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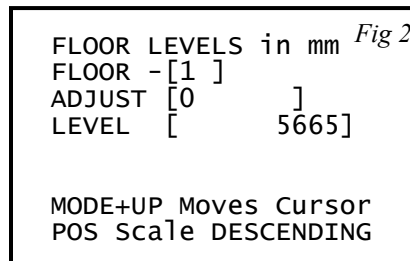
ALMEGA POSITIONING SYSTEM: QUICK SETUP GUIDE

“HPV6/900, DIRECT TO FLOOR, KP” ISSUE: 3 Date: 15/10/2010

1. PRE-CHECKS (see next page). Also refer to Almega Technical Manual Supplements: **Positioning system**, and **Drive Serial Comms Magnetek HPV600/900 Drive**.
2. SETTING THE OVERRUN DISTANCE
In general the default value of 500mm should suffice to cover the max distance the lift could ever overrun. However check this distance to ensure the max shaft position values are set correct, before using in normal operation. They can also be adjusted after the learning run.
 - a. Set parameters MENU->POSITION SYSTEM SETUP->OVERRUN TOP/BOT, typically-500mm.
3. SETTING THE TERMINAL LIMITS.
 - a. **If parameter “SOFTWARE TERM LIMITS” = NO, or does not exist (Mechanical Terminal Limit Switches are fitted)**
 - i. Set Terminal Stopping limit switches above/below, top/bot floor level as required.
 - b. **Else if Parameter “SOFTWARE TERM LIMITS” = YES.**
 - i. Set parameter MENU->POSITION SYSTEM SETUP->UP TERM LIMIT DIST as desired (distance above top floor level). Typically set at 25mm.
 - ii. Set parameter MENU->POSITION SYSTEM SETUP->DN TERM LIMIT DIST as desired (distance below bot floor level). Typically set at 25mm.
 - iii. **If Terminal Limits are required before the LEARN RUN (i.e. manual setting)**
 1. Take the lift to the terminal floors and record the Absolute Top / Bottom Position Values, Position Value found by pressing F1 and reading P=????
 2. Enter the values into system as SET FLOOR LEVELS (8). (POSITION SYSTEM SETUP->FLOOR LEVELS).
 3. The terminal limits will now be set e.g. 25mm above and below top/bot floor levels. The lift will stop on these on Inspection Control.
 - iv. **Setting terminal limits during Learn Run**
 1. After setting the UP/DN TERM LIMIT DISTANCES (as above) the lift will automatically set the terminal limits when the learning run has been successful.
4. PUT THE LIFT ON PREPARE TO TEST CONTROL (DOORS OFF).
 - a. Press MENU on the Almega Keypad.
 - b. Press DOWN ARROW once to highlight “ENGINEERS SELECTION”; Press ENTER
 - c. Press DOWN ARROW 3 times to highlight “PREPARE TO TEST CTRL”; Press ENTER
 - d. If “Password Lev 1 Req’d” is displayed at the bottom of the screen, Press and hold **MODE** on the Almega keypad, then press **ENTER**, whilst still holding **MODE**.
 - e. Press UP ARROW to display “DOORS OFF”; Press ENTER
5. TAKE LIFT TO BOTTOM ON INSPECTION.
 - a. **If Terminal Limits are not configured or not set.**
 - i. Lift will be required to run onto Down final limit at the bottom instead of Down Terminal limit, and the limit will have to be bridged to move back up (or handwind). Alternatively the user can physically take the lift to the bottom flr lev before initiating the learning run.
 - b. **If PANEL TEST CONTROL is fitted**
 - i. Switch to Inspection.
 - ii. Take to bottom, and stop on the Down Terminal / Stopping Limit.
 - iii. Nudge the lift UPWARDS to release the Down Terminal / Stopping Limit. (This will ensure bottom floor level is not below the limit!)
 - iv. Switch Back to Normal.
 - c. **Else if PANEL TEST CONTROL is NOT fitted**
 - i. On the main terminal rail (lift shaft/car side) remove the wire in terminal **TS** and mark it, then wire in the same terminal as **TS1**.

