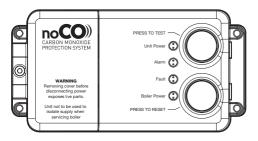


Control Unit Installation Guide Part No: 7211366



WARNING: DO NOT leave this manual with end user! Installer: Please keep manual for future reference.

IMPORTANT: Install this product first. Complete wireless interlinking (pairing) of CO alarms to the Control Unit before installing the alarms.

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INTRODUCTION

This NoCo Carbon Monoxide Safety System is designed for use with gas and oil fired domestic boilers and the NoCO range of Wireless Carbon Monoxide Alarms.

This system is particularly suitable for domestic gas and oil fired heating systems in which the boiler flue has been enclosed within a void or where the appliance is within a living space.

What is a Void?

A void, as related specifically to this product's objective when used with the Void Alarm system component, is a hidden enclosed space within the fabric of a domestic building through which passes a flue from a boiler, either your own or a flue from an adjacent property.

This NoCO Control Unit can be wirelessly interlinked with up to 49 NoCO Carbon Monoxide Alarms which will detect the presence of Carbon Monoxide. The alarms can be Void Alarms, Room Alarms or a mix of both.

When installed with Carbon Monoxide Alarms from the NoCO range, this NoCO Control Unit will provide additional safety by switching off the boiler in the event of a dangerous carbon monoxide leak.

WARNING: This NoCO Control Unit will only respond to alarm messages from NoCO Alarms. This NoCO Control unit must be linked to NoCO alarm unit(s) to create a Carbon Monoxide Protection System.

Other Carbon Monoxide System components from NoCO: Order Code: 7211367 Wireless Carbon Monoxide Void Alarm Order Code: 7211368 Wireless Carbon Monoxide Room Alarm

Please refer to the NoCO Control Unit User Guide for information about the dangers of carbon monoxide.

INSTALLATION PRECAUTIONS

Precautions for installation:

The NoCO Control Unit must be installed in accordance with the manufacturer's instructions and the regulations in force. Read the instructions fully before installing or using the device.

WARNING: This product should only be installed by a person competent in electrical installation and in accordance with the requirements of BS7671. Failure to install the product correctly could result in electric shock.

Â

WARNING: When the power is on, do not touch the terminals, exposed conductors or electrical components.



 Δ WARNING: Isolate the electrical supply prior to commencing any work.



WARNING: This NoCO Control Unit is not to be used to isolate mains supply during installation or when servicing a boiler.

To ensure safety of installation, complete functional and safety testing must be completed after installation. Only engage the NoCO Control Unit after all the testing has been completed to confirm safe operation.

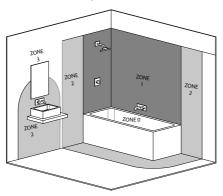
IMPORTANT: Install the NoCO Control Unit first, then wirelessly interlink (pair) CO alarms to the Control Unit prior to positioning and installation of alarms (see page 9).

POSITIONING

The NoCO Control Unit should be securely mounted to a flat surface using the 4 fixing locations provided. The unit should be located in an area where it will not be subjected to any excesses in temperature or humidity.

The NoCO Control Unit has an ingress protection rating of IPXXD. It should be located with reference to the zoning requirements set out in the current edition of electrical regulations (BS7671).

Zoning requirements for a Bathroom or similar are shown below for information only.

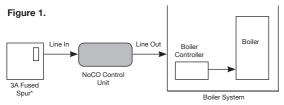


In accordance with electrical regulations (BS7671), the NoCO Control Unit should **not** be installed in the following zones:

Zone 0 Zone 1 Zone 2 The schematic diagram below (Fig 1) shows where the NoCO Control Unit should be positioned in the boiler system's wiring.

Caution: NoCO Carbon Monoxide alarms should not be installed in damp or humid environments eg: bathrooms.

The Control Unit must be wired between the fused spur and any boiler control circuitry. This is to ensure that all power is removed from the boiler if the Control Unit is triggered.



