



GDX5 Door Entry System
Installation &
Maintenance Manual

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System Variants Available

GDX Technologies supply two standard ranges of their GDX5 door entry equipment as detailed below – one of which offers a limited range of the features available on the other – along with a changeout option to allow the utilisation of existing entrance panel steelwork.

GDX5 LITE Control Unit

- Maximum Of 32 Handsets
- Maximum Of 2 Door Entrance Panels (Use FULL Control Unit For Up To 7 Door Entrance Panels)
- No Concierge Facilities Available (Use FULL Control Unit For Concierge Facilities)

GDX5 FULL Control Unit

- Maximum of 32 Handsets
- Maximum Of 7 Door Entrance Panels (Using FULL Door Entrance Panels)
- Concierge Compatible (Using FULL Door Entrance Panels)

GDX5 Changeout Control Unit (Utilising Existing Entrance Panel Steelwork)

- Maximum Of 16 Handsets
- Option To Accomodate 1 Or 2 Existing Steel Faceplates
- No Concierge Or Integrated Token Access Facilities Available

GDX5 LITE Door Entrance Panel

- Functional Operation Up To A Maximum of 20 Call & Service (Trade) Buttons
- No Concierge Facilities Available (Use FULL Door Entrance Panel For Concierge Facilities)
- No Coded Access Facility (Use FULL Door Entrance Panels For Coded Access Facility)
- Maximum Of 2 Door Entrance Panels Per Control Rack (Use FULL Door Entrance Panels For Up To 7 Doors)

GDX5 FULL Door Entrance Panel

- Functional Or Digital Operation On Either LITE Or FULL Control Unit
- Maximum Of 32 Handsets On A LITE Or FULL Control Unit
- Maximum Of 255 Handsets On A High Rise System Utilising A High Rise Exchange Unit
- Concierge Compatible On A FULL Control Unit
- Coded Access Facility (Digital Operation Only) On A LITE Or FULL Control Unit
- Maximum Of 7 Door Entrance Panels Per System On A FULL Control Unit

LITE and FULL variants can be used together to give the required system specification : for example –

- A FULL Door Entrance Panel can be used on a 32 way LITE control unit to give the ability to call 32 telephone handsets – a LITE Door Entrance Panel could only take a maximum of 20 buttons on the faceplate so would not be sufficient.

As both LITE and FULL variants are covered by this manual any differences between the two variants are highlighted where appropriate.

All the above variants can be identified from their respective LCD displays at power up or reset – which display whether the LITE or FULL variant has been supplied in each case.

System Cabling Requirements

Cabling requirements between the various system components within a GDX5 door entry system are as follows (the additional video cabling should be ignored if not applicable) –

The routing of cabling should be carefully considered to comply with all current standards and regulations as regards cabling proximity to power cabling, electrical control equipment or fluorescent lighting fixtures or cabling

Control Unit / Entrance Panel

Cabling for the door lock between the control rack and the door entrance panel must be kept on a separate cable from the door entrance panel cable and should be flex power cable and not CW1308 telephone cable. (This also applies to the cabling to any Fire Switches and Push To Exit buttons as they also carry lock power)

Cable	Audio Only System	Audio & Video System
Door Panel Power, Data & Audio	6 Pair CW1308 Cable	6 Pair CW1308 Cable
Lock Power	2 Core 0.5mm Flex (Note 1)	2 Core 0.5mm Flex (Note 1)
Video Monitor Power & Signal	N/A	3 Pair CW1308 Cable (Note 2)

Refer to the manual section on Changeout Racks for the wiring required in this case to the entrance panel.

Control Unit / Telephone Handset

Cabling for the video monitor power and video signal must be kept on a separate cable from the handset.

Cable	Audio Only System	Audio & Video System
Handset Power, Data & Audio	3 Pair CW1308 Cable	3 Pair CW1308 Cable
Video Monitor Power & Signal	N/A	3 Pair CW1308 Cable (Note 2)

When connecting telephone handsets into the control unit the location on the card into which a particular handset should be connected will be in numerical order as per the engraving on the front faceplate – starting from the lowest postal address first. This will be the factory default method for the order in which the call buttons on the door entrance panel have been wired. If this connection sequence is not followed then the door station will call the wrong flats within the system.

Control Unit / Token Access Reader

If a separate token access controller such as an “Easikey 99” or an “Easikey 1000” is utilised then the cabling from the control unit to the token reader located at the door must be a separate cable from the door entrance panel at all times to avoid data glitches and audio noise pick-up.

Cable Use	Cable Type
Controller To Reader	6 Core Security Or 3 Pair CW1308 Cable

Notes

- (1) Upgrade if long cable run or locks drawing large current.
- (2) 3 pair up to 50 metres or 6 pair up to 100 metres (double up power pairs).

For GDX Integrated access no additional reader cabling is required between the entrance panel and the control unit as all required connections to the reader are factory made within the entrance panel.

None of the above cabling specifications are valid for underground cabling.

System Pre-Power Up & Power Up Checks

The following checks are recommended before and after system power up –

Pre-Power Up

1. Using a multi-meter on OHMS scale check that the impedance between the CANH & CANL terminals both at the door entrance panel(s) and at the control rack reads approximately 60 ohms. If this is not the case then there may be too few or too many CAN headers fitted or they may be a wiring problem. (see elsewhere in manual for details on header links) This is essential for reliable system operation. As default, headers are factory fitted on Control Unit Card 00 and Door Entrance Panel 00.
2. Check that the audio connections between the door entrance panel(s) and the control unit crossover the TX and RX connections but not the + and – connections as illustrated below –

Door Entrance Panel	Control Unit Card
RX+	TX+
RX-	TX-
TX+	RX+
TX-	RX-

After Power Up

1. Using a multi-meter on VOLTS DC scale check that the voltage output of the PSU in the control unit is set to approximately +13.8 VDC. If this is not the case then adjust the PSU output to +13.8 VDC. It should be noted that if the PSU is overloaded or adjusted too high then it may shut down temporarily to protect itself – if this occurs leave the PSU switched off for around 5 minutes to reset. If the PSU output voltage on the control unit is not correct then the system may not operate correctly or may operate erratically.
2. Check that the 1st door entrance panel is programmed as “DOOR NUMBER 000” and “AUD CHANNEL 001” using the door entrance panel LCD (use the reset button on the door entrance panel or power down / power up to display) and is connected into the correct audio channel on the control unit card. In the same manner, verify that the 2nd door entrance panel (if applicable) is programmed as “DOOR NUMBER 001” and “AUDIO CHANNEL 002” and is also connected into the correct audio channel on the control unit card. It should be noted that the LITE variants of this equipment display only the “AUD CHANNEL” setting and not the “DOOR NUMBER” – the door numbers are allocated automatically within the LITE systems and are not alterable by the user.

Control Unit Introduction

The following details the operation of the GDX5 Audio control card contained within the GDX Technologies range of door entry equipment.

The drawing number on the card is 0105/001.

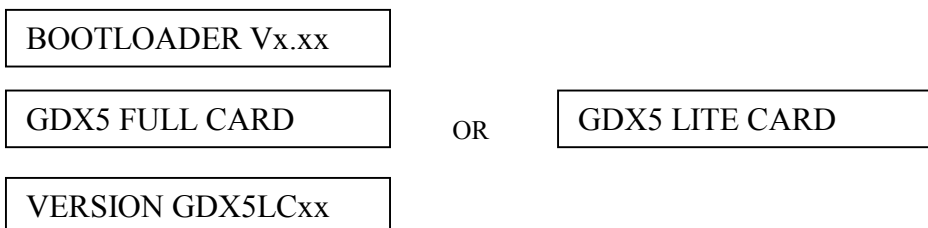
The card is available with either 8 or 16 handset positions fitted and is capable of either 2 or 7 simultaneous audio conversations from 2 or 7 doors at the same time (number of doors depending on the version supplied).

Please see the section on spare parts ordering information for details on ordering replacements.

The manual covers the standard control racks – most of the information detailed also applies to the changeout control racks. Any differences within the operation of the changeout control rack are highlighted within the manual section on changeout control racks.

Control Unit Card Software Versions

The software loaded within a control unit card comprises three different software components – the version details for which are displayed on the card LCD at power up :-



Please have details of these software versions if contacting GDX Technical Support for assistance.

Control Unit Card Addressing

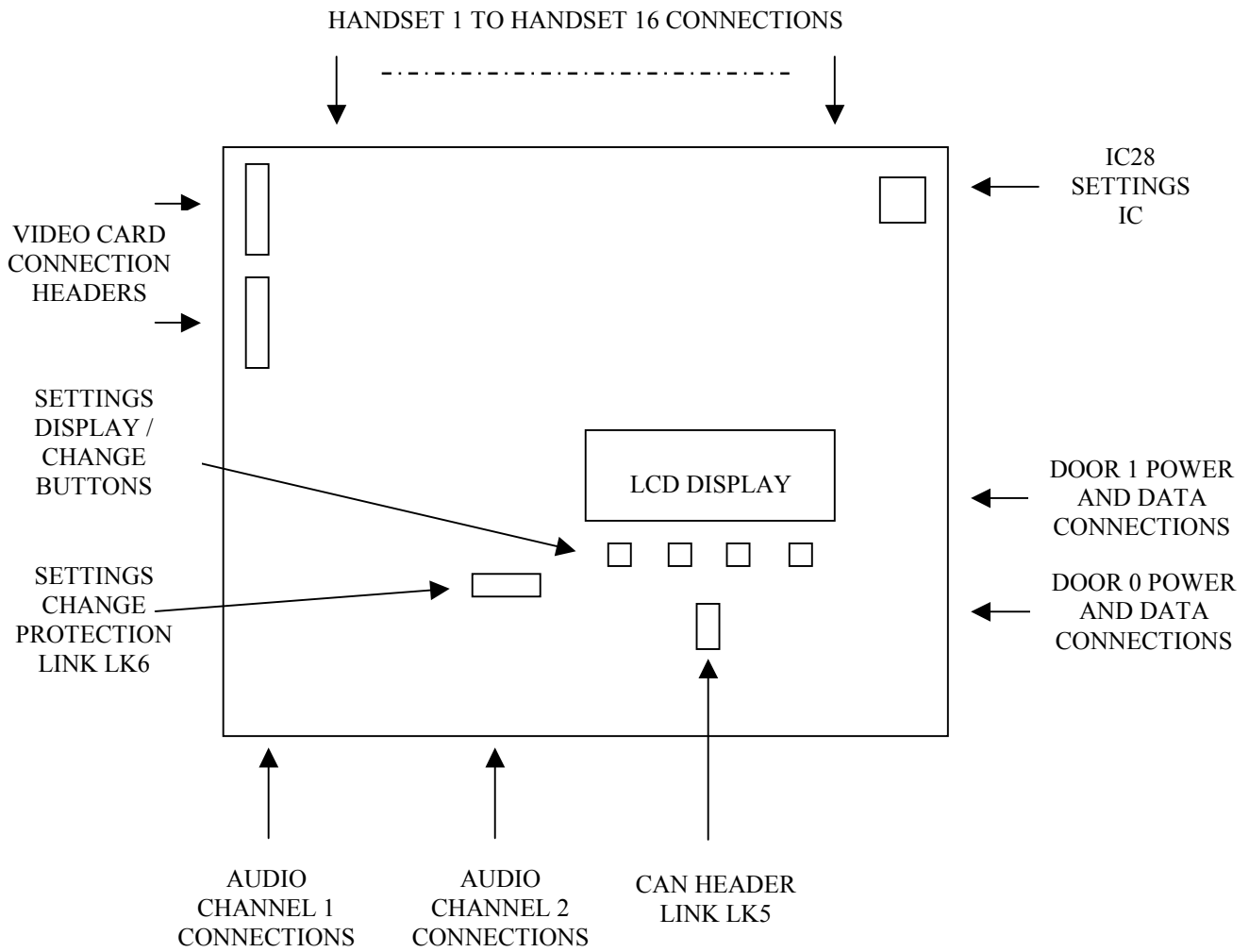
The control unit card address will be factory programmed by the manufacturer and is displayed on the card LCD at power up or reset as “CARD NUMBER 00”.

The card should always be addressed as CARD NUMBER 00 within an 8 or 16 way system – within a 24 or 32 way system the 2nd card should be addressed as CARD NUMBER 01.

It should never normally be the case that this setting would require to be altered as all cards will have been factory programmed as required.

This address is stored within IC28 on the card.

Control Unit Card Layout Schematic



Control Unit Card Type Setting

Within the settings / programming facility on the card there is a “CARD TYPE” option that will have been factory programmed to “CARD TYPE 01”.

This setting should not be altered.

Control Unit Card Setup Header Links

LK5

Link LK5 is the CAN data communication bus termination resistor link. This link brings into circuit the 120 Ohm resistor across the CAN data bus. It is essential that there are two of these resistors across the CAN data bus somewhere on the system to give the correct impedance for the bus to function correctly – which should be measured at approximately 60 Ohms across CANH and CANL on the system **with the power off**. Normally these two headers are factory fitted on Control Unit Card Address 00 and Door Entrance Panel Number 00 and should not be fitted on any other cards. Care must therefore be taken when replacing cards to maintain the correct impedance by not having either too many or too few headers fitted.

LK6

Link LK6 is used to prevent accidental changing of the control unit card settings programmed into the card using the four small pushbuttons located below the LCD display. Under normal operation this header link should be located in the “PROTECT” position however if it is required to change a setting then this header link should be moved to the “CHANGE” position before the change can be made. The card will not continue to function again after a change has been made until this link is re-located into the “PROTECT” position again. If the link is left in the “CHANGE” position then “SECURE SETTINGS” will be displayed on the card LCD display until this is rectified.

LK8 & LK9

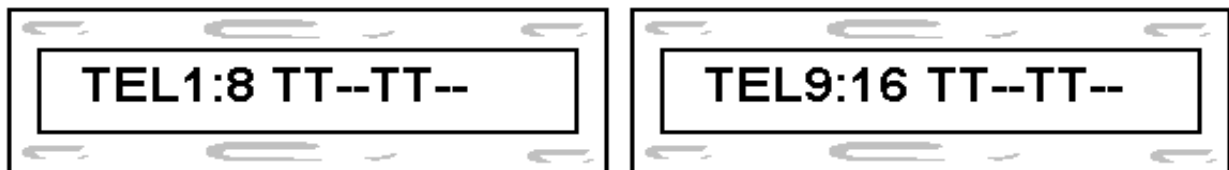
Links 8 & 9 must always be fitted on the card and should never be removed.

Control Unit Card LCD Messages

The LCD display fitted on the card can provide information on system activity and operation that can be extremely useful for fault finding and commissioning.

