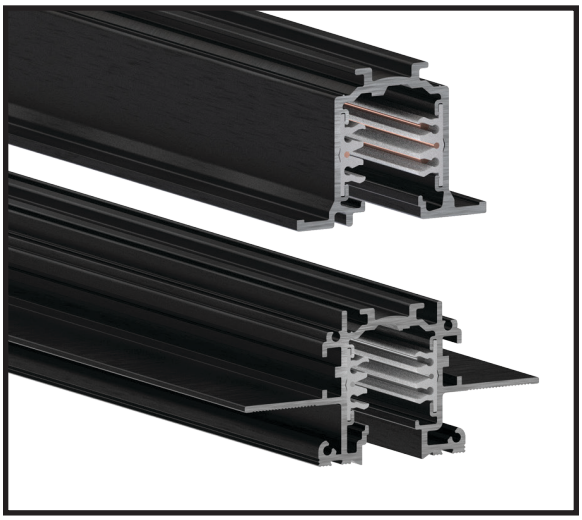
SPECTRAC RECESSED

120V & 277V 2-CIRCUIT TRACK WITH DATABUS - 0-10V, DMX, DALI



Times Square Lighting's **SpecTrac Recessed** features a low voltage busway for transmitting a DMX, 0-10V, or DALI control signal. This track bed will also operate phase dimming (leading and trailing edge). SpecTrac is a two circuit/two neutral lighting track that features a robust extrusion, high quality connectors and components, and multiple mounting options.

FEATURES

- Available in trimmed or trimless track
- Field cuttable housing
- Extruded, recycled aluminum housing
- Milled grounding bar provides continuous ground contact
- Two independent circuits, 120V or 277V, 20 amp max each
- Black or white finish available

TRIMMED TRACK

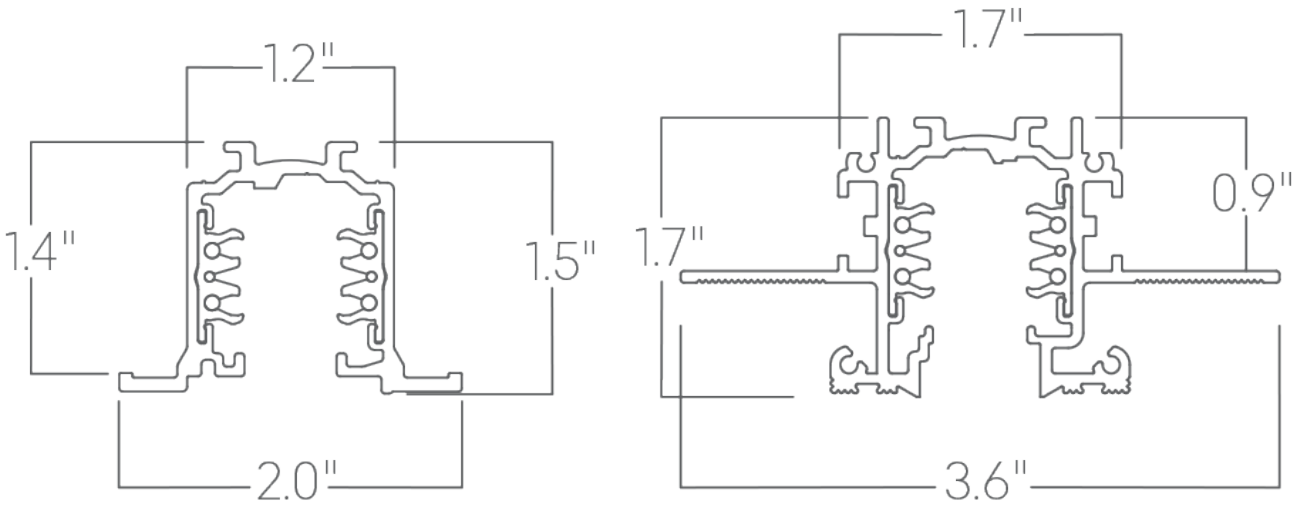
PART NUMBER	FINISH	DESCRIPTION
RDT4	B = Black W = White	4' Trimmed 120V Track
RDT8	B = Black W = White	8' Trimmed 120V Track
HRDT4	B = Black W = White	4' Trimmed 277V Track
HRDT8	B = Black W = White	8' Trimmed 277V Track

