

USER MANUAL



Model: HSA/BC/RF10-PRO
Sealed Battery Operated Carbon
Monoxide Alarm With 10 Year Life



INTRODUCTION

- Wireless interconnection via RF 868MHz
- Test/silence button
- Low battery warning
- Self-test function

This instruction leaflet contains important information on the correct installation and operation of your carbon monoxide (CO) alarm. Read this leaflet fully before attempting installation and retain it for future reference.

SPECIFICATION

Power Supply:	"Lifetime Power" 3V Lithium Battery
Battery Life:	10 Year (Sealed)
Detection Type:	Electrochemical (CO)
Operating Temperature:	-10°C ~ 40°C
Ambient Humidity:	10% - 90%
Sound Level:	85 Decibels at 3m

Wireless Interconnection	
Radio Frequency:	868MHz
Interconnect Distance:	80m open area / 30m indoor area
Max Wireless Interconnect:	20 RF-PRO Fire Safety Devices



INSTALLATION

WARNING: This alarm should be installed by a competent person.

WARNING: The battery is non-replaceable, any attempt to replace the battery may cause electric shock and/or explosion.

WARNING: DO NOT attempt to open the alarm under **ANY** circumstances.

RF10-PRO devices can be wirelessly connected to other HiSPEC alarms of the same type, this alarm can be connected with up to 19 other devices in total, this alarm can also operate as a standalone unit.

RF WIRELESS INTERCONNECTION

To commence wireless pairing, all alarms must be switched on (*refer to COMMISSIONING section*).

On First Alarm

1. Press and Hold the Test/Silence button for 12 seconds until the red LED lights up.
2. The red LED will stay on for 30 seconds, this indicates the alarm is in pairing mode, additional alarms can only be paired when the first alarm is in pairing mode.

On All Additional Alarms

1. Press the Test/Silence button twice firmly with a pause in between the presses (*e.g PRESS-PAUSE-PRESS*) the red LED will flash 3 times.
2. The alarm is now paired.

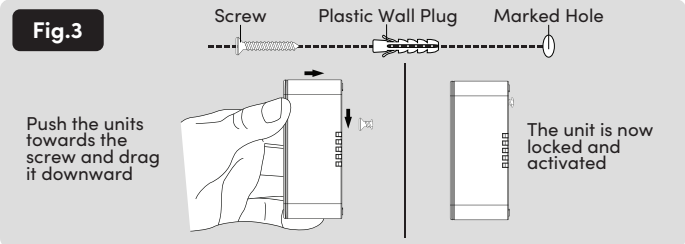
Note: The alarms can only be tested when the first alarm is out of pairing mode (*red LED no longer illuminated*).

Note: This interconnect feature enables the CO alarm to be used as a type A apparatus when interconnected with strobe lights and remote indicators either directly or via a relay base device.

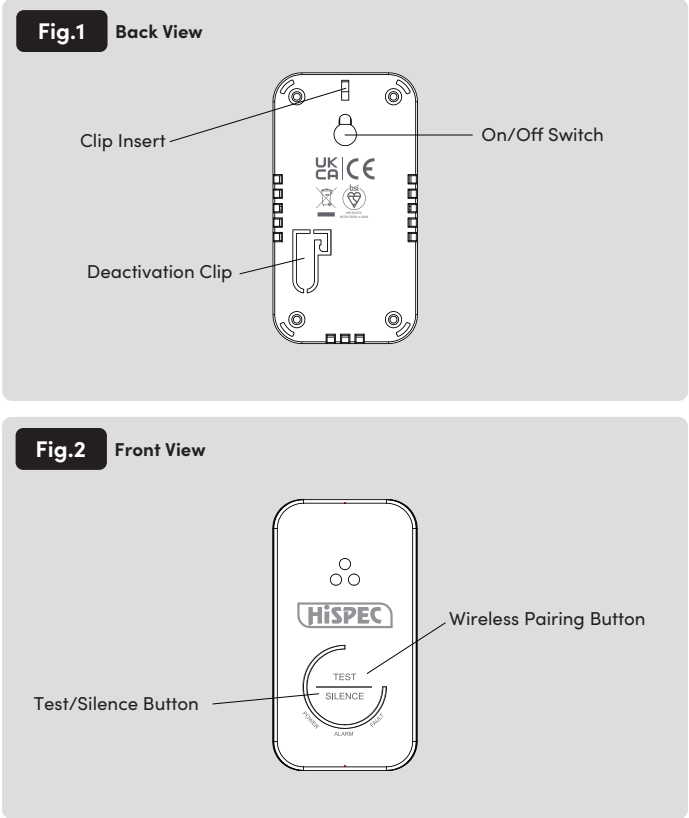
MOUNTING

Before installing the CO alarm, it is crucial to thoroughly review the provided instructions.

