### Program Revision 3.26

10/03/2025

• Change Door/Gate Monitor operation

Since conception, the first call after power up, all Call/Sends, and all Homing calls assumed the door and gate have been cycled to avoid nuisance lockouts.

An inspector in Washington State wants the Call/Send function to require a gate to be cycled if a door has been cycled.

The Door/Gate monitor is now functional at all times.

Anytime a hall door is cycled, the gate must also be cycled.

#### NOTE:

This change increases the chance of a lockout (LK).

If repeated Call/Sends and Calls are performed without cycling doors and gates, a lockout (LK) will occur.

The exact number of repeated Calls and Call/Sends that can be performed before a lockout occurs is equal to the number of floors plus 1.

# Program Revision 3.24

3/28/2025

• Change Light Curtain operation Add an Optional Light Curtain Enable/Disable option to Setup Menu (Using Lowest Level Input)

Note: When the Lowest Level Input is configured as the Light Curtain Input, a break in the Light Curtain beam will cause "LC" to appear on all PI's.

If the car was in motion, a break in the Light Curtain beam will stop the elevator under software control and a Light Curtain Error will be saved in the Error Log

Optional Light Curtain Input Usage:

All wiring is done inside of the TOC enclosure.

- ❖ Disconnect the Light Curtain output wires from the TOC connector "J11" or "J29".
- ❖ Place a Safety Circuit Jumper on the unused connector, "J11" or "J29".
- ❖ At the travelling cable connector that goes to the TOC Signal Connector "J19", cut wire number "10".
- ❖ Then connect one of the Light Curtain output wires to the loose end of wire "10" in the traveling cable.
- ❖ Connect the other Light Curtain output wire to the TOC 24VDC 1 AMP MAX connector "J12" positive terminal "+".
- ❖ Then using the CPU control Setup Menu, go to the Light Curtain setting and then change
  - the setting to "On".

### **Program Revision 3.22**

# 7/30/2024

• Bug-Fix: When Releveling and Door Fault Interrupt were both enabled, if Releveling occurred while a door was open, an "OS" was displayed on the PI and the elevator was disabled.

There was a conflict between the "Door Open is when the car is not in Door Zone error (Z!)" and the Releveling option.

If the Door Fault is on, and a door is open while the car is not in the Door Zone, the elevator will be disabled, and "OS" will be displayed on PI.

If Releveling is enabled, if the car moves out of the door zone, releveling will occur.

The conflict was that both of the above conditions were triggered by the same events.

Now, If Releveling is enabled or the control is configured as a Hydro elevator, the "Door Open when NOT in Door Zone" error (Z!), will only be logged when the Door is Open and car is out of a Leveling Zone.

If Releveling is disabled and the control is not configured as a Hydro elevator, the "Door Open when NOT in Door Zone" error (Z!), will be logged when the Door is Open and car is out of the Door Zone.

The "OS" error still operates as it did, an "OS" error will be logged if the "Door Fault Interrupt" option is enabled and either:

- a "Door Open and Car is NOT in the Door Zone" error (Z!) or
- a "Door Open on the Wrong Floor" error (D!) error occurs.

### **Program Revision 3.20**

3/1/2023

• Change Run Timer for Chain Elevator from 1.5 minutes to 2.0 minutes for use with 60 feet of travel.

## Program Revision 3.18

2/1/2023

• Bug-Fix: 2/3 Speed Door Obstruction detection stopped sensing after a call was placed. If the light curtain beam was broken after a call was placed, the door would not reopen. It has been corrected.

### **Program Revision 3.16**

### 12/28/2022

• Bug-Fix: This ONLY affects Hydro elevators. When an up call is placed, the car drifts slightly downward before moving upward. If the valve adjustment is stopping the car too low in the door zone, just above the bottom of the door zone, when an up call is placed the car dips out of the door zone before moving upward.

This was causing a false "NF" error to occur.

- Bug-Fix: When in inspection and Installation mode with the Tape Reader disconnected, the "Tape Reader Not Connected Error" was displayed and the pendant could not run the elevator.
- Bug-Fix: When the Tape Reader was reconnected, the pendant would run the elevator but, the "Tape Reader Not Connected Error" remained displayed on LCD.
- Bug-Fix: When configured for Auto Gate, If the Gate is Open, a false Pit Stop Switch Fault was logged when entering Installation Mode. This was due to the lack of backfeed in the safety circuit when the gate was open. This could also cause any of the following special PI characters to be displayed. UL, LL, SC, AP, NF, SP, OS, FS, GT, Dx, --, Z!, D!, LF or OB All of the special PI characters are now suppressed while in Installation Mode.
- Add data screens to aid in VFD/Gearbox/Motor tuning, Error 97 is Up screen and Error 98 is Down screen.

