OPERATION SUMMARY
Weiland Automated Lift Slide

The following describes the operation process for the Weiland Automated Lift Slide. This summary is subject to change as new technologies and ideas become available during the prototyping stage.

OPENING THE DOORS

1. The door opening sequence starts when a person activates a wireless remote control or a keypad built into the wall. This action sends a signal to the system controller built into the lead door. Once the system controller receives the signal, it then sends out wireless commands to receivers located in the other doors to raise.
2. Receivers in the doors transmit commands to the motor controllers. The motor controllers then engage the motors/gearboxes that ultimately lift the doors. Once the doors are lifted, the transmitter sends a wireless signal back to the system controller that the lifting operation is complete.
3. Once the system controller receives the signals that all the doors are in their lifted position, it then engages the motors to start opening the system. The primary door motor controller then activates the drive motor and starts sliding open the door panels. At the same time, sensors on the primary door scan to make sure there are not any foreign objects in the door's path. If something is in the path of the door, (i.e. a person or animal) the drive motor will stop and then reverse the motion of the door for inches. The system remains idle until someone activates the wireless remote control or the keypad.
4. When the last door is completely open, sensors in the primary door report to the system controller that the open operation is complete. The system controller then shuts off the drive motor and the system remains idle in the open position.

CLOSING THE DOORS

5. The door closing sequence starts when a person activates a wireless remote control or a keypad built into the wall. This action sends a signal to the system controller and starts moving the panels into the closed position. During this time inferred beams scan for any obstruction. Once all the panels are closed it then transmit to all the doors to lower. Once lowered the transmitters in each door send a signal back to the system controller confirming the position of each door.
6. Once the system controller receives the signals that all the doors are in their lowered position, shuts down and awaits a signal to start again.

CHARGING THE BATTERIES

When the system is in the closed idle position, the system charges the batteries that are located in the door panels. The batteries power the motor controllers, motors, sensors, and transmitters/receivers located in the door panels. The charger is mounted

in the wall next to the doors. When the doors are closed, contacts mounted in the doorjamb connect to contacts on the primary door. Another set of contacts on the opposite side of the primary door mate with contacts on the second door. This contact-to-contact circuit continues through the remaining doors. The current that charges the batteries travels through these contacts and wires that are hidden inside the doors.