Commissioning & Testing

1. When wiring is complete and checked to be OK, connect power to the Host Module.

2. With the “DISABLE” switch terminals open circuit, the DISABLE LED should be lit and all floors connected to that interface board should be freely accessible.

   To perform Floor Relay testing, the “DISABLE” switch terminals must be closed (shorted).

3. Refer to the Integriti Programming Reference Manual for system programming details. As a minimum, Floors, Lift Types, Lifts and User Permissions must be programmed.

4. Once programmed ensure that all floors connected, switch between the secure and free state. Review should also be monitored at this point to ensure that no excessive amounts of noise on the button inputs cause false triggering of these inputs.

   The Floor Relays can be tested via the Integriti System Designer Software by selecting a Floor and using the “Free” and “Secure” buttons at the top right-hand corner of the “Lift Floor” dialog box.

   Floor Relays can also be tested by the Installer from an LCD Terminal via the “Lifts” option in the Control Menu. <MENU>, 9, 4.
   Select the required Lift control action, then follow the prompts to select the entity to test.

   Monitor the relevant LED on the Lift Interface board to check that the Relay is functioning.

5. Individually check each floor for correct operation as per the system programming.

Acknowledgement & Disclaimer.
This product uses components of FreeRTOS (see www.freertos.org).
Source code for free RTOS can be obtained by download from www.freertos.org or by e-mail request to publications@innerrange.com.
While every effort has been made to ensure the accuracy of this manual, the manufacturer assumes no responsibility or liability for any errors or omissions.
Due to ongoing development, this manual is subject to change without notice.

Designed & manufactured in Australia.

 Part No: 636540

Integriti
UniBus 16-Floor Lift Interface
P/N: 996540PCB&K

INSTALLATION MANUAL

Introduction

UniBus 16-Floor Lift Interface Boards provide a low level interface incorporating button feedback, between Integriti and a Lift Control system. It incorporates input conditioning and switching to provide the isolation required between the two systems.
Using an Integriti UniBus cable, the board connects directly to the Host Module or via another UniBus Board and is compatible with the following types of Integriti Host Modules:

- Security Controller (ISC)
- Access Controller (IAC)
- Intelligent LAN Access Module (ILAM)
- 8 Zone Expander.
- 16 Zone Expander.

Important Notes:

1) **The host Module must have an Integriti External Power Supply connected.**
   Module + 1 UniBus Board: 2A Power Supply.
   Module + 2 or more UniBus boards: 3A or 8A Power Supply.

2) **Ensure that the current required by UniBus Boards does not cause the Host Module’s ancillary current limit to be exceeded.**

3) **Firmware / Software Compatability.**
   - **Integriti Software/Controller Firmware V2.5.1 or later is required.**

4) **A host module is required per lift car. Adding more UniBus Lift Interfaces to a host module only expands the number of floors for a single lift car.**

Parts List

- UniBus Lift Interface PCB sub-assy.
- 17 x 3 way plug-on screw terminals.
- Installation Guide. (This document)
- 1 x UniBus Cable. 270mm. (Other lengths available. See page 3 for details)
- 6 x Metal M3 PCB Mounting Clips.
- 6 x M3x10mm screws.

Specifications

Power Supply Input:	11V to 14V DC from Host Module
Current Consumption:	55mA PLUS 16mA per relay. i.e. Approximately 310mA when all Relays are On.
Button Input Voltage.	16 - 110V dc full wave rectified non regulated.
Contact Rating.	
Max switched current:	500mA @ 16 - 48V DC/AC RMS 200mA @ 60 - 110V DC/AC RMS (30W / 62.5VA)
Physical dimensions:	Length: 200mm. Width: 94mm Depth: 28mm with UniBus cable connected.
Installation environment:	0º to 40º Celsius 15% to 85% Relative humidity (non-condensing)

Status and Fault LEDs

L1-31	ON	(Odd numbered LEDs only) Indicates the presence of +ve feed voltage on the "N.C." terminals for each floor. Also follows the Floor button lamp when button lamp feedback voltage is sourced via Lift Controller button sense feed.
L2-32	ON	(Even numbered LEDs only) Indicate when the Floor Access Relays are active. Note: Relays are normally active and de-activate to select the floor. Will remain Off when in Disabled mode.
L33	OFF	OK
UNIBUS	Flashing	Getting Address
	ON	Address Clash or Too High. Choose another address.
L34 SYS	Flashing	OK. Module is powered and firmware running OK.
L35	OFF	OK
"Fault"	ON	If On during normal operation, a fault has been detected. OK if On during bootup or firmware download.
L34/L35	Alt Flash	Firmware Update in progress. (Fast alternate flashing)
L36	Disable	On when security is disabled and Floors are in free access. i.e. "Disable" input is open circuit.

