

ALTMAN SMART-TRACK[®] LIGHTING SYSTEM

IMPORTANT SAFETY & INSTALLATION INSTRUCTIONS

When installing or using the Altman Smart-Track[®] System, basic safety precautions should always be followed, including:

1. Read and understand all of these installation instructions before installing the SMART-TRACK[®] fixtures and lighting track.
2. Only a qualified electrician in accordance with the National Electrical Code and all local codes and ordinances should perform installation of the SMART-TRACK[®] system.
3. Do not install the track in damp or wet locations.
4. Do not install any parts of the track system less than 5 feet above the floor.
5. Do not install any fixtures closer than six inches from combustible materials.
6. Do not use this track with a power supply cord or convenience receptacle adaptor.
7. The Altman Smart-Track[®] System is intended for use only with Altman Smart-Track[®] components and fixtures marked for use with the Altman Smart-Track[®] System. To reduce the risk of fire and electric shock, do not use other components as part of this system. DMX cable or twisted pair Ethernet cable can be used for data. Make sure the DMX shield is connected to AC ground. ***DO NOT CONNECT DMX PIN 1 DIGITAL COMMON TO EARTH AC GROUND FOR ANY REASON WHATSOEVER.***
8. The 3-circuit track is designed to be connected to lighting branch circuits rated 120/240 volts single-phase (three-wire plus ground), or 120/208 volts three-phase (4-wire plus ground). The 2-circuit track contains 2 hot circuits and 2 neutral conductors, allowing a maximum load of 2 x 20A at 120 volts.
9. Insure that ALL lighting branch circuits for the smart track are dedicated and NOT connected to an in-line dimmer.
10. Do not attempt to energize anything other than Lighting Track Fixtures on the lighting track. To reduce the risk of fire and electrical shock, do not attempt to connect power tools, extension cords, appliances, and the like to the lighting track.
11. Data Control Wires (+/-/G) on the 3-circuit Adaptors, and Data Control Wires (+/-) on the 2-circuit adaptors are to be used for DMX or RDM control signals only, rated max. 5 volts, 1 Amp.
12. During installation, do not connect data control cables to the lighting track with electric power connected. Power off the lighting track first, insert the data control cable, and then turn power back onto the lighting track. Voltage spikes can damage the fixtures.
13. Keep the data rail control circuits on the lighting track as clean as possible. Use a clean lint-free cloth with isopropyl alcohol to clean the data rail control circuits in the event of dirt and dust collection. The data control lines have to be absolutely clean and free of dirt and dust for a reliable connection with the data contacts of the fixture control adaptor.

LED CONTROL INSTRUCTIONS FOR FIXTURES WITH SMART-LED™ INSTALLED

There are four different selectable modes of control. Switches are located under the moveable access door on the side of the electronics box. The single RED (S1) 2-position binary DIP switch sets each mode of control. The three WHITE (S2, S3, S4) 10-position rotary decimal switches set the DMX address or dimmer levels.

<u>Red DIP switch S1 (2,1)</u>	<u>Mode (<i>Fixture hanging down from Track</i>)</u>	<u>White Rotary switches S4, S3, S2 (left-right)</u>
Open (DN), Open (DN)	Manual RGB color control.	Intensity levels 000% to 100% (S4, S3, S2).
Open (DN), Closed (UP)	Full ON (RGB all on gives White).	Rotary switch settings are ignored.
Closed (UP), Open (DN)	DMX control and local addressing.	DMX channels 001 to 512 (S4, S3, S2).
Closed (UP), Closed (UP)	RDM control and remote addressing.	Rotary switch settings are ignored.

(Note: Fixture will remember the last fixture address setting state after power is removed and re-applied except in standalone programs).

Spectra-Series LED luminaires have standalone programs that can be activated in either DMX or RDM modes.

When in DMX mode, the functions are accessed by setting the address switches to the various values as described below. When in RDM mode, the functions are accessed by using the RAD to set the address numbers.

The 600 series of addresses selects static colors that are representative of popular Rosco gel color numbers. For example, address 680 is close to Rosco 80 gel. The table below shows the 600 series numbers, the color name, and the DMX values used to create each color.

The format for each line of the color table is the word DATA followed by the DMX values used to create the color in red, green, blue order. This is followed by the address setting (such as 601). The Rosco gel number is next and that is followed by the name of the color.