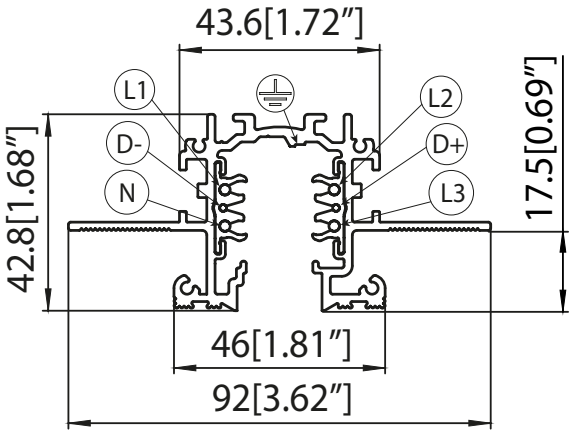
TRIMLESS TRACK

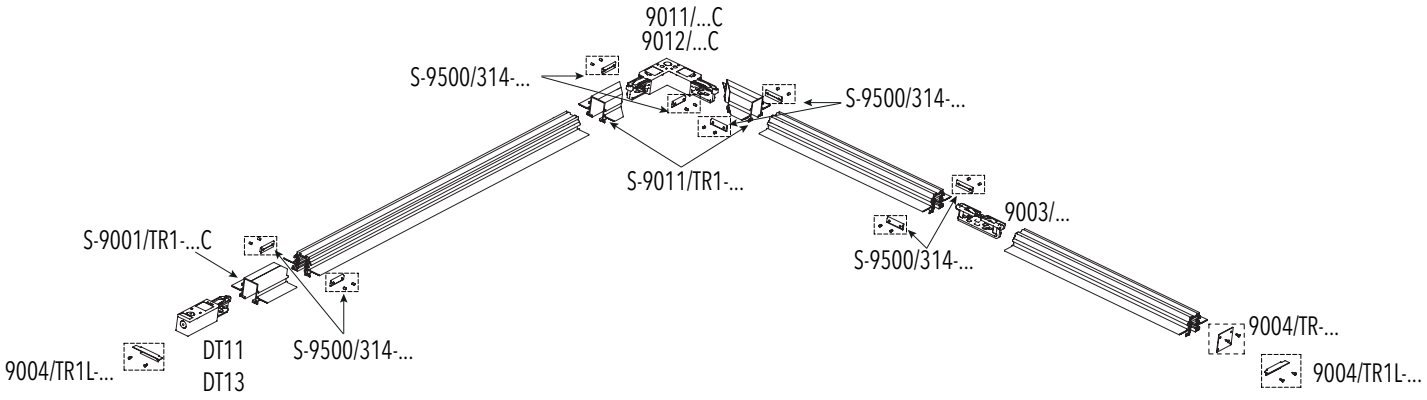
PART NUMBER	FINISH	DESCRIPTION
9000-UL4/_-TR1-120	B = Black W = White	4' Trimless 120V Track
9000-UL4/_-TR1-277	B = Black W = White	4' Trimless 277V Track
9000-UL8/_-TR1-120	B = Black W = White	8' Trimless 120V Track
9000-UL8/_-TR1-277	B = Black W = White	8' Trimless 277V Track

SPECTRAC RECESSED

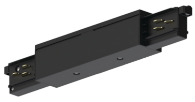
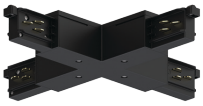
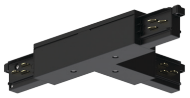
120V & 277V 2-CIRCUIT TRACK WITH DATABUS - 0-10V, DMX, DALI







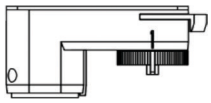
FEEDS & JOINERS

PART NUMBER	FINISH	DESCRIPTION	
DT11 (120V) **HDT11** (277V)	B = Black W = White	L-End feed polarity right/ earthing left	
DT13 (120V) **HDT13** (277V)	B = Black W = White	Mirror End Feed	
DT14 (120V) **HDT14** (277V)	B = Black W = White	Middle Feed	
DT21	B = Black W = White	Joining corner	
DT34 (120V) **HDT34** (277V) * See Page 6 for additional polarities.	B = Black W = White	L-feed polarity internal/ earthing external	
DT38 (120V) **HDT38** (277V) * Not available on trimless.	B = Black W = White	X-Feed	
DT40 (120V) **HDT40** (277V) * See Page 6 for additional polarities. * Not available on trimless.	B = Black W = White	T-feed polarity external left/earthing internal right	
S-9500/314-_	B = Black W = White	Reinforcing bracket for joining connector	
DT11-TERM (120V) **HDT11-TERM** (277V)	B = Black W = White	Data Terminator - Used to terminate DMX configuration. 120 Ohm resistor installed.	
DT13-TERM (120V) **HDT13-TERM** (277V)	B = Black W = White	Data Terminator Mirror - Used to terminate DMX configuration. 120 Ohm resistor installed.	