*The device must be connected via a fused spur or switched fused supply (the disconnect switch needs at least 3mm separation between poles). This spur / switch needs to be fused at 3A (F3AH 230VAC or T3AH 230VAC).

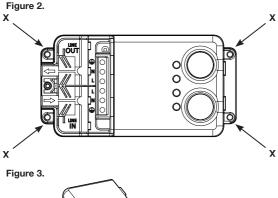
INSTALLATION

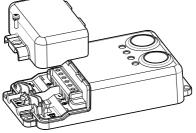
See Figures 2 and 3 on the next page:

- Secure the unit to the wall using the 4 fixing locations (X) (Fig 2). Use fixings appropriate to the substrate and take care to identify any hidden pipes or wires before drilling. Note: Adhesives, cable ties or similar are not to be used.
- Remove the terminal cover by unscrewing the retaining screw (Fig 3).
- Using a minimum of 3 core 0.75 mm² PVC sheathed cable (approved to EN 60227) connect the line-in (from the mains supply) and the line-out (to the boiler system) connections to

the terminal block as labelled, ensuring the cable is secured by the cable clamp (see Fig 2).

WARNING: An earth connection must be provided.





The boiler earth is connected via this device. Failure to provide an earth connection could result in electric shock or damage to the boiler and all connected equipment.

- Replace the terminal cover and secure with the retaining screw and washer provided.
- 5. Switch on the power to the NoCO Control Unit at the fused spur / switch. The Unit Power LED (green) will illuminate. The Alarm LED (red) and Fault LED (amber) will flash twice to show the unit is working correctly. Note: This will occur only at the initial power on stage.
- The alternating flash of the Alarm LED (red) and the Fault LED (yellow), indicates that the NoCO Control Unit is ready for the carbon monoxide alarms to be interlinked ("paired").

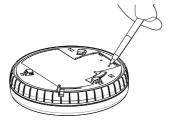
INTERLINKING ("PAIRING") THE CARBON MONOXIDE ALARMS TO THE NºCO CONTROL UNIT

Once the NoCO Control Unit is installed, temporarily place all the NoCO alarms within reach of the NoCO Control Unit.

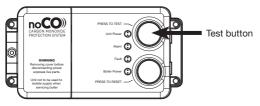
IMPORTANT: It is not recommended to wirelessly interlink (pair) NoCO Room Alarms where there are fuel burning appliances, other than the boiler, in the property to avoid the risk of false boiler shut off.

Read the following instructions carefully prior to "pairing" the NoCO alarms to the NoCO Control Unit. The "Pair" button is found on the back of the NoCO alarm (Fig 4).

Figure 4.



 Using a biro, press the "Pair" button of the NoCO alarm once (one short press). The red LED on the back of the alarm will flash and then illuminate for 5 seconds. Within this 5 seconds press the test button on the NoCO Control Unit (see below).



- The red LED on the back of the alarm will start to flash, confirming that the pairing has been successful.
- The Alarm LED (red) and Fault LED (yellow) on the NoCO Control Unit will flash initially, but once the Control Unit has completed the initial pairing process, the LEDs on the Control Unit will stop flashing.
- Repeat Steps 1 3 for additional alarms. Note: The Alarm LED (red) will flash briefly each time you press the Control Unit test button during the pairing process.*
- 5. Fit the baseplates to the NoCO alarms.
- Once all the units are interlinked, the network will take a few minutes to establish. It is recommended to WAIT AT LEAST FIVE MINUTES BEFORE TESTING THE UNITS (see below). Note, larger networks will take longer to establish.
- Press the reset button on the NoCO Control Unit which will activate the NoCO Control Unit to standby mode. The Control Unit "Boiler Power" LED (green) will illuminate, showing there is mains power to the boiler.

*Depending on how long the pairing of additional alarms takes, it is possible that the Control Unit will flash the Fault LED (yellow). This is normal and will stop once steps 5 - 7 are complete.

TO RESET AN ALARM TO FACTORY SETTINGS

In order to ensure that an alarm is ready for pairing, or if you wish to ensure that you are creating a new network, you can use the following method to return the alarm to its factory setting.