The program revision must have a "t" suffix to enable data screens.

- Add Mitsubishi Drive Menu Selection to Setup Menu (Only available on OHCD-1000) When a Mitsubishi Drive is selected the gearbox selection will not appear, it is forced to Sumotomo.
- Add OHCD-1000 w/Sumitomo Gearbox Mitsubishi Drive movement tables for 30 and 40 FPM.
- Change EEPROM Master Reset routine word from 0x4321 to 0x1235. Enter 0x1235 in address 0x7FF000 and then cycle power to reset all EEPROM Parameters.
- Change OHCD-1000 Gearbox default from Grove to Sumitomo

### **Program Revision 3.14**

4/12/2021

• Add MRL Chain Omron and Hitachi Drive support

### **Program Revision 3.12**

2/25/2021

- Add OHCD-1000 w/Sumitomo Gearbox Omron and Hitachi Drive support for 30 and 40FPM
- Change Pendant Operation,
   When configured for Overhead Elevator, Sumitomo Gearbox and Omron Drive, add starting and stopping speed ramping to Pendant Routine to avoid Drive Tripping
- Change Door Gate Monitor Operation
   It now starts monitoring as soon as the car stops, not after the "In Use Timer" expires

# Program Revision 3.10

12/21/2020

- Bug-Fix: Change N.J. Compliance Option operation.
   When configured for Automatic Gates and the Gate power was removed and the Gates were cycled manually, the Door/Gate monitor did not work correctly.
- Bug-Fix: Change Pendant operation.
   Quickly changing pendant direction would cause both up and down bits to be active at the same time.
   Now if a quick direction change is attempted, the car will stop first.
- Change Pendant Operation. When an Up or Down Button was quickly pressed, released and pressed again, the movement would continue. Now, once a button is released, the car will come to a stop before it will move again. NOTE: For this change to provide maximum drive protection, a wire must be added from CR2 terminal 12 (NC) to Drive-S4.
- Change OHCD-1000 Movement tables for Omron & Hitachi Drive Operation.
   The values had to be changed after disabling the Omron & Hitachi Overload Limit Function (B021).

## Program Revision 3.08

11/25/2020

- Add CD500 Omron and Hitachi Drive support
- Change Inspection Minimum Speed from 1% to the original 25%

## **Program Revision 3.06**

11/5/2020

- Bug-Fix: Change Call/Send Button Duration setting in Setup Menu caused a reset. It has been corrected.
   Add CD1000 Omron & Hitachi Drive support. This requires Omron & Hitachi Drive Setting F003 to be 2.00 not 1.50.
- Change OHCD-1000 Omron & Hitachi Drive Operation. This requires Omron & Hitachi Drive Setting F003 to be 2.00 not 1.50
- Change Tape Reader handling of UL & DL flags during very short floor conditions

### **Program Revision 3.04**

10/5/2020

• Bug-Fix: Auto Doors would not timeout and close. The changes made in Rev 3.02 prevented timeout. It has been corrected.

### **Program Revision 3.02**

9/28/2020

- Bug-Fix: Door/Gate obstruction routine could prevent operation when configured for 2 Gates. This could occur even when configured as Manual Gates. It has been corrected.
- For 2/3 Speed Doors and/or 2/3 Speed Gates Only, if a Door or Gate is obstructed for 20 seconds or more, an "OB" will be displayed on all PI's to indicate a "Door/Gate

