beamZ

LS-1W Animation Laser RGB DMX

152.897

Instruction Manual

（Before using , please read the user manual carefully.）

This is product integrates many advanced technologies like optics, electronics, digital graphic processing, especially designed for dancing halls and DISCO. According to music rhythms, built-in beam program can be activated; if using smoke, light curtain wall and time tunnel can be formed to create a colorful and fantastic laser world.

NOTICE

✧　　　The best temperature range of using laser：20～35℃.

✧　　　Do not reflect to the eye directly in case of hurting.

✧　　　Do not use the laser over AC220V～240V and please make sure reliable grounding.

✧　　　Do not turn on and turn off frequently; this will affect the laser's normal life.

✧　　　Based on the working character of solid state laser, please try not to work for a long time. If the laser works continuously for three hours, please turn off the laser 15 minutes. After the laser is cold, start to turn on again.

✧　　　Do not use hands to touch the lens in case it will affect the effects.

✧　　　If there appears breakdown, please ask experts to repair; do not remove the laser yourself.

✧　　　Attention：Destroy the laser or tear up the warranty label artificially, it's all beyond warranty scope. Please read the warranty rules.

Animation Laser (without PC interface)

Front panel and rear panel schemes (According to different models, the panel will be different.)
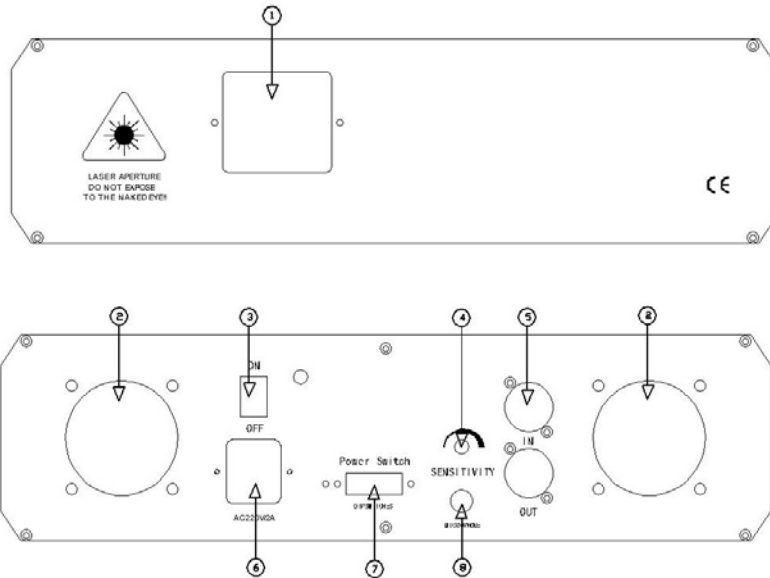
◯,1 light outlet   ◯,2 Fan

◯,3 power supply   ◯,4 Sound control sensitivity knob

◯,5 DMX XLR   ◯,6 power socket
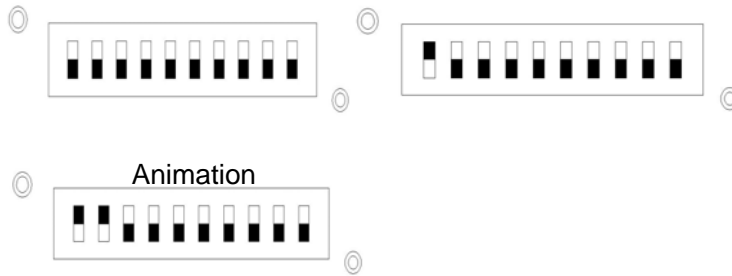
◯,7 Address code switch   ◯,8 sound control MIC

1. Operating Instructions

DIPSWITCH CHART										FUNCTION	
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10		
X	X	X	X	X	X	X	X	X	x	SOUND ACTIVE	
1	X	X	X	X	X	X	X	x	x	AUTO MODE	
1	1	x	x	x	x	x	x	x	x	Animatiom	

