

Lighting systems from Tegan Lighting are supplied as complete systems. Use only factory-supplied parts to preserve the validity of the ETL listing and manufacturer's warranty.

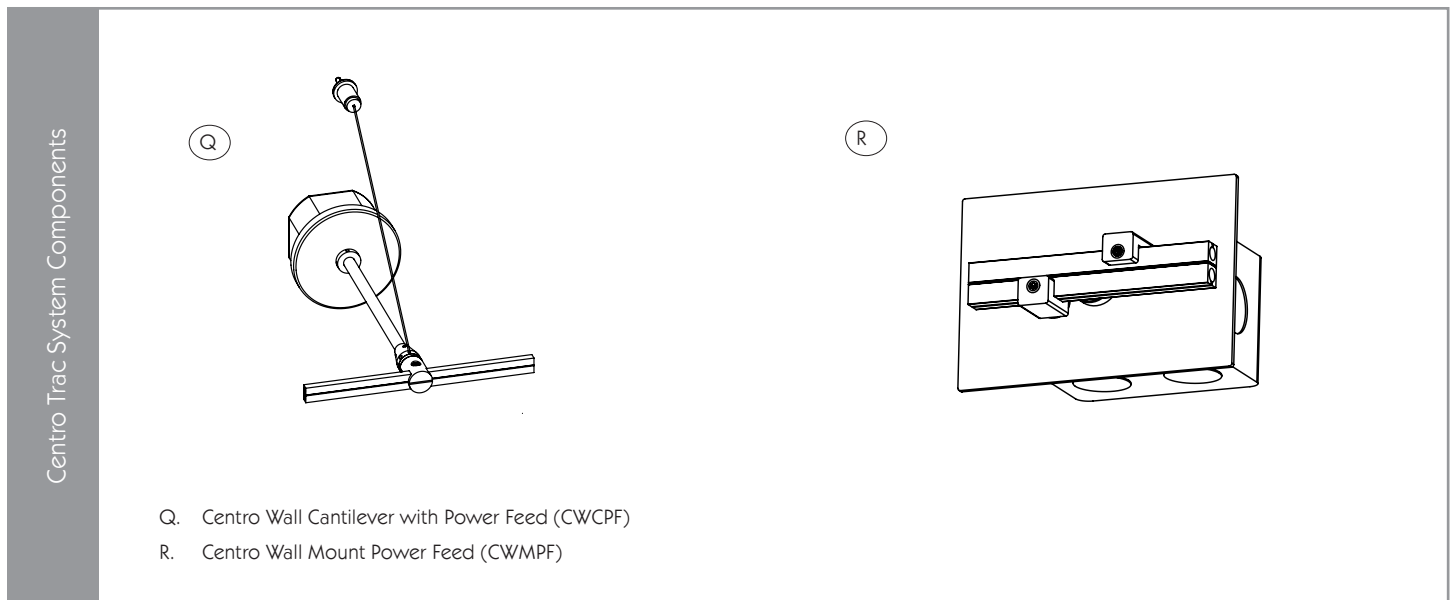
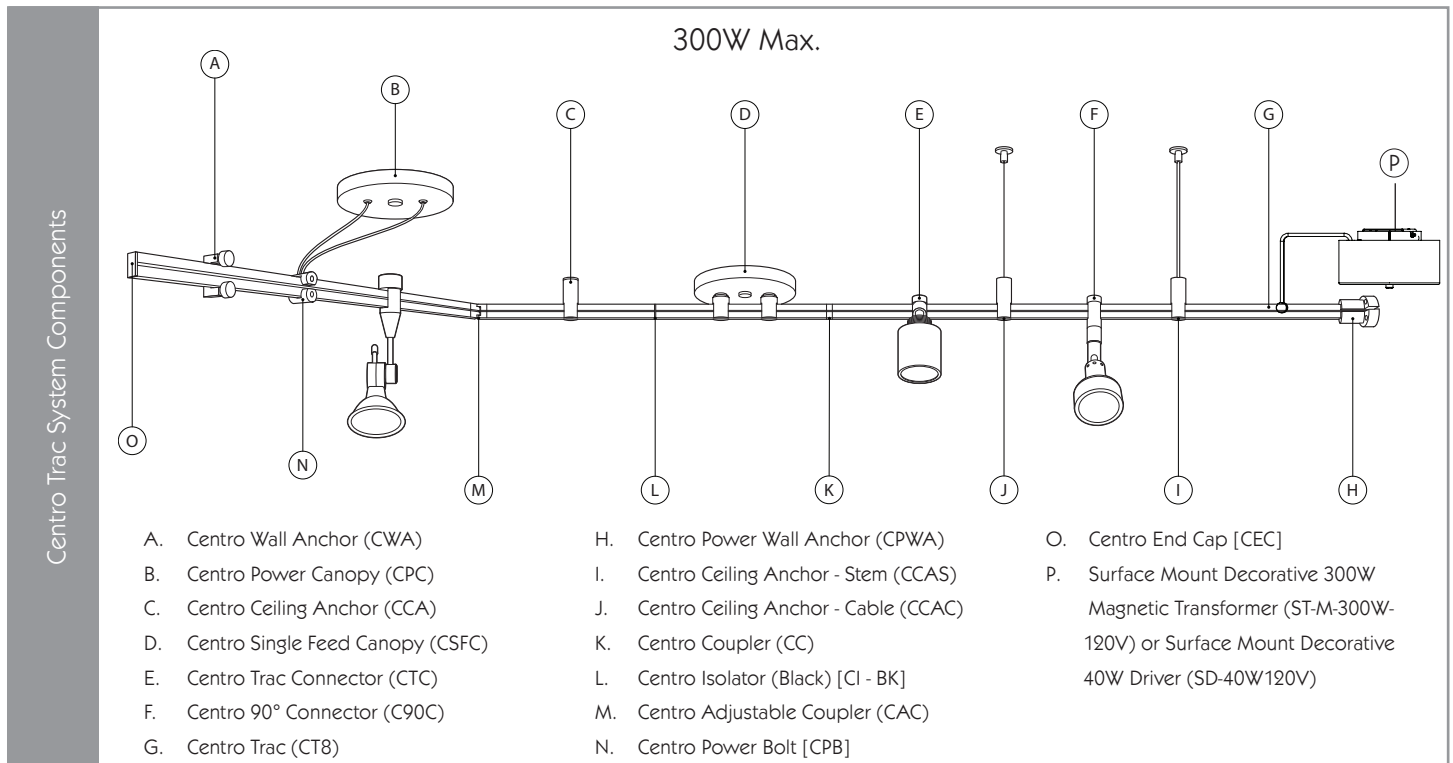
Tegan Lighting system hardware is intended for installation in accordance with the National Electric Code and local regulations. To ensure full compliance with local codes and regulations, check with your local electrical inspector before installation.