- ii. Take to bottom (by bridging the Test Down connections TF and TD), and stop on the Down Terminal / Stopping Limit.
 - iii. Nudge the lift UPWARDS (by bridging the Test Up connections TF and TU) to release the Down Terminal / Stopping Limit. (This will ensure bottom floor level is not below the limit!)
 - iv. Switch Back to Normal by restoring the **TS** wire back into the terminal **TS**.
6. INITIATE LEARNING RUN.
- a. Press F1 on the Almega Keypad (to show lift viewer).
 - b. Is the Door Zone Sensor input on (**Z**◆ = ON, **Z** (space) = OFF)? If not, DO NOT CONTINUE; get the Door Zone working 1st!
 - c. Make sure the lift is not on **any other service that will inhibit the learn run**, check inputs: Fire, Fire Alarm, Serv Ctrl, LW110, LW90, THERM, INSP, Priority Service, Code Blue, ESUP, Auto Srv, Shutdown. Also check brake monitoring switches operate correctly (if fitted).
 - d. Press and hold → on the Almega keypad, then press ↑, whilst still holding →.
 - e. Read the information on the LCD; press ENTER on the keypad to continue.
 - f. Wait for the lift to run to the top and back again before the learning has completed.
7. TRY A LIFT FLOOR TO FLOOR RUN.
- a. Before setting floor levels the response of the system needs to be checked so that the lift stops properly, else floor level settings will be inaccurate. Press **CPB** on the keypad to reset lift position.
 - b. Try a single floor run, (MENU->ENTER CALLS->ENTER A CALL->CAR = (bottom+1)) and ensure the lift electrically decelerates to NEAR ZERO SPEED before releasing the brake. If not try adjusting the parameters in the order as below (note all can be fine tuned later):-
 - i. DRIVE A1->RESPONSE up to max of **20** (Sensitivity of Speed Regulator)
 - ii. DRIVE A1->INNER LOOP XOVER up to max of **20** (Inner Speed Loop Crossover)
 - iii. POSITION SYSTEM SETUP->DECEL S BALANCE to **-2** (i.e. minimum to give the slowest floor level approach).
8. PUT THE LIFT ON PREPARE TO TEST CONTROL (DOORS PARK OPEN).
- a. As 3(a/b/c/d), but Press DN ARROW to display "PARK OPEN"; Press ENTER
9. SET FLOOR LEVELS.
- a. Travel to each floor in turn, making a note of the position error in mm. Travelling to each floor in both directions IS NOT NECESSARY as the system should be the same for both UP and DOWN.
 - b. From the menu POSITION SYSTEM SETUP->FLOOR LEVELS, select each floor in turn and use the ADJUST option (MODE+UP moves cursor) to adjust the floor levels. E.g. floor level = 20mm HIGH, adjust 20 DN to correct; then press ENTER to store.

FLOOR LEVEL ADJUSTMENT INFORMATION:



Pressing Mode and UP moves the Cursor between FLOOR, ADJUST, and LEVEL.

The keypad keys (↑ and ↓) can be used to change the value within the brackets as described below:

FLOOR: This is the Lift Floor Position, i.e. the number of recorded floor positions.

ADJUST: This is the adjustment that can be made to the floor LEVEL position. The adjustment direction will appear when the value is altered. i.e. 100mm UP, or 5mm DN etc.

LEVEL: This is the absolute floor position of the floor LEVEL. Adjusting this allows the user to enter numbers in absolute format, thus major floor adjustments are entered here.

10. TESTING THE SLOWING LIMITS

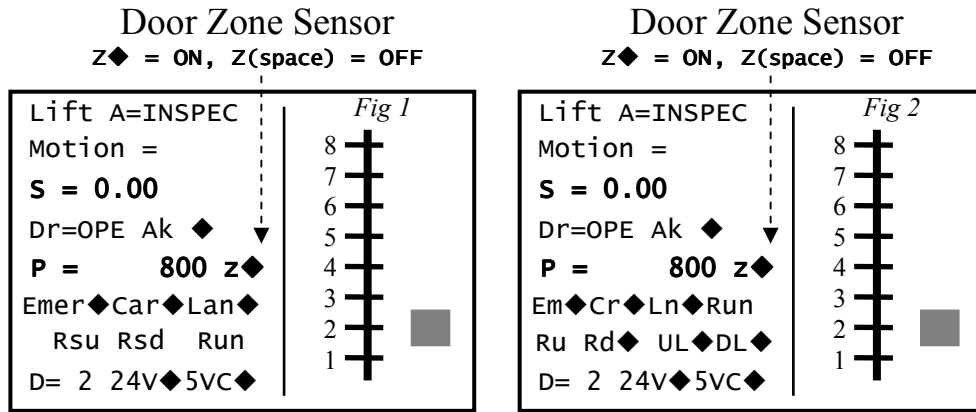
- a. Run the lift to a Terminal floor on HIGH speed. Press and hold both **MODE + MENU** on the Almega keypad. This will inhibit the position stepping and force the lift to slow on the slowing limit. If the lift stops out of the "WITHIN FLEV DISTANCE " the lift will not open its doors. If "OUT OF LEVEL RECOVERY" is set to YES, the lift will automatically re-level back to floor level and then open its doors. The procedure should also be repeated for a single floor run.