Sound control   Auto working
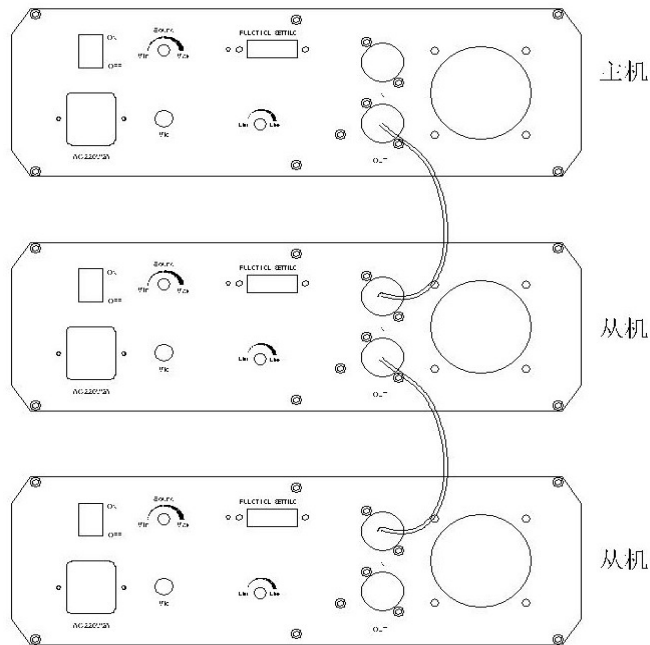

Animation

1.1 Single user mode:

1.1.1 Use dip switch to set operating mode(See the table below）. Set the operating mode according to clients' requirement: SOUND ACTIVE or AUTO MODE.

1.1.2 Connect the power supply, and the lamp start to project laser light.

1.1.3 When in SOUND ACTIVE mode，adjust sound control sensitivity, and adjust the sound control sensitivity knob according to the surrounding's sound strength.   In the front panel when the blue indicator flashes to indicate the sound activation, the system is in sound active program; when in Auto mode, the system is in Auto-working program.

1.2 Scanner master & slave synchronous mode:

The switching method of Master & slave synchronous mode

Master: sound activation(switch 0 in address code) or auto mode(switch 1in address code) or animation mode(switch 1,2 in address code)

Master (sound activation, auto, animation mode)
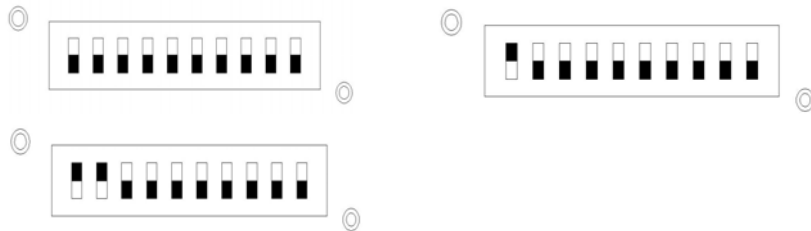
Slave: switch 2 or switch 3

1.1 Set working mode. Set a laser in Master& Slave mode(MASTER：SOUND/AUTO）, and other lasers are all set in Slave mode.

1.2 Connect the line. Use XLR-XLR line to connect the XLR output of the master to the XLR input of the first slave, and then connect the XLR output of the first slave to the XLR input of the second slave. Do like this until all the slaves are connected.

1.3 Connect the power supply, and the lamp start to project laser light. And the slave beam is synchronous with master.

1.4 When in SOUND ACTIVE mode，adjust sound control sensitivity, and adjust the sound control sensitivity knob according to the surrounding＇s sound strength. In the front panel when the blue indicator flashes to indicate the sound activation, the system is in sound active program; when in Auto mode, the system is in Auto-working program.
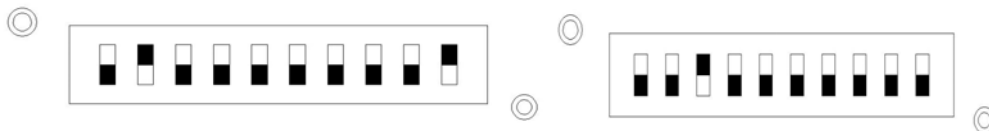
DMX mode switching method:

When in DMX mode, the DMX controller controls the laser, and the corresponding function of every channel is shown in attachment. The DMX address code is in the attached address table.