; Preset RoscoLux color lookup table

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; switch settings 600-609
; red green blue
DATA .000,.000,.000 ;600 ;all off
    
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DATA .255,.147,.131 ;601 ;#01 LT BASTARD AMBER
DATA .255,.208,.168 ;602 ;#02 BASTARD AMBER
DATA .255,.178,.142 ;603 ;#03 DRK BASTARD AMBER
DATA .255,.179,.145 ;604 ;#04 MED BASTARD AMBER
DATA .255,.208,.198 ;605 ;#05 ROSE TINT
DATA .238,.246,.194 ;606 ;#06 NO COLOR STRAW
DATA .239,.247,.187 ;607 ;#07 PALE YELLOW
DATA .245,.224,.175 ;608 ;#08 PALE GOLD
DATA .255,.206,.132 ;609 ;#09 PALE AMBER GOLD

; switch settings 610-619

; red green blue

DATA .233,.254,.000 ;610 ;#10 MED YELLOW
DATA .254,.234,.086 ;611 ;#11 LT STRAW
DATA .231,.246,.026 ;612 ;#12 STRAW
DATA .255,.221,.130 ;613 ;#13 STRAW TINT
DATA .255,.203,.018 ;614 ;#14 MED STRAW
DATA .255,.186,.000 ;615 ;#15 DEEP STRAW
DATA .255,.189,.092 ;616 ;#16 LT AMBER
DATA .255,.156,.084 ;617 ;#17 LT FLAME
DATA .255,.158,.072 ;618 ;#18 FLAME
DATA .255,.000,.000 ;619 ;#19 FIRE

; switch settings 620-629

; red green blue

DATA .255,.157,.000 ;620 ;#20 MED AMBER
DATA .255,.118,.000 ;621 ;#21 GOLDEN AMBER
DATA .255,.050,.000 ;622 ;#22 DEEP AMBER
DATA .255,.086,.000 ;623 ;#23 ORANGE
DATA .255,.032,.038 ;624 ;#24 SCARLET
DATA .255,.000,.000 ;625 ;#25 ORANGE RED
DATA .225,.000,.000 ;626 ;#26 LT RED
DATA .139,.000,.009 ;627 ;#27 MED RED

DATA .139,.000,.009 ;628 ;
DATA .139,.000,.009 ;629 ;

; switch settings 630-639

; red green blue
DATA .255,.120,.101 ;630 ;#30 LT. SALMON PINK
DATA .255,.122,.134 ;631 ;#31 SALMON PINK
DATA .255,.075,.082 ;632 ;#32 MED SALMON PINK
DATA .255,.183,.210 ;633 ;#33 NO COLOR PINK
DATA .255,.125,.144 ;634 ;#34 FLESH PINK
DATA .255,.181,.202 ;635 ;#35 LT PINK
DATA .255,.118,.157 ;636 ;#36 MED PINK
DATA .255,.165,.214 ;637 ;#37 PALE ROSE PINK
DATA .249,.162,.193 ;638 ;#38 LT ROSE
DATA .205,.000,.094 ;639 ;#39 EXOTIC SANGRIA

; switch settings 640-649

; red green blue
DATA .255,.088,.058 ;640 ;#40 LT SALMON
DATA .255,.042,.028 ;641 ;#41 SALMON
DATA .233,.000,.036 ;642 ;#42 DEEP SALMON
DATA .255,.061,.143 ;643 ;#43 DEEP PINK
DATA .255,.052,.156 ;644 ;#44 MIDDLE ROSE
DATA .207,.000,.070 ;645 ;#45 ROSE
DATA .169,.000,.044 ;646 ;#46 MAGENTA
DATA .105,.045,.115 ;647 ;#47 LT ROSE PURPLE
DATA .203,.035,.165 ;648 ;#48 ROSE PURPLE
DATA .149,.000,.114 ;649 ;#49 MED PURPLE

; switch settings 650-659

; red green blue
DATA .202,.043,.058 ;650 ;#50 MAUVE
DATA .216,.175,.231 ;651 ;#51 SURPRISE PINK

DATA .191,.114,.209 ;652 ;#52 LT LAVENDER
DATA .205,.199,.239 ;653 ;#53 PALE LAVENDER
DATA .191,.169,.235 ;654 ;#54 SPECIAL LAVENDER
DATA .146,.131,.225 ;655 ;#55 LILAC
DATA .078,.000,.172 ;656 ;#56 GYPSY LAVENDER
DATA .149,.090,.222 ;657 ;#57 LAVENDER
DATA .113,.018,.178 ;658 ;#58 DEEP LAVENDER
DATA .053,.000,.101 ;659 ;#59 INDIGO

