



FEDERAL SIGNAL
Safety and Security Systems

Models SIFZ Front ILS Light Bar



Installation, Maintenance, and Service Manual

Limited Warranty

This product is subject to and covered by a limited warranty, a copy of which can be found at www.fedsig.com/SSG-Warranty. A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to info@fedsig.com or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.



FEDERAL SIGNAL Safety and Security Systems

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Safety Messages

For your safety, read and understand this manual thoroughly before installing, operating, and servicing the light bar. The safety messages presented in this chapter and throughout the manual are reminders to exercise extreme care at all times. To download copies of the manual, go to www.fedsig.com or call the Federal Signal Service Department at 1-800-433-9132, 7 a.m. to 5 p.m., Monday through Friday (CT).

Safety Message to Installers and Service Personnel of Warning Lights

▲ WARNING

People's lives depend on your proper installation and servicing of Federal Signal products. It is important to read and follow all instructions shipped with this product. Listed below are some other important safety instructions and precautions you should follow:

Before Installation or Service

Qualifications

- To properly install or service this equipment, you must have a good understanding of automotive mechanical and electrical procedures and systems, along with proficiency in the installation and service of safety warning equipment. Always refer to the vehicle service manuals when performing equipment installations on a vehicle.

Light Hazards

- To be an effective warning device, this product produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range, or permanent damage to your eyesight may occur.
- Do not install the light system in an area that would block, impair, or blind the driver's vision. Ensure that the light system is mounted in a position that is outside of the driver's field of vision so the driver can safely operate the vehicle.
- Federal Signal power supplies and light heads are designed to work together as a system. Combining light heads and a power supply from different manufacturers may reduce the warning effectiveness of the lighting system and may damage the components. Verify or test your combination to ensure that the system works together and meets federal, state, and local standards or guidelines.

Electrical Hazards

- Strobe systems present a shock hazard because they use high voltage to operate. Do not handle strobe cables, the power supply, or bulbs or remove the lens while the equipment is connected. Strobe systems can also hold their charge even after they have been turned off. After disconnecting power to the unit, wait five minutes before handling any parts of the strobe system.
- A light system is a high current system. In order for the system to function properly, a separate negative (–) connection and positive (+) connection must be made. All negative connections should be connected to the negative battery terminal and a suitable fuse should be installed on the positive battery terminal connection as close

to the battery as possible. Ensure that all wires and fuses are rated correctly to handle the device and system amperage requirements.

- Never attempt to install aftermarket equipment that connects to the vehicle wiring without reviewing a vehicle wiring diagram available from the vehicle manufacturer. Ensure that your installation will not affect vehicle operation or mandated safety functions or circuits. Always check the vehicle for proper operation after installation.
- The lighting system components, especially light bulbs, strobe tubes, LEDs, and the outer housing, get hot during operation. Disconnect power to the system and allow the system to cool down before handling any components of the system.
- Halogen light bulbs and strobe tubes are pressurized and if broken, can burst, resulting in flying glass. Always wear gloves and eye protection when handling these components.
- Do not mount a radio antenna within 18 inches (45.7 cm) of the lighting system. Placing the antenna too close to the lighting system could cause the lighting system to malfunction or be damaged by strong radio fields. Mounting the antenna too close to the lighting system may also cause the radio noise emitted from the lighting system to interfere with the reception of the radio transmitter and reduce radio reception.
- Do not attempt to wash any unsealed electrical device while it is connected to its power source.

During Installation and Service

- DO NOT get metal shavings inside the product. Metal shavings in the product can cause the system to fail. If drilling must be done near the unit, place an ESD-approved cover over the unit. Inspect the unit after mounting to ensure that there are no shavings present in or near the unit.
- To avoid a battery explosion, always disconnect the negative battery cable first and reconnect it last. Avoid causing a spark when connecting near or to the battery. The gases produced by a battery can cause a battery explosion that could result in vehicle damage and serious injury.
- DO NOT connect this system to the vehicle battery until ALL other electrical connections are made, mounting of all components is complete, and you have verified that no shorts exist. If the wiring is shorted to the vehicle body or frame, high current conductors can cause hazardous sparks resulting in electrical fires or flying molten metal.
- DO NOT install equipment or route wiring (or the plug in cord) in the deployment path of an airbag.
- If a vehicle seat is temporarily removed, verify with the vehicle manufacturer if the seat needs to be recalibrated for proper airbag deployment.

