Lift Monitor Board Manual

Revision Date: Nov 25, 2013

ECD System Manual
This manual covers all versions of Lift Monitor Board hardware and software. Some features and operative descriptions mentioned in this manual may differ or not be available on earlier versions.
**Table Of Contents**

*Section 1: Introduction* ..................................................................................................3

*Section 2: Setup and Connections*..................................................................................3
  Connecting to the group............................................................................................................5

*Section 3: Reading the Lift Monitor Board*....................................................................5
  Lift Position & Direction...........................................................................................................5
  Lift Mode.................................................................................................................................5
  Lift Status ...............................................................................................................................6
  Lift Door Modes ....................................................................................................................6

*Section 4: Lift Monitor Board options*.............................................................................7
  Status Lift display ....................................................................................................................7
  Error Log display ...................................................................................................................7

*Section 5: Battery Backup*..............................................................................................8
Section 1: Introduction

The lift monitor board serves 2 purposes;

1. To allow the operating status of the lift to be monitored when the controller is not readily accessible. Eg, when the controller is mounted inside the lift shaft.
2. To provide a log of errors to aid fault finding

Features;
- Compatible with group enabled ECD controllers PN 100-170 and 100-174.
- Provides remote monitoring of all the lifts in the group to show their current operating status
- Error log stores the last 16 errors per lift
- Monitors up to 5 controllers
- May be mounted up to 100m from the controller
- Optional battery backup for retention of error logs and monitoring power failure

The lift monitor board is added to the controllers’ group Serial TX wiring and setup as the last lift in the group.

Section 2: Setup and Connections
Check the LIFT CONTROLLER software version. It will be either, V2 or V3. The software version of the lift monitor board must be set to the same version of controller software.

Check the software version of the lift controller from the controller LCD screen that the monitor board is being connected to. In the example left, the controller has V3 software installed.

To confirm the Lift Monitor Board is set to V3 also, follow these steps:

Connect a 24VDC supply to the 24VDC terminals on the lift monitor board. (See Fig.1) The monitor board screen should appear as below.

```
02u NOR IDL ][
ECD Aust. V=3.31
```

Note: LCD contrast is set via POT located to the lower left of the LCD. (POT 2.)

Press > button until VER is displayed. If VER is 03, which matches the V3 software of the controller, then proceed to next step. If not, press the ENT (enter) button and adjust using ∧ or ∨ buttons to change to VER 03.

```
--- --- --- ---
Status lift: 1
--- --- --- ---
```

Press ∧ button. The monitor board screen should appear as below.

```
--- --- --- ---
VER 03: 00000011
--- --- --- ---
```

```
L# 03 = Lift number 3
--- --- --- ---
L.# 03 :00000011
--- --- --- ---
```

*The lift monitor board must be set up as the last lift in the group.*

In the example above, the lift monitor board is lift 3 of the group (actual 2 car group). If the actual number of lifts in the group was 3, then the monitor board would be set up as L# 04. Using the ENT, ∧ and ∨ buttons adjust to suit.

Press ∧ button. The monitor board screen should appear as below.

```
--- --- --- ---
#L 03 :00000011
--- --- --- ---
```
In the example above, the lift monitor board shows there are 3 lifts in the group (remember, the monitor board makes up the 3rd lift of the group).
If the actual number of lifts in the group was 3, then the monitor board would be set up as #L 04
Use the ENT, ∧ and ∨ buttons adjust to suit.

The #L parameter, for each lift controller must now be changed up by 01 to reflect the addition of the lift monitor board to the group.
In the example above, the 2 controllers must now have the #L parameter changed from 02 to 03.

**Connecting to the group**

Disconnect the 24VDC supply to the lift monitor board.
Connect the Lift Com terminals SX+, SX- and GRD (see Fig.1) to the controller Serial TX terminals, SX+, SX- and GRD.
Re connect the 24VDC supply to the lift monitor board.
The monitor screen should appear as below. (assuming lift is on level 1, idle with doors closed)

![Monitor Screen Example](image)

The lift monitor board is now ready to monitor the lifts in the group.

