RGB Animation and Animation Twinkling laser Light

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:

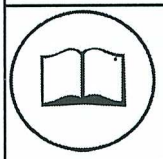
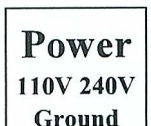
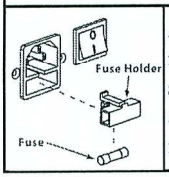
Thank you for purchasing this product. Please read user guide for safety and operations information before using the product. Keep this manual for future reference. This product can create perfect laser programs and effects since it has passed a series of strictly tests before delivery. Please check the attachments listed on the page after opening the carton. 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.

What is included:

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

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.

<table>
<tr>
<td>  </td>
<td>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 C we certified technicians. Do not open the housing or attempt any repairs unless you are one of them.</td>
<td>  </td>
<td>Please refer to all applicable local codes and regulations for proper installation of the light.</td>
</tr>
<tr>
<td>  </td>
<td>Keep this manual for future consultation. If you sell the light to another user, make sure that they also receive this manual.</td>
<td>  </td>
<td>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.</td>
</tr>
<tr>
<td>  </td>
<td>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.</td>
<td>  </td>
<td>Make sure there are no flammable materials close to the fixture(s) while operating.</td>
</tr>
<tr>
<td>  </td>
<td>Please prevent this light away from electrical shock</td>
<td>  </td>
<td>When hanging this fixture, always secure it to a fastening device using a safety cable (not provided).</td>
</tr>
<tr>
<td>  </td>
<td>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.</td>
<td>  </td>
<td>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!</td>
</tr>
<tr>
<td>  </td>
<td>Use cleaning tissue to remove the dust absorbed on the external lenses periodically to optimize light output.</td>
<td>  </td>
<td>Do not remove or break the warranty label, otherwise it void the warranty.</td>
</tr>
<tr>
<td>  </td>
<td>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.</td>
<td>  </td>
<td>There are no serviceable parts in the light. Please have all servicing and adjustments made by a qualified service engineer.</td>
</tr>
</table>

Technical Specification

1. Voltage: AC110V-130V/200V-250V, 50HZ-60HZ/ Fuse: 2A/250V
2. Rated Power: 30W
3. Scanner: 10kpss High-speed optical scanner, big angle scanning
4. Laser:

   Green: 70mW 532nm

   Red: 200mW 650nm

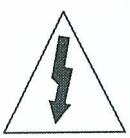
   Blue: 150mW 450nm

   Mixed white laser 400mW
5. Working Modes: Sound Active, AUTO-Beam, AUTO-Animation, DMX512 (12 CH), Master/Slave, PC Control
6. Graphics & Effects: This laser is a perfect combination of animation and animation twinkling effect together. It has been built in mass MCU memory to install over 100 kinds of animations and 256 kinds of beam effects. Single animation graphics and animation twinkling graphics can be displayed in turn in AUTO, Sound Active and DMX. For the functions, it shows pattern rotately, frequently flashing, rotating, movement, billowing, zoom(+/-), drawing, speed and color, step motor speed control, etc.
7. Interface: 3 pins XLR jack for DMX or Maser-Slave linking, DB25/M ILDA computer interface for PC control
8. Item Size: mm
9. Net weight: 3.6kg
10. Gross weight:4.3Kg

Features

1. RGB full-color animation laser with high-speed optical scanner to create animated graphics,128 beam show and graphics show patterns, and with the function of unique blanking, frequently flashing, rotating, moving, rotation, split, zoom, drawing, speed and color etc.
2. Includes six working modes as DMX512, Sound Active, AUTO-Animation, AUTO- Beam, Master/Slave and PC control(with DB25 ILDA computer interface) for different applications.
3. The unit has fourteen channels to control in DMX mode. The unit has BLACK OUT function. The uint will shut off if no DMX512 signal.
4. Compatible ILDA laser show software with ILDA interface. Use electronic switches to conversion full ILDA signal. The uint will shut off if no ILDA signal.
5. Design according to security and good performance, safer to human and environment.Master/Slave mode, DMX512 mode and PC Control mode, will shut off laser automatically without trigger signal.
6. Animation and Twinkling Animation can display in AUTO and Sound Active through removable lens.

