Club Style Lasers

Azure & Emerald

Item ref: 152.750UK & 152.755UK

User Manual

Stock Code	Model	Wavelength	Laser Power
152.750UK	Azure	450nm	100mW
152.755UK	Emerald	532nm	50mW

IMPORTANT SAFETY NOTICE
Please Read this manual before operating
VERSION 1.0

⚠	Caution: Please read this manual carefully before operating Damage caused by misuse is not covered by the warranty

Introduction

Thank you for choosing this product. Please read this manual carefully to achieve the best results from your purchase and to avoid damage through misuse. This laser has been designed to create multiple laser effects and patterns across a wide area. Please keep this manual for future reference.

CAUTION

- **This Class 3B laser product emits hazardous levels of optical radiation and will cause injury to the eyes if viewed directly.**

- **This product is not suitable for projection directly at audiences or other personnel.**

- **This product must not be used for any form of audience scanning application and is for professional use only.**

Important information

This product is a Class 3B laser and should only be installed and used by personnel who are trained in the management of laser radiation and are able to operate in accordance within the guidance given by the Health and Safety Executive (HSE).

The guide can be found in the HSE website:

https://www.hse.gov.uk/pubns/indg224.htm

This product contains no user-serviceable parts. Under no circumstances should any attempt be made by the user to modify it in any way.

Technical Specification

1. Voltage: 100-250Vac, 50-60Hz (IEC)
2. Rated Power: 10W
3. Laser: Emerald: 50mW @532nm green laser
4. Laser: Azure: 100mW @450nm blue laser
5. Working Modes: DMX, Sound-Active, AUTO, Master-Slave.
6. DMX Control Channel: 7 channels
7. Interface: 3 pins XLR jack for DMX or Master-Slave linking.
8. Size: 180 x 135 x 65mm
9. Weight: 1.5Kg

Function & Setting

Sound-Activated Mode

When setting up sound activated mode please see the Dipswitch Chart as this helps give a visual interpretation of the values. Please set dipswitch 10 to high to enable sound activated mode. The patterns will change in accordance with the sound. If there is no sound detected from the microphone, then the laser will have no output.

AUTO Mode

When this setting is live the laser will change patterns automatically and go through different cycles with no external control. The laser will not black out when in this mode.
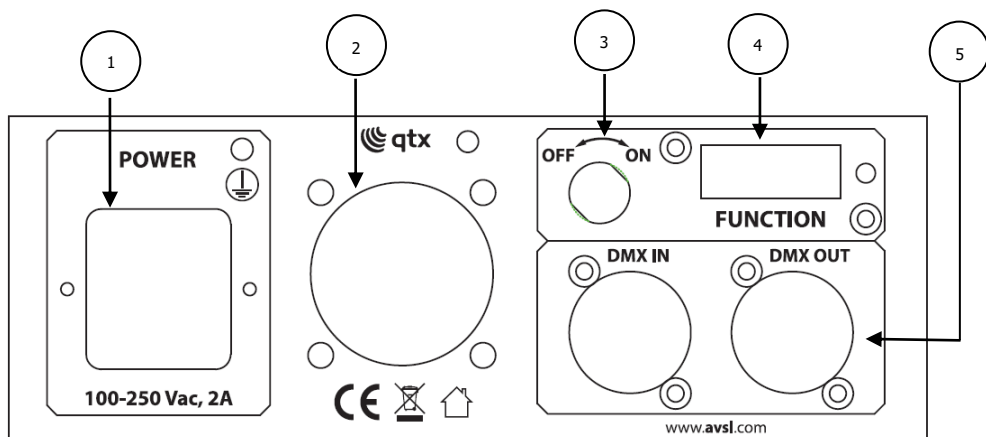
DMX Control

When controlling lasers via DMX set up the controller through the input socket. DMX can control the system mode, the laser pattern, the size, the position, the speed, etc.

For more information please see the Control Parameter Charts.

Front/Rear Panel
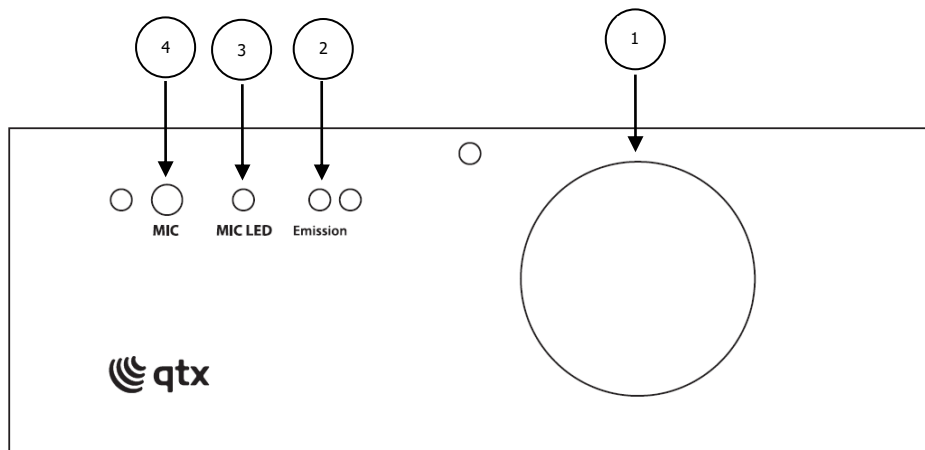
1. Laser Aperture
2. Power Indicator: Red
3. Sound Active Indicator: Blue
4. Sound Active Microphone

