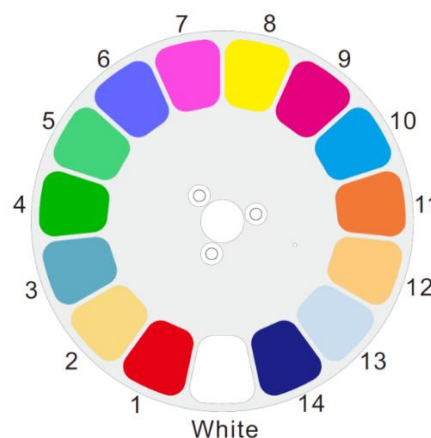


DMX PROTOCOL

DMX Parameter	Standard	Sharpy	Sharpy Extended
1	CYAN	COLOUR WHEEL	COLOUR WHEEL
2	CYAN FINE	STOP/STROBE	STOP/STROBE
3	MAGENTA	DIMMER	DIMMER
4	MAGENTA FINE	STATIC GOBO WHEEL	STATIC GOBO WHEEL
5	YELLOW	PRISM INSERTION	PRISM INSERTION
6	YELLOW FINE	PRISM ROTATION	PRISM ROTATION
7	COLOUR WHEEL	RESERVED	RESERVED
8	STOP/STROBE	FROST	FROST
9	DIMMER	FOCUS	FOCUS
10	DIMMER FINE	PAN	PAN
11	STATIC GOBO WHEEL	PAN FINE	PAN FINE
12	PRISM1	TILT	TILT
13	PRISM1 ROTATION	TILT FINE	TILT FINE
14	PRISM2	FUNCTION	FUNCTION
15	PRISM2 ROTATION	RESET	RESET
16	FROST	LAMP CONTROL	LAMP CONTROL
17	FOCUS	-	CYAN
18	PAN	-	CYAN FINE
19	PAN FINE	-	MAGENTA
20	ENDLESS PAN	-	MAGENTA FINE
21	PAN DIRECTION	-	YELLOW
22	TILT	-	YELLOW FINE
23	TILT FINE	-	PRISM2
24	P/T SPEED	-	PRISM2 ROTATION
25	FUNCTION	-	ENDLESS PAN
26	RESET	-	PAN DIRECTION
27	LAMP CONTROL	-	P/T SPEED

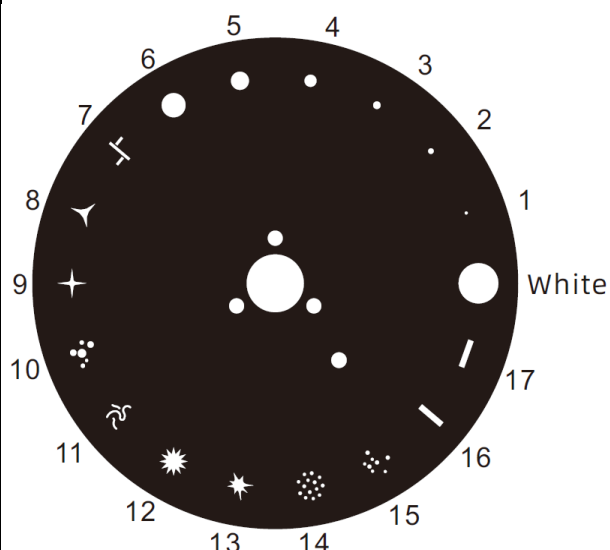
Functions Details

Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
1	-	17	000	000 - 255	CYAN Linear 0 – 100% from white to full (Colour Mixing → CMY)
2	-	18	000	000 - 255	CYAN FINE Linear 0 – 100% from white to full (Colour Mixing → CMY)
3	-	19	000	000 - 255	MAGENTA Linear 0 – 100% from white to full (Colour Mixing → CMY)
4	-	20	000	000 - 255	MAGENTA FINE Linear 0 – 100% from white to full (Colour Mixing → CMY)
5	-	21	000	000 - 255	YELLOW Linear 0 – 100% from white to full (Colour Mixing → CMY)
6	-	22	000	000 - 255	YELLOW FINE Linear 0 – 100% from white to full (Colour Mixing → CMY)
7	1	1	000		COLOUR WHEEL
				000	White
				005	White+Red
				009	Red
				013	Red+Orange
				018	Orange
				022	Orange+Aquamarine
				026	Aquamarine
				030	Aquamarine+Green
				035	Green
				039	Green+Light Green
				043	Light Green
				047	Light Green+Lavender
				052	Lavender
				056	Lavender+Pink
				060	Pink
				064	Pink + Yellow
				069	Yellow
				073	Yellow+Magenta
				077	Magenta
				082	Magenta+Cyan
				086	Cyan
				090	Cyan+CTO 260
				094	CTO 260
				099	CTO 260+CTO 190
				103	CTO 190
				107	CTO 190+CTB 8000
				111	CTB 8000
				116	CTB 8000+Blue
				120	Blue
				124	Blue+White
				128 - 255	Slow rotation(0.2rpm) to fast rotation(160rpm)



Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
8	2	2	104		STOP/STROBE
				000 - 003	Closed
				004 - 103	Strobe linear from slow (1flash-sec) to fast (12flash-sec)
				104 - 107	Open
				108 - 207	Pulsation linear from slow (30bpm) to fast (360bpm)
				208 - 212	Open
				213 - 225	Random Strobe at low frequency
				226 - 238	Random Strobe at medium frequency
				239 - 251	Random Strobe at high frequency
				252 - 255	Open
9	3	3	000	000 - 255	Dimmer Intensity from 0% to 100%
10	-	-	000	000 - 255	Dimmer Fine

Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
11	4	4	000		STATIC GOBO WHEEL (As Sharpy)
				000 - 003	White
				004 - 007	Gobo 1
				008 - 011	Gobo 2
				012 - 015	Gobo 3
				016 - 019	Gobo 4
				020 - 023	Gobo 5
				024 - 027	Gobo 6
				028 - 031	Gobo 7
				032 - 035	Gobo 8
				036 - 039	Gobo 9
				040 - 043	Gobo 10
				044 - 047	Gobo 11
				048 - 051	Gobo 12
				052 - 055	Gobo 13
				056 - 059	Gobo 14
				060 - 063	Gobo 15
				064 - 067	Gobo 16
				068 - 071	Gobo 17
				072 - 113	Forwards gobo wheel rotation from fast (60rpm) to slow (5rpm)
				114 - 117	STOP
				118 - 159	Backwards gobo wheel rotation from slow to fast
				160 - 166	Gobo2 shake, slow speed to fast speed
				167 - 172	Gobo3 shake, slow speed to fast speed
				173 - 179	Gobo4 shake, slow speed to fast speed
				180 - 185	Gobo5 shake, slow speed to fast speed
				186 - 191	Gobo6 shake, slow speed to fast speed
				192 - 198	Gobo7 shake, slow speed to fast speed
				199 - 204	Gobo8 shake, slow speed to fast speed
				205 - 211	Gobo9 shake, slow speed to fast speed
				212 - 217	Gobo10 shake, slow speed to fast speed
				218 - 223	Gobo11 shake, slow speed to fast speed
				224 - 230	Gobo12 shake, slow speed to fast speed
				231 - 236	Gobo13 shake, slow speed to fast speed
				237 - 243	Gobo14 shake, slow speed to fast speed
				244 - 249	Gobo15 shake, slow speed to fast speed
				250 - 255	Gobo16 shake, slow speed to fast speed



Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
12	5	5	000		PRISM 1
				000 - 127	Open
				128 - 255	8-facet Prism linear insertion
13	6	6	000		PRISM 1 ROTATION
				000 - 021	Prism indexing CW: 0° to 90° range
				021 - 042	Prism indexing CW: 90° to 180° range
				042 - 063	Prism indexing CW: 180° to 270° range
				063 - 084	Prism indexing CW: 270° to 360° range
				084 - 105	Prism indexing CW: 360° to 450° range
				105 - 127	Prism indexing CW: 450° to 540° range
				128 - 190	Continuous CW rotation linear from fast (43 rpm) to slow (1.1 rpm)
				191 - 192	Stop
				193 - 255	Continuous CCW rotation linear from slow (1.1 rpm) to fast (43 rpm)
14	-	23	000		PRISM 2
				000 - 127	Open
				128 - 255	6-facet Prism linear insertion
15	-	24	000		PRISM 2 ROTATION
				000 - 021	Prism indexing CW: 0° to 90° range
				021 - 042	Prism indexing CW: 90° to 180° range
				042 - 063	Prism indexing CW: 180° to 270° range
				063 - 084	Prism indexing CW: 270° to 360° range
				084 - 105	Prism indexing CW: 360° to 450° range
				105 - 127	Prism indexing CW: 450° to 540° range
				128 - 190	Continuous CW rotation linear from fast (43 rpm) to slow (1.1 rpm)
				191 - 192	Stop rotation
				193 - 255	Continuous CCW rotation linear slow (1.1 rpm) to fast (43 rpm)
16	8	8	000	000 - 255	FROST 0-100% Linear
17	9	9	128	000 - 255	FOCUS from far to near (128=default)
18	10	10	128	000 - 255	PAN
19	11	11	000	000 - 255	PAN Fine
20	-	25	000		ENDLESS PAN
				000	Unused range
				001 - 255	Pan rotation from Slow to Fast
21	-	26	000		PAN DIRECTION
				000 - 127	CCW
				128 - 255	CW

Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
22	12	12	128	000 - 255	Tilt
23	13	13	000	000 - 255	Tilt FINE
24	-	27	000	000 - 255	P/T SPEED Speed from max. to min.
25	14	14	000		FUNCTION
				000 - 004	Home-Zero
				005 - 050	FREE
				051 - 055	Pan invert OFF (default)
				056 - 060	Pan invert ON
				061 - 065	Tilt invert OFF (default)
				066 - 070	Tilt invert ON
				071 - 075	Pan/Tilt Speed Standard
				076 - 080	Pan/Tilt Speed Fast (default)
				081 - 085	Pan/Tilt Speed Boost
				086 - 090	FREE
				091 - 095	Pan/Tilt Smooth OFF (default)
				096 - 100	Pan/Tilt Smooth ON
				101 - 105	Lamp DMX OFF
				106 - 110	Lamp DMX ON
				111 - 115	Fan mode Auto (default)
				116 - 120	Fan mode Low Noise
				121 - 160	FREE
				151 - 155	Reflection OFF (default)
				156 - 160	Reflection ON
				161 - 165	Display OFF (default)
				166 - 170	Display ON
				171 - 175	CMY Shortcut OFF
				176 - 180	CMY Shortcut ON (default)
				181 - 185	Sharpy Emulation OFF
				186 - 190	Sharpy Emulation ON
				191 - 195	CMY Whole Path (default)
				196 - 200	CMY Limited Path
				201 - 205	Dimmer Curve Linear (default)
				206 - 210	Dimmer Curve Square
				211 - 220	FREE
				221 - 225	Sunsafe Protection OFF
				226 - 230	Sunsafe Protection ON (default)
				231 - 235	Safety Black Out OFF (default)
				236 - 240	Safety Black Out ON
				241 - 249	FREE
				250 - 255	Default Recall
					IMPORTANT: Functions are activated/selected staying in the necessary range for 3 seconds

Standard	Sharpy	Sharpy Extended	Default Values	Bit Values	Function
26	15	15	000		RESET
				000 - 201	FREE
				202 - 203	Reset Dimmer
				204 - 205	Reset CMY
				208 - 209	Reset Colour Wheel1
				210 - 213	FREE
				214 - 215	Reset Gobo1
				216 - 217	FREE
				218 - 219	Reset Prism
				220 - 221	FREE
				222 - 223	Reset Frost1
				224 - 227	FREE
				228 - 229	Reset Focus
				230 - 231	FREE
				232 - 233	Reset Pan
				234 - 235	Reset Tilt
				236 - 237	Reset P/T
				238 - 249	FREE
				250 - 251	Reset Effects
				252 - 255	Complete Reset
					IMPORTANT: Reset sequence is activated staying in the range for 3 seconds
27	16	16	000		LAMP CONTROL
				000 - 025	Unused range
				026 - 100	Lamp OFF
				101 - 255	Lamp ON Lamp switch-on staying in this range for 5 seconds
					Important: Ultimo Sharpy is not provided with hot re-strike igniter. After switching-off the lamp wait at least 2 minutes before switching-on it again

IMPORTANT NOTES

After switching-off the lamp we recommend waiting at least 2 minutes before switching-on it again

To prevent accidental breakage of the effects, which could collide with each other's during transport, before switching the projector OFF, check that all the fixture Channels have been excluded (DMX level = 0 bit.).

Remember to "Switch-Off" the lamp, before to "Switch-Off" the fixture.

To ensure reliable operation of the effects, it is suggested to keep the lamp of the projector switch-on for few minutes before moving the effects. Claypaky use a high-performance lubricant that is designed to work within the high temperature environment in Claypaky's modern moving light fixtures. In cold environments, it may take several minutes for the lubricant to reach optimum fluidity and all functions to reach optimum performance.