DTS Lighting

Alchemy 3



Manufacturer	**DTS Lighting**
Type	**Moving head**
DMX modes	**5**
DMX footprint	**13, 20, 23, 28 channels**
Beam angle	**14.1-45.2°**
Pan range	**540°**
Tilt range	**215°**
Size (W × H × D)	**217 × 301 × 240 mm**
GDTF fixture type	**39D60010-712C-4854-B44C-F4…**

Controls

Zoom · CMY colour mixing · Extra LED colours · RGB colour mixing · Colour temperature · Colour wheel · Strobe · Dimmer · Pan and tilt · Movement speed

Safety-relevant functions

Fixture reset · Strobe · Built-in effect programmes

DMX modes

Expo	13 ch
CCT Mode	20 ch
Basic	23 ch
CMY Emulation	23 ch
Advanced	28 ch

Expo

13 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Pan Fine	0	Fine byte of Pan
3	Tilt	128	
4	Tilt Fine	0	Fine byte of Tilt
5	Shutter / Strobe	10	0–9 Closed 10–19 Open 20–29 Closed 30–118 Min Strobe 119–119 Max Strobe 120–148 Min PulseOpen 149–149 Max PulseOpen 150–178 Max PulseClose 179–179 Min PulseOpen 180–189 Random Strobe 190–199 Open 200–209 FX Wheel BO on Insert 210–219 P/T BO on Movement 220–222 Open 223–224 Beam Shaper BO on Insert 225–226 Zoom BO on Movement 227–229 All BO on Movement/Insertion 230–255 Open
6	Dimmer	0	0–254 Closed 255–255 Open
7	C TC	163	0–69 1 800 K 70–82 2 700 K 83–91 3 000 K 92–118 3 200 K 119–147 4 000 K 148–162 5 000 K 163–173 5 600 K 174–183 6 000 K 184–194 6 500 K 195–214 7 000 K 215–232 8 000 K 233–254 9 000 K 255–255 10 000 K
8	Color Macro1	0	
9	Effect	0	0–50 Open (wheel slot 1) 51–90 Heavy Frost (wheel slot 2) 91–130 Deep Blue w/Blue Forced ON (wheel slot 2) 131–170 Deep Red w/Red Forced ON (wheel slot 3) 171–210 Deep Blue w/custom color (wheel slot 2) 211–255 Deep Red w/custom color (wheel slot 3)
10	Beam Shaper	0	0–9 No Function 10–126 0deg Index 127–127 360deg Index 128–180 CW Rotation fast>slow 181–202 Stop 203–255 CCW Rotation slow>fast
11	Zoom	0	
12	Control1	0	

Expo (continued)

Ch	Function	Default	DMX values
13	Fixture Global Reset	0	10–75 Pan/Tilt Reset 76–95 Head Motors Reset 96–115 Reserved 116–135 Effects Wheel Reset 136–175 Reserved 1 176–195 Beam Shaper Reset 196–215 Reserved 2 216–239 Zoom Reset 240–255 Total Unit Reset

CCT Mode

20 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Pan Fine	0	Fine byte of Pan
3	Tilt	128	
4	Tilt Fine	0	Fine byte of Tilt
5	Position MSpeed	0	0–9 Fast 10–25 Standard 26–127 Vector fast>slow 128–247 DMX react fast>slow 248–250 Silent 251–255 Snap
6	Shutter / Strobe	10	0–9 Closed 10–19 Open 20–29 Closed 30–118 Min Strobe 119–119 Max Strobe 120–148 Min PulseOpen 149–149 Max PulseOpen 150–178 Max PulseClose 179–179 Min PulseOpen 180–189 Random Strobe 190–199 Open 200–209 FX Wheel BO on Insert 210–219 P/T BO on Movement 220–222 Open 223–224 Beam Shaper BO on Insert 225–226 Zoom BO on Movement 227–229 All BO on Movement/Insertion 230–255 Open
7	Dimmer	0	0–254 Closed 255–255 Open
8	Dimmer Fine	0	Fine byte of Dimmer
9	C TC	163	0–69 1 800 K 70–82 2 700 K 83–91 3 000 K 92–118 3 200 K 119–147 4 000 K 148–162 5 000 K 163–173 5 600 K 174–183 6 000 K 184–194 6 500 K 195–214 7 000 K 215–232 8 000 K 233–254 9 000 K 255–255 10 000 K

CCT Mode (continued)

