Contents

| Revision Number	Date	Comment
1.0	December 22, 2013	First version
2.0	December 11, 2017	Addition of board replacement instructions and Appendix A/B
2.1	February 21, 2018	Addition of Smart System Update in Section #3
3.0	July 30, 2018	Addition of Security Codes File Backup/Restore, Appendix C
4.0	September 6, 2018	Updated P-Hall and P-HNA replacement instructions
5.0	October 16, 2020	Update all PCB replacement instructions to the latest versions. Update software download from Elevator Controls website instructions
6.0	June 21, 2021	Update of P-MP Board Software Update method to Section #2. Addition of Legacy P-MP Board Software Update method to Appendix D.
7.0	January 13, 2022	Update instructions for P-MPv01 Legacy Software update.

1 Downloading Software from Elevator Controls Website

1. The latest Pixel software can be downloaded from the Elevator Controls website at the following link:

   https://www.elevatorcontrols.com/support/software-downloads/

2. Once you have downloaded the file from the Elevator Controls website, copy the "Pixel (version).zip file to a USB Flash drive root directory.

   ⓘ **NOTE:** Screen Shots below are from Windows 10 PC operating system and may be different for other Windows or Apple PC operating systems versions.
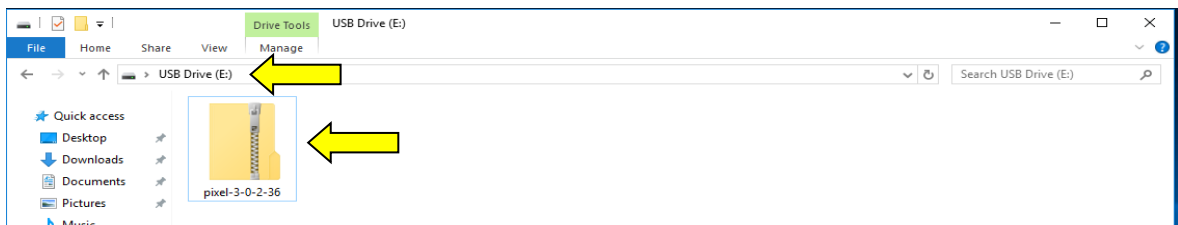

3. Using the mouse right click the Pixel(version).zip file and select "Extract All," then follow the on-screen instructions from the Extraction Wizard. Another file extraction program can be used to unzip the Pixel folder contents (Winzip, Winrar, 7-Zip…etc.).

   ⓘ **NOTE:** Files are compressed and must be unzipped to be used for Pixel controller software updating.
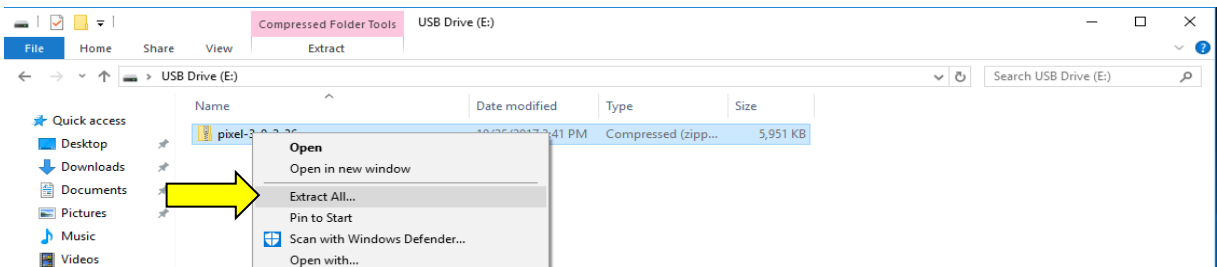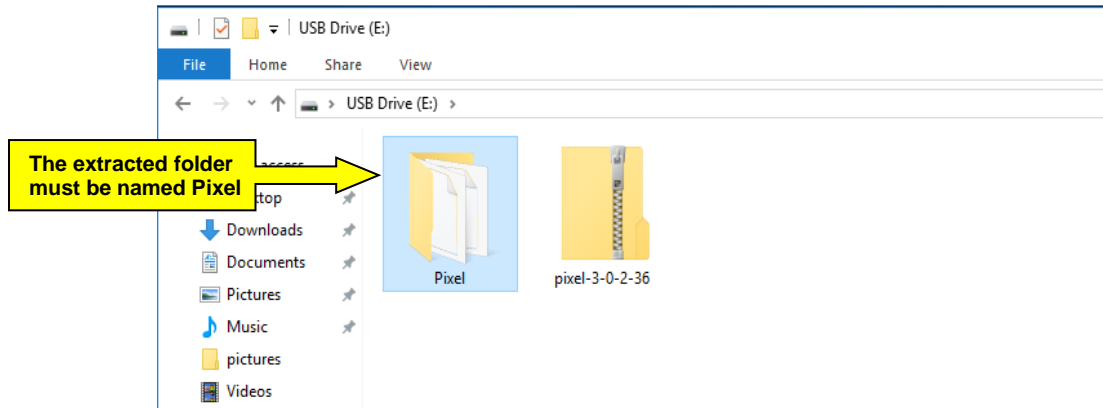

4. Change destination, to USB root directory, for files to be extracted to. Then click on the Extract button. Once file extraction is complete an Extraction Complete window will appear, then click on the Finish button.

   ⓘ **NOTE:** For this example the USB drive is assigned to drive E.
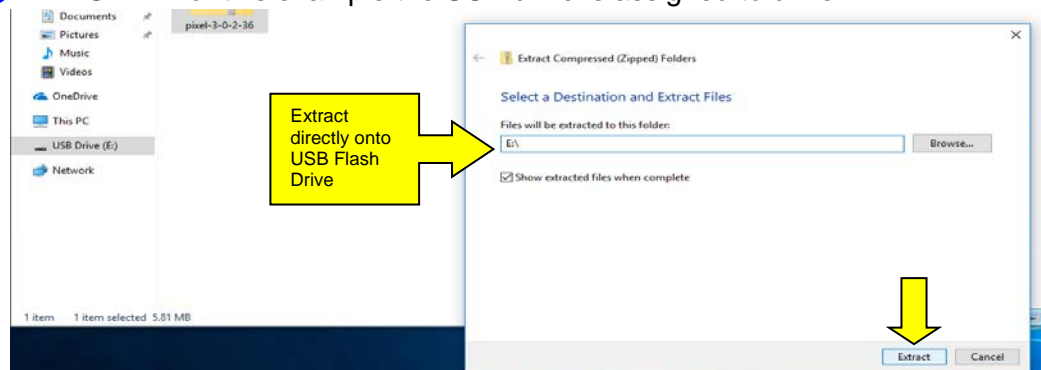
5. A folder called **Pixel** will be displayed**.**


The extracted folder must be named Pixel

6. Verify the Pixel folder contains the files required for updating Pixel software by clicking on the Pixel folder to view folder contents and compare to screen shot below.

ⓘ **NOTE:** File dates and sizes may vary, however file names will remain the same

The approximate size of the unzipped Pixel folder is 25-30MB, double click the version .txt file to display the downloaded Pixel software version.

ⓘ **NOTE:** Write down the software version number downloaded to be able to verify software update dates during the actual software update processes
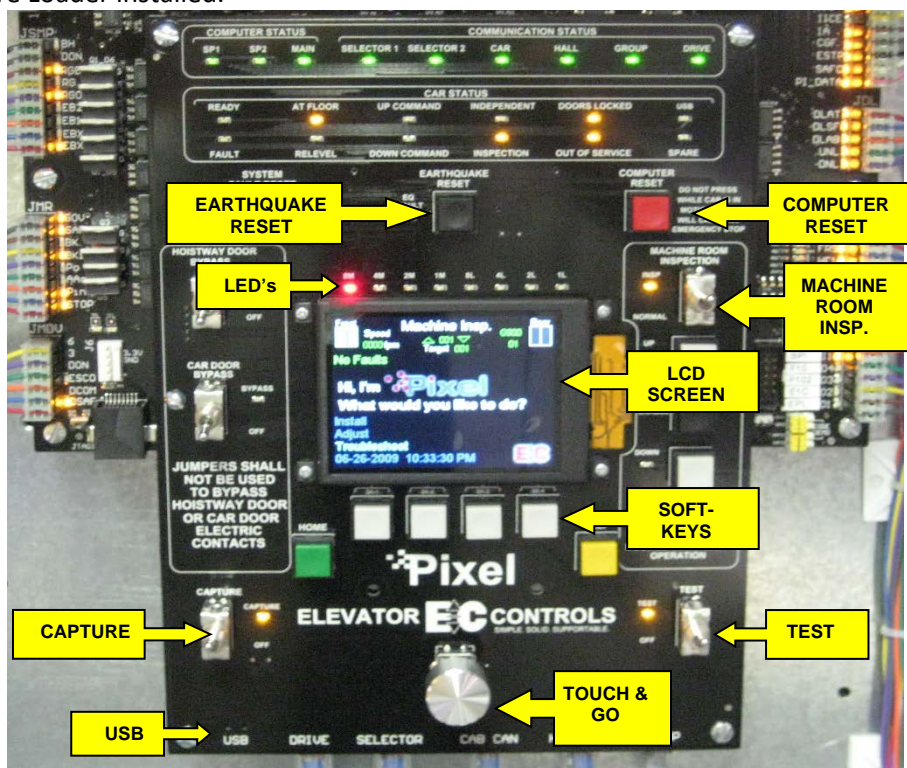