Telephone Handsets Status Displays

When a control unit card is in normal mode of operation it continuously monitors the attached telephone handsets and cycles through the following displays :-



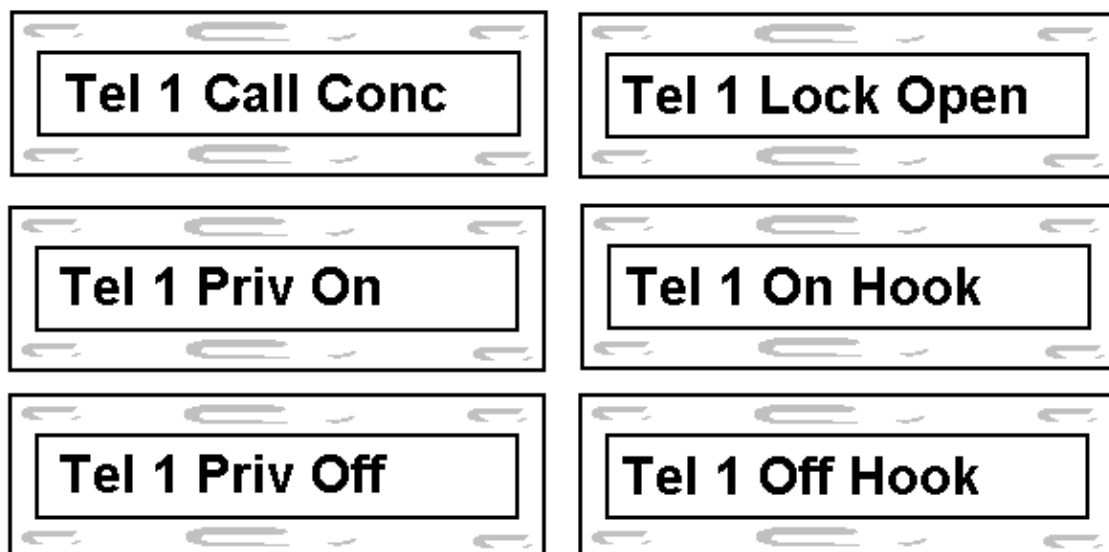
The “T” displayed indicates a telephone handset detected as connected into the corresponding position on the card and the “-“ indicates nothing detected as connected into that position. (Hence the above example indicates handsets in positions 1,2,5,6,9,10,13,14). If a handset is called by a door the “T” will change to a “C” whilst the handset is called which can be used to check that a button is calling the correct handset position on the card.

This display therefore assists in fault finding on the system by indicating immediately if there is a fault in the connection to that handset.

Telephone Handset Operation Displays

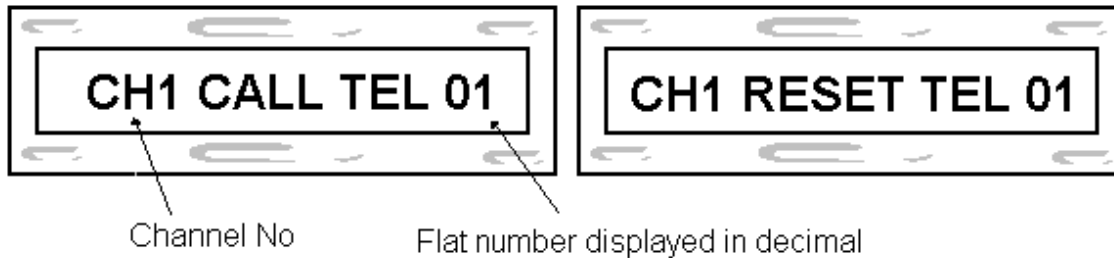
The following group of displayed messages show any handset operations that occur. The telephone number displayed is the position of the telephone handset on the control unit card. i.e. 1 to 16.

The displayed messages are -



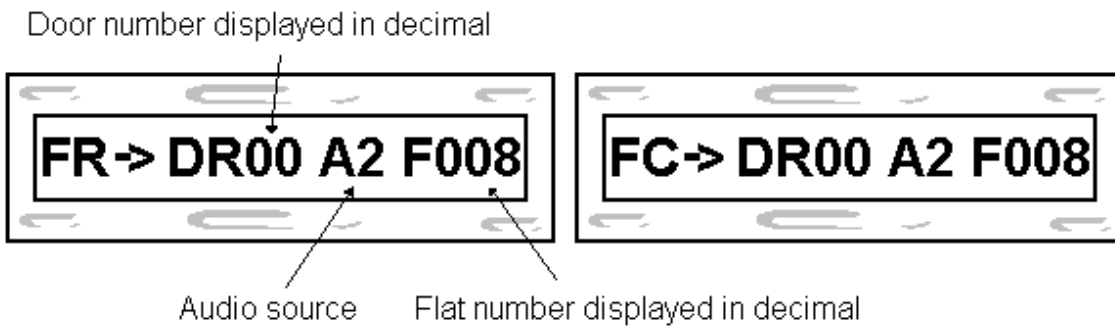
Flat Handset Called/Flat Reset Displays (LITE Card Only)

The Flat Call/Flat Reset actions are displayed as shown below (flats are displayed as 1-16).



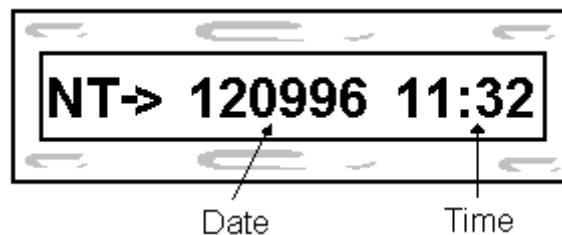
Flat Called/Flat Reset Displays (FULL Card Only)

The Flat Call/Flat Reset actions are displayed as shown below (flats are displayed as 0-15 and not 1-16).

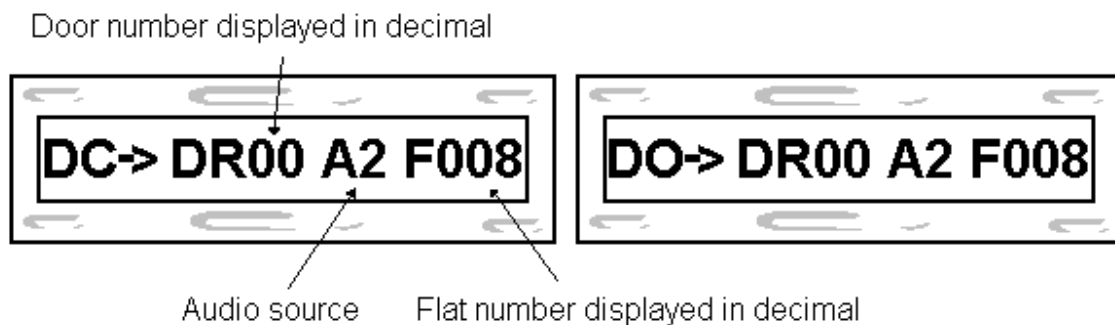


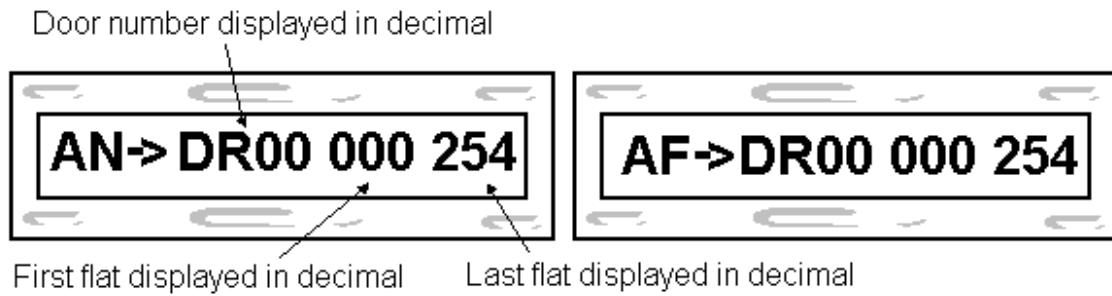
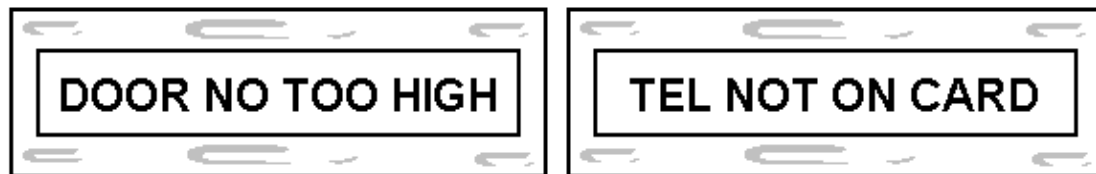
New Time Display

On response to the time broadcast the following message is displayed.



Door Open/Door Closed Displays



Door Alarm On/Door Alarm Off Displays**General Information Displays (LITE Cards Only)**

The above messages are displayed on LITE cards under the following circumstances –

1. If a door station programmed as other than channel 01 or channel 02 (a FULL type card) attempts to call a handset on the system then “DOOR NO TOO HIGH” is displayed on the card LCD
2. If a door station attempts to call a handset address that is not located on a particular card then “TEL NOT ON CARD” will be displayed on the card LCD. This would occur if a card were incorrectly addressed on an 8 or 16 way control unit or would occur on one of the two cards on a 24 or 32 way control unit.

Control Unit Card Fuse Ratings

The following fuse values are fitted as standard on a control unit card assembly -

Fuse No	Fuse Value	Fuse Use	Notes
FS1	3A QB	Overall Card Fuse	
FS2	1.6A QB	Door 00 Electronics & Lock	
FS3	1.6A QB	Door 01 Electronics & Lock	
FS4	1.6A QB	Door 02 Electronics & Lock	Only Fitted On FULL Card
FS5	1.6A QB	Door 03 Electronics & Lock	Only Fitted On FULL Card
FS6-FS21	500mA	Handsets 1-16	Thermal Resetting

Red LED1 and Red LED2 indicate a healthy +12V and +5V supply on the card respectively. The thermal resetting fuse for each handset does not require replacing if it goes – remove the problem and the fuse will reset itself once it cools in a matter of seconds.

Control Unit Settings Programming

Certain system settings are user configurable on the control unit card itself. The following is a list of these settings, the range of values allowed and the factory defaults supplied (not all settings applicable to LITE card).

Setting	Range Allowed	Factory Default	Notes
Card Number	00-15	00	
Privacy Time	01-15 Hours	06	
Card Type	01-04	01	
Alarm 1 Delay	00-60	00	Not On LITE Cards
Alarm 2 Delay	00-60	00	Not On LITE Cards
Video System	Off / On	As Required	
Video Scroll	Off / On	Off	
Radio Paging	Off/On	Off	Not On LITE Cards
Handset Alarms	Off/On	As Required	Not On LITE Cards
Channel 2 Door	00-63	As Required	Not On LITE Cards
Channel 3 Door	00-63	As Required	Not On LITE Cards
Channel 4 Door	00-63	As Required	Not On LITE Cards
Channel 5 Door	00-63	As Required	Not On LITE Cards
Channel 6 Door	00-63	As Required	Not On LITE Cards
Channel 7 Door	00-63	As Required	Not On LITE Cards

All of the above card settings are stored in an EEPROM memory IC (IC28) on the control card. If changing a card then this IC can be swapped into the new card to save re-programming all of the current card settings into the new card.

Each of the above settings is dealt with in more detail within their respective sections of this datasheet.

These settings can be displayed and changed by way of the four small buttons located below the LCD display on the card. These four buttons – from the left hand side have the following functions ;-

1. Settings Display (SET)
2. Increment Setting (INC)
3. Decrement Setting (DEC)
4. Enter New Setting (ENTER)

Pressing the Settings Display button repeatedly will bring up each of the above settings in turn.

Before any of these settings can be changed a security link must be moved before the Increment, Decrement or Enter buttons can be used. Link LK6 is used to prevent accidental changing of the control card settings programmed into the card using the 4 small pushbuttons located below the LCD display. Under normal operation this header link should be located in the "PROTECT" position however if it is required to change a setting then this header link should be moved to the "CHANGE" position before the change can be made. The card will not continue to function again after a change has been made until this link is re-located into the "PROTECT" position again. If the link is left in the "CHANGE" position then "SECURE SETTINGS" will be displayed on the card LCD display until this is rectified.

With the link in the CHANGE position this will then allow the Increment and Decrement buttons to vary the setting – pressing the Enter button will save the new setting. This new setting will not be saved until the Enter button has been pressed. The settings routine will time out 8 seconds after the last button press.

Control Unit Card Video Control Facilities

The control unit card has the ability to control external video switching cards to upgrade the system from audio only to audio & video.

These additional 8 way video switching cards are connected to the audio control unit card by way of 20 way headers PLG1 and PLG2 – PLG1 for telephone handsets 1-8 and PLG2 for telephone handsets 9-16.

Before the audio control unit card will control and switch the additional video card(s) the "VIDEO SYSTEM" option within the settings/programming menu must be set to "ON". This will have been factory preset to "ON" if the system was specified as video at the time of order.

In addition, the control unit card also offers the facility to allow the dwelling handset scroll through any of the available cameras connected to the system - whilst and only whilst they are called from the door entrance panel. This "VIDEO SCROLL" feature is factory preset to "OFF".

Control Unit Telephone Handset Connections

A GDX5 telephone handset can be identified by the number "9705/002" on the PCB contained within the handset. Under no circumstances should handsets of any other type with any other number be connected onto a GDX5 control card as permanent damage may occur.

The connections from the control unit card to the telephone handset are as follows :-

Connection	Use
1	Audio From Handset To Entrance Panel
2	Audio From Entrance Panel To Handset
3	0V
4	+12Vdc

Please consult the manual section entitled "System Cabling Requirements" for further details on cabling specifications and requirements.

See manual section on "Telephone Handsets" for further information specifically on handsets.

When a control unit card is in normal mode of operation it continuously monitors the attached telephone handsets and cycles through the following displays :-

SCANNING PHONES
 TELS1:8 TT--TT--
 TELS9:16 TT--TT--

The "T" displayed indicates a handset detected as connected into the corresponding position on the card and the "--" indicates nothing detected as connected into that position. (Hence the above example indicates handsets in positions 1,2,5,6,9,10,13,14)

This display assists in fault finding on the system by indicating immediately if there is a fault in the connection to that handset.

Whilst a handset is called from a door the "T" changes to a "C" to indicate that the handset position is called. This can be used to verify that the button being pressed is calling the correct handset position on the card.

Control Unit Entrance Panel Connections

The connections from a control unit card to a door entrance panel comprise of audio, power & data connections.

Please consult the manual section entitled “System Cabling Requirements” for further details on cabling specifications and requirements.

Audio Connections

Control Unit Card	Door Entrance Panel
RX+	TX+
RX-	TX-
TX+	RX+
TX-	RX-

It should be noted that as shown above the RX and TX connections swap between the control unit card and the door entrance panel but the + and – connections do not.

The “Audio Channel” for which a door entrance panel is programmed determines which terminals on the control card the door audio should be connected into (the door setting can be checked on the door LCD at power up).

On a LITE door entrance panel card this setting will either be 01 or 02 and this must match the position on the control unit card into which it is connected.

On a FULL door entrance panel card this setting will be in the range 01 to 07 and again this must match the position on the control unit card into which it is connected.

If when a handset is called from a door the handset bleeps and the green LED illuminates but there is no audio or ring tone at the handset then the audio connections, audio channel settings and audio wiring itself should be checked.

Power & Data Connections

Control Unit Card	Door Entrance Panel
UNREG	UNREG
0V	0V
LOCK 12V	LOCK PWR +12V
LOCK 0V	LOCK PWR 0V
CAN H	CAN H
CAN L	CAN L

It should be noted as shown above that the data connections CANH & CANL do not cross over between the control unit card and the door entrance panel.

The lock power connections between the control unit card and the door entrance panel must be on a suitably rated power cable and must not be on the same cable as the audio, data & electronics power.

See the manual section on the door entrance panel card itself for further details specifically on the door operation.

Handset Introduction

A GDX5 handset can be identified by the number “9705/002” on the PCB contained within the handset. Under no circumstances should handsets of any other type with any other number be connected onto a GDX5 control card as permanent damage may occur.

