

# Appendix A

## DMX Control of Trackspot®

Under DMX 512 protocol, each Trackspot fixture uses a block of seven contiguous DMX channels for a total of 72 fixtures per link. Although you can control Trackspot from any DMX starting channel you choose, that starting channel must not interfere with another fixture's channel block.

The tables below assume that all Trackspot fixtures will be assigned to the same link, one after another. Keep in mind, however, that if you mix different devices on the same link, those devices will have different channel blocks that may overlap the 7-channel sequence listed below.

**Note:** The values displayed in the tables in this appendix may vary slightly depending on your controller's rounding convention.

## Start Channels and Construct Parameters

If you chose DMX 512 protocol as your control mode, you must operate your Trackspot fixture(s) either in low resolution or high resolution. Control options available on your DMX controller will determine whether you can operate your fixtures in low or high resolution mode.

### Low Resolution Mode

Low resolution mode is used with DMX controllers that do not support color or gobo fader and spin effects. There are fewer color and gobo features available in low resolution mode.

### High Resolution Mode

High resolution mode has more construct parameters and is intended for DMX controllers with more accurate faders or direct numerical control of each dim channel. In high resolution mode, the color fader and gobo fader effects include half colors, oscillating colors, color spin effects, and gobo spin effects.

After determining which DMX 512 mode you will operate in, see Table A-1 for information such as DMX starting channels and address and personality switch settings in both high and low resolution modes. For construct parameters available in low resolution mode, see Table A-2. For construct parameters available in high resolution mode, see Table A-3.



Table A-1. Starting channels in 7-channel DMX 512 protocol

Numerical Order In Link	Address DIP Switches ON	Personality DIP Switches ON		DMX Starting Channel
		Low Resolution	High Resolution	
Fixture 1	none	5	3, 5	001
Fixture 2	1, 2, 3	5	3, 5	008
Fixture 3	2, 3, 4	5	3, 5	015
Fixture 4	1, 3, 5	5	3, 5	022
Fixture 5	3, 4, 5	5	3, 5	029
Fixture 6	1, 2, 6	5	3, 5	036
Fixture 7	2, 4, 6	5	3, 5	043
Fixture 8	1, 5, 6	5	3, 5	050
Fixture 9	4, 5, 6	5	3, 5	057
Fixture 10	1, 2, 3, 4, 5, 6	5	3, 5	064
Fixture 11	2, 3, 7	5	3, 5	071
Fixture 12	1, 3, 4, 7	5	3, 5	078
Fixture 13	3, 5, 7	5	3, 5	085
Fixture 14	1, 2, 4, 5, 7	5	3, 5	092
Fixture 15	2, 6, 7	5	3, 5	099
Fixture 16	1, 4, 6, 7	5	3, 5	106
Fixture 17	5, 6, 7	5	3, 5	113
Fixture 18	1, 2, 3, 5, 6, 7	5	3, 5	120
Fixture 19	2, 3, 4, 5, 6, 7	5	3, 5	127
Fixture 20	1, 3, 8	5	3, 5	134
Fixture 21	3, 4, 8	5	3, 5	141
Fixture 22	1, 2, 5, 8	5	3, 5	148
Fixture 23	2, 4, 5, 8	5	3, 5	155
Fixture 24	1, 6, 8	5	3, 5	162
Fixture 25	4, 6, 8	5	3, 5	169
Fixture 26	1, 2, 3, 4, 6, 8	5	3, 5	176
Fixture 27	2, 3, 5, 6, 8	5	3, 5	183
Fixture 28	1, 3, 4, 5, 6, 8	5	3, 5	190
Fixture 29	3, 7, 8	5	3, 5	197
Fixture 30	1, 2, 4, 7, 8	5	3, 5	204
Fixture 31	2, 5, 7, 8	5	3, 5	211
Fixture 32	1, 4, 5, 7, 8	5	3, 5	218
Fixture 33	6, 7, 8	5	3, 5	225
Fixture 34	1, 2, 3, 6, 7, 8	5	3, 5	232
Fixture 35	2, 3, 4, 6, 7, 8	5	3, 5	239
Fixture 36	1, 3, 5, 6, 7, 8	5	3, 5	246*
Fixture 37	none	4	3, 4	257