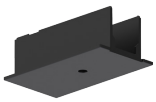
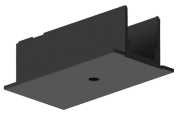
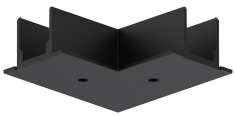
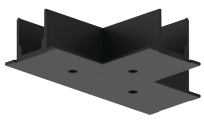
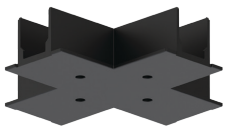
SPECTRAC RECESSED

120V & 277V 2-CIRCUIT TRACK WITH DATABUS - 0-10V, DMX, DALI

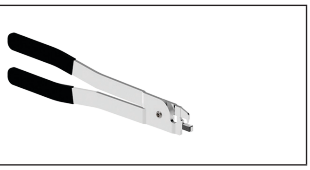
FEEDS & JOINERS CONTINUED...

PART NUMBER	FINISH	DESCRIPTION	
DT2-TERM (120V) **HDT2-TERM** (277V)	B = Black W = White	Terminating Resistor Retrofit	
DT2-PC (PowerCon) **DT2-ED** (Edison)	B = Black W = White	Convenience Outlet	
DT2-XLR5 (5-Pin XLR) **DT2-XLR3** (3-Pin XLR)	B = Black W = White	Convenience Data Outlet	

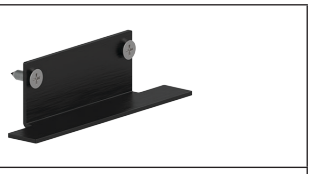
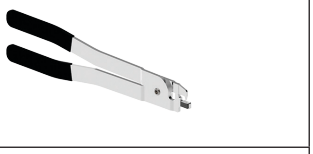
TRIMMED TRACK ACCESSORIES

PART NUMBER	FINISH	DESCRIPTION	
RDT11	B = Black W = White	Recessed cover for end feed (Compatible with trimmed recessed track only)	
RDT14	B = Black W = White	Recessed cover for middle feed (Compatible with trimmed recessed track only)	
RDT34	B = Black W = White	Recessed cover for L-feed (Compatible with trimmed recessed track only)	
RDT39	B = Black W = White	Recessed cover for T-feed (Compatible with trimmed recessed track only)	
RDT38	B = Black W = White	Recessed cover for X-feed (Compatible with trimmed recessed track only)	
RDTE	B = Black W = White	End cap for recessed track with locking screw	

TRIMMED TRACK ACCESSORIES CONTINUED...

PART NUMBER	FINISH	DESCRIPTION	
DTCT	B = Black W = White	Cutting tool for surface/ pendant and recessed with trim	

TRIMMLESS TRACK ACCESSORIES

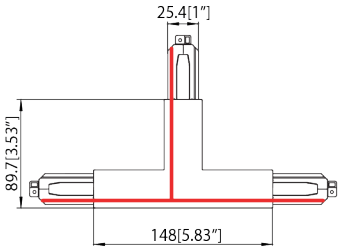
PART NUMBER	FINISH	DESCRIPTION	
9004/TR1L-_	B = Black W = White	End cap for trimless 120V track with locking screws (Goes with 9004/TR)	
9004/TR-_	B = Black W = White	End cap for trimless 120V track with locking screws (Goes with 9004/TR1L)	
S-9000/T-TR	B = Black W = White	Cutting tool for trimless track conductors	
S-9001/TRI-_	B = Black W = White	Recessed cover for end feed (Trimless)	
S-9011/TRI-_	B = Black W = White	Recessed covers (right + left) for joints (Trimless)	

SPECTRAC RECESSED

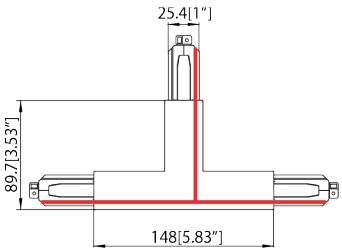
120V & 277V 2-CIRCUIT TRACK WITH DATABUS - 0-10V, DMX, DALI