It should be noted that the standard GDX5 handset does not contain an IC fitted into the socket for IC2 on the handset PCB – links LK4, LK5, LK6 & LK7 will be fitted in its place to bypass it. This IC provides the additional communications required whenever a video handset or a handset with internal alarm monitoring capabilities is attached to the control card. Handsets with and without this additional IC cannot be mixed on the one control card – they must all have them fitted or all not have them fitted to function correctly.

Handset Connections

The connections from control card to handset are as follows :-

Connection	Use
1	Audio From Handset To Door
2	Audio From Door To Handset
3	0V
4	+12Vdc

Please consult the manual section entitled “System Cabling Requirements” for further details on cabling specifications and requirements.

When a control card is in normal mode of operation it continuously monitors the attached handsets and cycles through the following displays :-

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SCANNING PHONES
TELS1:8 TT--TT--
TELS9:16 TT--TT--

```

The “T” displayed indicates a handset detected as connected into the corresponding position on the card and the “-” indicates nothing detected as connected into that position. (Hence the above example indicates handsets in positions 1,2,5,6,9,10,13,14)

This display assists in fault finding on the system by indicating immediately if there is a fault in the connection to that handset.

Whilst a handset is called from a door the “T” changes to a “C” to indicate that the handset position is called. This can be used to verify that the button being pressed is calling the correct handset position on the card.

Handset Privacy Period

The handset privacy timeout period is set using the small pushbutton switches located below the LCD display on the control card - within the range 1 to 15 hours. This setting defines the period for all handsets on the control card and is not selectable for individual handsets on the card. The privacy time may be altered at any time during normal operation. No resetting of the processor is required after a new time has been selected.

The privacy period will be factory programmed by the manufacturer to a default of 6 hours. This setting is stored within IC28 on the card.

Entrance Panel Introduction

The following details the configuration and operation of the 119020 GDX5 Compact Entrance Panel Card.

The drawing number marked on the card is 9905/003.

The card provides communications between the door entrance panel and the dwelling telephone handsets.

The card also provides the lock control circuitry and connections for additional systems add-ons such as push to exit switches, fire switches, token access systems and door monitoring contacts.

The same card is configurable for either digital (ie. using a “Call” Button) or functional operation.

The card can interface to either single individual buttons or a 12 button keypad module.

Please see the section on spare parts ordering information for details on ordering replacements.

The manual covers the standard entrance panels – much of the information detailed also applies to the changeout control racks. Any differences within the operation of the changeout control rack and entrance panels are highlighted within the manual section on changeout control racks.

The card is available in two assembly variants which can be identified from the LCD at power up or reset -

GDX5 LITE Door Entrance Panel

- Functional Operation Up To A Maximum of 20 Call & Service (Trade) Buttons
- No Concierge Facilities Available (Use FULL Door Entrance Panel For Concierge Facilities)
- No Coded Access Facility (Use FULL Door Entrance Panels For Coded Access Facility)
- Maximum Of 2 Door Entrance Panels Per Control Rack (Use FULL Door Entrance Panels For Up To 7 Doors)

GDX5 FULL Door Entrance Panel

- Functional Or Digital Operation On Either LITE Or FULL Control Unit
- Maximum Of 32 Handsets On A LITE Or FULL Control Unit
- Maximum Of 255 Handsets On A High Rise System Utilising A High Rise Exchange Unit
- Concierge Compatible On A FULL Control Unit
- Coded Access Facility (Digital Operation Only) On A LITE Or FULL Control Unit
- Maximum Of 7 Door Entrance Panels Per System On A FULL Control Unit

Entrance Panel Software Versions

It is essential if there are any queries on the system that the software version fitted within the panel is to hand when contacting us for technical support - the software version fitted within the panel is displayed on the panel LCD at power up or at reset (see following manual section).

IC1 is the main control IC on the board and is a software programmable microcontroller that contains standard software and does not require individual site configuration for each site.

Entrance Panel LCD Operation

The LCD display fitted on the card displays various messages as data is received on the system CAN data bus and as various events occur on the card itself.

At power up, or reset, the LCD will display the following information in order

GDX TECHNOLOGIES	Manufacturer
BOOTLOADER V XXX	Software Version
VERSION XXXXXXXX	Software Version
CHANGEOUT CARD	Only If Applicable As Changeout
GDX5 FULL PANEL	Type Of Panel (LITE Or FULL)
ID : KXXXXXXXXXX	Site Specific EEPROM ID (1)
DOOR NUMBER xxx	Card Programmed Door Address (2)
AUD CHANNEL xxx	Programmed Audio Channel
DIGITAL DOOR	Door Type (Digital or Functional)
NO OF BLOCKS xxx	No Of Blocks Called From Door
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
BUTTON TEST MODE	Button Test Mode (See Later)
SYSTEM READY	Normal Operation

(1) Will display "KLITE" On Lite Variant Of Door Station.

(2) Not Displayed On LITE Variant Of Door Station.

The various other system settings can be displayed onto the door station as well – see the section on programming the entrance panel card settings for more details.

Entrance Panel Card Addressing

This Is Not Applicable To LITE Door Entrance Panel Cards Or Changeout Control Cards

Each door entrance panel card connected within a door entry block must have a unique address to allow it to function correctly. This Door Number is the identifier used by the CAN data communication network to allow communication between a door and the rest of the system. No two doors on the system can have the same door number - the allowed range on a full card is 0 to 63 and on a LITE card it is either 0 or 1 (set automatically by the card on LITE variants).

The door card number will be factory programmed by the manufacturer and is displayed on the card LCD at power up or reset as "DOOR NUMBER xxx". This address is stored within IC3 on the card. It should never normally be the case that this setting would have to be changed as all cards will have been factory programmed as required - unless a new or replacement card is being fitted.

Having two cards of the same address connected onto a system will result in data bus clashes occurring and will provide very unstable overall system operation. Please contact the manufacturer's technical support if in any doubt whatsoever about changing and fitting new cards.

Entrance Panel Audio Channel Numbering

The Audio Channel number selects which particular audio path is used for each of the door entrance panels to communicate to the flats. This audio channel address defines which audio channel terminals on the control card the door connects its audio connections into – the allowed range is 01 to 07 on full cards and 01 or 02 on LITE cards.

Again the audio channel address will be factory programmed by the manufacturer and is displayed on the door card LCD at power up or reset as "AUDIO CHANNEL xxx". This address is stored within IC3 on the card. It should never normally be the case that this setting would have to be changed as all cards will have been factory programmed as required - unless a new or replacement card is being fitted. This setting does not apply to changeout control cards.

Entrance Panel Flat Address Programming (LITE Cards)

In the case of a LITE door entrance panel card the buttons on the door station faceplate call handsets in the order that they are wired at manufacture –

Button Input No At Door Station	Handset Position Called On Card
1	1
2	2
3	3
...	...
19	19
20	20
24	Service/Trades

As standard, panels will be wired in ascending postal order as specified by the engraving on the front faceplate.

Button input 24 is a special case and is always used for a service/trades button if required.

See the manual section on "BUTTON TEST MODE" for more information on checking and identifying button inputs.

Entrance Panel Flat Address Programming (FULL Cards)

In the case of a FULL variant type entrance panel the entrance panel carries out the decoding of flat postal addresses into a system telephone no and these postal addresses are stored in an EEPROM (IC3) that is factory programmed to the addresses supplied at the time of order. When replacing a board this IC must be swapped also or the entrance panel will call through to incorrect handset positions.

This IC also contains the following information :-

Type Of Panel (Functional Or Digital)
Input Button Information (Type And LCD text)

The address information programmed into IC3 is not user configurable and an upgrade must be purchased from the manufacturer if changes are required to the postal addresses originally specified.

The programming details contained within this IC are referenced by an ID displayed on the panel LCD at power-up or reset of the format "ID : Kxxxxxxx". This reference ID is unique to a particular door on a particular site and will allow the addresses contained within an EEPROM to be checked or modified if required. This reference ID must be quoted when contacting the manufacturer.

Entrance Panel Timeclock & System Time Broadcast

The entrance panel card is responsible for system timekeeping within the GDX5 system. The card is fitted with its own on-board electronic timeclock (IC4) which is battery backed internally for up to 10 years and automatically adjusts for BST (Adjusts at 2am on the last Sunday in March and the last Sunday In October). The timeclock IC4 is not system specific and does not require to be changed if changing cards as it contains only the time of day/month/year settings for the panel and nothing else.