Typical files located in the extracted Pixel folder
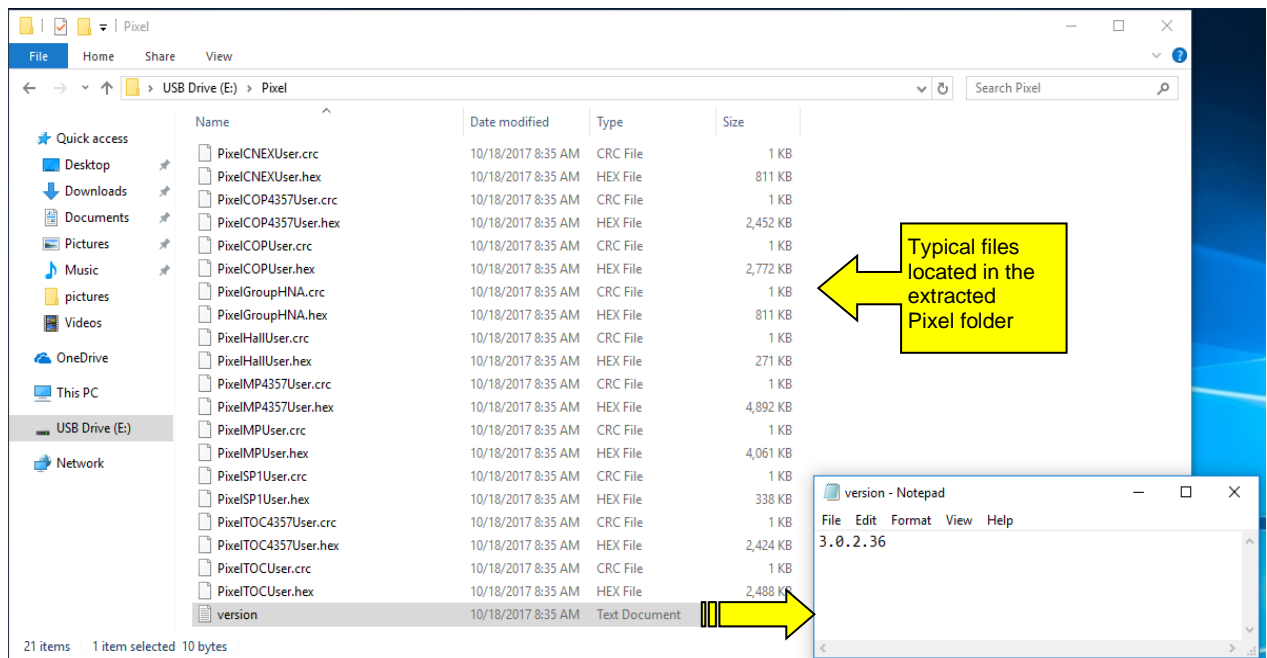
2   Software Update to P-MP Board

The following diagram shows which section to follow when performing a Software Update to the P-MP.
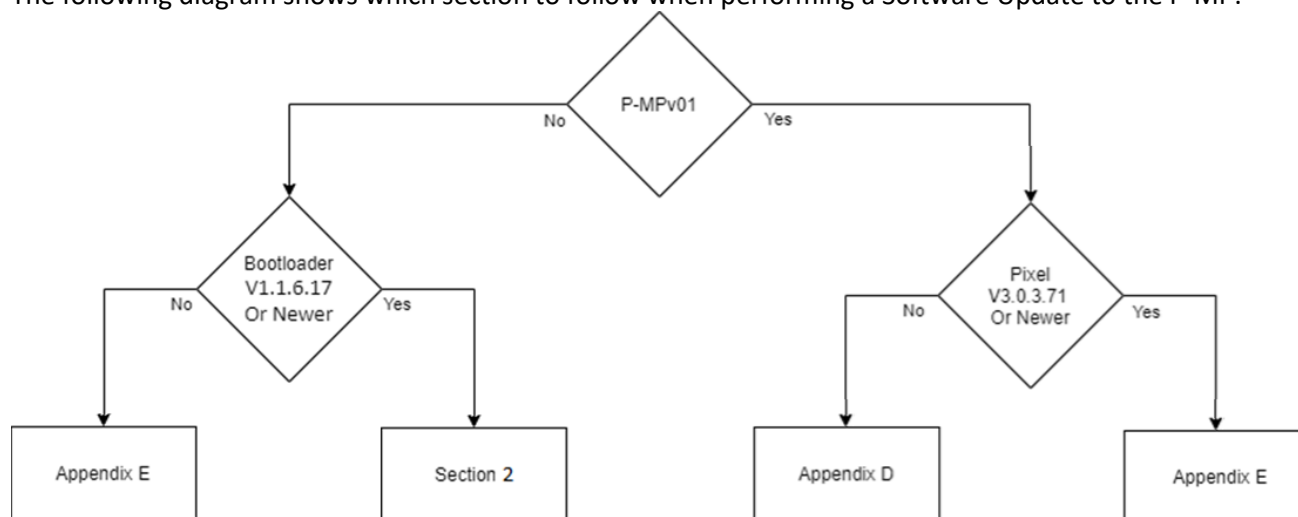

> ⓘ **NOTE:** This Software Update method applies to P-MPv02 or newer boards that have the latest P-MP Firmware Loader installed.

1.   Place controller on Capture operation (CAPTURE position).

2.   Place controller on Test operation (TEST position), after elevator has finished transporting passengers. (Test operation disables door operation)

3.   Place controller on Machine Room Inspection (INSP position).

4.   Locate Earthquake Reset button, Touch & Go Selection Knob, and Computer Reset buttons on P-MP board. Reference picture above for device locations on P-MP board.

5. Press and hold Earthquake Reset and Touch & Go buttons simultaneously. While press and holding Earthquake Reset and Touch & Go buttons, momentarily press Computer Reset button.
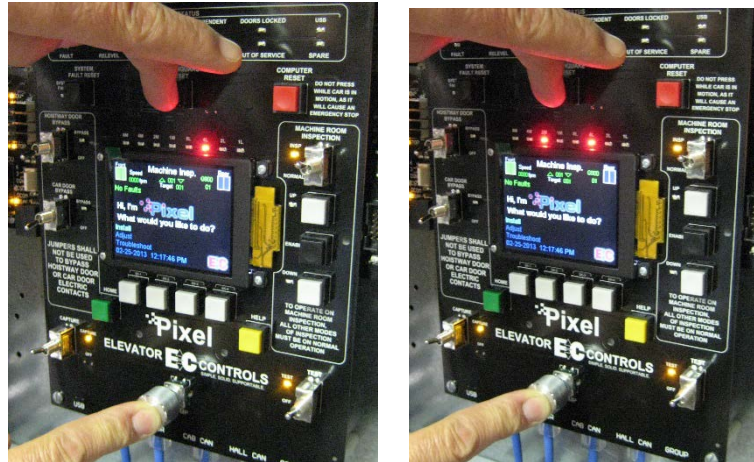

6. Continue to hold Earthquake Reset and Touch & Go buttons until LED's above LCD screen scroll from left and right towards center. This can take approximately 2-5 seconds.

7. Release Earthquake Reset and Touch & Go buttons once LED's are scrolling from left and right to center.

8. Insert USB Flash drive (with Pixel folder) into P-MP board USB port.

9. Wait until "USB MP Software Version:" changes from "Not Found" to the version number of the software in the USB and USB LED is lit.
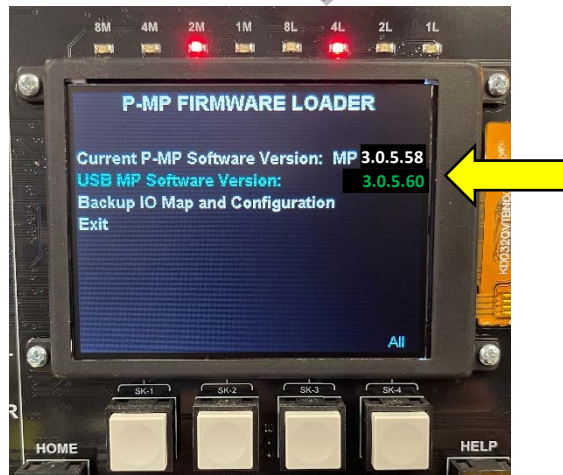

⊕ **NOTE:** The USB MP Software Version number will appear in **GREEN** text and display the current version number of the software loaded in the USB.

10. Use Touch & Go Knob to select USB MP Software Version.

⊕ **NOTE:** When it is selected the text for the option will turn **LIGHT BLUE**.

11. Press touch and go button to start P-MP update. A progress bar will appear once P-MP update starts, indicating the current software update status.
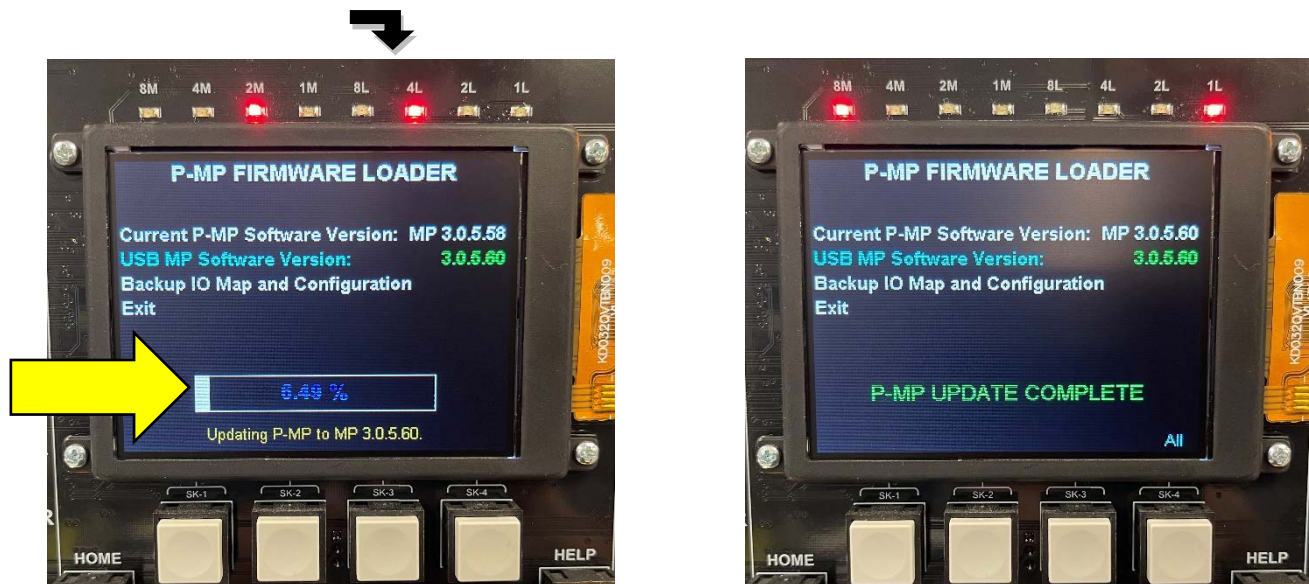

12. When update is complete, display will display message "P-MP UPDATE COMPLETE"

① NOTE: If an error is detected, then an error message will be displayed as shown below om **RED** text. If an error occurs, press the Computer Reset pushbutton and start from step #8.

13. After the software update is complete, use Touch & Go Knob to scroll to and select "Exit." The P-MP will reboot into Pixel application.

