Installation.
- When mounting an alarm on the ceiling install it at a minimum of 300mm from the side wall and 600mm from any corner (see diagram).
- When mounting an alarm on a wall, install it at a minimum of 300mm from the ceiling level but not more than 600mm from the ceiling level and any corner (see diagram) *NOTE: The performance of smoke alarms mounted on a wall is unpredictable, and is not recommended when ceiling mounting can be implemented.*
- When mounting an alarm at the apex of a sloping ceiling it should be located a minimum of 500mm from the apex but should not exceed 1500mm (see diagram).
- Locate smoke alarm at both ends of a bedroom hallway if the hallway is more than 9m long.
- May be located near kitchen area (not over cooking surface). HUSH Control in case of false alarms.

INSTALLATION OF SMOKE ALARM



IMPORTANT:
INCORRECT ORIENTATION OF SMOKE ALARMS MAY DECREASE OPERATIONAL EFFECTIVENESS

MOBILE HOME INSTALLATION

- Modern mobile homes have been designed and insulated to be energy efficient. Install smoke alarms as recommended (refer to RECOMMENDED LOCATIONS).
- In mobile homes that are not well insulated extreme heat or cold can be transferred from the outside through poorly insulated walls and roof. This may create a thermal barrier that can prevent smoke from reaching a smoke alarm mounted on the ceiling. In such units, install the smoke alarm on inside partition between 300mm and 600mm from the ceiling.
- If you are not sure about the insulation in your mobile home, or if you notice the walls and ceilings are either hot or cold, install alarm on an inside wall. For minimum protection, install one alarm close to the bedrooms.

For additional protection, see SINGLE FLOOR plan.
We recommend that the smoke alarm be tested after each journey.

AVOID THESE LOCATIONS

Do not place alarm in the following locations:

- The garage. Gas released when you start your automobile may cause false alarms.
- In front of forced air supply ducts used for heating and air conditioning and other high airflow areas.
- In the peak of an "A " frame type of ceiling.
- In areas where temperatures may fall below -10°C or rise above +50°C.
- In dusty areas, dust particles may cause smoke alarm to false alarm or fail to alarm.
- We do not recommend installation in areas of high condensation such as bathrooms due to potential for false alarms

FALSE ALARMS

- In very humid areas or near a bathroom, moisture can cause false alarms.
- This smoke alarm is designed to minimise false alarms. Smoking will not normally set off the alarm unless smoke is blown directly into the alarm.
- Combustion particles from cooking may set off the alarm if the alarm is located close to the cooking surface.
- Because large quantities of combustion particles are generated from spills or grilling an alarm with a Hush Control device is preferable near a kitchen environment.
- If the alarm does sound, check for a fire before silencing the alarm. If a fire is discovered, escape quickly and call the Fire Brigade.

GOOD SAFETY HABITS

The use of this product should not be seen as a substitute for basic safety precaution in the prevention of fire.

- Do not smoke in bed.
- Do not leave children at home alone.
- Do not clean with flammable liquids, such as petrol.
- Safely store flammable materials.
- Smoke alarms must be tested regularly to ensure that the batteries and alarm circuit are in good operating condition.

THE LIMITATIONS OF SMOKE ALARMS

- Smoke alarms cannot provide an alarm if smoke does not reach the alarm. 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 bedrooms, or on a different floor, it may not wake up sound sleepers. A smoke alarm in the bedroom, is therefore recommended as additional protection.
- Smoke alarms have been significant in saving lives in many parts of the world. However, U.S. Government research indicates that they may not give early enough warning in up to 35% of fires. Hence, the use of this product does not substitute for basic prevention and total protection.
- Although smoke alarms can help save lives by providing early warnings of a fire, they are not a substitute for an insurance policy.
- This smoke alarm alone will not alert the hearing impaired. Use special purpose smoke alarm with lights or vibrating devices, for those hard of hearing.