; switch settings 660-669

; red green blue

DATA .153,.179,.238 ;660 ;#60 NO COLOR BLUE
DATA .167,.206,.249 ;661 ;#61 MIST BLUE
DATA .102,.162,.227 ;662 ;#62 BOOSTER BLUE
DATA .139,.189,.244 ;663 ;#63 PALE BLUE
DATA .061,.103,.221 ;664 ;#64 LT STEEL BLUE
DATA .028,.123,.238 ;665 ;#65 DAYLT BLUE
DATA .135,.213,.243 ;666 ;#66 COOL BLUE
DATA .000,.106,.239 ;667 ;#67 LT SKY BLUE
DATA .000,.065,.227 ;668 ;#68 SKY BLUE
DATA .000,.085,.210 ;669 ;#69 BRILLIANT BLUE

; switch settings 670-679

; red green blue

DATA .047,.161,.225 ;670 ;#70 NILE BLUE
DATA .000,.126,.212 ;671 ;#71 SEA BLUE
DATA .000,.157,.243 ;672 ;#72 AZURE BLUE
DATA .000,.142,.201 ;673 ;#73 PEACOCK BLUE
DATA .028,.000,.167 ;674 ;#74 NIGHT BLUE
DATA .028,.000,.167 ;675 ;
DATA .000,.055,.141 ;676 ;#76 LT GREEN BLUE
DATA .000,.038,.156 ;677 ;#77 GREEN BLUE

DATA .082,.084,.214 ;678 ;#78 TRUDY BLUE
DATA .038,.000,.203 ;679 ;#79 BRIGHT BLUE

; switch settings 680-689

; red green blue
DATA .033,.000,.193 ;680 ;#80 PRIMARY BLUE
DATA .039,.052,.200 ;681 ;#81 URBAN BLUE
DATA .052,.000,.167 ;682 ;#82 SURPRISE BLUE
DATA .042,.000,.154 ;683 ;#83 MED BLUE
DATA .054,.052,.191 ;684 ;#84 ZEPHYR BLUE
DATA .033,.000,.143 ;685 ;#85 DEEP BLUE
DATA .000,.207,.076 ;686 ;#86 PEA GREEN
DATA .191,.241,.199 ;687 ;#87 PALE YELLOW GREEN
DATA .156,.241,.161 ;688 ;#88 LT GREEN
DATA .000,.188,.108 ;689 ;#89 MOSS GREEN

; switch settings 690-699

; red green blue
DATA .000,.086,.037 ;690 ;#90 DARK YELLOW GREEN
DATA .000,.054,.045 ;691 ;#91 PRIMARY GREEN
DATA .000,.193,.189 ;692 ;#92 TURQUOISE
DATA .000,.134,.153 ;693 ;#93 BLUE GREEN
DATA .000,.131,.106 ;694 ;#94 KELLY GREEN
DATA .000,.086,.133 ;695 ;#95 MED BLUE GREEN
DATA .255,.000,.000 ;696 ;Red
DATA .000,.255,.000 ;697 ;Green
DATA .000,.000,.255 ;698 ;Blue
DATA .255,.255,.255 ;699 ;white

; End of color table

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The 700 series is used for color fades

700-709

R-G-B fades. The ones digit is used to set the speed. Lower ones digit settings yield faster fades. (i.e.: 700=faster fade, 709=slower fade).

780-789

RG-GB-BR. The ones digit is used to set the speed. Lower ones digit settings yield faster fades. (i.e.: 780=faster fade, 789=slower fade).

800-809

White strobe. The ones digit is used to set the speed. Lower ones digit settings yield faster strobes. (i.e.: 800=faster strobe, 809=slower strobe).

810-819

Red strobe. The ones digit is used to set the speed. Lower ones digit settings yield faster strobes. (i.e.: 810=faster strobe, 819=slower strobe).

820-829

Green strobe. The ones digit is used to set the speed. Lower ones digit settings yield faster strobes. (i.e.: 820=faster strobe, 829=slower strobe).

830-839

Blue strobe. The ones digit is used to set the speed. Lower ones digit settings yield faster strobes. (i.e.: 830=faster strobe, 839=slower strobe).

840-849

Rainbow strobe. The ones digit is used to set the speed. Lower ones digit settings yield faster strobes. (i.e.: 840=faster strobe, 849=slower strobe).

900 series

Random. Any address that starts with 9 triggers this mode. The ones and tens values are ignored.

QUARTZ CONTROL INSTRUCTIONS FOR FIXTURES WITH SMART-DIMMER™ INSTALLED

There are four different selectable modes of control. Switches are located under the moveable access door on the side of the electronics box. The single RED (S1) 2-position binary DIP switch sets each mode of control. The three WHITE (S2, S3, S4) 10-position rotary decimal switches set the DMX address or dimmer levels.