- Before mounting any components, check the manual to ensure that the component you are installing is suitable for use in that area of the vehicle. Many components are not suitable for use in the engine compartment or other extreme environmental exposure areas.
- The service life of light bulbs and strobes tubes will be shortened if the glass portion is touched during installation. Use gloves when handling these components. If the glass portion has been touched, clean the glass carefully with isopropyl alcohol.
- When drilling into a vehicle structure, ensure that both sides of the surface are clear of anything that could be damaged. Remove all burrs from drilled holes. To prevent electrical shorts, grommet all drilled holes through which wiring passes. Ensure that the mounting screws do not cause electrical or mechanical damage to the vehicle.
- Refer to the manual packed with the lighting system for proper electrical connections, additional precautions, and information.
- Because vehicle roof construction and driving conditions vary, do not drive a vehicle with a magnetically mounted warning light installed. The light could fly off the vehicle, causing injury or damage. Repair of damage incurred because of ignoring this warning shall be the sole responsibility of the user.
- To avoid denting the roof of the vehicle, place the light bar mounting feet as close to the outer edge of the roof as possible.
- Roof damage can occur if the hook adjustment bolts are over-tightened. Tighten the adjustment bolts 6 ft-lb to 7 ft-lb. Install keeper plates.
- Locate the light system controls so the VEHICLE and CONTROLS can be operated safely under all driving conditions.

After Installation or Service

- After installation, test the light system to ensure that it is operating properly.
- To ensure proper operation, test all vehicle functions, including horn operation, vehicle safety functions, and vehicle light systems. Ensure that the installation has not affected the vehicle operation or changed any vehicle safety function or circuit.
- Scratched or dull reflectors, mirrors, or lenses will reduce the effectiveness of the lighting system. Avoid heavy pressure and use of caustic or petroleum based products when cleaning the lighting system. Replace any optical components that may have been scratched or crazed during system installation.
- Do not attempt to activate or deactivate the light system control while driving in a hazardous situation.
- Frequently inspect the light system to ensure that it is operating properly and that it is securely attached to the vehicle.
- After installation and testing are complete, provide a copy of these instructions to instructional staff and all operating personnel.

- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow these precautions may result in property damage, serious injury, or death.

Safety Message to Operators of Warning Light Equipment

⚠ WARNING

People's lives depend on your safe use of our products. Listed below are some important safety instructions and precautions you should follow:

- Do not attempt to activate or deactivate the light system control while driving in a hazardous situation.
- Although your warning system is operating properly, it may not be completely effective. People may not see or heed your warning signal. You must recognize this fact and continue to drive cautiously.
- Situations may occur that obstruct your warning signal when natural and man-made objects are between your vehicle and others, such as raising your hood or trunk lid. If these situations occur, be especially careful.
- The effectiveness of an interior mounted warning light depends on the clarity, the tinting, and the angle of the glass it is being placed behind. Tinting, dirt, defects, and steeply angled glass reduce the light output of the warning light. This may reduce the effectiveness of the light as a warning signal. If your vehicle has dirty, tinted, or steeply angled glass, use extra caution when driving your vehicle or blocking the right of way with your vehicle.
- All effective sirens and horns produce loud sounds that may cause, in certain situations, permanent hearing loss. You and your passengers should consider taking appropriate safety precautions, such as wearing hearing protection.
- In order to be an effective warning device, this product produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range, or permanent damage to your eyesight may occur.
- It is important that you fully understand how to safely operate this warning system before use.
- Only operate your vehicle and its light/sound system per your department's Standard Operating Procedures.
- If a selected function does not perform properly or if any of the lamps remain illuminated when the control is off, disconnect the power connector from the control unit and contact the nearest service center.
- At the start of your shift, ensure that the entire warning light system and the siren system are securely attached and operating properly.
- Suction cup mounting is for temporary applications only. The unit should be removed from the window and stored securely when not in use. Temperature changes and sunlight can cause suction cups to lose holding power. Periodically check the unit to make sure the suction cups have a firm grip on the mounting surface. An improperly secured light could fall off of the vehicle, causing injury and damage.