14. Verify update by checking software version. Using Touch & Go knob, select Install menu then About. Verify MP Software Version has been updated to the same software version in Pixel folder (Section 1) on the USB Flash drive. If software version uploaded is unknown, using a computer open version.txt file in the Pixel folder.
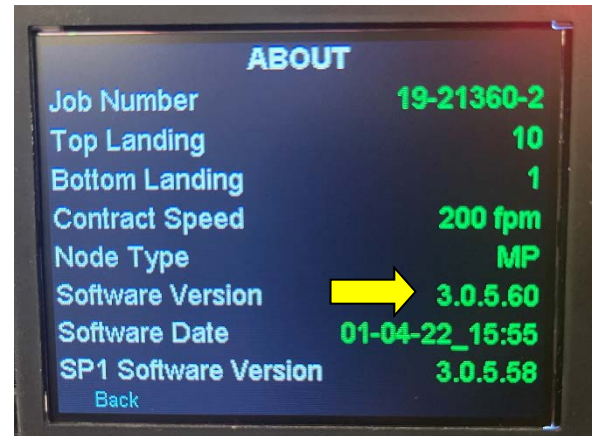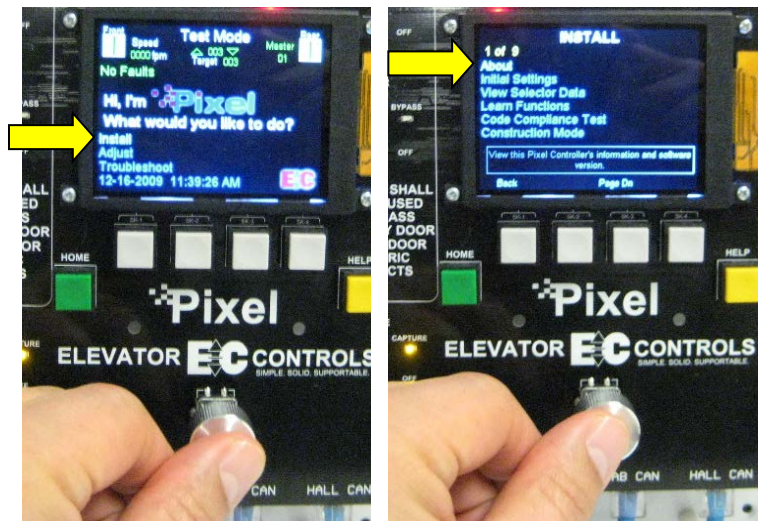
15. Utilizing the "ALL" softkey labeled pushbutton. Below is a small description of what features are available when the "ALL" button is pressed.
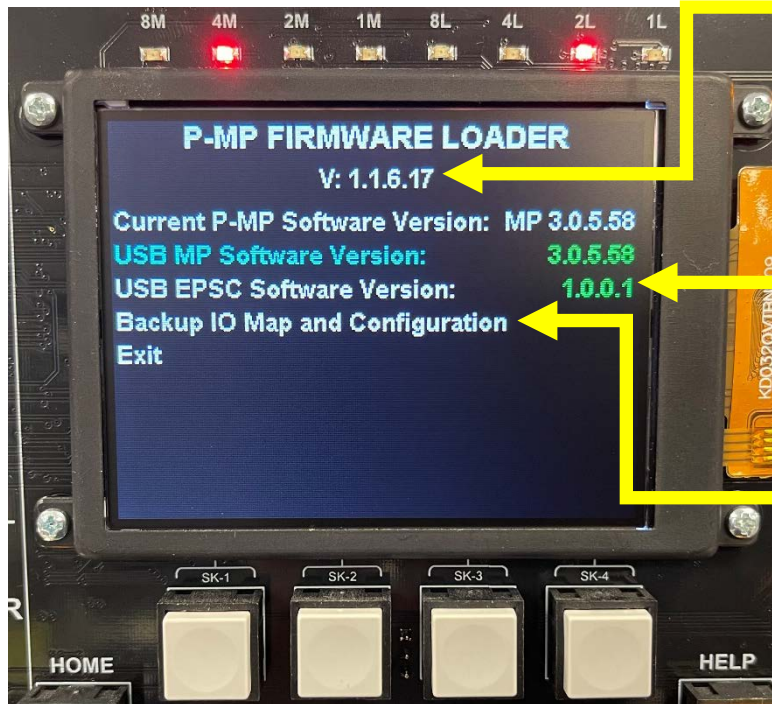
The P-MP Firmware Loader software version is displayed

The current software version for EPSC (Emergency Power Supervisor Controller) that is loaded on the USB will appear. Selecting this will load the EPSC software onto the P-MP board.
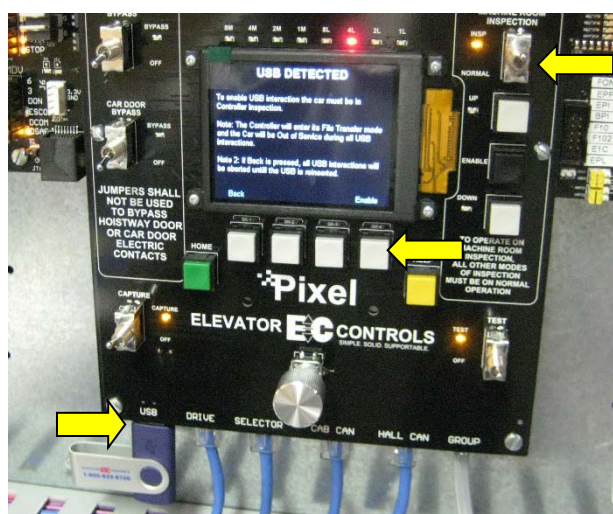
Create a Backup Copy of the Pixel Controller's System Configuration and IO Mapping files on the USB currently inserted to the P-MP board.

3 System Software Update (All Pixel Nodes Automatic)

Type of Software Update	Approximate Time Required for Update
SP	3 minutes
P-TOC	15 minutes
P-COP	15 minutes for each P-COP board
P-HALL	4 minutes for each P-HALL board

ⓘ **NOTE:** A Software Update to P-MP Board must be performed before completing the Pixel System Software Update, refer to Section 2 above.

1. Insert the USB Flash drive into the P-MP board USB port. The P-MP will detect the USB Flash drive and display a message. (USB DETECTED), then follow instructions on screen to place controller on File Transfer mode operation.

2. Press the "Enable" soft-key button to activate the File Transfer mode. This can also be done by navigating to the File Transfer window (Install→File Transfer).

3. A File Transfer Countdown timer screen will be displayed, that counts down from 10 to 1. The LED's above the LCD screen will begin to scroll from the center to the left and right sides.

4. A FILE TRANSFER screen will be displayed after the countdown timer. Using the Touch & Go knob scroll down to System Software Update (highlighted) and select it by pressing down.
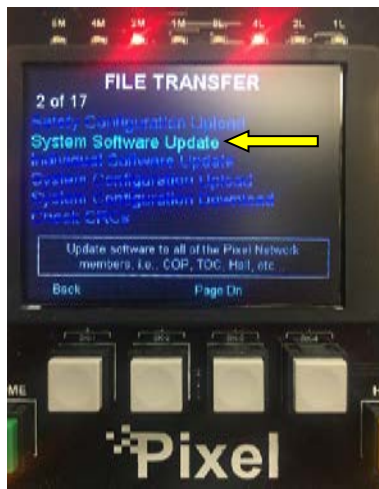
5. A SYSTEM UPDATE screen will be displayed. Using the Touch & Go knob scroll down to USB Version (highlighted) and select by pressing down.
    The USB Version will be the same as the Current version from Section 2, Step 15.

6. In the UPLOADING FIRMWARE window, a system scan will take place to locate all Pixel node boards currently installed in the Pixel Control System. This will take approximately 1 minute.
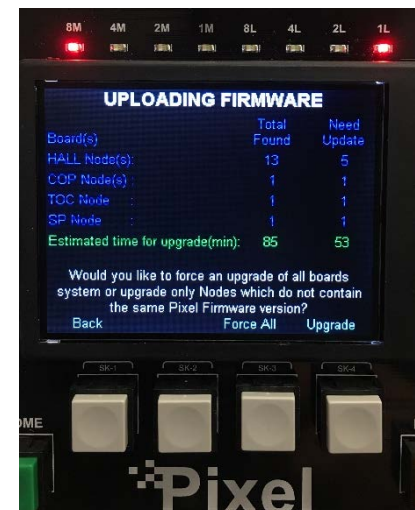
7. After the scan is complete, the UPLOADING FIRMWARE screen will display the total number of node boards connected to the P-MP board (HALL Nodes, COP Nodes, TOC and SP) and the number of boards which actually require an update. The estimated times to force an overwrite update all boards and the estimated time to upgrade only the boards that actually require an upgrade will be displayed in green. Press the "Upgrade" soft-key button to begin.

8. The firmware will begin upgrading one at a time until all components have been upgraded. The P-TOC and P-COP boards will display "This Pixel System is currently in File Transfer Mode. Note that the elevator will be Out of Service during this time." While the P-MP will display "Upgrading" next to the component that is currently being updated.
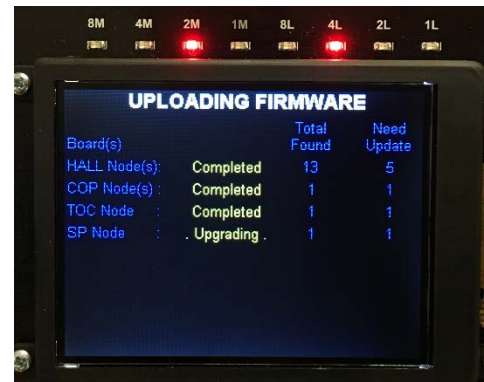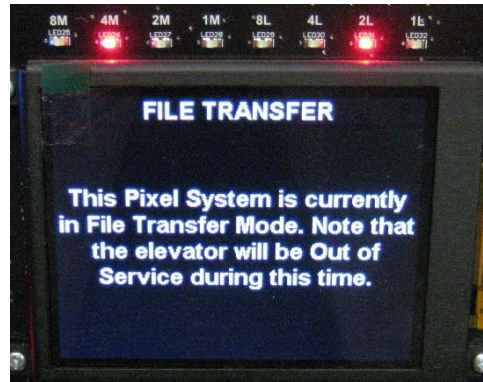
    ⓘ   **NOTE:** Do not cycle power during the software upgrade process. In the event of a power cycle, restart process from the Step #1 above.