1. Choose a suitable location on the wall that complies with section **POSITIONING OF THE ALARM**.
2. Locate the alarm on the wall in its exact final position and mark the location of the screw hole.
3. Using a 5mm drill bit, drill the hole location. Be vigilant of any electrical wiring or pipework in the area.
4. Insert the provided wall plug into the marked hole and tighten the screw **DO NOT OVER TIGHTEN**.



DIAGRAM



POSITIONING OF THE ALARM

Ideally, a CO alarm should be installed in every room containing a fuel burning appliance. Additional apparatus may be installed to ensure that adequate warning is given to occupants in other rooms, by locating apparatus in:

- Remote rooms in which the occupant spend considerable time whilst awake and from which they may not be able hear an alarm from apparatus in another part of the premises and every sleeping room.

However, if there is a fuel burning appliance in more than one room and the number of CO alarms is limited, the following points should be taken into consideration when deciding on the best location:

- An apparatus should be located in a room containing a flueless or open-flued appliance.
- If there is an appliance in a room where people spend most time, an apparatus should be placed in that room.
- If there is an appliance in a room where people sleep, an apparatus should be placed in that room.
- In a bedsit, the apparatus should be placed as far from the cooking appliances as possible but near to where the person sleeps.
- If the appliance is in a room not normally used, such as a boiler room, the apparatus should be placed just outside the room so that the alarm will be heard more easily.

COMMISSIONING

STEPS TO ACTIVATE THE CARBON MONOXIDE ALARM:

1. Fill out the 'Date of Installation' Label located on the side of the alarm.
2. Align the keyhole shaped insert on the back of the CO alarm with the mounting screw on the wall/ceiling.
3. Hook the alarm onto the screw (*See figure 3*). The battery activates when hooked onto the screw.
Note: It is designed to provide a 10 year lifespan during regular operation.
4. The alarm is now securely attached to the surface, a red flashing LED will illuminate every 40-60 seconds to signal normal operation. If any other sequence of flashing LEDs occur, refer to the **OPERATING YOUR CO ALARM** section of this manual.
5. Press and **HOLD** the test button for 3 seconds, the alarm will sound and trigger any other interconnected units within 30 seconds.
Note: After the Test/Hush button has been pressed, the CO alarm will automatically stop test mode and silence after 30 seconds.

OPERATING YOUR CO ALARM

During normal operation the CO alarm performs a self-check test every minute.
Alarm Condition

LED LIGHT	CONDITION INDICATION	
	GREEN LIGHT (Power)	Alarm unit activation and power on
	RED LIGHT (Alarm)	High CO concentration warning
	YELLOW LIGHT (Fault)	Unit malfunction - End of life signal

Alarm Unit Activation and Power on
After the CO alarm is hooked on and installed, the green LED will flash 5 times. Then, the green LED will continually flash every 48 seconds to indicate power is on.

High CO Concentration Warning
When the apparatus detects dangerous levels of CO gas, it will give an alarm signal. The red LED will flash and the sounder will chirp 4 times simultaneously every 5 seconds.

CO LEVEL (PPM)	RESPONSE TIME (MIN)
50	60-90
100	10-40
300	<3

WARNING
This product may not alarm at low carbon monoxide levels. Individuals with medical problems may consider using warning devices which provide audible signals for carbon monoxide concentrations unit 30 PPM.

Carbon monoxide has a similar density to warm air and can be fitted in various locations. Apparatus located in the same room as a fuel-burning appliance:

- If the apparatus is located on a wall, it should be located at a height greater than the height of any door or window but at least 150 mm from the ceiling. If the apparatus is mounted on a ceiling, it should be at least 300 mm from any wall.
- The apparatus should be at a horizontal distance of between 1m and 3m from the potential source.
- If there is partition in a room, the apparatus should be located on the same side of the partition as the potential source.
- In rooms with sloped ceilings, the apparatus should be located at the high side of the room.

Apparatus located in sleeping rooms and in rooms remote from a fuel burning appliance:
The apparatus should be located relatively close to the breathing zone of the occupants.