Caution: This will "unpair" an alarm from any existing network and should only be carried out by a qualified installer.

To reset an individual alarm, using a ballpoint pen or opened paper clip, press the 'pair' button briefly and then press and hold the 'pair' button until the red LED goes out (see Fig 4). It will then flash, signalling that it is ready to be paired again. Repeat this process for each alarm.

TO TEST THE NoCO ALARMS ARE CORRECTLY "PAIRED" AND HAVE CREATED A NETWORK

Note: This test will confirm the pairing of the units into a network, but will not switch off the boiler.

A: Testing the NoCO alarms:

In order to be able to see the Control Unit indicators at the same time as pressing the test button on the NoCO alarms, it is likely you will need two people to perform this operation.

- 1. Place the NoCO alarm onto its base plate.
- 2. Press the test button on the NoCO alarm.
- All paired NoCO alarms will sound a pattern of 2 x 4 short beeps and the Alarm LED (red) on the NoCO alarm will flash.
- The Alarm LED (red) on the NoCO Control Unit will flash for 60 seconds. If the Alarm LED on the NoCO Control Unit does

not flash, the alarms have not been paired. Please repeat the "pairing" procedure above.

B: Testing the NoCO Control Unit:

- 1. Press the test button on the NoCO Control Unit.
- The Alarm LED (red) on the NoCO Control Unit will flash once per second for 10 seconds.
- All paired NoCO alarms will sound a pattern of 2 x 4 short beeps (but the red Alarm LED on the NoCO alarms will not flash).

If the NoCO Alarm and/or NoCO Control Unit does not test:

- 1. Check the NoCO alarm operation as indicated in the Alarm Installation and User Guide.
- 2. Check troubleshooting guides in both product User guides.

For assistance, please contact your Gas Safe registered installer. If you are unable to resolve the issue, call the NoCO Technical Helpline on 0844 241 2504 or see further information at www.no-co.co.uk.

Installing the NoCO alarms

Once the NoCO alarms have been tested with the NoCO Control Unit, the NoCO alarms can be installed into position.

POSITIONING THE NoCO VOID ALARM

Once the NoCO alarms have been tested with the NoCO Control Unit, the NoCO alarms can be installed into position.

WARNING: This NoCO alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas, and so additional carbon monoxide Room Alarms are recommended particularly if other fuel burning appliances are located in the home.

Where should the NoCO Void Alarm be installed?

The NoCO Void alarm has been specifically designed to enable the detection of an escape of carbon monoxide gas from a boiler flue within a void space within your home.

One alarm should be fitted into each open void space.

If you are in any doubt that the void is clear and it cannot be reasonably determined, reasonable precaution must be taken by fitting additional void alarms – at least one every 2 metres along the expected path of the flue.

Where not to put the NoCO Void Alarm:

Whilst the location of the NoCO Void Alarm is influenced by the run of the void, care is required in selecting the location of Void Alarm unit.

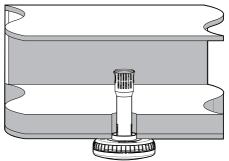
The NoCO Void Alarm should not be installed:

- In an enclosed space (for example in a cupboard or behind a curtain).
- Where it can be obstructed (for example by furniture).
- · Directly above a sink.
- · Next to a door or window.
- Next to an extractor fan.
- · Next to an air vent or other similar ventilation openings.
- In an area where the temperature may drop below -10°C or exceed 40°C.
- . Where dirt and dust may block the sensor.
- In a damp or humid location (for example in a bathroom).
- In the immediate vicinity of a cooking appliance.

FITTING THE NoCO VOID ALARM

 Drill a 50mm / 2" diameter hole in the wall or ceiling, fully into the void behind.

Figure 5.



