



Gallagher

Dual Cabinet

Installation Note

Gallagher Dual Cabinet: C20010X (6 variants)



ATTENTION: This equipment contains components that can be damaged by electrostatic discharge. Ensure both you and the equipment are earthed before beginning any servicing.

1 Introduction

The Gallagher Dual Cabinet is available in 6 variants to meet specific market requirements. These are:

Dual Cabinets without power supply:

- C200103 Gallagher Dual Cabinet without Power Supply, Charcoal (non UL1076 compliant)
- C200104 Gallagher Dual Cabinet without Power Supply, Cool Grey (non UL1076 compliant)
- C200107 Gallagher Dual Cabinet without Power Supply, Cool Grey (UL1076 compliant)
- C200108 Gallagher Dual Cabinet without Power Supply, Charcoal (UL1076 compliant)

Dual Cabinets including power supply:

- C200105 Gallagher Dual Cabinet with 8A Power Supply, Cool Grey (non UL1076 compliant)
- C200109 Gallagher Dual Cabinet with 8A Power Supply, Charcoal (non UL1076 compliant)

The Gallagher Dual Cabinet is a secure metal enclosure for access control and burglar alarm equipment. There are two PCB locations in the Cabinet, unlike the smaller Gallagher Cabinet which only has one PCB location, therefore doubling the housing capacity for any combination of Gallagher PCBs from the Gallagher Cabinet. When the PCBs are installed in accordance with the installation instructions, optical tamper protection is provided for both the front and rear of the Cabinet. The Gallagher Dual Cabinets (C200105 and C200109) include an installed 8 Amp power supply which has visible indicators for mains and battery power monitoring.

The Cabinet can house a number of Gallagher PCBs, as well as a power supply (with monitoring board) and standby battery/batteries. A Gallagher Controller 6000 or Gallagher HBUS 16 In 16 Out Board (C300688) can be mounted directly into the Cabinet.

Note: GBUS is not supported from version vEL9.10 of Command Centre.

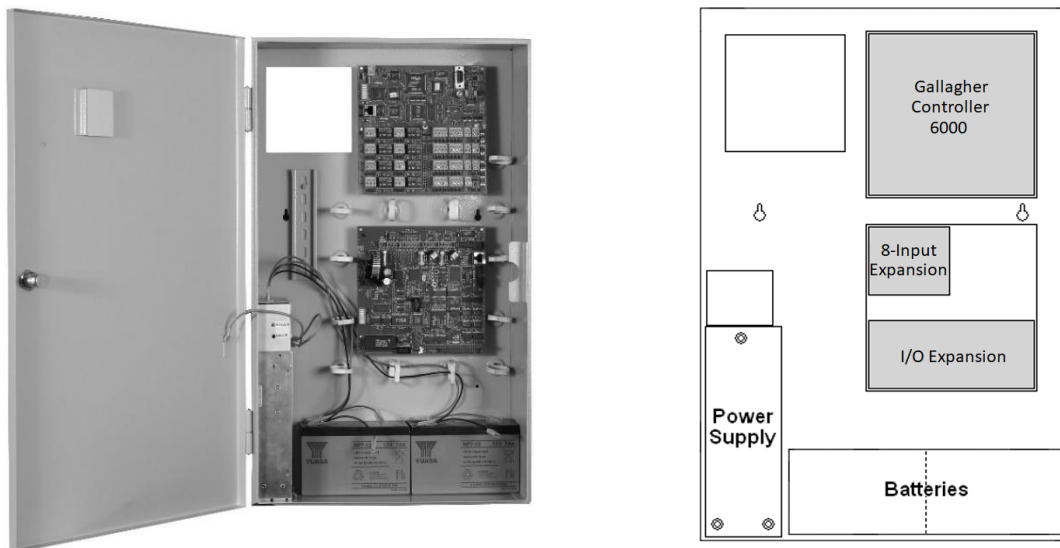
A Gallagher Mounting Plate is required when fitting one of the following Gallagher expansion PCBs:

- Gallagher HBUS 8 In 2 Out Door Module (C300660)
- Gallagher HBUS 8 In 4 Out Board (C300684)
- Gallagher HBUS 8 In Board (C300680)

The following photo demonstrates how the interior of the Gallagher Dual Cabinet looks when first unpackaged, (i.e. what items are already fitted).



The following diagram is an example of how the Gallagher Dual Cabinet can accommodate a number of Gallagher PCBs.



Note: Beware that mounting any third party hardware that contains LEDs in the Gallagher Dual Cabinet may affect the operation of the front tamper.

