Upgrading the EPROM or PIC

PXL-250 Tiger Controller firmware upgrades are offered periodically, adding or improving features. Before upgrading the EPROM and PIC, you should collect all events from the controller.

If you do not collect events, they will be lost when the EPROM and PIC are changed. Use the 

button found under the Operate > Start Monitor pull-down menu command in the *Doors32*™ program.

NOTE: When working with Controller and Satellite boards, and with EPROMs and PICs, it is very important that you protect these boards and components from static electricity. Static electricity can damage these components. You can drain any static electric charge you may be carrying by touching an earth ground source before working with these components, or by wearing a ground strap.

NOTE: Please note that there are two types of PXL-250 controller boards: surface mount and through-hole.

- The surface mount board assembly number is found near the center of the board – ASSY 04193-xxx (see Figure page 5).
- The through-hole board assembly number is found at the lower right corner of the board – ASSY 04174-xxx (see Figure page 6).

As required, perform the following instructions according to the type of controller board you have to upgrade an EPROM or a PIC.

To upgrade a surface mount controller you must:

- verify the controller's power is OFF
- remove the satellite board (if a satellite board is attached) - see Section 1.0 on page 2
- upgrade the PROM - see Section 3.0 on page 2
- upgrade the PIC - see Section 4.0 on page 3
- reinstall the satellite board if necessary - see Section 5.0 on page 4
- power up/reset the controller - see Section 7.0 on page 4

To upgrade a through hole controller you must:

- verify the controller's power is OFF
- remove the satellite board (if a satellite board is attached) - see Section 1.0 on page 2
- remove the receiver board - see Section 2.0 on page 2
- upgrade the PROM - see Section 3.0 on page 2
- upgrade the PIC - see Section 4.0 on page 3
- reinstall the satellite board if necessary - see Section 5.0 on page 4
- reinstall the PIC - see Section 6.0 on page 4
- power up/reset the controller - see Section 7.0 on page 4

KERISYSTEMS INCORPORATED
1530 Old Oakland Road, Suite 100
San Jose, CA 95112 USA
(800) 260-5265 (408) 451-2520 FAX (408) 441-0309
Web: http://www.kerisys.com E-mail: sales@kerisys.com

Upgrading the EPROM or PIC

1.0 Removing the Satellite Board

If your controller has a Satellite board attached, the Satellite board must be removed.

1. Verify the controller's power is off.
2. Place a unique identification mark on terminal blocks TB7, TB8, TB9, and TB10 and then remove these terminal blocks from the Satellite board.
3. At all four corners of the Satellite board are standoffs attaching the Satellite board to the controller.
4. For each corner, place a finger under a corner and gently lift up until the Satellite board/standoff pulls away from the controller.
5. Once all four corners of the board have been loosened, lift the Satellite board away from the controller and set it aside.

2.0 Removing the Receiver Board

If your controller has a Receiver board (through-hole controllers only), the Receiver board must be removed.

1. Verify the controller's power is off.
2. Place a unique identification mark on TB6 and then remove TB6 from the Receiver board.
3. At the upper-right and lower-left corners of the Receiver board are standoffs attaching the Receiver board to the controller.
4. For these two corners, place a finger under a corner and gently lift up until the Receiver board/ standoff pulls away from the controller.
5. Once the two corners of the board have been loosened, lift the Receiver board away from the controller and set it aside.

3.0 Upgrading the EPROM

1. Locate the EPROM.
   - For a surface mount controller, use Figure 1 on page 5 as a reference.
   - For a through-hole controller, use Figure 2 on page 6 as a reference.
2. If you have an IC Puller, position the puller on 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 4 on page 6).
3. Gently pull/pry 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 4 on page 6). 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.

Note: ***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.*

4.0 Upgrading the PIC

NOTE: The PIC is found on the PXL-250 Controller not the SB-293 Satellite Board.

1. Locate the PIC.
   - For a surface mount controller, use Figure 1 on page 5 as a reference.
   - For a through-hole controller, use Figure 2 on page 6 as a reference.
2. If you have an IC Puller, position the puller on 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 4 on page 6).
3. Gently pull/pry 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 4 on page 6). 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.

Note: ***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.

KERISYSTEMS INCORPORATED
1530 Old Oakland Road, Suite 100
San Jose, CA 95112 USA
(800) 260-5265 (408) 451-2520 FAX (408) 441-0309
Web: http://www.kerisys.com E-mail: sales@kerisys.com

Upgrading the EPROM or PIC

5.0 Reinstalling the Satellite Board

1. Align the Satellite board's four standoffs with their seating holes on the controller board.
2. Align the two sets of header pins in the PXL-250 controller board with the two sets of header connectors on the Satellite board.
3. Gently press each standoff into the controller board.
4. Identify and install terminal blocks TB7, TB8, TB9, and TB10.

6.0 Reinstalling the Receiver Board

1. Align the Receiver board's two standoffs with their seating holes on the controller board.
2. Align the two sets of header pins in the PXL-250 controller board with the two sets of header connectors on the Receiver board.
3. Gently press each standoff into the controller board.
4. Identify and install terminal block TB6.

