



INSTALLATION LOCATIONS

- These recommendations are for information only. Check specific state legislation in your area to ensure smoke alarms are correctly located according to local laws. Each state or territory may differ in building codes and regulations.
- 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.
- Locate additional alarms to monitor any stairway because stairways act like chimneys for smoke and heat.
- Locate at least one alarm on every floor level.
- Locate an alarm in every room where electrical appliances are operated (i.e. portable heaters or humidifiers)
- 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.
- When mounting alarms on the ceiling locate it at least 300 mm away from the sidewall and 300mm away from any corner.
- When mounting alarms on a wall use the internal walls of the building. The recommended position is between 300 mm and 500 mm off the ceiling.

NOTE: The performance of smoke alarms mounted on walls is unpredictable and this mounting position is not recommended when ceiling mounting can be implemented.

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 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.
- Familiarize everyone with the sound of the smoke 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 that they know what to do.

TROUBLESHOOTING

ELECTROMAGNETIC INTERFERENCE (EMI)

For Wired smoke alarms which are interconnected with this smoke alarm

Legrand Smoke alarms are designed to filter external EMI signals. But some forms of EMI can still affect performance.

- Avoid installing a smoke alarm too close to an electrical noise source (< 1m).
- Install the smoke alarm on a separate circuit to all other electrical circuits. Common sources of EMI which may cause the smoke alarm to malfunction include: Fluorescent luminaires, LED Downlights, CFL lamps, Security Lights, Solar Inverters, A/C Compressors (Spikes during ON/OFF).
- Heat lamps, air conditioners, ceiling fans [Electrical noise & Spike due to heavy inductive loads at ON/OFF].

Note: Some installations may require an inline EMI filter if the EMI source cannot be identified (Legrand EMI Filter Cat. No: 643093 is available).

OTHER COMPATIBLE LEGRAND SMOKE ALARMS

Legrand Reference	Mounting Type	Interconnect Type	Interconnect Compatibility with 643091
643088	Surface Mount	Wired & Wireless	Wired only
643089	Flush Mount (Ø 90mm Cut-out)	Wired & Wireless	Wired only
643090 / 643085	Surface Mount	Wired	Conditional (Requires minimum of 1x type 643088 or 643089)
643092 / 643087	Flush Mount (Ø 90mm Cut-out)	Wired	

TABLE 1

INSTALLATION DESIGN

Legrand RF smoke alarm can be added to the existing wired Interconnect network. You must replace one of the existing wired smoke alarms with an RF unit that is also wired to do this.

- Understand your requirements and decide how and where you need the smoke alarm installed [See location section Fig. 5 for guidance]
- Determine which alarms are appropriate from our range [See Legrand smoke alarms list Table 1]
- Run cabling if required.
- Mount base in the required position [See recommended location, Fig. 5].
- Commission and install [See Operation Mode and wiring sections for guidance]
- Test the installation.

REFER TO THE TABLE BELOW TO UNDERSTAND COMBINATIONS TO INSTALL

Understand Installation Types		
Upgrade existing installation with wireless units	New installation with a mix of wired and wireless	New installation with only wired installation
<ul style="list-style-type: none"> You can have a mixture of wired and RF units on the one installation 	<ul style="list-style-type: none"> Existing installation with 2 or more wired interconnected units to extend the network with RF units. At least one existing unit must be replaced with a wired RF unit (Either 643088 or 643089) All new smoke alarms must be RF units (643088, 643089, 643091) 	<ul style="list-style-type: none"> Install the wired interconnect versions where required (643090, 643092, 643085)
Note: A maximum of 20 smoke alarms can be interconnected on one circuit.		

TABLE 2

STEPS TO INSTALL

Installation Type		
Upgrade existing installation with wireless units	New installation with a mix of wired and wireless	New installation with only wired installation
<ul style="list-style-type: none"> Pair all additional RF units to the network. After RF network setup is completed, clip units to mounted base and test. Remove existing smoke alarm and replace with a RF unit (Either 643088 or 643089) If adding 240V RF versions - hard wire A, N & E to the new base. 	<ul style="list-style-type: none"> Gather all RF alarms to be installed and complete pairing to network. After RF network setup is completed, clip units to mounted base and test. On 240V RF units, hard wire A, N & E to new base. Connect interlink wire to 'I' on the new bases. Note: RF only units (643091) need unit clipped into base to perform pairing. 	<ul style="list-style-type: none"> Hard wire 240V to A, N, E Connect interconnect wire to 'I' on the new bases. Clip units to mounted base and test
Note: A maximum of 20 smoke alarms can be interconnected on one circuit.		

TABLE 3

NOTE: AFTER THIS SMOKE ALARM HAS REACHED THE END OF ITS LIFE, IT CAN BE RECYCLED AS E-WASTE.

INTERNAL RF NETWORK SETUP

For easiest first-time setup, we recommend unpacking all units together on a desk, table or counter and using the steps in the following Table 4 below. If you prefer to install the alarms on the ceiling before connecting the units, attach all mounting brackets to the ceiling first and then start with step 2 in TABLE 4.

- Ensure all units are powered by clipping the base to the head of the smoke alarm (battery activation)
- Pair all RF units on the bench.
- Validate RF network on the bench.
- Install base to ceiling / wall if required and install smoke alarm.
- Validate installation.

Definition of key terminology

MASTER: This is the network master unit that is the key communicator with the other wireless units.

SLAVE: The other wireless units that are to be paired to the MASTER unit.