<u>Red DIP switch S1 (2,1)</u>	<u>Mode (<i>Fixture hanging down from Track</i>)</u>	<u>White Rotary switches S4, S3, S2 (left-right)</u>
Open (DN), Open (DN)	Manual dimming control.	Intensity levels 000% to 100% (S4, S3, S2).
Open (DN), Closed (UP)	Full ON.	Rotary switch settings are ignored.
Closed (UP), Open (DN)	DMX control and local addressing.	DMX channels 001 to 512 (S4, S3, S2).
Closed (UP), Closed (UP)	RDM control and remote addressing.	Rotary switch settings are ignored.

(Note: Fixture will remember the last fixture address setting state after power is removed and re-applied.)

HID CONTROL INSTRUCTIONS FOR FIXTURES WITH SMART-HID™ INSTALLED

There are four different selectable modes of control. Switches are located under the moveable access door on the side of the electronics box. The single RED (S1) 2-position binary DIP switch sets each mode of control. The three WHITE (S2, S3, S4) 10-position rotary decimal switches set the DMX address or dimmer levels.

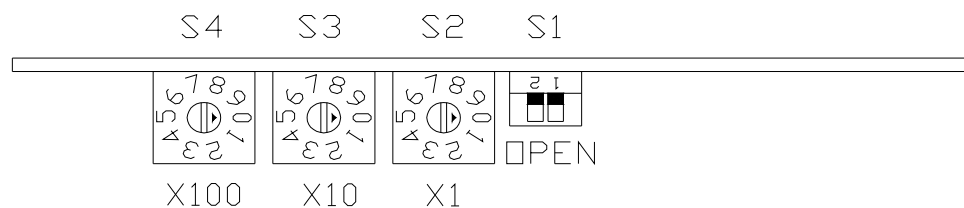
<u>Red DIP switch S1 (2,1)</u>	<u>Mode (<i>Fixture hanging down from Track</i>)</u>	<u>White Rotary switches S4, S3, S2 (left-right)</u>
Open (DN), Open (DN)	Manual dimming control.	Intensity levels 50% to 100% (S4, S3, S2).
Open (DN), Closed (UP)	Full ON.	Rotary switch settings are ignored.
Closed (UP), Open (DN)	DMX control and local addressing.	DMX channels 001 to 512 (S4, S3, S2).
Closed (UP), Closed (UP)	RDM control and remote addressing.	Rotary switch settings are ignored.

(Note: Fixture will remember the last fixture address setting state after power is removed and re-applied.)

SMART-HID™ RELAY AND DIMMING CONTROL (IF PROVIDED)

A 0-10V digital output signal to control dimming ballasts down to 50% intensity.

<u>DMX Console Level</u>	<u>Function</u>	<u>0-10V Output Signal</u>	<u>Intensity Level</u>
0	Relay OFF	0V	50%
1	Relay ON	1V	55%
2	Relay ON	2V	60%
3	Relay ON	3V	65%
4	Relay ON	4V	70%
5	Relay ON	5V	75%
6	Relay ON	6V	80%
7	Relay ON	7V	85%
8	Relay ON	8V	90%
9	Relay ON	9V	95%
10	Relay ON	10V	100%