Safety Messages

- Holding power of magnetic mounting systems is dependent upon surface finish, surface flatness, and thickness of the steel mounting surface. Therefore, to promote proper magnetic mounting:
 - Keep mounting surface and magnets clean, dry, and free of foreign particles that prevent good surface contact.
 - Ensure that mounting surface is flat.
 - Do not use a magnet mounting system on vehicles with vinyl tops.
 - To prevent sliding of light assembly on mounting surface, avoid quick acceleration and hard stops.

Failure to follow these precautions may result in property damage, serious injury, or death.

Unpacking the Light Bar

After unpacking the ILS light assembly, inspect it for damage that may have occurred in transit. If it has been damaged, do not install it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts listed in kit contents list are included in the package. If you are missing any parts, contact Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT). Disposal of all shipping materials must be carried out in accordance with national and local codes and standards.

Introduction to the SIFZ Series SpectraLux

The SIFZ SpectraLux® ILS is a single-level LED light bar that mounts on the inside of the front windshield. It uses ROC (Reliable On Board Circuitry) technology, and Solaris® S2 reflectors. Split, Passenger only, and Driver only are available. The light bar operates at a nominal input of 13.6 Vdc (11 Vdc minimum). Both Discrete and Serial (Convergence Network) control are available as configured options.

Discrete models have eight control inputs that connect to the user-supplied low current switches. Serial models are controlled through the CAT5 serial communication cable. The cable connects to either a compatible Federal Signal Convergence Network controller/siren or a Federal Signal Serial Interface Module (P/N 8583446). An internal PCB assembly within the light bar decodes the control data and performs the requested function. With the Serial Interface Module, the light bar can be activated by Federal Signal light bar controllers or individual low current switches.

The backbone is a powder coated aluminum shroud. The light bar has 15-foot power and ground cables and a 25-foot control cable. Mounting hardware is a configured option. Refer to mounting instructions supplied with mounting hardware. The light bar has an operating temperature range of -30 °C to +65 °C (-22 °F to +149 °F).

Selecting Configuration Options for the Serially-Controlled SIFZ

The serial controlled ILS has three configuration options that are selectable with DIP switches on the light bar control board. The options are described in Table 1 on page 10.

