

GDX Audio and Video Door Entry

Entrance Panel Installation Guide Ref. EP-LIT-001 V2.0 August 2023

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Health and Safety

Please read all these instructions and save them for later use.

The installation of this system must meet the requirements of the country of installation's National Wiring Regulations (BS7671, IET National Wiring Regulations in the UK) and EN60950-1. It must only be carried out by suitably competent, qualified and experienced personnel.

Injury or death by electric shock may result if ignored.

It must also comply with any local Fire, Health and Safety regulations. A secured door that may be part of an escape route must always be fitted with the following.

- A fail-safe lock so that the door will be released if the power fails. Ideally a magnetic lock should be used as these are less likely to jam or seize.
- A normally-closed break-glass or manual pull in the lock supply wiring so that in an emergency the fail-safe lock can be immediately powered off.

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Risk of injury or death if ignored.

The controller must be earthed.

Isolate the controller power supply before working on the controller.



Failure to do so may damage the unit.

Cabling

The cabling used in the control systems, should be routed in a manner to avoid running alongside any heavy load switching signals either within equipment or wiring. Alternatively, you can use screened cable to reduce interference and/or cross the cable at right angles every 3.3–6.6ft / 1–2m to reduce the interference if possible.

Communications Cabling

Use CW1308 or a minimum of CAT5e U/UTP, multi-core, twisted pair with a bare/plain copper conductor.

Cabling for Lock Power

2-core 0.75mm standard flex

ESD Precautions

The product contains static-sensitive devices and earth grounding strap should be worn when handling the hardware.

RFID Devices

RFID technology is now widely used in a number of industries, it is possible that interaction between your credential and other devices in the vicinity may cause incorrect operation or recognition. Should you suspect that you have experienced such a problem, ensure the interfering device is out of range. **This only applies if any RFID devices have been fitted**

WEEE Directive and Product Disposal



At the end of its serviceable life this product should not be treated as household or general waste.

It should be handed over to the applicable collection point for the recycling of electrical and electronic equipment or returned to the supplier for disposal.

Lithium Batteries

Failure to read the following guidelines carefully may result in injury. There is a danger of explosion if lithium batteries are incorrectly replaced or handled.

- Ensure that lithium batteries are never short circuited.
- Always store lithium batteries separately in non-conducting materials.
- Never replace a lithium battery with the incorrect type.
- Lithium batteries should be disposed of safely and legally according to your local area, state or country laws.

Equipment Electrical Rating

All electrical equipment should have electrical ratings clearly stated on an identification label and in any documentation provided. Any applicable fuse ratings will also be specified within the documentation.

Product Information

This section will list all relevant directives, regulations and specifications that apply to the GDX Audio & Video Entrance Panel.

Entrance Panel and Backbox Specifications

| Dimensions mm | 150 (w) × 280 (h) × 65 (d) |
|---------------|---------------------------------|
| Weight | 2.0 kg |
| Temperature | -10 °C to +35 °C |
| Humidity | 0% to 90% Relative Humidity |
| Input Voltage | 12.0 VDC to 13.5 VDC |
| Input Current | 0.35 Amps Standby (excl. locks) |

Approvals, Directives and Regulations

Hereby, Comelit-PAC Limited declares that the radio equipment type residential, commercial or light industry door entry product is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <u>https://pacgdx.com/</u>

RoHS 2011/65/EU

WEEE 2012/19/EU

Equipment Checklist

| Part no. | Equipment |
|----------|---|
| 109012 | Power Bit Monodrive 5 M4 screw for entrance panels |

Contact Customer Services to order additional parts.

1 Overview

This guide is intended only as a summary and checklist for installers familiar with this equipment.

Software Versions

If you need to contact technical support, please make a note of the software versions currently installed. This information is provided on the Entrance Panel LCD during power up.

2 Product Mounting

The entrance panel is typically supplied with an attached standard backbox. This can be removed and discarded, as per the instructions in WEEE Directive and Product Disposal, if there is already a backbox fitted in the building.

Backbox types

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GDX Audio Lite Entrance Panel plates will fix on to either backbox.

- Mitred has a bezel, 75 mm deep and panel plate is inset
- Standard no bezel 55 mm or 65 mm deep and panel plate is fixed directly to the front

Backbox installation (if required)

Only follow these steps if a backbox has not been fitted

- 1. Remove the panel from the packaging and release the six security screws fixing the faceplate to the backbox (fitting templates available on request).
- 2. Cut out a hole for the backbox 'inside' the fixing holes.
 - Hole dimensions for backbox are 255 mm (H) × 123 mm (W).
 - Depth depends on Mitred or Standard model.
- 3. Use the cable entry knock-outs provided in the backbox.

In metal backboxes, use rubber grommets in the knock-outs.

4. Secure the backbox with appropriate fixings for the intended mounting surface.

GDX Faceplate Panel

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255 mm

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THIS DRAWING IS NOT TO SCALE.