- Steps must be taken to ensure that cabling, boiler flue or other utilities will not be damaged by the drill.
- Ensure the hole is of the minimum diameter throughout to accommodate the full length of the probe and that the sensor (which is positioned within the end of the probe) protrudes through any insulation present.
- IMPORTANT: Ensure there is a minimum clearance of free air around the top of the probe containing the sensor.
- Offer the mounting plate up to the ceiling, ensuring the round boss on the back of the mounting plate locates in the hole previously drilled.
- 3. Secure the mounting plate to the ceiling using 2 pan head

screws (not supplied) and fixings appropriate to the material to which the alarm is being attached.

- Locate the NoCO alarm on the mounting plate, by putting the probe through the hole and rotating clockwise to lock into position. This will automatically activate the battery.
- 5. Test the installation (see page 18).

Once all the alarms are installed press the reset button on the NoCO Control Unit. This will activate the NoCO Control Unit and put it in standby mode. The Control Unit "Boiler Power" LED (green) will illuminate, showing there is mains power to the boiler.

POSITIONING THE NoCO ROOM ALARM

Once the NoCO alarms have been tested with the NoCO Control Unit, the NoCO alarms can be installed into position.

WARNING: This NoCO alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas, and so additional Carbon Monoxide Room Alarms are recommended particularly if other fuel burning appliances are located in the home.

In which room(s) should the NoCO Room Alarm be installed?

Ideally, a carbon monoxide alarm should be installed in every room containing a fuel burning appliance.

Note: It is not recommended to wirelessly interlink (pair) NoCO Room Alarms where fuel burning appliances (other than a boiler) are situated, to avoid the risk of "nuisance" boiler shut off.

Additional alarms may be installed to ensure that adequate warning is given for occupants in other rooms, by locating a NoCO Room Alarm in:

- Remote rooms in which the occupant(s) spend considerable time whilst awake and from which they may not be able to hear an alarm from a NoCO alarm 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 NoCO Room Alarms is limited, the following points should be considered when deciding where best to put the NoCO Room Alarms:

- Locate the NoCO Room Alarm in a room containing a flueless or open-flued appliance, and
- Locate the NoCO alarm in a room where the occupant(s) spend most time.
- If the domestic premises is a bedsit (a single room serving as both sitting and bedroom) then the NoCO Room Alarm should be put 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 (for example a boiler room), the NoCO Room Alarm should be put just outside the room so that the alarm may be heard more easily.

Where in the room should I place a NoCO Room Alarm?

For NoCO Room Alarms located in the same room as a fuelburning appliance:

This NoCO Room Alarm must be mounted on the wall in accordance with the instructions:

- a) The NoCO Room Alarm should be at a horizontal distance of between 1m and 3m from the potential source.
- b) If there is a partition in a room, the NoCO Room Alarm should be located on the same side of the partition as the potential source.

c) NoCO Room Alarms in rooms with sloped ceilings should be located at the high side of the room.

In addition to the above the following must be observed:

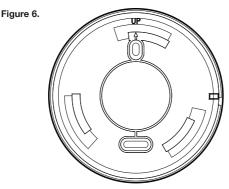
- a) It should be located between 150mm and 300mm from the ceiling.
- b) it should be located at a height greater than the height of any door or window.

For NoCO Room Alarms located in sleeping rooms and in rooms remote from a fuel burning appliance the alarm should be located relatively close to the breathing zone of the occupants.

Where not to put the NoCO Room Alarm:

- In an enclosed space (for example in a cupboard or behind a curtain).
- Where it can be obstructed (for example by furniture).
- · Directly above a sink.
- Next to a door or window.
- Next to an extractor fan.
- · Next to an air vent or other similar ventilation openings.
- In an area where the temperature may drop below -10°C or exceed 40°C.
- · Where dirt and dust may block the sensor.
- In a damp or humid location (for example in a bathroom).
- In the immediate vicinity of a cooking appliance.

FITTING THE NoCO ROOM ALARM



- Position the baseplate on the wall, ensuring the arrow marked on the baseplate is pointing upwards.
- Secure the baseplate to the wall using 2 pan head screws (not supplied) and fixings appropriate to the material to which the alarm is being attached.
- Locate the NoCO Room Alarm on the baseplate and rotate clockwise to lock into position. This will engage the battery power.
- 4. Test the installation (see page 18).