FIXTURE INSTALLATION PROCEDURE

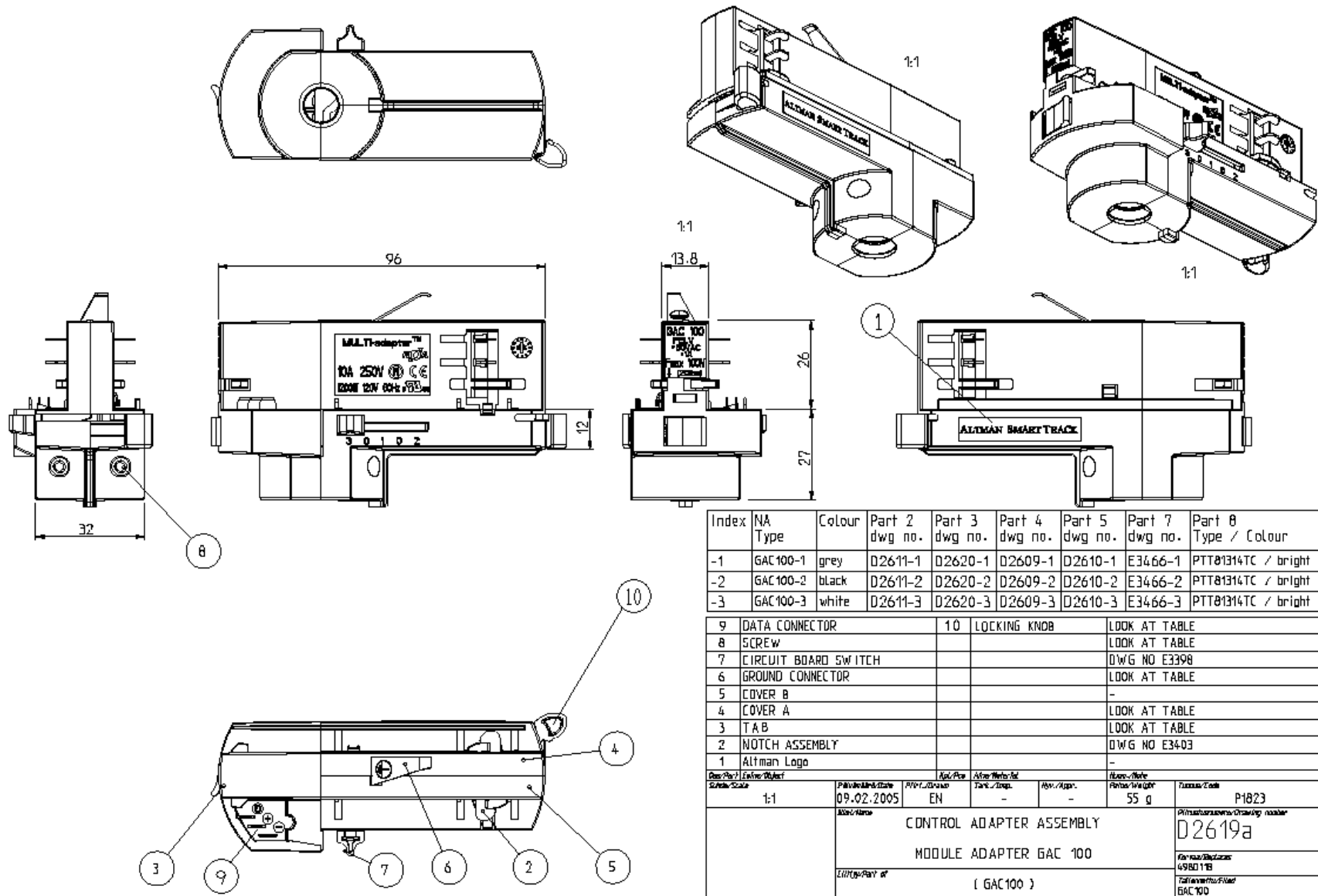
PLEASE REFER TO THE DIAGRAM OF THE ALTMAN SMART-TRACK[®] ADAPTOR ON THE FOLLOWING PAGE.

