1.0 The Purpose of this Document

Doors32 software can be used for basic elevator control. For small elevator applications it can be a very cost-effective elevator control solution. However, the following caveats apply when using Doors32 software for elevator control.

- No more than 16 floors can be controlled (up to eight PXL-250 Controllers, each with an SB-293 Satellite Board - each controller/satellite combination controls two floors).

- One reader in the elevator car controls access for all floors. This reader is attached to all antenna inputs at all controllers assigned to a floor. This wiring scheme results in the one reader being responsible for access requests for all floors.

- The reader's read range is reduced, possibly up to 25%, due to the reader signal being shared between multiple antenna inputs.

- The reader's LED and beeper must not be wired. A rider in the elevator car may be allowed access to some floors, but not all floors, and the single reader (driven by multiple controllers) is unable to differentiate between controllers that are granting access to a floor and controllers that are not granting access to a floor.

- User card presentation to the reader is critical. To ensure that all controllers have the opportunity to respond to a card read, the card must be presented to the reader for a greater period of time (perhaps up to 2 seconds). This allows all antenna inputs on all controllers the time necessary to respond to the card.

For elevator control, the following hardware and software requirements must be met.

- The master PXL-250 controller must be at firmware revision 6.3.42 or greater (for best operation, all controllers on the network should be at this firmware revision or greater).

- The PIC on all elevator controllers must be at revision 1.08 or greater (for best operation, all controllers on the network should be at this PIC revision or greater).

- The Doors32 software must be at revision 3.42 or greater.

- All satellite boards must be configured for two door control (JP-12 OFF).

NOTE: This document is written to support existing PXL-250 Tiger Controller panels in elevator control applications and does not cover using the LC-202 and LC-208 Elevator Control Panels. The LC-202 and LC-208 Elevator Control Panels are covered in their own document: LC-202/LC-208 Elevator Control Panel Quick Start Guide (P/N 01879-001).
2.0  Wiring an Elevator Control System

For elevator control there are four reader to PXL-250 controller wiring connections that must be made. Figure 1 provides a wiring diagram of an elevator control system.

1. The reader antenna line must be daisy-chained to all controller antenna inputs (Pin 1 of TB-5 or TB-6 on the controllers).

2. The reader ground line must be daisy-chained to all controller antenna grounds to provide a standard ground reference for all controllers (Pin 4 of TB-5 or TB-6 on the controllers).

3. The reader shield line must be connected to the A-door controller antenna ground at the master controller (Pin 4 of TB-5 on the master controller).

4. The power line must be connected to the master controller only (Pin 3 of TB-5 on the master controller).
Figure 1 - Reader/PXL-250 Wiring Diagram