DMX protocol

ERA 600 Performance firmware version 1.1.0.

Channel	DMX Value	Function	Fade type	Default value
1	0 - 19 20 - 24 25 - 64 65 - 69 70 - 84 85 - 89 90 - 104 105 - 109 110 - 124 125 - 129 130 - 144 145 - 255	**Strobe/shutter effect** Shutter closed Shutter open Strobe, fast → slow Shutter open Opening pulse, fast → slow Shutter open Closing pulse, fast → slow Shutter open Random strobe, fast → slow Shutter open Random opening pulse, fast → slow Shutter open	Snap	0
2	0 - 65535	**Dimmer fade (MSB)** Closed → open	Fade	0
3		**Dimmer fade, fine (LSB)**	Fade	0
4	0 - 65535	**Cyan (MSB)** 0 → 100%	Fade	0
5		**Cyan fine (LSB)** 0 → 100%	Fade	0
6	0 - 65535	**Magenta (MSB)** 0 → 100%	Fade	0
7		**Magenta fine (LSB)** 0 → 100%	Fade	0
8	0 - 65535	**Yellow (MSB)** 0 → 100%	Fade	0
9		**Yellow fine (LSB)** 0 → 100%	Fade	0
10	0 - 65535	**CTO (MSB)** 0 → 100%	Fade	0
11		**CTO fine (LSB)** 0 → 100%	Fade	0
12	0 - 5 6 - 11 12 - 17 18 - 23 24 - 29 30 - 35 36 - 41 42 - 47 48 - 127 128 - 190 191 - 192 193 - 255	**Color wheel** **Indexing** *Solid colors* Open Color 1 Color 2 Color 3 Color 4 Color 5 Color 6 Color 7 *Split colors* Continuous color wheel indexing **Continuous rotation** CW, fast → slow Stop (wheel stops at current position) CCW slow → fast	Fade	0

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Channel	DMX Value	Function	Fade type	Default value
13		**Gobo wheel 1** **Gobo selection**	Snap	0
	0 - 6	Open		
	7 - 13	Gobo 1		
	14 -20	Gobo 2		
	21 - 27	Gobo 3		
	28 - 34	Gobo 4		
	35 - 41	Gobo 5		
	42 - 48	Gobo 6		
	49 - 55	Gobo 7		
	56 - 62	Gobo 1 shake		
	63 - 69	Gobo 2 shake		
	70 - 76	Gobo 3 shake		
	77 - 83	Gobo 4 shake		
	84 - 90	Gobo 5 shake		
	94 - 97	Gobo 6 shake		
	98 - 104	Gobo 7 shake		
		Continuous gobo wheel rotation		
	105 - 178	CW, fast → slow		
	179 - 181	Stop (wheel stops at current position)		
	182 - 255	CCW slow → fast		
14		**Gobo wheel 1** **Gobo indexing/rotation**	Snap	0
	0 - 127	Gobo indexing 0 - 360°		
	128 - 190	Gobo rotation CW fast → slow		
	191 - 192	Stop		
	193 - 255	Gobo rotation CCW slow → fast		
15		**Gobo wheel 1** **Gobo indexing/rotation fine**	Fade	0
	0 - 255	Indexed position / rotation speed fine		
16		**Gobo wheel 2** **Gobo selection**	Snap	0
	0 - 6	Open		
	7 - 13	Gobo 1		
	14 -20	Gobo 2		
	21 - 27	Gobo 3		
	28 - 34	Gobo 4		
	35 - 41	Gobo 5		
	42 - 48	Gobo 6		
	49 - 55	Gobo 7		
	56 - 62	Gobo 8		
	63 - 69	Gobo 1 shake		
	70 - 76	Gobo 2 shake		
	77 - 83	Gobo 3 shake		
	84 - 90	Gobo 4 shake		
	91 - 97	Gobo 5 shake		
	98 - 104	Gobo 6 shake		
	105 - 111	Gobo 7 shake		
	112 - 118	Gobo 8 shake		
		Continuous gobo wheel rotation		
	119 - 185	CCW, fast → slow		
	186 - 188	Stop (wheel stops at current position)		
	189 - 255	CW slow → fast		
17		**Animation**	Snap	0
	0 - 5	Open		
	6 - 128	Indexing CCW 0° → 540°		
	129 - 191	Continuous rotation CW fast → slow		
	192	Stop		
	193 - 255	Continuous rotation CCW slow → fast		
18		**Frost**	Fade	0
	0 - 255	No frost → full frost		
19		**Rotating Prism 1 deployment**	Snap	0
	0 - 10	Off		
	11 - 255	On		
20		**Rotating Prism 1 movement**	Snap	0
	0 - 127	Indexing 0° - 360°		
	128 - 190	Rotation CW fast → slow		
	191 - 192	Stop		
	193 - 255	Rotation CCW slow → fast		