WIRING NOTES: *Refer to Drawing on Page 6.*

1. The existing EMS connection between the Floor button and the Button sense input on the Lift Control equipment is disconnected.

2. If the Button was wired directly to the Button sense input, connect the Floor button feed into the "Common" terminal and fit the even numbered Links (LK2, 4, 6, 8, etc. but not LK18) on the Lift Interface board.
OR
If the Button was not wired directly to the Button sense input, connect the Floor button feed into the "Sense" terminal and remove the even numbered Links (LK2, 4, 6, 8, etc. but not LK18) on the Lift Interface board.

The Sense input on the Lift interface board may be used for the following reasons:

a) If additional circuitry (such as a relay) was connected between the Floor Selection Button and the "Sense" input on the EMS. When this is the case, the wire from the button is connected to the Sense input instead of the Common input, and the relevant Links are removed.
The Common input is then connected to a voltage source (or 0V) suitable for the EMS "Sense" input.

b) If an alternative wiring scheme is required to accomodate Floor selection buttons that switch to negative. *See note 7 regarding other wiring schemes below.*

3. Connect the Lift Control equipment Button sense wire into the "N.C." terminal.

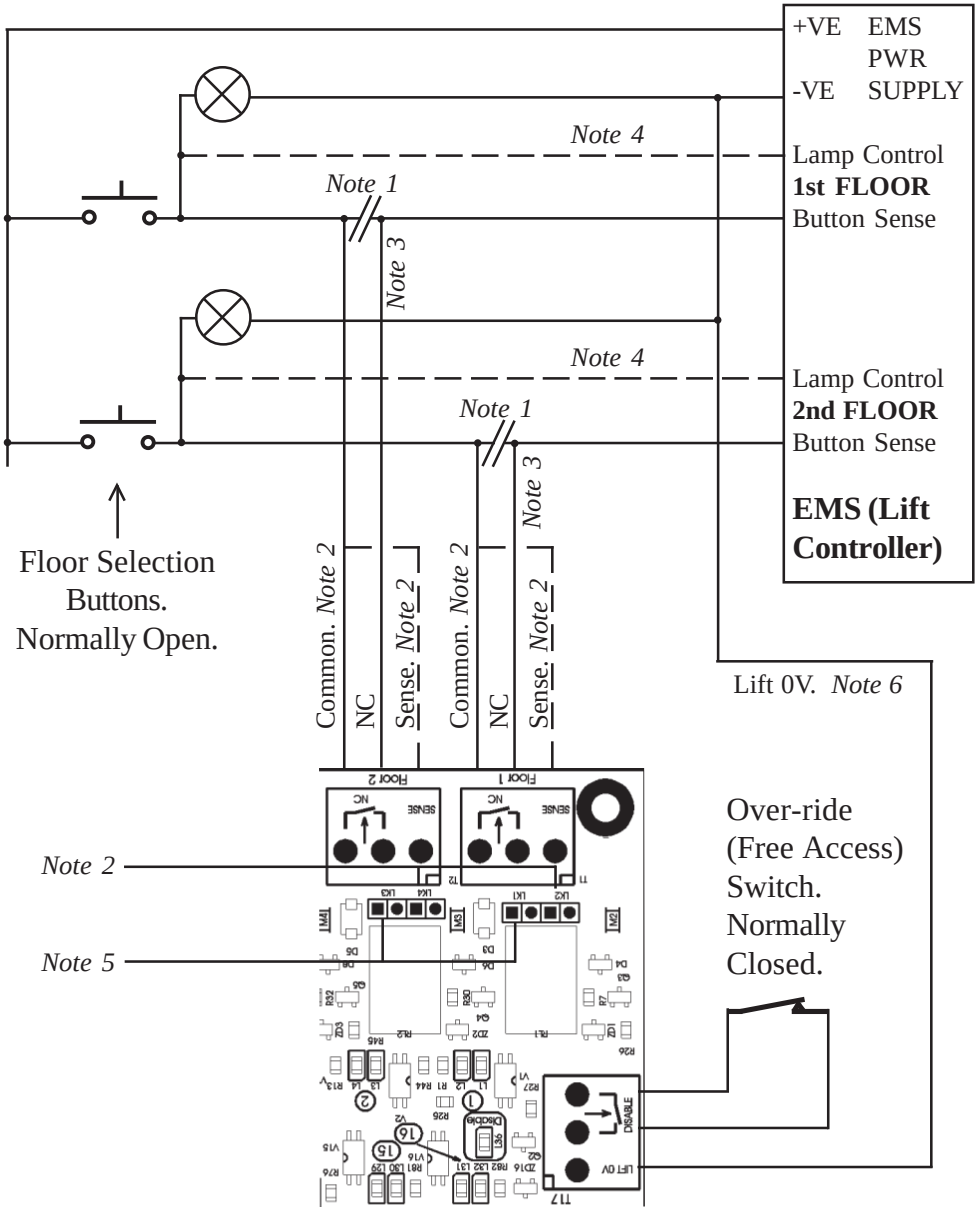
4. The EMS may provide a separate output circuit for lamp control.

