light BIG

DESIGN BY GERMANY

LASER SHOW SYSTEM

FIREFLY LASER SERIES

MODEL: BE-FS04

User Guide

General instructions

Unpacking:

Thank you for purchasing this product. Please read user guide for safety and operations'information 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. In the event of carton damage or attachment missing in transit, please contact your dealer or our after sales service department.

Attachments:

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

Notice:

1. Do not exposure the human eye direct to laser beam.

2. Do not turn on and off the unit frequently.

3. Before using this unit make sure the power supply is ground.

4. This unit is intended for indoor use only and should be prevented form water, moisture and shake. The working temperature of this unit is $18 \sim 30°C$, do not use this continuously over 4 hours, otherwise it shortens the lifetime of the unit.

5. Use cleaning tissue to remove the dust absorbed on the external lenses periodically to optimize light output.

6. Do not remove or break the warranty label, otherwise it void the 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: 6 channels

6. Graphics & Effects: more than 2000 beams shooted out from the aperture within 70 angles, the effect of rotating, frequently flashing, zoom (+/-) and colour controlled, looks like stars flashing in the sky.

7. Interface: 3 pins XLR jack for DMX or Maser-Slave linking

8. Size: L*W*H=242*192*162mm

9. Weight: 3Kg

Features

1. Various working modes

Includes four working modes as DMX, Sound Active, AUTO and Master-Slave Control for different applications.

2. DMX control

The unit has 6 channels functions to control system mode, laser beam running direction, running speed, twinkle speed and color setting in DMX mode. The unit has BLACK OUT fun-ction. The uint will shut OFF if no DMX512 signal.

3. Master-Slave function

The system allow link many units (as slave unit) together to doing synchro job without console in sound active or AUTO mode.

4. LED indicating and shut-off function

In sound active mode, the unit's panel has LED indicating for sound active. The unit will shut off after 8 seconds when the music stops.

5. DPSS Laser

Use Diode-Pumped Solid State laser, stable output and long working life.

Front/Rear Panel
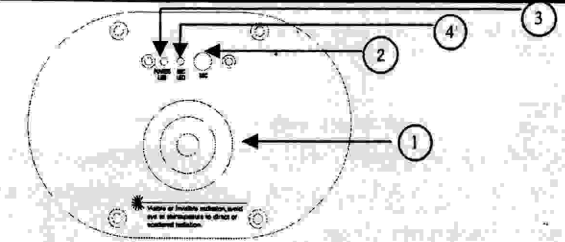
Front Panel Figure

1. Laser Aperture   2. Sound Active Microphone   3. Power Indicator:Red

4. Sound Active Indicator:Blue. The LED will twinkle when a stimulated sound signal is received form the MIC
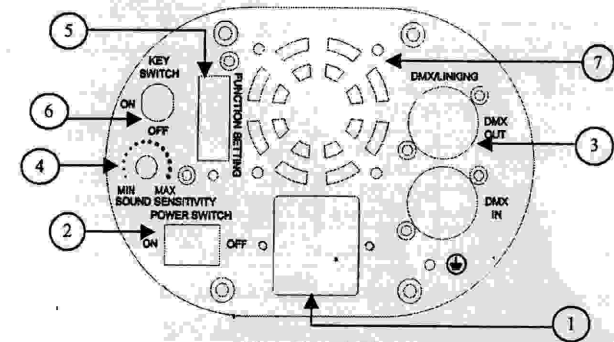
Rear Panel Figure

1. Power Jack   2. ON/OFF switch   3. DMX or Linking Jack

4. Audio Sensitivity Knob   5. Dipswitches: Function Setting

6. Key Switch   7. Cooling Fan

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.

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.

DMX Control Parameter Chart

Channel	Function	Value	Description
CH1	Mode	0~49	Close, laser OFF
		50~99	Sound active mode
		100~149	Auto Mode
		150~255	DMX mode
CH2	Pattern Selection	0~255	
CH3	Spin Direction	0~99	Clockwise direction Spin
		100~199	Stop
		200~255	Counter clockwise direction Spin
CH4	Spin Speed	0~255	0 is speedy, 255 is slow
CH5	Frequency flashing	0	Stop
		1~255	1 is speedy, 255 is slow
CH6	Color Selection	0~99	Red + Green
		100~199	Red
		200~255	Green

ONLY CH1 is selected the DMX mode (DMX value is 150~255), you can use channel CH2~CH6 to control laser beam, otherwise, CH2~CH6 are invalid.

Function setting

0=OFF 1=ON X=OFF

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

Uses dipswitches to assign a unit's function: DMX/slave, or sound active, or AUTO mode. For the unit is DMX mode, set the DMX address using dipswitch. Each dipswitch represents a binary value. See the "Function chart".

Dipswitch #10 is use to set master or slave mode. Master modes have sound active and AUTO mode. Slave modes have DMX and Slave mode. The units automatically identify DMX or SLAVE mode by data receives. Dipswitch #9 use to is set sound active or AUTO mode in master mode.

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 6 channels, so each unit must be assigns 6 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 ".

Operation

Stand-Alone Operation (Sound Active, AUTO mode)

The mode allows a single unit to react to the beat of the music in the master mode.
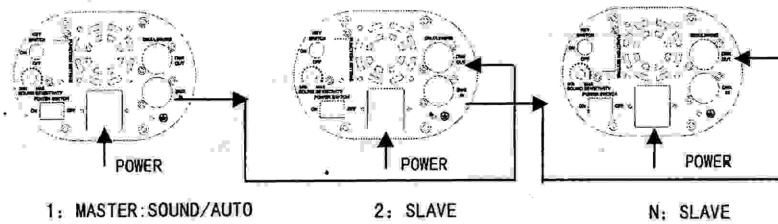
1. Install the units in a suitable position (laying or appending).

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.

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.

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

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

1: DMX MODE   2: DMX MODE   N: DMX MODE
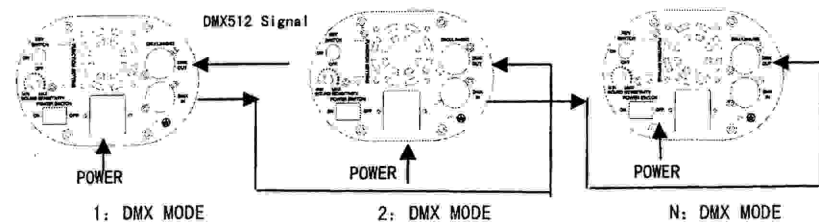
Reference Char".

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.

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. 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.

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

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	#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**