AVOID THESE LOCATIONS

- Situations where the temperature may drop below -10°C or exceed 40°C for extended periods.
- In a damp or humid area
- Any area where high levels of dust, dirt or grease emissions could contaminate or clog the sensor.
- Where the air flow to the apparatus would be obstructed by curtains or furniture.
- Next to a door or window or in the path of air discharged from a furnace l air conditioning vent or ceiling fan.
- Outside the building
- Directly above a sink or cooker
- In or below a cupboard

The following conditions can result in transient CO situations in the home:

- Excessive spillage or reverse venting of fuel burning appliances caused by:
- Outdoor ambient conditions such as wind direction and/ or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles).
 - Negative pressure differential resulting from the use of exhaust fans.
 - Simultaneous operation of several fuel burning appliances competing for limited internal air.
 - Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
 - Obstructions in or unconventional vent pipe designs which amplify the above situations.
 - Extended operation of unvented fuel burning devices (range, oven, fireplace, etc.).
 - Temperature inversions which can trap exhaust gases near the ground.
 - Car idling in an open or closed attached garage, or near a home.

WARNING

This carbon monoxide alarm is designed for indoor use only. Do not expose to rain or moisture. It will not protect against the risk of carbon monoxide poisoning when the battery has drained. Do not open or tamper with the alarm as this could cause malfunction.

Installation of the apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

HUSH FUNCTION

While the CO Alarm is chirping, press and hold the Test/Silence button for 2 seconds. If the CO alarm detects a CO concentration under 30ppm, the alarm unit will be silenced for 10 hours. If the alarm unit did not silence, that means the CO Level is higher than 30ppm. Read section - **"WHAT TO DO IF THE ALARM SOUNDS"**.

LOW BATTERY SIGNAL

In case the battery is at the end of its life, the apparatus will sound a short chirp with a yellow LED flash simultaneously every minute. This low voltage warning will be given for at least 7 days. Under normal operating conditions, the batteries will last 10 years.

END OF LIFE SIGNAL

After 10 years operation, the yellow LED will flash 3 times and beep 3 times simultaneously every 48 seconds. Read below "Deactivating Unit".

UNIT MALFUNCTION

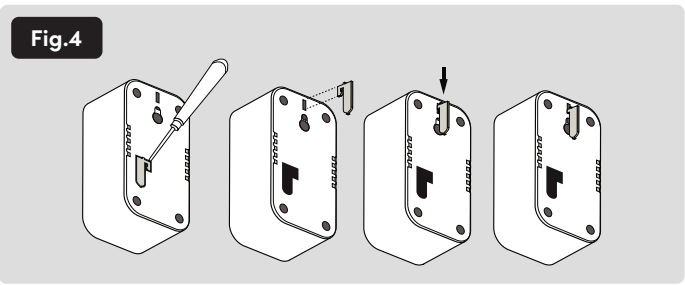
Your CO alarm performs an internal self-diagnosis every minute to make sure that it is functioning properly. In the rare event that your alarm malfunctions, the apparatus will sound a double short chirp and the yellow LED will flash simultaneously every minute. In this case, the alarm must be replaced.

Never ignore a CO unit's alarm. A true alarm is an indication of potentially dangerous levels of carbon monoxide. CO alarms are designed to alert you to the presence of carbon monoxide before an emergency, before most people experience symptoms of carbon monoxide poisoning, giving you time to resolve the problem. Read the section "What to do if the alarm sounds".

DEACTIVATING UNIT

If the CO alarm is confirmed to be faulty or at the end of its life, you may uninstall and deactivate the CO alarm by following these steps:

- Unhook the alarm unit from wall.
- Use a screwdriver to lever the deactivation clip out
- Fit the deactivation clip into the clip hole and push downward
- The alarm unit is now deactivated



TESTING YOUR CO ALARM

Test the unit by holding the test/silence button for 3 seconds. The sounder will chirp 4 times and the red LED will flash for 30 seconds. This will then emit a signal to test all other alarms that are connected to that home group.

SILENCE FEATURE

The silence function is applicable only to the low battery warning signal, end of life signal and fault warning signal.

To operate the silence feature, press the test button and hold for approximately 3 seconds. The alarm unit will enter a dormant period for 10 hours. After 10 hours, the CO alarm will resume its operation. You should be alert to the signal the alarm gives and replace the unit.

