

Smart Track Fixture Programming Manual

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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.
8. 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 (+/-) on the 2-circuit adaptors and track 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

Data Cable shall be suitable for transport of USITT DMX-512A (ANSI E1.11-2004) and RDM (ANSI E1.20-2006) control information between Smart Track Sections and the Lighting Control System (example: Belden 9842) or CAT-5 Ethernet cable (Example: Belden 1583A) can be used.

DO NOT CONNECT DMX PIN 1/ DIGITAL COMMON, DIRECTLY TO EARTH AC GROUND AT THE TRACK POWER/ DATA FEEDS.

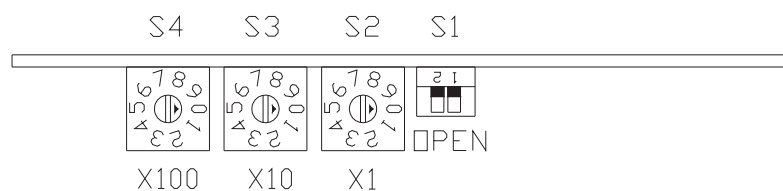
DMX/ Data Digital Common is allowed to float at track Power/ Data feeds and remains un-terminated.

Data Cable shall be suitable for transport of USITT DMX-512A (ANSI E1.11-2004) and RDM (ANSI E1.20-2006) control information between Smart Track Sections and the Lighting Control System (example: Belden 9842) or CAT-5 Ethernet cable (Example: Belden 1583A) can be used.

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.

Red DIP switch S1 (2,1)	Mode (Fixture hanging down from Track)	White Rotary switches S4, S3, S2 (left-right)
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



Rotary Dial and Dipswitch Controls
Please note that these are viewed as the fixture hangs below the Smart Track. Track Adapter Up.

Note: Fixture will remember the last fixture address setting state after power is removed and re-applied except in stand-alone 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 be-low. 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.

Preset RoscoLux Color Lookup Table

Switch settings 600-619

Red	Green	Blue	DMX Address	Personality	Rosco Color
000	000	000	600	#00	ALL OFF
255	147	131	601	#01	LIGHT BASTARD AMBER
255	208	168	602	#02	BASTARD AMBER
255	178	142	603	#03	DARK BASTARD AMBER
255	179	145	604	#04	MEDIUM BASTARD AMBER
255	208	198	605	#05	ROSE TINT
238	246	194	606	#06	NO COLOR STRAW
239	247	187	607	#07	PALE YELLOW
245	224	175	608	#08	PALE GOLD
255	206	132	609	#09	PALE AMBER GOLD
233	254	000	610	#10	MEDIUM YELLOW
254	234	086	611	#11	LIGHT STRAW
231	246	026	612	#12	STRAW
255	221	130	613	#13	STRAW TINT
255	203	018	614	#14	MEDIUM STRAW
255	186	000	615	#15	DEEP STRAW
255	189	092	616	#16	LIGHT AMBER
255	156	084	617	#17	LIGHT FLAME
255	158	072	618	#18	FLAME
255	000	000	619	#19	FIRE

Switch settings 620-629

Red	Green	Blue	DMX Address	Personality	Rosco Color
255	157	000	620	#20	MEDIUM AMBER
255	118	000	621	#21	GOLDEN AMBER
255	050	000	622	#22	DEEP AMBER
255	086	000	623	#23	ORANGE
255	032	038	624	#24	SCARLET
255	000	000	625	#25	ORANGE RED
225	000	000	626	#26	LIGHT RED
139	000	009	627	#27	MEDIUM RED
139	000	009	628		
139	000	009	629		

Switch settings 630-639

Red	Green	Blue	DMX Address	Personality	Rosco Color
255	120	101	630	#30	LIGHT SALMON PINK
255	122	134	631	#31	SALMON PINK
255	075	082	632	#32	MEDIUM SALMON PINK
255	183	210	633	#33	NO COLOR PINK
255	125	144	634	#34	FLESH PINK
255	181	202	635	#35	LIGHT PINK
255	118	157	636	#36	MEDIUM PINK
255	165	214	637	#37	PALE ROSE PINK
249	162	193	638	#38	LIGHT ROSE
205	000	094	639	#39	EXOTIC SANGRIA