POLARITY VIEW

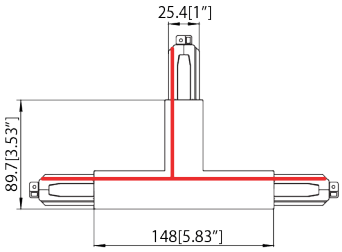
DT40
HDT40



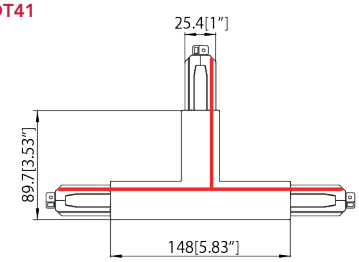
DT42
HDT42



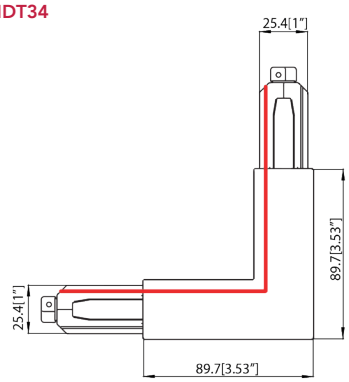
DT39
HDT39



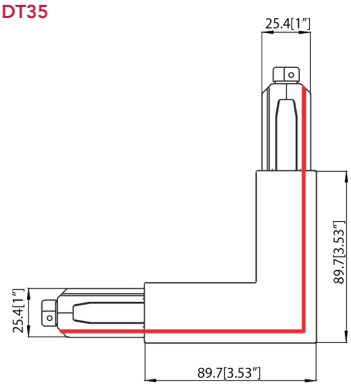
DT41
HDT41



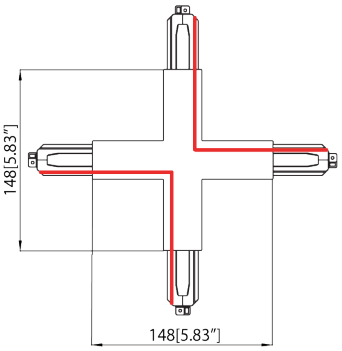
DT34
HDT34



DT35
HDT35

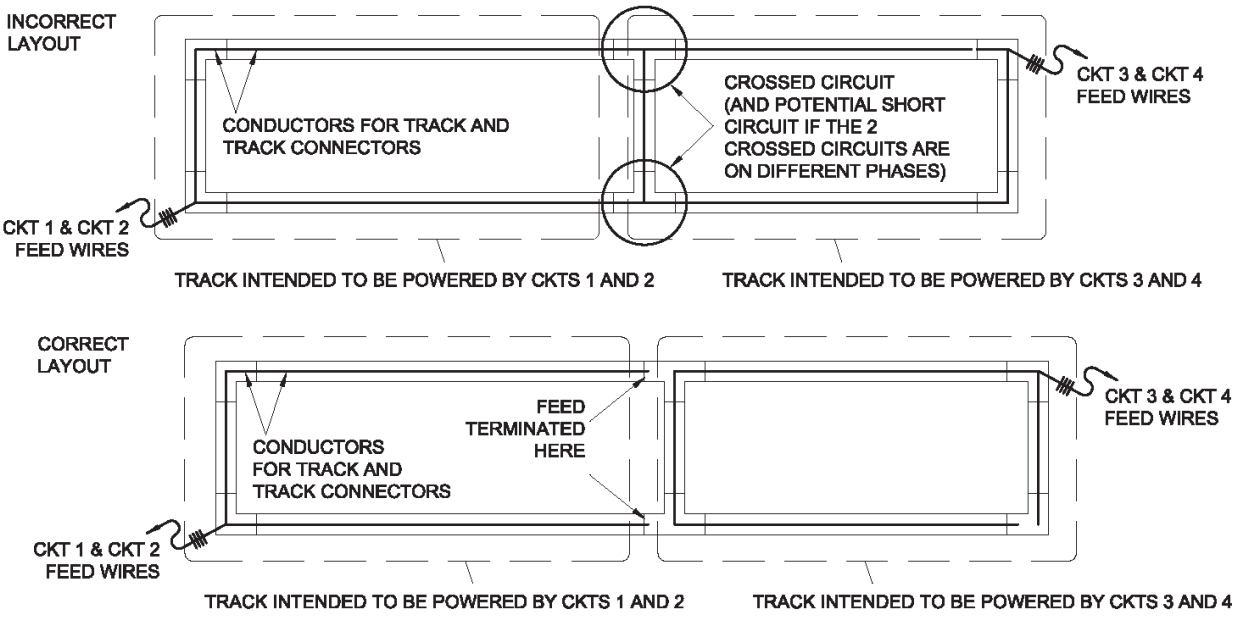


DT38
HDT38

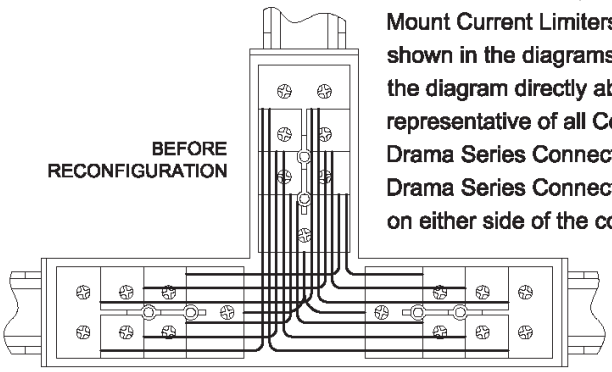


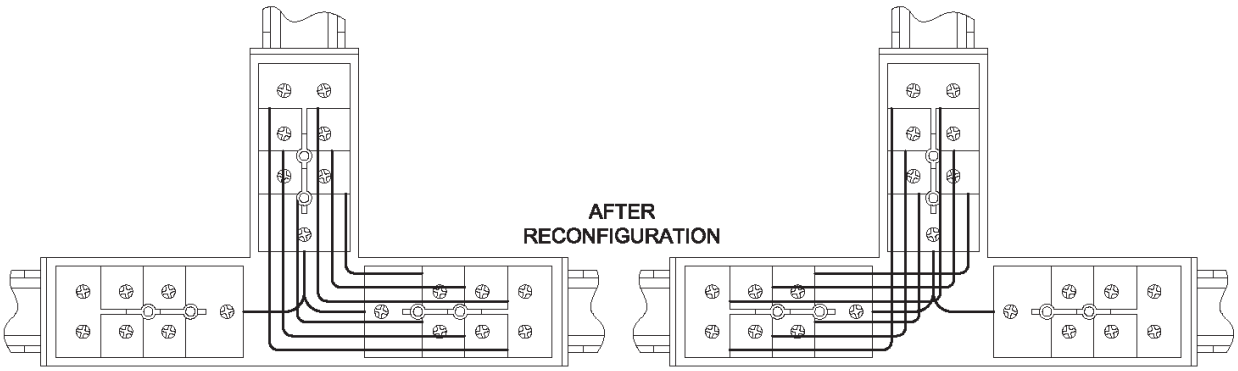
Guidelines for Track System Layouts

Complex layouts often have more than one feed point, and the potential exists for short or crossed circuits. The first diagram below shows how short or crossed circuits can be created. The second diagram below illustrates how short circuits can be avoided.