9. Once all of the components display "Completed", select the "Back" soft-key button until you return to the File Transfer window.
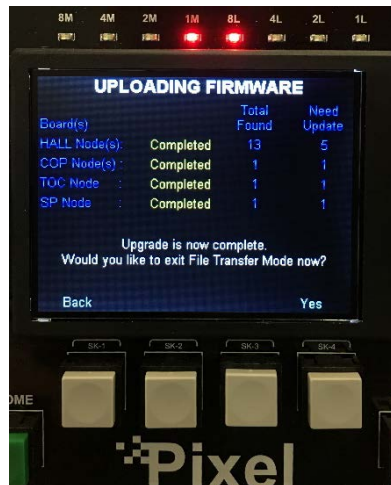
10. Once in the File Transfer window, using the Touch & Go knob scroll to the Safety Configuration Upload (highlighted) and select by pressing down.

11. In the Safety Configuration window, select the "Transfer" soft-key button to update the Safety Processors with the latest configuration settings from the recent software update.

12. After the transfer is complete, select the Home pushbutton to exit File Transfer and return to the home screen. A File Transfer Countdown timer will be displayed, counting down from 10 to 1.

13. When the LCD screen returns to the home screen, remove the USB Flash drive.

4   Pixel Individual Node Software Update

Type of Software Update	Approximate Time Required for Update
SP	3 minutes
P-TOC	15 minutes
P-COP	15 minutes for each P-COP board
P-HALL	4 minutes for each P-HALL board

1. Insert the USB Flash drive into the P-MP board USB port. The P-MP will detect the USB Flash drive and display a message. (USB DETECTED), then follow instructions on screen to place controller on File Transfer mode operation.

2. Press the "Enable" soft-key button to activate the File Transfer mode. This can also be done by navigating to the File Transfer window (Install→File Transfer).

3. A File Transfer Countdown timer screen will be displayed, that counts down from 10 to 1. The LED's above the LCD screen will begin to scroll from the center to the left and right sides.

4. A FILE TRANSFER screen will be displayed after the countdown timer. Using the Touch & Go knob scroll down to Individual Software Update (highlighted) and select it by pressing down.
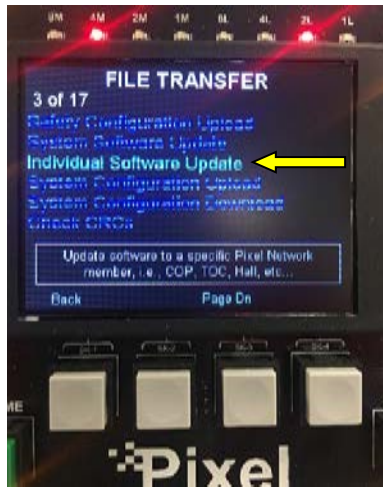
5. A INDIVIDUAL UPDATE screen will be displayed. Using the Touch & Go knob, scroll down to USB Version (highlighted) and select by pressing down.
The USB Version will be the same as the Current version from Section 2, Step 15.

6. Using the Touch & Go knob, scroll to the Pixel node to perform the software update to and select by pressing down.
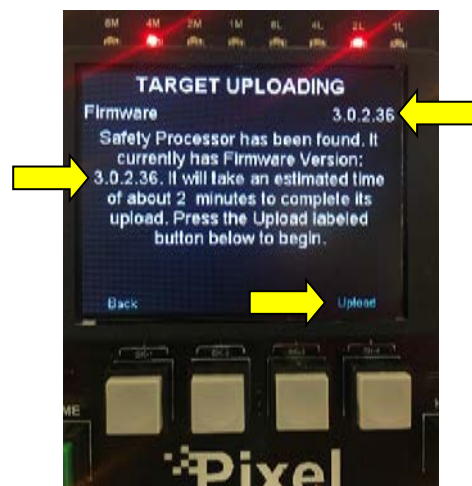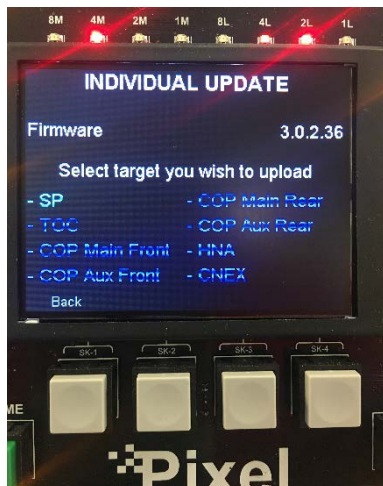
7. The TARGET UPLOADING window will display the version of software to be loaded to the node at the top right, the current version of software loaded on the node and the length of time it will take to perform the software update. Press the "Upload" soft-key button to begin.

8. During the update, the "Uploading" text will appear below indicating the update is currently in process.
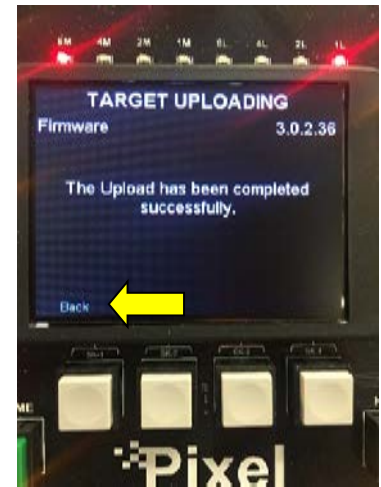
9. After the update is complete the TARGET UPLOADING window indicate the process is complete. Press the "Back" soft-key button to return to the INDIVIDUAL UPDATE window or press the HOME pushbutton to exit File Transfer and return to the home screen.

5   Pixel Board Replacement Instructions

5.1   P-MP Board Replacement Instructions

<u>17-002-123v05 P-MPv05 Pixel Main Processor Board Assembly Version 5</u>
Replaces (all previous versions of Pixel P-MP boards):
1. P-MPv01(17-002-123v01)
2. P-MPv02(17-002-123v02)
3. P-MPv03(17-002-123v03)
4. P-MPv04(17-002-123v04)

ⓘ   **NOTE:** Replacing the P-MP board requires "this controller's" job specific NewPixelConfig.dat and LogicalPhysicalMap.dat files uploading. The files can be downloaded from existing P-MP if board still functional, or can be uploaded from the P-TOC board, if a copy of the same was previously downloaded as backup, for controllers running software version 3.0.2.32 or later, refer to section appendix "A" below for a step by step procedure on how to or perform this task. If neither option is available parameters must be manually entered, contact Elevator Controls technical support for advice prior to starting this process.

I)   **P-MPv05 replacing P-MPv05, P-MPv04 or P-MPv03**
   a. Set the JCT and the JP1 jumper switches to match board being replaced settings
   b. Perform Common P-MP Board Replacement Instructions below

II)   **P-MPv05 replacing P-MPv02**
   a. Set the JCT jumper switch in the Up position, towards the JCT label
   b. Set the GTR (JP1) jumper switch to match board being replaced setting
   c. Perform "Common P-MP Board Replacement Instructions" below

III)   **P-MPv05 replacing P-MPv01**
   a. Set the JCT jumper switch in the Up position, towards the JCT label
   b. Set the GTR (JP1) jumper switch in the Up position, towards the JP1 label
   c. Perform Common P-MP Board Replacement Instructions below

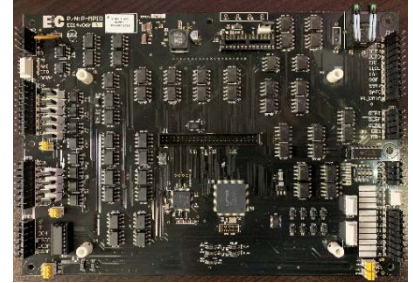**Common P-MP Board Replacement Instructions**
   a. Verify the Real Time Clock Battery (BT1) has been loaded
   b. Install the new P-MP board onto controller.
   c. Set switches CAPTURE to CAPTURE, TEST to TEST, Machine Room Inspection to INSP.
   d. Download the Pixel Configuration (NewPixelConfig.dat) and IO Mapping (LogicalPhysicalMap.dat) to the new P-MP board from USB from *Note* above.
       i.   USB refer to Pixel_ Software&Hardware_Update_Instructions.pdf appendix "B".
       ii. P-TOC refer to Pixel _Software&Hardware_Update_Instructions.pdf appendix "A".
       iii. Manually enter them; An as built controller default settings file from Elevator Controls can be obtained, then you will have to perform a complete on-site learning of all position parameters, adjust all speed profile parameters, and if a CAN driven load weighing device is part of job installation a new load learning process need to be executed as well as pre-torque calibration if applicable. Consult with Elevator Controls Corp technical support group for best approach as necessary.
   e. Perform a P-MP board Default Settings navigating to File Transfer Window→Board Settings Window→ then press the Default soft key pushbutton. Task sets IP addressing for Interact and PC interface exchanges based on this controller Car Number.
   f. Perform a software update to the Pixel Controller if the current software was a version prior to 3.0.0.0, refer to Pixel _Software&Hardware_Update_Instructions.pdf.
   g. Perform a Safety Configuration File Transfer
   h. Set the Pixel Real Time Clock to job location current time and date.
   i. Verify controller operation

5.2 P-MPIO Board Replacement Instructions

17-002-124v06 P-MPIOv06 Pixel Main Processor I/O Board Assembly Version 6
Replaces (all previous versions of Pixel P-MPIO boards):
1. P-MPIOv01(17-002-124v01)
2. P-MPIOv02(17-002-124v02)
3. P-MPIOv03(17-002-124v03)
4. P-MPIOv04(17-002-124v04)
5. P-MPIOv05(17-002-124v05)

I)   **P-MPIOv06 replacing P-MPIOv06 or P-MPIOv05**
   a. Configure all slide jumpers and SWI switches to match settings of board being replaced.
   b. Perform the Common P-MPIO Board Replacement Instructions below

II)   **P-MPIOv06 replacing P-MPIOv04, P-MPIOv03, P-MPIOv02, or P-MPIOv01**
   a. Set the JP2 slide jumper switch (bottom left hand corner) towards the 2 position (right)
   b. Set the JP7 and JP6 slide jumper switches (bottom left hand corner) towards the 1 position (left)
   c. Set the JP8 and JP9 slide jumper switches (middle left) towards the 2 position (right)
   d. Set the JP_BK slide jumper switches (middle left) towards the 2 position (right)
   e. Set the GOV1, GOV2, SAFC1, and SAFC2 slide jumper switches to match settings of board being replaced
   f. Set SW1 switches 1 to 4 in the dawn position
   g. Perform the Common P-MPIO Board Replacement Instructions below

Common P-MPIO Board Replacement Instructions
   a. Remove U8 from existing board and install into U8 socket on the P-MPIOv05 board
   b. Install the new P-MPIO board onto controller.
   c. Verify P-MP and P-MPIOv05 software versions are the same under Install→About menu
      i. If they are the same proceed to step d below
      ii. If they are not the same, use the USB provided with your replacement board to perform a P-MP and P-MPIOv05 software upgrade; refer to Pixel_ Software&Hardware_Update_Instructions.pdf for a step by step procedure on how to update the Pixel Controller Software. This file and the latest Pixel software can be downloaded from Elevator Controls Corp. website at www.elevatorcontrols.com.