1. IEC Power
2. Cooling Fan
3. Laser Key Switch
4. Dipswitches: Function Setting
5. DMX or Linking Jack

DMX Control Parameter Chart

Channel	Function	Value	Description
CH1	Mode	0～49	No output from laser
		50～99	Sound active mode
		100～149	AUTO mode
		150～199	Static patterns of DMX mode
		200～255	Dynamic patterns of DMX mode
CH2	Pattern selection	0～255	52 static/dynamic patterns
CH3	Position-X	0～255	Adjust position (X-Axis)
CH4	Position-Y	0～255	Adjust position (Y-Axis)
CH5	Scanning speed	0～255	0 is fast, 255 is slow
CH6	Dynamic patterns speed	0～255	Fast to slow (0-255) in 10 steps
CH7	Static pattern size	0～255	0 is small, 255 is big

Channel 2 Parameter Function Chart

DMX value	Static patterns	Dynamic patterns	DMX value	Static patterns	Dynamic patterns
0～4	Circle	Circle size increases	65～69	Vertical Dotted line 1	Jumping horizontal line
5～9	Circle dot 1	Dot increases in size to a circle	70～74	Vertical line 2	Jumping dotted horizontal line
10～14	Circle dot 2	Scanning Circle increases in size	75～79	Vertical dotted line 2	Jumping vertical line
15～19	Scanning Circle	Flashing Circle	80～84	Triangle 1	Jumping dotted vertical line
20～24	Horizontal line	Flashing dot changes to circle	85～89	Dotted triangle 1	Jumping diagonal line
25～29	Horizontal-dotted line	Rolling Circle	90～94	Triangle 2	Jumping dotted diagonal line
30～34	Vertical line	Dot changes into rolling circle	95～99	Dotted triangle 2	Short round sector 1
35～39	Vertical-dotted line	Turning Circle	100～104	Square	Short round sector 2
40～44	45° diagonal	Dot changes into turning circle	105～109	Dotted Square	Long round sector 1
45～49	Diagonal dot	Dotted Circle	110～114	Rectangle 1	Long round sector 2
50～54	135° diagonal	Extended scanning circle	115～119	Dotted rectangle 1	Scanning line
55～59	Diagonal dot	Jumping circle	120～124	Rectangle 2	Scanning dotted line
60～64	Vertical line 1	Jumping dotted circle	125～129	Dotted rectangle 2	45° diagonal moving line

DMX value	Static patterns	Dynamic patterns	DMX value	Static patterns	Dynamic patterns
130~134	Criss-cross	Diagonal moving dot	195~199	Ladder line 4	Turning square
135~139	Chiasma line	Flexing horizontal line	200~204	Tetragon 1	Turning dotted square
140~144	Extended horizontal line	Flexing horizontal dotted line	205~209	Tetragon 2	Turning pentagon
145~149	Shrinking horizontal line	Moving horizontal line	210~214	Pentagon 1	Turning dotted pentagon
150~154	Flexing horizontal line	Horizontally moving dotted line	215~219	Pentagon 2	Turning tetragon
155~159	Flexing horizontal dotted line	Vertically moving line	220~224	Pentagon 3	Turning pentagon star
160~164	Extended vertical line	Vertically moving dotted line	225~229	Pentagon 4	Flying bird
165~169	Shrinking vertical line	Extended rectangle	230~234	Wave line	Dotted flying bird
170~174	Flexing vertical line	Extended dotted rectangle	235~239	Wave dotted line	Flowing wave
175~179	Flexing vertical dotted line	Extended square	240~244	Spiral line	Flowing dotted wave
180~184	Ladder line 1	Extended dotted square	245~249	Many dots 1	Many dots jump 1
185~189	Ladder line 2	Turning rectangle	250~254	Many dots 2	Dotted square jump
190~194	Ladder line 3	Turning dotted rectangle	255	Dotted square	Many dots jump 2

As shown in the table there are 52 static patterns where the sizes of the patterns up to DMX value 140 are adjustable, those after this value are non-adjustable. There is also 52 dynamic patterns where all sizes are non-adjustable.