### Program Revision 3.00

9/11/2020

- Bug-Fix: A Floor Overshoot in either Up or Down direction, could have caused an invalid "Positioning Error 7" or "Positioning Error 16" to be displayed. It has been corrected.
- Add VFD selection to Setup Menu
   We now have 3 drives to select, Teco, Omron & Hitachi.
- Add Gearbox selection to Setup Menu (Only for OHCD-1000)
   We now have 2 gearboxes to select, Grove & Sumitomo
   NOTE: When configured for OHCD-1000 with Teco Drive, the Sumitomo Gearbox is
   NOT allowed and will NOT appear in Setup Menu
- Add Elevator Speed selection to Setup Menu
   We now have 2 speeds to select, 30 & 40 FPM
- Add Omron & Hitachi Drive support OHCD-1000, Grove 30 & 40 FPM is finished
- Add 2 & 3 Speed Gate Selection to Setup Menu
- Add 2 & 3 Speed Gate support
- Add 2 & 3 Speed Door Selection to Setup Menu
- Add 2 & 3 Speed Door support
- Add Configuration Register check during Initialization If incorrect, the Control will stop and display:
   "Control Inoperable" "Reprogram CPU Board"
- Change Setup Message handling to save program space
- Change Setup and Maintenance Menu idle timeout from either 2 or 5 Minutes to 10 Minutes
- Change the additional Tape Reader Status Display to include the Last Floor & New Floor values that caused a Non-Sequential Floor Error. If no Non-Sequential error, the values are zeroed.

## Program Revision 3.00

9/11/2020

Operation: While the Tape Reader display is active, press and hold the "Enter" button to display the following information;

Tape Reader, Last Tape Reader, Car Position,

GAL Zone, Motion Flags, Last Floor: New Floor

Displayed as TR=xx LTR=xx CP=xxx

G=xx MF=xxxx F=llnn

All values are Hexadecimal

Note: If a Non-Sequential Floor Error occurrs, the F=llnn will decode as follows:

"II" = The Last Floor before the error and "nn" = The New Floor that caused the error

• Change Door Unlocking
If car is in overhead or pit, do NOT unlock any doors (Even if tape reader shows a valid Door Zone)

### Program Revision 2.68

7/10/2020

• Bug-Fix: The Lock Fault Feature was falsely tripping and displaying (LF) during releveling with an open Automatic Door. It has been corrected

### **Program Revision 2.66**

12/27/2019

• Change battery lowering operation. The speed was reduced to 50% on CD-500, CD-1000 & OVH-1000 to prevent UPS overload

### **Program Revision 2.64**

11/8/2019

• Bug-Fix: Float Switch Fault Routine did not work correctly
If the Float Switch was tripped while car was traveling down, the car did not stop and reverse direction, it continued the destination floor was reached and then reversed direction.

### **Program Revision 2.62**

8/19/2019

- Bug-Fix: Call/Send would operate from a Hall Call that was disabled by optional key switch It has been corrected.
- Bug-Fix: "Both Pendants Connected" error message did not clear correctly.
   It has been corrected.
- Add Door Fault Interrupt lockout option.
   Currently only Florida requires these conditions to lockout the elevator so, for now, the default setting for this lockout option is "Lockout Disabled".

The Door Fault Interrupt is enabled or disabled from the Setup Menu.

If the Door Fault is Enabled and a Car Position / Open Door mismatch, (D!) or a Door open but Car NOT in Door Zone, (Z!) occurs, (OS) is displayed on all PIs for "Out of Service" and the elevator will be placed Out of Service.

Once the elevator is "Out of Service", to restore service, the elevator control must be manually reset by pressing the Cancel key located under the display in the main control.

The Door Fault Interrupt Lockout is automatically disabled while the pendant is connected.

 Change text displayed on LCD for original Pit Float Switch Input to indicate it's the wrong Pit Float Input to use

### Program Revision 2.60

7/10/2019

- Bug-Fix: Float Switch and Safety Pan Faults inhibited re-leveling. It has been corrected.
- Bug-Fix: Setting control for too many floors and then to the correct number of floors, caused the control to ignore calls until power was cycled.
   It has been corrected.
- Bug-Fix: The Gate Safety Override Jumper function was not working correctly. If the Gate was open
  when the Override Jumper was installed, it would not run. If the Gate was closed when the Override
  Jumper was installed, it would run.
  It has been corrected.
- Bug-Fix: All three Override Jumpers would not work with multiple open circuits within each group. It has been corrected.
- Bug-Fix: If a Manual Gate was opened after placing a call but before the car began moving, the program would hang and blink the PIs between "Up Arrow with Floor" and "GT".

