



OWNER'S MANUAL

ElectroTrack Kit

Installation Instructions

(65 Amp & 120 Amp)



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1.0 Ratings and Specifications

| | |
|--------------------------------------|----------------------|
| Maximum Collector Speed: | 390 FPM |
| Maximum Amps Allowed: | 65 Amp or 120 Amp |
| Actual Length of 1 Section of Track: | 12' 11-3/8" |
| Maximum Distance Between Hangers: | 79 Inches |
| Limit Heat Exposure: | Range = 0°F to 155°F |

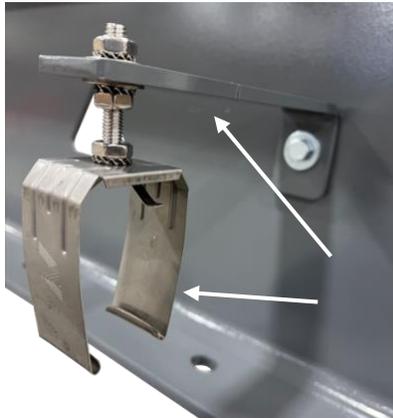
▲ IMPORTANT NOTE: ElectroTrack must be shielded from direct sunlight and very high temperatures



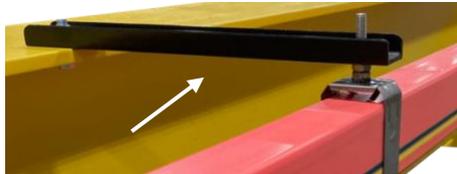
2.0 Installing Your Starke ElectroTrack Kit

2.1 Read these instructions first and then unpackage all the parts of your ElectroTrack Kit. Get familiar with the different parts and be looking for the bolt-on ElectroTrack track runway hangers. The style of ElectroTrack brackets can vary with different systems. Typical runway hangers shown.

Optional channel brackets can be bolted or welded onto your bridge or runway beam. (Sold separately.)



2.1.1 ElectroTrack Hanger on Bracket



2.1.2 Channel Bracket Style

▲IMPORTANT NOTE: In some cases, ElectroTrack hangers can be bolted directly to the I-Beam without using any type of runway brackets



2.1.3 ElectroTrack Hanger Bolted Directly to I-Beam

2.2 If the runway ElectroTrack brackets and ElectroTrack hangers & track are not pre-assembled on your beam, use the following instructions to start assembly. Bolt the ElectroTrack bracket through the hole on your I-Beam.

Channel style brackets only. With C channel legs of the channel bracket pointing up, bolt the channel bracket to your runway. If there is no hole on your beam, you must drill holes as necessary.

Spacing: If no holes exist on your beam, space the ElectroTrack brackets (maximum spacing 79") evenly along the beam. Attach your ElectroTrack hangers to the brackets. Do not tighten hardware at this time.



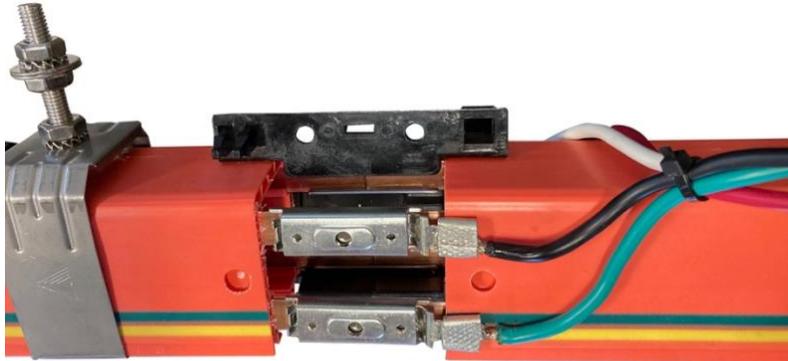
2.2.1 ElectroTrack Hangers

2.3 At the end of the ElectroTrack system that will be closest to your building power supply wiring, install one full length of the Starke ElectroTrack to be used for "incoming power". (Green & Yellow color stripes should be facing away from the I-Beam.) Drill a ¼" hole in each Copper Conductor Rail as shown below to connect incoming power wiring. At this point just drill the holes for the wires to connect to later.



2.3.1 End of ElectroTrack System

2.3a For long runway systems a “Center Power Feed” option is available. (See Parts List)



2.3a.1 Center Power Feed Kit

▲ IMPORTANT NOTE: Recommended for Runway Systems Longer than 200'

Optional – Center Power Feed includes:

- (1) Splice Covers (shown)
- (2) Hardware
- (4) Copper Center Feed Connectors (1 shown)
- (1) Extra End Cap



2.3.2 Center Feed Part Numbers:

SET-90069 (65 Amp)

SET-90088 (120 Amp)

2.4 Leaving a 4-inch to 6-inch gap, install the second section of ElectroTrack making sure the grounding conductor color stripes are lined up.

