



TECH LIGHTING®



## Installing MonoRail

Supplement to individual  
item instructions

**TECH LIGHTING LLC**

7400 Linder Ave  
Skokie, IL 60077

**SALES AND  
CUSTOMER SERVICE:**

847.410.4400

**QUOTES AND  
TECHNICAL ASSISTANCE:**

800.522.5315

**FAX:**

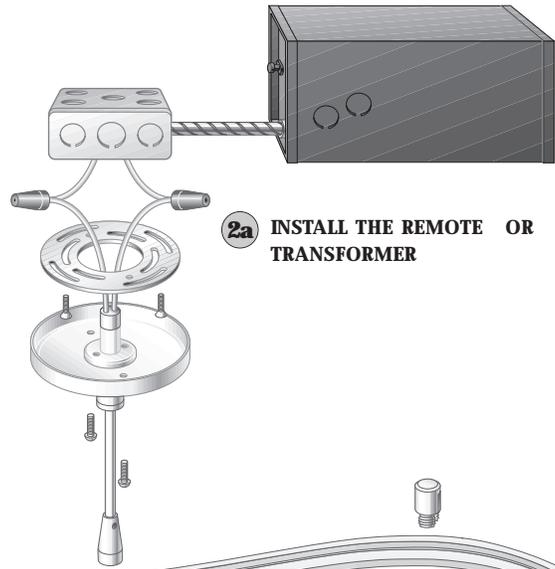
847.410.4500

[www.techlighting.com](http://www.techlighting.com)



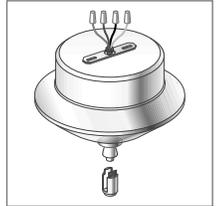
Certain products shown in this catalog have patent protection or patents pending. Tech Lighting reserves the right to discontinue or to change the technical or design specifications of its products at any time without notice. Copyright ©2005 Tech Lighting L.L.C. All rights reserved.

**1** LAY SYSTEM OUT ON FLOOR

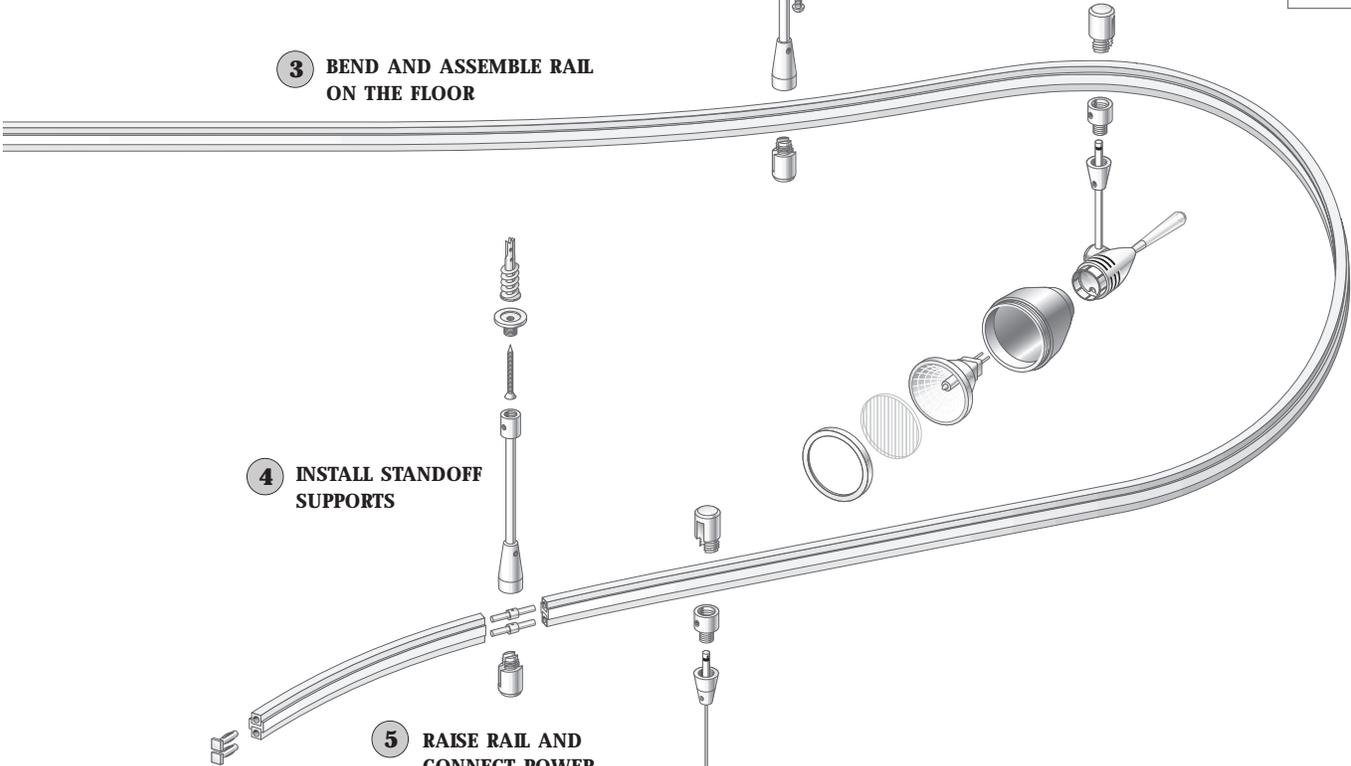


**2a** INSTALL THE REMOTE OR TRANSFORMER

**2b** INSTALL THE SURFACE TRANSFORMER



**3** BEND AND ASSEMBLE RAIL ON THE FLOOR



**4** INSTALL STANDOFF SUPPORTS

**5** RAISE RAIL AND CONNECT POWER FEED AND STANDOFFS

**6** ADD ELEMENTS



**7** RUN THE SYSTEM FOR 20 MINUTES

# Installing MonoRail

**When installing and using this system, please adhere to the following basic safety precautions:**

- Read all instructions completely before beginning installation
- Turn off the electrical power at the panel before modifying the system in any way
- Do not install this system
  - In a wet or damp location
  - With the fixtures located within six inches of combustible materials
  - With the rail concealed or extended through a building wall

We recommend you hire a qualified, licensed electrician to install the system.