11. TESTING THE TERMINAL LIMITS

- a. Run the lift to a Terminal floor on any normal run speed. Press and hold both **MODE + ESC** on the Almega keypad. This will inhibit the stopping and force the lift to stop on the terminal limit. If the lift stops out of the "WITHIN FLEV DISTANCE " the lift will not open its doors. If "OUT OF LEVEL RECOVERY" is set to YES, the lift will automatically re-level back to floor level and then open its doors. This procedure may also be used to test OUT OF LEVEL RECOVERY at any floor.

PRE-CHECK INFORMATION:

- A. Door Zone Sensor / Door Zone Actuators Fitted At Each Floor Level.
- Ensure **Door Zone Actuators** are fitted at each floor level and operate the **Door Zone Sensor** fitted on the lift car. Also the **Door Zone Actuators** are clear of any obstructions of the lift car and **Door Zone Sensor**.
 - Also ensure the signal from the **Door Zone Sensor** can be seen in the lift controller. This can be achieved by pressing F1 on the Almega keypad which will display the screen as Fig1/2 below:



(Software Terminal Limits NOT selected)

(Software Terminal Limits selected)

UL = Up Limit, DL = Down Limit

If UL/DL=? then not set and will be ignored

- B. Motor Wiring / Speed
- Ensure motor windings are wired correctly i.e. typically the high speed windings (with the lowest electrical resistance, and wired in STAR). Ensure the motor runs at the correct speed (Closed Loop) on Inspection. E.g. on the Almega LCD display “S = 0.30” is the actual measured speed, or measure using a Tachometer.

C. Almega Parameters (e.g. Contract Speed = 1.6m/s)

- TRAVEL SETUP (Press F3 on the Almega Keypad and Scroll Down with ↓)
 - STOP TIME = 3000 Milliseconds
 - BRAKE LIFT TIME = 200 Milliseconds
 - BRAKE RELEASE TIME = 3000 Milliseconds
 - DRIVE CONTRACT SPEED / HIGH SPEED / MEDIUM SPEED1 = 1.6 m/s
 - DRIVE LEVEL SPEED = 0.060 m/s
 - DRIVE TEST SPEED = 0.300 m/s
 - STOP ON RUN RELEASE = YES
 - PROFLE FINISH SPEED = 0.002 m/s
 - LEARN RUN SPEED = 0.200 m/s

D. Drive Parameters

- UTILITY U0->Basics U9->Operation = CLOSED LOOP
- DRIVE A1
 - RESPONSE = 10 (Sensitivity of Speed Regulator)
 - INNER LOOP XOVER = 10 (Inner Speed Loop Crossover Frequency)
- S-CURVES A2
 - S-Curve 0 values = default (Accel / Decel = 0.8, All Jerk's = 0.6)
 - S-Curve 1 values = user (Accel / Decel = 3.999, All Jerk's = 0)
 - S-Curve 2 Not Used
 - S-Curve 3 All Values = 1.5

E. Slowing Limits

- Ensure slowing limits are set as the backup slowing distances as below. (Also see shaft wiring drawing). Setting the distance too great may generate events "SLOWED: UP/DN SLOW LIMIT" and result in inaccurate floor levels at the terminal floors!
- | Speed (m/s) | Backup Slow Dist (mm) | Speed (m/s) | Backup Slow Dist (mm) |
|-------------|-----------------------|-------------|-----------------------|
| 0.2 | 200 | 1.25 | 1200 |
| 0.5 | 400 | 1.6 | 1700 |
| 0.75 | 600 | 2.0 | 2400 |
| 1.0 | 900 | 2.5 | 3400 |