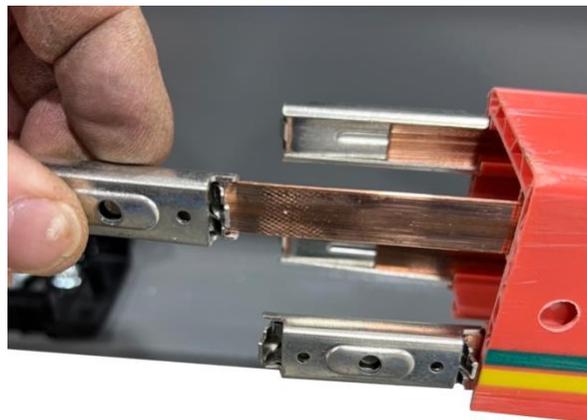


2.4.1 Gap Between ElectroTrack Sections

▲IMPORTANT NOTE: Each orange track is marked with a yellow and green line. This line indicates where the ground conductor is located.

2.5 Press a Copper Splice Connector onto the dimpled end of each of the 4 Copper Conductors as far as it will go.

▲ IMPORTANT NOTE: Copper Splice Connector (SET-90072 65 Amp) body goes to the outside of the Copper Conductor, leaving a smooth transition on the inside face of the Copper Splice Connector as shown below.



2.5.1 Adding the Copper Splice Connector

2.6 Push the next full track section of ElectroTrack Copper Conductors into the Copper Splice Connectors installed in step 1.5. Once all 4 Conductors are started into the corresponding Copper Splice Connector, use a needle nose plier to work the conductors the rest of the way into the connectors fully. Copper Conductor Ends should be in tight contact.



2.6.1 Copper Conductor Ends on Fully and in Tight Contact

2.7 Place one half of a Plastic Splice Cover around the Copper Splice Connectors and tight to the orange track. The pins on the cover should align with holes in the orange track. Press the other half of the Plastic Splice Cover into place bringing rails together and bolt Splice Cover. Repeat steps as necessary until the track is complete.



2.7.1 Rails Together



2.7.2 Splice Cover Pin



2.7.3 Plastic Splice Cover Connecting Rails Together

2.8 Place the End Power Feed housing on the “Incoming Power” end of the rail.



2.8.1 End Power Feed Housing Attached

2.9 Place a bolt through each Copper Conductor Hole so that the bolt head is between the Conductors.



2.9.1 Bolt Head Between the Conductors

2.10 Place a wire terminal ring over the bolt on the outside of the conductor followed with the nut.

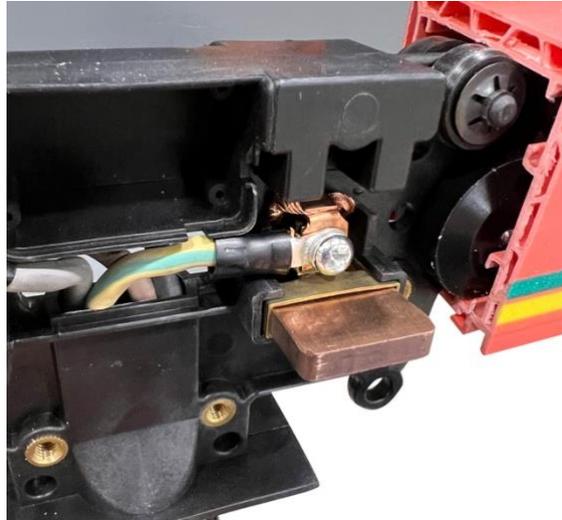
2.11 ▲ **IMPORTANT NOTE:** First make sure the power source is disconnected and verified “off” with a voltage tester. Then connect the supply wire to the conductors. Starting with grounding terminal (green/yellow stripe) attach green wire then proceed clockwise with black, white, then red (red opposite to ground as shown above) Tighten the cord grip (not included) and tighten the connection nuts and bolts. Then slide the End Power Feed cover in place and install the cover.

2.12 The Tow Bar Mounting Bracket (typically black) may occasionally be mounted in a shipping position to prevent damage during shipping. Once your bridge is set in place you will need to relocate the Tow Bar Mounting Bracket so that the silver Tow Bar will fit around the collector. Shipping position shown.



2.12.1 Tow Bar Arm in Shipping Position

2.13 Verify power is still off. At the other end of the ElectroTrack install the 40 Amp Single Collector. Make sure the grounding brush (yellow wire w/green stripe) is aligned with the ground terminal of the ElectroTrack. Next, push brushes in and slide Collector into ElectroTrack. Depress the remaining brushes and slide 40 Amp Single Collector all the way in.



