

# Technospot™ DMX Protocol

Updated January 2012

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
1	Pan coarse	Pan, coarse adjustment	0-255	0-100	00-FF
2	Pan fine	Pan, fine adjustment	0-255	0-100	00-FF
3	Tilt coarse	Tilt, coarse adjustment	0-255	0-100	00-FF
4	Tilt fine	Tilt, fine adjustment	0-255	0-100	00-FF
5	Color Mix Function	Pure Mix	0-47	0-18	00-2F
		Cycle	48-63	19-25	30-3F
		Random	64-79	25-31	40-4F
		Reserved	80-255	31-100	50-FF
6	Cyan	<b>Color Mix Function = Pure Mix</b>			
		Full Cyan to Open (White)	0-255	0-100	00-FF
		<b>Color Mix Function = Cycle or Random Mode</b>			
		Rate Slow to Fast	0-255	0-100	00-FF
7	Magenta	<b>Color Mix Function = Pure Mix</b>			
		Full Magenta to Open (White)	0-255	0-100	00-FF
8	Yellow	<b>Color Mix Function = Pure Mix</b>			
		Full Yellow to Open (White)	0-255	0-100	00-FF
9	Static Color Function	Indexed	0-15	0-6	00-0F
		Forward Wheel Spin	16-31	6-12	10-1F
		Reverse Wheel Spin	32-47	13-18	20-2F
		Continuous	48-63	19-25	30-3F
		Fast Scan	64-79	25-31	40-4F
		Random	80-95	31-37	50-5F
		TBD	96-255	38-100	60-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
10	Static Color Position	<b>Static Color Function = Indexed or Scan Mode</b>			
		White (Open)	0-24	0-9	00-18
		Red	25-49	10-19	19-31
		Blue	50-74	20-29	32-4A
		Green	75-99	29-39	4B-63
		Yellow	100-124	39-49	64-7C
		Amber	125-149	19-58	7D-95
		Pink	150-174	59-68	96-AE
		Indigo	175-199	69-78	AF-C7
		CTO	200-224	78-88	C8-E0
		White (Open)	225-255	88-100	E1-FF
		<b>Static Color Function = Spin or Random Mode</b>			
		Stop	0	0	00
		Slowest to Fastest	1-255	1-100	01-255
		<b>Static Color Function = Continuous Mode</b>			
Positioning from 0-360	0-255	0-100	00-FF		
11	Gobo 1 Function	Indexed	0-15	0-5	0-0F
		Forward Wheel Spin	16-31	6-12	10-1F
		Reverse Wheel Spin	32-47	13-18	20-2F
		Scan	48-63	19-25	30-3F
		Random	64-79	25-31	40-4F
		TBD	80-255	31-100	50-FF
12	Gobo 1 Position	<b>Gobo 1 Function = Indexed or Scan Mode</b>			
		(Open)	0-15	0-5	0-0F
		Position 1 (Dense Foliage)	16-47	6-18	10-2F
		Position 2 (Fracture)	48-79	19-31	30-4F
		Position 3 (Psy Spin, Red)	80-111	31-44	50-6F
		Position 4 (Skull or Hollywood Stars)	112-143	44-56	70-8F
		Position 5 (Lava)	144-175	56-69	90-AF
		Position 6 (Triangle)	176-207	69-81	B0-CF
		(Open)	207-255	82-100	D0-FF
		<b>Gobo 1 Function = Spin or Random Mode</b>			
		Stop	0-3	0-1	00-03
Slowest to Fastest	4-255	2-100	03-FF		

