DMX Address Chart

This chart lists the DMX dipswitch setting for DMX address 1 through 511. Follow the instructions below to configure fixture dipswitches with you desired DMX address.

DMX Address Quick Reference Chart

DipSwitch Position

DMX:DIPSWITCH SET 0=OFF 1=ON X=OFF or ON	#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
	#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
	#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**

2.5W RGB MULTI-COLOR ILDA ANIMATION LASER SHOW SYSTEM

User's Manual

Read this manual before using. Do not attempt to open the housing or repair this device by yourself without contact us!

General instructions

Unpacking:

Thank you for purchasing this product. Please read user guide for safety and before using the product. Keep this manual for future reference. This product can create perfect laser programs and effects since it has passed a series of strictly tests before delivery. Please check the attachments listed on the page after opening the carton. Immediately upon receiving a fixture, carefully unpack the box. Check the box contents to ensure that all parts are present and that they are in good condition. If any part appears damaged from shipping, or if the box shows signs of mishandling, notify the shipper immediately. In addition, retain the box and all the packing material for inspection.In any event, save the carton and all packing material because, in case that you have to return the fixture to the factory, you will have to do so in its original box, with its original packing.

1. Laser Light: 1PCS
2. Power Cable: 1PCS
3. User Guide: 1PCS

Technical Specification

1. Voltage: bi-voltage 110V -220V-250V AC, 50HZ-60HZ/ Fuse: 2A/250V
2. Rated Power: 50W
3. Laser:

Color	Wavelength	Power output	Scanner speed
Red	650nm	600mW	40kpps
Green	532nm	400mW	
Blue	450nm	1500mW	
Mixed white:	1500mW		

5. Laser class: Class IV
6. Working Modes: Sound Active, AUTO-Beam, AUTO-Animation, DMX512 (12 CH), Master/Slave, PC Control
7. Graphics & Effects: 128 beam show and animated graphics show patterns
8. Interface: 3 pins XLR jack for DMX or Maser-Slave linking
   DB25/M ILDA computer interface for PC control
9.. inner box: 478*390*215(0.040m³), carton: 510*410*460(0.096m³), 2pcs/carton
10. N.W.: 6.2Kg, Gross Weight: 6.9Kg

Troubleshooting

1. If the power supply indicator doesn't light up and the laser doesn't work, please check the power supply, the input voltage and the fuse.
2. In Stand-Alone operation, if the power supply indicator is light up and sound active indicator isn't light up, but the laser is shut off doesn't work.

A. Because sound is too small make for laser shut off in sound active, please increase the music volume or increase audio sensitivity with sensitivity knob, please check as below.

B. Please check if unit has been set up in slave mode, then set up in master mode.

3. In Master-Slave operation, slave unit don't function, please check as below.

A. Make sure to there's only one master in the chain, and the others are set in slave mode.

B. Make sure to control the unit without DMX console controlling.

C. Make sure to take a good quality power cable and connection.

4. In DMX mode operation, the laser is OFF and the DMX signal indicator is unlighted, please check as below.

A. Make sure to set up the DMX mode.

B. Make sure to have a good connection.

5. In DMX operation, the unit can't be controlled by the DMX console, but the DMX signal indicator is flashing, please make sure the DMX console and unit have the same channel.
6. If the unit is fail, please turn off the unit, then turn on again after 5 minutes.

Warranty Warnings:

1. Damages caused by the disregard of this user manual are not subject to Warranty.
2. Please consider that unauthorized modifications on the device are forbidden due to safety reasons. Please note that damages caused by manual modifications on the device or unauthorized operation by unqualified persons are not subject to warranty.
3. If this device will be operated in any way different to the one described in this manual, it may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns electric shock, etc.

After trying the above solution you still have a problem, please contact your dealer or our company for service.

DMX Control

The system only accepts the DMX512 signal of international standard to control the system.