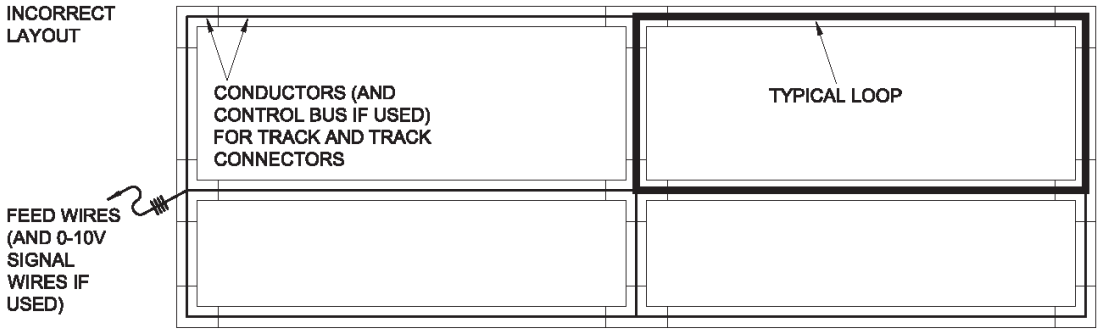
As the need arises, all Connector types and all Surface/Suspension Mount Current Limiters can be opened and reconfigured. The Connector shown in the diagrams below would be typical of a T Connector used in the diagram directly above, after it has been reconfigured. It is representative of all Connector types to be used in any layout. All but the Drama Series Connectors can be accessed by removing their covers. Drama Series Connectors can be accessed by removing the two screws on either side of the connector and sliding the Connector out from its housing. NOTE: Ground wires should be left undisturbed for ALL Connector types.

