

DMX GRAPHIC SCAN COMMON DMX CHANNELS AND ASSIGNMENTS:

DMX PIN ASSIGNMENTS:

PIN1 - GROUND
PIN2 - NEGATIVE
PIN3 - POSITIVE

DMX CHANNEL ASSIGNMENTS:

CHANNEL 1: PAN POSITION 000 - 255

CHANNEL 2: TILT POSITION 000 - 255

CHANNEL 3: GRAPHICS AND TEXT BANK SELECTION

000 - 007	1: STAR	128 - 135	17: LIGHTENING BOLT
008 - 015	2: SQUARE	136 - 143	18: 4 SQUARE ARRAY
016 - 023	3: HORIZONTAL FLAT	144 - 151	19: LEAF
024 - 031	4: VERTICAL FLAT	152 - 159	20: DIAMOND STAR
032 - 039	5: CIRCLE	160 - 167	21: EYE TRIANGLE
040 - 047	6: BOXED CROSS	168 - 175	22: MUSICAL NOTE
048 - 055	7: WAVE	176 - 183	23: DOLLAR
056 - 063	8: SOLID ARROW	184 - 191	24: SPLASH
064 - 071	9: TRIANGLE	192 - 199	25: 4 SLATS
072 - 079	10: 3 CIRCLES	200 - 207	26: SLOW GIRDER PROFILE
080 - 087	11: HEART	208 - 215	TEXT BANK 1
088 - 095	12: CROSS HAIRS	216 - 223	TEXT BANK 2
096 - 103	13: 3 PETALS	224 - 231	TEXT BANK 3
104 - 111	14: BEAM	232 - 239	TEXT BANK 4
118 - 119	15: BROKEN SQUARE	240 - 247	TEXT BANK 5
126 - 127	16: METEOR SHOWER	248 - 255	TEXT BANK 6

CHANNEL 4: GRAPHIC SIZE SELECTION

000 - 031	SIZE 1	128 - 159	SIZE 5
032 - 063	SIZE 2	160 - 191	SIZE 6
064 - 095	SIZE 3	192 - 223	SIZE 7
096 - 127	SIZE 4	224 - 255	SIZE 8

CHANNEL 5: GRAPHIC MODULATION SELECTION / TEXT STORING

MODULATION MODE:

000 - 032	NO MODULATION	128 - 159	SHRINK AND GROW
033 - 063	HORIZONTAL SPIN	160 - 191	ROTATE AND SHRINK
064 - 095	VERTICAL SPIN	192 - 223	ROTATE AND SHRINK
096 - 127	ROTATION	224 - 255	NO MODULATION

TEXT MODE:

000 - 255 - 000 STORE CHARACTER

CHANNEL 6: COLOUR CONTROL (ARGON SYSTEMS ONLY) / TEXT ENTRY MODE

000 - 059	CYAN (FULL POWER)	180 - 239	3 sec COLOUR SCROLL
060 - 119	GREEN	240 - 255	TEXT MODE
120 - 179	BLUE		

CHANNEL 7: BEAM CONTROL / REMOTE START (ARGON SYSTEMS ONLY)

BEAM CONTROL:

000 - 020	BEAM OFF	041 - 199	STROBE EFFECTS
021 - 040	BEAM ON	200 - 230	BEAM ON

REMOTE START:

020 - 231 - 020 REMOTE START TOGGLE

CHANNEL 8: SCAN RATE / TEXT CHARACTER SELECTION

SCAN RATES:

000 - 005 DEFAULT SCAN RATE 006 - 255 SCAN RATE EFFECTS (006 SLOWEST)

TEXT CHARACTER SELECTION:

000 - 005	A	120 - 125	U
006 - 011	B	126 - 131	V
012 - 017	C	132 - 137	W
018 - 023	D	138 - 143	X
024 - 029	E	144 - 149	Y
030 - 035	F	150 - 155	Z
036 - 041	G	156 - 161	. (full stop)
042 - 047	H	162 - 167	_ (space)
048 - 053	I	168 - 173	0
054 - 059	J	174 - 179	1
060 - 065	K	180 - 185	2
066 - 071	L	186 - 191	3
072 - 077	M	192 - 197	4
078 - 083	N	198 - 203	5
084 - 089	O	204 - 209	6
090 - 095	P	210 - 215	7
096 - 101	Q	216 - 221	8
102 - 107	R	222 - 227	9
108 - 113	S	228 - 233	£ (pound sign)
114 - 119	T		

DMX GRAPHIC SCAN HEAD SPECIFICATIONS (5mW, 10mW, 20mW and 50mW):

OPTICAL:

Laser Source : Green DPSS YAG, Red Laser Diode,
Maximum Optical Power : 5, 10, 20, 50mW - 30mins to stabilise,
Classification : 3A for powers 5mW or below, 3B for powers above 5mW,
Wavelength : 532nm Green, 650nm Red,
Beam Divergence : 1.5mrad Green, 2mrad Red,
Beam Diameter : 1.0mm Green, 2x7mm Red,
Laser Life : 5000Hrs,
Optics : Front surface enhanced aluminium mirrors with Anti Reflective coated output window,
Shutter : Solid State Switching
Maximum Scan Time : 30mS Exposure.

EFFECTS:

- 26 Pre-set Graphics,
- 6 x 250 Character Text banks,
- 150° Pan and 45° Tilt projection,
- 6 Modulations effects,
- Variable Strobe,
- Variable Scan Rate,
- Variable Pattern divergence angle,
- 2 Galvanometer Scanners.

POWER SUPPLY:

- Linear power supply for electronics and laser,
- 200 - 250 VAC Operation,
- 60 Watt power consumption.