Figure 1 DIP switch locations the control boards of the serial controlled ILS

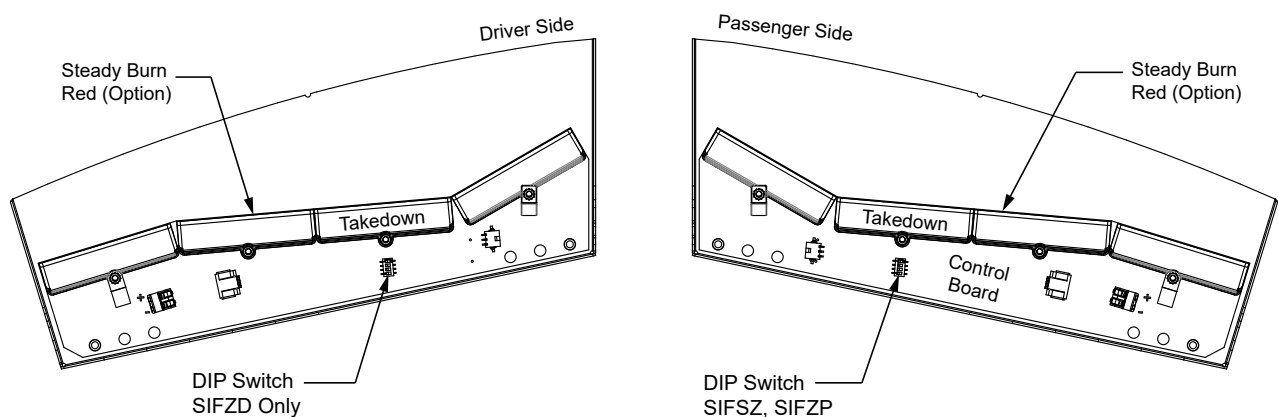


Table 1 Switch settings on the control board of the serial-controlled ILS

DIP Switch Position	Function
1	Sets what light heads turn on in Steady Burn. The default position for Switch 1 is OFF, which turns on the third outer heads on both sides of the Front ILS (Figure 1 on page 10). To turn on the third outer head on the driver side only, set Switch 1 to ON.
2	Not used
3	<p>Switch 3 has two functions:</p> <ul style="list-style-type: none"> • Performing an LED scan to ensure that an LED board flashes the correct colors after it is installed. • Changing the Device ID to enable the SpectraLux ILS to operate independently of the light bar (available with the Convergence Configuration Software). <p>Performing an LED Scan When an LED board is changed, an LED scan must be done to enable the LED board to flash the correct colors. To perform the scan:</p> <ol style="list-style-type: none"> 1. Disconnect the red power (BAT+) wire to the SpectraLux® ILS and maintain power to the control head. 2. Change the position of DIP Switch 3 and turn power ON to the SpectraLux ILS. The SpectraLux ILS emits a short flash to indicate that the LED scan is done. 3. To return DIP Switch 3 to its original function, repeat the scan. <p>Changing the Device ID The default setting for the SpectraLux ILS is to respond to light bar commands. For example, if the system includes a light bar and a SpectraLux ILS, both devices perform the same functions. The Convergence Configuration programming software enables you to program the control head to send a set of commands dedicated only to the SpectraLux ILS, making its operation independent of the light bar.</p> <p>To reset the control head to the default setting, perform an LED scan as described above.</p>
4	Sets the ability to power the network cable for other devices. The default is OFF. Switch 4 should be set only if the main power cables are turned on through an ignition-activated relay. If powering other devices, such as the Six-Button Serial Controller, set DIP Switch 4 to ON. For more information, see the instructions included with the network-powered device.

Control Wires for the Serial Interface Module

The serially controlled SIFZ SpectraLux ILS connects to a Federal Signal Convergence Network Siren/Controller or to the Serial Interface Module. Table 2 on page 11 shows the functions of control wires from the Serial Interface Module. The first color of wire is the wire predominant color and additional colors are stripes. For programming options, see the instructions included with the Interface Module or the Federal Signal Convergence Network Siren/Controller.

Table 2 SIFZ light bar controls and wires from the Serial Interface Module

Light Bar Control	Wire Color	Description of Function
Mode 1	Blue	Lowest priority
Mode 2	Blue/White	Overrides Mode 1
Mode 3	Black/Red	Overrides Modes 1 and 2
Steady Burn	Red/White	One (driver side) or two heads (driver and passenger side) burn steadily when 12 Vdc is applied to the control wire for Steady Burn. See “Selecting Configuration Options for the “Selecting Configuration Options for the Serially-Controlled SIFZ” on page 9.
Front Cutoff*	Green/White	Turns OFF power to the Split Front ILS
Front Enable*		Turns ON power to the Split Front ILS
Rear Cutoff	Orange/Black	N/A
Rear Enable		N/A
Intersection (SW-2 Switch 3 in the Serial Interface Module is in the UP position) Scene Light, Left (SW-2 Switch 3 in the Serial Interface Module is in the DOWN position)	Blue/Black	Typically a high activity pattern. Overrides all three priority modes. Scene Light, Left is unavailable. Applying 12 Vdc to the Scene Light, Left wire turns on the left half of the light bar. Intersection is unavailable.
Flash Takedown	Red/Black	Flashes the Takedown lights in Modes 1, 2, and 3 with every flash pattern. To have the Takedown lights remain off and flash only when the Flash Takedown wire is activated, see “Selecting Configuration Options for the Serially-Controlled SIFZ” on page 9.
Left Alley	Green/Black	N/A
Right Alley	Orange/Red	N/A
Takedown	White/Black	Provides white light to the front. Overrides Flash Takedown lights and Front Cutoff.
Low Power	White/Black/Red	Dims the lights approximately 50 percent to prevent blinding approaching drivers. Low Power is only available in Modes 1 and 2 and is disabled when switched to another flash pattern, including Mode 3 and Intersection.
Test Pattern (SW-2 Switch 3 in the Serial Interface Module is in the UP position) Scene Light, Right (SW-2 Switch 3 in the Serial Interface Module is in the DOWN position) Black/White/Red	Black/White/Red	Cycles through each available color. Scene Light, Right is unavailable. Applying 12 Vdc to the Scene Light, Right wire turns on the right half of the light bar. Light Bar Test Pattern is unavailable.

*To set these options in the Serial Interface Module, see instruction sheet 2562248.