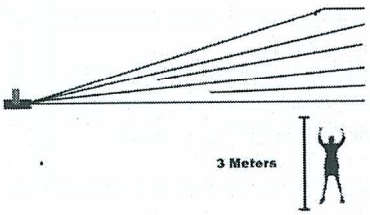
Laser Safty Warnings



DANGER

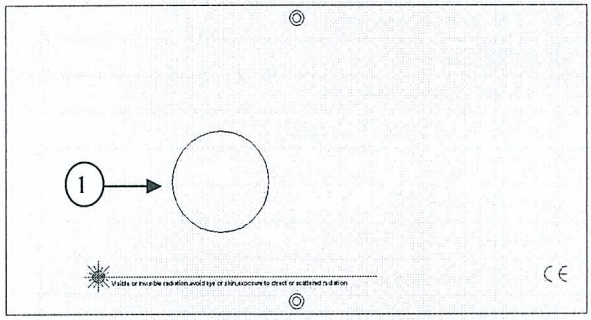
LASER RADIATION AVOID EXPOSURE

TO BEAM CLASS 3B LASER PRODUCT



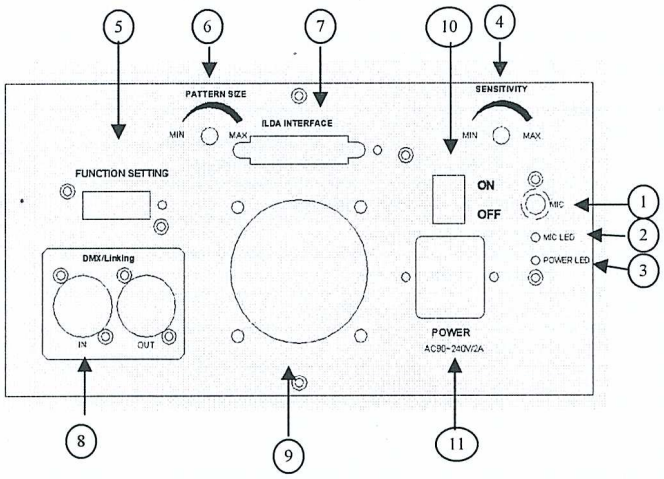
*Laser effects projected 3 meters (9.8 ft) above the audience are eye safe. A survey should be taken to assess the likelihood of any reflective surfaces (such as high windows, chrome bars etc) bouncing stray beams back down into the audience.

Front/Rear Panel



Front Panel Figure

1. Laser Aperture



Rear Panel Figure

1. Sound active microphone
2. Power indicator:Red
3. Sound active indicator:Blue
4. Audio sensitivity knob
5. Function of built-in program setting dipswitches
6. Pattern size knob
7. ILDA interface with DB25 jack
8. DMX or linking jack
9. Cooling fan
10. Power switch ON/OFF
11. Power jack

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.

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.

DMX Control Parameter Chart

Channel	Function		Value	Description
CH1	Mode		0～63	Close, Laser OFF
			64～79	Sound Active Twinkling Animation
			80～95	Sound Active Beam Animation
			96～111	Sound Active Single Animation
			112～127	Sound Active Twinkling and Beam Animation
			128～143	Auto Twinkling Animation
			144～156	Auto Beam Animation
			157～175	Auto Single Animation
CH1	Mode		176～191	Auto Twinkling and Beam Animation
			192～255	DMX Manually
CH2	Beam/Twinkling Animation in turn		0～127	Beam Animation
			128～255	Twinkling Animation
CH3	Pattern Select	big animation	0～255	124 kinds of animation
		small animation	0～255	66 kinds of animation