2 Before you begin

2.1 Shipment Contents

Check the shipment contains the following items:

Note: The contents of your shipment will differ slightly depending on whether you ordered the Gallagher Dual Cabinet with the power supply unit installed, or without.

Already fitted in the Cabinet:

- 1 x Earth wire (part number 2K0776)
- 1 x Rear Tamper Light Pipe wrapped with reflective label and grommet (part numbers 4G0671, 3B1896 and 2M1467)
- 16 x Nylon Spacers (part number 2M1567)
- 1 x Internal and External Label set (part numbers 3B1618 and 3B1645)
- * 1 x Power Supply complete with Monitoring Board, secured with nut and washer (part numbers 2A9305, 4T1978 and 4T1946)
- * Battery wires (part numbers 2K0774 and 2K0775) connected to power supply

* These two items are only supplied if you ordered the Cabinet **with** the power supply.

Supplied in plastic bag taped inside the Cabinet:

- 14 x Cable Saddles (part number 2M1468)
- 1 x Rear Tamper Label (part number 3B3833)
- 16 x M3x8 screws (part number 5D2844)
- 6 x #10X1.5" self tap screws (part number 5D2802)
- 4 x 4k7 terminating resistors
- 2 x Keys (part number 4G4713, which includes the lock in Cabinet door)
Note: The keys are in a separate plastic bag from the other items listed and are taped inside the hole on the back of the Cabinet.

Supplied in plastic bag taped to the outside of the Cabinet:

- 1 x Gallagher Dual Cabinet Installation Note (Document Code 3E0694)

IMPORTANT:

- Batteries are NOT provided. 12V batteries MUST be used. We recommend 12V 7AH Sealed Acid batteries, (e.g. *Yuasa NP7-12*, *CSB Battery Company GP1270*, etc.). A maximum of four batteries can fit in the space in the Cabinet.
- You will need to purchase locally a standard IEC mains lead to fit the power supply.

2.2 Mounting the Gallagher Dual Cabinet

The Gallagher Dual Cabinet should be installed in a secure, internal situation. The security of the installation ultimately depends on the way you install the Gallagher Dual Cabinet, however it is considered to be 'high-security' in its own right, and need not rely on being in a high security room for protection.

2.3 Cabling and Conduit

The system or building cabling should be carried out prior to the installation of a Gallagher Dual Cabinet. The type of cable and the number of cables that enter the Cabinet will depend on the type of board(s) installed. (Refer to the appropriate board Installation Note.) The back plate of the Cabinet has a large square cut-out which fits over a wall socket/power point.

If conduit is fitted, use the knockouts on each side of the Cabinet. It is recommended conduit is connected to the Gallagher Dual Cabinet using "conduit adapters".

2.4 Cabinet Mains Supply

The Gallagher Dual Cabinet can be fed a mains power supply via either of two methods:

- If a more secure cabinet mains supply is desirable and local electrical standards allow it, then the Gallagher Dual Cabinet may be placed over a standard electrical outlet.
- If accessible mains supply isolation is required, beyond that of the switchboard isolation point (e.g. circuit breaker), then a socket outlet adjacent to the cabinet should be installed. Connection of the cabinet power supply to the socket outlet shall be made by appropriate plug and appliance cable and be routed through one of the cabinets pre-punched conduit holes. The mains appliance cable should be protected from damage by way of cable grommet or gland such as an Icotek QVT32.

2.5 Tamper Detection

Gallagher Controller PCBs, which mount within the Gallagher Dual Cabinet, are fitted with two optical tamper detectors. If only one Controller is mounted in the Cabinet, it must be mounted in the top PCB location (as shown in the diagram on page 2).