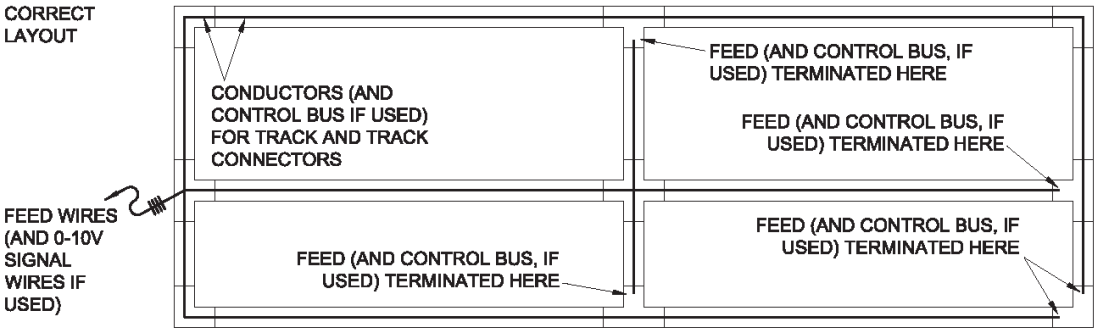




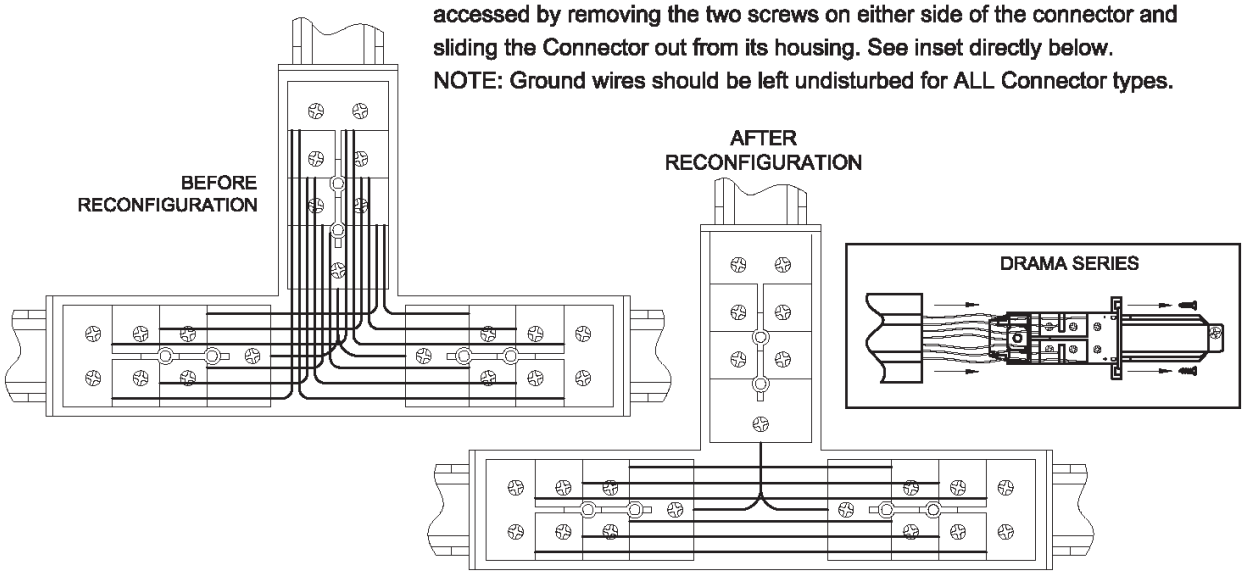
Guidelines for Track System Layouts (Continued)

It is good practice to eliminate wiring loops for power conductors and the control bus conductors on complex layouts . The first diagram below shows how loops are created, with a typical loop highlighted for clarity. The second diagram below illustrates how loops can be avoided. Complex layouts using DMX control wiring will be discussed on the next two pages. Also, see Page 17 for more requirements on Data Track using 0-10V control and DALI.