First to ninth: starting address

The tenth: sound control/ DMX functions change

OFF : sound control   **ON** :   DMX signal control

. Animation Laser (with PC interface)

1. Front panel and rear panel schemes (According to different models, the panel will be different.)
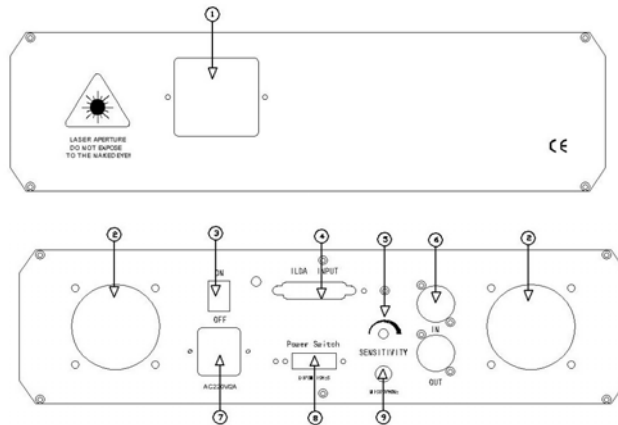
◯, 1 light outlet   ◯, 2 Fan

◯, 3 power supply   ◯, 4PC interface (ILDA/DB-25)

◯,5 Sound control sensitivity knob   ◯,6 DMX XLR

◯,7 power socket   ◯,8 Address code switch

◯,9 sound control MIC

2.The operating method of lasers with PC interface is the same as that of lasers without PC interface. So I will not repeat here. And now let's introduce how to use PC interface. Please connect the lines as following.

Lasers can connect the ILDA output software like Phoenix, Pangolin and Ishow.

Attention: After connecting, the laser will not be controlled by its own program.

After connecting software, users can edit pictures, animation, characters freely.

Lasers with SD card can also edit pictures, animation, characters and so

on. Please refer to the user manual of lasers with SD card and CD.

DMX512 Controller connecting lasers:

IN   OUT
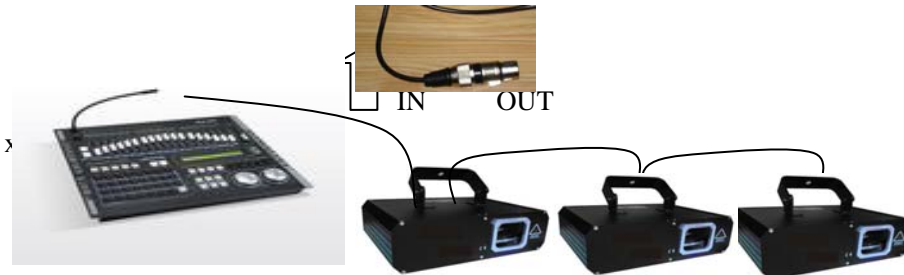
DMX Console(Sending end)   laser1(Receiving end）   Laser 2
Laser 3   ………………..

For example, If the laser has 11 channels, the address is set as: 000000001
000001100   000010111   …………

1.Connection Method：
     DMX Console---------Laser

   Every machine is connected in series like serial installation. Many people thought signal is serial but DMX signal is collateral. All the receiving ends are connected in parallel in DMX control. If address code isn't differentiated, we can't differentiate sending ends. As long as the sending ends are differentiated, it can form different and regular effects. Therefore, the address switch in our laser can set address, and then DMX console can tell the difference. How to set the address can be shown at 3. (Attention:

the terminal should connect with 120 Resistor to avoid signal disturbing.