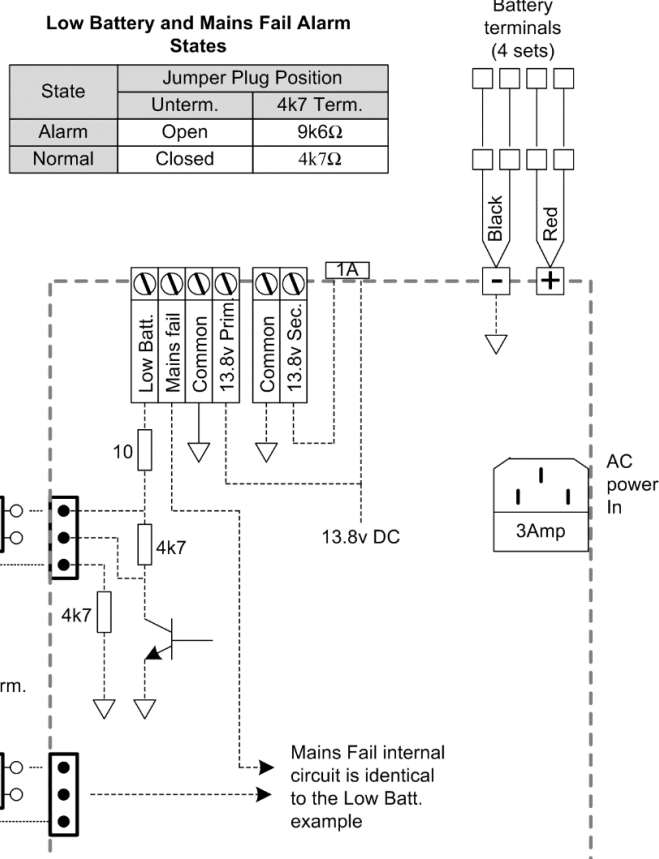
The first detector operates through a light pipe in the back face of the Gallagher Dual Cabinet. This detector senses if anyone attempts to remove the Gallagher Dual Cabinet from its mounting position.

The second detector operates via the reflecting plate on the inside of the Cabinet door. This detector senses when the Cabinet door is opened.

2.6 Wiring

The Gallagher Dual Cabinet already has an earth wire connected between the Cabinet and the door (and power supply if applicable). If this wire is disconnected during installation, please ensure that it is reconnected.

The following diagram shows connection details for the power supply:



3 Installation Instructions

The instructions for installing a Gallagher Dual Cabinet have been split into the following procedures:

1. Installing the Gallagher Dual Cabinet
2. Installing Gallagher PCBs

3.1 Installing the Gallagher Dual Cabinet

1. Unlock and open the Gallagher Dual Cabinet door.
2. Remove the Cabinet door which is keyholed onto the Cabinet.
Note: Removing the door can only be done once it is opened to 90° or beyond.
3. It is preferable for optimal work height that the cable exit the wall and enter the Cabinet at eye height or just below, (i.e. approximately 1.6m from the floor).
Make the cable entry hole in the back plate of the Cabinet.
4. Mark the position of the two mounting keyholes, on the surface that you intend to secure the Cabinet to.
Note: This allows the Cabinet to be supported while you mark the mounting holes provided around the periphery of the Cabinet. (If appropriate, drill pilot holes.)
5. Mark on the wall where the tamper hole is in the Cabinet, for the Gallagher Controller.
6. Mount the reflective label on the wall and ensure it is firmly stuck in place.
This white, adhesive reflective label (provided with the Cabinet) must align with the light pipe located in the back of the Cabinet.

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7. Secure the Cabinet to the wall using the self tap screws provided (#10x1.5"), using a minimum of four, or all six.
The Gallagher Dual Cabinet must be tight against the wall. This ensures the distance between the reflective label and the optical tamper detector is kept to a minimum.
 8. Does the Cabinet have a power supply installed?
If **yes**, go to Step 9.
If **no**, go to Step 11.
 9. Wire in the mains power using a standard IEC mains lead connected to the power supply.
 10. Connect any batteries using the battery wires that are connected to the power supply. The red wire should connect to the red (positive) terminal and the black wire should connect to the black (negative) terminal.
Notes:
 - The power supply will operate on batteries alone. To check if the power supply is operating, look for the green LED.
 - Ensure that only 12V batteries are used.
 11. Install the PCBs into the Cabinet.
(Refer to the "2. *Installing Gallagher PCBs*" section next for details.)
 12. Wire in the data communications.
 13. Finally, re-install the Cabinet door ensuring the green earth lead is refitted to the door, before closing and locking it.
The Gallagher Dual Cabinet is now installed.

3.2 Installing Gallagher PCBs

The following procedures are involved when installing Gallagher PCBs:
(Refer to the appropriate Gallagher Installation Note for detailed instructions.)

