Upgrading the EPROM or PIC

PXL-250 Tiger Controller firmware upgrades are offered periodically, adding or improving features. Depending upon the type of upgrade, either the EPROM, the PIC, or both components may need to be replaced. As required, perform the following instructions to upgrade an EPROM or a PIC.

Upgrading the EPROM and/or the PIC
Before upgrading the EPROM and/or PIC, collect all events from the controller. Use the Collect Button found under the Operate/Start Monitor pull-down menu command in the *Doors™* program.

Refer to Figures 1 through 3 when using these instructions.

Removing the Satellite and Receiver boards.
1. Turn the controller's power off.
2. If an SB-293 Satellite board is attached to the controller, it must be removed.
   – Place a unique identification mark on each terminal block and then remove terminal blocks TB7, TB8, TB9, and TB10.
   – At all four corners of the Satellite board are standoffs attaching the Satellite board to the controller.
   – For each corner, place a finger under a corner and gently lift up until the Satellite board/standoff pulls away from the controller.
   – Lift the Satellite board away from the controller.
3. If you are upgrading the PIC, remove the controller's Receiver board.
   – Place a unique identification mark on the terminal block and then remove terminal block TB6.
   – At the upper right and lower left corners of the Receiver board are standoffs attaching the Receiver board to the controller.
   – For each corner, place a finger under a corner and gently lift up until the Receiver board/standoff pulls away from the controller.
   – Lift the Receiver board away from the controller.

Upgrading the EPROM
If you are not upgrading the EPROM, skip to the Upgrading the PIC section.
1. Using Figure 1 as a reference, locate the EPROM.
2. If you have an IC Puller, position the puller at the top and bottom of the EPROM. If not, from the top of the controller's PCB, carefully slide a thin blade screwdriver between the EPROM and the IC socket holding the EPROM (see Figure 2).
3. Gently pull the EPROM away from the IC socket. If you're using the screwdriver, stop and reposition the screwdriver blade farther under the EPROM as the EPROM pulls away from the IC socket. Continue until the EPROM can be lifted off the PCB with your fingers.
4. Set the old EPROM aside and pick up the new EPROM. Grasp the new EPROM by its body, try not to touch its pins – if your body has a static charge, it could be discharged through the EPROM, possibly damaging the EPROM.
5. Examine the EPROM and the IC socket. One end of the EPROM and one end of the IC socket has a notch in the center (see Figure 3). With the EPROM and IC socket notches pointing in the same direction, align the EPROM's pins with the IC socket on the PCB.
6. Gently press the EPROM into the socket.
7. Examine the fit between EPROM and IC socket. Each EPROM pin should be seated within its corresponding IC socket pin. **If any pin is not seated correctly, do not power on the system – the EPROM can be damaged.** Remove the EPROM as described above, straighten any pins that may be bent, and reinsert the EPROM.

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01844-001 Rev. B

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Application Note

PXL-250

Upgrading the PIC
If you are not upgrading the PIC, skip to the Reinstalling the Satellite and Receiver boards section.
1. Using Figure 1 as a reference, locate the PIC.
2. If you have an IC Puller, position the puller at the top and bottom of the PIC. If not, from the top of the controller's PCB, carefully slide a thin blade screwdriver between the PIC and the IC socket holding the PIC (see Figure 2).
3. Gently pull the PIC away from the IC socket. If you're using the screwdriver, stop and reposition the screwdriver blade farther under the PIC as the PIC pulls away from the IC socket. Continue until the PIC can be lifted off the PCB with your fingers.
4. Set the old PIC aside and pick up the new PIC. Grasp the new PIC by its body, try not to touch its pins – if your body has a static charge, it could be discharged through the PIC, possibly damaging the PIC.
5. Examine the PIC and the IC socket. One end of the PIC and one end of the IC socket has a notch in the center (see Figure 3). With the PIC and IC socket notches pointing in the same direction, align the PIC's pins with the IC socket on the PCB.
6. Gently press the PIC into the socket.
7. Examine the fit between PIC and IC socket. Each PIC pin should be seated within its corresponding IC socket pin. **If any pin is not seated correctly, do not power on the system – the PIC can be damaged.** Remove the PIC as described above, straighten any pins that may be bent, and reinsert the PIC.

Reinstalling the Satellite and Receiver boards.
If this step is not necessary, skip to the Resetting Controller RAM section.
1. To reinstall the SB-293 Satellite board:
    – Align the Satellite board's four standoffs with their seating holes on the controller board.
    – Align the two sets of header pins in the PXL-250 controller board with the two sets of header connectors on the SB-293 Satellite board.
    – Gently press each standoff into the controller board.
    – Identify and install terminal blocks TB7, TB8, TB9, and TB10.
2. To reinstall the Receiver board:
    – Align the Receiver board's two standoffs with their seating holes on the controller board.
    – Align the two sets of header pins in the PXL-250 controller board with the two sets of header connectors on the Receiver board.
    – Gently press each standoff into the controller board.
    – Install terminal block TB6.