2. Address allocation:

   DMX 512 supports 512 channels. If every laser has 16 channels, so is can connect 32 pieces of lasers. Usually, RGB LED has 3 channels, so DMX 512 console can connect 170 pieces of LED in every line.

3. How to set address code switch:
   Address code setting: In the binary system, the first has 0 and 1 numerical value, and it corresponds with Switch "OFF" and "ON". When calculating, meet 2 into, as shown below:

LOOP   ADDR   BINARY   USAGE OF DIP SWITCH

   First laser   1   000000001 =

   Second laser   12   000001100 =

   Third laser   23   000010111=

   Forth laser   34   000100010=

Common abnormal phenomena & failure elimination

1.   In the sound activation mode, beam effects don't change with music.

   Elimination method: Rotate right (Sensitivity control) knob until you obtain satisfactory effects.

When in DMX512 mode, push-and-pull controlling rob doesn't work.

   Elimination method: First check whether DMX 512 controller can work normally and whether the signal lines are connected correctly; and then check whether the first channel push rob of the laser is in the controlling (the numerical value is between 192-255).

3.   The laser doesn't react.

   Elimination method: First check whether the fan can rotate, then check whether the power supply is connected and the fuse is broken.。

4. The laser doesn't shine enough.

   Elimination method: The laser need preheat time, so please preheat 5-10 minutes before using; please check whether the lens is dirty and use soft cotton swab with absolute alcohol to clean the lens.

Form I The international standard DMX 512 Signal suitable for laser with 7 channels. The detailed control function is shown below:

Form 1

Channel	Function	Value	Description
CH1	Mode	0～49	Close, laser OFF
		50～99	Static patterns of DMX mode
		100～149	Dynamic patterns of DMX mode
		150～199	Sound active mode
		200～255	AUTO mode
CH2	Pattern selection	0～255	52 static/dynamic patterns
CH3	Position-X	0～255	Adjust position-X
CH4	Position-Y	0～255	Adjust position-Y
CH5	Scanning speed	0～255	0 is speedy, 255 is slow
CH6	Dynamic pattens play speed	0～255	0 is speedy, 255 is slow, has ten grade speed
CH7	Static pattern size	0～255	0 is small, 255 is big

Adopting international standard DMX512 Signal suitable for lasers with11 channels, the detailed control function is shown below:

Form 2

	DMX512 value	Control function
1control mode	0~51	sound control （3-10 channels don't work）
	52~103	Auto mode（3-10 channels don't work）
	104~155	Animation mode
	156~206	Manual mode，sound control start
	207-255	Auto mode, auto start
2 blanking and light-free	0~15	Light free
	16~25	No blanking
	26~135	Water-flow effect, closer to 135, water flow quickly.
	136~245	Flashing effect, closer to 245, it flashes more quickly.
	246~255	Fixed blanking
3 picture changing	0~255	128gobos（0~255）
4 speed	0~255	12 level speed（0-255）/23＝（0-11）
5reversing	0~63	No reversing
	64~127	Horizontal reversing
	128~191	Vertical reversing
	192~255	Horizontal & vertical reversing
6rotating/plotting	0~63	No rotating and no plotting
	64~127	Rotating
	128~191	Plotting
	192~255	Rotating and plotting
7horizontal/vertical moving	0~63	No moving
	64~127	Horizontal moving
	128~191	Vertical moving
	192~255	Horizontal & vertical moving
8Level stretching	0~63	No stretching
	64-255	Horizontal stretching
9vertical stretching	0~63	No stretching
	64-255	Vertical stretching
10magnifying and narrowing	0~85	No magnifying and no narrowing
	86-169	Magnify and narrow from small to large
	170-255	Magnify and narrow from large to small
11Gradually draw	(0~255)/21	13 level speed（0-255）/21 <0-12> the speed is quicker, the draw is quicker.

Form 3   DMX Address form

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			