Larco
An Acrometal Company

Vestibule Sequencer

Installation and Programming Instructions

The Larco vestibule sequencer provides a method for operating two (or more) automatic doors from a single transmitter with a user-defined, delayed opening signal to the second door via a second sequencer unit. The delay of the second door's opening helps minimize heating and cooling loss by allowing the first door to close, or begin to close, before the second door opens.

NOTE: Read this manual in its entirety before installing any Larco transmitter or receiver. It is important to complete the programming procedure on the next page before installing the vestibule sequencer in its final location. The installer must have access to the vestibule sequencer's programming button and must be able to view the vestibule sequencer's LED (Light Emitting Diode) during the programming process.

CAUTION: As you complete these programming and installation procedures, your door may open or close if power is applied. Also, you must be appropriately qualified for the installation task and familiar with the requirements for your installation as well as any local codes or ordinances before attempting to install automatic door control devices.

Installation

Follow the installation instructions below for each vestibule sequencer in your installation. Each door control will require a separate vestibule sequencer unit.

1. Mount the vestibule sequencer(s) in a location so that the antenna is not surrounded by metal. Metal attenuates RF signals causing a reduction in range and inconsistency of signal reception. Door operator motors and controls may also cause RF interference. Locate the vestibule sequencer away from the door control's motor(s) and power supply(s). If the vestibule sequencer is mounted in a metal enclosure, drill a hole in the enclosure and thread as much of the antenna as possible through the hole. This reduces the effects the metal enclosure will have on the vestibule sequencer's reception.

2. The vestibule sequencer comes equipped with a wiring harness for easy installation. Follow the color-coding diagram at right. The vestibule sequencer must be connected to the power source before programming, but it is not necessary to connect the relay output wires at this time. You may want to connect these wires as your last step as a safety precaution to keep the doors from operating during the installation. You may remove the power source after the programming procedure as a safety precaution. The vestibule sequencer is designed to retain its programming even after power has been removed.

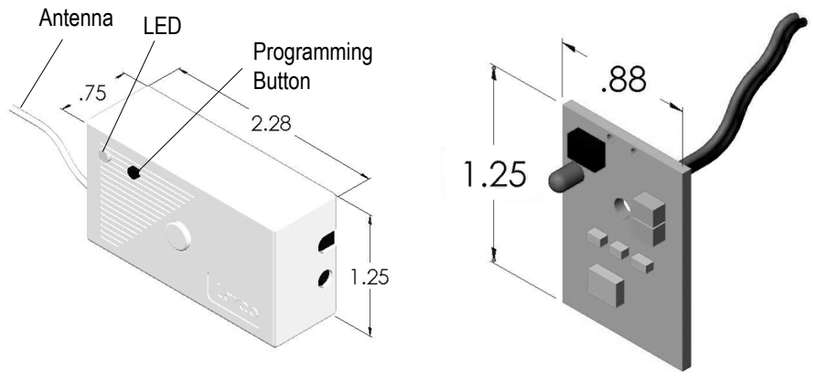

Diagram 1: Receiver (left) and Transmitter (right) Dimensional Diagrams

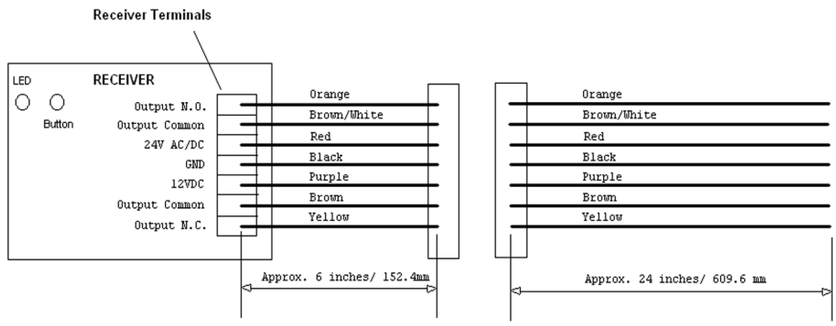

Diagram 2: Receiver Wiring Harness.