1. CAUTION: Read all instructions.

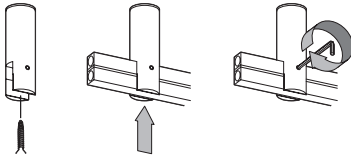
- Do not install any Spotlight closer than six inches from any curtain or similar combustible material.
- Do not install this system in a damp or wet location.
- Turn off electrical power before modifying the lighting system in any way.
- To reduce the risk of fire and burns, do not install this system where exposed bare conductors can be shorted or contact any conductive materials. Do not conceal or extend exposed conductors through a building wall.
- Use minimum AWG #10 for 25 amp load on secondary side of power supply. No part of the secondary system should be grounded.
- Most problems with low voltage lighting systems are due to poor or loose connections at the Power Supply or the Power Feed that connects power to the system. Ensure all connections are tight. Loose connections can cause overheating, arcing and a potential fire risk.
- **Oil Rubbed Bronze Trac, due to its weight, requires structural support every 24" (.61m)** (vs. every 48" for Aluminum).
- This system is for 12VAC or 24VDC Spotlights (**12VAC ONLY for Oil Rubbed Bronze finish**); it must be used with an appropriate 12VAC or 24VDC power supply. Refer to Specification Sheets.
- Use only as described in these Tegan Lighting Installation Instructions. For 12VAC magnetic transformers, refer to transformer manufacturer installation instructions: [Q-Tran Instructions](#) or [SEBCO Instructions](#).
- Use only Tegan Lighting supplied accessories.
- Spotlights may be extremely hot, allow to cool before touching.
- For proper installation, have a qualified electrician install this product.
- This system must be wired and grounded in accordance standard accepted electrical installation practices, local codes, and ordinances.
- Wire supply connections must be made with U.L. or comparable testing agency-approved connectors.
- Regular cleaning of these products is important. Switch off at main supply and allow to cool before touching. Clean fittings with a soft damp cloth and allow to dry before reconnecting power supply.
- Turn off electrical power before modifying the lighting system in any way.

Centro Trac System (CT8) with Oculus LED Short Glare Shield (OSGS) Spotlights





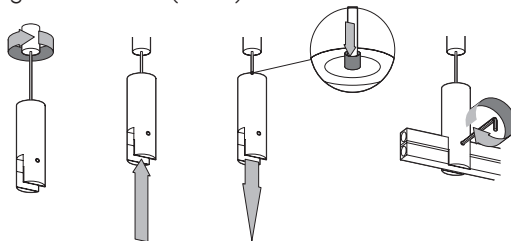
1. Centro Ceiling Anchor (CCA)



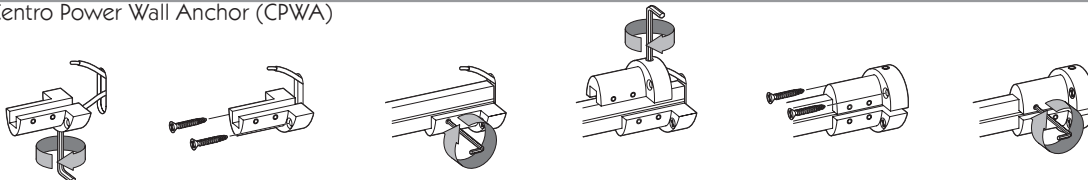
2. Centro Ceiling Anchor Stem (CCAS)



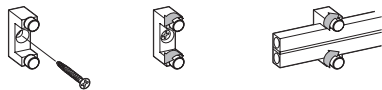
3. Centro Ceiling Anchor Cable (CCAC)



4. Centro Power Wall Anchor (CPWA)



5. Centro Universal Anchor (CUA)



1. **Centro Ceiling Anchor (CCA)**

- Attach Ceiling Anchor to ceiling every 48" (1.2m) for Aluminum finish; every 24" (.61m) for Oil Rubbed Bronze finish. Insert isolating washers (provided) between Ceiling Anchor and ceiling.
- Insert Centro Trac and secure with Allen key.

2 & 3. **Centro Ceiling Anchor Stem/Cable (CCAS/CCAC)**

- Attach Ceiling Anchor to ceiling every 48" (1.2m) for Aluminum finish; every 24" (.61m) for Oil Rubbed Bronze finish.
- Fasten Ceiling Anchor base to ceiling with threaded screw.
- Attach Ceiling Stem/Cable to Ceiling Anchor base, inserting isolating washers (provided) between Stem/Cable Anchor and ceiling.
- Cable height can be adjusted: To raise, pull cable through connector and cut. To lower press and hold catch on top of connector and slide cable through then cut.
- Insert Centro Trac and secure with Allen key.