   ⓘ   **NOTE:** In order to take advantage of the new diagnostics features incorporated into the latest version of software, a Pixel system upgrade is recommended.

   d. Perform a Safety Configuration File Transfer under Install→File Transfer→Safety Configuration Upload
   e. Verify controller operation

   ⓘ   **NOTE:** JP_SP1 slide jumper switch has been removed from P-MPIOv05, not required for board functionality.

   ⓘ   **NOTE:** JIOEX2 and JCTH connectors are not used by the P-MPIOv05 when replacing prior generations of the P-MPIO board.

## 5.3 P-TOC Board Replacement Instructions

17-002-121v04 P-TOCv04 Pixel Top of Car Board Assembly Version 4
Replaces (all previous versions of Pixel P-TOC boards):
1. P-TOCv01(17-002-121v01)
2. P-TOCv02(17-002-121v02)
3. P-TOCv03(17-002-121v03)

I)   P-TOCv04 replacing P-TOCv04, P-TOCv03 or P-TOCv02
   a.   Set the J2, J3 and J4 slide jumpers to match the board being replaced settings
   b.   Install the new P-TOC in the Top of Car Box
   c.   Verify controller operation

II)   P-TOCv04 replacing P-TOCv01
   a.   Set the J2, and J3 slide jumpers to match the board being replaced settings
   b.   Set the J4 slide jumpers to the ON (left) position
   c.   Install the new P-TOC in the Top of Car Box
   d.   Rewire terminal block JIOEX per new layout below:
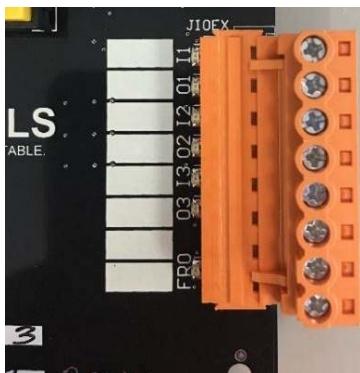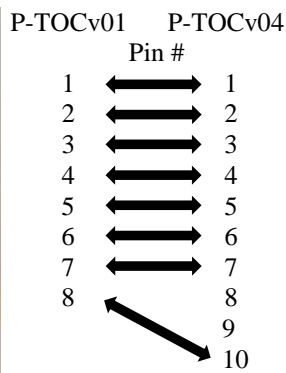
Figure 1: P-TOCv01 JOIEX (8Pin)   **Figure 2: P-TOCv04 JOIEX (10Pin)**

   e.   Verify controller operation

5.4 P-COP Board Replacement Instructions

<u>17-002-121v04 P-COPv04 Pixel Car Operating Panel Board Assembly Version 4</u>
Replaces (all previous versions of Pixel P-COP boards):
1. P-COPv01(17-002-119v01)
2. P-COPv02(17-002-119v02)
3. P-COPv03(17-002-119v03)
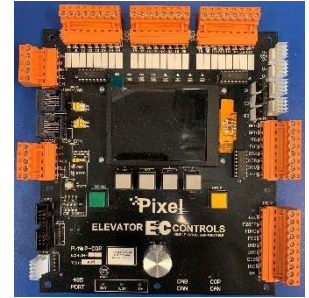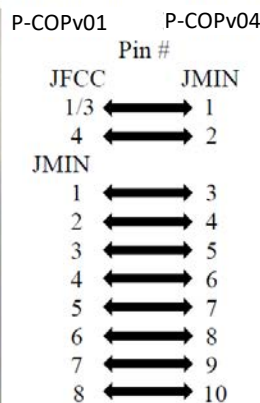
I) **P-COPv04 replacing P-COPv04, P-COPv03 or P-COPv02**
a. Set the J2, J3 and J4 slide jumpers to match the board being replaced settings
b. Set COP CONFIG node configuration switches to match the board being replaced settings.
c. Install the new P-COP in the COP
d. Verify controller operation

II) **P-COPv04 replacing P-COPv01**
a. Set the J2, J3 slide jumpers to match the board being replaced settings
b. Set the J4 slide jumper to the ON position.
c. Set COP CONFIG node configuration switches to match the board being replaced settings.
d. Install the new P-COP in the COP
e. Rewire terminal block JMIN per new layout below:
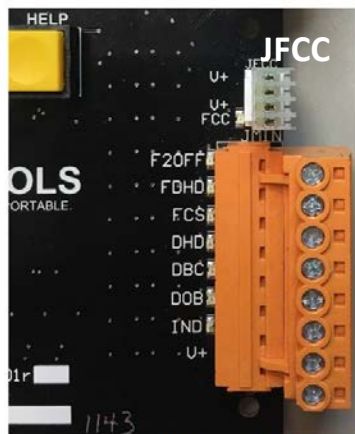
P-COPv01 JFCC (4PIN) & JMIN (8PIN)   P-COPv04 JMIN (10Pin)
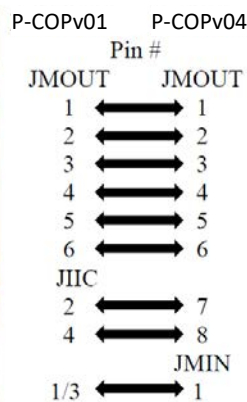
f. Rewire terminal block JMOUT per new layout below
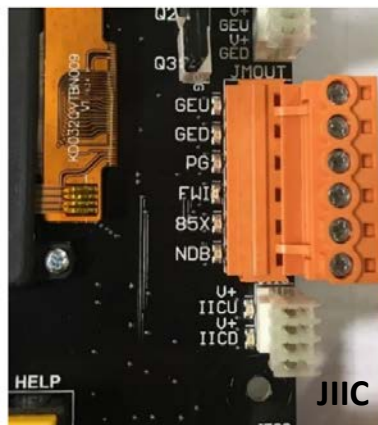
P-COPv01 JMOUT (6PIN) & JIIC (4PIN)   P-COPv04 JMOUT (8Pin)

g. Verify controller operation

5.5 P-CNEX Board Replacement Instructions

17-002-116v03 P-CNEXv03 Pixel CAN IO Expansion Board Assembly Version 3
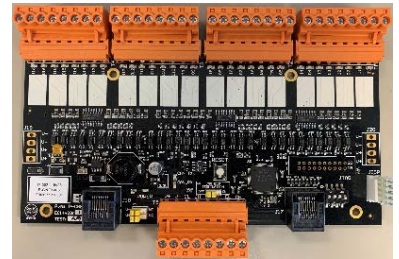**Replaces (all previous versions of Pixel P-CNEX boards):**
1. P-CNEXv01(17-002-116v01)
2. P-CNEXv02(17-002-116v02)

I) **P-CNEXv03 replacing P-CNEXv03 or P-CNEXv02**
a. Set the J23, and J25 slide jumpers to match the board being replaced
b. Set node configuration switches to match the board being replaced settings
c. Install the new P-CNEX
d. Verify controller operation

II) **P-CNEXv03 replacing P-CNEXv01**
a. Set the J23 (CAN Termination) slide jumper to match the board being replaced
b. Set node configuration switches to match the board being replaced settings
c. Set both of the J25 slide jumpers to the NC (right) position.
d. Install the new P-CNEX
e. Verify controller operation

5.6 P-HALL Board Replacement Instructions

17-002-114v05 P-HALLv05 Pixel Hall Board Assembly Version 5
Replaces (all previous versions of Pixel P-HALL boards):
1. P-HALLv01(17-002-114v01)
2. P-HALLv02(17-002-114v02)
3. P-HALLv03(17-002-114v03)
4. P-HALLv04(17-002-114v04)

I) **P-HALLv05 replacing P-HALLv05, P-HALLv04, P-HALLv03, P-HALLv02 or P-HALLv01**
a. Set the JP1 slide jumper to match the board being replaced
b. Set SW1 node configuration switches to match the board being replaced
c. Install the new P-HALL board

ⓘ **NOTE:** T1, terminal strip used for power and CAN communications wiring, and T2, terminal strip used for fixture interface wiring, terminal connections remain the same for all versions of the board.

🚫 **WARNING:** Reversal of T1 and T2 terminal connections may damage the board, for newer releases of the board T2 terminal strip has been changed to color black for ease of identification

d. Verify controller operation
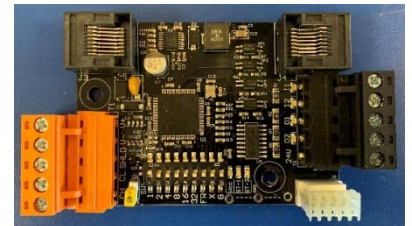
5.7 P-HNA Board Replacement Instructions

17-002-135v04 P-HNAv04 Pixel Hall Network Adapter Board Assembly Version 4
Replaces (all previous versions of Pixel P-HNA boards):
1. P-HNAv01(17-002-135v01)
2. P-HNAv02(17-002-135v02)
3. P-HNAv03(17-002-135v03)

I) **P-HNAv04 replacing P-HNAv04, P-HNAv03, P-HNAv02 or P-HNAv01**
a. Set the J7, J8 and JP1 slide jumpers to match the board being replaced settings
b. Set SW1 node configuration switches to match the board being replaced settings
c. Install the new P-HNAv04 in the controller cabinet
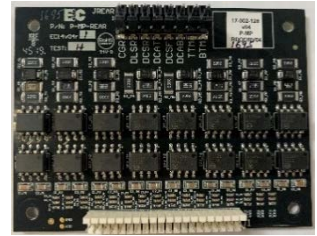d. Verify controller operation

5.8 P-MP-REAR Board Replacement Instructions

<u>17-002-128v04 P-MP-REARv04 Pixel Rear Door IO Expansion Board Assembly Version 4</u>
Replaces (all previous versions of Pixel P-MP-REAR boards):
1. P-MP-REARv02(17-002-128v02)
2. P-MP-REARv03(17-002-128v03)

I)   **P-MP-REARv04 replacing P-MP-REARv04, P-MP-REARv03 or P-MP-REARv02**
   a. Direct replacement no configuration settings required
   b. Verify controller operation

ⓘ   **NOTE:** P-MP-REARv01 (17-002-128v01), Prototype board, it was not released for production.