Table 1: DMX Protocol

Channel	DMX Value	Function	Fade type	Default value
21	0 - 10 11 - 255	**Rotating Prism 2 deployment** Off On	Snap	0
22	0 - 127 128 - 190 191 - 192 193 - 255	**Rotating Prism 2 movement** Indexing 0° - 360° Rotation CW fast → slow Stop Rotation CCW slow → fast	Snap	0
23	0 - 255	**Iris** Open → closed	Fade	0
24	0 - 65535	**Zoom (MSB)** Wide → narrow	Fade	0
25		**Zoom fine (LSB)**	Fade	0
26	0 - 65535	**Focus (MSB)** Infinity → near	Fade	0
27		**Focus fine (LSB)**	Fade	0
28	0 - 255	**Framing blade 1: position** Out → in	Fade	0
29	0 -126 127 - 128 129 - 255	**Framing blade 1: angle** Angle – Parallel Angle +	Fade	127
30	0 - 255	**Framing blade 2: position** Out → in	Fade	0
31	0 -126 127 - 128 129 - 255	**Framing blade 2: angle** Angle – Parallel Angle +	Fade	127
32	0 - 255	**Framing blade 3: position** Out → in	Fade	0
33	0 -126 127 - 128 129 - 255	**Framing blade 3: angle** Angle – Parallel Angle +	Fade	127
34	0 - 255	**Framing blade 4: position** Out → in	Fade	0
35	0 -126 127 - 128 129 - 255	**Framing blade 4: angle** Angle – Parallel Angle +	Fade	127
36	0 -126 127 - 128 129 - 255	**Framing module angle** Minimum (-60°) 0° Maximum (+60°)	Fade	127
37	0 - 65535	**Pan (MSB)** Left → right	Fade	32768
38		**Pan, fine (LSB)**		
39	0 - 65535	**Tilt (MSB)** Up → down	Fade	32768
40		**Tilt, fine (LSB)**		

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Channel	DMX Value	Function	Fade type	Default value
41		**Fixture control/settings**	Snap	0
		(hold for number of seconds indicated to activate)		
	0 - 9	*No function (disables calibration)* – 5 sec.		
	10 - 14	Reset entire fixture – 5 sec.		
	15	*No function*		
	16	Reset color – 5 sec.		
	17	Reset beam only– 5 sec.		
	18	Reset pan and tilt only – 5 sec.		
	19 - 22	*No function*		
	23	Linear dimming curve – 1 sec. (menu override, setting unaffected by power off/on)		
	24	Square law dimming curve – 1 sec. (menu override, default setting, setting unaffected by power off/on)		
	25	Inverse square law dimming curve – 1 sec. (menu override, setting unaffected by power off/on)		
	26	S-curve dimming curve– 1 sec. (menu override, setting unaffected by power off/on)		
	27	*No function*		
	28	Fast pan and tilt speed– 1 sec. (default setting, menu override - setting returns to MENU setting after power on/off)		
	29	Smooth pan and tilt speed– 1 sec. (menu override - setting returns to MENU setting after power on/off)		
	30 - 51	*No function*		
	52	Control panel display = ON – 1 sec.		
	53	Control panel display = OFF – 1 sec.		
	54	Regulated fan speed, fixed light output intensity (default) – 1 sec.		
	55	Full fan speed, regulated light output intensity – 1 sec.		
	56 -255	*No function*		

Table 1: DMX Protocol

Control panel menus

ERA 600 Performance firmware version 1.0.0.