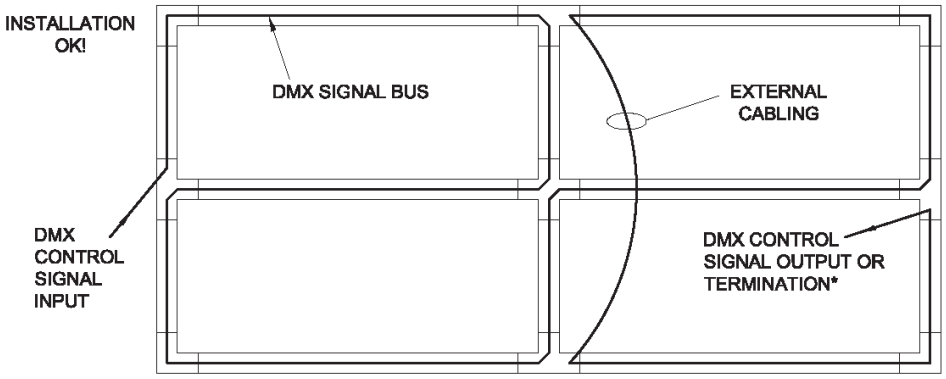


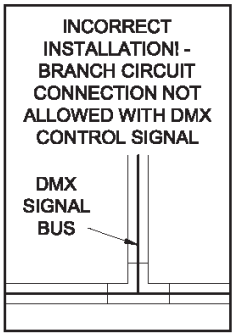
As previously stated, all Connector types and all Surface/Suspension Mount Current Limiters can be opened and reconfigured. The Connector shown in the diagrams below would be typical of a T Connector used in three places in the diagram directly above, after it has been reconfigured. It is representative of all Connector types to be used in any layout. All but the Drama Series Connectors can be accessed by removing their covers. Drama Series Connectors can be accessed by removing the two screws on either side of the connector and sliding the Connector out from its housing. See inset directly below.
NOTE: Ground wires should be left undisturbed for ALL Connector types.

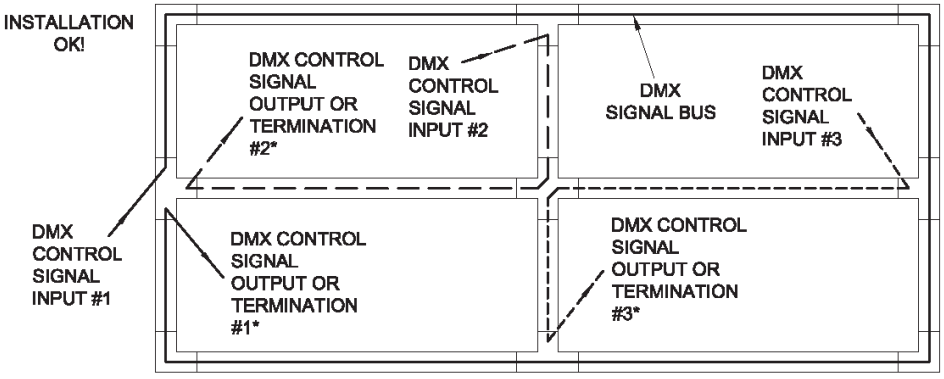


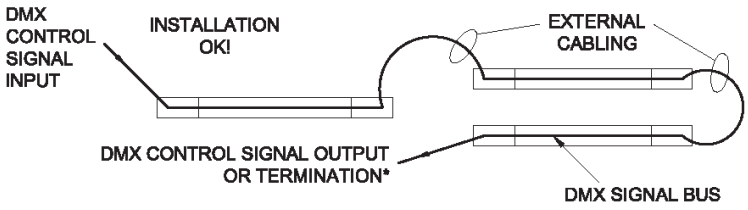
Guidelines for Track System Layouts (Continued)

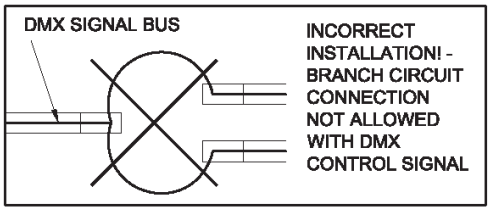
It is imperative that all DMX control wiring on any layout be run in a daisy chain fashion . No loops or branches such as T's or X's are allowed. The layout possibilities are endless, but the diagrams below show the basics of how loops and branch circuits are avoided. See the next page for more requirements on Data Track using DMX control.