Orange Wire: Normally Open Relay Output
Brown wire with White Stripe: Normally Open Relay Output Common Connection
Red Wire: 24VAC/24VDC Power
Black Wire: Ground
Purple Wire: 12 VDC Power (CAUTION: DO NOT connect 12 VAC Power)
Brown Wire: Normally Closed Relay Output Common Connection
Yellow Wire: Normally Closed Relay Output

The receiver and transmitter comply with FCC part 15/15.231-2001, Industry Canada RSS-210-2003, EN55022A-2000, EN55024-2001, EN300-220-3 V1.1.1-2000, and EN301-489-1 V1.2.1-2000. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any inerference received, including interference that may cause undesired operation. This product may be susceptible to local transmissions being generated near the transmitter's fundamental frequency. Testing has shown some susceptibility in a frequency range of 416-440 MHz.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures: (a) Reorient or relocate the receiving antenna. (b) Increase the separation between the equipment and receiver. (c) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected (d) Consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that any internal modifications, either replacement of or modification of any component, of the transmitter or receiver could violate the rules of compliance and authority to operate the equipment.

Ultra-Small Model #: 233804
Tested to Comply with FCC standards
FOR HOME OR OFFICE USE

Larco
An Acrometal Company

Vestibule Sequencer

Installation and Programming Instructions, Continued

Programming Procedures

Follow the the appropriate set of instructions below to program each vestibule sequencer in your installation. NOTE: The vestibule sequencer's single programming LED changes color (green or red) and either glows steadily or flashes to indicate various programming operations. Before you begin the programming procedure, check to see that the receiver's LED glows red, indicating that power is connected.

Step 1: Teach the vestibule sequencers to recognize the transmitter.
Repeat these steps for each vestibule sequencer and transmitter pair.

1A. Press the programming button on the vestibule sequencer for less than 2 seconds and release. Note that the LED changes from red to solid green, indicating that it is ready to learn the transmitter signal.

1B. Press and release the transmitter and confirm that the vestibule sequencer's LED changes from green to red, indicating that it is learning the signal from the transmitter.

1C. After at least 3 seconds, press and release the transmitter again and confirm that the vestibule sequencer's LED begins to flash green several times, indicating that it is ending the learning procedure. When complete, the LED will change back to steady red.

Step 2: Teach the vestibule sequencer how long to wait before signaling the door to open.
Repeat these steps for each vestibule sequencer and transmitter pair requiring a timed delay before activating a door's operation. NOTE: In a typical two-door application there will be no time delay in the signal to open the first door.

2A. Press the programming button on the vestibule sequencer connected to the second door for 4 seconds and release. Confirm that the LED glows steadily red, indicating that it is ready to learn the time delay.

2B. Press and release the transmitter and confirm that the vestibule sequencer's LED changes to steady green, indicating that it is waiting for a second signal after the desired amount of time has elapsed.

2C. When the desired amount of time has elapsed (up to 4 hours), press the transmitter again and confirm that the LED flashes green several times, indicating that it is ending the learning procedure. When the procedure is complete the LED should change back to steady red.

2D. In a two-way traffic application, there would typically be two transmitters (wall switches), one for egress and one for ingress. The Larco vestibule sequencer receiver will recognize when to delay the opening depending on the unique signal from the individual transmitters. In this application, repeat step 2 in the opposite traffic direction.

Step 3: Test the system to confirm the operation.

3A. Press the transmitter and walk-test your installation to confirm that the time delay you programmed is appropriate for the application. The first door should begin its opening and closing sequence immediately upon activation of the transmitter and the second door should begin its sequence after the chosen time delay.

3B. If you need to change the time delay, simply repeat the instructions in step 2.

Deleting all transmitters from the receiver's memory
You can clear the receiver of all previously learned transmitters. Press the receiver's programming button for more than 8 seconds until the receiver's LED starts blinking green. Release the programming button. The LED should now be solid red. The receiver's memory is now cleared. To learn new transmitters, follow the steps for programming transmitters into the receiver's memory.