Ch	Function	Default	DMX values
10	Tint	128	0–127 Full minus green > neutral 128–128 Neutral 129–255 Neutral > full plus green
11	Color Macro1	0	
12	Color Macro1Rate	0	0–0 Gel Library 1 1–254 X-Fade GL 1 > GL 2 255–255 Gel Library 2
13	Color Macro2	0	
14	H SBSaturation	0	0–0 100% Gel Color 1–254 Linear Desaturation 255–255 0% Gel Color
15	Effect	0	0–50 Open (wheel slot 1) 51–90 Heavy Frost (wheel slot 2) 91–130 Deep Blue w/Blue Forced ON (wheel slot 2) 131–170 Deep Red w/Red Forced ON (wheel slot 3) 171–210 Deep Blue w/custom color (wheel slot 2) 211–255 Deep Red w/custom color (wheel slot 3)
16	Beam Shaper	0	0–9 No Function (wheel slot 1) 10–255 Beam Shaper (wheel slot 2)
17	Beam Shaper Pos	0	0–9 No Function 10–126 0deg Index 127–127 360deg Index 128–180 CW Rotation fast>slow 181–202 Stop 203–255 CCW Rotation slow>fast
18	Zoom	0	
19	Control1	0	
20	Fixture Global Reset	0	10–75 Pan/Tilt Reset 76–95 Head Motors Reset 96–115 Reserved 116–135 Effects Wheel Reset 136–175 Reserved 1 176–195 Beam Shaper Reset 196–215 Reserved 2 216–239 Zoom Reset 240–255 Total Unit Reset

Basic

23 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Pan Fine	0	Fine byte of Pan
3	Tilt	128	
4	Tilt Fine	0	Fine byte of Tilt
5	Position MSpeed	0	0–9 Fast 10–25 Standard 26–127 Vector fast>slow 128–247 DMX react fast>slow 248–250 Silent 251–255 Snap

Basic (continued)

Ch	Function	Default	DMX values
6	Shutter / Strobe	10	0–9 Closed 10–19 Open 20–29 Closed 30–118 Min Strobe 119–119 Max Strobe 120–148 Min PulseOpen 149–149 Max PulseOpen 150–178 Max PulseClose 179–179 Min PulseOpen 180–189 Random Strobe 190–199 Open 200–209 FX Wheel BO on Insert 210–219 P/T BO on Movement 220–222 Open 223–224 Beam Shaper BO on Insert 225–226 Zoom BO on Movement 227–229 All BO on Movement/Insertion 230–255 Open
7	Dimmer	0	0–254 Closed 255–255 Open
8	Dimmer Fine	0	Fine byte of Dimmer
9	C TC	163	0–69 1 800 K 70–82 2 700 K 83–91 3 000 K 92–118 3 200 K 119–147 4 000 K 148–162 5 000 K 163–173 5 600 K 174–183 6 000 K 184–194 6 500 K 195–214 7 000 K 215–232 8 000 K 233–254 9 000 K 255–255 10 000 K
10	Color Macro1	0	
11	Red	0	
12	Green	0	
13	Blue	0	
14	Color Add RY	0	
15	Color Add C	0	
16	Color Add GY	0	
17	Effect	0	0–50 Open (wheel slot 1) 51–90 Heavy Frost (wheel slot 2) 91–130 Deep Blue w/Blue Forced ON (wheel slot 2) 131–170 Deep Red w/Red Forced ON (wheel slot 3) 171–210 Deep Blue w/custom color (wheel slot 2) 211–255 Deep Red w/custom color (wheel slot 3)
18	Beam Shaper	0	0–9 No Function (wheel slot 1) 10–255 Beam Shaper (wheel slot 2)
19	Beam Shaper Pos	0	0–9 No Function 10–126 0deg Index 127–127 360deg Index 128–180 CW Rotation fast>slow 181–202 Stop 203–255 CCW Rotation slow>fast
20	Dummy	0	
21	Zoom	0	

Basic (continued)

Ch	Function	Default	DMX values
22	Control1	0	
23	Fixture Global Reset	0	10–75 Pan/Tilt Reset 76–95 Head Motors Reset 96–115 Reserved 116–135 Effects Wheel Reset 136–175 Reserved 1 176–195 Beam Shaper Reset 196–215 Reserved 2 216–239 Zoom Reset 240–255 Total Unit Reset

CMY Emulation

23 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Pan Fine	0	Fine byte of Pan
3	Tilt	128	
4	Tilt Fine	0	Fine byte of Tilt
5	Position MSpeed	0	0–9 Fast 10–25 Standard 26–127 Vector fast>slow 128–247 DMX react fast>slow 248–250 Silent 251–255 Snap
6	Shutter / Strobe	10	0–9 Closed 10–19 Open 20–29 Closed 30–118 Min Strobe 119–119 Max Strobe 120–148 Min PulseOpen 149–149 Max PulseOpen 150–178 Max PulseClose 179–179 Min PulseOpen 180–189 Random Strobe 190–199 Open 200–209 FX Wheel BO on Insert 210–219 P/T BO on Movement 220–222 Open 223–224 Beam Shaper BO on Insert 225–226 Zoom BO on Movement 227–229 All BO on Movement/Insertion 230–255 Open
7	Dimmer	0	0–254 Closed 255–255 Open
8	Dimmer Fine	0	Fine byte of Dimmer
9	Tint	128	0–127 Full minus green > neutral 128–128 Neutral 129–255 Neutral > full plus green
10	Color Macro1	0	
11	Color Macro1Rate	0	0–0 Gel Library 1 1–254 X-Fade GL 1 > GL 2 255–255 Gel Library 2
12	Color Macro2	0	
13	Cyan	0	
14	Magenta	0	

