

**FEATURES**

- **(ELECTRIC ONLY)** Supervised system monitors 2-wire safety edge.
- Supervised system monitors infrared transmission path between receiver and transmitter, power to receiver, power to transmitter and integrity and operation of safety edge.
- Receiver: Draws power from the operator.
- Transmitter: Low current battery powered device designed for 1 year minimum battery life.  
Low battery / audible notification.
- Dead battery / visible and audible notification  
Multiple encoded channel selections for adjacent door installations.  
20' minimum operation distance from receiver to transmitter devices on standard device. Contact parts and service for extended range availability.
- **(ELECTRIC ONLY)** Cut to length supervised safety edge.

**SUPERVISION**

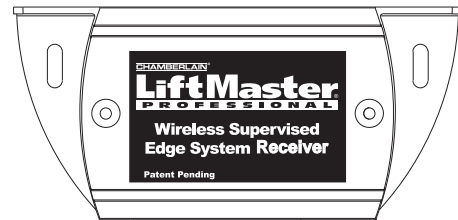
- **(ELECTRIC ONLY)** Transmitter: Monitors safety edge trigger (short), dead short and normally open embedded safety edge. Supervisory signal sent at constant intervals for signal path and battery condition.
- **(PNEUMATIC ONLY)** Transmitter: Monitors pneumatic pressure switch.
- Receiver: Supervised fault occurs if normal supervisory conditions are not received. Provides lock out on critical failure with electro-mechanical operator and requires constant pressure to close with solid State operator. Diagnostic LED's and sounder for system status and troubleshooting.

**REQUIREMENTS**

- Designed for rolling service doors and shutters (Not for use on rolling fire doors or fire shutters).
- Power source of +20 VDC to +35 VDC or 18 Vac to 26.5 Vac required.
- Temperature range of 0° to 158° F.
- Designed for use indoors, dry locations.

**⚠ WARNING**

To avoid **SERIOUS** personal **INJURY** or **DEATH** from electrocution, disconnect electric power to operator **BEFORE** installing.  
 ALL electrical connections **MUST** be made by a qualified individual.  
 This device is for use **ONLY** with LiftMaster Commercial Door Operators. Use on other than recommended equipment voids warranty and may cause property damage or **SERIOUS** personal **INJURY**.



**REPLACEMENT KITS**

ITEM	DESCRIPTION
K74-WSE	Transmitter and Receiver (Electric)
K74-WSP	Transmitter and Receiver (Pneumatic)
K74-WSE-14	Electric Edge, 14'
K74-WSE-22	Electric Edge, 22'
K74-WSP-14	Pneumatic Edge, 14'
K74-WSP-22	Pneumatic Edge, 22'
K77-WSE	Hardware Kit-Electric Edge
K77-WSP	Hardware Kit-Pneumatic Edge

## SELECTING MOUNTING LOCATION

The supervised edge system consists of two distinct components, the transmitter and the receiver. The receiver, which is connected to the operator, behaves like a normally open safety edge. The receiver requires a power and ground connection (DC) or an AC connection. The transmitter is connected to the safety edge and uses an internal 3V lithium battery for power. Battery life is estimated at one year, however, conditions may vary. For convenience, a low battery warning tone will sound to indicate that replacement is required (See diagnostics). The system requires several considerations when deciding upon where to locate the units on the door.

**NOTE:** Refer to door system illustration on page 3 for basic door setup. Location and configuration may differ from illustration.

1. Both units must be located on the same side of the door. There must be a clear line of sight between the units throughout door/grill range of travel (Refer to page 3, figure 4).
2. The transmitter must always remain below the receiver throughout the door's range of travel.
3. The receiver placement must be within 2' of transmitter centerline (Refer to page 3, figure 5).

## RECEIVER AND TRANSMITTER INSTALLATION

### RECEIVER UNIT

1. Attach receiver unit near motor operator by pre-drilling guide holes and using #8 or #10 fasteners (Refer to page 3 figures 4 & 5).
2. Wire receiver to operator (Refer to page 2 figure 1).
3. Attach the Receiver unit with nuts and lockwashers, making sure the reception window and LED's are facing downward (Refer to page 3 figure 5).