TESTING THE NoCO PROTECTION SYSTEM WILL SWITCH OFF THE BOILER IN THE PRESENCE OF A CARBON MONOXIDE LEAK

- Press and hold the test button on the NoCO Control Unit for more than 2 seconds and the boiler power will switch off.
- Press the reset button on the NoCO Control Unit to turn the boiler power back on, but the boiler will remain on.
- Test each NoCO alarm individually the Alarm LED (red) will flash on the NoCO Control Unit for 60 seconds.

Note: the system can be repeatedly tested – the NoCO Control Unit will only "lock out" the boiler in the presence of carbon monoxide.

The NoCO alarms should be regularly tested as recommended in the NoCO alarm's user guide.

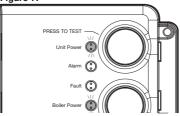
The NoCO Control Unit should be tested weekly.

Control Unit Operation:

In normal operation (standby mode):

Unit Power (Green) and Boiler Power (Green) - illuminated

Figure 7.



WHAT WILL HAPPEN IN THE EVENT OF A CARBON MONOXIDE LEAK BEING DETECTED?

In the event that a NoCO alarm detects carbon monoxide, the system will enter alarm mode. The Alarm LED (red) on the NoCO Control Unit will flash continuously, once per second.

The boiler will switch off and User Lock Out will set.

The system will activate:

- After a period of between 60 and 90 minutes when exposed to a minimum of 50ppm* of carbon monoxide.
- After a period of between 10 and 40 minutes when exposed to a minimum of 100ppm* of carbon monoxide.
- Within 3 minutes when exposed to a minimum of 300ppm* of carbon monoxide.

The Alarm LED (red) on the Control Unit will flash continuously, once per second.

All NoCO alarms will sound a pattern of 4 loud beeps continuously and the Alarm LED (red) of the NoCO alarm which detected carbon monoxide will also flash.

*ppm = parts per million. This is a measure of the concentration of carbon monoxide in the air. The above alarm trigger points should be viewed in the context of the following table.

Concentration	Symptoms
35 ppm	Headache and dizziness within six to eight hours of constant exposure.
100 ppm	Slight headache in two to three hours.
200 ppm	Slight headache within two to three hours; loss of judgement.
400 ppm	Frontal headache within one to two hours.
800 ppm	Dizziness, nausea, and convulsions within 45 min; insensible within two hours.
1,600 ppm	Headache, dizziness, and nausea within 20 min; death in less than two hours.
3,200 ppm	Headache, dizziness and nausea in five to ten minutes. Death within 30 minutes.
6,400 ppm	Headache and dizziness in one to two minutes. Convulsions, respiratory arrest, and death in less than 20 minutes.
12,800 ppm	Unconsciousness after 2–3 breaths. Death in less than three minutes.

If the level of carbon monoxide detected is less than 200ppm, it is possible to temporarily silence the alarm.

Remote Silence: Pressing the test button on any alarm which is does not have a flashing Alarm LED (red) will silence ALL NoCo alarms EXCEPT the instigating alarm (the alarm that has detected the presence of carbon monoxide) for 2 minutes. This allows you to locate the potential source of carbon monoxide.

Local Silence: Pressing the test button on the instigating alarm, identified by a flashing Alarm LED (red) will silence all units for 3 minutes.

In all cases a maximum of 2 silence periods is permitted.

When the carbon monoxide gas dissipates, the NoCO alarms will silence automatically. The Alarm LED (red) on the NoCO Control Unit will emit a short flash once every 10 seconds to advise that there has been a carbon monoxide leak.

USER LOCK OUT

When the boiler is switched off as a result of a carbon monoxide leak, a Gas Safe engineer will be required to reset the boiler in order to switch it back on.

The Gas Safe engineer must, before resetting the boiler, fully investigate the cause of the carbon monoxide alarm event and take all appropriate measures to remove any further risk.

Call the NoCO Technical Helpline for assistance on 0844 241 2504 or visit www.no-co.co.uk for further information.