5. If the Floor Button and Lamp are on a common circuit ensure that the odd numbered links (LK1, 3, 5, 7, etc. but not LK17) are fitted on the Lift Interface board.
OR
If the Floor Button and Lamp are on separate circuits ensure that these links are removed.

6. "Lift 0V" MUST be connected to negative of the Lift Controller DC Power Supply.

7. Other wiring schemes can be accomodated and may require additional external components. Send a detailed diagram of the existing EMS wiring to Inner Range Technical support for advice.

Typical Wiring Installation.



INTEGRITI LIFT INTERFACE BOARD

Installing the UniBus Lift Interface

1) Remove the power, LAN and Battery connections from the Host Module.

2) Choose a mounting location that will allow a 6-way UniBus cable to be connected between the Lift Interface and the Host Module or an existing UniBus Board, without strain, then install using the 6 PCB mounting clips provided.

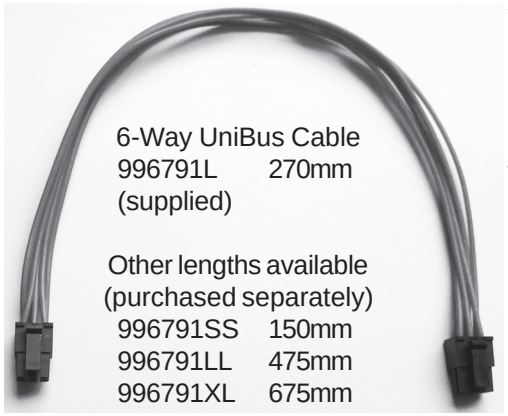
3) Secure the Board to the standoffs using the M3 screws provided.

4) Using the 6-way UniBus cable, connect Lift Interface P1 to the UniBus connector on the Host Module or the spare UniBus connector on an existing UniBus Board.
NOTES:
a) Only use Inner Range UniBus cables. Any damage caused by the use of custom UniBus cables will not be covered under warranty.
A 270mm UniBus cable is provided. Other lengths are listed below.
b) A maximum of 6 UniBus Lift Interface boards can be connected.
c) A maximum of 6 UniBus Boards in total can be connected to a Host Module.
d) Combined length of all UniBus cables on a Host Module must not exceed 1620mm.
e) DO NOT run UniBus cables outside or between enclosures under any circumstances. All UniBus Boards must be in the same enclosure as the Host Module.

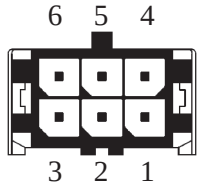
5) Detemine the Floors that will be assigned to this Lift Interface board and adjust the settings on DIPswitch SW1 accordingly. *See the table on page 5.*

6) Re-apply power and re-connect the LAN and Battery to the host Module.

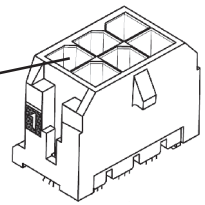
7) Wait about 45 seconds, then check the Status LEDs; L33, L34 and L35.



UniBus connector.



1 Comms
2 +13.75V (System)
3 0V
4 0V
5 +13.75V (Ancillary)
6 Comms



Odd Numbered LEDs from L1 to L31.
Indicate the presence of +ve feed voltage on the "N.C." terminals for each floor.
Note: Will also follow the Floor button lamp when button lamp feedback voltage is sourced via Lift Controller button sense feed.