Control Wires for the Discrete-Wire SIFZ ILS

The SIFZ SpectraLux ILS is controlled through an eight-conductor discrete-wire cable that connects to user-supplied, low-current switches.

Figure 2 Discrete wire cable on passenger-side

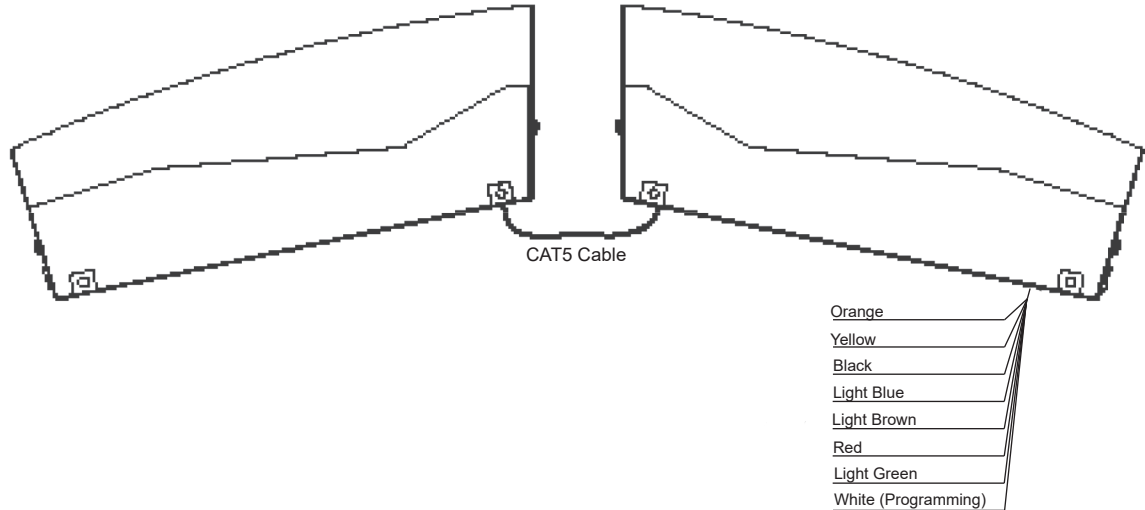


Table 3 Description of SIFZ SpectraLux ILS control wires

Light Bar Control	Wire Color	Function
Mode 1 Flash	Orange	Lowest priority.
Mode 2 Flash	Yellow	Overrides Mode 1
Takedowns	Black	Applying +12 Vdc provides white light to the front. Overrides flashing lights
White Flashing	Light Blue	When calling for the right of way, a vehicle responding to an emergency is permitted to have white light. Applying +12 Vdc activates the white flashing LED heads.
Dimming	Light Brown	Applying +12 Vdc dims the light bar 50 percent. Steady Burn Red Red One (driver side) or two red LED heads (driver and passenger side) burn steadily when +12 Vdc is applied to the control wire for Steady Burn Red.
Scene Light	Light Green	Applying +12 Vdc turns on the scene light, Programming White Up to six operational settings can be selected by applying +12 Vdc to the control wire for the setting. See "Programming the Discrete-Wire SIFZ ILS" on page 13
Programming	White	Up to six operational settings can be selected by applying +12 Vdc to the control wire for the setting."Programming the Discrete-Wire SIFZ ILS" on page 13.

Programming the Discrete-Wire SIFZ ILS

The white programming wire enables you to program the functions of the control wires. A description of each function is listed in Table 4. Only one control wire can be modified at a time. If more than one control wire is active, the programming wire is disabled.

To modify the function of a control wire:

1. Connect the black wire from the light bar to ground (–GND), then apply 12 Vdc (+BAT) to the 16 AWG red wire and the wire you want to modify.
2. Cycle through functions by tapping the white programming wire from the light bar to 12 Vdc (+BAT).
3. To save the setting, let the function run for five seconds before removing power. The available programming functions are listed in Table 4.