Once a minute the door entrance panel programmed as Door 00 on the system broadcasts its current time setting onto the CAN data bus.

Within a control rack, this provides an indication that the data communications from this door to the control rack is functioning and that the status of the CAN data bus in general is healthy.

This message can be viewed on the LCD display on the control card. If it is not being displayed then either the control card itself is faulty, the door station is not communicating for some reason or the data bus itself is not stable and therefore no communications whatsoever are being made.

TU 130201 17:43

New Time & Date Broadcast
Of 17:43 Hrs On Tuesday 13/02/01

Entrance Panel Setup Header Links & Adjustable Pots

The jumper link positions and adjustable pots on the control card have the following functions –

Adjustment	Function
Pot VR1	Audio At Handset From Door Entrance Panel
Pot VR2	Audio At Door Entrance Panel From Flat Handset & Door Tones
Link PLG7	CAN Resistor Link
Link PLG10	Settings Security Link
Link PLG11	Fail Open / Fail Closed Lock Select

Potentiometer VR1 Adjusts The Volume Level Of The Audio From The Door Entrance Panel MIC (ie. Audio From Door To Handset).

Potentiometer VR2 Adjusts The Volume Level Of The Audio At The Door Entrance Panel Speaker (ie. Audio From Handset To Door) and the level of the tones at the door.

Link PLG7 brings into circuit the CAN termination resistor. This 120R resistor R1 is a bus termination resistor and should only be present on two of the boards connected to the CAN bus - one of which should be at either end of the bus. **The factory default location for the two headers to be fitted is on the first door and control card 0.**

Link PLG10 is used when changing any of the system parameters via the programming interface.

Link PLG11 selects between Fail Open and Fail Closed lock operation.

Entrance Panel Fuse Ratings

There are no fuses on the door entrance panel card itself as both the electronics “UNREG” supply and the lock power are fused within the control unit that the door entrance panel is connected into.

LED1 and LED2 however provide verification of the 12V and 5V supplies respectively on the card.

Door Lock Notes & Precautions

The door lock switching on the card can be configured using the link fitted on PLG11 between Fail Open or Fail Closed operation.

The system lock relay RL1 has contact ratings of 12Vdc 1A which must not be exceeded under any circumstances. Red LED4 displays whether a voltage is currently present at the lock output or not – whether this is illuminated or not when the lock is released is dependant on the lock type used and the position of PLG11.

Lock manufacturers recommendations as regards suppression devices directly across the locks themselves must be followed - there must be an MOV protection device fitted directly across each door lock or back emf spikes from the locks may cause erratic system operation. An MOV is provided with each door entrance panel in case none are provided with the locks.

It is not recommended that the monitoring contact provided within a magnetic lock is used for door monitoring purposes with the GDX5 system where the anti-tailgating facility is to be enabled. A separate security contact should be utilised for this purpose unless the contact provided within the magnetic lock specifically gives indication of the door armature plate's removal from the magnet and not merely an indication that power has been removed from the magnet – as is the case with the majority of available magnets. Please check with the lock manufacturer or supplier for further information.

The door lock release period is set as default to 8 seconds but is user adjustable – see section on door card settings programming for details.

Included within this manual is a sheet entitled “GDX5 Compact Entrance Panel Lock Operation & Checks” which details the lock operation on the card and highlights specific checks that can be made if difficulties are being experienced.

Door Monitoring Contact

A door contact switch can be wired into the "DOOR NC CONT" entrance panel screw terminals. A normally closed contact must be used for this facility. These door contact terminals should be shorted by a link into the screw terminals if a door contact facility is not required.

This door contact is used to lock the door after an authorised access to prevent an unauthorised access taking place during the remaining lock release period – if the anti-tailgating facility is enabled within the programmable settings for the door. As a factory default the anti-tailgating facility is switched off.

The contact is also used for the door alarm indication facility if the door is left open for a pre-set period of time. The default factory setting is 5 minutes but this can be adjusted – see manual section on door card settings programming for details.

It is not recommended that the monitoring contact provided within a magnetic lock is used for door monitoring purposes with the GDX5 system where the anti-tailgating facility is to be enabled. A separate security contact should be utilised for this purpose unless the contact provided within the magnetic lock specifically gives indication of the door armature plate's removal from the magnet and not merely an indication that power has been removed from the magnet – as is the case with the majority of available magnets. Please check with the lock manufacturer or supplier for further information.

Push To Exit (PTE) Button

In the case of a fail closed lock it is assumed that a mechanical door lock release handle is fitted on the inside of the door and hence the PTE button option will not be used. In this case, or if the PTE button option is not required, the "PTE NC CONT" contact should be linked out at the entrance panel door card.

The PTE button circuitry on the card not only signals the card that the PTE is pressed so that it can release the lock but it also actually breaks the lock supply 12V connection as well. This is done to ensure that the push to exit button will operate the lock even if the system electronics is down.

It should be noted that if the system electronics is not functional, and hence the PTE button itself is relied upon to open the door lock, the lock will be released only for the time that the PTE is pressed - since it is normally the system that does the timing of the lock release. For this reason the PTE button should be mounted as close as physically possible to the door itself to allow operation with one hand whilst opening the door with the other.

Since the PTE button is therefore itself carrying the lock current, cabling to it should be rated accordingly and telephone cable should not be used.

Fireman's Switch

The Fire Switch circuitry on the card not only signals the card that the Fire Switch is activated so that it can release the lock but it also actually breaks the lock supply 12V connection as well. This is done to ensure that the Fire Switch will operate the lock even if the system electronics is down.

A normally closed contact is required in the fire switch which should be connected into the screw terminals "FIRE NC CONT" on the card.

Whenever the fire switch option is not required the "FIRE NC CONT" screws must be linked out.

When a fire switch is triggered a door can be configured to transmit a message over the system data bus to all other doors on the system instructing them to release their locks also.

This feature is a user adjustable setting that can be switched on or off as required. Factory default setting is that the global fire switch lock release facility is switched off, but the panels on site should be checked if in any doubt. Please contact the manufacturer for further details if required. See the manual section on door entrance panel card settings programming for programming details to alter this setting.

Entrance Panel Call Button Connections

This section is not applicable to changeout control racks – see the appropriate section in the manual for details on button connections in this case.

The entrance panel buttons do not operate on the principle of a single common wire with an individual switch wire for each button connected into the equipment. The entrance panel buttons are wired at manufacture with a switching matrix connecting the buttons and feeding into the entrance panel PCB.

There are no installer connections required from the buttons.

The switching matrix operates using 4 separate common 0V's, each of which is used for a group of 8 buttons. These 4 common 0V's are enabled one after another so allowing each group of 8 buttons to be read. In simplification the groups of eight buttons can be viewed as having a select line each, and can only be read in when selected in turn.

The pin headers used to connect the button matrix into have the following functionality -

Switched 0V Outputs (PLG1)

The 4 switched common 0V outputs are output on the following header pins :-

Switched Common 0V	Pin Header Used
SWITCHES 1 – 8	PLG1 PIN1
SWITCHES 9 –16	PLG1 PIN2
SWITCHES 17 – 24	PLG1 PIN3
SWITCHES 25 – 28	PLG1 PIN4

Switched Button Inputs (PLG2)

The 8 button inputs are connected onto following header pins :-

Button Input	Pin Header Used
INPUT 1	PLG2 PIN1
INPUT 2	PLG2 PIN2
INPUT 3	PLG2 PIN3
INPUT 4	PLG2 PIN4
INPUT 5	PLG2 PIN5
INPUT 6	PLG2 PIN6
INPUT 7	PLG2 PIN7
INPUT 8	PLG2 PIN8

The number of flat call buttons is limited to 20 buttons including the function buttons (Call, Cancel & Service) in the case of a digital style panel.

LITE variant panels cannot be digital in operation (no call, cancel or concierge buttons).

See the manual section entitled “Entrance Panel Flat Address Programming (LITE Cards)” for more information on how the call buttons on a LITE type panel are wired.

Entrance Panel Call Button Test Mode