Table A-1. Starting channels in 7-channel DMX 512 protocol

Numerical Order In Link	Address DIP Switches ON	Personality DIP Switches ON		DMX Starting Channel
		Low Resolution	High Resolution	
Fixture 38	1, 2, 3	4	3, 4	264
Fixture 39	2, 3, 4	4	3, 4	271
Fixture 40	1, 3, 5	4	3, 4	278
Fixture 41	3, 4, 5	4	3, 4	285
Fixture 42	1, 2, 6	4	3, 4	292
Fixture 43	2, 4, 6	4	3, 4	299
Fixture 44	1, 5, 6	4	3, 4	306
Fixture 45	4, 5, 6	4	3, 4	313
Fixture 46	1, 2, 3, 4, 5, 6	4	3, 4	320
Fixture 47	2, 3, 7	4	3, 4	327
Fixture 48	1, 3, 4, 7	4	3, 4	334
Fixture 49	3, 5, 7	4	3, 4	341
Fixture 50	1, 2, 4, 5, 7	4	3, 4	348
Fixture 51	2, 6, 7	4	3, 4	355
Fixture 52	1, 4, 6, 7	4	3, 4	362
Fixture 53	5, 6, 7	4	3, 4	369
Fixture 54	1, 2, 3, 5, 6, 7	4	3, 4	376
Fixture 55	2, 3, 4, 5, 6, 7	4	3, 4	383
Fixture 56	1, 3, 8	4	3, 4	390
Fixture 57	3, 4, 8	4	3, 4	397
Fixture 58	1, 2, 5, 8	4	3, 4	404
Fixture 59	2, 4, 5, 8	4	3, 4	411
Fixture 60	1, 6, 8	4	3, 4	418
Fixture 61	4, 6, 8	4	3, 4	425
Fixture 62	1, 2, 3, 4, 6, 8	4	3, 4	432
Fixture 63	2, 3, 5, 6, 8	4	3, 4	439
Fixture 64	1, 3, 4, 5, 6, 8	4	3, 4	446
Fixture 65	3, 7, 8	4	3, 4	453
Fixture 66	1, 2, 4, 7, 8	4	3, 4	460
Fixture 67	2, 5, 7, 8	4	3, 4	467
Fixture 68	1, 4, 5, 7, 8	4	3, 4	474
Fixture 69	6, 7, 8	4	3, 4	481
Fixture 70	1, 2, 3, 6, 7, 8	4	3, 4	488
Fixture 71	2, 3, 4, 6, 7, 8	4	3, 4	495
Fixture 72	1, 3, 5, 6, 7, 8	4	3, 4	502*

\*Note: Channels 253 - 256 and channels 509 - 512 cannot be used due to Trackspot's 7-channel block structure.



Table A-2. Construct parameters in DMX 512 low resolution mode

DMX Channel	Function	Low Resolution Parameters	Decimal	Percent	Hex
1	Pan	Pan Positioning, 8 bit	0-255	0-100	00-ffh
2	Tilt	Tilt Positioning, 8 bit	0-255	0-100	00-ffh
3	Color Wheel	open / color 1	0	0	0
		color 2	32	13	20
		color 3	54	21	36
		color 4	79	31	4F
		color 5	110	43	6E
		color 6	138	55	8A
		color 7	160	63	A0
		color 8	200	78	C8
		color 9	210	82	D2
		color 10	240	94	F0
4	Gobo Wheel	open / gobo 1	0	0	0
		gobo 2	32	13	20
		gobo 3	54	21	36
		gobo 4	79	31	4F
		gobo 5	110	43	6E
		gobo 6	138	55	8A
		gobo 7	160	63	A0
		gobo 8	200	78	C8
		gobo 9	210	82	D2
		gobo 10	240	94	F0
5	Shutter	closed	0	0	0
		open	26	10	1A
		strobe 1	51	20	33
		strobe 2	77	30	4D
		strobe 3	102	40	66
		strobe 4	128	50	80
		strobe 5	153	60	99
		strobe 6	179	70	B3
		strobe 7	204	80	CC
		closed	230	90	E6
open	242	95	F2		
6	Dimmer	closed-open	0-255	0-100	00-ffh
7	MSPeed	slowest-fastest	0-255	0-100	00-ffh