WARNING: All fuel burning appliances should be serviced regularly, in addition to the boiler, by a Gas Safe registered engineer.

TROUBLESHOOTING

The Unit Power LED is not illuminated on the NoCO Control Unit	Check the mains power to the NoCO Control Unit and that it has been installed correctly.
The carbon monoxide alarms do not sound when the test button on the NoCO Control Unit is pressed	 The NoCO alarms are not paired with the NoCO Control Unit. Repeat the pairing process, see Interlinking ("Pairing") the carbon monoxide alarms to the NoCO Control Unit. In order to ensure that an alarm is ready for pairing see section 'To Reset an Alarm To Factory Settings' to return the alarm to its factory setting. Caution: This will "unpair" an alarm from any existing network and this sequence should only be carried out by a qualified installer.
The Alarm LED (red) is flashing	 If the red LED is flashing every second and the carbon monoxide alarms are sounding, the system is in alarm mode, warning of a carbon monoxide (CO) leak, and the boiler will shut off. If the red LED is flashing every 10 seconds and the NoCO alarms are no longer sounding, it is inicitating that there has been a carbon monoxide leak which has now dissipated. The NoCO alarm flashing the red Alarm LED has sensed carbon monoxide. Contact your Gas Safe registered installer to arrange for your boiler to be reset. Ensure all fuel burning appliances are checked and serviced.

The Fault LED (yellow) is illuminated	 1 flash every 10 seconds indicates that the NoCO Control Unit temporarily lost network connectivity with a particular unit but connectivity is now re- established. Press the Reset button to reactivate the boiler. 1 flash every second indicates a fault on the network. Are any NoCO alarms also indicating a fault? Yes - Refer to the NoCO alarm instruction manual, your NoCO alarm has a fault, contact NoCO Technical Support. No - Remote Network Fault. Contact NoCO Technical Support. 3 flashes every 3 seconds indicates a low battery on a NoCO alarm. Refer to the NoCO alarm User Guide, as this fault may be resettable. 1 flash every 3 seconds indicates a NoCO alarm has been removed from its baseplate. Check all NoCO alarms are fitted correctly. 4 flashes every second indicates an internal network fault. Contact NoCO Technical Support.
The boiler is switched off and the Alarm LED (red) is flashing	 A carbon monoxide leak has been detected. Keep calm and open the doors and windows to ventilate the property. Stop using all fuel burning appliances and ensure, if possible, that they are turned off. Evacuate the property leaving the doors and windows open. Contact your gas or other fuel supplier on their emergency number. Remember, your boiler will switch off if the interlinked carbon monoxide alarms detect carbon monoxide. However, it may be another fuel burning appliance causing the carbon monoxide leak, so ensure all fuel burning appliances are checked and serviced.

DISPOSAL

Waste electrical products should not be disposed of with regular household waste.

Please recycle where facilities exist. Check with your local authority or retailer or contact the NoCO Technical Helpline for recycling/disposal advice as regional variations apply.

The NoCO Control Unit must be decommissioned before disposal by a person competent in electrical installation.

WARNING: Do not attempt to open. Do not burn.

TECHNICAL SPECIFICATION:

NoCO Carbon Monoxide Protection System NoCO CONTROL UNIT Part number: 7211366

230V~50Hz, 5A To suit: 0.75mm²- 1.00mm² 3 core cable IPXXD

Independently tested to: EN 60335-1:2012 EN 301489-1 v1.6.1 (2005-09) EN 301489-3 v1.4.1 (2002-08) EN 300220-2 v2.3.2 (2010-12) Complies with relevant EMC, Electrical Safety & Radio Regulations. Tel: 0844 241 2504

Visit www.no-co.co.uk

Open Monday - Friday 8am - 6pm

Saturdays & Bank Holidays 8:30am - 2pm

We are closed on Christmas Day & New Year's Day

Please note calls may be monitored or recorded

NoCO, a registered brand of Baxi Heating UK Ltd, Brooks House, Coventry Road, Warwick CV34 4LL

NOTES