3-CIRCUIT GAC100 TRACK ADAPTOR

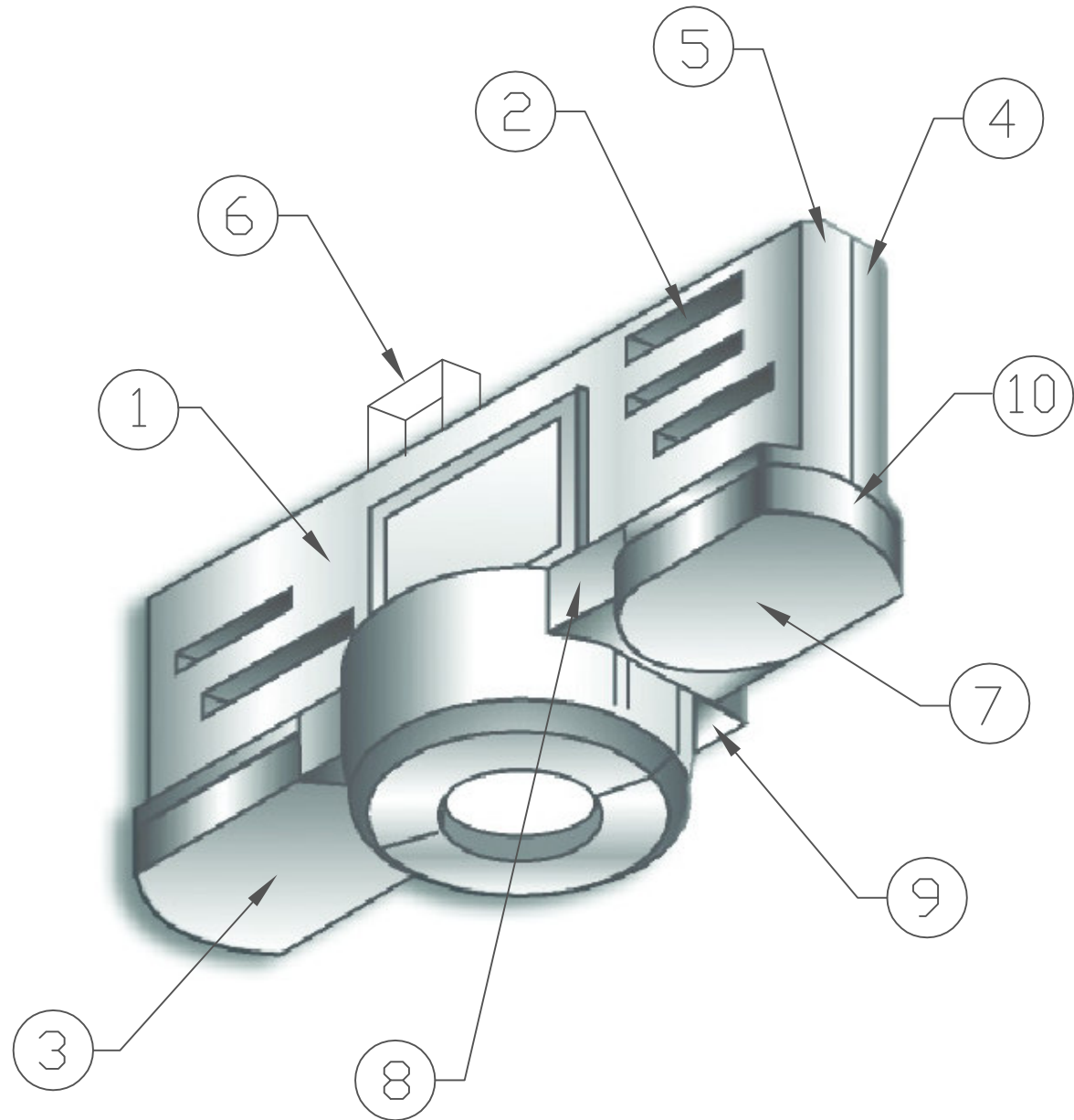
1. Before installing the fixture to the Nordic Aluminium lighting track, set the control mode and/or fixture addresses as outlined above.
2. Insert fixture track adaptor into track making sure the data connector contacts (9) are on the same side as the data rail on the track.
3. While maintaining upward pressure on the adaptor, fully rotate the locking tab (3) ¼ turn until tab completely engages into its track slot. **DO NOT RELEASE TRACK ADAPTOR UNTIL YOU HAVE COMPLETED STEP 4.**
4. While maintaining upward pressure on the adaptor, rotate the locking knob (10) ¼ turn until the contacts are fully engaged into their respective track slots. **NOTE:** During the break-in period, it may help to gently slide the track adaptor and fixture back and forth a touch in order to fully engage the power lever (10). Make sure the power lever is **LOCKED** into place.
5. Apply power to the fixture by sliding the switch (7) to the proper circuit.
6. Test the fixture.
7. Repeat steps 1-6 for each additional fixture.