DMX Control Parameter Chart

Channel	Function	Value	Description
CH1	Mode	0～49	Sound Active mode
		50～99	Auto-Beam mode
		100～149	Auto-Animation mode
		150～199	Manual mode to Auto run
		200～255	Manual mode to Sound Active run
CH2	Dimmer	0～255	Closed-W-R-Y-G-B-P-fixed color -random single color-random seven-color -moving seven-color-fixed color
CH3	Pattern Select	0～255	128 pattrens
CH4	Moving-Y	0～127	Manual to up to down moving
		128～191	Auto to down moving
		192～255	Auto to up moving
CH5	Moving-X	0～127	Manual to left to right moving
		128～191	Auto to right moving
		192～255	Auto to left moving
CH6	Rolling-X	0～127	Manual rolling
		128～255	Auto rolling
CH7	Rolling-Y	0～127	Manual rolling
		128～255	Auto rolling
CH8	Rotation	0～127	Manual rotation
		128～191	Auto clockwise rotation
		192～255	Auto counter clockwise rotation
CH9	Zoom(+/-)	0～85	Auto zoom(+)
		86～170	Auto zoom(-)
		171～255	Manual zoom(+/-)
CH10	Pattern Size	0～255	0 is Moderate, 1 is small, 255 is big
CH11	Display Dot	0～255	0 is display dot, 255 is best brightness
CH12	Drawing	0~127	Auto drawing mode 1
		128~255	Auto drawing mode 2

Laser Expected Lifespan

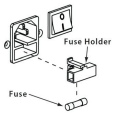
Laser gradually decline in brightness over time. HEAT is the dominant factor that leads to the acceleration of this decline. Packaged in clusters, laser exhibit higher operating temperatures th in ideal or singular optimum conditions. For this reason when all color lasers are used at their fi intensity, life of the laser is significantly reduced. It is estimated that a viable lifespan of 4,000 t 10,000 hours will be achieved under normal operational conditions. If improving on this lifespa expectancy is of a higher priority, place care in providing for lower operational temperatures. Th may include climatic-environmental and the reduction of overall projection intensity.

Safty Notice:

Please read the following notes carefully because they include important safety information about the installation,usage and maintenance of this product. It is important to read all these notes before starting to work with this product.

Lasers can be hazardous and have unique safety considerations. Permanent eye injury and blindness is possible if lasers are used incorrectly. Pay close attention to each safety REMARK and WARNING statement in the user manual. Read all instructions careful.

	There are no user serviceable parts inside the light. Any reference to servicing this unit you may find from now on in this User Manual will only apply to properly consult we certified technicians. Do not open the housing or attempt any repairs unless you are professional.
	Avoid direct eye exposure to the light source while the fixture is on. Always disconnect the light from its power source before servicing. Always connect the light to a grounded circuit to avoid the risk of electrocution.
	This product is for indoor use only! Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other fluids, or metallic objects.
Power **110V 240V** **Ground**	Always make sure that you are connecting the light to the proper voltage, as per the specifications in this manual or on the product's sticker. Never connect the light to a dimmer pack. Make sure that the power cable is not cracked, crimped or damaged. Never disconnect the fixture by pulling or tugging on the power cable.
	The maximum ambient temperature (Ta) is 104 F (40 C). Do not operate the fixture at a higher temperature. In case of a serious operating problem, stop using this product immediately!

	Do not remove or break the warranty label, otherwise it void the warranty.		
	Always replace with the exact same type fuse, replacement with anything other than the specified fuse can cause fire or electric shock and damage your unit, and will void your manufactures warranty.		
	There are no serviceable parts in the light. Please have all servicing and adjustments made by a qualified service engineer.		
	Please refer to all applicable local codes and regulations for proper installation of the light.		Keep this manual for future consultation. If you sell the light to another user, make sure that they also receive this manual.
	Make sure there are no flammable materials close to the fixture(s) while operating.		Please prevent this light away from electrical shock
	When hanging this fixture, always secure it to a fastening device using a safety cable (not provided).		Use cleaning tissue to remove the dust absorbed on the external lenses periodically to optimize light output.
	Don't throw this product away just as general trash, please dispose of this product following the abandon electronic product regulation in your country.		To protect the environment, recycle packing material wherever possible.

Laser Safty Warnings

Potential laser injury hazard exists with this product! Read these Instructions carefully, which include important information about installation, safe use and service!

Caution

* Avoid direct eye contact with laser light. Never intentionally expose your eyes or others to direct laser radiation.

*This laser product can potentially cause instant eye injury or blindness if laser light directly strikes the eyes.