7.0 Power-up and Reset the Controller

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 by using the Update Controller command in the *Doors32* program.

- For a surface mount controller, use Figure 1 on page 5 as a reference.
- For a through-hole controller, use Figure 2 on page 6 as a reference.

1. Insert a jumper across pins 1 and 2 of JP3.
2. Hold the S1 Address and Diagnostics Button down and turn the controller's power on.
3. When the controller's firmware has reset the controller's RAM, the beeper for the reader attached to the controller beeps followed by a beep-beep, and the controller displays its address. Depending upon the controller firmware revision, this may take 2 to 3 seconds.
4. Release S1. If the optional Alpha/Numeric Plug-in Display has been installed, it will display a "SYSTEM RESET" message.
5. 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.
6. To restore the controller's configuration information, perform the following *Doors32* commands.
   - Auto-Config: Click on the **Auto-Config** button found in the Setup > System > Controllers menu option.
   - Set Controller Date and Time: Click on the **Set Time** button found in the Setup > System > Controllers menu option.
   - Update Controller: Click on the Operate > Doors menu option, click on the **Select All** button, and then click on the **Update Doors** button.

Upgrading the EPROM or PIC

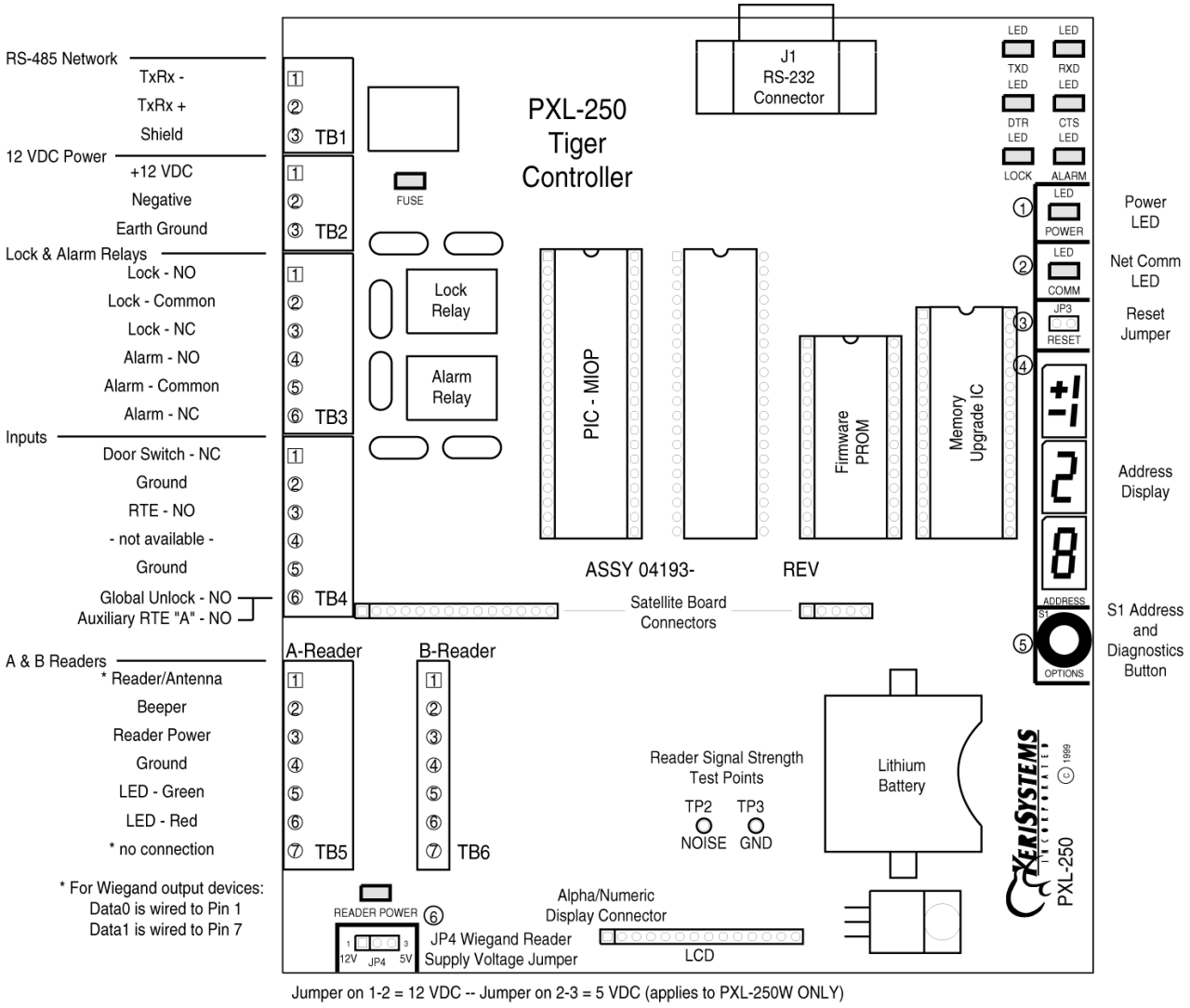

Figure 1: Surface Mount PXL-250 Controller

Upgrading the EPROM or PIC

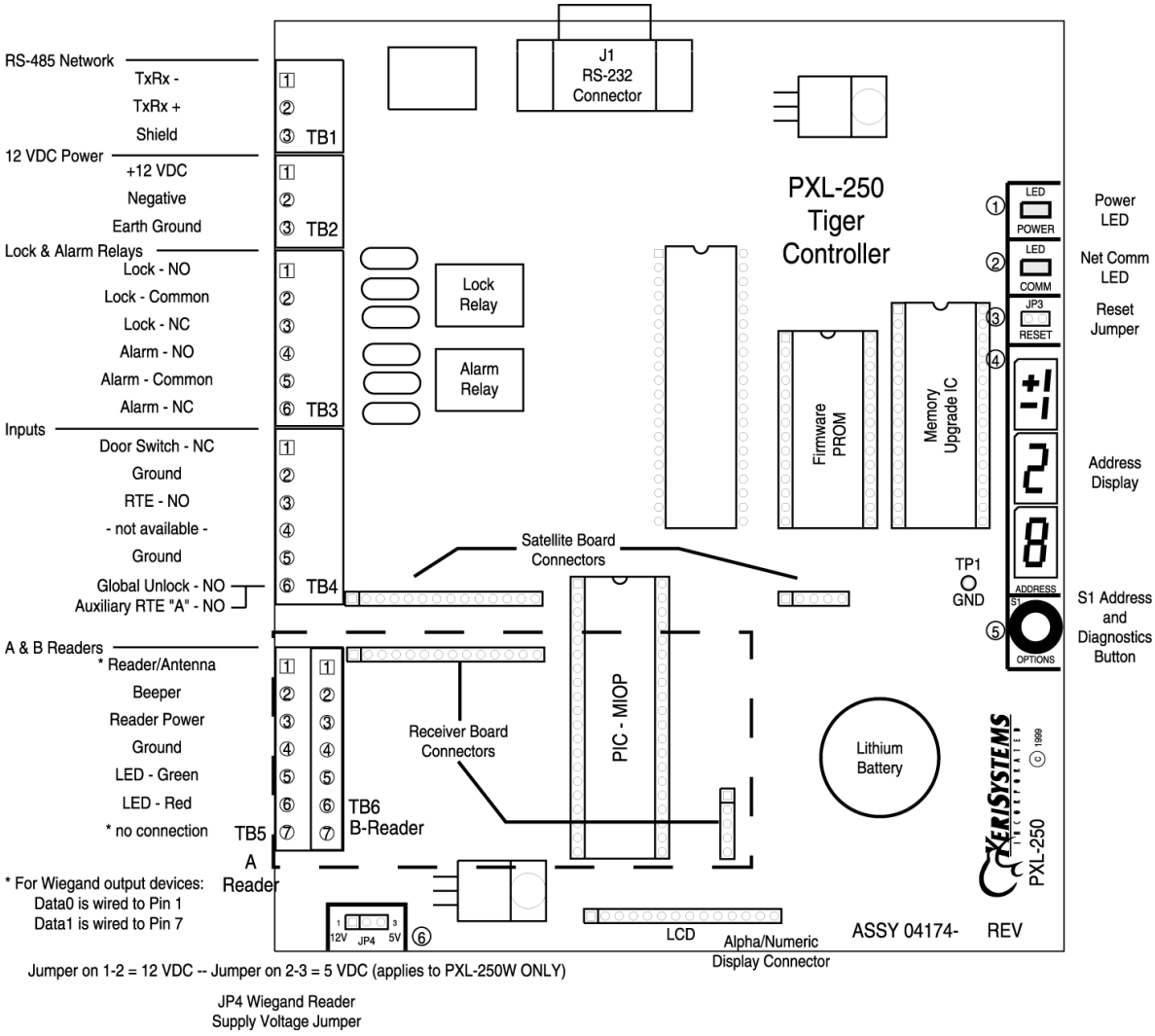

Figure 2: Through-Hole PXL-250 Controller

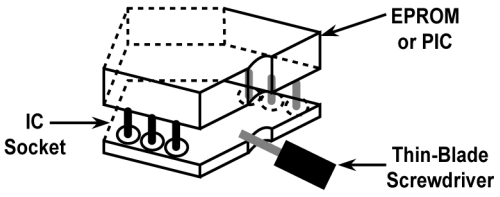

Figure 3: EPROM/PIC Removal

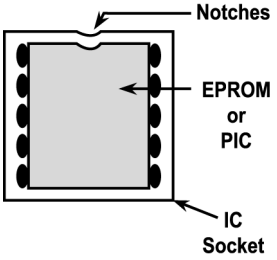

Figure 4: EPROM/PIC Alignment