5.9 P-PDB Board Replacement Instructions

<u>17-002-129v03 P-PDBv03 Pixel Power Distribution Board Version 3</u>
Replaces (all previous versions of Pixel P-PDB boards):
1. P-PDBv01 (17-002-129v01)
2. P-PDBv02 (17-002-129v02)

ⓘ   **NOTE:** This board is configured on a per controller requirements design, instructions below are meant to guide ECC technical support to upgrade a job with current P-PDB version as needed.

I)   **P-PDBv03 replacing P-PDBv03 or P-PDBv02 (revisions r01 and r02)**
   a. Configure P-PDBv02r02 board per job engineering production information.
   b. Set the all slide jumpers to match the board being replaced settings
   c. Verify controller operation

ⓘ   **NOTE:** The differences between r02 and r01 are cosmetic per list below:
   i. Added Fuse Type and MFG Label to the fuses as required by CSA.
   ii. Released version r02 in Altium where version r01was in Eagle.
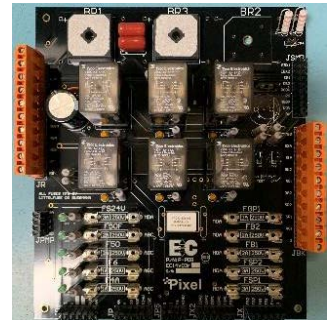
II)   **P-PDBv03 replacing P-PDBv01**
   a. Configure P-PDVv03 board per job engineering production information.
   b. Set JP4 slide jumper switch to 1&2 position (Right)
   c. Set EBRT slide jumper switch to OFF position (Right)
   d. Set JP1 & JP2 slide jumpers as the follows:
       i. If the P-PDBv01 has the JP1 & JP2 slide jumper switches set to the ON position, then set the P-PDBv02 slide jumpers JP1 & JP2 to 2&3 position (Up)
       ii. If the P-PDBv01 has the JP1 & JP2 slide jumper switches set to the OFF position, then set the P-PDBv02 slide jumpers JP1 & JP2 to 1&2 position (Down)
   e. Verify controller operation

III)   **P-PDBv03 replacing versions of P-PDBv00**
   a. Upgrading from P-PDBrev00 to P-PDBv03 requires evaluation on a per job basis

5.10 P-PDB-H Board Replacement Instructions

17-002-141v02 P-PDB-Hv02 Pixel Power Distribution Board Version 2(Hydraulic)
**Replaces (all previous versions of Pixel P-PDB-H boards):**
1. P-PDB-Hv01 (17-002-141v01)

I)   **P-PDB-Hv02 replacing P-PDB-Hv02**
   a. Configure P-PDB-Hv02 board per job engineering production information.
   b. Set the all slide jumpers to match the board being replaced settings
   c. Verify controller operation

II)   **P-PDB-Hv02 replacing P-PDB-Hv01**
   a. Configure P-PDB-Hv02 board per job engineering production information.
   b. Set the all slide jumpers to match the board being replaced settings
   c. Verify if the P-PDB-Hv01 has a resistor or jumper located at R6
        a. If there is a jumper or 0-ohm resister place JP7 in the 1 position (UP)
        b. If there is a 22K resistor place the JP7 in the 3 position (DOWN)
   d. Verify controller operation
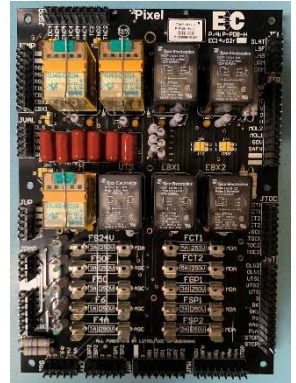
6   Appendix A: P-TOC File Backup/Restore

The P-TOC file backup system provides a backup storage capability for the current System Configuration and IO Mapping files in the P-TOC board to be able to retrieve these files in the event that the P-MP functionality no longer permits files retrieval. This is an additional feature to the current saving of the files to the USB drive.

The System Backup and System Restore windows can only be accessed through the File Transfer window on the P-MP. Below are the instructions for both the backup of files to the P-TOC and the restore of files from the P-TOC.

I)   Pixel Main Window

In the Main Window, a small bubble will flash right above the EC Logo whenever the files saved on the P-TOC board are out of sync with the current copy running in the Pixel System. If there are no faults or warnings being displayed the help pushbutton will indicate to the user which files are out of sync by the color of the flashing bubble.

    a.   Red = both files are out sync
    b.   White = only the IO Mapping file is out of sync
    c.   Yellow = only the Configuration file is out sync

ⓘ   **NOTE:** The P-TOC must contain software version 3.0.2.32 (or more recent) in order for the synching message to function correctly, if it does not the Main Window will always flash the small bubble. Keep in mind the bubble will not cause the Pixel Controller to fault or not function; it is only used as a reminder to the user to save a copy of the files to the P-TOC as a backup.

II)   Backup from P-MP to P-TOC: (Install→File Transfer→System Backup)

In this window select which files you would like to create a copy (backup) of in the P-TOC board. Press the Backup softkey pushbutton, and then wait for the process to complete. Text will appear indicating that the copy has passed or failed.

III) Restore from P-TOC to P-MP: (Install→File Transfer→System Restore)

In this window select which files you would like to restore to the P-MP from the copy saved in the P-TOC board. Press the Restore softkey pushbutton, and then wait for the process to complete. Text will appear indicating that the restore process has passed or failed.

ⓘ   **NOTE:** After this is completed, a Computer Reset will need to be performed in order for the new files to take into effect. This process is similar to when the user restores files from a USB. When the Pixel Controller powers back up, a Safety Configuration Transfer will also need to be executed.

7   Appendix B: USB File Backup/Restore

The USB file backup system provides a backup capability for the current System Configuration and IO Mapping files to a USB drive to be able to retrieve these files in the event that the P-MP functionality no longer permits files retrieval.

The System Configuration Backup/Restore and IO Mapping Backup/Restore windows can only be accessed through the File Transfer window on the P-MP. Below are the instructions for both the Backup of files to the USB drive and the Restore of files from the USB drive.

<u>System Configuration:</u>

I)   Backup from P-MP to USB Drive: (Install→File Transfer→System Configuration Backup)
In this window, a copy of the Pixel's current System Configuration file can be created on the USB drive. Press the Backup softkey pushbutton, and then wait for the process to complete. A "Pixel" folder will be created automatically, if it does not exist on the USB drive. If there is an existing System Configuration file (NewPixelConfig.dat) on the USB drive, text will appear indicating if you would like the file to be overwritten or not. At the end of the operation, text will appear indicating that the copy has passed, failed or has been aborted by the user.

ⓘ   **NOTE:** This window was previously named System Configuration Upload

II) Restore from USB Drive to P-MP: (Install→File Transfer→System Configuration Restore)
In this window, you can restore the System Configuration file to the P-MP from a previously saved copy in the USB drive. Press the Restore softkey pushbutton, and then wait for the process to complete. Text will appear indicating that the restore process has passed or failed.

ⓘ   **NOTE:** After this is completed, a Computer Reset will need to be performed in order for the new files to take into effect. When the Pixel Controller powers back up, a Safety Configuration Transfer will also need to be executed.

ⓘ   **NOTE:** This window was previously named System Configuration Download

<u>IO Mapping:</u>

I)   Backup from P-MP to USB Drive: (Install→File Transfer→IO Mapping Backup)
In this window, a copy of the Pixel's current IO Mapping file can be created on the USB drive. Press the Backup softkey pushbutton, and then wait for the process to complete. A "Pixel" folder will be created automatically, if it does not exist on the USB drive. If there is an existing IO Mapping file (LogicalPhysicalMap.dat) on the USB drive, text will appear indicating if you would like the file to be overwritten or not. At the end of the operation, text will appear indicating that the copy has passed, failed or has been aborted by the user.

ⓘ   **NOTE:** This window was previously named IO Mapping Upload

II) Restore from USB Drive to P-MP: (Install→File Transfer→IO Mapping Restore)
In this window, you can restore the IO Mapping file to the P-MP from a previously saved copy in the USB drive. Press the Restore softkey pushbutton, and then wait for the process to complete. Text will appear indicating that the restore process has passed or failed.

ⓘ   **NOTE:** After this is completed, a Computer Reset will need to be performed in order for the new files to take into effect.

ⓘ   **NOTE:** This window was previously named IO Mapping Download

8 Appendix C: Security Codes File Backup/Restore

The Security Codes file backup system provides a backup capability for the current Building Security Codes file to a USB drive to be able to retrieve these files in the event that the P-MP functionality no longer permits files retrieval.

The Security Backup/Restore windows can only be accessed through the File Transfer window on the P-MP. Below are the instructions for both the Backup of files to the USB drive and the Restore of files from the USB drive.

I) Backup from P-MP to USB Drive: (Install→File Transfer→Security Backup)

In this window, a copy of the Pixel's current Security Codes file can be created on the USB drive. Press the Backup softkey pushbutton, and then wait for the process to complete. A "Pixel" folder will be created automatically, if it does not exist on the USB drive. If there is an existing Security Codes file (Codes.txt) on the USB drive, text will appear indicating if you would like the file to be overwritten or not. At the end of the operation, text will appear indicating that the copy has passed, failed or has been aborted by the user.

ⓘ **NOTE:** This window was previously named Security Upload

II) Restore from USB Drive to P-MP: (Install→File Transfer→Security Restore)

In this window, you can restore the Security Codes file to the P-MP from a previously saved copy in the USB drive. Press the Restore softkey pushbutton, and then wait for the process to complete. Text will appear indicating that the restore process has passed or failed.

ⓘ **NOTE:** After this is completed, a Computer Reset will need to be performed in order for the new files to take into effect.