*It is illegal and dangerous to shine this laser into audience areas, where the audience or other personnel could get direct laser beams or bright reflections into their eyes.

*It is a US Federal offense to shine any laser at aircraft.

dipswitches directly is ok. ILDA mode (PC control) and Built-in program mode can be identified and transisted automatically.

0＝OFF 1=ON X=OFF or ON

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

Built-In Program Function Chart

DMX address calculation

For DMX mode, DMX address from #1 to 9# dipswitches must be set, the address is set from 1 to 511. Each dipswitch represents a binary value.

Dipswitch	Value	Dipswitch	Value
# 1	1	# 6	32
# 2	2	# 7	64
# 3	4	# 8	128
# 4	8	# 9	256
# 5	16	# 10	DMX, Set to "0"

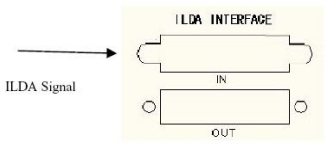
One unit has 5 channels, so each unit must be assigns 5 channels at least. We may assign 8 channels for one unit, then DMX address = 8*N + 1, N=0, 1, 2, 3 …… Example, One loop address=1, two loop address=9, three loop address=17, four loop address=25

Loop	Address	Binary	Dipswitches
1	1	100000000	# 1
2	9	100100000	# 1+#4
3	17	100010000	# 1+#5
4	25	100110000	# 1+#4+#5

The dipswitches setting for DMX address see the " DMX Address Quick Reference Chart ".

PC Control Operation

This mode allows you to use PC software(for example: Pangolin, Phenix, Mamba) to operate. If no IDLA signal to DB25 jack in ILDA mode, the laser and scaner will is closed for protection. The scan speed of software coltrol must be less than **the scanner speed**, otherwise, the patterns possible have distortion, or the scaner is protected possibly by built-in circuitry.



Caution: Do not allow contact between the common and the ficture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shild or each other.

4. Turn on the all units' power, the units begins reset, then the unit begins working. The slave units will react the same as the master unit.

5. The units will react to the low frequencies of music via the internal microphone. Adjust the audio sensitivity knob on the back of the master unit to make the unit more or less sensitive in sound active.The panel has LED indicating for sound active.

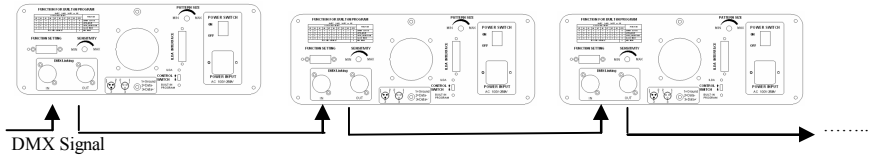
Universal DMX Operation (DMX mode)

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

1. Install the units in a suitable position (laying or appending).

2. Use standard XLR microphone cable chain your units together via the XLR connector on the rear of the units. For longer cable runs we suggest a terminator at the last fixture.

3. Assign a DMX address to each the unit using dipswitches, see the "DMX Address Quick Reference Char".



1：MASTER: SOUND/AUTO/DMX　　2：SLAVE　　2：SLAVE

4. Turn on the all units' power, the units begins reset, then the unit begins working.

5. Use DMX console to control your units.

Notes:

1. DMX console can not be used in Master-Slave operation (Sound Active or AUTO mode).

2. There should be only one master unit in Master-Slave operation.

DMX Control

The system only accepts the DMX512 signal of international standard to control the system mode, the laser beam ON /OFF, running direction, running speed and twinkle speed etc.

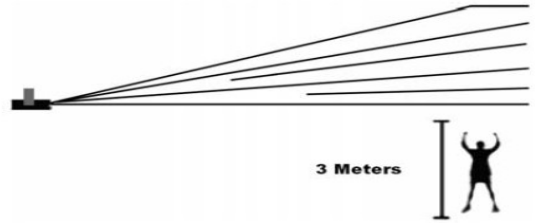
Function setting

If it is set to ILDA mode (use PC software to control laser light), just need to connect ILDA signal to DB25 jack. If set to Built-in program, then ILDA signal cannot be connected,seting

NON-INTERLOCKED HOUSING WARNING

*This unit contains high power laser devices internally. Do not open the laser housing, due to potential exposure to unsafe levels of laser radiation. The laser power levels accessible if the unit is opened can cause instant blindness, skin burns and fires.

