Black Light Design

Ayrton Diablo



Manufacturer	**Black Light Design**
Type	**Profile spot**
DMX modes	**3**
DMX footprint	**34, 36, 56 channels**
Beam angle	**7.8-58°**
Pan range	**540°**
Tilt range	**270°**
Size (W × H × D)	**248 × 417 × 228 mm**
GDTF fixture type	**18558B13-3A15-42D7-9E0D-D7…**

Controls

Focus · Frost · Iris · Prism · Prism rotation · Zoom · CMY colour mixing · Colour temperature · Colour wheel · Strobe · Dimmer · Pan and tilt · Movement speed · Animation wheel · Gobos · Gobo rotation

Safety-relevant functions

Fixture reset · Service functions

DMX modes

Basic_540_S	34 ch
Standard_540_S	36 ch
Extended_540_S	56 ch

Basic_540_S

34 channels

Ch	Function	Default	DMX values
1	Pan	128	
2	Tilt	128	
3	Position MSpeed	0	0–225 max to min speed 226–235 blackout by movement 236–245 blackout by all wheels 246–255 no function
4	Shutter / Strobe	11	0–10 Closed 11–20 open 21–116 ShutterStrobe · min 0.5–24.7 Hz 117–117 ShutterStrobe · max 25 Hz 118–126 open 127–179 ShutterPulse · min 0.5–24.5 Hz 180–180 ShutterPulse · max 25 Hz 181–191 open 192–244 ShutterRandom · min 0.5–24.5 Hz 245–245 ShutterRandom · max 25 Hz 246–255 open
5	Dimmer	0	0–254 closed 255–255 open
6	Reserved 6	0	
7	Reserved 7	0	
8	Reserved 8	0	
9	Zoom	128	0–127 narrow 128–254 mid 255–255 wide
10	Focus	128	0–127 near 128–254 mid 255–255 far
11	Focus1Distance	0	0–50 NoAutoFocus 51–100 5m 101–150 7_5m 151–200 10m 201–255 15m
12	Focus1Adjust	0	0–127 near 128–254 mid 255–255 far
13	Color Wheel	0	0–3 Open (wheel slot 1) 4–7 Quarter CTB (wheel slot 2) 8–11 Magenta (wheel slot 3) 12–15 Congo Blue (wheel slot 4) 16–19 Green (wheel slot 5) 20–23 Orange (wheel slot 6) 24–27 Blue (wheel slot 7) 28–31 Red (wheel slot 8) 32–42 Open (wheel slot 1) 43–52 Quarter CTB (wheel slot 2) 53–63 Magenta (wheel slot 3) 64–73 Congo Blue (wheel slot 4) 74–84 Green (wheel slot 5) 85–95 Orange (wheel slot 6) 96–105 Blue (wheel slot 7) 106–116 Red (wheel slot 8) 117–127 Open (wheel slot 1) 128–188 CW max 189–189 CW min 190–193 stop 194–254 CCW min 255–255 CCW max

Basic_540_S (continued)

Ch	Function	Default	DMX values
14	Cyan	0	
15	Magenta	0	
16	Yellow	0	
17	C TO	0	
18	Gobo	0	0–9 Open (wheel slot 1) 10–19 DotLine11 (wheel slot 2) 20–29 Stardust (wheel slot 3) 30–39 NestedTriangle (wheel slot 4) 40–49 InfiniteStairs (wheel slot 5) 50–59 Vortex (wheel slot 6) 60–69 BlackAndWhiteTarget (wheel slot 7) 70–77 NestedRingYellow (wheel slot 8) 78–93 DotLine11 (wheel slot 2) 94–109 Stardust (wheel slot 3) 110–125 NestedTriangle (wheel slot 4) 126–141 InfiniteStairs (wheel slot 5) 142–157 Vortex (wheel slot 6) 158–173 BlackAndWhiteTarget (wheel slot 7) 174–189 NestedRingYellow (wheel slot 8) 190–220 CW max 221–221 CW min 222–223 Stop 224–254 CCW min 255–255 CCW max
19	Gobo Rotation	0	0–126 Gobo1Index 128–187 CW max 188–188 CW min 189–192 stop 193–253 CCW min 254–255 CCW max
20	Animation Wheel1	0	0–7 open 8–126 CW max 127–127 CW min 128–135 stop 136–254 CCW min 255–255 CCW max
21	Iris	0	0–190 open 191–191 close 192–222 pulse max 223–223 pulse min 224–254 Pulse slow 255–255 Pulse fast
22	Prism	0	0–127 Open (wheel slot 1) 128–255 5-Facet (wheel slot 2)
23	Prism Rotation	0	0–127 Prism1Index 128–187 CW max 188–188 CW min 189–192 stop 193–254 CCW min 255–255 CCW max
24	Frost1	0	0–254 open 255–255 Light Frost
25	Blade3B	0	
26	Blade3A	0	
27	Blade1B	0	
28	Blade1A	0	
29	Blade4B	0	