	User Input	Visual Indication	Time Limit
Step 1	Attach all brackets to the base, which will activate the battery (fig.3)	RED Light flashes once, then 3 fast flashes	N/A
Step 2	<ol style="list-style-type: none"> Choose one of the smoke alarm to be the MASTER. Hold down the Network button and count 6 to 8 flashes of the BLUE light then release. Place the MASTER unit away from the others as the MASTER will need to be identified later in the process. 	Solid BLUE light	Master mode will timeout in 9 min.
Step 3	SLAVE joining Network: Hold the Network button and count 3 to 4 flashes of the BLUE light then release to connect to other MASTER unit.	Fast BLUE flashes indicating scanning for network. Slow BLUE flashes when connected to network	Timeout in 9 min. If timeout occurs go back to step 2 and either use the same MASTER unit previously selected or select any unit which is already part of the network to be the new MASTER unit.
Step 4	Exit Pairing Mode: Go to the MASTER smoke alarm (the one in step 2) and hold down the Network button and count 2 to 3 flashes of the BLUE light then release.	Fast BLUE flashes on MASTER indicating network close. BLUE flashes on SLAVE will turn OFF. NOTE: Do not operate smoke alarm until the master stops flashing.	Pairing Mode can take up to 90 seconds to close.

TABLE 4

ADDING A SMOKE ALARM TO AN EXISTING RF NETWORK

- At some point, you might want to add another smoke alarm unit to your existing RF network for additional protection or to replace an old unit. To do so follow the steps from Table 4.

FACTORY RESET

This section will explain how to perform a general reset of a smoke alarm, which starts the unit over as if it were powered up for the first time. This reset will also remove a unit from an existing network.

Follow the steps in the table below if one of these conditions occurs:

- If you have problems or become confused during initial RF Interconnect enrolment.
- If a unit does not perform as stated in this document.
- If you decide to remove a unit from your RF Interconnect Network and enrol it in another RF Interconnect Network (at a friend or family's location for example).

Note: If a unit has reached its end of life or has a low battery as stated on Table 6, a Reset will not be required. Simply remove the unit from the mounting bracket which will disconnect the battery.

Steps	User Input	Visual Indication
Step 1	Ensure the bracket is locked into the position Fig. 3.	N/A
Step 2	Attach all the brackets to base, which will turn activate the battery Fig.3.	RED LED flashes (3 times in 3 seconds).
Step 3	Hold down the Network button for 20 flashes of BLUE LED and release.	BLUE light will flash 3 more times and go OFF.

The unit has now been reset to Factory Settings and is ready to be paired again.

TABLE 5

OPERATING MODES

The smoke alarm is operational once:

- All wires are properly connected.
- The smoke alarm is correctly installed on the mounting base.
- The alarm has been tested.

Legrand RF smoke alarms are capable of linking together to make a unique network. When one RF or hard-wired Interconnected unit senses smoke, it sounds an alarm and triggers all other units on the same network to sound an alarm. Only the originating smoke alarm will have a flashing RED LED.

VISUAL AND AUDIBLE INDICATIONS

VISUAL INDICATION			SOUND PATTERN	MEANING		
GREEN	RED	BLUE				
Solid ON	N/A	N/A	N/A	Unit is connected to 240V a.c.		
OFF	N/A	N/A	N/A	Unit is not connected to 240V a.c		
N/A	N/A	N/A	3 beeps in 4 sec (1 cycle)	Wired unit being tested		
		1 Flash in 4 sec	3 beeps in 4 sec (1 cycle)	RF unit being tested		
		N/A	3 beeps in 2 sec (1 cycle)	Other wired units on the network being tested		
N/A	N/A	1 Flash in 4 sec	3 beeps in 2 sec (1 cycle)	Other RF units on the network being tested.		
		Solid ON	N/A	This is the Master smoke alarm		
		2 Flashes every sec		Slave is searching for Network		
N/A	N/A	1 Flash every sec	N/A	Slave connected to Network		
		Fast flashing for 90 sec		Master smoke alarm exiting pairing mode		
		Single flash, followed by 3 flashes		N/A	Smoke alarm is battery activated	
N/A	N/A	1 Flash every 300 sec	N/A	Normal operation (Standby mode)		
		1 Flash every minute		Single beep every minute	Low battery indication (End of life)	
N/A	N/A	N/A	3 beeps every 4 sec (1 cycle) and repeats	Smoke detected (Wired Unit)		
			3 flashes every 4 sec (1 cycle) and repeats	Flashes once every 4 sec	3 beeps every 4 sec (1 cycle) and repeats	Smoke detected (Wireless Unit)
			N/A	Flashes once every 4 sec	3 beeps every 2 sec (1 cycle) and repeats	Smoke alarm interconnect (Triggered by wireless unit)
N/A	N/A	N/A	3 beeps every 2 sec (1 cycle) and repeats	Smoke alarm interconnect (Triggered by wired unit)		

TABLE 6

TESTING (NETWORK TEST ONLY)

This test is performed to check if:

- All the smoke alarm units on one network are all interconnected and working as it should be.
- To check if all smoke alarm units on a network are within the working range.
- Before testing, make sure that the smoke alarm is connected to the AC power supply and the Green LED is ON.

	User Input	Detector Response	Timeout
Step 1	Select one of the RF Smoke Alarm in the network: Hold the Network button for 10 -12 seconds.	Solid BLUE light	Master mode will time-out in 9 min.
Step 2	After visually check all other RF units.	Slow BLUE flashes	Time-out in 9 min.
Step 3	Stop Networking Mode: Go to the MASTER smoke alarm (the one in step1) and hold down the Network button and count 2 to 3 flashes of the BLUE light then release.	BLUE light on the MASTER will flash fast followed by the BLUE lights on all SLAVES turning OFF. This may take up to 90 seconds	Network is closed

TABLE 7