2-CIRCUIT 99-780-* TRACK ADAPTOR

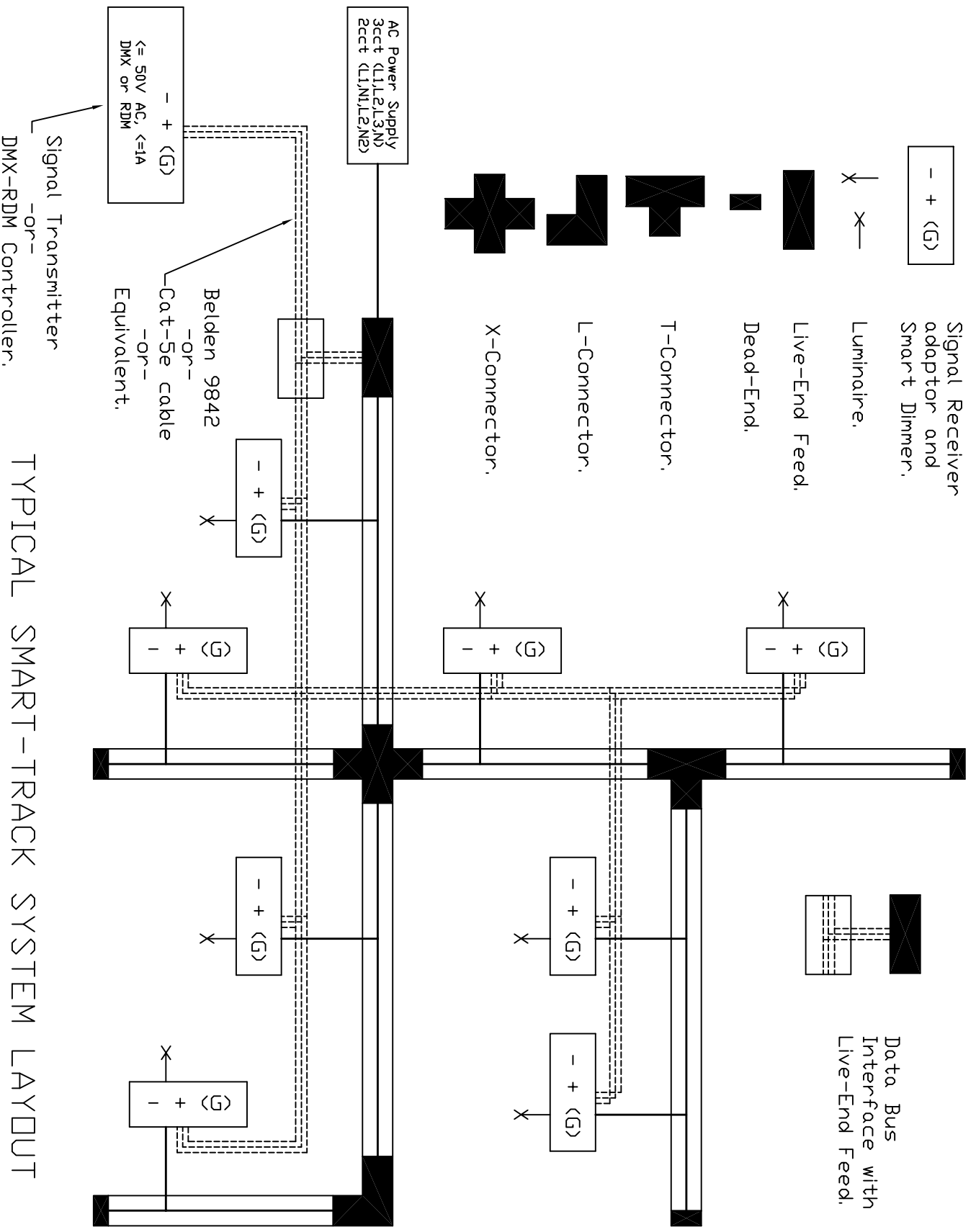
1. Before installing the fixture to the Eutrac lighting track, set the control mode and/or fixture addresses as outlined above.
2. Insert fixture track adaptor into track making sure the two data bus contacts (9) are on the same side as the data rail on the track.
3. While maintaining upward pressure on the adaptor, fully rotate the locking tab (3) ¼ turn until tab completely engages into its track slot. **DO NOT RELEASE TRACK ADAPTOR UNTIL YOU HAVE COMPLETED STEP 4.**
4. While maintaining upward pressure on the adaptor, rotate the locking knob to either Circuit-1 or Circuit-2 until the contacts are fully engaged into their respective track slots. **Caution:** Locking into either circuit will apply power immediately to the fixture.
5. Test the fixture.
6. Repeat steps 1-5 for each additional fixture.



Index	NA Type	Colour	Part 2 dwg no.	Part 3 dwg no.	Part 4 dwg no.	Part 5 dwg no.	Part 7 dwg no.	Part 8 Type / Colour
-1	GAC100-1	grey	D2611-1	D2620-1	D2609-1	D2610-1	E3466-1	PTT81314TC / bright
-2	GAC100-2	black	D2611-2	D2620-2	D2609-2	D2610-2	E3466-2	PTT81314TC / bright
-3	GAC100-3	white	D2611-3	D2620-3	D2609-3	D2610-3	E3466-3	PTT81314TC / bright
9	DATA CONNECTOR		10		LOCKING KNOB		LOOK AT TABLE	
8	SCREW						LOOK AT TABLE	
7	CIRCUIT BOARD SWITCH						DWG NO E3398	
6	GROUND CONNECTOR						LOOK AT TABLE	
5	COVER B						-	
4	COVER A						LOOK AT TABLE	
3	TAB						LOOK AT TABLE	
2	NOTCH ASSEMBLY						DWG NO E3403	
1	Altman Logo						-	
Rev/Part	Enter Object	Part/Drawn	App/Rev	App/Rev	App/Rev	App/Rev	App/Rev	Part/Weight
Scale	1:1	09.02.2005	EN	-	-	-	-	55 g
CONTROL ADAPTER ASSEMBLY							P1823	
MODULE ADAPTER GAC 100							D2619a	
Altman Part of							Part number/ Drawing number	
(GAC100)							4980178	
							Full name/Part No	
							GAC 100	