MOUNTING INSTRUCTIONS:

1. Strip the Active/Neutral and Inter-connect (if used) wires back to the strip length shown above.
2. Connect the wires to the correct terminals on the base as indicated and ensure the screws are fully tightened.
2. Clip the flap closed to prevent accidental contact with the live terminals.
4. Screw the mounting base to the ceiling or wall using the plugs and screws provided or No.6/No.8 Superscrews.
5. Install the 9V battery. The Smoke Alarm will not latch to the base unless battery is installed.
6. Turn on the Mains Power and check the Green and Red LED's function. Green LED should glow to show Main Power present. Red LED will pulse every 60 seconds to indicate correct operation and the 9V battery is OK.
7. Press the Test/Hush Button for 5 seconds to check the alarm works.
8. When installing onto a wall the grille must be orientated downwards.

OPERATION, TESTING AND MAINTENANCE

OPERATION:

The smoke alarm is operational once all wires are properly connected, the smoke alarm is correctly installed on the mounting base, battery inserted and the alarm has been tested. There are two LED indicators. Each of them has a unique function:

Red LED

- **Stand-by condition:** will flash once approximately every 60 seconds to indicate unit is functioning properly.
- **Alarm condition:** will flash quickly when unit goes into alarm. The flashing Red LED and pulsating alarm will continue until the air is cleared. For interconnected units, the originating smoke alarm Red LED will be flashing. All other units will sound but not flash.

Green LED

- **AC Mains-ON Indicator:** indicates that the unit is operating with AC power. If this LED goes out, it indicates that the AC power is off.

False Alarm Hush Control Feature:

- This smoke alarm has the capability of being temporarily desensitised for approximately 10 minutes.
- The smoke alarm is desensitised by pressing the "HUSH/TEST" button on the smoke alarm cover.
- After pressing the "HUSH/TEST" button, the alarm will silence immediately and Red LED will flash every 15 seconds for approximately 10 minutes to indicate the alarm is in the temporary desensitised condition.
- The smoke alarm will automatically reactivate after approximately 10 minutes and sound the alarm if particles of combustion are still present.
- The "HUSH" feature may be used repeatedly until the air has cleared.

TESTING:

NOTE: Before testing, make sure that the smoke alarm is connected to AC power supply (Make sure the Green LED is ON.) and there is a 9V battery properly installed.

- Test alarm by pushing and holding the test "HUSH/TEST" button for a few seconds. This should sound the alarm if all electronic circuitry and horn are working.
- If no alarm sounds, check wiring, fuses or circuit breaker and make certain that alarm is connected to a continuous final sub-circuit.
- With interconnected units, holding test button down on one unit will cause all connected units to sound.
- Continuous chirping or erratic noise or low sound from an alarm may indicate a defective alarm.

To accurately test the integrity of the sensing chamber use a smoke detector (aerosol) tester.

NOTE:
After the above alarm test with the 'HUSH/TEST' button, the alarm will be desensitised for about 10 minutes. **ONLY DO THE SMOKE AEROSOL TEST AFTER THIS DESENSITISED PERIOD.**

WARNING:
Do not apply excessive force on the "HUSH/TEST" button this may damage the smoke alarm and may void the warranty.

WARNING:
Never use an open flame of any kind to test your alarm. You may damage the alarm or set fire to your home. The built-in test switch enables testing of all electronic components and the horn.

MAINTENANCE:

The smoke alarm is virtually maintenance free. However, under dusty or greasy conditions, a vacuum cleaner may be used to clean the exterior of unit (including slots on cover). **DO NOT IMMERSE IN OR SPRAY WITH HOUSEHOLD CLEANERS.**

BATTERY

BATTERY INSTALLATION

- The Smoke Alarm uses one 9V battery to automatically provide back-up power to the alarm if AC power fails. The battery will operate the alarm for approximately one to three months with AC power off.
- **USE ONLY BATTERIES AS SPECIFIED IN THE PRODUCT LABEL. USE OF A DIFFERENT BATTERY MAY HAVE A DETRIMENTAL EFFECT ON OPERATION OR MAY CAUSE THE BATTERY TO EXPLODE.**
- **USE ONLY THE FOLLOWING 9-VOLT ALKALINE BATTERIES FOR REPLACEMENT:**
  EVEREADY/ENERGIZER 522 DURACELL MN1604, MX1604
- Battery can only be inserted in one direction. Ensure polarity is correct.