Table 4 Discrete-Wire SIFZ light bar controls

Light Bar Programming	Wire Color	Programming Functions
Mode 1 Flash	Orange	28 flash patterns, 4 cruise patterns, Mode 2 Flash overrides Mode 1.
Mode 2 Flash	Yellow	28 flash patterns (dimming disabled)
Takedowns	Black	Takedown location (Inner/Outer/Double)
White Flashing (independent)	Light Blue	17 takedown patterns (Pattern 1 adds white to any mode-wire flash pattern.) The rest of the patterns flash the takedown lights independently.
Dimming	Light Brown	N/A
Steady Burn Red	Red/White	Steady Burn Red location, 4 cruise patterns
Scene Light	Light Green	Scene light location (Inner/Outer/Full)
Programming	White	Hold the wire to 12 Vdc (+BAT) more than five seconds to reset all settings to the factory defaults and also perform an LED scan.

Testing the Serial SIFZ ILS Controls

⚠ WARNING

LIGHT HAZARD: *To be an effective warning device, an emergency warning system produces bright light that can be hazardous to your eyesight when viewed at a close range. Do not stare directly into this lighting product at a close range, or permanent damage to your eyesight may occur.*

NOTE: After the installation, check the entire system to ensure that the lights are flashing properly and all light systems are operating properly.

To test the light bar controls:

1. Connect the 16 AWG black lead from the light bar to the ground (–NEG) terminal of the vehicle battery and the 16 AWG red lead to the positive terminal.
2. Connect the black and black/white wires from the Serial Interface Module to the ground (–NEG) terminal of the vehicle battery

3. Apply 12 Vdc to a control wire and to the ignition wire from the Serial Interface Module.
4. After the installation, check the entire system to make sure the lights flash properly and all light system functions operate properly.

Wiring the SIFZ ILS in the Vehicle

NOTICE

INSTALLATION PRECAUTIONS: *The warning system and/or two-way radio system may operate improperly if a two-way radio antenna is installed on or within 18 inches of the light bar. Before permanently installing the light bar or a two-way radio antenna, test the warning system and two-way radio system. Some installations may require the relocation of the two-way radio antenna to the trunk or fender. DO NOT drill holes in the light bar or install auxiliary devices on the light bar, or the warning system may fail.*

⚠ WARNING

LOCATING OPERATOR CONTROLS: *The controls for the light system must be located so that the VEHICLE and CONTROLS can be operated safely under all driving conditions.*

NOTICE

REVERSE POLARITY/MISWIRING: *Reverse polarity may damage the siren amplifier. To avoid damage to the siren/amplifier, ensure that the battery voltage is the same voltage as the rating of the light and that the correct polarity is observed.*

To wire the light bar in the vehicle:

1. Ensure that the lines are adequately fused. From the light bar, route the CAT5 control cable into the vehicle cab or trunk near the planned location of a control head that is compatible with the light bar or Serial Interface Module.
2. Connect the 16 AWG black lead to the battery ground (–NEG) terminal.
3. Connect the 16 AWG red lead through the supplied 15 A fuse at the source to the positive (+BAT) terminal.

Maintaining the SIFZ ILS

⚠ WARNING

PERIODICALLY CHECK THE GLASS: *The effectiveness of the ILS light bar depends on the clarity of the glass it is being placed behind. Dirt and defects in the glass reduces the light output. The reliability of light for emergency signaling purposes may be reduced if the glass is dirty, cracked, or not clear. Be sure to periodically check the glass for cleanliness to ensure maximum light output of the light bar.*

Establishing a regular maintenance schedule for the ILS light bar extends its life and ensures safety. Periodically check that the light bar operates properly and that all mounting hardware is securely fastened to the vehicle. Inspect the reflectors for cracks, crazing (hairline cracks), discoloration, and other defects.

Cleaning the Shrouds

To clean the shrouds:

1. Remove the light bar from the vehicle according to the vehicle-specific installation instructions included with the ILS light bar.
2. Use a soft tissue to clean the shroud. If needed, you can use a solution of mild soap and water, but take care not to get water on the PCBs.
3. When finished, make sure the light bar is completely dry before reinstalling it according to the vehicle-specific installation instructions.

Cleaning the Domes

Periodically cleaning the domes using proper procedures and compatible cleaners will prolong their service life.