  It has been corrected.
- Bug-Fix: The Homing Time was incorrect when set above 109 Minutes.
   It has been corrected.
- Add Hall Call Lock Circuit Crowbar Function

If Door Lock Power is detected at any Locks other than Locks on the same floor as the car, the Door Lock Crowbar circuit of the offending Hall Call board will be energized to remove Door Lock Power, all PIs will display "LF" (Lock Fault), the alarm will beep, the car will be sent to the floor of the offending Hall Call and the elevator will be disabled.

A service call by an authorized Inclinator Dealer and a Pendant is required to clear this fault. Lock Fault / Float Switch Fault priority structure:

A Lock Fault trumps a Float Switch Fault, unless the Lock Fault is on the First Floor, then a Float Switch Fault trumps a Lock Fault, unless another Lock Fault occurs on a higher floor, then the Lock Fault again trumps the Float Switch Fault.

The car will not move to the offending floor while a pendant is connected.

• Add Disable Homing while the pendant is connected.

### **Program Revision 2.60**

7/10/2019

• Add NF (Non-sequential Floor) error display to PI
The elevator will be disabled, all doors will be locked and the "Call for Service" led will blink. A
service call by an authorized Inclinator Dealer and a pendant is required to clear this fault.

• Add Unlock Doors Feature

To unlock a door, connect pendant, set Normal/Inspection to Inspection, pull E-Stop then, press and hold the call button of the Hall Call at the door to be unlocked. After 10 seconds, the alarm will sound, and the door will be unlocked. The alarm will turn off and the door will be relocked when the Hall Call button is released.

• Add additional information to Tape Reader Status display.

While Tape Reader display is active, hold "Enter" to display the following information.

Tape Reader, Last Tape Reader, Car Position,

GAL Zone, Motion Flags, Number of Errors

Displayed as: TR=hh LTR=hh CP=hhh

G=hh MF=hhhh E=ddd

hh, hhh or hhhh indicates a Hexadecimal value, ddd indicates a Decimal Value.

Removed Safety Pan Feature.

# **Program Revision 2.59**

3/19/2019

Bug-Fix: Bug-Fix: Automatic Door Operation was causing false "Positioning Error 01" faults. This bug
was created during Rev 2.54 changes.

It has been corrected.

# **Program Revision 2.58**

11/27/2018

• Bug-Fix: N.J. Option Dual Door/Gate Monitor after being Locked, was rejecting the first call attempt but accepting the second call attempt.

It has been corrected.

## **Program Revision 2.56**

11/15/2018

 Bug-Fix: GT was not appearing on PI's when control was configured as: 2 Manual Gates and NJ Compliance disabled.
 It has been corrected.

### Program Revision 2.54

11/09/2018

- NOTE: Due to program growth into page 1 of program memory during Rev 2.54 changes, major code relocation was required
- Bug-Fix: The Automatic Gate Cleaning Mode did not work when there were 2 Gates and Gate 1 was set to Manual and Gate 2 was set to Automatic.
   It has been corrected.
- Bug-Fix: The "Door is Open but not in a Door Zone" error was not suppressed when the TOC pendant
  was connected, it was only suppressed with the CPU pendant.
  It has been corrected.
- Bug-Fix: The "Door is Open but not in a Door Zone" error was not suppressed when the TOC pendant
  was connected, it was only suppressed with the CPU pendant.
  It has been corrected.
- Bug-Fix: The "Door is Open on the Wrong Floor" error was not suppressed when the TOC pendant was connected, it was only suppressed with the CPU pendant.

  It has been corrected.
- Bug-Fix: If a call was interrupted while the car was within the leveling zone and the car releveled back to the Door Zone, the door would not unlock.
   Work Around: Pressing the call button of the current floor allowed the door to unlock.
   It has been corrected.
- Bug-Fix: A false positioning error #2 was being logged on Hydro Elevators with Automatic Gates after releveling up, which caused the call to drop.
   It has been corrected.