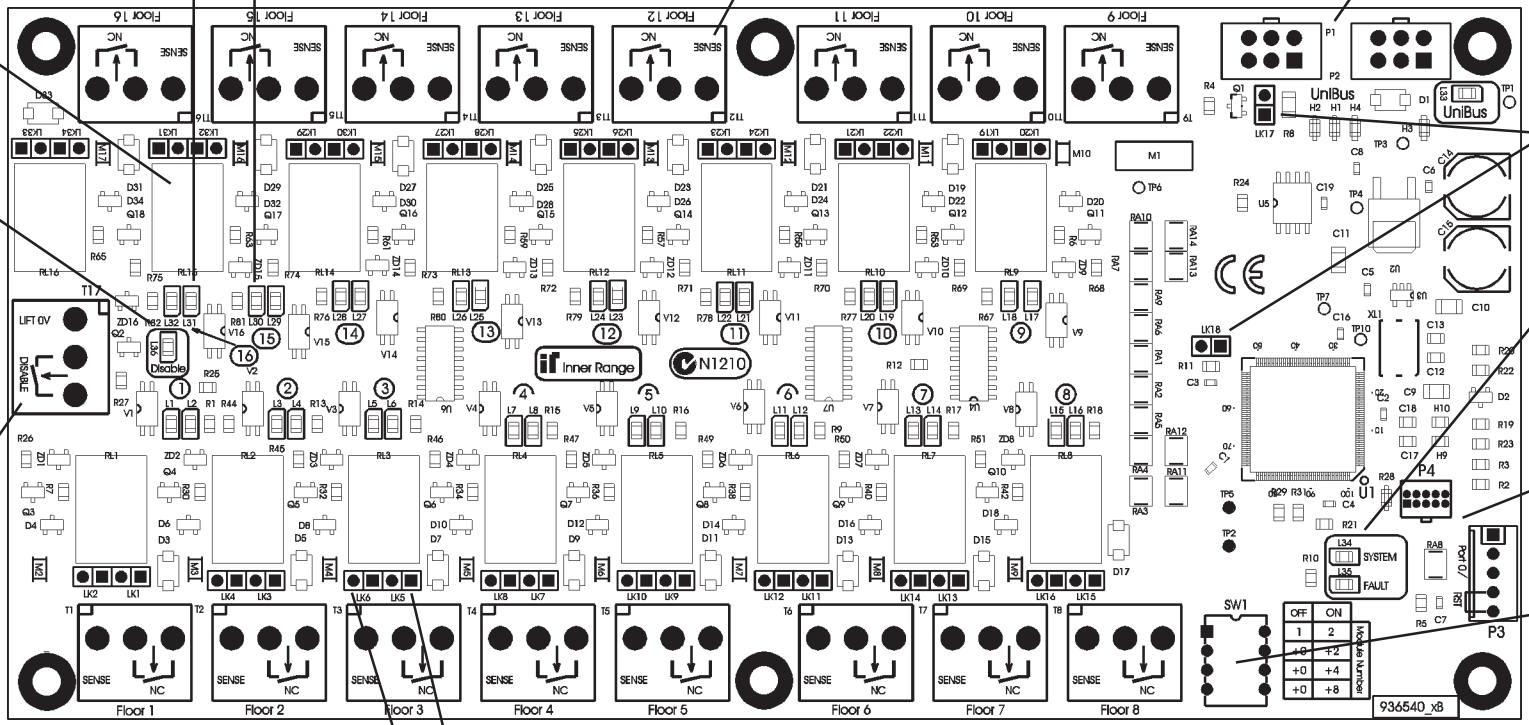
Even Numbered LEDs from L2 to L32.
Indicate when the Floor Access Relays are active.
Note: Relays are normally active and de-activate to select the floor.
Will not operate at all when in Disabled mode.

T1 to T16 Wiring terminals for connection to Floor request buttons/lamps and Lift Control equipment.
SENSE: Floor button sense.
NC: Normally Closed Relay contacts.
See details on page 6.

P1 / P2 / L33. UniBus.
Connectors & Status LED for UniBus.
See pages 2 & 3 for details.

Socketed Relays.
Replacements available.
P/No: ??????.

L36. DISABLE LED.
On when in disabled mode.
i.e. "Disable" input is open circuit.



LK17 & LK18.
Factory Only. NOT USED in the field.

L34 SYSTEM.
L35 FAULT.
See table on page 2.

P3 & P4.
Factory Only. NOT USED in the field.

DIPswitch SW1: Switch 1-4.
UniBus Address number.

T17
LIFT 0V: MUST be connected to common 0V (Pwr supply -ve) on the Lift system.
DISABLE: MUST be connected to Normally Closed over-ride switch.
-When Closed provides power to all floor access relays.
-When Open sets all floors to free access.

Odd Numbered Links from LK1 to LK15 & LK19 to LK33.
Fitted when button Lamp feedback voltage is sourced via Lift Controller button sense feed. *See pages 6 & 7 for details.*
(Inserts on on-board diode between "NC" and "Common")

Even Numbered Links from LK2 to LK16 & LK20 to LK34.
Removed when the Floor request button and the Input to the Lift Control equipment are separate circuits. *See pages 6 & 7 for details.*
(Shorts "Sense" and "Common")

Assign Floors			DIPswitch			
			1	2	3	4
1	to	16	OFF	OFF	OFF	OFF
17	to	32	ON	OFF	OFF	OFF
33	to	48	OFF	ON	OFF	OFF
49	to	64	ON	ON	OFF	OFF
65	to	80	OFF	OFF	ON	OFF
81	to	96	ON	OFF	ON	OFF