4. **Centro Power Wall Anchor (CPWA)**

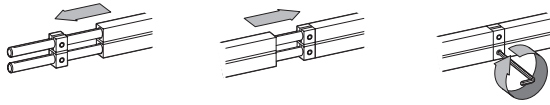
- Use a Trac section as a separator to accurately position the two halves of the anchor. With the two halves sandwiched onto the sample Trac, mark the four mounting holes to accommodate the entry of the Power Feed wires into the rear of the anchor halves. When mounting on a metal surface, a plastic washer must be used to separate the metal surface from the metal connector to prevent a short.
- Connect wire to bottom component using Allen key and fix to wall using screws.
- Install isolating washer (provided) between the Wall Anchor and wall.
- Insert Centro Trac and secure in place using two set screws.
- Repeat process for top component.

5. **Centro Universal Anchor (CUA)**

- Universal Wall Anchors must be placed at a maximum of 42" (1.06m) on straight Trac.
- Lift the Trac up to the Universal Wall Anchors and fasten securely with the Universal Wall Anchor thumb screws. Multiple sections of Trac can be installed simultaneously if the entire Trac is lifted by several people. If this is not possible, secure the Trac to the Wall Anchors piece by piece.
- Properly seat and securely fasten the Power Feeds to the Trac.
- SECURELY attach the lighting fixtures to the Trac with the power OFF.



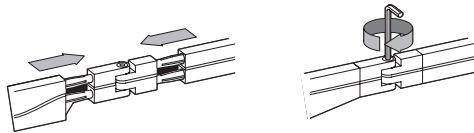
6. Centro Coupler (CCA)



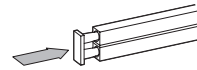
7. Centro Isolator - Black (CI-BK)



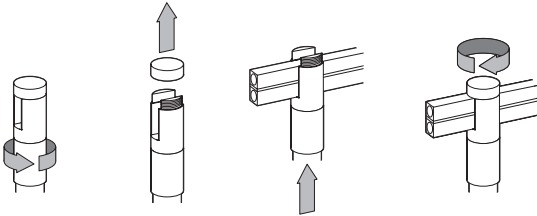
8. Centro Adjustable Coupler (CAC)



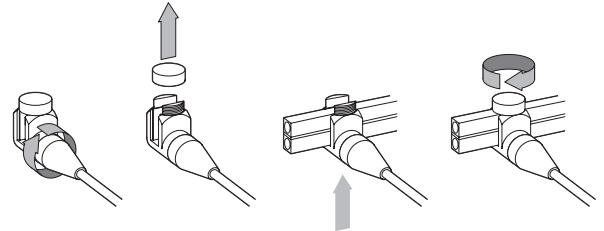
9. Centro End Cap (CEC)



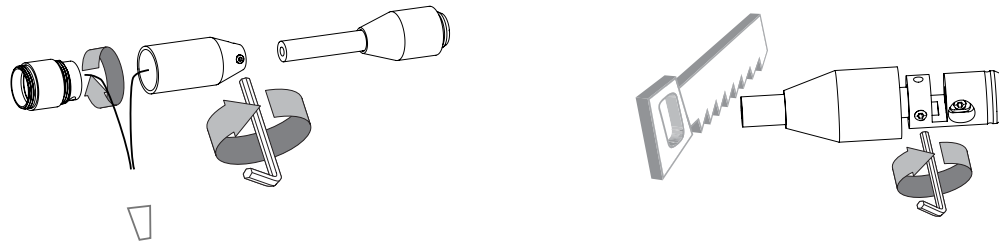
10. Centro Trac Connector (CTC)



11. Centro 90° Connector (C90C)



12. 72" Spot Extension (SpotExt72) & Double Spot Extension (DblSpotExt72)



6. Centro Coupler (CCA)

- Insert between Centro Trac sections.
- Secure with Allen key.
- NOTE: Maximum total run for Centro Trac is 50 ft.