ⓘ **NOTE:** This window was previously named Security Download

9 Appendix D: Legacy Software Update to P-MPv01 Board

ⓘ **NOTE:** This Software Update method applies to P-MPv01 Boards running software version 3.0.3.71 and below.
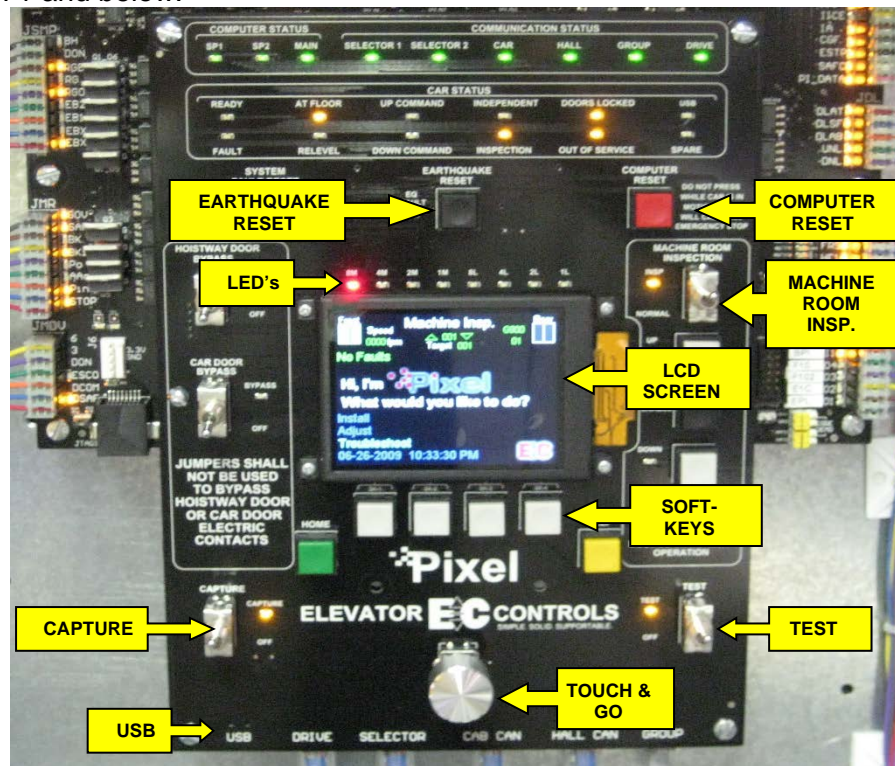

1. Place the controller on Capture operation (CAPTURE position).

2. Place the controller on Test operation (TEST position), after the elevator has finished transporting passengers. (Test operation disables door operation)

3. Place the controller on Machine Room Inspection (INSP position).

4. Locate the Earthquake Reset, Touch & Go Selection Knob and Computer Reset buttons on the P-MP board. Reference the picture above for device locations on the P-MP board.

5. Press and hold down the Earthquake and Touch & Go buttons simultaneously. While holding down the Earthquake and Touch & Go buttons, press the Computer Reset button momentarily.

6. Continue to hold down the Earthquake and Touch & Go buttons until the LED's above the LCD screen scroll from the left and right sides towards the center. This takes approximately 25-30 seconds.

7. Release the Earthquake and Touch & Go buttons once the LED's are scrolling in an inward motion.

8. Insert the USB Flash drive (with the Pixel folder) into the P-MP board USB port.

9. Press and hold all four soft-key buttons simultaneously, then release when the LED's above the LCD screen stop scrolling (freeze). This indicates that the MP software is being uploaded. The MP software upload takes approximately 20 seconds to complete.

LED's will stop scrolling (freeze). The position in which the LED's freeze will not always be the same.

10. When the LED's above the LCD screen begin to scroll from the left and right sides towards the center, this indicates the MP software uploaded has completed.

ⓘ **NOTE:** Do not cycle power during the software upgrade process. In the event of a power cycle, restart process from the Step #1 above.

11. Press and hold down the Touch & Go knob, and momentarily press the Computer Reset button.

   (i)   **NOTE:** During this process keep the USB inserted. If it is removed the process will not complete correctly and you will have to restart from Step #1 above.

12. Continue to hold down the Touch & Go knob for about 10-15 seconds. The LCD display will continue to display whatever was last shown.

13. Release the Touch & Go button. The P-MP board will reboot and begin to load the new P-MPv01 board base software. The load time is approximately 2½-3 minutes.

   (i)   **NOTE:** During this process all LED(s) will stop scrolling, and the board may look like it is in a "Frozen" state. Please allow the expected time for the new base software to load and do not Power Down or Reset the controller during this process.

   (i)   **NOTE:** After the new base software is loaded, the program will automatically start, and the LCD display will go back to Home screen.

14. Using the Touch & Go knob, select the Install menu and then select About. Verify the MP Software Version has been updated to the version in the Pixel folder (Section 1) on the USB Flash drive. If the software version uploaded is unknown, it can be verified by opening the version.txt file in the Pixel folder.

10 Appendix E: P-MP Firmware Loader Legacy

ⓘ **NOTE:** This Software Update method applies to P-MPv02, P-MPv03, and P-MPv04 boards that have the any Legacy P-MP Firmware Loader installed prior to v1.1.16.17.
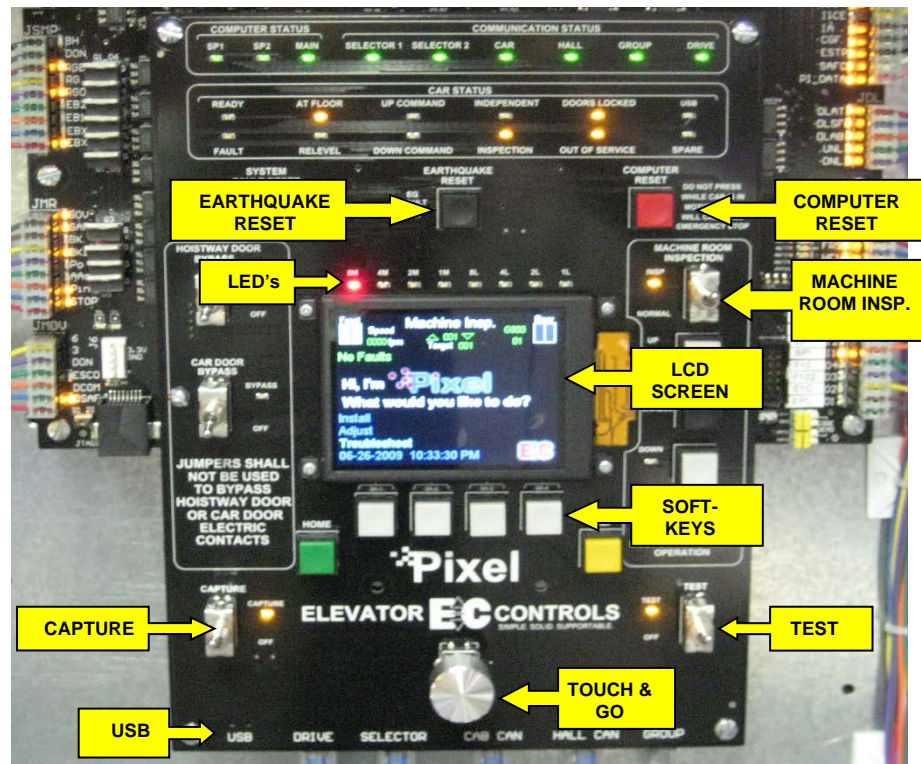
1. Place the controller on Capture operation (CAPTURE position).

2. Place the controller on Test operation (TEST position), after elevator has finished transporting passengers. (Test operation disables door operation)

3. Place controller on Machine Room Inspection (INSP position).

4. Locate Earthquake Reset, Touch & Go Selection Knob, and Computer Reset buttons on the P-MP board. Reference picture above for device locations on the P-MP board.

5. Press and hold Earthquake Reset and Touch & Go buttons simultaneously. While pressing Earthquake Reset and Touch & Go buttons, momentary press Computer Reset button.
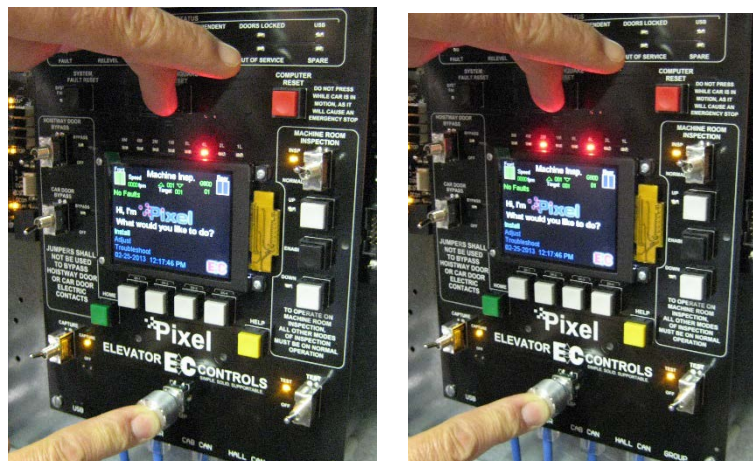
6. Continue to hold down Earthquake Reset and Touch & Go buttons until LED's above LCD screen scroll from left and right sides towards the center. This can take approximately 25-30 seconds.

7. Release Earthquake Reset and Touch & Go buttons once LED's are scrolling in an inward motion.
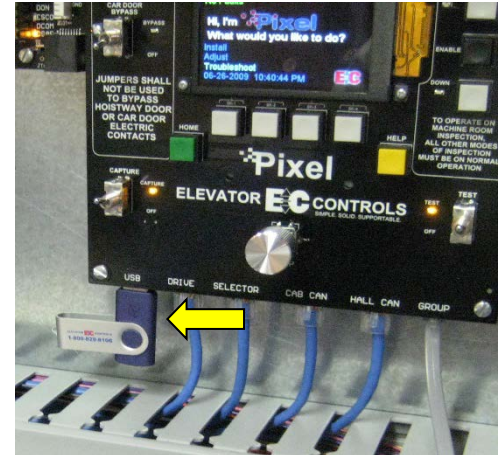
8. Insert USB Flash drive (with the Pixel folder) into the P-MP board USB port.

9. Press and hold all four soft-key buttons simultaneously, then release when LEDs above LCD screen stop scrolling (freeze). This indicates the MP software is being updated. The MP software update takes approximately 2 to 5 minutes to complete.