Resetting Controller RAM.
1. To ensure proper operation of the new EPROM and PIC, the controller's RAM must be reset. Please note that resetting the controller's RAM will cause the controller to erase any configuration information on the controller, but this information can be restored.
2. Insert a jumper across pins 1 and 2 of JP3 (see Figure 1).
3. Hold the S1 Address and Diagnostics Button down and turn the controller's power on.
4. The beeper for the reader attached to the controller will beep as power comes on followed by a beep-beep indicating the controller's firmware has reset the controller's RAM.
5. Release S1. If the optional Alpha/Numeric Plug-in Display has been installed, it will display a "SYSTEM RESET" message.
6. Turn the controller's power off, remove the jumper on JP3, and wait 5 seconds. Turn the controller back on and it is now ready for use.
7. To restore the controller's configuration information, perform the controller update command from the Doors™ program.

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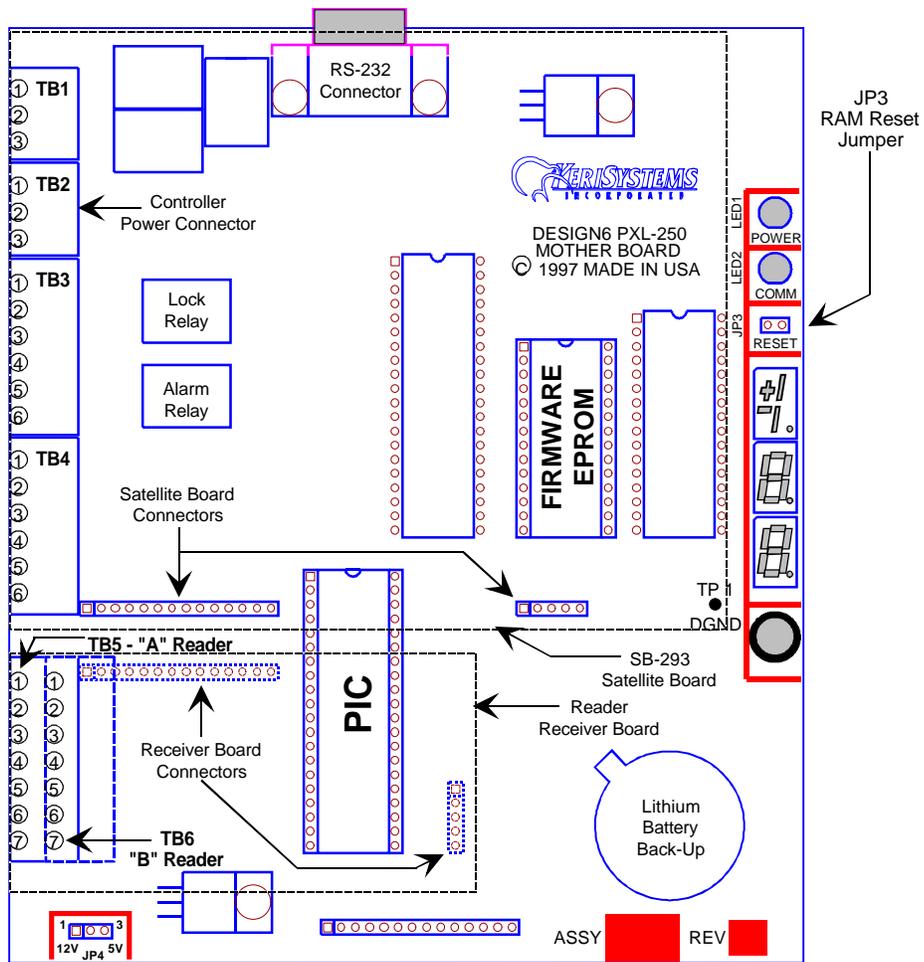
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Upgrading the EPROM or PIC

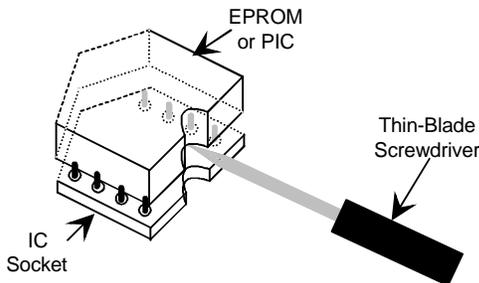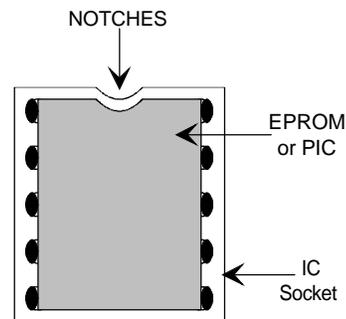Figure 1 – Location of Critical Components for EPROM or PIC Installations

Figure 2 – EPROM/PIC Removal

Figure 3 – EPROM/PIC Alignment