7, 8. Centro Isolator & Centro Adjustable Coupler (CI-BK) & (CAC)

- Insert Isolators and Couplers between Centro Trac sections.
- Isolators pressure fit into the Trac. They are not mechanically strong, like a normal metal coupler, and should be ideally located adjacent to a wall or ceiling bracket.
- Grasp Adjustable Coupler and Centro Trac firmly and push coupler in place, or lightly tap coupler in place with a rubber mallet. The Coupler is designed to form a very tight connection with Centro Trac. If the connection seems loose, spread the Coupler insertion posts slightly and push the Coupler in place for a tighter fit. Tighten the screw at the Coupler's fulcrum to lock the Trac at the desired angle.
- NOTE: Maximum total run for Centro Trac is 50 ft.

9. Centro End Cap (CEC)

- Insert into both ends of Centro Trac. This is required for proper electrical operation.

10, 11. Centro Trac Connector & Centro 90° Connector (CTC) & (C90C)

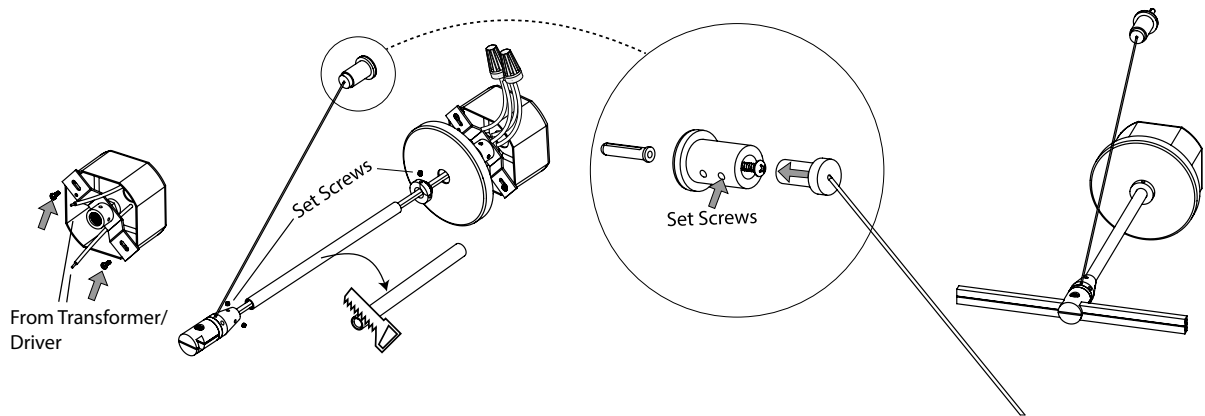
- Attach CTC and/or C90C to Centro Trac by unscrewing cap on Connector, inserting Trac into Connector slot, and rescrewing Connector cap.
- Attach Spotlight to CT/C90C Connector using Twist & Click mechanism.

12. 72" Spot Extension (SpotExt72) & Double Spot Extension (DblSpotExt72)

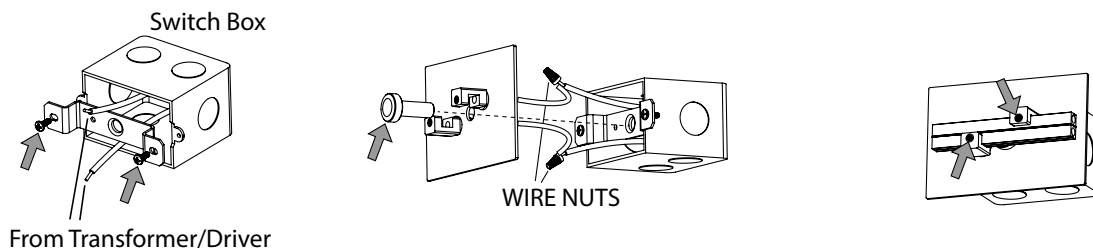
- Unscrew Connector bottom and remove wire nut. Then use allen key to remove the tapered shroud.
- With allen key at opposite (male) end, loosen set screws that affix stem. Remove stem from male end, and slide out wires.
- Cut and debur stem to appropriate length and re-assemble.
- Minimum length of Extension Stems after cutting should be 5.5", including the connector.