Operation

Stand-Alone Operation (Sound Activated & AUTO mode)

This mode allows a single unit to react to the beat of the music in the master mode.

1. Install the unit(s) in a suitable position.
2. Set dipswitch to select a mode.
3. Turn on the unit, this will reset first then begin to work afterwards.
4. The unit will react to any frequency of music/sound via the internal microphone on the back of the unit.

Master-Slave Operation

This mode allows you to link up to 32 units together via DMX without a controller.

1. Install the unit(s) in a suitable position.
2. Choose a unit to function as master mode, set the dipswitch to select sound activated or AUTO mode.
3. Set all other units to slave mode and select slave mode on the dipswitch.
4. Use standard XLR cables to chain your units together via the XLR connectors on the rear of the units. For longer cable runs we suggest a terminator is used at the last fixture.
5. Turn on all the units, they will reset first and then begin to work. All slave units will react in the same way as the master unit.
6. The units will react to any frequency of music/sound via the internal microphone on the back of the unit.

Universal DMX Operation (DMX Mode)

This mode allows you to use a universal DMX-512 controller to operate.

1. Install the unit(s) in a suitable position.
2. Use standard XLR cables to chain your units together via the XLR connectors on the rear of the units. For longer cable runs we suggest a terminator is used at the last fixture.
3. Assign a DMX address to each unit using the dipswitches to select the correct mode.
4. Turn on the unit, this will reset first then begin to work afterwards.
5. Use the DMX controller to control your units.

Notes:
- DMX controllers cannot be used in Master-Slave operation (Sound Activated or AUTO mode)
- There should only be one master unit when using Master-Slave operation.

Function Setting

To assign the function of the unit please use the Dipswitch chart, the functions are as follows; DMX/slave, sound activated and AUTO mode. Each dipswitch represents a binary value and changing the dipswitches changes the final value.

O=OFF   1=ON   X=OFF or ON

DIPSWITCH CHART										FUNCTION	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10		
X	X	X	X	X	X	X	X	0	1	SOUND	ACTIVE
X	X	X	X	X	X	X	X	1	1	AUTO	MODE
SET DMX ADDRESS FOR DMX MODE									0	DMX / SLAVE	

Dipswitch #10 is used to set the master or slave mode. Within the master modes there are sound activated mode and AUTO mode. Slave modes have DMX and slave mode. Dipswitch #9 is used to set sound activated or AUTO mode when in master mode.

Troubleshooting

1. If the power supply indicator doesn't light up and the laser doesn't work, please check the power supply and the input voltage.
2. If the unit is in stand-alone operation and the power supply indicator is illuminated but the sound activated indicator isn't then try the following:
- Increase the music volume, it may be that the sound is not loud enough to trigger the laser.
- Also check if the unit has been set up in slave mode, if so, please change to master mode.
3. In Master-slave operation, the slave unit isn't functioning. To fix this try the following:
- Ensure there is only one master and other units are in slave mode.
- Ensure that the unit is being controlled without a DMX controller.
- Ensure that the power cable is in good condition and all connections

If you have any other problems with no solution, please contact your retailer for additional support.

DMX Address Chart

This chart shows the DMX dipswitch table for setting a DMX address from 1-511. Please follow the table below to configure future dipswitches with your required DMX address.

DipSwitch Position

DMX:DIPSWITCH SET					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
0=OFF					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
1=ON					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
X=OFF or ON					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	#2	#3	#4	#5																	
0	0	0	0	0			32	64	96	128	160	192	224	256	288	320	352	384	416	448	480
1	0	0	0	0		1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481
0	1	0	0	0		2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482
1	1	0	0	0		3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483
0	0	1	0	0		4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484
1	0	1	0	0		5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485
0	1	1	0	0		6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486
1	1	1	0	0		7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487
0	0	0	1	0		8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488
1	0	0	1	0		9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489
0	1	0	1	0		10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490
1	1	0	1	0		11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491
0	0	1	1	0		12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492
1	0	1	1	0		13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493
0	1	1	1	0		14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494
1	1	1	1	0		15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495
0	0	0	0	1		16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496
1	0	0	0	1		17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497
0	1	0	0	1		18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498
1	1	0	0	1		19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499
0	0	1	0	1		20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500
1	0	1	0	1		21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501
0	1	1	0	1		22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502
1	1	1	0	1		23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503
0	0	0	1	1		24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504
1	0	0	1	1		25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505
0	1	0	1	1		26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506
1	1	0	1	1		27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507
0	0	1	1	1		28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508
1	0	1	1	1		29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509
0	1	1	1	1		30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510
1	1	1	1	1		31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511

DipSwitch Position   **DMX Address**

Errors and omissions excepted.
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