# **Program Revision 2.54**

11/09/2018

- Add N.J. Compliance Option which requires individual Gate Switch sensing for the Door/Gate Monitor.
   By connecting the DRZ input to the point where the Gate 1 switch connects to the Gate 2 switch, the control can determine if Gate 1 or Gate 2 is Open.
  - When this option is selected, the PI will still show only "GT" for either Gate, but the LCD on the CPU Board will show Gate 1 or Gate 2.
  - In previous program releases, the Gate assignment only appeared in the Setup Utility with automatic Gates. When this Option is selected, Gate assignment will appear in Setup Utility with Manual or Automatic Gates.
- Add Door/Gate Monitor disable with TOC pendant too, it was only disabled with CPU pendant.
- Change Homing Maximum Time from 60 to 120 minutes (Range is now 1 to 120 Minutes).
- Change Slack Cable/Final Limit Switch reset procedure, a Pendant is now required to reset this fault

### **Program Revision 2.52**

8/23/2018

- Bug-Fix: When a "24VDC shorted to ground" error was present, the "24VDC shorted to ground" error message appeared but the "COP Stop Switch Open" error also appeared.
   It has been corrected. Now when the safety circuit is shorted to ground, only the "24VDC shorted to ground" message is displayed and I added a "S!" display to PIs.
- Bug-Fix: The Access Panel Feature did not disable the elevator. The PI displayed "AP" and the LCD displays were correct but, the elevator was not disabled.
   It has been corrected.
- Bug-Fix: Call Send could still be used after an "Access Panel" or "Safety Pan" fault disabled the elevator.

It has been corrected.

- Bug-Fix: The direction determination routine was not always selecting the correct direction. If the car
  was stopped as it moved off a leveling magnet, and then the direction was reversed, and the car stopped
  again, when the next call was placed the car moved in the wrong direction.
  It has been corrected.
- Added 8 additional words to Record Keeping and 6 additional words to Operating Parameters EEPROM.

### **Program Revision 2.52**

8/23/2018

- Added a COP Halo at Idle, On/Off setting to Setup Menu.
- Added a "Skip Menu Instructions" function to Setup and Maintenance Menus. Pressing the Menu key will skip the Scroll and Edit instruction screens of each menu but, not the first screen.
- Added a "Pause" feature to Error Log Display routine. Holding the Menu key will pause the display and because it works by clearing a display timer, it can also be used to quickly step through the four screens of each error by pressing and releasing the Menu key until the desired screen appears.
- Added Constant Pressure Operation.
- Added a 500mS build pressure delay at start of Hydro Up movement (Pump runs for 500mS before valves open).

### Program Revision 2.50

5/08/2018

• Remove fake Gate was opened flag when COP Run/Stop switch is set to Off. This was put in place to prevent the alarm from sounding if the door was opened while the COP Run/Stop switch was cycled.

## Program Revision 2.48

9/26/2017

- Bug-Fix: Installations with 18.5" between floors were logging false positioning errors #3 and #12. It has been corrected.
- Bug-Fix: Changed COP keyswitch operation to prevent possible lockout when automatic doors are installed.
  - If COP keyswitch was turned off and an Automatic Door closed, you could no longer open the door and you were locked out.
  - It has been corrected.
- Added a special mode to allow closing Automatic Gate(s) for cleaning. To enter the special mode, set the COP Run/Stop switch to Stop while in door zone of any floor and press the call button of the current floor on COP or Hall Call. Each time a call button is pressed, the Automatic Gate(s) will toggle between open and closed. To exit the special mode, set the COP Run/Stop switch back to Run.

### **Program Revision 2.46**

9/11/2017

• Bug-Fix: PI display problem "AP" was also displayed for Pit Float and Overspeed Switches. It has been corrected

# Program Revision 2.44

9/08/2017

- Added clearing of Pit Switch Error message when entering Installation Mode Although when in Installation Mode this error message was meaningless and the elevator would still function, the message was confusing so, it is now cleared when entering Installation Mode.
- Added Cab Light with Gate Open Option to Setup Menu. In all past program revisions, except for an Automatic Gate, the Cab Light would always come on with any break in the safety circuit. We have been asked to not turn on the Cab Light when the Gate is opened but some people will still want the Cab Light to come on when the Gate is opened. Our solution was to add an option in the Setup Menu that allows our Dealers to select whether they want the Cab Light on or off with an open Manual Gate.
- Changed the operation of the Hard Stop safety circuit input.

  It has been redefined to Hard Stop / Access Panel safety circuit input. This safety circuit input is now intended be connected to a switch installed at any Access Panel allowing access to the hoistway, such as an overhead access panel for an MRL elevator. Once the Access Panel has been opened and closed, a manual reset at the control is required before the elevator can be put back in service. Refer to "UC601 Universal Control Access Panel Feature" document for details.
- Bug-Fix: The Car Position / Open Door Mismatch error display was not displaying correct information.
  The initial error display was correct but the error log display was displaying current car position and
  current open door status not the car position and open door status at the time of the error.
  It has been corrected.
- Bug-Fix: PI display timing problem
   If the installation had Automatic Gates, the "Dx" was displayed for 3 seconds, not the intended 1.5 seconds.
   It has been corrected.