13. Centro Wall Cantilever with Power Feed (CWC PF)



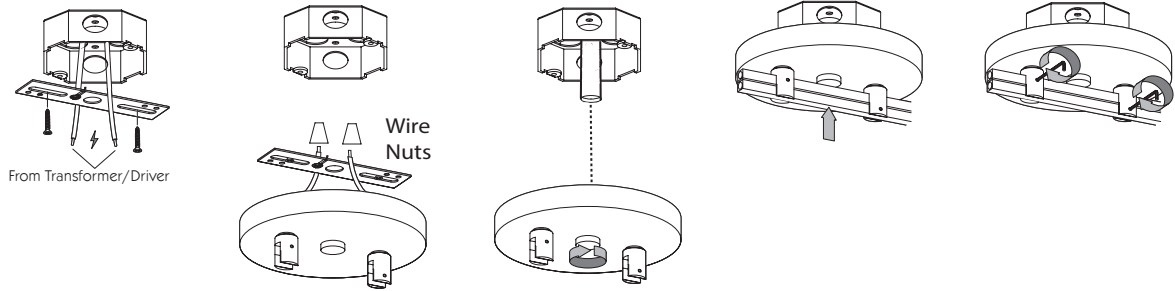
14. Centro Wall Mount Power Feed (CWMPF)



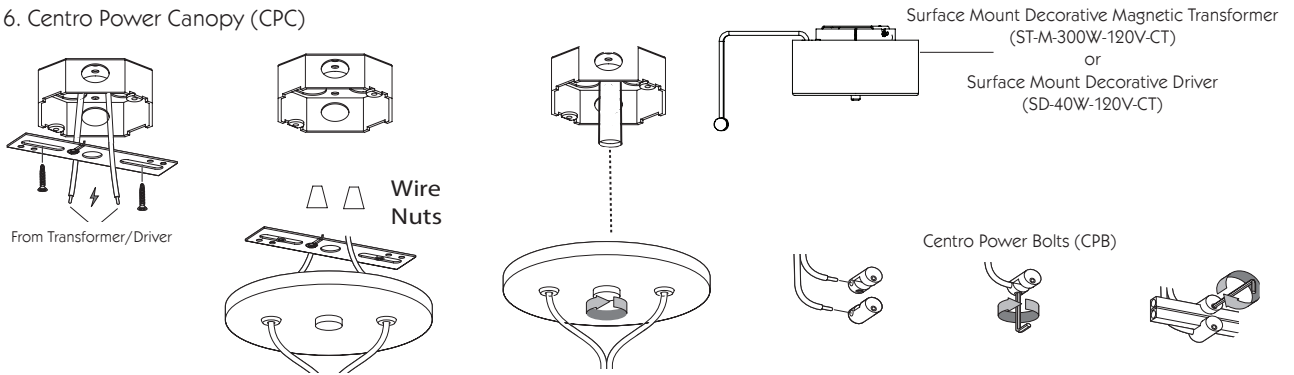
13. **Centro Wall Cantilever with Power Feed (CWC PF)**
 - Attach strap to Junction Box with wires from remote Transformer/Driver.
 - Loosen set screws to remove and shorten tubular stem. Debur edges. Also shorten wires.
 - Thread wires through the stem, and through finial and canopy and strap.
 - Make wire connections with wire nuts.
 - First, tighten canopy against strap with finial. Then, fasten stem with the set screws at both ends.
 - Remove/attach wire rope near track with set screws to cut to length.
 - Ensure stem is level by adjusting the end attached at the wall in or out, fixing with set screws.
 - Slide track into contacts and tighten with top screw.

14. **Centro Wall Mount Power Feed**
 - Attach strap to **Horizontal** switch box (or switch mud ring) using screws provided.
 - Connect wires from transformer/driver to the wires on the CWMPF with wire nuts. .
 - Affix CWMPF to the strap using the central finial.
 - Insert Centro Trac into connectors and tighten set screws with wrench.