### TRANSMITTER UNIT

1. Install Transmitter Unit housing to the door edge by pre-drilling guide holes and using #8 or #10 fasteners (Refer to page 3 figure 6).
2. Open front cover by removing 2 screws (Refer to page 3 figure 3).
  - a. **(ELECTRIC ONLY)** Wire transmitter to safety edge (Refer to page 5).
3. Insert the 3V lithium battery in the battery clips noting correct polarity.

### WARNING

To avoid **SERIOUS** personal **INJURY** or **DEATH** from electrocution:

- Disconnect **ALL** electric and battery power **BEFORE** performing **ANY** service or maintenance.

4. Replace front cover.
5. **(PNEUMATIC ONLY)** Connect hose (Refer to page 3 figure 3).
6. Attach transmitter unit with nuts and lockwashers (Refer to page 3 figure 6). Route cable or hose through channel on front of cover (Refer to page 2, figure 2).

**NOTE:** Do not kink or crush pneumatic tubing.

### RECEIVER WIRE CONNECTIONS

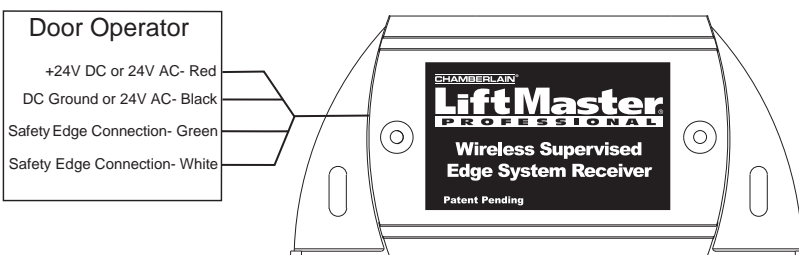


FIGURE 1

### CABLE & HOSE SUPPORT

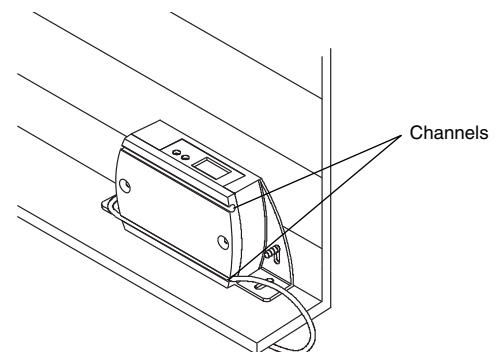


FIGURE 2

### ELECTRIC TRANSMITTER

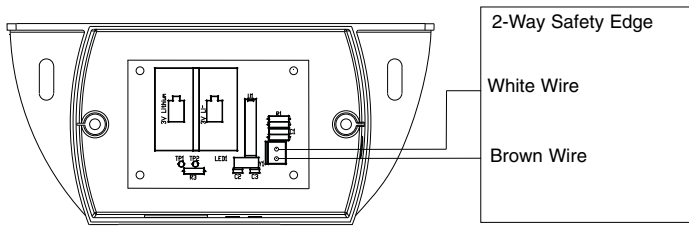
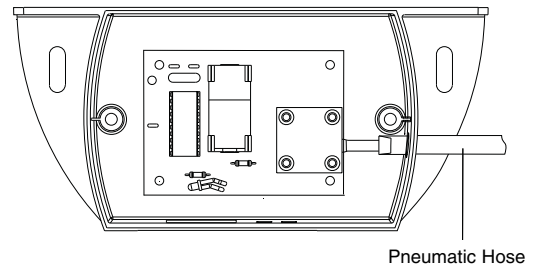


FIGURE 3

### PNEUMATIC TRANSMITTER



## DOOR SYSTEM ILLUSTRATION

### PLACEMENT RECOMMENDATION

Contact parts & services for extended range capability.