CH4	Color Selection	big animation	0～1	Close, Laser OFF
			2～69	R-G-B-RG-RB-GB-RGB
			70～79	R-G-B in inflection point
			80～89	RG-RB-GB-RGB
			90～99	R-G-B-RG-RB-GB-RGB
			100～109	R-G-B-RG-RB-RGB Streamly
			110～119	R-G-B in break point
			120～129	RG-RB-GB-RGB
			130～139	R-G-B-RG=RB-RGB
			140～179	R-G-B Auto change
			180～219	RG-RB-GB-RGB Auto change
			220～255	R-G-B-RG-RB-GB-RGB Auto change
		Twinkling	0～1	Close, Laser OFF
			2～95	R-G-B-RG-RB-RGB
			96～179	R-G-B Auto change
			180～229	RG-RB-GB-RGB Auto change
			230～255	R-G-B-RG-RB-GB-RGB Auto change
CH5	Moving-X		0～127	Manual to left/right moving
			128～160	Auto to left moving
			161～192	Auto to right moving
			193～224	Auto to left/right moving
			225～239	Rolling
			240～255	Moving on rhombus
CH6	Moving-Y		0～127	Manual to up/down moving
			128～160	Auto to down moving
			161～192	Auto to up moving
			193～224	Auto up/down moving
			225～239	Sine wave moving
			240～255	Square moving
CH7	X Dimmer		0～-150	Dimmer manaul
			151～255	Dimmer Auto
CH8	Y Dimmer		0～150	Dimmer manaul
			151～255	Dimmer Auto
CH9	Rotation		0～179	Manually rotation
			180～224	Auto clockwise rotation
			225～255	Auto counter clockwise rotation
CH10	Zoom(+/-)		0～-10	no motion
			11～115	Manual zoom(+/-)
			115～170	Auto zoom(+)
			171～210	Auto zoom(-)
			211～255	Auto zoom(-/+)
CH11	Sine wave fluctuation		0～10	no motion
			11～127	Y fluctuation
			128～255	X fluctuation
CH12	Display Dot		0～-1	No dot
			2～-64	Manually dot
			65～255	Auto dot
CH13	Spin direction for twnkling animation		0～10	No spin
			11～99	Counter clockwise direction Spin
			100～199	clockwise direction Spin
			200～255	Auto spin
CH14	Spin Speed for twnkling animation		0～255	0 is slow, 255 is speedy

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

DMX Chart 1=ON 0=OFF ×=ON OR OFF

Dipswitch										Mode
1	2	3	4	5	6	7	8	9	10	
1	0	×	×	×	×	×	×	1	1	AUTO TWINKLING ANIMATION
0	1	×	×	×	×	×	×	1	1	AUTO BEAM ANIMATION
1	1	×	×	×	×	×	×	1	1	AUTO SINGLE ANIMATION
0	0	×	×	×	×	×	×	1	1	AUTO ALL
1	0	×	×	×	×	×	×	0	1	SOUND ACTIVE TWINKLING ANIMATION
0	1	×	×	×	×	×	×	0	1	SOUND ACTIVE BEAM ANIMATION
1	1	×	×	×	×	×	×	0	1	SOUND ACTIVE SINGLE ANIMATION
0	0	×	×	×	×	×	×	0	1	SOUND ACTIVE ALL
Dipswitch									0	DMX/SLAVE

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 "1"

One unit has 12 channels for DMX control, so each unit must be assigns 12 channels at least.

We may assign 16 channels for one unit, then DMX address = 16*N + 1, N=0, 1, 2, 3 .....

Example

One loop address=1, two loop address=17, three loop address=33, four loop address=49

Loop	Address	Binary	Dipswitches
1	1	100000000	#1 (#1 switch is ON, the others are OFF)
3	17	100010000	#1+#5 (#1 and #5 switches are ON)
3	33	100001000	#1+#6 (#1 and #6 switches are ON)
4	49	100011000	#1+#5+#6 (#1,5,6 switches are ON)

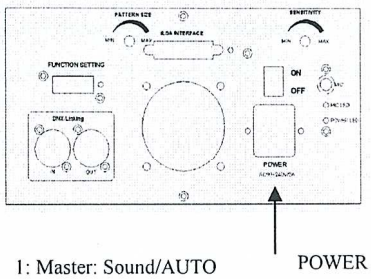
The dipswitches setting for DMX address see the " DMX Address Quick Reference Chart ".

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.