At power up or reset the door entrance panel card LCD will display the following for a period of approximately 3 or 4 seconds before reverting to its normal mode of operation –

BUTTON TEST MODE

When displayed on the LCD, this mode allows the call buttons on a faceplate to be tested and checked – the LCD will display the button input number onto which the button is wired - if the button is functioning - for a period of 3 or 4 seconds. More than one button can be checked before the panel will revert to its normal mode of operation 3 or 4 seconds after the last button press was detected.

For LITE variant door cards only this button input number displayed on the door card LCD specifies the telephone handset number that the button will call within the control unit itself.

For FULL variant door entrance panel cards however this button input number may not relate directly to the handset number within the control unit as the panel may have been programmed differently according to specification at time of order.

Entrance Panel Service / Trades Access

Two separate daily service periods are allowed for within the GDX5 entrance panel so that if a service or trades button on the front of the panel (if fitted) is pressed during either of these periods the door will release the door lock for service or trades access to the premises.

As factory default, only one of these daily time periods is programmed as being operative between 07:00 Hrs to 09:00 Hrs – any other requirements must be entered into the panel by the user. See manual section on door entrance panel card settings programming for details on programming. IC3 stores these settings for the entrance panel.

It is also possible to omit Sundays from the service / trades program if not required – as default Sunday is included in the program but this can also be adjusted. Again see the manual section on door entrance panel card settings programming for details on this.

Entrance Panel Coded Access Facility

A coded access facility allowing entry at a door entrance panel by way of entering a code of between 5 and 8 digits is also available on the card – **facility not available on LITE variant panels.**

As standard this facility is disabled but this can be adjusted by the user – see manual section on door entrance panel card settings programming for more details.

The coded access digits are specified in terms of button inputs and not in terms of the engraved legend on the front of the button plate. The buttons will always be wired as the first input being the lowest numerical button on the faceplate.

The coded access settings are contained within the memory of IC3 on the card.

The coded access facility is only available on digital style door panels (ie. with a call button) and not on functional style panels.

Entrance Panel Audio Operation / Connections

Audio interconnections between the door entrance panel card and the control unit are as follows –

Door Entrance Panel Card	Control Unit
RX+	TX+
RX-	TX-
TX+	RX+
TX-	RX-

It should be noted that although the RX and TX connections crossover the + and – connections do not.

Relay RL2 is activated whenever audio is activated at the entrance panel – green LED3 will light to indicate that this audio relay is activated.

Entrance Panel Engineer LCD Fault Codes

The entrance panel displays certain error codes if it detects certain hardware problems. These codes are as follows ;-

Code TC	IC4 – Timeclock
Code EE	IC6 – EEPROM
Code CA	IC2 – CAN Controller
Code WEE	Wrong Type Of EEPROM Fitted (1)

(1) ie. LITE EEPROM in FULL panel or FULL EEPROM in LITE panel.

The problem may concern the IC itself or any associated interface circuitry and the error message is only intended as an indication of the problem. The checks performed are basic initialisation checks only and do not guarantee the operation of the IC.

If this should occur the entrance panel will release the door lock and display the error messages indefinitely.

The system should be powered down and powered back up again to give it the opportunity to initialise again. If error codes are still displayed then further investigation will be required into the cause of the problem.

Entrance Panel Settings Programming

With the new GDX5 Compact Entrance Panel many of the system settings previously factory preset are now user configurable on the entrance panel itself. The following is a list of these settings, the range of values allowed and the factory defaults.

Setting	Range Allowed	Factory Default	Notes
Door Number	0-63	As Required	Not On LITE Card
Audio Channel	2-7	As Required	
Day Of Week	Sun-Sat	As Required	
Date	0-31	As Required	
Month	1-12	As Required	
Year	0-99	As Required	
Hours (24 Hr)	0-23	As Required	
Minutes	0-59	As Required	
Pre Answer Call Length	1-99 secs	30 secs	
Post Answer Call Length	1-99 secs	40 secs	
Call Tone Ring Length	1-20 secs	4 secs	
Lock Release Length	1-20 secs	8 secs	
Door Alarm Activation Time	1-99 mins	5 mins	
Service Period 1 Start Hrs	0-23 hrs	07 hrs	
Service Period 1 Start Mins	0-59 mins	00 mins	
Service Period 1 Stop Hrs	0-23 hrs	09 hrs	
Service Period 1 Stop Mins	0-59 mins	00 mins	
Service Period 2 Start Hrs	0-23 hrs	00 hrs	
Service Period 2 Start Mins	0-59 mins	00 mins	
Service Period 2 Stop Hrs	0-23 hrs	00 hrs	
Service Period 2 Stop Mins	0-59 mins	00 mins	
Coded Access Digit 1	1-9	8	Not On LITE Card
Coded Access Digit 2	1-9	8	Not On LITE Card
Coded Access Digit 3	1-9	9	Not On LITE Card
Coded Access Digit 4	1-9	2	Not On LITE Card
Coded Access Digit 5	1-9	8	Not On LITE Card
Coded Access Digit 6	1-9	3	Not On LITE Card
Coded Access Digit 7	1-9	8	Not On LITE Card
Coded Access Digit 8	1-9	-	Not On LITE Card
Sunday Service Facility	On Or Off	On	
Coded Access Facility	On Or Off	Off	Not On LITE Card
Global Fire Switch	On Or Off	Off	
Tailgating Lock Securing	On Or Off	Off	

These settings can be displayed and changed by way of the four small buttons visible through the hole in the plastic carrier - which are reached by removing the entrance panel button faceplate.

These four buttons – from the left hand side have the following functions :-

1. Settings Display
2. Increment Setting
3. Decrement Setting
4. Enter New Setting

Pressing the Settings Display button repeatedly will bring up each of the above settings in turn.

Before any of these settings can be changed a security link must be moved before the Increment, Decrement or Enter buttons can be used.

Link PG10 should always normally sit in the position labelled SP (Settings Protect) – to adjust any settings move this link into the position labelled SE (Settings Enable).

This will then allow the Increment and Decrement buttons to vary the setting – pressing the Enter button will save the new setting. This new setting will not be saved until the Enter button has been pressed. The settings routine will time out 8 seconds after the last button press.

Panel operation will not return to normal until the security link has been replaced again to secure the settings again.

Notes

1. The coded access digits are specified in terms of button inputs and not in terms of the engraved legend on the front of the button plate. The buttons will always be wired as the first input being the lowest numerical button on the faceplate. Coded Access facilities are only available with Digital operation panels (ie with a call button) and not with Functional operation panels.

Changeout Rack Introduction

To allow the utilisation of existing entrance panel faceplate metalwork of other manufacturers systems in conjunction with a GDX5 door entry system an optional changeout interface card can be fitted into a GDX5 control rack. This additional card (0305/001) allows the connection of existing single call buttons and a standard 3 or 4 wire ADU speech unit into a GDX5 control rack without having to replace the door entrance panel electronics or faceplate. The card comes in two assembly variants – either 1 or 2 door.

Changeout Rack Card Addressing

The additional changeout card does not require addressing as Door 0 and Door 1 are automatically allocated by the card itself.

Changeout Rack Audio Channel Numbering

The audio channel numbering on the additional changeout card cannot be altered as Channel 1 and Channel 2 are automatically allocated by the card. The audio channel connections from the additional changeout card into the standard control card are factory made and no user connections are required.

Changeout Rack Call Button Connections

Unlike the call button looming on a standard GDX5 entrance panel, which operate in a switching matrix, the entrance panel buttons on a changeout control rack entrance panel faceplate operate on the principle of a single common wire “COMM” with an individual switch wire for each button connected into the equipment. The call button connections into the changeout card determine which handset is called on the system.

Button Input No At Changeout Card	Handset Position Called On Card
1	1
2	2
3	3
...	...
15	15
16	16
Trade	Service/Trades

The service/trades access button is wired into the position labeled “TRADE”.

Changeout Rack Audio Level Adjustment

Audio level adjustment on a changeout rack is made utilising the variable potentiometers on the ADU speech units themselves – there are no adjustments on the cards within the changeout rack itself.

Changeout Rack Audio Operation / Connections

The changeout control rack is designed to interface onto a standard 3 or 4 wire ADU speech unit such as the Urmet 5150/500 or the LT Terraneo 2659N.

The connections required for these two models are as follows –

Connection	0305/001 Card	LT	URMET
+8V	+	+	+
0V	-	Not Required	-
Audio (Door To Handset)	1	1	1
Audio (Handset To Door)	2	2	2

Changeout Rack Settings Programming

Unlike the standard GDX5 system where certain door settings are set on the door entrance panel the following settings are fixed and cannot be altered.

Setting	Range Allowed	Setting
Audio Channel	Fixed	1 or 2
Pre Answer Call Length	Fixed	30 secs
Post Answer Call Length	Fixed	40 secs
Call Tone Ring Length	Fixed	4 secs
Door Alarm Activation Time	Fixed	5 mins
Sunday Service Facility	Fixed	On
Global Fire Switch	Fixed	Off