Installation



AVOID EYE DIRECT CONTACT!

*Laser effects projected 3 meters (9.8 ft) above the audience are eye safe. A survey should be taken to assess the likelihood of any reflective surfaces (such as high windows, chrome bars etc) bouncing stray beams back down into the audience.

*Using a fastening clamps on the light and tight to the ceiling in a strong hook..

*Make sure its correct power output and plug the power cable to the wall socket.

* Power must be in earth! Power on the light.

* Do not shoot the beams to the audience!

*Do not look direct into the laser aperture once the laser light is ON. Please pay attention to the Laser Danger Warning Label!

Cleaning

Fixture Cleaning: Due to fog residue, smoke, and dust cleaning the internal and external lenses should be carried out periodically to optimize light output.

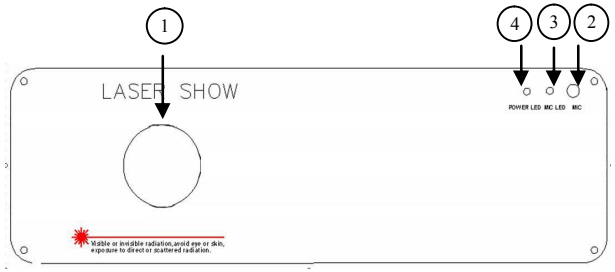
1. Use normal glass cleaner and a soft cloth to wipe down the out- side casing.

2. Clean the external optics with glass cleaner and a soft cloth every 20 days.

3. Always be sure to dry all parts completely before plugging the unit back in.

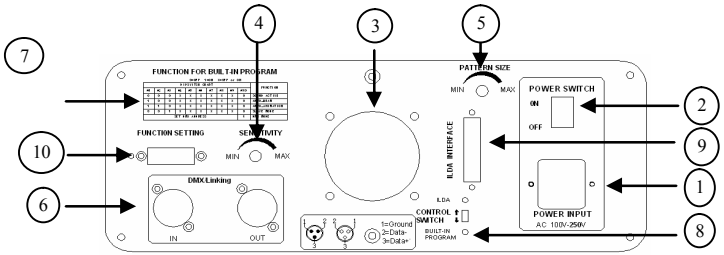
Cleaning frequency depends on the environment in which the fixture operates (I.e. smoke, fog residue, dust, dew). In heavy use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp beam output.

Front/Rear Panel



Front Panel Figure

1. Laser aperture
2. Sound active microphone
3. Sound active indicator:Blue
4. Power indicator:Red



Rear Panel Figure

1. Power jack
2. Power switch
3. Cooling fan
4. Audio sensitivity knob
5. Pattern size knob
6. DMX or linking jack
7. Function reference chart
8. Built-in program or ILDA mode conversion switch
9. ILDA interface with DB25 jack
10. Function of built-in program setting dipswitches

Function & Setting

Sound Active

The change of the laser pattern is controlled by sound, that is, the rhythm of the sound control the effect of the changing laser pattern. Turning the sensitivity knob in the clockwise direction to increase the fixture's sensitivity to sound, the knob in the counter clockwise direction to decrease. The laser diode will automatically turn off after 8 seconds when the music stops.

AUTO

Auto cycles the built-in programs without being controlled externally. It has no laser OFF.

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

1. Install the units in a suitable position (laying or appending).
2. Set dipswitch to select Sound Active or AUTO mode.
3. Turn on the unit power, the unit begins reset, then the unit begins working.
4. The unit will react to the low frequencies of music via the internal microphone. Adjust the audio sensitivity knob on the back of the unit to make the unit more or less sensitive in sound active.The panel has LED indicating for sound active.

Master-Slave Operation

This mode will allow you to link up to 32 units together without controller.

1. Install the units in a suitable position (laying or appending).
2. Choose a unit to function as Master mode, set dipswitch to select Sound Active or AUTO mode. The others must be set to Slave mode, set dipswitch to select Slave mode.
3. Use standard XLR microphone cable chain your units together via the XLR connector on the rear of the units. For longer cable runs we suggest a terminator at the last fixture.

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.