WHAT TO DO IF THE ALARM SOUNDS

If the alarm signal sounds:

1. Immediately move to fresh air – outdoors or by an open door/window. Do a head count to check that all persons are accounted for.
2. Where possible turn off all fuelled appliances and stop using them.
3. Call your emergency services if anybody is unwell or missing.
4. Do not re-enter the premises nor move away from the open door/window until emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
5. Call a qualified appliance technician to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

SYMPTOMS OF CO POISONING

The following symptoms may be related to CO poisoning:

SYMPTOMS OF CO POISONING	
35 ppm	The maximum allowable concentration for continuous exposure for healthy adults in any 8 hour period.
200 ppm	Slight headaches, fatigue, dizziness, nausea after 2–3 hours.
400 ppm	Frontal headaches within 1-2 hours, life threatening after 3 hours.
800 ppm	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 3 hours.
1600 ppm	Headache, dizziness and nausea within 20 minutes, Death within 1 hour.
6400 ppm	Headache, dizziness and nausea within 1-2 minutes.

Many cases of reported **CARBON MONOXIDE POISONING** indicate that while victims are aware they are not well. They become so disoriented they are unable to save themselves by either leaving the building or calling for assistance. Young children and household pets are typically the first affected.

THIS APPARATUS IS DESIGNED TO PROTECT INDIVIDUALS FROM THE ACUTE EFFECTS OF CARBON MONOXIDE EXPOSURE. IT WILL NOT FULLY SAFEGUARD INDIVIDUALS WITH SPECIFIC MEDICAL CONDITIONS. IF IN DOUBT CONSULT A MEDICAL PRACTITIONER.

MAINTAINING YOUR CO ALARM

Your alarm will alert you to potentially hazardous CO concentrations in your home when maintained properly. To maintain your alarm in proper working order, it is recommended that you:

- Test your alarm at least once a month.
- Clean the outside case regularly to prevent dust or dirt from building up in the slots. **DO NOT USE CLEANING AGENTS, BLEACH, POLISH OR ANY CHEMICALS.** Chemicals can permanently damage or temporarily contaminate the sensor. Simply wipe with a damp cloth OR a clean tissue.

Do not paint the CO alarm.

Note: If you will be staining or stripping wood floors or furniture, painting, wall-papering, or using aerosols or adhesives, remove the CO alarm to a remote location beforehand in order to prevent possible damage to or contamination of the sensor.

The following is a list of substances which, at high levels, can affect the sensor and may cause a nuisance alarm that is not a carbon monoxide alarm.

Methane, propane, iso-butane, ethylene, ethanol, alcohol, isopropanol, benzene, toluene, ethyl acetate, hydrogen, hydrogen sulfide, and sulfur dioxides. Also most aerosol sprays, alcohol-based products, paints, solvents, adhesives, hair sprays, after shaves, perfumes and some cleaning agents.

END OF UNIT LIFE

With normal use, the battery is expected to last at least 10 years. However, battery life will be reduced if the apparatus remains in alarm for long periods of time.

The apparatus must be replaced when a fault warning signal is given.

Note: BATTERY SEALED-IN NOT FOR REPLACEMENT

GUARANTEE INVALIDATED IF TAMPERED WITH. IF THE UNIT IS FAULTY PLEASE RETURN IT TO YOUR ORIGINAL SUPPLIER WITH YOUR PROOF OF PURCHASE.

GUARANTEE

This alarm is guaranteed under normal use and service for 5 years (including battery) from the date of purchase. The company will not be obligated to repair or replace parts which are found to need repair because of misuse, damage or alterations present after the date of purchase. If the alarm is proven to be faulty, within the guarantee period, it must be returned to where it was purchased, carefully packaged, with the fault clearly stated along with proof of purchase. The liability of the company arising from the sale of this alarm shall not in any case exceed the cost of replacement of the alarm and in no case shall the company be liable for consequential loss or damages resulting from the failure of the alarm.

	
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This does not affect your statutory rights. This alarm is only suitable for residential dwellings and is not suitable for commercial or industrial use.

Waste electrical products should not be disposed of with normal household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. New regulation will encourage the recycling of Waste from Electrical and Electronic Equipment (European "WEEE Directive" effective August 2005).



Information regarding substances of very high concern (SVHC) according to the Regulation 1907/2006/EC (REACH)

This product contains Lead element, CAS Number: 7439-92-1

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