2.13.1 40 Amp Single Collector Installed

2.14 Bridge and Collector should then be lined up and the Tow Bar that guides the Collector down through the ElectroTrack can be attached to the bridge or trolley and surround the Collector as shown.



2.14.1 Tow Bar Arm Attached to the 40 Amp Single Collector

2.15 Install the ElectroTrack End Cap on the end of the system.



2.15.1 ElectroTrack End Cap Installed

2.16 Tighten all hardware at this time.

3.0 Parts Lists

3.1 Parts List – 65 Amp

| Part Description | Part Number |
|---|-------------|
| 13ft Conductor Track (orange) | SET4-65-13 |
| 40 Amp Single Collector | SET-90066 |
| Single Tow Arm | SET-90067 |
| End Power Feed Kit | SET-90068 |
| Center Power Feed Kit (see page 6) | SET-90069 |
| Plastic Splice Cover | SET-90071 |
| Copper Splice Connectors | SET-90072 |
| Hole Punch Tool for Conductors (not required) | SET-90073 |
| End Cap | SET-90074 |
| ElectroTrack Hanger with Hardware | SET-90075 |
| 16" Channel Bracket | SET-90077 |
| 18" Channel Bracket | SET-90078 |
| 26" Channel Bracket | SET-90080 |

▲ IMPORTANT NOTE: If tandem collectors are required, simply order (2) single collectors and (2) single tow arms.

3.2 Parts List – 120 Amp

| Part Description | Part Number |
|---|-------------|
| 13ft Conductor Track (orange) | SET4-120-13 |
| 40 Amp Single Collector | SET-90066 |
| Single Tow Arm | SET-90067 |
| End Power Feed Kit | SET-90068 |
| Center Power Feed Kit (see page 6) | SET-90069 |
| Plastic Splice Cover | SET-90083 |
| Copper Splice Connectors | SET-90081 |
| Hole Punch Tool for Conductors (not required) | SET-90073 |
| End Cap | SET-90074 |
| ElectroTrack Hanger with Hardware | SET-90075 |
| 16" Channel Bracket | SET-90077 |
| 18" Channel Bracket | SET-90078 |
| 26" Channel Bracket | SET-90080 |

▲IMPORTANT NOTE: If tandem collectors are required, simply order (2) single collectors and (2) single tow arms.

4.0 Calculating Amp Draw for Crane Systems

4.1 NEC 610.14

4.1.1 Single Motor. For one motor, 100 percent of motor nameplate full load ampere rating shall be used.

4.1.2 Multiple Motors on Single Crane or Hoist. For multiple motors on a single crane or hoist, the minimum ampacity of the power supply conductors shall be the nameplate full-load ampere rating of the largest motor or group of motors for any single crane motion, plus 50 percent of the nameplate full-load ampere rating of the next largest motor or group of motors, using that column of Table 610.14(A) that applies to the longest time rated motor. (ref. NEC Table 610.14(A) online if needed)

4.1.3 Multiple Cranes or Hoists on a common Conductor System. For multiple cranes, hoist, or both, supplied by a common conductor system, calculate the motor minimum ampacity requirement for each crane as defined in 610.14E above, add them together, and multiply the sum by the appropriate demand factor from Table 610.14E.

| 4.1.1 Table 610.14 (E) | |
|----------------------------|---------------|
| Number of Cranes or Hoists | Demand Factor |
| 2 | 0.95 |
| 3 | 0.91 |
| 4 | 0.87 |
| 5 | 0.84 |
| 6 | 0.81 |
| 7 | 0.78 |



Starke Products Warranty

1 Year (12 Month) Parts & Labor Warranty

Unless otherwise specified, Starke guarantees that our products are free from material defects in design and workmanship under normal use, proper maintenance, and service.

This warranty is strictly limited to 12 months for single shift operation or 2,000 hours after installation, or 14 months after shipment, whichever is shorter. Within ten days after defect is found, warrantee must deliver a written notice to Starke providing defect information. All requested warranty information must be received promptly by Starke in no more than 5 business days.

Customer is responsible for all shipping charges on returned/warrantable items. Starke will cover the repair (parts and labor) at no charge or provide a replacement item at Starke's discretion.

This warranty does not cover defects or damage caused by acts of God, unusual wear and tear, improper use, or improper maintenance by the user. No responsibility for consequential damage is expressed or implied, and the responsibility under this warranty/guaranty is limited to the repair or replacement of the defective materials. Repair or replacement of the item is fully at the discretion of Starke.

ALL OTHER REPRESENTATIONS, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION OR USE OF THE PRODUCT ARE SPECIFICALLY DISAVOWED, AND IN NO EVENT SHALL STARKE BE LIABLE TO BUYER, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES

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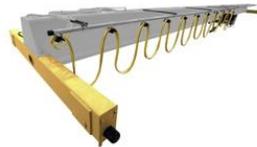


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