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
13	Gobo 1 Rotate Function	Indexed	0-15	0-5	0-0F
		Forward Rotate	16-31	6-12	10-1F
		Reverse Rotate	32-47	13-18	20-2F
		TBD	48-63	19-25	30-3F
		Forward Animate	64-79	25-31	40-4F
		Reverse Animate	80-95	31-37	50-5F
		Reserved	96-255	38-100	60-FF
14	Gobo 1 Rotate Coarse	<b>Gobo 1 Rotate Function Channel = Indexed Mode</b>			
		Position 0° - 360°	0-255	0-100	00-FF
		<b>Gobo 1 Rotate Function Channel = Rotate or Animate Mode</b>			
		Rotate Stop	0-7	0-13	00-07
		Rotate slow to fast	8-255	4-100	08-FF
15	Gobo1 Rotate Fine	<b>Gobo 1 Rotate Function Channel = Indexed</b>			
		Position 0° - 360°	0-255	0-100	00-FF
16	Gobo 2 Function	Indexed	0-15	0-5	0-0F
		Forward Wheel Spin	16-31	6-12	10-1F
		Reverse Wheel Spin	32-47	13-18	20-2F
		Scan	48-63	19-25	30-3F
		Random	64-79	25-31	40-4F
		TBD	80-255	31-100	50-FF
17	Gobo 2 Position	<b>Gobo 1 Function = Indexed or Scan Mode</b>			
		(Open)	0-15	0-5	0-0F
		Position 1 (Red Chicklet)	16-47	6-18	10-2F
		Position 2 (Animation Litho)	48-79	19-31	30-4F
		Position 3 (Fusion Fire, Clear)	80-111	31-44	50-6F
		Position 4 (Valiant)	112-143	44-56	70-8F
		Position 5 (Gatlin Gun, Indigo)	144-175	56-69	90-AF
		Position 6 (Multidot)	176-207	69-81	B0-CF
		(Open)	208-255	82-100	D0-FF
		<b>Gobo 1 Function = Spin or Random Mode</b>			
		Stop	0-3	0-1	00-03
		Slowest to Fastest	4-255	2-100	03-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
18	Gobo 2 Rotate Function	Indexed	0-15	0-5	0-0F
		Forward Rotate	16-31	6-12	10-1F
		Reverse Rotate	32-47	13-18	20-2F
		TBD	48-63	19-25	30-3F
		Forward Animate	64-79	25-31	40-4F
		Reverse Animate	80-95	31-37	50-5F
		Reserved	96-255	38-100	60-FF
19	Gobo 2 Rotate Coarse	<b>Gobo 1 Rotate Function Channel = Indexed Mode</b>			
		Position 0° - 360°	0-255	0-100	00-FF
		<b>Gobo 1 Rotate Function Channel = Rotate or Animate Mode</b>			
		Rotate Stop	0-3	0-1	00-03
		Rotate slow to fast	4-255	2-100	04-FF
20	Gobo 2 Rotate Fine	<b>Gobo 1 Rotate Function Channel = Indexed</b>			
		Position 0° - 360°	0-255	0-100	00-FF
21	Prism Function	Disengaged	0-31	0-12	0-1F
		Forward Spin	32-47	13-18	20-2F
		Reverse Spin	48-63	19-25	30-3F
		Reserved	64-255	25-100	40-FF
22	Prism Rotate Coarse	Rotate Stop	0-3	0-1	00-03
		Rotate slow to fast	4-255	2-100	04-FF
23	Animation Function	Disengaged	0-15	0-5	0-0F
		Continuous	16-31	6-12	10-1F
		Forward Spin	32-47	13-18	20-2F
		Reverse Spin	48-63	19-25	30-3F
		Forward Animate	64-79	25-31	40-4F
		Reverse Animate	80-95	31-37	50-5F
		Reserved	96-255	38-100	60-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
24	Animation Rotate	<b>Animation Function Channel = Continuous</b>			
		Position 0° - 360°	0-255	0-100	00-FF
		<b>Animation Function Channel = Any Rotate or Animate Mode</b>			
		Rotate Stop	0-3	0-1	00-03
		Rotate Slow to Fast	4-255	2-100	03-FF
25	Frost	Open (Hard Edge)	0-15	0-6	00-03
		Full Frost	16-31	6-12	10-1F
		Periodic Strobe from slowest to fastest	32-97	13-38	20-61
		Random Strobe from slowest to fastest	98-163	38-64	62-A3
		Open (Hard Edge)	164-225	64-100	A4-FF
26	Focus Course	Focus In to Out	0-255	0-100	0-FF
27	Focus Fine	Focus In to Out	0-255	0-100	0-FF
28	Zoom Coarse	Zoom In to Out	0-255	0-100	0-FF
29	Zoom Fine	Zoom In to Out	0-255	0-100	0-FF
30	Iris	Closed to Open	0-255	0-100	0-FF
31	Shutter Functions	Normal Shutter Functions	0-31	0-12	00-1F
		Random Random Strobe	32-63	13-24	20-3F
		Synchronous Random Strobe	64-95	25-37	40-5F
		Normal Shutter Functions	96-255	38-100	60-FF
32	Shutter	Close	0-23	0-9	00-17
		Strobe rate, slow to fast	24-229	9-89	18-E5
		Open	230-255	90-100	E6-FF
33	Dim	Close to Open	0-255	0-100	00-FF
34	MSpeed	Disable	0-3	0-1	00-03
		Longest (252.7 seconds) to Shortest (0.15 seconds)	4-255	2-100	04-FF

Chan #	Parameter	Description	Value (dec.)	Value (%)	Value (hex)
35	Control	<b>The Control channel should not be crossfaded.</b>			
		Safe (disables all Control settings)	0-9	0-4	00-09
		TBD	10-19	4-7	0A-13
		<b>Set Shutter Channel to 0 for access to the following commands.</b>			
		Display Off ( <i>send for 2 seconds</i> )	20-28	8-11	14-1C
		Display Bright ( <i>send for 2 seconds</i> )	40-48	16-19	28-30
		Home All ( <i>send for 2 seconds</i> )	60-68	24-27	3C-44
		Lamp On ( <i>send for 2 seconds</i> )	80-88	31-35	50-58
		Lamp Off ( <i>send for 2 seconds</i> )	90-98	35-38	5A-62
		Shutdown (send 80 packets)	120-130	47-50	78-82
		Position Home (send 20 packets)	131-140	51-54	83-8C
		Color Home (send 20 packets)	141-150	55-58	8D-96
		Gobo Home (send 20 packets)	151-160	59-62	97-A0
		Shutter & Dimmer Home (send 20 packets)	161-170	63-66	A1-AA
		Other Motor Home (send 20 packets)	171-180	67-70	AB-B4
		Audio Sync (send 20 packets)	181-190	7175	B5-BE
		<b>No Shutter channel requirement</b>			
TBD	191-255	75-100	BF-FF		
36	Indigo Highlighter Function	<b>Dim Tracking Mode</b>			
		Continuous	0-15	0-6	00-0F
		Periodic Strobe (slow to fast)	16-41	6-15	10-29
		TBD	42-127	16-50	2A-7F
		<b>Independent Dim Mode</b>			
		Continuous	128-143	50-56	80-8F
		Periodic Strobe (slow to Fast)	144-169	56-62	90-9F
TBD	170-255	63-100	A0-FF		
37	Indigo Highlighter Dim	Indigo Highlighter Off - 100%	0-255	0-100	11-FF