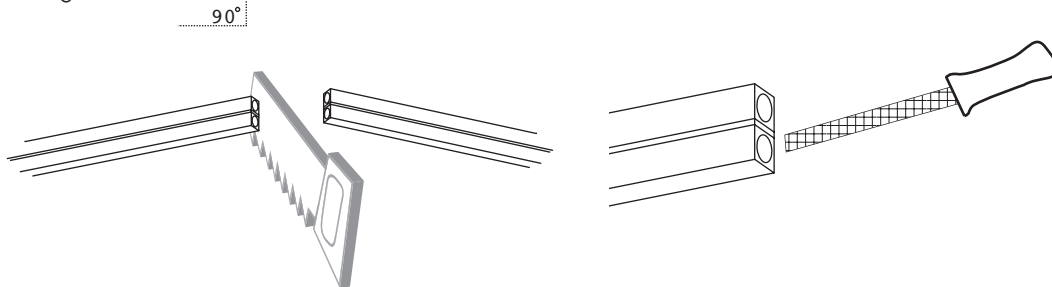
15. Centro Single Feed Canopy (CSFC)



16. Centro Power Canopy (CPC)



17. Cutting Track



15. Centro Single Feed Canopy (CSFC)

- Attach ceiling plate in place using screws provided and wire up Single Feed Canopy.
- Affix to standard electrical 4" J-box by screwing in center finial.
- The CSFC is a support point of structure when combined with CCA. For additional support, attach CCA to ceiling every 48" (1.2m) for Aluminum finish; every 24" (.61m) for Oil Rubbed Bronze finish.
- Insert Centro Trac and secure using both connectors.
- Use appropriate wire nuts per gauge used.

16. Centro Power Canopy, Surface Mount Transformer/Driver & Centro Power Bolts (CPC) & (CPB)

- Attach ceiling plate in place using screws provided and wire up Power Canopy.
- Affix to a standard electrical 4" box by screwing in center finial.

- Connect cables to Centro Power Bolts (CPB) and attached to Centro Trac.
- The Decorative Surface Mount Transformer/Driver mounts to standard 4" J-Box and connects to Centro Trac with Power Bolts.

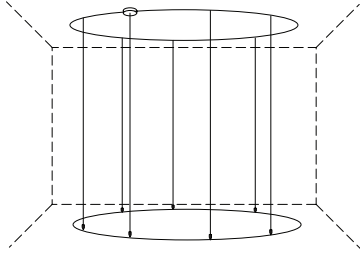
17. Cutting Track

- Make sure the Trac is cut true to obtain square 90° ends. File off the rough end with a flat file. File the two end holes with a small round file to remove any burrs.
- Remove any metal shavings between the rails with compressed air.
- Protect finish surface when cutting.
- Improperly cut Trac may result in a short across the two conductors. Properly cut and cleaned ends will ensure proper operation and give the Trac a clean profile when couplers are inserted.

Factory Bending

Tegan Lighting will factory-bend Trac for all applications. Factory bending will ensure that the Trac is bent exactly to specification. For factory bends with more than one radius, all orders or requests for quotations must be accompanied by an AutoCad drawing that details both the radius and arc length of all curves.

Curved Trac



Follow the steps below to aid in positioning ceiling mounts:

1. Install the Power Supply and Power Feed Canopy.
2. Assemble the Trac on the floor directly below the planned installation position on the ceiling, as per the drawing provided by Tegan Lighting.
3. Hang a Plum Bob from the installed Power Feed Canopy and fine tune the position of the Trac on the floor to be directly under the canopy.
4. Attach mounting hardware as per the provided drawing.
5. Use the Plum Bob to reflect the locations on the Trac back up to the ceiling.



Troubleshooting

Problem: Lights do not come on.

Step 1: Turn power off and check for a tripped breaker on the Power Supply or breaker panel. If a breaker at either location has been tripped, reset the breaker and try turning the system on again.

Step 2: Using a volt meter, check for 120 volts input to the Power Supply. If there are 120 volts of input to the Power Supply, proceed to Step 3.