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Notes (Default settings in bold print)
DMX SETUP	DMX ADDRESS	**1** – XXX		DMX address (default address = **1**). The DMX address range is limited so that the fixture will always have enough DMX channels within the 512 available.
PERSONALITY	PAN INVERSE	**NO**/YES		Inverse DMX pan control: right → left
	TILT INVERSE	**NO**/YES		Inverse DMX tilt control: down → up
	PAN/TILT SPEED	**FAST**		**Optimize pan/tilt movement for speed**
		SLOW		Optimize pan/tilt movement for smoothness
	DIMMER CURVE	LINEAR		Optically linear dimming curve
		SQUARE LAW		**Square law dimming curve**
		INV SQ LAW		Inverse square law dimming curve
		S-CURVE		S-curve (fixture emulates incandescent lamp voltage linear RMS dimming curve)
	DIMMING SPEED	**FAST**		**Snap dimmer reaction**
		SLOW		Short crossfade when dimmer value changes
	NO DATA MODE	BLACKOUT		If data signal stops, fixture blacks out
		HOLD		**If data signal stops, fixture holds last received data on all channels (holds current scene)**
	COOLING MODE	**REGULATED FANS**		**Fan speed optimized for light intensity: temperature-controlled by regulating fan speed, light output unaffected**
		FULL		Fans run at constant full speed
	DISPLAY	DISPLAY ROTATION	**NORMAL** / ROTATE 180	Display orientation **normal** or rotated 180°
		DISPLAY INTENSITY	10 ... **100 %**	Set display intensity in % (default = **100**)
		TEMPERATURE UNIT	°**C** / °F	All temperature readouts in Celsius / Fahrenheit
DEFAULT SETTINGS	FACTORY DEFAULT	LOAD	ARE YOU SURE? YES/NO	Return all settings (except calibrations) to factory defaults
FIXTURE TEST	TEST ALL	TESTING		Run test sequence of all LEDs and all effects
	TEST DIMMER	DIMMER		Run dimming test sequence. Press Enter to pause and to restart test sequence. Press Menu button to exit test
	TEST EFFECTS	CYAN ... BLADE 4 ANGLE		Run test sequence of effects. To test a specific effect, use Up/Down buttons to scroll to effect. Press Enter to pause and restart test sequence. Press Menu button to exit test
	TEST PAN/TILT	PAN		Run test sequence of pan functions. Press Menu button to exit test
		TILT		Run test sequence of tilt functions. Press Menu button to exit test

Table 2: Control menus

Menu level 1	Menu level 2	Menu level 3	Menu level 4	Notes (Default settings in bold print)
INFORMATION	POWER ON TIME	0 ... XXX HR		Display number of hours fixture has been powered on since manufacture (not user-resettable)
	LED HOURS	0 ... XXX HR		Display number of hours LEDs have been powered on since manufacture (not user-resettable)
	SW VERSION	V.X.X.X		Displays currently active fixture software (firmware) version
	FIXTURE ID	0000 - 9999		User-settable ID number. Use Up and Down buttons to scroll to the chosen ID number. Use Enter to confirm.
	RDM UID	4D50.XXXXXXXX		Displays fixture's unique RDM ID
	TEMPERA-TURES	LED / BASE		Scroll through current readings on all PCB temperature sensors
DMX LIVE	STROBE ... PAN/TILT SPEED	0 - 255		Scroll to see values currently being received on each DMX channel
MANUAL CONTROL	RESET	ALL		Reset fixture
		PAN / TILT		Reset pan and tilt only
		EFFECTS		Reset effects only
	STROBE ... PAN/TILT SPEED			Scroll through effects, then manually control an effect
SERVICE	PAN/TILT FEEDBACK	**ON**		**Enable pan/tilt position feedback system**
		OFF		Disable pan/tilt position feedback system
	CALIBRATION	PAN ... BLADE 4 ANGLE	-127 – +128 ... -127 – +128	Scroll through effects, press Enter to select. Adjust home position and press Enter to confirm.
	LOAD DEFAULTS	LOAD		Load factory default calibration settings
	SAVE SETTING	SAVE		Replace factory default calibration settings with current calibration settings
	USB	NO DEVICE / INVALID FILE		No USB device present or no firmware on USB device
		UPDATING FILES		Fixture updating internal memory from USB device

Table 2: Control menus