## Order of Installation

- 1** Unpack boxes, but keep packages intact to avoid losing small hardware pieces and instructions. Lay the system out on the floor as an overview of where individual items will be installed.

- |   |           |  |
|---|-----------|--|
| <ol style="list-style-type: none"> <li><b>2a</b> <b>Install remote transformer</b></li> <li>• Determine location of transformer, j-box and canopy</li> <li>• Pull the correct gauge THHN wire from the transformer to the canopy (see voltage drop chart, below). Single feed canopies require two leads; dual feed canopies require four</li> <li>• Install power feed extender to canopy (if using)</li> <li>• Install canopy at j-box</li> </ol> | <b>OR</b> | <ol style="list-style-type: none"> <li><b>2b</b> <b>Install surface transformer</b></li> <li>• Determine transformer location</li> <li>• Install power feed extender to transformer (if using)</li> <li>• Mount transformer to 120 volt j-box</li> </ol> |
|---|-----------|--|

- 3** **Bend and assemble rail on the floor**
  - Bend rail to desired shape
  - Join sections of rail using conductive connectors (included) and ensure tight connections
  - Insert isolating connectors into rail where needed
  - Insert end caps into both ends of the run

- 4** **Install standoff supports**
  - Field cut standoffs (if necessary)
  - Mark standoff locations on ceiling using plumb bob; place every three feet of run
  - Install standoffs to ceiling

- 5** **Raise the rail and connect to the power feed and standoffs**
  - Make sure power connections are very tight
  - Turn on the power; use a voltmeter to ensure the proper voltage

- 6** **Add elements**
  - Shorten pendants if necessary
  - Install accessories and lamps Note: 24 volt transformers require 24 volt lamps
  - Place elements on system ensuring tight connections

- 7** **Run the system for 20 minutes**

Turn off the system and check for any connections that are hot to the touch. Warm is acceptable. Note: it is normal for halogen lamps to generate heat. Those that are hot must be retightened.

<b>Low-Voltage Wire Size Table</b>							
Use this chart to determine the correct THHN wire size for an acceptable 3 percent drop in voltage at the specified wattage. The length shown is the length of wire from the remote transformer to the electrical J-box.							
		<b>5 ft.</b>	<b>6-15 ft.</b>	<b>16-20 ft.</b>	<b>21-40 ft.</b>	<b>41-60 ft.</b>	<b>61-90 ft.</b>
<b>12 VOLT</b>	150 watt	12 ga.	8 ga.	6 ga.	4 ga.	2 ga.	1 ga.
	300 watt	10 ga.	6 ga.	4 ga.	1 ga.	1/0 ga.	3/0 ga.
<b>24 VOLT</b>	300 watt	14 ga.	12 ga.	10 ga.	6 ga.	6 ga.	4 ga.
	600 watt	12 ga.	8 ga.	6 ga.	4 ga.	2 ga.	1 ga.

## Troubleshooting

---

### **Did the breaker on the transformer trip?**

- Confirm the transformer has not been overloaded
- If powering the system with more than one feed, ensure that isolating connectors are separating each feed
- Check that none of the elements are generating a direct short. If any elements have been shortened, check the FreeJack connector
- Check the low-voltage side of the transformer before the breaker with a voltmeter to ensure voltage does not exceed 12 or 24 volts

### **Is an individual element not working?**

- Check that the lamp is installed securely
- Check the lamp to see if it has burned out
- Check the FreeJack connector for proper contact

### **Did the breaker on the main panel trip?**

- Confirm that the circuit has not been overloaded
- Change the breaker in the panel to an inductive load breaker

### **Is the system still not working? Why not try checking the basics?**

- Check the light switch (or cord switch on a plug-in transformer)
- Make sure the power feeds from the transformer to the rail are tightly connected
- Check for loose wire nuts in the electrical box, canopy, or transformer cover
- Make sure the transformer's 120 volt side is wired correctly

### **Dimming Issues**

All Tech Lighting transformers may be dimmed with the appropriate low voltage dimmer: a low voltage magnetic dimmer for magnetic transformers; a low voltage electronic dimmer for an electronic transformer. The dimmer is placed on the input line before the transformer. It is very important to use the compatible dimmer type: failure to do so will substantially shorten the useful life of the transformer.

### **Reducing dimming noise**

Dimming a transformer may create a buzzing noise, which may be objectionable in certain applications. To reduce buzzing, we recommend the following:

- Use the compatible dimmer type recommended for the transformer
- Add a debuzzing dimming coil in series on one of the 120 volt lines. All our magnetic surface transformers are shipped with a debuzzing dimming coil

## Listings

Tech Lighting systems are tested and listed by major testing laboratories. Our system products are listed only when used as a complete system; that is, when all components, including transformers, have been provided by Tech Lighting. Substituting another manufacturer's product will render the listing completely void, Tech Lighting will be removed from liability, and any insurance coverage to which you may be entitled may be jeopardized.

ETL: Reference report #566697 City of New York calendar #39025