*NOTE: The receiver may be mounted to the lip of the door hood, either outside or inside, depending on door design and clearance within the hood when the door is in the fully open position. The receiver also may be mounted on the door's end bracket. Optimal mounting position for the receiver will vary depending on the door.*

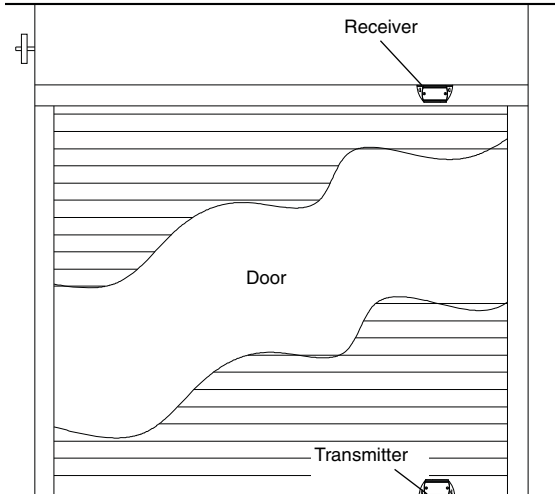


FIGURE 4

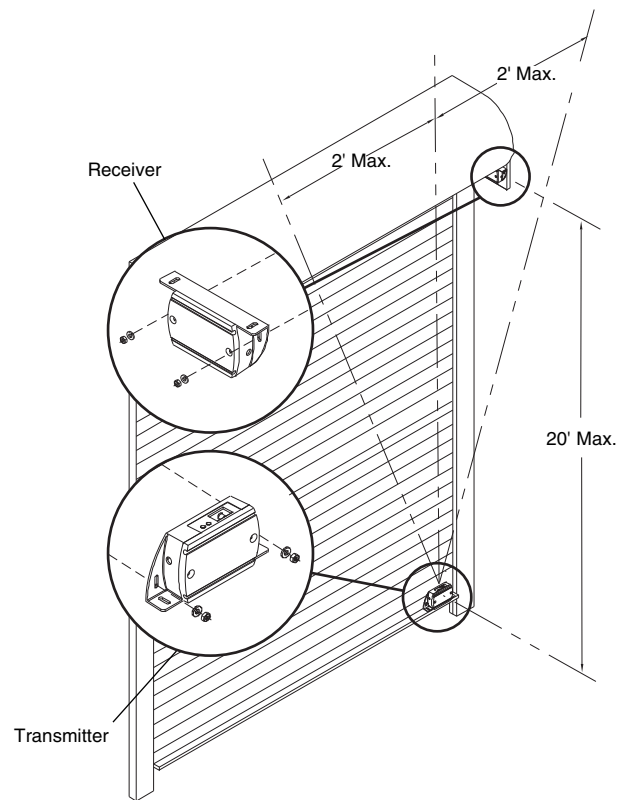
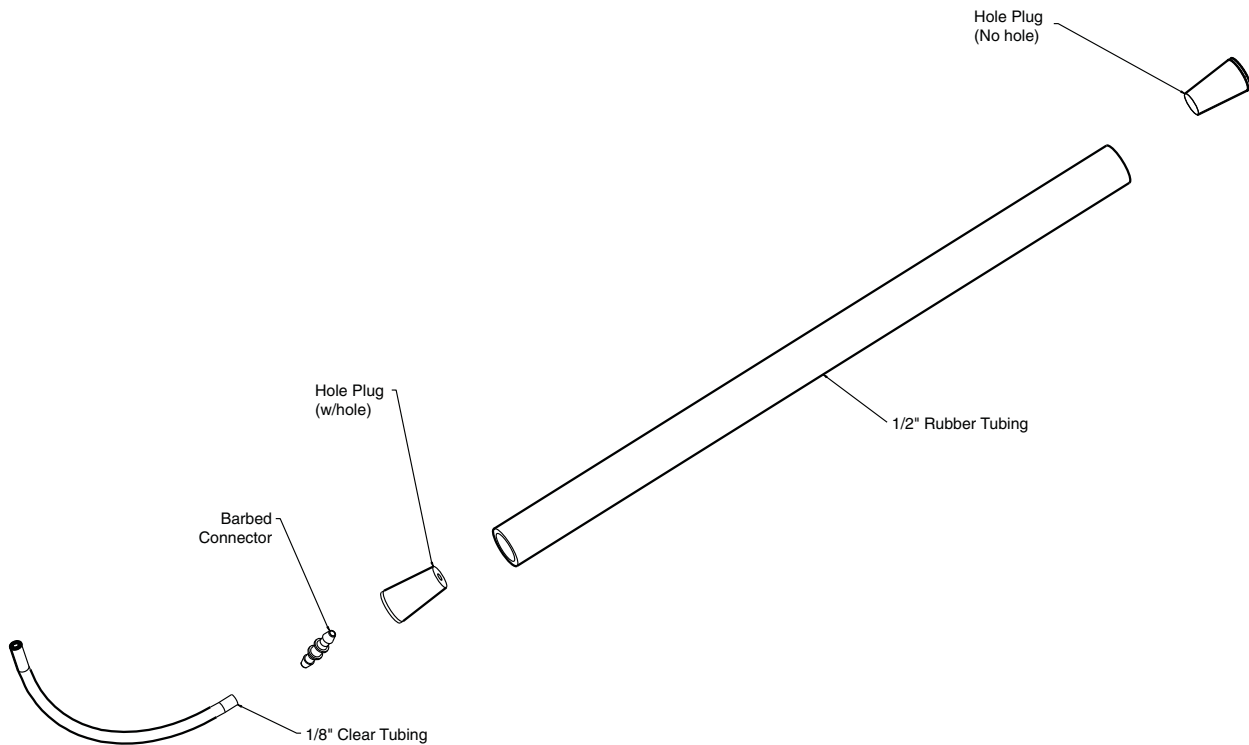