CONFORMITY / SAFETY FEATURES:

- CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated),
EN 61000-4-2:1995,
EN 61000-4-3:1995,
EN 61000-4-8:1994,
LOW VOLTAGE DIRECTIVE,
- *Pulse Train MPE=1.091J/m², Energy densities in medium density smoke: 5mW =1.060J/m² at 2.9m,
10mW=1.031J/m² at 3.6m, 20mW=0.991J/m² at 4.2m.

*Note that these energy densities are approximate calculations based on the information provided in the HS(G)95 guide book.

PHYSICAL:

System Dimensions : 465 x 180 x 110mm,
Weight : 5.0Kg,
Operating Temperature : 5-40°C,
Packaging Size : 600(l) x 300(w) x 225(h)mm,
Packaged Weight : 7.0Kg.

DMX GRAPHIC SCAN HEAD SPECIFICATIONS (50 – 600mW):

OPTICAL:

Laser Source : DPSS YAG,
Maximum Optical Power : 50 = 80mW, 100 = 120mW, 200 = 220mW, 400 = 450mW, 600 = 650mW,
Classification : Class 3B for 50 to 400mW, Class 4 for 600mW
Wavelength : 523nm,
Beam Divergence : 2mrad,
Beam Diameter : 2mm,
Estimated Laser Life : 5000 Hrs for 50 to 200mW, 10000 Hrs for 400 to 600mW,
Optics : Front surface aluminium mirrors with Anti Reflective coated output window,
Shutter : Solid State,
Maximum Scan Time : 1-5mS Exposure.

EFFECTS:

- 26 Pre-set Graphics,
- 6 x 250 Character Text banks,
- 150° Pan and 45° Tilt projection,
- 6 Modulations effects,
- Variable Strobe,
- Variable Scan Rate,
- Variable Pattern divergence angle,
- 2 Galvanometer Scanners.

POWER SUPPLY:

- Linear power supply for electronics and laser,
- 210 – 250VAC Operation, 120 Watt Power Consumption,
- IEC Fuse Rating: 500mA Delay Action, 20mm 250VAC.

CONFORMITY / SAFETY FEATURES:

- CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated),
EN 61000-4-2:1995, EN 61000-4-3:1995,
EN 61000-4-8:1994, LOW VOLTAGE DIRECTIVE,
- Recommended viewing distances for audience scanning. Note that these energy densities are approximate calculations based on the information provided in the HS(G)95 guide book.

Laser Power (mW)	MPE Energy Level (J/m ²)	Save Viewing Distance (m) in no Smoke and Energy Level (J/m ²)	Save Viewing Distance (m) in Low Density Smoke and Energy Level (J/m ²)	Save Viewing Distance (m) in Medium Density Smoke and Energy Level (J/m ²)
50	0.338	12.5, 0.335	6.3, 0.336	3.9, 0.331
100	0.338	18.1, 0.335	7.4, 0.336	4.4, 0.335
200	0.338	25.9, 0.338	8.3, 0.319	4.8, 0.291
400	0.338	37.1, 0.337	8.9, 0.294	5.0, 0.272
600	0.338	45.6, 0.338	9.1, 0.295	5.1, 0.197

- X or Y Scanner failure protection. If X or Y scanners fail, laser source will be shut down. Typical response time 2-5mS.

PHYSICAL:

System Dimensions : 695(l) x 310(w) x 120(h)mm,
Weight : 12.0Kg
Operating Temperature : 5-35°C
Packaging Size : 810(l) x 290(w) x 500(h)mm,
Packaged Weight : 18.0Kg

DMX GRAPHIC SCAN HEAD SPECIFICATIONS(250mW ARGON):

OPTICAL:

Laser Source : Gas, Argon Ion,
Maximum Optical Power : 300mW,
Classification : 3B,
Wavelength : 547 - 514nm,
Beam Divergence : 1.7mrad,
Beam Diameter : 1.5mm,
Estimated Laser Life : 2000 Hrs,
Optics : Front surface enhanced aluminium mirrors with Anti Reflective coated output window, di chloric filters for colour selection.
Shutter : Galvanometer,
Maximum Scan Time : 30mS Exposure.

EFFECTS:

- 26 Pre-set Graphics,
- 6 x 250 Character Text banks,
- 150° Pan and 45° Tilt projection,
- 6 Modulations effects,
- Variable Strobe,
- Variable Scan Rate,
- Variable Pattern divergence angle,
- 2 Galvanometer Scanners.

POWER SUPPLY:

- Linear power supply for electronics and switch mode for laser,
- 230 VAC \pm 10% Operation,
- 1600 Watt power consumption.

CONFORMITY / SAFETY FEATURES:

- CE Conformity to : EN 55011:1991 CLASS B (conducted and radiated),
EN 61000-4-2:1995,
EN 61000-4-3:1995,
EN 61000-4-8:1994,
LOW VOLTAGE DIRECTIVE,
- *Pulse Train MPE=1.092J/m², Energy density: 0.963J/m² at 5m assuming a scan time of 30mS and exposure to 2 pulses in medium density smoke.
- *Minimum viewing distance for stationary beams is 5m, based on single pulse exposure and 250mS exposure (eye blink reflex time) in medium density smoke.

*Note that these energy densities are approximate calculations based on the information provided in the HS(G)95 guide book. For further details on the calculation process please see LASER MPE LEVEL CALCULATIONS section in this manual.

PHYSICAL:

System Dimensions : 720(l) x 386(w) x 235(h)mm,
Weight : 15.0Kg
Operating Temperature : 5-35°C
Relative Humidity : 0-95%, non condensing,
Packaging Size : 940(l) x 540(w) x 415(h)mm,
Packaged Weight : 20.0Kg