Tailgating Lock Securing	Fixed	Off

A Coded Access facility is not available on a changeout control rack.

The following settings however can be set from the control unit card - rather than on the entrance panel card with a standard system - using the “Control Unit Settings Programming” menu.

The option “CHANGEOUT” within the settings menu should be set to “ON” to allow the following settings menus to be accessed – otherwise they will not be accessible.

Setting	Range Allowed	Factory Default
Day Of Week	Sun–Sat	As Required
Date	0-31	As Required
Month	1-12	As Required
Year	0-99	As Required
Hours (24 Hr)	0-23	As Required
Minutes	0-59	As Required
Lock Release Length	1-20 secs	8 secs
Service Period 1 Start Hrs	0-23 hrs	07 hrs
Service Period 1 Start Mins	0-59 mins	00 mins
Service Period 1 Stop Hrs	0-23 hrs	09 hrs
Service Period 1 Stop Mins	0-59 mins	00 mins
Service Period 2 Start Hrs	0-23 hrs	00 hrs
Service Period 2 Start Mins	0-59 mins	00 mins
Service Period 2 Stop Hrs	0-23 hrs	00 hrs
Service Period 2 Stop Mins	0-59 mins	00 mins

Changeout Rack Specifications & Sizes

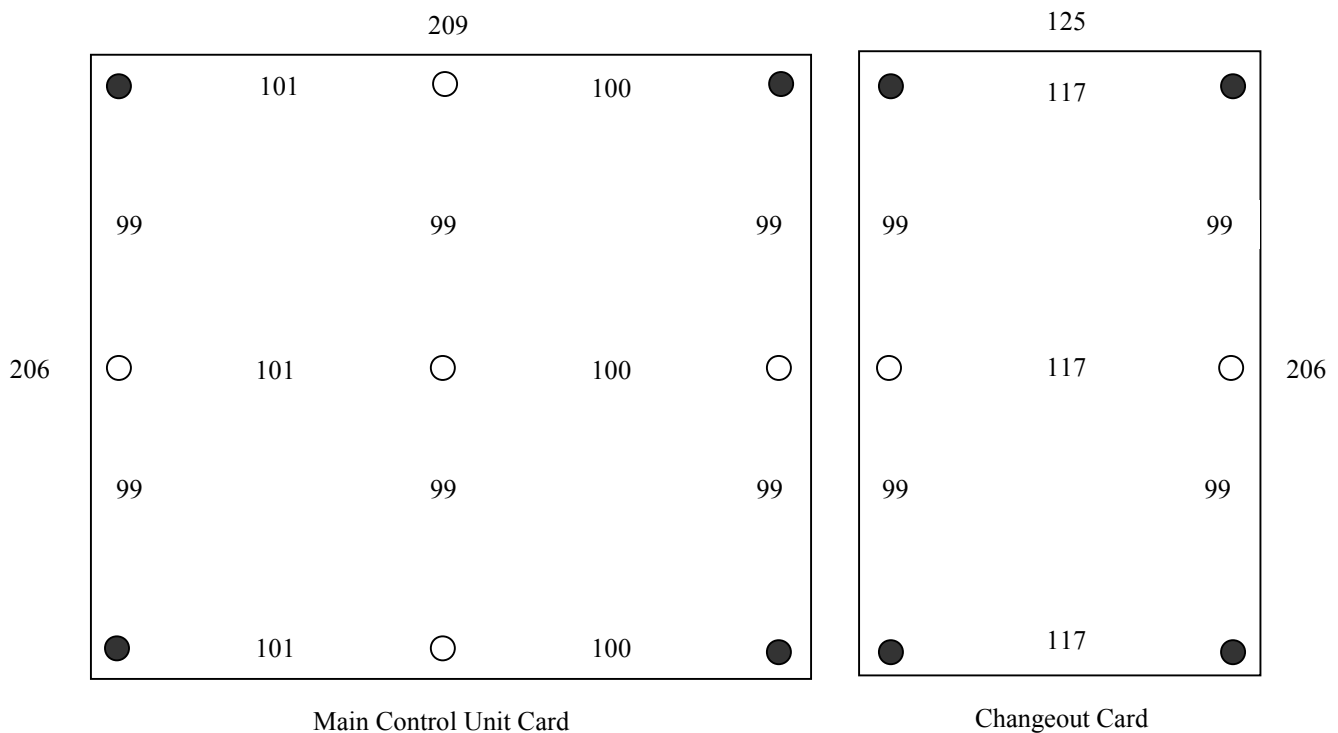
The enclosure supplied with a changeout control rack is of dimensions 500 x 400 x 100 mm.

If the existing enclosure is to be kept, but the backplate mounting holes are different, then the easiest solution is to adapt the backplate mounting holes on the plate supplied to fit the existing enclosure fixings.

If this is not possible, then the following dimensions are included to allow mounting of the cards supplied within a changeout control rack within an existing enclosure of a different size. It should be noted that the diagrams below are not to scale and should not be used as a template as such.

It is recommended that the cards are kept in the layout out shown in any other enclosure as this will avoid having to re-make factory made wiring looms to connect the cards together.

Dimensions quoted within the cards are between centers of holes in mm.



- Brass Standoff Pillar With Securing Nut On PCB
- Nylon Standoff Support Pillar With No Securing Nut On PCB

Battery Backup Facilities

Battery back-up facilities may be incorporated into a GDX5 Audio Control Unit by the addition of a GDX5 Audio Battery Back-up Module (Order Code 16143) or into a GDX5 Video Control Unit by the addition of a GDX5 Video and Audio Battery Backup Module (Order Code 119052).

Batteries are not supplied with the control units and are the responsibility of the installer to provide if required.

The above modules allow the addition of 12V lead acid battery cells into a control unit to provide a limited period of system operation when mains supply failure occurs. The largest battery capacity rating that can be charged from a standard GDX control unit PSU and housed within any of our enclosures is 7 Amp/Hour. Any applications requiring larger batteries would require a dedicated PSU/battery charger located within a separate enclosure.

The modules will charge the batteries under normal mains operation and when running on battery power will drop the batteries out of circuit when the battery voltage drops to around 9 Vdc - to prevent permanent damage to the batteries themselves by completely discharging them.

The duration of the mains fail backup period is dependant on the size of batteries used, the general condition of the batteries themselves and the specification of the door locks(s) used on the system. As illustrated with the example below, of particular note would be the heavy current drawn continuously by magnetic door locks which must be considered when considering the duration of mains fail backup required. The addition of token access equipment will also impact of course on the duration of this backup period from a particular battery capacity.

As a rough guide, the following figures allow the calculation of battery requirements for various system permutations for a required duration of mains fail backup –

Audio Equipment Item	Approx Current Consumption (A)
8 or 16 Way Audio Control Unit	0.150
Audio Door Entrance Panel	0.150
Audio Telephone Handset	0.015
Audio High Rise Control Unit (Typical)	0.500

Video Equipment Item	Approx Current Consumption (A)
8 Way Video Control Unit	0.250
16 Way Video Control Unit	0.350
Video Door Entrance Panel	0.250
Video Telephone Handset	0.025
Video High Rise Control Unit (Typical)	0.700

Token Access Equipment Item	Approx Current Consumption (A)
Easikey 99 Controller	0.190
Easikey 1000N Controller	0.150
Easikey Token Reader	0.090

Taking the following system specification (16 Way Audio, 2 Door & Easikey) therefore as an example using standard fail closed door keeps, and not magnetic locks drawing current continuously –

Equipment Item	Quantity	Unit Consumption (A)	Total Consumption (A)
Control Unit	1	0.150	0.150
Door Entrance Panel	2	0.150	0.300
Telephone Handsets	16	0.015	0.240
Easikey 99 Controller	1	0.190	0.190
Easikey Token Reader	2	0.090	0.180
Door Locks (Fail Closed)	2	0.000	0.000
Total			1.060

Using these approximate figures the battery capacity required could then be calculated as follows –

(Total Consumption In Amps) x (Backup Period Required In Hours) = Amp/Hour Rating Required

For the above system example therefore for a battery backup period of 4 hours –

$$\mathbf{1.060 \times 4 = 4.24 \text{ Amp/Hour Battery Capacity Required}}$$

As stated previously the above is a very rough indication and is very dependant on battery condition.

If however the above system utilised magnetic door locks drawing current continuously (eg. 0.300A each), and not standard fail closed door locks, then the total current consumption of the above system would become 1.660A and then $1.660 \times 4 = 6.64$ Amp/Hour Battery Capacity would be required.

It should also be noted that the current consumption varies greatly between different types of magnetic locks and can be anywhere within the range of 0.250 to 2.000 Amps.

Token Access Equipment

Proximity token access equipment can be used in conjunction with the GDX5 door entry system. Two distinctly different methods of proximity token access can however be employed with the GDX5 system as detailed below.

GDX Integrated Proximity Token Access Controller

With the GDX integrated proximity token access package the token access controller is built into the GDX5 entrance panel controller and the token reader itself connects directly into the entrance panel. All necessary connections from the reader to the entrance panel are factory made and no user connections are required to the reader. The token reader communicates via the door entry system and requires no connections of its own to the central control unit.

The entrance panel LCD will display "TOKEN VALID" or "TOKEN INVALID" as required when a token is presented to the reader.

The setup and installation of the GDX Integrated Access product is detailed within the Installation and User's manuals supplied with the equipment.

Standalone Proximity Token Access Controller (eg : Easikey 99, Easikey 1000)

The token reader at the door connects directly into the token reader controller as per the token equipment manufacturers instructions. The token reader controller equipment then interfaces to the GDX5 system by connecting what would normally be its switched lock output into the entrance panel allowing the entrance panel to operate the door lock for it. The advantages of operation in this fashion are -

- A lock released re-assurance tone is provided by the entrance panel.
- "TOKEN ACCESS" is displayed on the entrance panel LCD as further re-assurance.

The token reader control equipment interfaces into the entrance panel by providing a switched negative to activate the entrance panel lock circuitry. This circuitry can be checked by momentarily shorting a 0V onto this terminal at the entrance panel.

If the token reader control panel is of the type that supplies a clean contact intended for lock operation - which operates when a successful token presentation is detected - then use that contact to switch a 0V into the entrance panel terminal "TOKEN SW-".

If the token reader control panel is of the type that switches both a +12V and a 0V - intended for the actual lock operation - then connect the switched 0V provided at activation into the entrance panel terminal "TOKEN SW-".

In this manner, when the token reader operates, the reader control equipment activates relay RL1 on the door entrance panel. The entrance panel lock relay RL1 has contact ratings of 12Vdc 1A which must not be exceeded under any circumstances. Red LED4 displays whether a voltage is currently present at the lock output or not - whether this is illuminated or not when the lock is released is dependant on the lock type used and the position of lock selection link PLG11 on the entrance panel.

The token reader control equipment should have its lock release period set to shorter or the same as the door entry equipment - so that the door entry system timing prevails.

Spare Parts Ordering Information

The following table details ordering information for available standard spare parts for the GDX5 Door Entry System – please contact the manufacturer for latest pricing and availability or technical support for any other enquiries.

Order Code	Item Description	Notes
119049	8 Handset, 2 Audio Channel Control Unit Card	
119050	16 Handset, 2 Audio Channel Control Unit Card	
119043	16 Handset, 7 Audio Channel Control Unit Card	
119058	1 Door Changeout Control Unit Door Card	
119057	2 Door Changeout Control Unit Door Card	
125000	GDX5 FULL Entrance Panel Chassis	Includes PCB, MIC, SPK, LCD
125001	GDX5 LITE Entrance Panel Chassis	Includes PCB, MIC, SPK, LCD
125002	GDX5 FULL Entrance Panel Chassis & Integrated Access Facility	Does Not Include Reader
125003	GDX5 LITE Entrance Panel Chassis & Integrated Access Facility	Does Not Include Reader
120	GDX Integrated Access Panel Mount Reader	Fits LITE & FULL Chassis
121	GDX Integrated Access Standalone Vandal Resistant Reader (LITE)	
131	GDX Integrated Access Standalone Vandal Resistant Reader (FULL)	
16695	GDX5 Entrance Panel Backlit LCD Display	