FIGURE 5

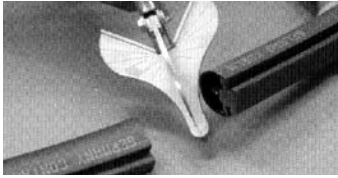
## SAFETY EDGE MOUNTING (PNEUMATIC)

1. Remove any existing safety edge.
2. Insert rubber plug without hole into 1/2" tubing, farthest from transmitter.
3. Cut 1/2" tubing to correct door length.
4. Insert rubber end plug with hole into 1/2" tubing, nearest transmitter.
5. Slide 1/2" tubing into door astragal.
6. Press 1/8" clear tubing onto barbed connector.
7. Insert other end of barbed connector into hole of end plug from step 4.
8. Cut 1/8" clear tubing to length and connect to barbed connector inside the transmitter.

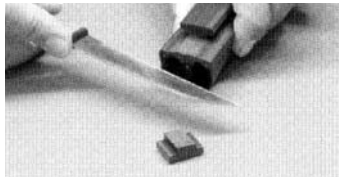


## SAFETY EDGE INSTRUCTIONS (ELECTRIC)

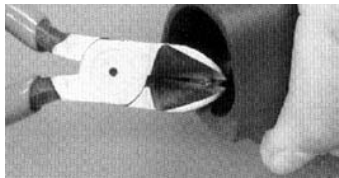
1. Using scissors or a sharp razor to cut edge to length adding a total of 1" for end caps.



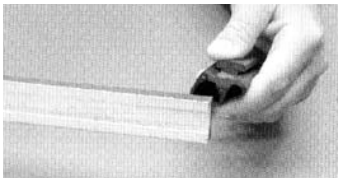
2. Carefully trim foot by 1/2" on each end of the edge. Make certain no damage is done to the profile when making the vertical cut. Any remains of the foot will be removed later with sand paper.



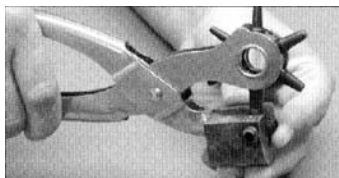
3. Before sanding surface, cut protruding copper wire.



4. Using sand paper, smooth all cut surfaces even and flat, making sure you do not round edges, on each end of edge, including the area where footing was removed.



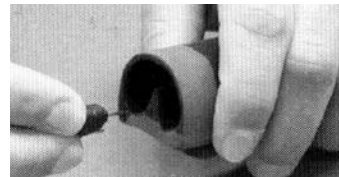
5. Open one of the end caps using a hole punch or any other sharp object. Remove any remaining material. Feed connecting cable through the hole.



6. Insert wire connector pins into the middle of the copper strands to ensure a good connection. Insert one pin into the upper copper strand and one pin into the lower copper strand.