### **Program Revision 2.44**

9/08/2017

- Bug-Fix: The Slack Cable Switch Error Message was confusing.
   If the Slack Cable switch was open, then closed and then opened again, both the Slack Cable switch is open and press cancel to reset Slack Cable messages were displayed.
   It has been corrected.
- Bug-Fix: Elevators equipped with automatic gates were getting stuck in a call but not closing the automatic gate nor timing out and dropping the call.
   It has been corrected.

Here are the details of this bug.

The Auto Gate Bug can affect UC601 controls with program revisions; 2.38, 2.40 & 2.42.

The conditions that trigger this bug are:

The installation has an Automatic Gate or Automatic Gates

The car is at the lowest floor

The COP call button for the lowest floor is pressed

The above conditions incorrectly tell the program that Automatic Door 2 is open. Then when a call is placed the program will try to close Automatic Door 2 which does not exist. This causes an infinite loop waiting for an Automatic Door that does not exist to close.

During this infinite loop, the PI in the left position, will display the character representing the lowest floor (1, B, G, etc.) and in the right position, a stationary Up Arrow  $(\uparrow)$ . Once this occurs, the elevator will not move nor respond to any other calls.

If the car is on any other floor and the matching COP call button is pressed, there will be no problem. If the car is on the lowest floor and the call button on the lowest floor Hall Call is pressed, there will be no problem.

If the installation also has 2 Automatic Doors, there will be no problem.

While correcting this bug, I discovered a work around. Obviously, the best way to correct this problem is to update the program but, following the steps below will trick the control into working until the program is updated.

Using the "Setup Menu" temporarily set "Floor 1" for 2 doors, then set "Floor 1 Door 2" as 'Automatic" and then go back and set "Floor 1" back to 1 door.

### **Program Revision 2.42**

4/19/2017

• Changed Automatic Door Open sensing.

If an Automatic Door was opened and then the Door Override Jumper was installed before it closed, a false "Automatic Door Didn't Close" error was generated because the control cannot sense the door closed when the Door Override Jumper is installed.

The "Automatic Door Didn't Close" error is now suppressed when the Door Override Jumper is installed to prevent the false error.

• Bug-Fix: The car would occasionally go into the pit.

If the re-leveling option was enabled and the car was stopped before it reached the floor and only on an Up or Down level sensor but not also on the Door Zone sensor, when the car was called or re-leveled to a floor, a Position Error 19 (Unintended Car Movement) occurred when the Door Zone sensor was detected. A Position Error 19 could cause the car to go into the pit or skip a floor depending on its starting position and direction.

It has been corrected.

• Bug-Fix: Pendant operation with Automatic Doors installed did not work correctly. If Automatic Doors were installed and the car was moved into a door zone with the Pendant, it was possible to get the Automatic Doors out of sync with the control. This prevented the Pendant from being able to move the car out of the door zone because the doors would open when they should have closed which broke the safety circuit therefore inhibiting movement. It has been corrected.

Bug-Fix: False "Exceeded Re-leveling Time" and or "T\" errors were being logged if re-leveling was interrupted by the Pendant E-Stop or Top of Car E-Stop switches.
 It has been corrected.

### **Program Revision 2.40**

1/13/2017

#### • Added Pit Float Switch Feature

This feature will provide car protection for an elevator that is installed in a flood prone area by moving the car to the highest floor when water is detected. Our Float Switch Assembly P/N 80211371 which is located in the pit, connects to the Spare Input connector on the CPU board. Refer to "UC601 Universal Control – Float Switch Feature" document for details.

#### • Added Safety Pan Feature

This feature was added in response to new residential elevator laws enacted in Florida requiring the car to stop if an obstruction is encounter in the hoistway when moving in the downward direction. A Safety Pan is installed on the bottom of the car which electrically connects to the TOC board Gate switch and BRZ switch inputs. Refer to "UC601 Universal Control – Safety Pan Feature" document for details.

#### • Added 5 error displays to PI (Position Indicator)

In addition to displaying the error on the CPU board LCD display and logging the errors, the following error displays are added to the PI.