Basic_540_S (continued)

Ch	Function	Default	DMX values
30	Blade4A	0	
31	Blade2B	0	
32	Blade2A	0	
33	Shaper Rot	128	0–127 min 128–254 default 255–255 max
34	Control1	0	0–4 No Function 5–9 Display Off 10–14 Display On 15–19 Display Inv Off 20–24 Display Inv On 25–26 Auto Fan 27–28 Stage Fan 29–30 Silence Fan 31–32 Super Silence Fan 33–34 Constant Fan OFF 35–36 Constant Fan ON 37–44 unused 45–49 Square Law 50–54 Linear 55–58 1200 Hz 59–62 2400 Hz 63–66 16000 Hz 67–69 25000 Hz 70–74 Gobo Correction Off 75–79 Gobo Correction On 80–84 All Motor Reset 85–87 Scan Motor Reset 88–90 Color Motor Reset 91–93 Gobo Motor Reset 94–96 No Function 97–99 Other Motor Reset 100–102 Prerig INIT Off 103–105 Prerig INIT ON 106–111 NoFeature 8 112–114 Tilt Degree 270 115–117 Tilt Degree 180 118–120 Tilt Degree 190 121–123 Tilt Degree 200 124–126 Tilt Degree 210 127–129 Tilt Degree 220 130–132 Tilt Degree 230 133–255 InternalProgram

Standard_540_S

36 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	0–225 max to min speed 226–235 blackout by movement 236–245 blackout by all wheels 246–255 no function

Standard_540_S (continued)

Ch	Function	Default	DMX values
6	Shutter / Strobe	11	0–10 Closed 11–20 open 21–116 ShutterStrobe · min 0.5–24.7 Hz 117–117 ShutterStrobe · max 25 Hz 118–126 open 127–179 ShutterPulse · min 0.5–24.5 Hz 180–180 ShutterPulse · max 25 Hz 181–191 open 192–244 ShutterRandom · min 0.5–24.5 Hz 245–245 ShutterRandom · max 25 Hz 246–255 open
7	Dimmer	0	0–254 closed 255–255 open
8	Reserved 8	0	
9	Reserved 9	0	
10	Reserved 10	0	
11	Zoom	128	0–127 narrow 128–254 mid 255–255 wide
12	Focus	128	0–127 near 128–254 mid 255–255 far
13	Focus1Distance	0	0–50 NoAutoFocus 51–100 5m 101–150 7_5m 151–200 10m 201–255 15m
14	Focus1Adjust	0	0–127 near 128–254 mid 255–255 far
15	Color Wheel	0	0–3 Open (wheel slot 1) 4–7 Quarter CTB (wheel slot 2) 8–11 Magenta (wheel slot 3) 12–15 Congo Blue (wheel slot 4) 16–19 Green (wheel slot 5) 20–23 Orange (wheel slot 6) 24–27 Blue (wheel slot 7) 28–31 Red (wheel slot 8) 32–42 Open (wheel slot 1) 43–52 Quarter CTB (wheel slot 2) 53–63 Magenta (wheel slot 3) 64–73 Congo Blue (wheel slot 4) 74–84 Green (wheel slot 5) 85–95 Orange (wheel slot 6) 96–105 Blue (wheel slot 7) 106–116 Red (wheel slot 8) 117–127 Open (wheel slot 1) 128–188 CW max 189–189 CW min 190–193 stop 194–254 CCW min 255–255 CCW max
16	Cyan	0	
17	Magenta	0	
18	Yellow	0	
19	C TO	0	

Standard_540_S (continued)

