❖ When discussing the position of parts on the board, the top of the board is considered the side which has the Ethernet module or the space where one can be installed. Non-network boards will have a square with multiple small circles where the Ethernet module can be installed.

Instructions:

❖ Before starting have on hand the Programmer, a computer/laptop with the PICKit 2 software installed, the latest firmware file (from EMS), and a USB extension cable. The latest firmware currently is EMRI3024.hex, and was created on June 30th, 2017.

1. First disconnect the battery, power and communications from the board. All three of these are situated in the top right of the board.
2. Move the red jumpers on the top left of the board to positions J-10, J-9, and J-4 as shown in Figure 1:
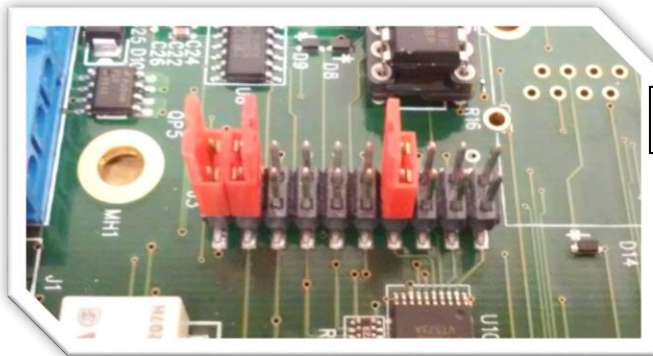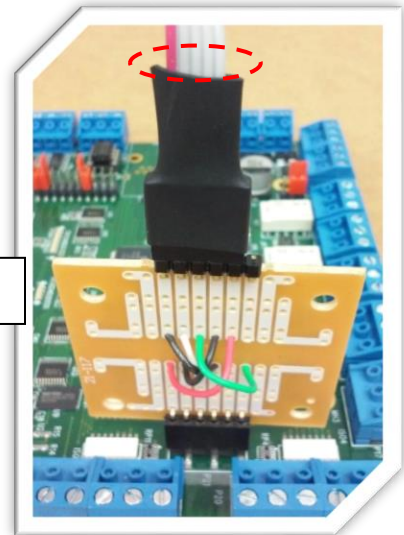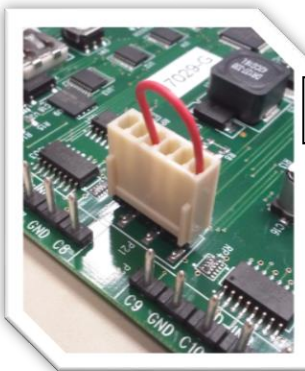

Figure 1

Figure 2

Figure 3

3. Remove the Jumper over the 6-pin programming connection (shown in Figure 3), and connect the Programmer to your computer/laptop via the USB cable.

4. Power the EMRI-3 board; none of the LEDs should light up. Now plug the programmer into the 6-pin connector at the bottom of the board, with the red wire on the programmer cable facing left as shown in Figure 2.

5. Start the PICKit 2 software. In the VDD PICKit 2 box in the middle-right, ensure that '/MCLR' is checked, as well as the box above labeled 'Check'. Continue selecting the 'Check' box until a notification that an "Unpowered source detected.". When done the box should look like Figure 4 (On next page).
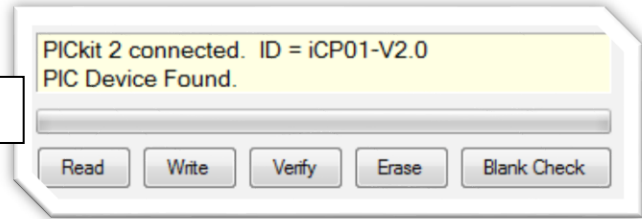
Figure 4

Figure 5

6. Using the buttons on the middle-left (Shown in Figure 5 above), Hit 'Erase' to clear the board. Then hit 'Blank Check' to ensure the board is erased; the program will display "Device is Blank" in a green text box.

7. Open 'File' from the top menu and select 'Import Hex' then navigate to where you put the latest firmware file.
8. Now hit 'Write' (Shown in Figure 5 above). The programmer will both 'Write' and 'Verify' the firmware. Once finished it will display "Programming Successful." In a green text box.

9. Disconnect the programmer from the board and then disconnect power. Wait about 10 seconds then reconnect power. Once the LEDs begin to 'crawl' or light up one by one down the board, then the update is finished.

10. Disconnect power to the board and return the jumpers to their previous configuration or as shown in Figure 6, and Reconnect the Jumper shown in Figure 3 on the previous page.

Figure 6

11. Reconnect the communications, power, and battery to the top right of the board. The bottom LED, #12, should begin blinking about once per second.
12. Soon after LED 12 should begin blinking more rapidly and the two LEDs above will flash about every 4 seconds. This indicates that the board is being polled by the system again.

❖ Only for EMRI-3 Systems - When finished updating the boards, log-in to the Entry Master System via web browser (Or have an administrator do so).
❖ Go to the 'Utilities Menu', then the 'Device Diagnostics Menu', and finally the 'EMS Technician Task Execution Menu'.
❖ Run the option titled 'Build Card Database'; when finished run the option titled 'Download Card Database to EMRI-3 Boards'. Use the Event Monitor to verify when the download is finished (Often takes several minutes).
❖ Finally go to the 'Report Utilities Menu', select 'Use New System Parameters' and hit 'Yes'.
❖ Your firmware update and re-initialization is now complete.