16696	GDX5 Entrance Panel Slimline Speaker	
16599	GDX5 Entrance Panel Microphone	
140140	GDX5 Entrance Panel Button Microswitch	
140035	GDX5 Entrance Panel Faceplate Lexan	
109011	GDX5 Entrance Panel Security Screws	Supplied In Packs Of 100
109013	Entrance Panel Security Screw Driver	Use With Driver Bit
109012	Entrance Panel Security Screw Driver Bit	Use With Screw Driver
23121	GDX5 2 Button Audio Handset	
106007	GDX5 Audio Handset Mounting Backplate	
123018	GDX5 2 Button Colour Video Handset	
123017	GDX5 3 Button Colour Video Handset (Camera Legend)	If Using Camera Scroll Facility
102034	GDX5 2 Button Monochrome Video Handset	
102037	GDX5 3 Button Monochrome Video Handset (Camera Legend)	If Using Camera Scroll Facility
954	S-40-12 12V 3.5A Control Rack PSU	
920	S-100-12 12V 8.5A Control Rack PSU	
922	S-150-13.5 13.5V 11.2A Control Rack PSU	
921	S-60-15 15V 4A Control Rack PSU	

Minimum order value of £25-00 will be applicable at the time of order.

Common System Faults Experienced On GDX5

Symptom 1	Symptom 2	Possible Cause
Door station reports "COMMS PROBLEM" at LCD on door station and cannot call any flat on the control card.		<p>May Indicate Wiring Problem Between Door Station And Control Rack. Switch Off System And Meter Impedance Between CANH And CANL At The Door Station Itself - Should Be approximately 60 Ohms. 120 Ohms Suggests One CAN Header Too Few, 40 Ohms Suggests One CAN Header Too Many. If High Impedance Check Cabling Between Door Station Is Okay. Check For Broken Wires, Shorts Between Wires And For Shorts To Ground. Check That There Have Been No Cable Compression Joints When The Door Station Has Been Sealed.</p> <p>Connect Door Station Into Control Rack Directly On Short Length Of Cable To Prove Cabling Not At Fault.</p> <p>Try Another Door Station On The System To Prove Whether The Cabling And The Control Card Are Okay Or Not. If The 2nd Door Station Works Then The CAN Data Driver On The 1st Door Station May Be Blown - Return To Manufacturer For Checking. If The 2nd Door Station Doesn't Work Either And The Cabling Is Okay Then Try Another Control Card.</p>
Door Station Reports "CALL ENGINEER" At Door Station LCD.	"Code TC" "Code EE" "Code CA" "Code WEE"	<p>Timeclock IC Has Been Corrupted.</p> <p>EEPROM IC Problem Has Been Detected.</p> <p>CAN Communications IC Problem Has Been Detected.</p> <p>Wrong EEPROM IC Type Fitted</p> <p>For All Of The Above, Contact Manufacturer.</p>
Door Station Reports "TEL DISCONNECTED" At Door Station LCD When A Handset Is Called	Other Handsets On Control Card Call Okay	<p>The Control Card Is Reporting To The Door Station That There Is Either No Handset Connected In The Position Being Called, The Cabling To The Handset Is Faulty, The Handset Is Faulty Or The Control Card Position Is Faulty.</p> <p>Try A Known Working Handset Directly Into The Control Card & Check With The Control Card LCD Which Handset Is Being Called.</p>

Symptom 1	Symptom 2	Possible Cause
<p>No Audio Or Call Tone To Handset, Green LED Illuminated, Door Station Reports “CALL ANSWERED” When Handset Lifted And Door Release Operates On Handset.</p>		<p>Wrong Audio Path Used To Connect That Door Into That Control Card.</p> <p>Check That RX And TX Audio Connections Are Crossed Correctly Between Doors, Control Racks And That LJB For That Audio Path.</p> <p>Check Cabling On RX And TX Audio Connections For That Audio Path - No Broken Wires, Shorts Between Wires Or Shorts To Ground.</p>
<p>Audio Level Very Quiet One Way Between Handset And Door Station</p>		<p>May Be That Either The + or the – Connection Is Broken Or Missing On The RX Or TX Audio Pair Between The Door And The Control Rack.</p>
<p>Door station reports “INVALID NO” at LCD on door station.</p>		<p>Suggests That The Address Being Entered At The Door Station Is Not Programmed Into It. Manufacturer Can Confirm Programming From EEPROM IC Label Information - See Section On Door Station For Details.</p> <p>One Situation To Be Aware Of However Is That The “INVALID NO” Is Not Being Encountered Accidentally As The Result Of A Double Press Of The Door Station Call Button ie. A Call Is Made, No Response Is Returned To The Door Station So The Call Button Is Pressed Again Producing The “INVALID CALL” Message As A Result. This May Be Masking A Potential “COMMS PROBLEM” Fault As Discussed Above - Which May Take 3 Or 4 Seconds To Be Returned, By Which Time The Call Button Has Been Pressed Again. Please Check If This Is The Case - A Genuine “INVALID NO” Message Should Be Displayed Immediately, And Not By A Second Button Press.</p>

Symptom 1	Symptom 2	Possible Cause
<p>Door Station LCD Displays "FIRE SWITCH"</p>	<p>Lock Is Permanently Released</p>	<p>The Fire Switch Is Triggered, The Cabling To The Fire Switch Is Faulty Or If A Fire Switch Is Not Used Then The Shorting Link At The Door Inputs For The Fire Switch Is Missing. Check With A Meter That There Is A Short Across The Fire Switch Inputs At The Door.</p>
<p>Door Station LCD Displays "NO LOCK SUPPLY"</p>	<p>Lock Is Permanently Released</p>	<p>There Is No Supply Voltage For The Lock Coming From The Control Rack Into The Door. Using A Meter On VOLTS DC Scale Check For Approximately +12VDC Across The "LOCK PWR +12V" And "LOCK PWR 0V" Screws At The Door (Not The "LOCK O/P" Screws)</p> <p>See Sheet On GDx5 Lock Operation & Checks For Further Information</p>
<p>Erratic Operation & Difficulties Calling Through To Flats.</p>	<p>General Intermittent Faults & Operation.</p> <p>Calls Sometimes Go Through Correctly, Other Times "Handset Is Disconnected" Appears On LCD, Sometimes Two Handsets Call At One Time, Other Times "Comms Problem" Appears On LCD.</p> <p>Erratic Operation Throughout The System.</p>	<p>Erratic Operation May Indicate That There Is More Than One Door With The Same Address On The System, Thereby Confusing The Data Bus As More Than One Door May Be Attempting To Respond To A Data Transmission. This Will Give Erratic Operation And Cause Some Of The Fault Symptoms Listed Opposite To Be Exhibited. Check Door Addresses By Way Of Their LCD Displays.</p> <p>May Also Indicate CAN Data Bus Wiring Problem Between Door Station And Control Rack. Switch Off System And Meter Impedance Between CANH And CANL At The Door Station Itself - Should Be approximately 60 Ohms. 120 Ohms Suggests One CAN Header Too Few, 40 Ohms Suggests One CAN Header Too Many.</p>

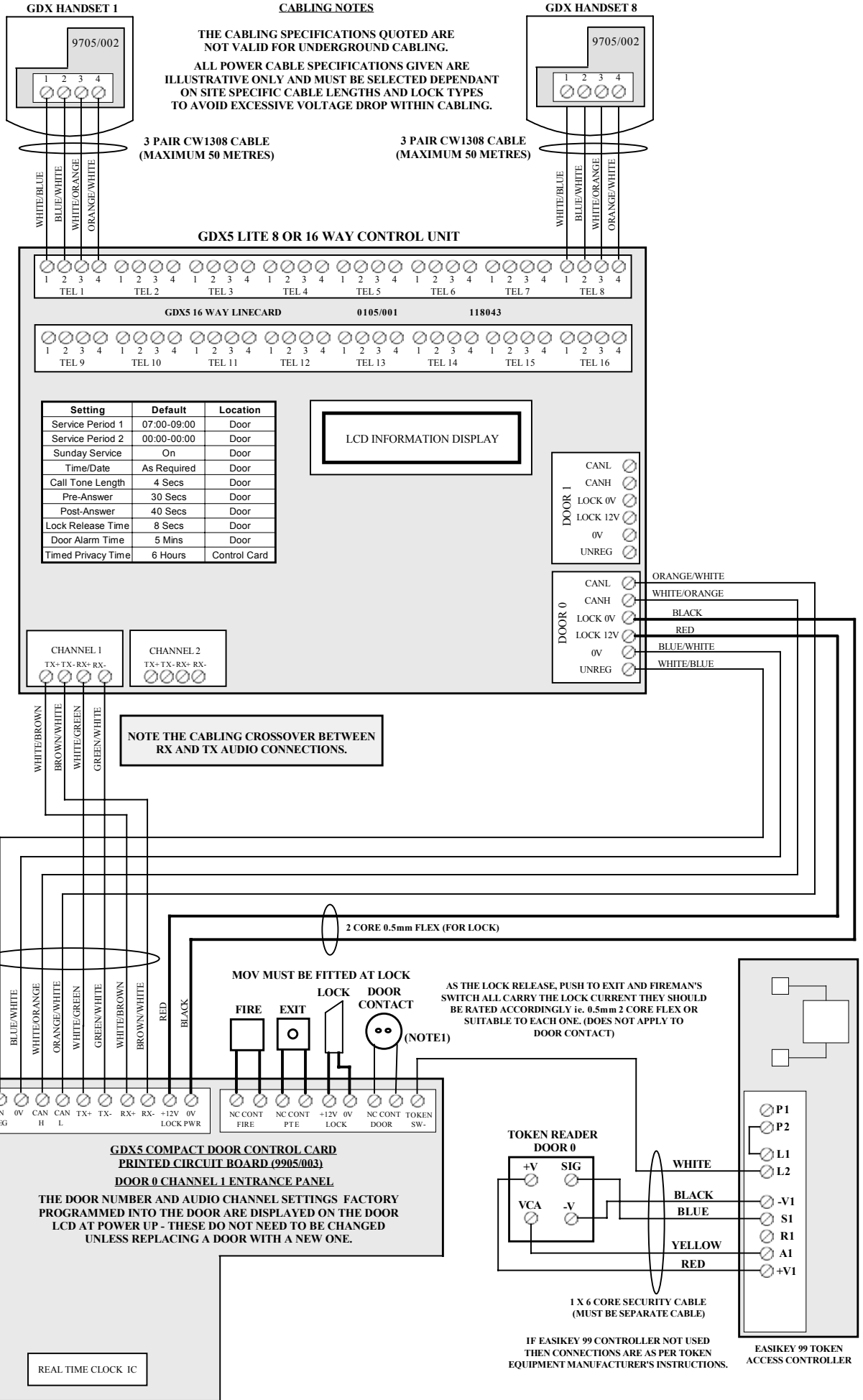
System Connection Drawings & Schematics

The following system connection drawings are included within this manual in the following pages –

Drg No	Title
0010	GDX5 Lite Low Rise Audio Control Unit
0017	GDX5 Full Low Rise Audio Control Unit
0014	GDX5 Lite Low Rise Video Control Unit
0015	GDX5 Full Low Rise Video Control Unit
0022	GDX5 Changeout Low Rise Audio Control Unit
0016	GDX5 Slave Handset Connections (2 nd Handset In Parallel)
	GDX5 Hard Of Hearing Beacon & Extension Sounder Connections

The following schematics and further information notes are also included within this manual in the following pages –

Title	Notes
GDX5 COMPACT ENTRANCE PANEL LOCK OPERATION & CHECKS	FAULT FINDING CHECK SHEET
GDX COMPACT PANEL STANDARD METAL BACKBOX TEMPLATE	CHECK CAREFULLY WHICH BACKBOX HAS BEEN ORDERED
GDX COMPACT PANEL MITRED BEZEL METAL BACKBOX TEMPLATE	CHECK CAREFULLY WHICH BACKBOX HAS BEEN ORDERED
COMMISSIONING RECORD TICK SHEET	TO BE COMPLETED BY COMMISSIONING ENGINEER



IF SYSTEM IS A 2 DOOR SYSTEM THEN THE 2ND DOOR IS CONNECTED AS SHOWN FOR THE 1ST ONE EXCEPT USING THE DOOR 1 CHANNEL 2 CONNECTIONS. (IF USING A 2ND DOOR TOKEN READER ADD A LINK FROM SCREW P2 TO SCREW L3 ON THE EASIKY 99 CONTROLLER AND CONNECT INTO THE 2ND READER CHANNEL)

NOTE 1: DO NOT USE THE CONTACTS WITHIN MAGNETIC LOCKS FOR THE DOOR CONTACT. USE SECURITY CONTACTS INSTEAD FOR DOOR OPEN INDICATION IF REQUIRED.

GDX5 8 OR 16 WAY CONCIERGE CONTROL UNIT

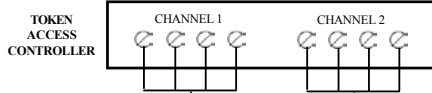
CABLING NOTE : The cabling specifications quoted are not valid for underground cabling - suitable underground cabling must be used in this case.

GENERAL NOTE : The audio channel programmed into each door that it will use within the control rack is displayed at power up on the door.

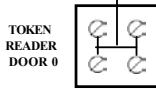
DOOR CONNECTIONS SUMMARY

DOOR	CONTROL CARD	COLOUR CODING
UNREG	UNREG	WHITE/BLUE
0V	0V	BLUE/WHITE
CANH	CANH	WHITE/ORANGE
CANL	CANL	ORANGE/WHITE
TX+	RX+	WHITE/GREEN
TX-	RX-	GREEN/WHITE
RX+	TX+	WHITE/BROWN
RX-	TX-	BROWN/WHITE
LOCK12V	LOCK PWR +12V	
LOCK0V	LOCK PWR 0V	

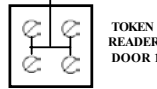
CONNECTIONS AS PER TOKEN EQUIPMENT MANUFACTURER'S INSTRUCTIONS.



1 X 6 CORE SECURITY CABLE (MUST BE SEPARATE CABLE)

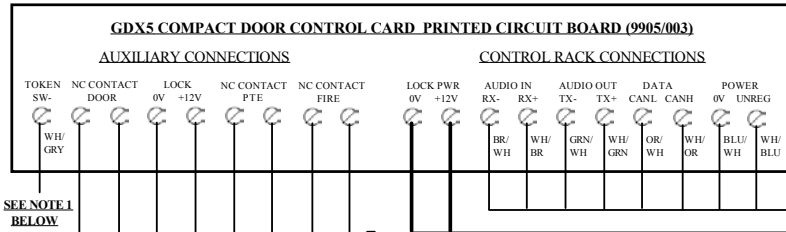


1 X 6 CORE SECURITY CABLE (MUST BE SEPARATE CABLE)



ALL POWER CABLE SPECIFICATIONS GIVEN ARE ILLUSTRATIVE ONLY AND MUST BE SELECTED DEPENDANT ON SITE SPECIFIC CABLE LENGTHS AND LOCK TYPES TO AVOID EXCESSIVE VOLTAGE DROP WITHIN CABLING.

DOOR 0 CHANNEL 2 ENTRANCE PANEL



SEE NOTE 1 BELOW

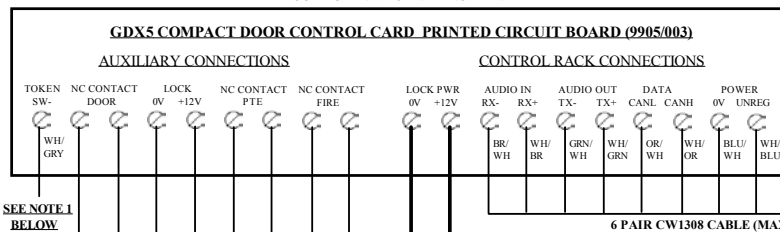
DOOR CONTACT (SEE NOTE 2)
RELEASE (FIT MOV AT LOCK)
PUSH TO EXIT
FIREMAN'S SWITCH

AS THE LOCK RELEASE, PUSH TO EXIT AND FIREMAN'S SWITCH ALL CARRY THE LOCK CURRENT THEY SHOULD BE RATED ACCORDINGLY ie. 0.5mm 2 CORE FLEX OR SUITABLE TO EACH ONE. (DOES NOT APPLY TO DOOR CONTACT)

NOTE THE CABLING CROSSOVER BETWEEN RX AND TX AUDIO CONNECTIONS THROUGHOUT THE SYSTEM.

6 PAIR CW1308 CABLE (MAXIMUM 100 METRES)
2 CORE 0.5mm FLEX (FOR LOCK)

DOOR 1 CHANNEL 3 ENTRANCE PANEL



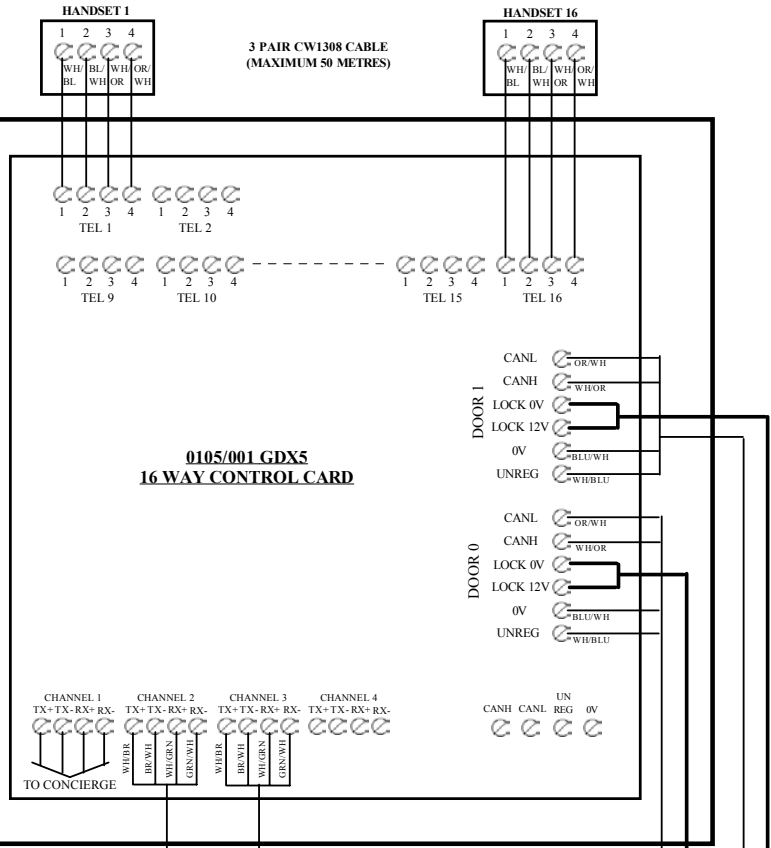
SEE NOTE 1 BELOW

DOOR CONTACT (SEE NOTE 2)
RELEASE (FIT MOV AT LOCK)
PUSH TO EXIT
FIREMAN'S SWITCH

AS THE LOCK RELEASE, PUSH TO EXIT AND FIREMAN'S SWITCH ALL CARRY THE LOCK CURRENT THEY SHOULD BE RATED ACCORDINGLY ie. 0.5mm 2 CORE FLEX OR SUITABLE TO EACH ONE. (DOES NOT APPLY TO DOOR CONTACT)

NOTE 1 : THE CONNECTION INTO TOKEN SW- FROM THE TOKEN ACCESS CONTROLLER SHOULD BE TAKEN ON THE MAIN ENTRANCE PANEL CW1308 CABLE. THE LOCK OUTPUT -VE ON THE TOKEN CONTROLLER IS USED TO SWITCH THE ENTRANCE PANEL LOCK CIRCUITRY INSTEAD OF THE LOCK DIRECTLY.

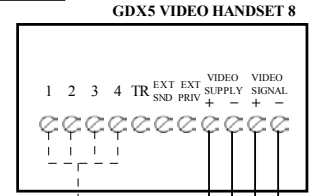
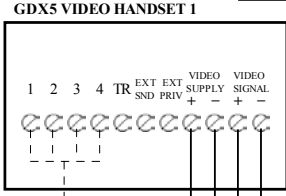