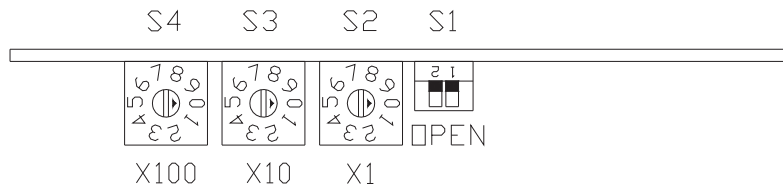
Switch settings 640-649

Red	Green	Blue	DMX Address	Personality	Rosco Color
255	088	058	640	#40	LIGHT SALMON
255	042	028	641	#41	SALMON
233	000	036	642	#42	DEEP SALMON
255	061	143	643	#43	DEEP PINK
255	052	156	644	#44	MIDDLE ROSE
207	000	070	645	#45	ROSE
169	000	044	646	#46	MAGENTA
105	045	115	647	#47	LIGHT ROSE PURPLE
203	035	165	648	#48	ROSE PURPLE
149	000	114	649	#49	MEDIUM PURPLE

Switch settings 690-699

Red	Green	Blue	DMX Address	Personality	Rosco Color
000	086	037	690	#90	DARK YELLOW GREEN
000	054	045	691	#91	PRIMARY GREEN
000	193	189	692	#92	TURQUOISE
000	134	153	693	#93	BLUE GREEN
000	131	106	694	#94	KELLY GREEN
000	086	133	695	#95	MEDIUM BLUE GREEN
255	000	000	696		RED
000	255	000	697		GREEN
000	000	255	698		BLUE
255	255	255	699		WHITE

The 700 series is used for color fades



Rotary Dial and Dipswitch Controls
Please note that these are viewed as the fixture hangs below the Smart Track. Track Adapter Up.

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).

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.

Red DIP switch S1 (2,1)	Mode (Fixture hanging down from Track)	White Rotary switches S4, S3, S2 (left-right)
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-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

Red DIP switch S1 (2,1)	Mode (Fixture hanging down from Track)	White Rotary switches S4, S3, S2 (left-right)
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 DMX RELAY CONTROL

DMX Console Level	Function
0	Relay OFF
1 thru 100	Relay ON

FIXTURE INSTALLATION PROCEDURE

2-CIRCUIT SMART TRACK ADAPTOR

1. Before installing the fixture to the Smart Track 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) $\frac{1}{4}$ 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.

FIXTURE INSTALLATION PROCEDURE

2-CIRCUIT SMART TRACK ADAPTOR

1. Before installing the fixture to the Smart Track 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.

2 CIRCUIT SMART TRACK RDM FEATURES

Altman Lighting is working within the ANSI Standard E1.20 for RDM to bring intelligent RDM products and systems to end user customers. Intelligent RDM is presently incorporated into Altman's Smart-Track system and fixtures.

The RDM feedback that can be obtained from any Altman Smart Track Luminaire is DMX address. DMX addressing the fixtures through RDM is done with a device called the RAD (Remote Addressing Device) by Doug Fleenor Designs or any RDM capable controller. Smart Track LED luminaires can have their preset colors, strobos and fades triggered via the RAD by entering in the appropriate preset number in lieu of a DMX address.

Altman Smart Track Luminaires with on-board dimmers have additional RDM feedback capabilities such as fixture type ID. The ID is generic and simply states Altman Dimmer.

Two additional RDM feedback features are lamp failure alert and lamp hour tracking.

RAD (Remote Addressing Device) Operation Instructions

Overview:

The RAD is used to set the DMX address of any RDM enabled device. It uses bi-directional data and the RDM protocol to perform this function.

Operation:

Connect the RAD to the Altman Smart Track to be addressed using standard DMX cabling. Note that if there are any isolators or splitters in the system, they must be capable of bidirectional communication per the RDM Standard.

The RAD is powered by a standard 9V battery. To turn on the RAD, move the slide switch below the front panel to the ON position.

Be sure that the Altman Smart Track Luminaires to be addressed are powered and dip switch settings are for RDM (Remote Device Management).

Press the NEXT button on the RAD. One of the RDM devices will be discovered and will identify itself by flashing the lamp on dimmer units; LED units will flash the color RED; HID units have a green indicator light that flashes next to the settings panel.

The DMX address for the identified device will be shown on the RAD's display. Use the three buttons below the display to change the address of the identified device. A few seconds after the address has been set, the RAD display will flash once and re-display the newly set DMX address for the identified device. This indicates that the address has been saved to the device.

Push NEXT to identify another device on the Smart Track and set its address. This will cause the first device to "un-identify" and the next device to identify itself. The LAST button is used to move back through the devices that have previously been identified.

When no more devices are found on the data line, pushing the NEXT button will cause three dashes to appear on the display. This indicates that no more RDM enabled devices could be found.

If no buttons are pressed on the RAD for about 15 seconds, the RAD will go into sleep mode. In this battery saving mode, one short line will flash on the display every few seconds. To wake the RAD from sleep, either push one of the buttons or cycle the power switch.