Ch	Function	Default	DMX values
20	Gobo	0	0–9 Open (wheel slot 1) 10–19 DotLine11 (wheel slot 2) 20–29 Stardust (wheel slot 3) 30–39 NestedTriangle (wheel slot 4) 40–49 InfiniteStairs (wheel slot 5) 50–59 Vortex (wheel slot 6) 60–69 BlackAndWhiteTarget (wheel slot 7) 70–77 NestedRingYellow (wheel slot 8) 78–93 DotLine11 (wheel slot 2) 94–109 Stardust (wheel slot 3) 110–125 NestedTriangle (wheel slot 4) 126–141 InfiniteStairs (wheel slot 5) 142–157 Vortex (wheel slot 6) 158–173 BlackAndWhiteTarget (wheel slot 7) 174–189 NestedRingYellow (wheel slot 8) 190–220 CW max 221–221 CW min 222–223 Stop 224–254 CCW min 255–255 CCW max
21	Gobo Rotation	0	0–126 Gobo1Index 127–187 CW max 188–188 CW min 189–192 stop 193–254 CCW min 255–255 CCW max
22	Animation Wheel1	0	0–7 open 8–126 CW max 127–127 CW min 128–135 stop 136–254 CCW min 255–255 CCW max
23	Iris	0	0–190 open 191–191 close 192–222 pulse max 223–223 pulse min 224–254 Pulse slow 255–255 Pulse fast
24	Prism	0	0–127 Open (wheel slot 1) 128–255 5-Facet (wheel slot 2)
25	Prism Rotation	0	0–127 Prism1Index 128–187 CW max 188–188 CW min 189–192 stop 193–254 CCW min 255–255 CCW max
26	Frost1	0	0–254 open 255–255 Light Frost
27	Blade3B	0	
28	Blade3A	0	
29	Blade1B	0	
30	Blade1A	0	
31	Blade4B	0	
32	Blade4A	0	
33	Blade2B	0	
34	Blade2A	0	

Standard_540_S (continued)

Ch	Function	Default	DMX values
35	Shaper Rot	128	0–127 min 128–254 default 255–255 max
36	Control1	0	0–4 No Function 5–9 Display Off 10–14 Display On 15–19 Display Inv Off 20–24 Display Inv On 25–26 Auto Fan 27–28 Stage Fan 29–30 Silence Fan 31–32 Super Silence Fan 33–34 Constant Fan OFF 35–36 Constant Fan ON 37–44 unused 45–49 Square Law 50–54 Linear 55–58 1200 Hz 59–62 2400 Hz 63–66 16000 Hz 67–69 25000 Hz 70–74 Gobo Correction Off 75–79 Gobo Correction On 80–84 All Motor Reset 85–87 Scan Motor Reset 88–90 Color Motor Reset 91–93 Gobo Motor Reset 94–96 No Function 97–99 Other Motor Reset 100–102 Prerig INIT Off 103–105 Prerig INIT ON 106–111 NoFeature 8 112–114 Tilt Degree 270 115–117 Tilt Degree 180 118–120 Tilt Degree 190 121–123 Tilt Degree 200 124–126 Tilt Degree 210 127–129 Tilt Degree 220 130–132 Tilt Degree 230 133–255 InternalProgram

Extended_540_S

56 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	0–225 max to min speed 226–235 blackout by movement 236–245 blackout by all wheels 246–255 no function

Extended_540_S (continued)

Ch	Function	Default	DMX values
6	Shutter / Strobe	11	0–10 Closed 11–20 open 21–116 ShutterStrobe · min 0.5–24.7 Hz 117–117 ShutterStrobe · max 25 Hz 118–126 open 127–179 ShutterPulse · min 0.5–24.5 Hz 180–180 ShutterPulse · max 25 Hz 181–191 open 192–244 ShutterRandom · min 0.5–24.5 Hz 245–245 ShutterRandom · max 25 Hz 246–255 open
7	Dimmer	0	0–254 closed 255–255 open
8	Dimmer Fine	0	Fine byte of Dimmer
9	Reserved 9	0	
10	Reserved 10	0	
11	Reserved 11	0	
12	Zoom	128	0–127 narrow 128–254 mid 255–255 wide
13	Zoom Fine	0	Fine byte of Zoom
14	Focus	128	0–127 near 128–254 mid 255–255 far
15	Focus Fine	0	Fine byte of Focus
16	Focus1Distance	0	0–50 NoAutoFocus 51–100 5m 101–150 7_5m 151–200 10m 201–255 15m
17	Focus1Adjust	0	0–127 near 128–254 mid 255–255 far
18	Color Wheel	0	0–3 Open (wheel slot 1) 4–7 Quarter CTB (wheel slot 2) 8–11 Magenta (wheel slot 3) 12–15 Congo Blue (wheel slot 4) 16–19 Green (wheel slot 5) 20–23 Orange (wheel slot 6) 24–27 Blue (wheel slot 7) 28–31 Red (wheel slot 8) 32–41 Open (wheel slot 1) 42–52 Quarter CTB (wheel slot 2) 53–63 Magenta (wheel slot 3) 64–73 Congo Blue (wheel slot 4) 74–84 Green (wheel slot 5) 85–95 Orange (wheel slot 6) 96–105 Blue (wheel slot 7) 106–116 Red (wheel slot 8) 117–127 Open (wheel slot 1) 128–188 CW max 189–189 CW min 190–193 stop 194–254 CCW min 255–255 CCW max
19	Color Wheel Fine	0	Fine byte of Color Wheel
20	Cyan	0	