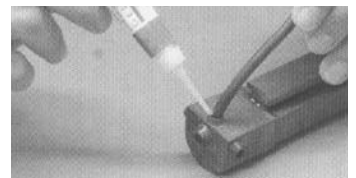
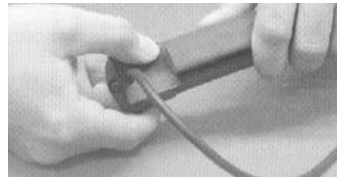
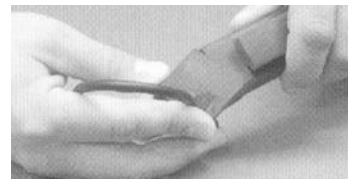
7. Insert resistor assembly into other end of edge. Insert wire connector pins into the middle of the copper strands to ensure a good connection. Insert one pin into the upper copper strand and one pin into the lower copper strand.



8. Carefully apply a thin, even layer of adhesive to the ridge inside the end cap. Do not get any adhesive on the sealing lip or on the cable. Attach end cap to the profile from the foot side. Line up the corners so the end cap is straight. Immediately press firmly on the cap for approximately 10 seconds.

9. Roll back the sealing lip on the end cap and apply a thin, even layer of adhesive to the surface. Unroll sealing lip and press firmly on the entire adhesive joint for approximately 10 seconds.

10. Carefully pull cable to one side and apply adhesive to bushing allowing the adhesive to run inside the sleeve around the cable. Apply a thin layer of adhesive to the edge of the cable bushing to seal.

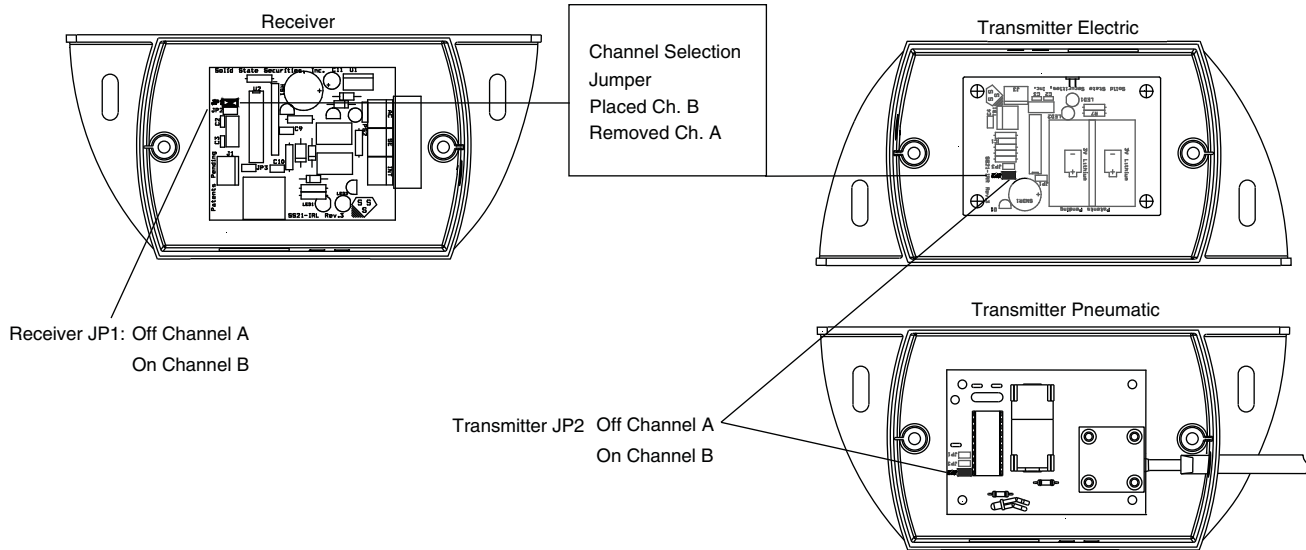


11. Slide edge into door astragal.

# CHANNEL SELECTION

The supervised edge system is capable of communicating in either of two channels, A or B. Each unit is set to the default communication channel A from the factory. Under most conditions the factory setting will not have to be changed. When two systems are used in close proximity (less than 6 feet), one system should be set to channel B.

To select Channel B the rear covers of both units must be removed and the jumpers marked in the following illustration must be placed over both pins. To select Channel A the jumper should be placed over one of the pins securing it for storage.