BEFORE DRILLING: The physical dimensions should be checked against the measurements shown here.

Cutting out backbox template

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- Drill six holes as indicated to accommodate the fixing screws for the panel faceplate.
 6 mm holes at approx. 10 mm deep
- 2. Inside the six holes, cut out the aperture indicated of 123 (w) × 255 (h) mm.
 - For COMPACT panel: depth approx. 65 mm (or 55 mm if using earlier version of backbox).
 - · For MITRED panel: depth approx. 75 mm

USE CABLE ENTRY KNOCKOUTS PROVIDED

Do not drill any other cable entries other than those provided as this may lead to water ingress into the panel. Failure to adhere to this will invalidate any warranty claim arising.

PLEASE NOTE: The hinge is at the bottom of the box.

– 123 mm –––

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3 Electric Door Lock Specification and Rating

All electric door lock release(s) connected to the system **must** have back EMF suppression devices fitted, as recommended by the lock manufacturer. All GDX Entry Panels are shipped with a MOV for this purpose.

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The MOV must be installed directly at the lock.

Lock Type Selection

Fail Open (FO) or Fail Closed (FC) lock operation is set by link header PLG11 on the door Entrance Panel pcb.

4 Line Card Connections

The connections from a Line Card to a door Entrance Panel comprise of audio, power and data connections.

Entrance Panel connections

Cable run should be max. 100m.

| Cable type | Cable use |
|-------------------------|----------------------------------|
| 6 pair | Door panel power, data and audio |
| 2 core 0.75mm min. flex | Lock power |

Door lock cabling (Entrance Panel to Line Card) must be separate to cabling for door panel power, data and audio.

Cabling to Fire Switches and Push To Exit buttons must also be separate cables as they also carry lock power.

| Door Entrance Panel | Line Card |
|---------------------|-----------|
| UNREG | UNREG |
| 0V | 0V |
| LOCK PWR +12V | LOCK 12V |
| LOCK PWR 0V | LOCK 0V |
| CAN H | CAN H |
| CAN L | CANL |

Door Entry Wiring





CAN Header must be set to IN for Door Entry Panel address 0. All other Door Entry Panel CAN headers must be set to OUT.

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CANH and CANL do not cross over.

CANL (7) & CANH (8) are wired in parallel if <u>connecting</u> CCUs. SEUs are required to support more than 32 Audio or 16 Video handsets.

5 Audio connections

| Door Entrance Panel | Line Card |
|---------------------|-----------|
| RX+ | TX+ |
| RX- | TX- |
| TX+ | RX+ |
| TX- | RX- |

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The RX and TX connections cross between the Line Card and the door Entrance Panel but the + and – connections do not.

The Audio Channel for a door Entrance Panel is factory-programmed (1 or 2) and can be checked on the door Entrance Panel LCD at power up. Use the matching Audio Channel on the Line Card for the door audio.



If a handset 'bleeps' when it is called and the green LED is lit but there is no audio or ring tone, check:(1) the correct audio channel is used; (2) audio channel settings and audio channel wiring are also correct.

To check the Audio Channel setting programmed into the Entry Panel either check the LCD at panel power up or use the Entrance Panel setup settings menu.

6 LCD Status Messages

The LCD will show various power up and operational status messages throughout normal operation. At power up, or reset, the LCD will display the following information in order :

| GDX TECHNOLOGIES | Manufacturer |
|----------------------|--|
| BOOTLOADER V XXX | Software Version |
| VERSION XXXXXXX | Software Version |
| GDX Audio Lite PANEL | Type Of Panel |
| ID : K(type) | Site Specific EEPROM ID |
| DOOR NUMBER XXX | Card Programmed Door Address. Does not apply to '2Audio' |
| AUD CHANNEL XXX | Programmed Audio Channel |
| DIGITAL DOOR | Door type (digital or functional) |
| NO OF BLOCKS XXX | No of blocks called from door. Does not apply to '2Audio' |
| NO OF TELS : XX | No of tels the door is set for |
| READER DISABLED | Displayed if not integrated access panel |
| MODE : COMMON | Integrated access mode of operation |
| TOKEN COUNT XXXX | Integrated access token storage count. If tokens have been manually added |
| BUTTON TEST MODE | Button test mode (see later) |
| SYSTEM READY | Normal operation |
| VIDEO | On or Off |

Troubleshooting

| LCD Message | Description |
|----------------|--|
| Code EE or WEE | Problem with the door panel flat address setings IC |
| Code CA | Problem with the CAN databus on system. Check wiring and termination headers, PLG7. (Two fitted per system). |
| Code SS | Programming menu security link in wrong setting, PLG10. |
| Not connected | A handset has been called from a door but the Line Card cannot detect a corresponding handset. |
| Comms problem | The door did not receive a reply from the Line Card. Check Line Card address and CAN data connections. |
| No Lock Supply | No Lock Supply voltage from the Line Card to the Entrance Panel. Check cabling and fuse. |
| No PTE Switch | No PTE Switch voltage from the Line Card to the PTE Switch. Check cabling and fuse. |
| No fire Switch | No Fire Switch voltage from the Line Card to the Fire Switch. Check cabling and fuse. |

7 Door Numbers



Every door on a system must be uniquely addressed and there <u>must</u> be an Entrance Panel on the system addressed as Door 00.