LED's will stop scrolling (freeze). The position in which the LED's freeze will not always be the same.
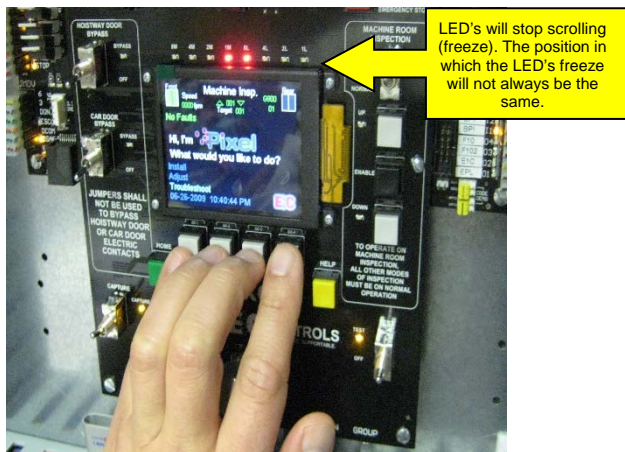
10. When LEDs above the LCD screen begin to scroll from the left and right sides towards the center, MP software update has completed.

ⓘ **NOTE:** Do not cycle power during the software upgrade process. In the event of a power cycle, restart process from the Step #1 above.

11. Press and hold the Touch & Go knob, and momentarily press Computer Reset button.

12. Continue to hold down the Touch & Go knob for about 10-15 seconds or until "System Initializing" is displayed.
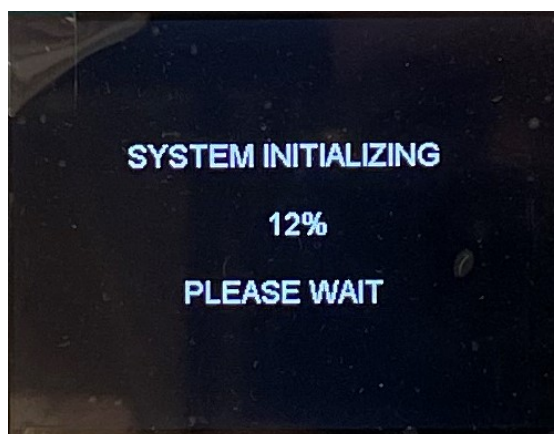
13. Using Touch & Go knob, select Install menu and then About. Verify MP Software Version number displayed matches version number in Pixel folder (Section 1) on the USB Flash drive. If software version uploaded is unknown, it can be verified by opening version.txt file in the Pixel folder (Section 1).
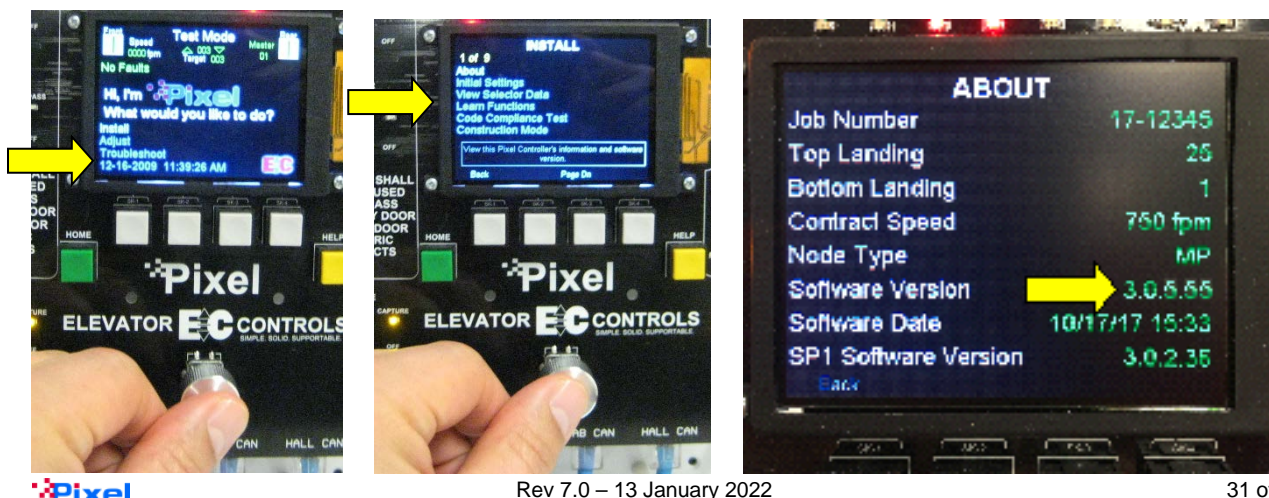
11 Appendix F: P-MPv01 Downgrade

P-MPv01 boards that have installed software V3.0.3.71 or newer at any point will require user intervention to downgrade software to any release prior to V3.0.3.71. The following section outlines how a P-MPv01 can be updated/downgraded.

1. Open Pixel release folder from USB on a PC. Pixel folder should contain the Following

Name	Date modified	Type	Size
BootloaderV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
BootloaderV2.hex	10/6/2020 11:16 AM	HEX File	619 KB
cnexversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hallversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hnaversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
PixelCNEXUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCNEXUser.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelCOP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOP4357User.hex	10/6/2020 11:16 AM	HEX File	3,564 KB
PixelCOPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOPUser.hex	10/6/2020 11:16 AM	HEX File	3,965 KB
PixelGroupHNA.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelGroupHNA.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelHallUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelHallUser.hex	10/6/2020 11:16 AM	HEX File	541 KB
PixelIMP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMP4357User.hex	10/6/2020 11:16 AM	HEX File	7,026 KB
PixelIMPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMPUser.hex	10/6/2020 11:16 AM	HEX File	787 KB
PixelIMPUserV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMPUserV2.hex	10/6/2020 11:16 AM	HEX File	5,558 KB
PixelISP1User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelISP1User.hex	10/6/2020 11:16 AM	HEX File	340 KB
PixelTOC4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOC4357User.hex	10/6/2020 11:16 AM	HEX File	3,557 KB
PixelTOCUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOCUser.hex	10/6/2020 11:16 AM	HEX File	3,646 KB
SP2.vme	10/6/2020 11:16 AM	VME File	561 KB
sp2version.txt	10/6/2020 11:16 AM	TXT File	1 KB
version.txt	10/6/2020 11:16 AM	TXT File	1 KB

Figure 1: Default Pixel Folder

2. Next, delete PixelMPUser.hex and PixelMPUser.crc. These files are shown highlighted below.

Name	Date modified	Type	Size
BootloaderV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
BootloaderV2.hex	10/6/2020 11:16 AM	HEX File	619 KB
cnexversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hallversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hnaversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
PixelCNEXUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCNEXUser.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelCOP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOP4357User.hex	10/6/2020 11:16 AM	HEX File	3,564 KB
PixelCOPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOPUser.hex	10/6/2020 11:16 AM	HEX File	3,965 KB
PixelGroupHNA.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelGroupHNA.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelHallUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelHallUser.hex	10/6/2020 11:16 AM	HEX File	541 KB
PixelIMP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMP4357User.hex	10/6/2020 11:16 AM	HEX File	7,026 KB
PixelIMPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMPUser.hex	10/6/2020 11:16 AM	HEX File	787 KB
PixelIMPUserV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelIMPUserV2.hex	10/6/2020 11:16 AM	HEX File	5,558 KB
PixelISP1User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelISP1User.hex	10/6/2020 11:16 AM	HEX File	340 KB
PixelTOC4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOC4357User.hex	10/6/2020 11:16 AM	HEX File	3,557 KB
PixelTOCUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOCUser.hex	10/6/2020 11:16 AM	HEX File	3,646 KB
SP2.vme	10/6/2020 11:16 AM	VME File	561 KB
sp2version.txt	10/6/2020 11:16 AM	TXT File	1 KB
version.txt	10/6/2020 11:16 AM	TXT File	1 KB

3. Now find the files, PixelMPUserV2.hex and PixelMPUserV2.crc, as shown below.

Name	Date modified	Type	Size
BootloaderV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
BootloaderV2.hex	10/6/2020 11:16 AM	HEX File	619 KB
cnexversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hallversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hnaversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
PixelCNEXUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCNEXUser.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelCOP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOP4357User.hex	10/6/2020 11:16 AM	HEX File	3,564 KB
PixelCOPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOPUser.hex	10/6/2020 11:16 AM	HEX File	3,965 KB
PixelGroupHNA.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelGroupHNA.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelHallUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelHallUser.hex	10/6/2020 11:16 AM	HEX File	541 KB
PixelMP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelMP4357User.hex	10/6/2020 11:16 AM	HEX File	7,026 KB
PixelMPUserV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelMPUserV2.hex	10/6/2020 11:16 AM	HEX File	5,558 KB
PixelSP1User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelSP1User.hex	10/6/2020 11:16 AM	HEX File	340 KB
PixelTOC4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOC4357User.hex	10/6/2020 11:16 AM	HEX File	3,557 KB
PixelTOCUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOCUser.hex	10/6/2020 11:16 AM	HEX File	3,646 KB
SP2.vme	10/6/2020 11:16 AM	VME File	561 KB
sp2version.txt	10/6/2020 11:16 AM	TXT File	1 KB
version.txt	10/6/2020 11:16 AM	TXT File	1 KB

4. Rename the files to PixelMPUser.hex and PixelMPUser.crc

Name	Date modified	Type	Size
BootloaderV2.crc	10/6/2020 11:16 AM	CRC File	1 KB
BootloaderV2.hex	10/6/2020 11:16 AM	HEX File	619 KB
cnexversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hallversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
hnaversion.txt	10/6/2020 11:16 AM	TXT File	1 KB
PixelCNEXUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCNEXUser.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelCOP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOP4357User.hex	10/6/2020 11:16 AM	HEX File	3,564 KB
PixelCOPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelCOPUser.hex	10/6/2020 11:16 AM	HEX File	3,965 KB
PixelGroupHNA.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelGroupHNA.hex	10/6/2020 11:16 AM	HEX File	811 KB
PixelHallUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelHallUser.hex	10/6/2020 11:16 AM	HEX File	541 KB
PixelMP4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelMP4357User.hex	10/6/2020 11:16 AM	HEX File	7,026 KB
PixelMPUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelMPUser.hex	10/6/2020 11:16 AM	HEX File	5,558 KB
PixelSP1User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelSP1User.hex	10/6/2020 11:16 AM	HEX File	340 KB
PixelTOC4357User.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOC4357User.hex	10/6/2020 11:16 AM	HEX File	3,557 KB
PixelTOCUser.crc	10/6/2020 11:16 AM	CRC File	1 KB
PixelTOCUser.hex	10/6/2020 11:16 AM	HEX File	3,646 KB
SP2.vme	10/6/2020 11:16 AM	VME File	561 KB
sp2version.txt	10/6/2020 11:16 AM	TXT File	1 KB
version.txt	10/6/2020 11:16 AM	TXT File	1 KB

5. Now follow instructions in Appendix E for upgrading P-MP V1 software.