1: Master: Sound/AUTO POWER

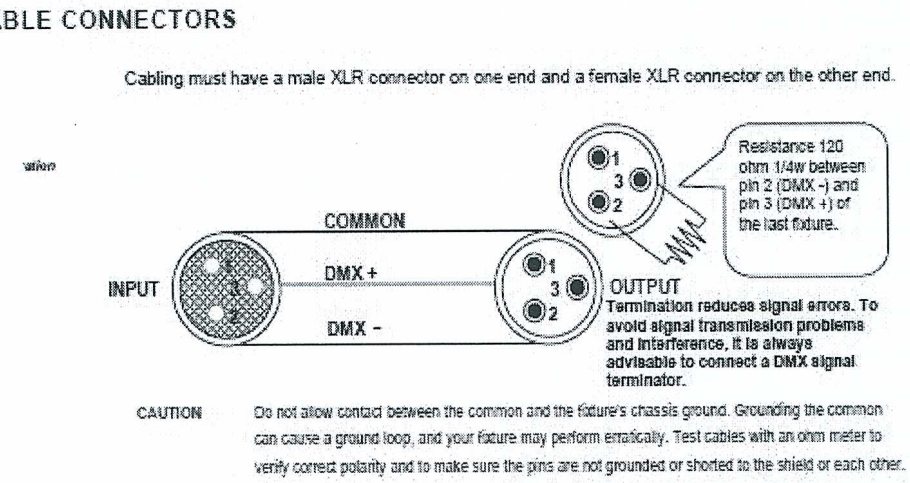
Master-Slave Operation

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).

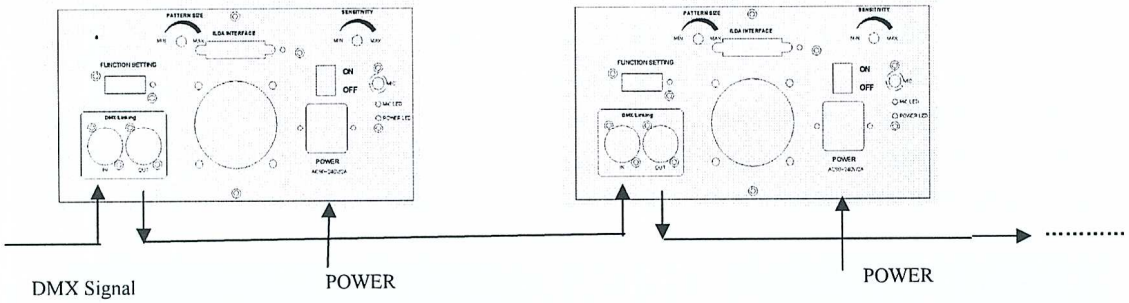
2. Choose a unit to function as Master mode, set dipswitch to select Sound Active or AUTO mode. The others must be set to Slave mode, set dipswitch to select Slave mode.

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

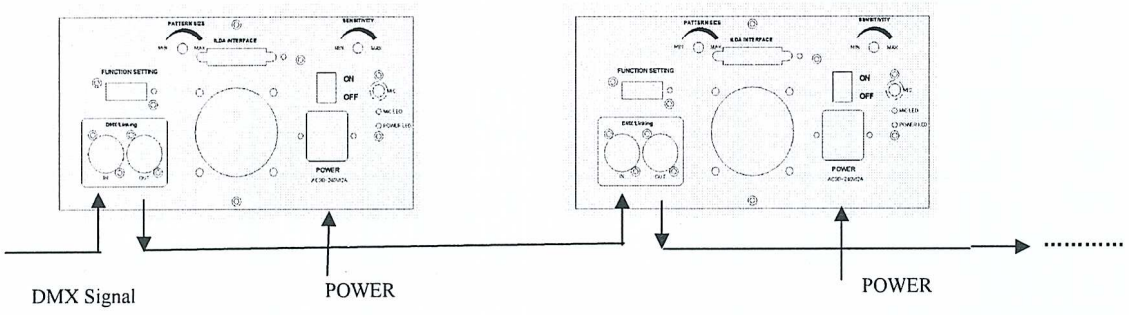
Universal DMX Operation (DMX mode)

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.

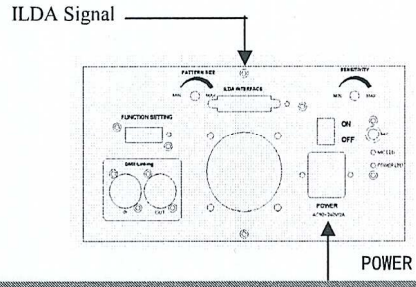
3. Assign a DMX address to each the unit using dipswitches, see the "DMX Address Quick Reference Char".
4. Turn on the all units' power, the units begins reset, then the unit begins working.
5. Use DMX console to control your units.



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 15KPPS, otherwise, the patterns possible have distortion, or the scaner is protected possibly by built-in circuitry.



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.

Warranty Warnings:

1. Damages caused by the disregard of this user manual are not subject to Warranty. The dealer will not accept liability for any resulting defects or problems.
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.

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**