BATTERY REPLACEMENT:

- To replace battery, unlatch unit from mounting base and remove the battery from compartment. Replace the old battery with a fresh one and close unit. Verify that the green LED is on.
- To ensure proper operation, the battery should be replaced once a year.
- Smoke Alarm cannot be latch closed without battery in place.

BATTERY TEST:

- Switch off mains power OR unlatch the smoke alarm from its base plate. The Green LED on the smoke alarm will be OFF.
- Watch the Red LED for about 40 seconds. It should flash at least once. If unit chirps the battery is low and it is time to replace the battery.
- Test alarm by pressing on the Test Button for a few seconds. This should sound the alarm.
- Switch on mains power OR hinge the smoke alarm back onto its base plate *only* when smoke alarm passes the above tests. The Green LED on the smoke alarm will come ON.

NOTE:
We reccommend a periodic monthly test and inspection of the smoke alarm.

REPAIRS AND SERVICES

- The smoke alarm uses a very small amount of radioactive element that is safely contained within the sealed source.
- If the smoke alarm is defective in any way, do not tamper with the unit. See warranty for instructions on in-warranty returns. **Note: NO USER REPLACEABLE PARTS INSIDE.**

NOTE:
When this product is no longer required dispose by returning to HPM office in your state capital or your state's Health Department. Batch quantity of less than 10 may be disposed of as general garbage depending on your state's Health and Safety Regulations.

- Please note: It is illegal to send radioactive material through Australia Post. Check for similar conditions with any forwarding agency before sending this article.

WARNING:
DO NOT TAMPER WITH RADIOACTIVE SOURCE.

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 house 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 all of you can meet, if a fire occurs.
- Familiarise everyone with the sound of the smoke alarm and practice leaving your home when they hear it.
- Practice a fire drill at least every six months, including drills at night. Practice allows you to test your plan before an emergency. You may not be able to reach your children. It is important that they know what to do!

WHAT TO DO WHEN THE ALARM SOUNDS

- Leave immediately by your plan of escape. 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 if you see smoke seeping through cracks, don't open that door! Instead, use your alternative exit. If inside 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 air is smoky. Breathe shallowly through a wet cloth if possible.
- Once outside, go to your selected meeting place and make sure everyone is there.
- Call the Fire Brigade from your neighbour's home - not from yours!
- Don't return to your home until officials say that it is safe to do so.

For additional information on fire safety, contact your local Fire Brigade.

WARRANTY AND LIABILITY

Warranty

HPM Cat 645/3 Smoke Alarms are warranted as here and after appears, against faulty material and/or workmanship for a period of 12 months from date of purchase.

The obligation of the manufacturer, under this warranty, is limited to servicing and replacing defective parts when the unit is returned to HPM Legrand, or the distributors in your state, freight pre-paid.

This warranty becomes void on any unit which has been tampered with or damaged by accident, short circuited, loaded beyond rating or damaged otherwise by improper operation.

The warranty is also conditional on the unit being installed by licensed electrical contractor.

All other warranties, whether expressed or implied, and whether arising by operation of law or otherwise are hereby excluded.

HPM Legrand.

This smoke alarm has a recommended service life of at least 10 years under normal conditions of use.

THIS SMOKE ALARM HAS BEEN TESTED AND PASSED TO AS3786-1993

DEAR ELECTRICIAN:
PLEASE LEAVE THIS MANUAL FOR THE OWNER.
THANK YOU FOR CHOOSING THIS SMOKE ALARM.

Cat 645/3
HPM Legrand
www.hpm.com.au
www.hpm.co.nz

221108 Made in China