⚠ WARNING

CRAZING HAZARD: *Crazed, cracked, or faded domes or reflectors reduce the light output and the effectiveness of the lighting system. Tops or reflectors showing this type of aging must be replaced. Failure to follow this warning may result in bodily injury or death to you or others.*

⚠ WARNING

CLEANING SOLUTION WARNING: *The use of cleaning solutions, such as strong detergents, solvents, and petroleum products, can cause crazing (cracking) of the domes and reflectors. Failure to follow this warning can damage the domes and reflectors and may result in bodily injury or death to you or others.*

To clean the domes:

1. Rinse the domes with lukewarm water to loosen dirt and debris.
2. Use a mild soap, lukewarm water, and a soft cloth to gently clean the plastic surfaces. To avoid damaging the reflectors, do not use heavy pressure or caustic, abrasive, or petroleum-based cleaners.
3. Rinse and dry the plastic surfaces with a soft cloth to prevent water spotting.

To remove fine scratches and haze, use a specialty plastic cleaner/polish or a non-abrasive high quality automotive paste cleaner/wax.

Cleaning the Reflectors

⚠ WARNING

CRAZING HAZARD: Crazed, cracked, or faded domes or reflectors reduce the light output and the effectiveness of the lighting system. Tops or reflectors showing this type of aging must be replaced. Failure to follow this warning may result in bodily injury or death to you or others.

⚠ WARNING

CLEANING SOLUTION WARNING: The use of cleaning solutions, such as strong detergents, solvents, and petroleum products, can cause crazing (cracking) of the domes and reflectors. Failure to follow this warning can damage the domes and reflectors and may result in bodily injury or death to you or others.

To clean the reflectors:

1. Remove the light bar from the vehicle according to the vehicle-specific installation instructions included with the Front ILS.
2. Use a soft tissue to clean the reflectors. If needed, you can use a solution of mild soap and water, but take care to avoid getting the PCBs wet. Avoid heavy pressure and the use of caustic, abrasive, or petroleum-based cleaners, which will scratch or dull the reflectors.
3. When you are finished, make sure the light bar is completely dry before reinstalling it according to the vehicle-specific instructions.

Servicing the SIFZ ILS

This section has instructions for replacing the light bar PCBs and reflectors. For additional service and support, call the Federal Signal Service Department at 800-433-9132, 7 a.m. to 5 p.m., Monday through Friday (Central Time). For a list of common replacement parts, see “Ordering Replacement Parts” on page 19.