Extended_540_S (continued)

Ch	Function	Default	DMX values
21	Cyan Fine	0	Fine byte of Cyan
22	Magenta	0	
23	Magenta Fine	0	Fine byte of Magenta
24	Yellow	0	
25	Yellow Fine	0	Fine byte of Yellow
26	C TO	0	
27	C TO Fine	0	Fine byte of C TO
28	Gobo	0	0–9 Open (wheel slot 1) 10–19 DotLine11 (wheel slot 2) 20–29 Stardust (wheel slot 3) 30–39 NestedTriangle (wheel slot 4) 40–49 InfiniteStairs (wheel slot 5) 50–59 Vortex (wheel slot 6) 60–69 BlackAndWhiteTarget (wheel slot 7) 70–77 NestedRingYellow (wheel slot 8) 78–93 DotLine11 (wheel slot 2) 94–109 Stardust (wheel slot 3) 110–125 NestedTriangle (wheel slot 4) 126–141 InfiniteStairs (wheel slot 5) 142–157 Vortex (wheel slot 6) 158–173 BlackAndWhiteTarget (wheel slot 7) 174–189 NestedRingYellow (wheel slot 8) 190–220 CW max 221–221 CW min 222–223 Stop 224–254 CCW min 255–255 CCW max
29	Gobo Rotation	0	0–126 Gobo1Index 127–188 CW max 189–189 CW min 190–193 stop 194–254 CCW min 255–255 CCW max
30	Gobo Rotation Fine	0	Fine byte of Gobo Rotation
31	Animation Wheel1	0	0–7 open 8–126 CW max 127–127 CW min 128–135 stop 136–254 CCW min 255–255 CCW max
32	Iris	0	0–190 open 191–191 close 192–222 pulse max 223–223 pulse min 224–254 Pulse slow 255–255 Pulse fast
33	Iris Fine	0	Fine byte of Iris
34	Prism	0	0–127 Open (wheel slot 1) 128–255 5-Facet (wheel slot 2)
35	Prism Rotation	0	0–127 Prism1Index 128–188 CW max 189–189 CW min 190–193 stop 194–254 CCW min 255–255 CCW max
36	Prism Rotation Fine	0	Fine byte of Prism Rotation

Extended_540_S (continued)

Ch	Function	Default	DMX values
37	Frost1	0	0–254 open 255–255 Light Frost
38	Blade3B	0	
39	Blade3B Fine	0	Fine byte of Blade3B
40	Blade3A	0	
41	Blade3A Fine	0	Fine byte of Blade3A
42	Blade1B	0	
43	Blade1B Fine	0	Fine byte of Blade1B
44	Blade1A	0	
45	Blade1A Fine	0	Fine byte of Blade1A
46	Blade4B	0	
47	Blade4B Fine	0	Fine byte of Blade4B
48	Blade4A	0	
49	Blade4A Fine	0	Fine byte of Blade4A
50	Blade2B	0	
51	Blade2B Fine	0	Fine byte of Blade2B
52	Blade2A	0	
53	Blade2A Fine	0	Fine byte of Blade2A
54	Shaper Rot	128	0–127 min 128–254 default 255–255 max
55	Shaper Rot Fine	0	Fine byte of Shaper Rot

Extended_540_S (continued)

Ch	Function	Default	DMX values
56	Control1	0	0–4 No Function 5–9 Display Off 10–14 Display On 15–19 Display Inv Off 20–24 Display Inv On 25–26 Auto Fan 27–28 Stage Fan 29–30 Silence Fan 31–32 Super Silence Fan 33–34 Constant Fan OFF 35–36 Constant Fan ON 37–44 unused 45–49 Square Law 50–54 Linear 55–58 1200 Hz 59–62 2400 Hz 63–66 16000 Hz 67–69 25000 Hz 70–74 Gobo Correction Off 75–79 Gobo Correction On 80–84 All Motor Reset 85–87 Scan Motor Reset 88–90 Color Motor Reset 91–93 Gobo Motor Reset 94–96 No Function 97–99 Other Motor Reset 100–102 Prerig INIT Off 103–105 Prerig INIT ON 106–111 NoFeature 8 112–114 Tilt Degree 270 115–117 Tilt Degree 180 118–120 Tilt Degree 190 121–123 Tilt Degree 200 124–126 Tilt Degree 210 127–129 Tilt Degree 220 130–132 Tilt Degree 230 133–255 InternalProgram