1. It is recommended that the first PCB to be installed is a Gallagher Controller. Refer to the Installation Note provided with the Controller for further detail.
2. Put in as many cable saddles as you require.
The cable saddles provided with the Cabinet assists with management of the cables.
3. Does the Cabinet have a power supply installed?
If **no**, go to Step 4.
If **yes**, wire the battery alarm and mains alarm to available inputs on the Gallagher Controller.
(Refer to the "Power Supply" section later for details.)
4. Install all optional PCBs into the Gallagher Dual Cabinet.
Note: Use the screws provided with the PCB to fix the PCB to a Gallagher Mounting Plate. Then fix the Mounting Plate to the rear face of the Cabinet, using the screws provided with the Mounting Plate.
5. Wire up the communications between the Gallagher Controller and the PCBs if applicable.
IMPORTANT: The software set up in Gallagher Command Centre for the Controller and the I/O Expansion units power low events should be disabled.
6. Individually connect DC power to each PCB to ensure that they are working. Turn the power off on completion of these tests.
7. Connect all units to the DC power supply.
8. Fix the component identification decal(s) to the inside of the Cabinet door.
9. Initialise the PCBs.

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10. Ensure all equipment operates correctly both with mains power on / battery on and with mains power off / battery on.

Reminder: When the installation is complete, re-fit the Cabinet door ensuring the green earth lead is refitted to the Door, then close and lock it.

4 Power Supply

The power supply fits inside the Gallagher Dual Cabinet (see diagram on page 3 for position), without physically interfering with other components, and is appropriately isolated. It is capable of powering the hardware under normal operating conditions, as well as charging the battery.

Two LEDs indicate visually whether the mains supply is within the required range and whether the battery above a certain voltage.

Note: There is a discharge time on the mains detection circuitry that may cause a time delay of up to 10 seconds between a mains drop out and the generation of an alarm and a change in LED.

4.1 Standby Batteries

The standby batteries (not provided with the Cabinet) fit inside the Gallagher Dual Cabinet (see diagram on page 3 for position) without physically interfering with the other components.

IMPORTANT: Ensure that only 12V batteries are used, and the batteries are wired in parallel.

4.2 Battery Low Indication

The battery low indication will be triggered when the battery charge falls below approximately 12.2V. During normal operating conditions the battery low output is a latched output. When the mains fails, the battery goes into continuous check mode, checking the battery continuously instead of every 8 minutes (still latched every 8 seconds).

Note: When a fault condition occurs in the mains input, the output will no longer be latched.

When a new battery is installed and charged, it is recommended that the installer push the “battery test” button for approximately 20 seconds, to ensure that the battery is OK. A faulty battery will cause a low battery alarm to be generated.

The low battery alarm output is an open collector transistor output. When the battery voltage is normal, the output provides a ground at the low battery alarm terminal. When a low voltage alarm occurs, the output will provide an open circuit at the low voltage alarm terminal.

Note: Users are reminded to follow the replacement and maintenance instructions listed by the battery manufacturer.

4.3 Mains Fail

The mains fail indication will be triggered when the mains voltage falls below approximately 87V or when the mains voltage rises above approximately 259V. The mains fail alarm output is an open collector transistor output. When the mains voltage is normal, the output provides a ground at the mains fail alarm terminal. When a mains fail alarm occurs, the output will provide an open circuit at the mains fail alarm terminal.

Note: There is a discharge time on the mains detection circuitry that may cause a time delay of approximately 10 seconds between a mains drop out and the generation of an alarm and a change in LED.

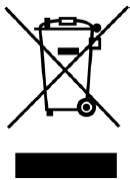
IMPORTANT: Do not apply voltage directly to the Battery Low or Mains Fail Outputs, as this will damage the monitoring circuitry, rendering the Power Supply unusable.

5 Technical specifications

Outside Dimensions:	620mm (24.4") x 372mm (14.6") x 150mm (5.9")
Input voltage:	100 - 240V AC (3A slow-blow fused)
Output voltages:	Primary 13.8V Auxiliary 13.3V 1A time lag fused
Output current:	8 A *
Power Rating:	150 W
Operating Temperature:	-10 °C to +50 °C

* This figure includes a 1A auxiliary output, but does not include battery charging.

6 Approvals and Compliance Standards



This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: Changes or modifications not expressly approved by Gallagher Limited could void the user's authority to operate this equipment.

UL Installations

For a guide to configuring the Gallagher system to the UL Standard, please refer to the document appropriate to your location:
- "3E2793 Gallagher Command Centre UL Configuration Requirements" (for USA), or
- "3E5960 Gallagher Command Centre ULC Configuration Requirements" (for Canada).
Installers must ensure these instructions are followed to ensure the installed system is UL compliant.



UL294 - Access Control
UL2610 - Commercial Burglary
CAN/ULC-S304- Commercial Burglary
CAN/ULC 60839-11-1- Access Control



AS/NZS IEC 60839.11.1:2019 Grade 4, Class II

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