"UL" – Upper Limit Switch on Tape Reader activated (Car is in overhead)

"LL" – Lower Limit Switch on Tape Reader activated (Car is in pit)

"SC" – Slack Cable Switch activated (Cables have gone slack)

"FS" – Float Switch activated (Water in pit)

"SP" – Safety Pan Switch activated (Obstruction in hoistway)

#### Added Tape Reader Status display to Maintenance Utility

The status of all 6 Tape Reader sensors, Position 4 "P4", Position 2 "P2", Position 1 "P1", Up Level "UL", Door Zone "DZ" and Down Level "DL" can be monitored from the CPU board LCD display. Each sensor's abbreviation is followed by a "0" or a "1". A "0" indicates the sensor is not on a magnet, a "1" indicates the sensor is on a magnet.

#### Examples:

Car in Door Zone at 1<sup>st</sup> floor

"TR: P4=0 P2=0 P1=1"

"TR: P4=0 P2=1 P=1"

"UL=0 DZ=1 DL=0"

"Car slightly above Door Zone at 3<sup>rd</sup> floor

"TR: P4=0 P2=1 P=1"

"UL=0 DZ=1 DL=1"

### **Program Revision 2.40**

1/13/2017

This condition can be caused by incorrect Hall Call wiring (In and Out wires reversed) or incorrect control configuration (Incorrect Standard and Attic Mount setting). This condition will cause the control to display the wrong door is open which interferes with proper Door/Gate Monitor operation, possibly resulting in a Lockout condition "LK". The message is intended to alert the elevator installer or technician that a problem exists before a Lockout occurs.

If a pendant is connected to the control, this error is ignored and not displayed.

Added Car Not in Door Zone but Hall Door Open error message
 If the control senses a Hall Door is open but the car is not in the Door Zone, a Car Not in Door Zone
 error will be displayed on the CPU board LCD display, the error will be logged and "Z!" will be
 displayed on the PI.

If a pendant is connected to the control, this error is ignored and not displayed.

- Changed Elevator Run Timer operation
  - Hydro elevator Run Timer was changed from 1.5 minutes in both directions to, 2 minutes for an upward direction and 2.5 minutes for a downward direction.
  - If a pendant is connected, the Elevator Run and Re-level Timers are disabled.
- Changed the MRL Chain Elevator emergency battery lowering operation
  The battery lowering speed was decreased from 40FPM to 20FPM to prevent the UPS from overloading.
- Changed Error Log operation
  - When using the Maintenance Utility to view logged errors, the display now begins with the most recent error first, previous revisions began with the oldest error first.
- Bug-Fix: The car would occasionally go into the pit
   If the car was slightly below the lowest floor and the power was turned off and back on and a call was placed, the car moved downward into the pit, not upward.
   It has been corrected.
- Bug-Fix: If auto gates were installed and the car was in a below lowest floor condition but, not on the lower limit switch, the control could not move car and it had to be hand cranked to raise it out of the pit. It has been corrected.

### Program Revision 2.40

1/13/2017

• Bug-Fix: The Trip Counter value was inaccurate.

You may want to record the date you install this program. The Trip Counter value was inaccurate and it will be reset to zero the first time the program runs after loading revision 2.40 or newer into a control running revision 2.36 or older.

The Trip Counter should be accurate from the program installation date forward.

- Bug-Fix: Pendant usage was logging false errors.
   When using a pendant, false non-sequential floor and floor overshoot errors were being logged.
   Both have been corrected.
- Bug-Fix: The "T\" PI error display was not displayed after a Hydro elevator re-level timeout. It has been corrected.
- Bug-Fix: Call/Send function would work if the car was stopped between floors.
   Now Call/Send will work only from the Hall Call of the current floor and only when the car is in the door zone.
- Bug-Fix: New "Loss of Communication" errors were logged while erasing the Error Log. It has been corrected.
- Bug-Fix: If Error Log was full (200 Errors) and power was cycled, all the errors were erased. It has been corrected.
- Bug-Fix: The auto door open and close error displays were displaying physical floor characters (1-6) not the display floor characters.

It has been corrected.

Example:

If the display characters for a 3-landing installation were B, 1 & 2 and an auto door error occurred on floor B, the error display would have shown the error was on floor 1 not floor B.