CMY Emulation (continued)

Ch	Function	Default	DMX values
15	Yellow	0	
16	C TO	0	0–254 7000 K 255–255 2700 K
17	Effect	0	0–50 Open (wheel slot 1) 51–90 Heavy Frost (wheel slot 2) 91–130 Deep Blue w/Blue Forced ON (wheel slot 2) 131–170 Deep Red w/Red Forced ON (wheel slot 3) 171–210 Deep Blue w/custom color (wheel slot 2) 211–255 Deep Red w/custom color (wheel slot 3)
18	Beam Shaper	0	0–9 No Function (wheel slot 1) 10–255 Beam Shaper (wheel slot 2)
19	Beam Shaper Pos	0	0–9 No Function 10–126 0deg Index 127–127 360deg Index 128–180 CW Rotation fast>slow 181–202 Stop 203–255 CCW Rotation slow>fast
20	Dummy	0	
21	Zoom	0	
22	Control1	0	
23	Fixture Global Reset	0	10–75 Pan/Tilt Reset 76–95 Head Motors Reset 96–115 Reserved 116–135 Effects Wheel Reset 136–175 Reserved 1 176–195 Beam Shaper Reset 196–215 Reserved 2 216–239 Zoom Reset 240–255 Total Unit Reset

Advanced

28 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Pan Fine	0	Fine byte of Pan
3	Tilt	128	
4	Tilt Fine	0	Fine byte of Tilt
5	Position MSpeed	0	0–9 Fast 10–25 Standard 26–127 Vector fast>slow 128–247 DMX react fast>slow 248–250 Silent 251–255 Snap

Advanced (continued)

Ch	Function	Default	DMX values
6	Shutter / Strobe	10	0–9 Closed 10–19 Open 20–29 Closed 30–118 Min Strobe 119–119 Max Strobe 120–148 Min PulseOpen 149–149 Max PulseOpen 150–178 Max PulseClose 179–179 Min PulseOpen 180–189 Random Strobe 190–199 Open 200–209 FX Wheel BO on Insert 210–219 P/T BO on Movement 220–222 Open 223–224 Beam Shaper BO on Insert 225–226 Zoom BO on Movement 227–229 All BO on Movement/Insertion 230–255 Open
7	Dimmer	0	0–254 Closed 255–255 Open
8	Dimmer Fine	0	Fine byte of Dimmer
9	C TC	163	0–69 1 800 K 70–82 2 700 K 83–91 3 000 K 92–118 3 200 K 119–147 4 000 K 148–162 5 000 K 163–173 5 600 K 174–183 6 000 K 184–194 6 500 K 195–214 7 000 K 215–232 8 000 K 233–254 9 000 K 255–255 10 000 K
10	Tint	128	0–127 Full minus green > neutral 128–128 Neutral 129–255 Neutral > full plus green
11	Color Macro1	0	
12	Color Macro1Rate	0	0–0 Gel Library 1 1–254 X-Fade GL 1 > GL 2 255–255 Gel Library 2
13	Color Macro2	0	
14	H SBSaturation	0	0–0 100% Gel Color 1–254 Linear Desaturation 255–255 0% Gel Color
15	Color Macro2Rate	0	0–0 CCT/Gel Mode 1–254 X-Fade CCT/Gel to RGBACL 255–255 RGBACL Mode
16	Red	0	
17	Green	0	
18	Blue	0	
19	Color Add RY	0	
20	Color Add C	0	
21	Color Add GY	0	

Advanced (continued)

Ch	Function	Default	DMX values
22	Effect	0	0–50 Open (wheel slot 1) 51–90 Heavy Frost (wheel slot 2) 91–130 Deep Blue w/Blue Forced ON (wheel slot 2) 131–170 Deep Red w/Red Forced ON (wheel slot 3) 171–210 Deep Blue w/custom color (wheel slot 2) 211–255 Deep Red w/custom color (wheel slot 3)
23	Beam Shaper	0	0–9 No Function (wheel slot 1) 10–255 Beam Shaper (wheel slot 2)
24	Beam Shaper Pos	0	0–9 No Function 10–126 0deg Index 127–127 360deg Index 128–180 CW Rotation fast>slow 181–202 Stop 203–255 CCW Rotation slow>fast
25	Dummy	0	
26	Zoom	0	
27	Control1	0	
28	Fixture Global Reset	0	10–75 Pan/Tilt Reset 76–95 Head Motors Reset 96–115 Reserved 116–135 Effects Wheel Reset 136–175 Reserved 1 176–195 Beam Shaper Reset 196–215 Reserved 2 216–239 Zoom Reset 240–255 Total Unit Reset