**Section 3: Reading the Lift Monitor Board**

**Lift Position & Direction**

The lift position is shown in the top left of the LCD, followed by the current direction. This example shows Lift 1 on the 2nd floor with a down direction.

![Position Example](image)

**Lift Mode**

The current mode of the lift is shown in the top left centre of the LCD.
This example shows Lift 1 on NOR (normal).

- CFS Lift on Car Fire Service
- COR Lift performing a correction run due to loss of position
- DDO Door Open Disable
- EP Lift on Emergency power
• HCB  Hall Call Bypass
• HFA  Lift on Hall Fire Alternate Service *(USA-Fire Service Code 17.1 only)*
• HFS  Lift on Hall Fire Service
• IND  Lift on Independent service
• INS  Lift on Inspection
• NOR  Lift on Normal
• NPT  No Pulse Time out
• PRK  Lift on Parking
• ZON  Lift zoned/zoning to floor

**Lift Status**

```
02d  NOR  RDN  ][
STATUS LIFT:  1
```

The lift status is shown to the top right centre of the LCD

This example shows Lift 1 Running Down

• BDL  Bridged door lock. Doors shall remain open until bridge is removed.
• BSD  Brake did not drop.
• BST  Brake did not lift.
• DCP  Fail door close protection.
• DOP  Fail door open protection.
• IDL  Lift idle
• LCK  Door Locks not made.
• LDN  Leveling down, displays on re-level down.
• LEV  Leveling blocked, displays on re-leveling failed and disabled.
• LRN  Learning floor operation in progress.
• LUP  Leveling up, displays on re-level up.
• PRV  Waiting PRV input to run.
• PWR  Power failure. *See Section 5, Battery backup*
• RDN  Running down
• RPT  Run protection time exceeded. Fatal error.
• RUP  Running up
• SAF  Lost safety circuit.

**Lift Door Modes**

```
02d  NOR  RDN  ][
STATUS LIFT:  1
```

The door mode is shown to the top right of the LCD

This example shows the doors closed on Lift 1

•  <>  Doors opening
•  []  Doors open
•  ><  Doors closing
•  ][  Doors closed
•  -bad  Doors fully closed but door locks not made
•  -fail  Doors failed on DOP or DCP.
•  - -  Doors on other control. ie – Inspection.
Section 4: Lift Monitor Board options

**Status Lift display**

Press the ▲ button to access the status of each lift in the group

```
02d  NOR  RDN  ][  
STATUS LIFT:  1
```

Lift 1 status displayed

```
03-  ZON  IDL  ][  
STATUS LIFT:  2
```

Lift 2 status displayed, showing zoned on level 3 with the doors closed

**Error Log display**

The error log stores up to 16 errors per lift. It also displays the floor on which the error occurred (where possible).

Press the > button to access the error log.

```
01  SAF  02
Err log lift:  1
```

The example above shows lift 1 lost the safety circuit (SAF) on level 2. The “01” in the top left of the LCD means this is the most recent error logged. The “02” in the top right of the LCD indicates on which level, the fault occurred.

To view additional (previous) errors logged, press the ▲ button.

```
02  LCK-bad  01
Err log lift:  1
```

The example above shows lift 1 had the doors fully closed but door locks were not made (LCK-bad) on level 1. The “02” in top left of LCD means this is the second most recent error logged. Keep pressing the ▲ button to scroll through the last 16 errors stored in the error log. The last or 16th error will be deleted from the log as new errors are stored.
Press the > button to access the error log for other lifts in the group

The example above shows lift 2 has no stored errors.

To reset the error log remove the 24VDC supply from the Lift Monitor Board for 5 seconds.

Section 5: Battery Backup

A 6VDC battery may be permanently connected (see Fig. 1) to the Lift Monitor Board to provide a backup power supply during power failures. This allows errors to be stored for a period of approximately 48 hours, using 4 x 1.5V AA batteries as below. Also, when using the battery backup, the Lift Monitor Board will record the power failure in the error log as PWR error.

6VDC Battery backup. (4 x 1.5v AA batteries)