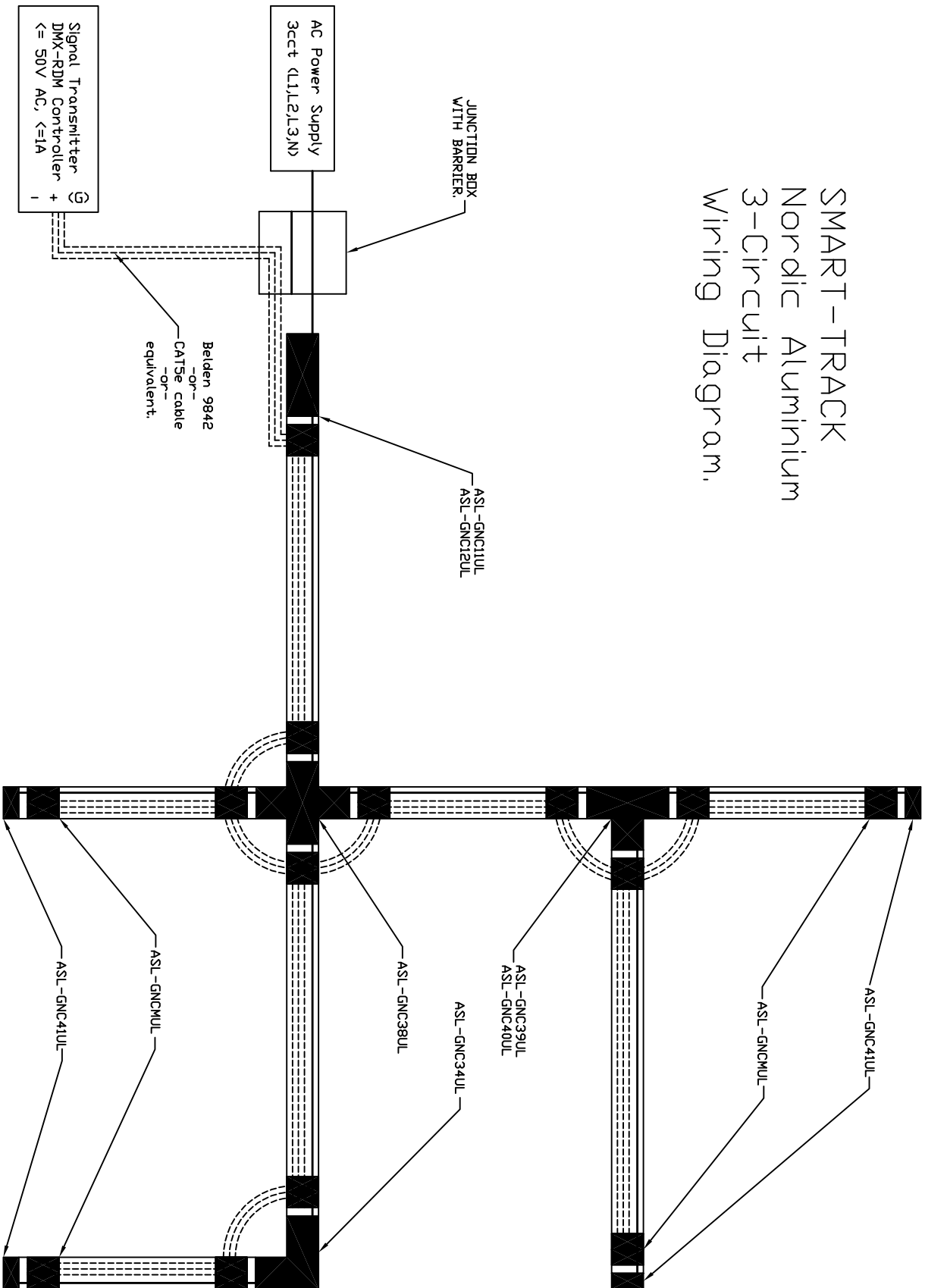


Altman 2-Circuit Smart Track Adaptor



TYPICAL SMART-TRACK SYSTEM LAYOUT

SMART-TRACK Nordic Aluminium 3-Circuit Wiring Diagram.



SMART-TRACK Selux EUTRAC 2-Circuit Wiring Diagram.