Table A-3. Construct parameters in DMX 512 high resolution mode

DMX Channel	Function	High Resolution Parameters	Decimal	Percent	Hex
1	Pan	Pan Positioning, 8 bit	0-255	0-100	00-ffh
2	Tilt	Tilt Positioning, 8 bit	0-255	0-100	00-ffh
3	Color Wheel	open / color 1	0	0	0
		forward color spin 8	8	3	8
		forward color spin 7	15	6	F
		forward color spin 6	22	9	16
		forward color spin 5	30	12	1E
		forward color spin 4	36	14	24
		forward color spin 3	43	17	2B
		forward color spin 2	51	20	33
		forward color spin 1	59	23	3B
		reverse color spin 8	64	25	40
		reverse color spin 7	71	28	47
		reverse color spin 6	79	31	4F
		reverse color spin 5	87	34	57
		reverse color spin 4	94	37	5E
		reverse color spin 3	99	39	63
		reverse color spin 2	107	42	6B
		reverse color spin 1	112	44	70
		half color 2	120	47	78
		color 2	128	50	80
		half color 3	133	52	85
		color 3	140	55	8C
		half color 4	148	58	94
		color 4	156	61	9C
		half color 5	163	64	A3
		color 5	168	66	A8
		half color 6	176	69	B0
		color 6	184	72	B8
		half color 7	191	75	BF
		color 7	196	77	C4
		half color 8	204	80	CC
		color 8	212	83	D4
half color 9	219	86	DB		
color 9	224	88	E0		
half color 10	232	91	E8		
color 10	240	94	F0		
half color 1	247	97	F7		
open / color 1	252	99	FC		



Table A-3. Construct parameters in DMX 512 high resolution mode

DMX Channel	Function	High Resolution Parameters	Decimal	Percent	Hex
4	Gobo Wheel	open / gobo 1	0	0	0
		forward gobo spin 7	10	4	A
		forward gobo spin 6	18	7	12
		forward gobo spin 5	28	11	1C
		forward gobo spin 4	38	15	26
		forward gobo spin 3	46	18	2E
		forward gobo spin 2	56	22	38
		forward gobo spin 1	64	25	40
		reverse gobo spin 7	82	32	52
		reverse gobo spin 6	92	36	5C
		reverse gobo spin 5	99	39	63
		reverse gobo spin 4	110	43	6E
		reverse gobo spin 3	117	46	75
		reverse gobo spin 2	128	50	80
		reverse gobo spin 1	135	53	87
		gobo 2	155	61	9B
		gobo 3	179	70	B3
		gobo 4	191	75	BF
		gobo 5	201	79	C9
		gobo 6	209	82	D1
gobo 7	217	85	D9		
gobo 8	227	89	E3		
gobo 9	235	92	EB		
gobo 10	245	96	F5		
open / gobo 1	252	99	FC		
5	Shutter	closed	0	0	0
		open	26	10	1A
		strobe 1	51	20	33
		strobe 2	77	30	4D
		strobe 3	102	40	66
		strobe 4	128	50	80
		strobe 5	153	60	99
		strobe 6	179	70	B3
		strobe 7	204	80	CC
		closed	230	90	E6
		open	242	95	F2
6	Dimmer	closed-open	0-255	0-100	00-ffh
7	MSpeed	slowest-fastest	0-255	0-100	00-ffh