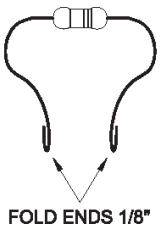


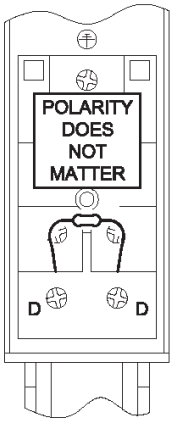






* All DMX control runs must be terminated with a 120 Ω resistor. If the end of the DMX control run is within the track layout, then this can be accomplished in two ways: 1) By adding a track adapter with a terminating resistor pre-installed at the very end of the track, closest to the last connector or the dead end in the run (All track adapter types are available with resistors installed from the factory by adding "-TERM" at the end of the part number), or, 2) By installing the resistor across the D+ and D- screw terminals on the last connector in the run (All Live Ends and Mirror Live Ends types are available with resistors installed from the factory by adding "-TERM" at the end of the part number). See diagrams to right. The polarity of the resistor does not matter.





Guidelines for Track System Layouts (Continued)

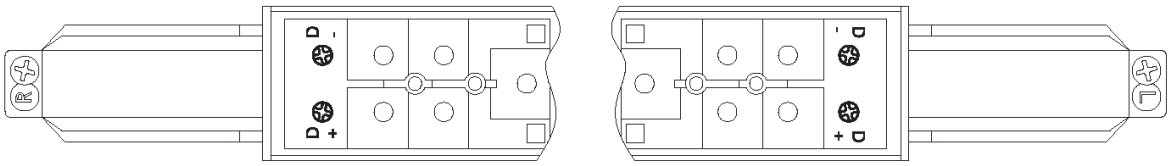
SPECIAL CONSIDERATIONS FOR DMX CONTROL

DMX control runs should be limited to 1000 feet maximum, including track and all intermediate control cabling. There should be no more than 32 fixtures and devices (including splitters) on a single DMX control run. The control bus in the track has a capacitance that can affect signal integrity compared to runs composed of cable only. Therefore, when using fixtures with DMX that have Remote Device Management (RDM) capability, there should be no more than 20 fixtures and devices (including splitters) on a single DMX/RDM control run.

The control bus in the track has only two conductors. Typical DMX systems consist of three conductors: Data +, Data - and Signal Common. If the intermediate control cabling to, from, or between the track consists of shielded twisted pairs, then the shield is Signal Common. The Signal Common when using this track is not used. Make certain that NO portion of the shield or shield wire (aka drain wire) is connected to the track, or bonded to or incidentally in contact with Ground, or anything electrically connected to Ground. If the intermediate control cabling to, from, or between the track consists of unshielded twisted pairs, such as Cat5, Cat5e, Cat6 or Cat6e, then only the Orange / White (Data +) and the Orange (Data -) wires are to be used. See chart below.

Data Track Connector	**Shielded Twisted Pair with Standard DMX Connector (XLR)**	**Unshielded Twisted Pair (Cat5, Cat5e, Cat6 or Cat6e)**
D+	Data + [Any Color], Pin 3 on XLR Conn.	Orange / White
D-	Data - [Any Color], Pin 2 on XLR Conn.	Orange
not used	Signal Common (bare drain wire), Pin 1on XLR Conn.	Brown / White

Depending on the polarity of the Connector, D+ and D- are located as shown below:



SPECIAL CONSIDERATIONS FOR 1-10V CONTROL

It is important to remember that although all track has multiple power circuits, there is only one signal bus circuit. For fixtures requiring 0-10V dimming controls, all fixtures connected to the 0-10V bus will receive the same dimming signal regardless of what power circuit they are on. The maximum number of fixtures on a control run depends on the 0-10V control device that is used.

SPECIAL CONSIDERATIONS FOR DALI CONTROL

The maximum control run between the first and the last DALI components may not exceed 984 feet. The maximum number of fixtures on a control run depends on the DALI control device that is used. The DALI standard specifies a voltage of 16V DC (typical), 22.5V DC MAX and a current of 250mA. The voltage drop may not exceed 2V. DALI fixtures should have a maximum consumption of 2mA. DALI control wiring on any layout may be run in a daisy chain or a star arrangement or in mixed form. The control signal has no polarity.