



LASER SHOW SYSTEM

MIGHTY LASER SERIES

MODEL Kam Mighty Firework

User Guide

ON/OFF Remote Control Specification

Thank you for purchasing one of the KAM mighty range lasers.

To optimize the performance of this product, please read these operating instructions carefully to familiarize yourself with the basic operations of this unit. This unit has been tested at the factory before being shipped to you. There is no assembly required.

Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to high temperature and rain or moisture.

1. Before using this equipment, please make sure that there is no damage caused during transportation. Should there be any, consult your retailer and do not use the equipment.

Please note that damages caused by user modifications to this equipment are not be covered by your warranty

Never remove warning or informative labels from the equipment.

Do not connect this equipment to a dimmer-pack.

This equipment is not waterproof and therefore is only suitable for indoor use

Do not expose to high temperature or flame

Disconnect from the power supply when equipment is not in use

Make sure that the correct mains voltage is used 220v/240v.

If your product fails to function correctly, discontinue use immediately.
and return it to your dealer for service.

Only use fuses of same type and rating.

Repairs, servicing and power connection must only be carried out by a qualified Engineer.

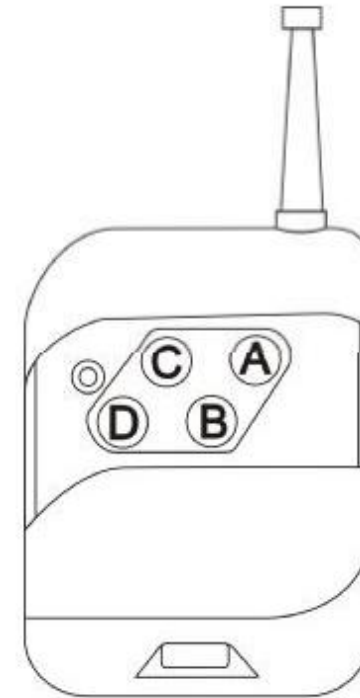
THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.

Important notice this product contains a class 3b laser diode

Please refer to the class 3b laser manual as restrictions of use may apply

Download from www.kam.co.uk

http://www.kam.co.uk/media/file/product/manual/kam_class3b_laser_guide_web.pdf



The remote control has 4 buttons; each button is set on a specific frequency which is dedicated to a specific laser. See list below..

Press the specific buttons to switch ON/OFF the laser:

1. Frequency Set A: Kam Mighty Kaleido
2. Frequency Set B: Kam Mighty 3D
3. Frequency Set C: Kam Mighty Firework
4. Frequency Set D: Kam Mighty Starcluster

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 your desired DMX address.

DMX Address Quick Reference Chart

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																	
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

General instructions

Unpacking:

Please unpack your new product carefully and check there has been no damage to your product in transit. If any damage is found DO NOT use the product and contact your dealer

Immediately.. This product has been tested fully at our factory before being shipped to you

Contents

- | | |
|-----------------|-------|
| 1. Laser Light: | 1PCS |
| 2. Power Cable: | 1PCS |
| 3. User Guide: | 1PCS |
| 4. Remote | 1 PCS |

Notice:

1. Do not exposure eyes to direct or reflected laser beams Never look directly into laser
2. Refrain from turning the unit on/off frequently.
3. This appliance must be earthed
4. This unit is intended for indoor use only and should not be exposed to rain / moisture The working temperature of this unit is 18~30°C, do not use this continuously over 4 hours, this may reduce the life of the laser diode.
5. Keep the unit clean using a dry cloth make sure fan and lens are free from dust.
6. Do not attempt to modify or repair the laser, opening the case will void any warranty
7. 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.



DANGER
LASER RADIATION AVOID EXPOSURE
TO BEAM CLASS 3B LASER PRODUCT



Technical Specification

1. Voltage: □AC220V, 50HZ/60HZ, Fuse: 2A/250V
2. Rated Power: 20W
3. Laser: 100mW RED laser, 650nm
50mW GREEN laser, 532nm; 150mW mixed yellow color
4. Working Modes: DMX, Sound Active, AUTO, Master-Slave
5. DMX Control Channel: 5 channels
6. Graphics & Effects: more than 2000 beams projected out from the aperture within 70 degree angle, the effect of rotating, frequently flashing, zoom (+/-) and colour controlled, 3D cluster effects. .
7. Interface: 3 pins XLR jack for DMX or Maser-Slave linking
8. Size: L*W*H=242*192*162*mm
9. Weight: 2.5Kg

Features

1. This product has 4 modes
DMX, Sound Active, AUTO and Master-Slave
2. DMX control
The unit uses 5 dmx channels 1.mode, 2.direction, 3.direction speed 4.twinkle speed 5. Colour
The unit has BLACK OUT function. The unit will shut OFF if no DMX512 signal. Is received
3. Master-Slave function
Allows you to link many units (as slave unit) together to run in sync without a dmx controller sound active or AUTO mode.
4. LED indicating and shut-off function
In sound active mode, the rear panel has an LED indicating sound activation. The unit will Shut off after 8 seconds when the music stops.
5. DPSS Laser
6. Safety key switch this safety switch will disable the laser diode output and must be in the on position
The laser output to function

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 and the fuse
2. In Stand-Alone operation, power indicator is on, and no sound led is lit and the laser is shut off
 - A. please increase the music volume or increase audio sensitivity with sensitivity knob,.
 - B. Please check if unit has been set in correct mode, check dip switches.
3. In Master-Slave operation, slave unit does not 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 no dmx controller connected.
 - C. Make sure mains power connected correctly.
4. In DMX mode operation, the laser is OFF and the DMX signal indicator is out, please check 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. in
6. If the unit is fail, please turn off the unit, then turn on again after 5 minutes.
After trying the above solution you still have a problem, please contact your dealer or our company for service.