Step 3: Disconnect the 12v feed from the Power Supply to the lighting system. Using a volt meter, confirm that the Power Supply is operating at 12 volts.
a. If the Power Supply is operating correctly, proceed to Step 4.
b. If the Power Supply is not working, contact Tegan Lighting tech support at 415-504-3536.

Step 4: One common cause of a short is mounting hardware that is mounted to metal (without proper isolation) or hardware mounting screws that sink through and touch a common metal structure. Visually inspect the Trac mounting hardware and mounting surface for insufficient isolation. If the Trac appears to be mounted correctly, proceed to Step 5.

Step 5: Conduct a continuity test on the Trac system.
a. Disconnect the 12v feed from the Power Supply to the lighting system, if not already done.
b. Remove the lamps from all of the fixtures (do not remove the fixtures yet).
c. Test for continuity between the busbars of the 12v lighting system (positive continuity confirms a short in the system).
d. If there is a short, remove one fixture from the system and re-test for continuity.
e. Continue removing one fixture at a time and retesting until continuity is broken. If continuity is not broken, proceed to Step 6.
f. The last fixture removed is possibly damaged or was installed incorrectly. Many Tegan Lighting fixtures are designed to conduct 12v throughout the entire body of the fixture. If the fixture was installed incorrectly, twisted, or stressed in some way, it is possible that it was creating a temporary short.
g. Try installing the fixture again.
h. If the fixture (without lamp installed) continues to short the system, please return it for a replacement or repair. Call the factory for a Return Goods Authorization.

Step 6:
a. If the Power Supply is disconnected from the system;
b. If all the fixtures have been removed in the course of the continuity test;
c. And if the continuity test still shows positive continuity:

Then this indicates that the mounting hardware or system conductors are shorting. The screws used to install the hardware to the surface are touching a common metal structure under the surface, or the Trac connectors are forming a poor connection. Check to make sure that all mounting hardware is suitably mounted and that all Trac connectors are properly installed and tightened.

Special attention for Centro Trac - If the Trac has been cut in the field, it is possible that the cutting action could create a short across the two conductor halves of the Trac. Check that metal dust or rough edges are not creating the short at the point of the field cut.

Problem: Lights were installed and operational with no problems. A few (days/weeks) pass and the system has now started to shut itself off. Lights usually go off after a few hours of operation and the problem is increasing in frequency.

Action: This situation is indicative of a bad 12 volt connection between the Power Supply and the Duplex Cable. The connection is heating up, oxidizing and will eventually destroy itself. Check all 12v connections between the Power Supply and the Duplex Cable. Inspect the Power Cable for discoloration or deterioration. If damage is found, rewire with a fresh new end.

Note: All 12 volt connections must be tight due to the associated high current.



Troubleshooting (cont'd)

Problem: Lamps are burning out frequently.

Action: Short lamp life may be due to over voltage. Check voltage using a meter to ensure proper voltage. A lamp rated for 12v operates optimally from 11.5v to 12 volts. Lamp life falls dramatically over 12 volts. (An MR-16 lamp can burn out in a few minutes if receiving 15 volts.)

There are several ways to correct for Over Voltage.

1. The most efficient and accurate way is to install a Tegan Lighting Power Supply. This will ensure that the proper voltage is consistently delivered to the lighting system.
2. Replace the light switch with a dimmer switch. This typically cuts 5% of the output voltage when turned fully on.
3. Ensure that the lighting is on a dedicated 120v line at the panel. If the lighting shares the line with a large appliance, there may be voltage spikes as the appliance shuts off.

Note: If the lighting system and fixtures are very high up or inaccessible you may elect to run them at a slightly lower voltage than 12 volts. This will be slightly dimmer but will greatly increase the lamp life.

Problem: The breaker at the main panel trips when turning lights on.

Action: The breakers used on the lighting circuits should be rated for inductive loads. The use of breakers not rated for inductive loads may result in nuisance tripping.