# SPECIFICATIONS

## RECEIVER UNIT

PARAMETER	MINIMUM	MAXIMUM	TYPE	UNIT
OPERATING VOLTAGE	18	26.5	24	Vac
	20	35	24	VDC
CURRENT	5	50	20	mA
RELAY CONTACTS	-	1.0 .5 .3	-	A for 30VDC A for 125Vac A for 60VDC
TEMPERATURE CHANGE	0	158	-	0F
HUMIDITY	10%	-	95%	Relative
SIZE	3.5 x 2.5 x 1.5			inches

## TRANSMITTER UNIT

PARAMETER	MINIMUM	MAXIMUM	TYPE	UNIT
OPERATING VOLTAGE	2.5	6	3	Vac
CURRENT	.1	20	10000	mA
SAFETY EDGE RESISTANCE	7.5K	15K	10K	Ohms
TEMPERATURE CHANGE	0	158	-	0F
HUMIDITY	10%	-	95%	Relative
SIZE	3.5 x 2.5 x 1.5			inches

## TESTING

**IMPORTANT** - Test system thoroughly before the door is put into normal operation. Stand clear of the door until it is fully tested. If any failure occurs during the test procedure, turn all power to the operator off and follow the suggestions in the Diagnostics section of this guide.

1. Turn power on to the operator.
2. The system should remain quiet and the green LED should flash briefly once a second.
3. Cover the protruding LED on the transmitter unit. The red LED on the receiver unit should come on and be accompanied by a 3-beep warning from the trouble sounder every 2 seconds. Uncover the LED.
4. Partially open the door. Squeeze the safety edge. The red LED on the receiver unit should come on and be accompanied by a 3-second continuous warning from the trouble sounder. Release the safety edge.
5. Begin closing the door. Being careful to stand clear of the door, squeeze the safety edge. The door should stop its downward motion and begin to open.
6. Allow door to open completely. The system should remain quiet and the green LED should flash briefly once a second. Both units should have an unimpeded path throughout the range of motion of the door. Strain relief should be used on both cables as well as additional cable ties as necessary.

## DIAGNOSTICS

The supervised edge system is designed to provide status information to the installer or maintenance personnel in order to assist in troubleshooting. There are three indicators in the receiver unit to observe: the green "heartbeat" LED, the red "fault" LED, and an integral trouble sounder.

CONDITION	SOLUTION
<ul style="list-style-type: none"> <li>• Red LED on</li> <li>• 3 beeps repeated every 2 seconds</li> <li>• Green LED does not flash</li> </ul>	<p>Transmission path failure. Make sure there is a direct line of sight between transmitter and receiver. Transmitter LED or receiver may be dirty.</p> <p><b>OR</b></p> <p>The battery was not properly inserted into the transmitter unit. Open the transmitter unit and make sure the battery is inserted with the correct polarity.</p>
<ul style="list-style-type: none"> <li>• Red LED on</li> <li>• 3 beeps repeated every 2 seconds</li> <li>• Green LED flashes about every second</li> </ul>	<p>One unit is set to channel A while the other is set to channel B. Open one of the units and change the channel jumper as described in channel election section.</p>
<p><b>(ELECTRIC EDGE ONLY)</b></p> <ul style="list-style-type: none"> <li>• Red LED on</li> <li>• 3 beeps repeated every 2 seconds</li> <li>• Green LED flashes about every second</li> </ul>	<p>Safety edge open fault. Open the transmitter unit and make sure connections are tight.</p> <p>The safety edge is open or does not have an 8.2k Ohm resistor embedded. Use a multimeter to check the resistance on the edge, it should be between 7.5k Ohms and 15k Ohms.</p>
<ul style="list-style-type: none"> <li>• Red LED on</li> <li>• 3 beeps repeated every 2 seconds</li> <li>• Green LED flashes about every second</li> </ul>	<p>The door/grill is closed on an uneven surface. This is a normal condition if continuously depressed.</p> <p><b>(ELECTRIC EDGE ONLY)</b></p> <p>Safety edge is shorted or partially shorted. Check the edge connections in transmitter, and then measure the safety edge resistance. Correct tolerance is 7.5k Ohms to 15k Ohms. Replace edge if out of tolerance.</p>
<ul style="list-style-type: none"> <li>• Red LED Off</li> <li>• Sounder sounds 2 beeps every ten seconds</li> <li>• Green LED flashes about every second</li> </ul>	<p>Low battery indication. Replace the battery in the transmitter unit with a 3V Lithium battery.</p>