'2Audio' Door configuration only:



The 1st Entry Panel MUST be connected to Door 0 on the Audio Line Card.

All GDX '2Audio' Entrance Panels are programmed for Audio Channel 1.

When a 2nd Audio Entry Panel is added the Audio Channel must be set to Channel 2 and connected to Door 01 on the CCU Audio Line Card.

'7Audio' Door configuration only:

All GDX '7Audio' Entrance Panels are programmed as Door 00.

The Door No. and Audio Channel must be selected on the Entrance Panel:

- Door 00 set to Audio Channel1
- Door 01 is set to Audio Channel2, etc.

All Audio Door Configurations

As Entrance Panels or Standalone Readers are added to the system they must be set to the next available Door number on that system.

To check the Door number setting programmed:

- Check the LCD at Entrance Panel power up or use the Entrance Panel setup settings menu
- Check the Standalone Reader using the Door No. button and count the LED flashes

Door Contact

If door opening monitoring is required, do not use the contact within the magnetic locks as this will not operate satisfactorily. Use a standard normally closed security contact instead.

8 Panel Settings

| Settings | Default | Range | Notes |
|-----------------------------|---------|-----------|--------------------|
| Door Number | - | 0-63 | Not on '2Audio' |
| Audio Channel | - | 1-7 | 1 or 2 on '2Audio' |
| Dav of week | - | Sun-Sat | |
| Date | - | 0-31 | |
| Month | - | 1-12 | |
| Year | - | 0-99 | |
| Hours (24 Hr) | - | 0-23 | |
| Minutes | - | 0-59 | |
| Pre Answer Call Length | 30 secs | 1-99 secs | |
| Post Answer Call Length | 40 secs | 1-99 secs | |
| Call Tone Ring Length | 4 secs | 1-20 secs | |
| Lock Release Length | 8 secs | 1-20 secs | |
| Door Alarm Activation Time | 5 mins | 1-99 mins | |
| Service Period 1 Start Hrs | 07 hrs | 0-23 hrs | |
| Service Period 1 Start Mins | 00 mins | 0-59 mins | |
| Service Period 1 Stop Hrs | 09 hrs | 0-23 hrs | |
| Service Period 1 Stop Mins | 00 mins | 0-59 mins | |
| Service Period 2 Start Hrs | 00 hrs | 0-23 hrs | |
| Service Period 2 Start Mins | 00 mins | 0-59 mins | |
| Service Period 2 Stop Hrs | 00 hrs | 0-23 hrs | |
| Service Period 2 Stop Mins | 00 mins | 0-59 mins | |
| Coded Access Digit 1 | 1-9 | 8 | Not on '2Audio' |
| Coded Access Digit 2 | 1-9 | 8 | Not on '2Audio' |
| Coded Access Digit 3 | 1-9 | 9 | Not on '2Audio' |

| Settings | Default | Range | Notes |
|--------------------------|---------|--------|-----------------|
| Coded Access Digit 4 | 1-9 | 2 | Not on '2Audio' |
| Coded Access Digit 5 | 1-9 | 8 | Not on '2Audio' |
| Coded Access Digit 6 | 1-9 | 3 | Not on '2Audio' |
| Coded Access Digit 7 | 1-9 | 8 | Not on '2Audio' |
| Coded Access Digit 8 | 1-9 | - | Not on '2Audio' |
| Sunday Service Facility | On | On/Off | |
| Global Fire Switch | Off | On/Off | |
| Tailgating Lock Securing | Off | On/Off | |

Panel Pushbuttons

GDX5 Entrance Panel Layout and Legend



These settings can be displayed and changed by using the four pushbuttons below the LCD display.

| PLG10 | SET | INC | DEC | ENT |
|---|----------------|---------------------------------------|---------------------------------------|--------------------------------------|
| Enables panel config. changes SP–Protect SE–Enable | Select menu | Increase menu value / option | Decrease menu value / option | Confirm menu value / option |

Change settings

Move PLG10 to SE to amend settings.

To set the appropriate door number and audio channel follow the steps below:

- 1. Move PLG10 to SE (settings enable—pin 1 and 2).
- 2. Press SET to cycle around the menus.
- 3. Use INC and DEC to change the setting to the required value.
- 4. Confirm the change with the ENTER pushbutton.
- 5. Move PLG10 back to SP (settings protect-pin 2 and 3).

PLG10 must be on "SP" to return panel to normal operation.

Settings menu times out 8 seconds after the last button press.

- INTENTIONALLY LEFT BLANK -