NOTE 2 : DO NOT USE THE CONTACTS WITHIN MAGNETIC LOCKS FOR THE DOOR CONTACT. USE SECURITY CONTACTS INSTEAD FOR DOOR OPEN INDICATION IF REQUIRED.



NOTE : This drawing shows the connections for the video equipment and must be read in conjunction with the correct audio switching drawing.
CABLING NOTE : The cabling specifications quoted are not valid for underground cabling - suitable underground cabling must be used in this case.
GENERAL NOTE : The audio channel programmed into each door that it will use within the control rack is displayed at power up on the door.

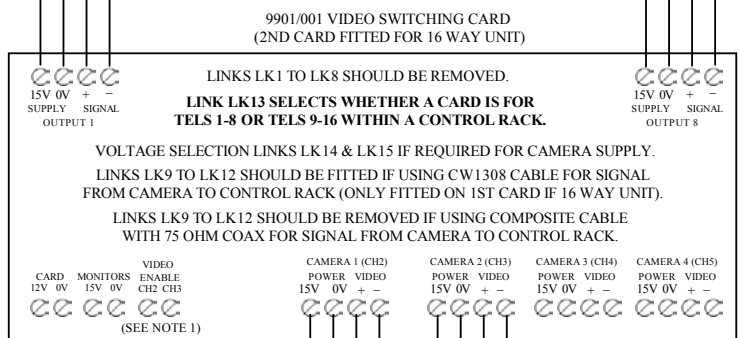
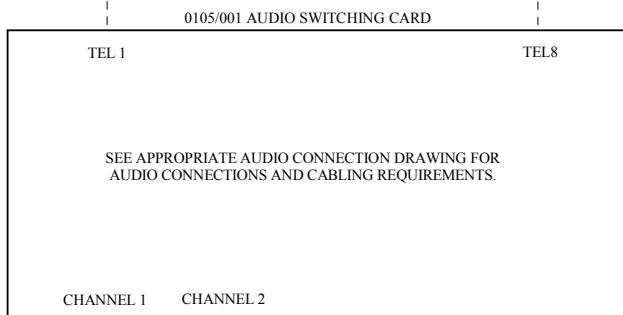
HANDSET / CONTROL RACK VIDEO CONNECTIONS (3 PAIR OR 6 PAIR CW1308 CABLE)			
HANDSET	UP TO 50 METRES 3 PAIR CW1308	UP TO 100 METRES 6 PAIR CW1308	JUNCTION BOX
VIDEO SUPPLY +	WH/BL & BL/WH	WH/BL & BL/WH + WH/BR & BR/WH	SUPPLY +15V
VIDEO SUPPLY -	WH/OR & OR/WH	WH/OR & OR/WH + WH/SL & SL/WH	SUPPLY 0V
VIDEO SIGNAL +	WH/GN	WH/GN	SIGNAL +
VIDEO SIGNAL -	GN/WH	GN/WH	SIGNAL -

NOTE : IF SCREENED CABLE USED CONNECT SCREEN AS PER DASHED LINE



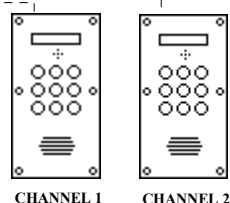
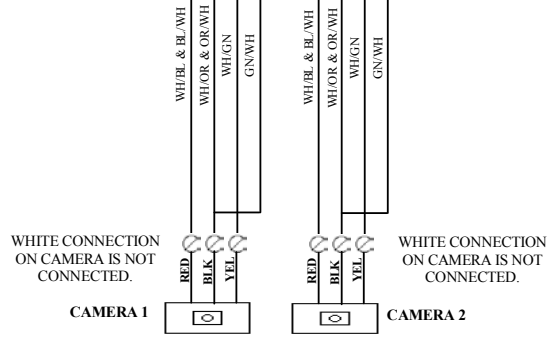
THE USE OF CW1308 CABLE IS RECOMMENDED ONLY IF THE CABLE IS SEGREGATED FROM ANY OTHER MAINS OR HIGH FREQUENCY CABLING - IF THIS CAN NOT BE GUARANTEED OR THERE ARE ANY CONCERNS WITH REGARDS TO A NOISY ENVIRONMENT THEN A SUITABLE SCREENED TWISTED PAIR CABLE SHOULD BE USED AS A PRE-CAUTION.

AUDIO & VIDEO CONNECTIONS MUST BE IN SEPARATE CABLES.



NOTE 1 : NO CONNECTIONS REQUIRED INTO TERMINALS "VIDEO ENABLE CH2 & CH3".

GDX5 VIDEO LOW RISE CONTROL UNIT



STANDARD GDX CAMERA TYPE VM38C SUPPLY REQUIREMENTS OF 10 TO 15 VDC AT CAMERA.

VIDEO CABLING REQUIREMENTS (AUDIO REQUIREMENTS ADDITIONAL)

THE USE OF CW1308 CABLE IS RECOMMENDED ONLY IF THE CABLE IS SEGREGATED FROM ANY OTHER MAINS OR HIGH FREQUENCY CABLING - IF THIS CAN NOT BE GUARANTEED OR THERE ARE ANY CONCERNS WITH REGARDS TO A PARTICULARLY NOISY ENVIRONMENT THEN A SUITABLE SCREENED TWISTED PAIR CABLE SHOULD BE USED AS A PRE-CAUTION.

CAMERA / CONTROL RACK VIDEO CONNECTIONS (CW1308 3 PAIR CABLE MAXIMUM 100 METRES)		
CAMERA		CONTROL RACK
+VE DC POWER (RED)	WH/BL & BL/WH	+15V DC POWER
0V DC POWER (BLACK)	WH/OR & OR/WH	0V DC POWER
+VE VIDEO SIGNAL (YELLOW)	WH/GN	+VE VIDEO SIGNAL
NOT CONNECTED (WHITE)	GN/WH	-VE VIDEO SIGNAL

NOTE : IF SCREENED CABLE USED CONNECT SCREEN AS PER DASHED LINE

NOTE : This drawing shows the connections for the video equipment and must be read in conjunction with the correct audio switching drawing.

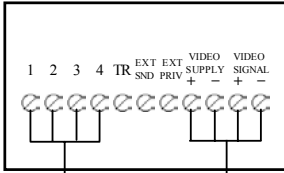
CABLING NOTE : The cabling specifications quoted are not valid for underground cabling - suitable underground cabling must be used in this case.

GENERAL NOTE : The audio channel programmed into each door that it will use within the control rack is displayed at power up on the door.

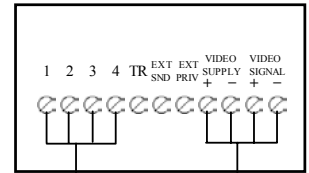
HANDSET / CONTROL RACK VIDEO CONNECTIONS (3 PAIR OR 6 PAIR CW1308 CABLE)			
HANDSET	UP TO 50 METRES 3 PAIR CW1308	UP TO 100 METRES 6 PAIR CW1308	JUNCTION BOX
VIDEO SUPPLY +	WH/BL & BL/WH	WH/BL & BL/WH + WH/BR & BR/WH	SUPPLY +15V
VIDEO SUPPLY -	WH/OR & OR/WH	WH/OR & OR/WH + WH/SL & SL/WH	SUPPLY 0V
VIDEO SIGNAL +	WH/GN	WH/GN	SIGNAL +
VIDEO SIGNAL -	GN/WH	GN/WH	SIGNAL -

NOTE : IF SCREENED CABLE USED CONNECT SCREEN AS PER DASHED LINE

GDX5 VIDEO HANDSET 1

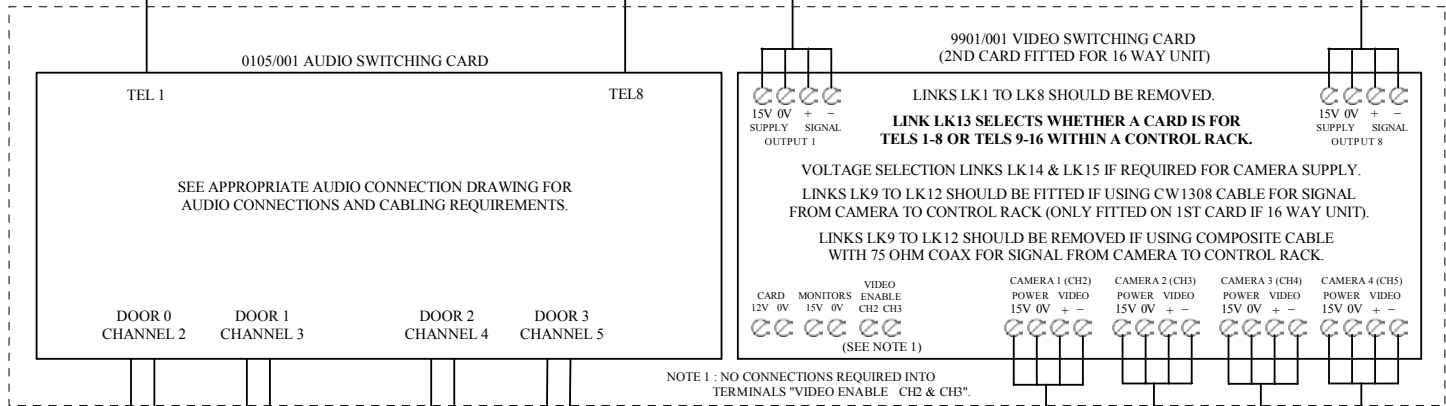


GDX5 VIDEO HANDSET 8

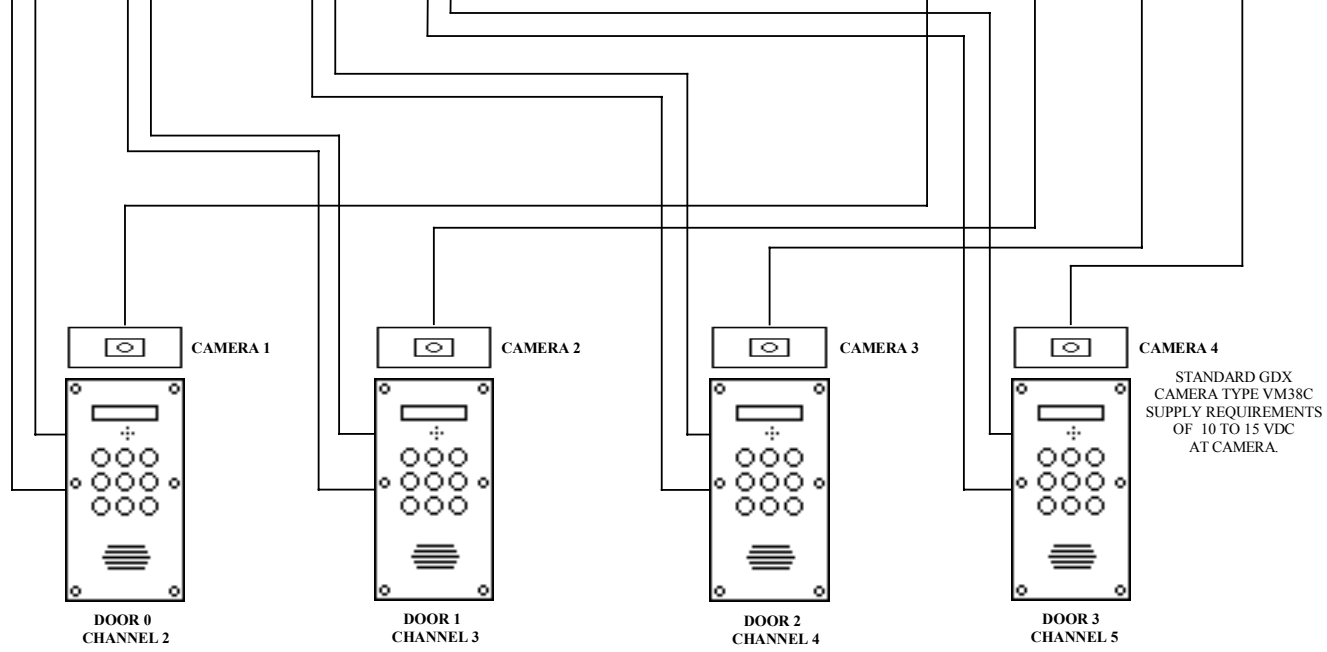


THE USE OF CW1308 CABLE IS RECOMMENDED ONLY IF THE CABLE IS SEGREGATED FROM ANY OTHER MAINS OR HIGH FREQUENCY CABLING - IF THIS CAN NOT BE GUARANTEED OR THERE ARE ANY CONCERNS WITH REGARDS TO A NOISY ENVIRONMENT THEN A SUITABLE SCREENED TWISTED PAIR CABLE SHOULD BE USED AS A PRE-CAUTION.

AUDIO & VIDEO CONNECTIONS MUST BE IN SEPARATE CABLES.



GDX5 VIDEO LOW RISE CONTROL UNIT

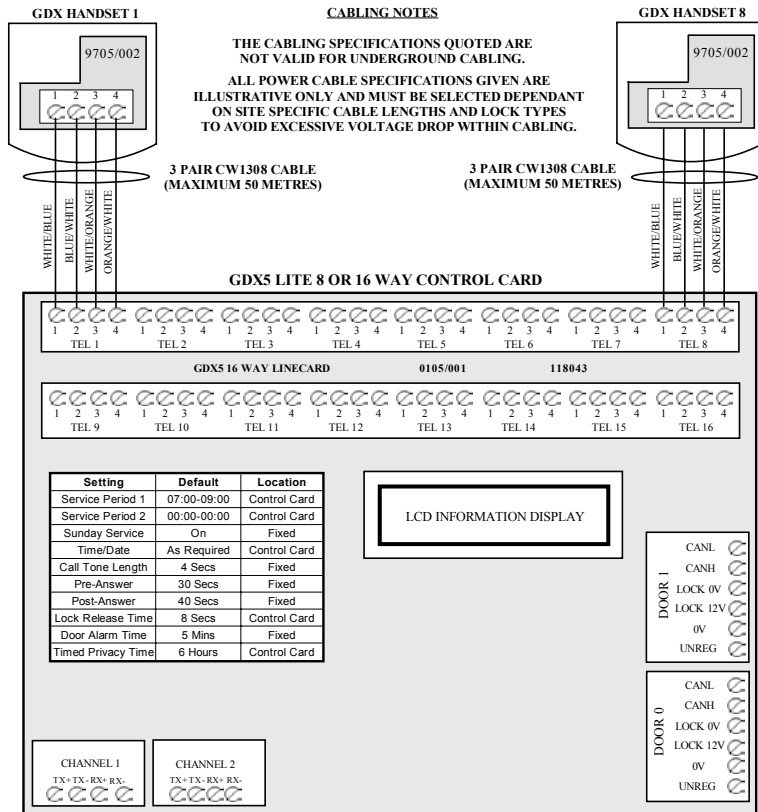


VIDEO CABLING REQUIREMENTS (AUDIO REQUIREMENTS ADDITIONAL)

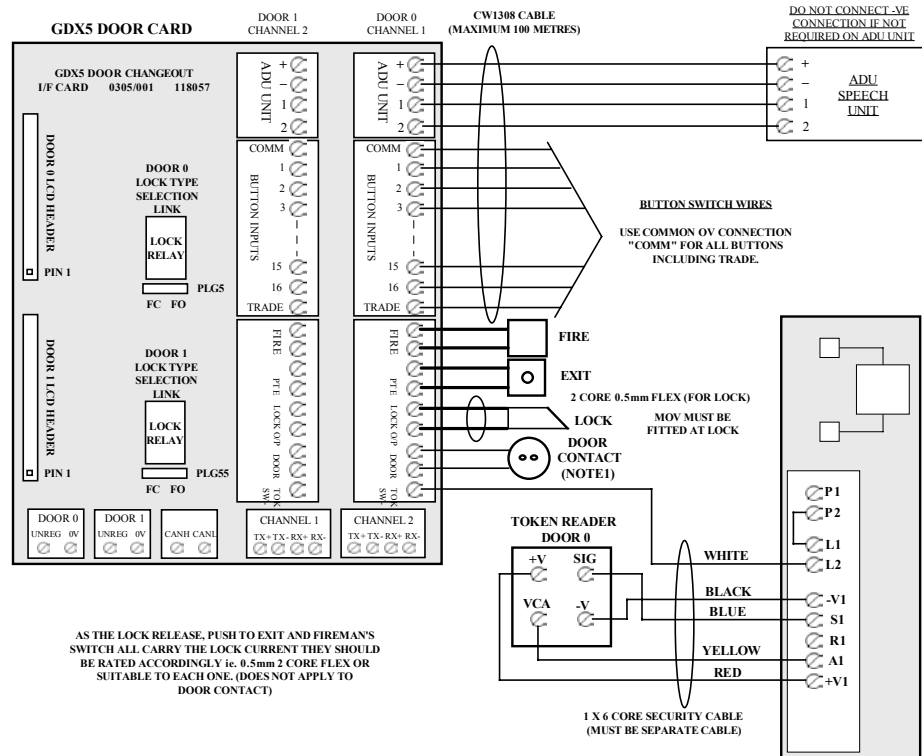
THE USE OF CW1308 CABLE IS RECOMMENDED ONLY IF THE CABLE IS SEGREGATED FROM ANY OTHER MAINS OR HIGH FREQUENCY CABLING - IF THIS CAN NOT BE GUARANTEED OR THERE ARE ANY CONCERNS WITH REGARDS TO A PARTICULARLY NOISY ENVIRONMENT THEN A SUITABLE SCREENED TWISTED PAIR CABLE SHOULD BE USED AS A PRE-CAUTION.

CAMERA / CONTROL RACK VIDEO CONNECTIONS (CW1308 3 PAIR CABLE MAXIMUM 100 METRES)		
CAMERA		CONTROL RACK
+VE DC POWER (RED)	WH/BL & BL/WH	+15V DC POWER
0V DC POWER (BLACK)	WH/OR & OR/WH	0V DC POWER
+VE VIDEO SIGNAL (YELLOW)	WH/GN	+VE VIDEO SIGNAL
NOT CONNECTED (WHITE)	GN/WH	-VE VIDEO SIGNAL

NOTE : IF SCREENED CABLE USED CONNECT SCREEN AS PER DASHED LINE



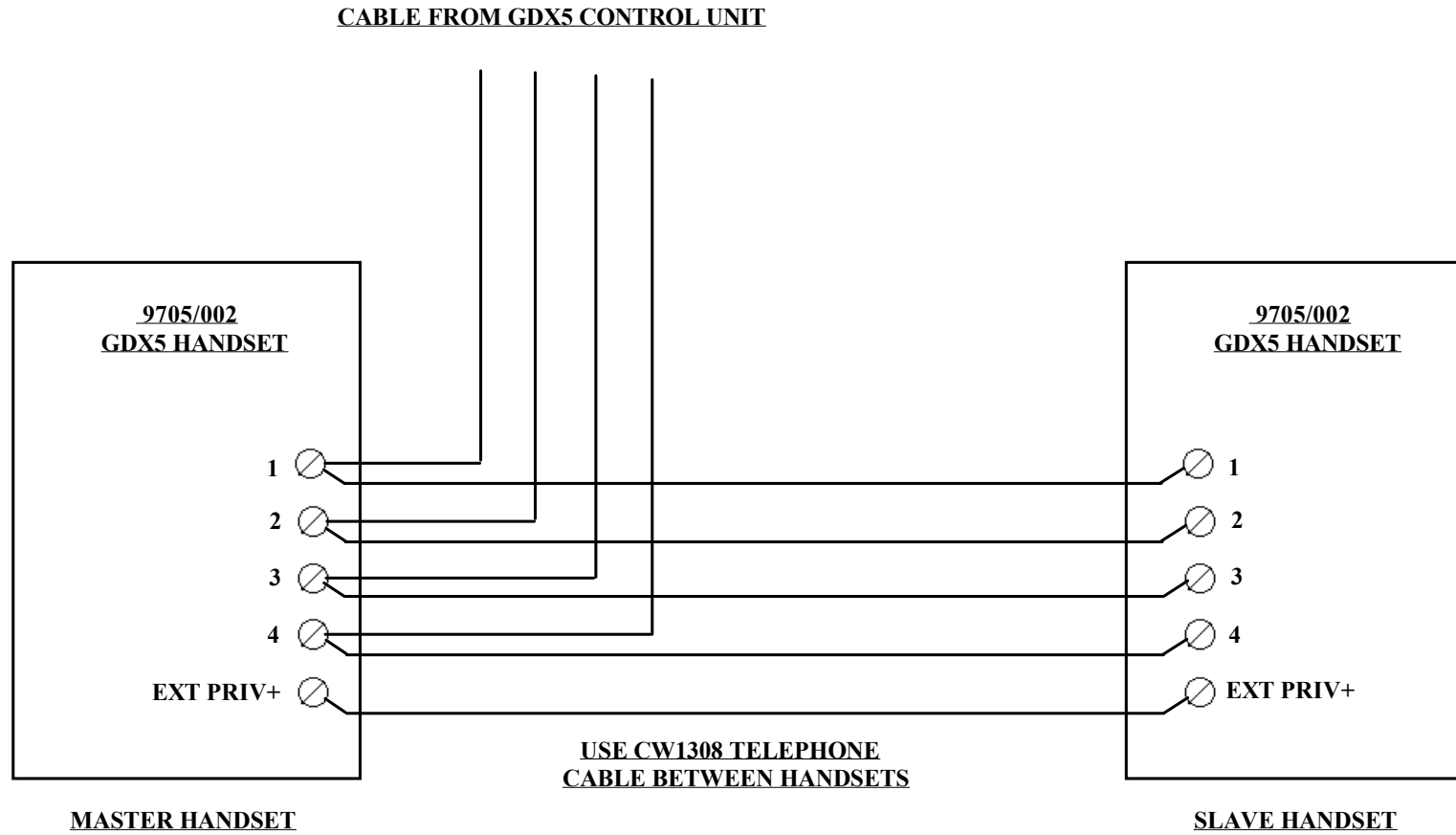
THE SETTINGS SHOWN ABOVE AS "CONTROL CARD" CAN BE ALTERED FROM THE FACTORY DEFAULT ON THE CONTROL CARD USING THE SETTINGS BUTTONS AND THE LCD DISPLAY. THE OTHERS DENOTED AS "FIXED" CANNOT BE ALTERED.



IF EASIKY 99 CONTROLLER NOT USED THEN CONNECTIONS ARE AS PER TOKEN EQUIPMENT MANUFACTURER'S INSTRUCTIONS.

NOTE 1: DO NOT USE THE CONTACTS WITHIN MAGNETIC LOCKS FOR THE DOOR CONTACT. USE SECURITY CONTACTS INSTEAD FOR DOOR OPEN INDICATION IF REQUIRED.

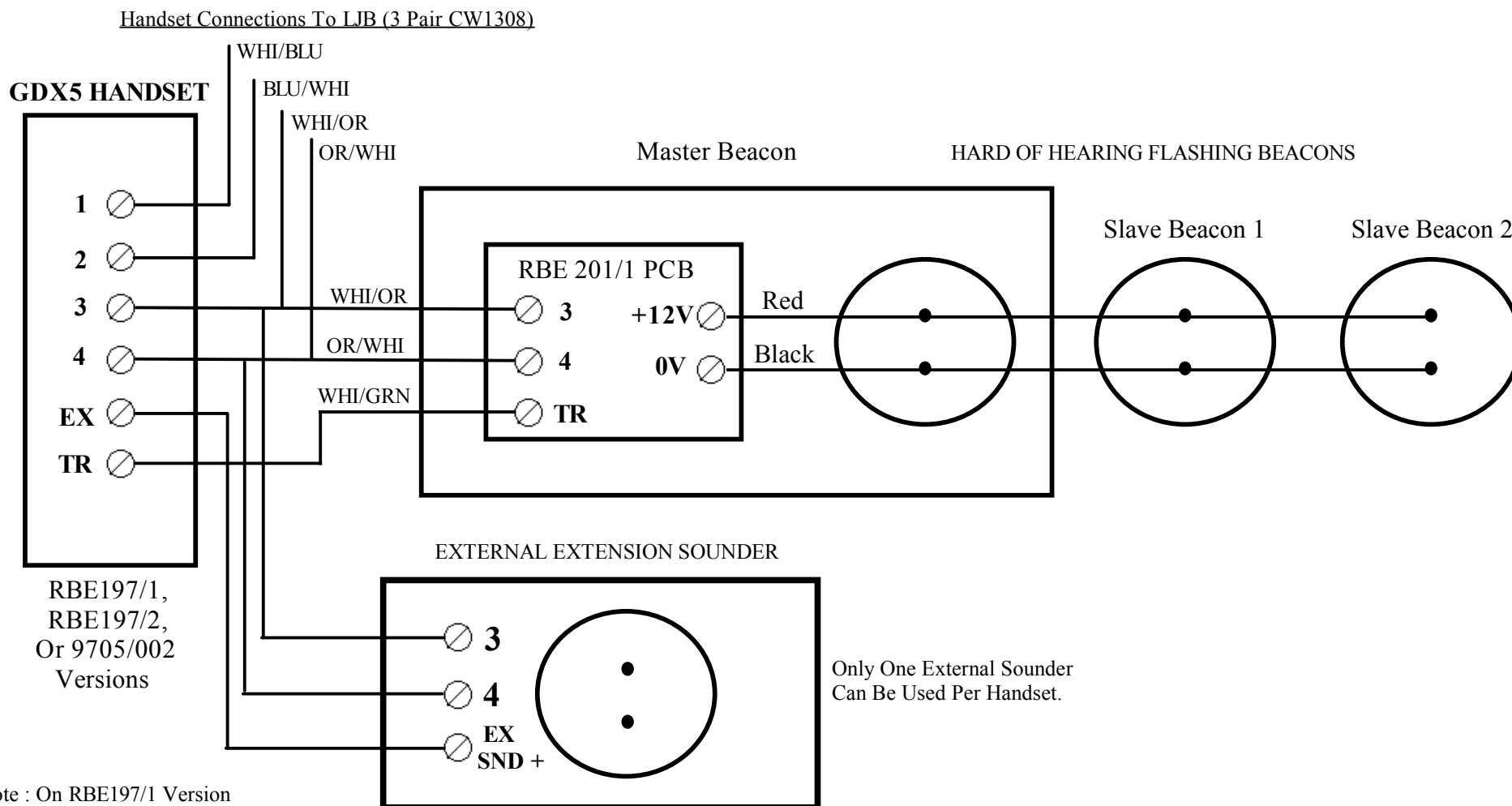
IF SYSTEM IS A 2 DOOR SYSTEM THEN THE 2ND DOOR IS CONNECTED AS SHOWN FOR THE 1ST ONE EXCEPT USING THE DOOR 1 CHANNEL 2 CONNECTIONS. (IF USING A 2ND DOOR TOKEN READER ADD A LINK FROM SCREW P2 TO SCREW L3 ON THE EASIKY 99 CONTROLLER AND CONNECT INTO THE 2ND READER CHANNEL)



REMOVE LK1 AND LK2 ON THE SLAVE HANDSET ONLY

GDX TECHNOLOGIES LTD

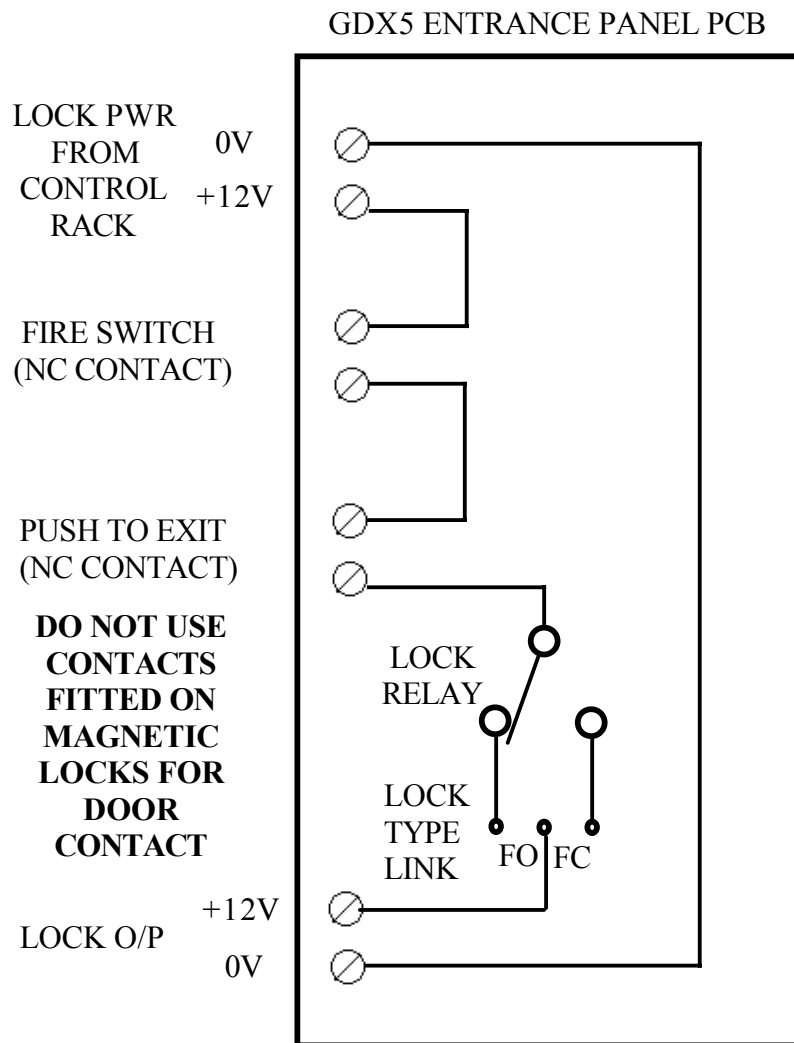
GDX5 HARD OF HEARING BEACON & EXTENSION SOUNDER CONNECTIONS



Note : On RBE197/1 Version
EX is Denoted By S.

GDX5 COMPACT ENTRANCE PANEL LOCK OPERATION & CHECKS

The lock power is fused within the control rack.



The lock switching circuitry on the GDX5 compact entrance panel is as simple as illustrated on the block diagram here. If problems are being experienced with the switching of the lock please check through the following procedure which also applies to the activation of the fire switch and the push to exit button. Temporarily disconnect the lock before performing these checks.

1. Using a meter on volts dc measure the voltage at the LOCK PWR screw terminals on the entrance panel and check that it measures around +12Vdc and that the polarity is correct. If this is not present then repeat the check at the output from the control rack - if present here check cabling, if not present here check fuse in control rack.
2. Leaving the 0V lead of the meter on the LOCK PWR 0V screw put the +VE lead of the meter onto one FIRE SWITCH screw terminal and then the other - if the fire switch and the cabling to it are correct then there should be +12Vdc on both terminals. If there is only +12Vdc on one screw then there is a problem with either the cabling or the switch itself. Activating the fire switch should remove the +12vdc from one of the screw terminals and signal the panel LCD.
3. Again leaving the 0V lead of the meter on the LOCK PWR 0V screw put the +VE lead of the meter onto one PUSH TO EXIT screw terminal and then the other - if the push to exit switch and the cabling to it are correct then there should be +12Vdc on both terminals. If there is only +12Vdc on one screw then there is a problem with either the cabling or the switch itself. Activating the push to exit should remove the +12vdc from one of the screw terminals and signal the panel LCD.
4. Check the setting of the lock type select link and perform the following checks ;-

Fail Open Lock (FO)

Place the meter across the LOCK O/P 0V and LOCK O/P +12V screw terminals and there should be +12Vdc present if everything is correct. When any operation releases the lock this +12Vdc should be removed to release the lock.

Fail Closed Lock (FC)

Place the meter across the LOCK O/P 0V and LOCK O/P +12V screw terminals and there should not be +12Vdc present if everything is correct. When any operation releases the lock this +12Vdc should then appear to release the lock.

IF THIS TEMPLATE HAS BEEN FAXED OR PHOTOCOPIED THEN DUE TO THE FACT THAT MANY FAX MACHINES AND PHOTOCOPIERS MAY SLIGHTLY SCALE THE DRAWING THE PHYSICAL DIMENSIONS SHOULD BE CHECKED AGAINST THE ONES SHOWN ON THE DRAWING BEFORE USING THE DRAWING AS A TEMPLATE FOR CUTTING OUT. IF THE DRAWING HAS BEEN SCALED THEN MARK OUT THE CUT OUT REQUIRED FROM THE SIZES GIVEN ON THE TEMPLATE INSTEAD.

CUTTING OUT BACKBOX TEMPLATE

- 1. DRILL 6 HOLES AS INDICATED TO ACCOMODATE THE FIXING SCREWS FOR THE PANEL FACEPLATE - 6mm HOLES TO A DEPTH OF APPROXIMATELY 10mm.**
- 2. INSIDE THE 6 HOLES, CUT OUT THE APERTURE INDICATED OF 123mm WIDTH BY 255mm HEIGHT. THE DEPTH OF THE CUT OUT REQUIRED IS APPROXIMATELY 65mm (55mm IF USING AN EARLIER VERSION BACKBOX).**

255mm

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 THAT THE HINGE ON THE BACKBOX IS AT THE BOTTOM OF THE BOX.

123mm

GDX COMPACT PANEL - MITRED BEZEL METAL BACKBOX TEMPLATE

IF THIS TEMPLATE HAS BEEN FAXED OR PHOTOCOPIED THEN DUE TO THE FACT THAT MANY FAX MACHINES AND PHOTOCOPIERS MAY SLIGHTLY SCALE THE DRAWING THE PHYSICAL DIMENSIONS SHOULD BE CHECKED AGAINST THE ONES SHOWN ON THE DRAWING BEFORE USING THE DRAWING AS A TEMPLATE FOR CUTTING OUT. IF THE DRAWING HAS BEEN SCALED THEN MARK OUT THE CUT OUT REQUIRED FROM THE SIZES GIVEN ON THE TEMPLATE INSTEAD.

CUTTING OUT BACKBOX TEMPLATE

- 1. DRILL 6 HOLES AS INDICATED TO ACCOMODATE THE FIXING SCREWS FOR THE PANEL FACEPLATE - 6mm HOLES TO A DEPTH OF APPROXIMATELY 10mm.**
- 2. INSIDE THE 6 HOLES, CUT OUT THE APERTURE INDICATED OF 123mm WIDTH BY 255mm HEIGHT. THE DEPTH OF THE CUT OUT REQUIRED IS APPROXIMATELY 75mm.**

255mm

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 THAT THE HINGE ON THE BACKBOX IS AT THE BOTTOM OF THE BOX.

123mm



GDX Technologies Door Entry Commissioning Record Sheet

System Address	
Job No / Reference	
Commissioned By (PRINT)	
Commissioned By (Signed)	
Commission Date	

(Tick Boxes As Appropriate)

	Flat No	Access	Ring Tone	Audio	Lock Open	Beacon	Completed	Notes
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