The unit has an audio sensitivity knob on the back of the unit adjust this as required turning clockwise will increase the sound sensitivity

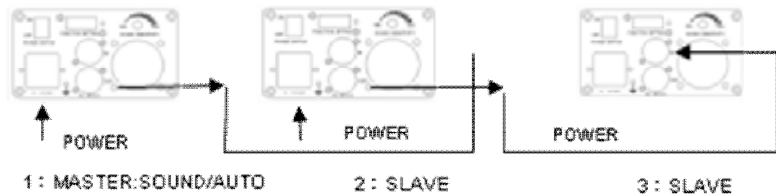
Master-Slave Operation

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

1. Install the units in a suitable position
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. Master auto set dipswitch
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.
4. Turn on the all units!

Slave units will react the same as the master unit.

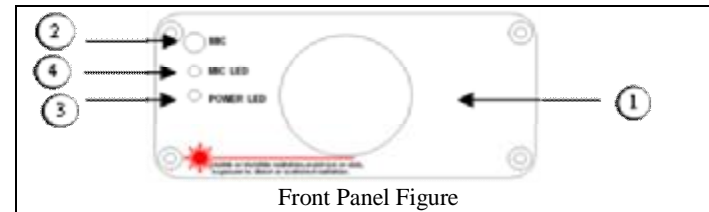
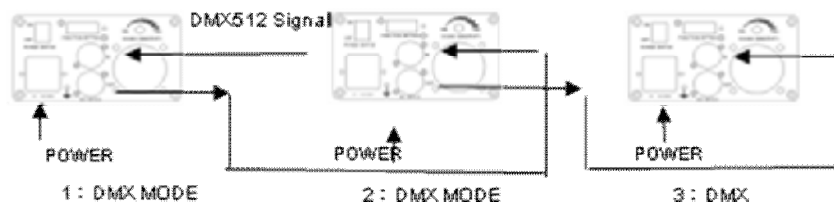
5. The units will react to sound via the internal microphone. Adjust the audio sensitivity knob on the back of the master unit to make the unit more or less sensitive to sound



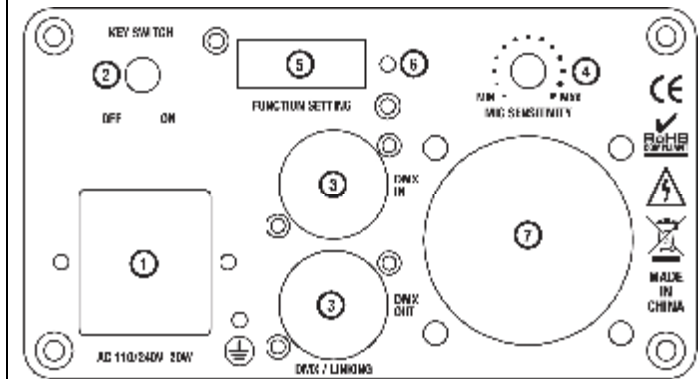
Universal DMX Operation (DMX mode)

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

1. Install the units in a suitable position
2. Use standard XLR dmx cable to 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 dip switches; see the "DMX Address chart"



1. Laser Aperture
2. Sound Active Microphone
3. Power Indicator: Red
4. Sound Active Indicator: Blue. The LED will flash when a sound signal is received



1. Mains in
2. Safety key switch
3. DMX or Linking Jack
4. Audio Sensitivity Knob
5. Dipswitches:
6. DMX Signal Indicator: Green. The LED will flash when DMX or Master-slave Is used
7. Cooling Fan

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 flash speed etc.

DMX Control Parameter Chart

Channel	Function	Value	Description
CH1	Mode	0~68	Close, laser OFF
		69-137	DMX mode
		138~208	Auto mode
		209~255	Sound mode
CH2	Running direction	0-190	Counter Clockwise direction
		191~255	Clockwise direction
CH3	Running speed	0~255	0 is slow, 255 is fast
CH4	flash speed	0~255	0 is slow 255 is fast
CH5	Colour Selection	0~34	Red + Green
		35-68	Red
		69~103	Green

When the CH1 is selected the DMX mode (DMX value is 50~100), you can use channel CH2, CH3 and CH4 to control laser beam, otherwise, CH2, CH3 and CH4 wont function

Dip switch setting reference

- (1). Sound active: All OFF
- (2). Auto run: #1 ON
- (3). DMX: #1 and #9 ON
- (4). Master unit put #1 ON, Slave unit put #2 ON, then all the units will run with auto.
- (5). Master unit put all OFF, Slave unit put #2 ON, then all the units run with sound control.

Function & Setting

Sound Active mode

In this mode the laser pattern is controlled by sound, and will react to the beat of the music changing laser patterns to the beat.. Turn the sensitivity knob in the clockwise direction to increase the fixture's sensitivity to sound, turn the knob in the counter clockwise Direction to decrease. The laser diode will automatically turn off after 8 seconds when no sound is detected

Stand alone

- 1). Sound active: All OFF
- (2). Auto run: #1 ON
- (3). DMX: #1 and #9 ON

Master slave no controller

- (4) master unit sound activated all dipswitches to off position slave units 2 on only
- (5). Master unit auto set dipswitch 1 on only, Slave units put slave 2 on only

Dmx mode

When linking units via dmx

To control several units at the same time all dmx address must be the same on each unit ie 1&9 on each unit

To control several units individually each unit must have a separate dmx address

Each unit must be set at least 5 channels apart

ie 1st unit 1+9 ----- 2nd unit 2

+3 +9

DMX address calculation

For DMX mode, DMX address from #1 to 10# 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"