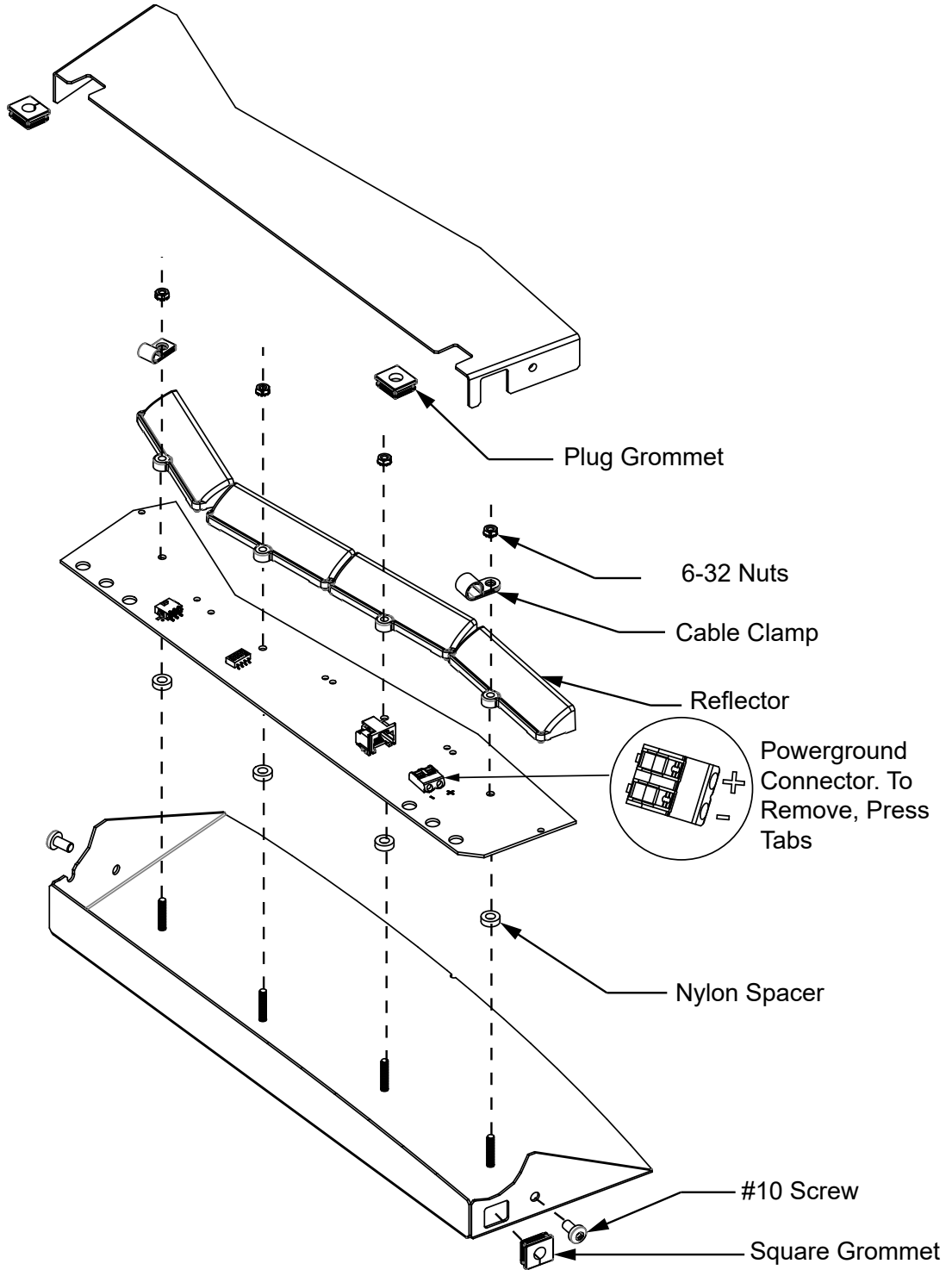
Replacing a PCB

NOTE: After replacing an LED board an LED scan may be necessary. For the serially controlled model, see Table 1 on page 10 for the DIP switch setting. For the discrete-wire model, see “Programming the Discrete-Wire SIFZ ILS” on page 13 for information on cycling through the flash patterns using the white programming wire.

To replace a PCB:

- 1.** Remove the light bar from the vehicle according to the vehicle-specific installation instructions included with the SIFZ ILS.
- 2.** Remove the #10 screws that hold the upper shroud. See Figure 3 on page 18.
- 3.** Disconnect the cables. For the power/ground connector, press the tabs with a pen or small screwdriver and remove the wires.
- 4.** Remove the 6-32 nuts that hold down the cable clamps, reflectors, and PCB. Lift off the parts and remove the PCB.
- 5.** Reassemble the light bar. Twist the power and ground cables to ensure there are no stray wires.

Figure 3 Exploded view



Getting Technical Support and Service

For technical support and service, please contact:

Service Department
 Federal Signal Corporation
 Phone: 1-800-433-9132
 Email: emp-service-info@fedsig.com
 www.fedsig.com

Getting Repair Service

The Federal Signal factory provides technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair must be accompanied by a Return Material Authorization (RMA). Obtain a RMA from a local Distributor or Manufacturer's Representative.

Provide a brief explanation of the service requested, or the nature of the malfunction.

Address all communications and shipments to the following:

Federal Signal Corporation
 Service Department
 2645 Federal Signal Drive
 University Park, IL 60484-3167

Ordering Replacement Parts

This section contains a partial list of replacement parts. To order replacement parts, call the Federal Signal Service Department at 1-800-433-9132 or 1-708-534-3400, 7 A.M. to 5 P.M., Monday through Friday (Central Time) or contact your nearest distributor.

Table 5 Replacement parts

Description	Part Number
PCB Assembly End (Configured)	Contact Factory
PCB Assembly, Front (Configured)	Contact Factory
PCB Assembly, Rear (Configured)	Contact Factory
PCB Assembly, Controller (Configured)	Contact Factory
Nut, 1/4-20, Barrel	7065071
Seal, Lip, Lens	8651116
O-Ring, Lens Nut	7067016
Gasket, Lens	8651125
Lens, Clear, 44"	8651101
Lens, Clear, 51"	8651103



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Customer Support

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Technical Support 800-433-9132 • +1 708 534-3400