



Dynamic LED

ORDERCODE 43056



SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!

You have bought a great, innovative product from Showtec.
The Showtec Dynamic LED brings excitement to any venue.

You can rely on Showtec, for more excellent lighting products.
We design and manufacture professional light equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
For more information: iwant@showtec.info

You can get some of the best quality, best priced products on the market from Showtec.
So next time, turn to Showtec for more great lighting equipment.
Always get the best -- with Showtec !

Thank you!



Warning	2
Safety-instructions.....	2
Operating Determinations.....	4
Rigging.....	4
Return Procedure.....	5
Claims.....	5
Description	6
Features and Overview	6
Backside.....	6
Installation	7
Set Up and Operation	7
One Dynamic LED.....	7
- Auto Run Mode.....	7
- Sound-controlled Mode.....	7
Multiple Dynamic LED's.....	8
- DMX Operation.....	8
DMX Dip Switch Value Guide.....	9
DMX Channels.....	11
Maintenance	12
Changing the Fuse.....	12
Troubleshooting	12
No Light.....	12
No Response to DMX.....	13
Product Specifications	13

**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- Dynamic LED
- 1m. IEC Power cable
- User manual

WARNING



CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!



**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device have to:

- be qualified
- follow the instructions of this manual



CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.

- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not open the device and do not modify the device.
- Never use the device during thunderstorms, unplug the device immediately.
- Never look directly into the light source.
- Do not switch the device on and off in short intervals, as this would reduce the system's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.
- Avoid flames and do not put close to flammable liquids or gases.
- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If the lens is obviously damaged, it has to be replaced. So that its functions are not impaired, due to cracks or deep scratches.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. Light effect must be installed out of the reach of children. Never leave the unit running unattended.
- For replacement use fuses of same type and rating only.
- The user is responsible for correct positioning and operating of the Dynamic LED. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.



OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

The minimum distance between light-output and the illuminated surface must be more than 0.5 meter.

The maximum ambient temperature $t_a = 45^\circ\text{C}$ must never be exceeded.

The relative humidity must not exceed 50 % with an ambient temperature of 45°C .

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

Any other operation may lead to dangers like short-circuit, burns, electric shock, crash etc.

You endanger your own safety and the safety of others!

Rigging

Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself !

Always let the installation be carried out by an authorized dealer !

Procedure:


- If the Dynamic LED is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the Dynamic LED, with the mounting-bracket, to the trussing system.
- The Dynamic LED must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety-cable.
- When rigging, derigging or servicing the device, always make sure, that the area below the installation place is blocked and staying in the area is forbidden.

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

Return Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

- 1) Your name
- 2) Your address
- 3) Your phone number
- 4) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The Showtec Dynamic LED is a light effect with high output and great effects.

- 5 DMX Channels
- Bright light output
- Light compact housing
- LED system: 24 x Red, 24 x Green, 16 x Blue 5mm LEDs (Hi brightness)
- Flashrate 1-20 Hz
- Mode: Auto and Music controlled
- Music-controlled via built-in microphone
- Fuse 3A / 250V

Overview



Fig. 1

1) Mountingbracket

Backside

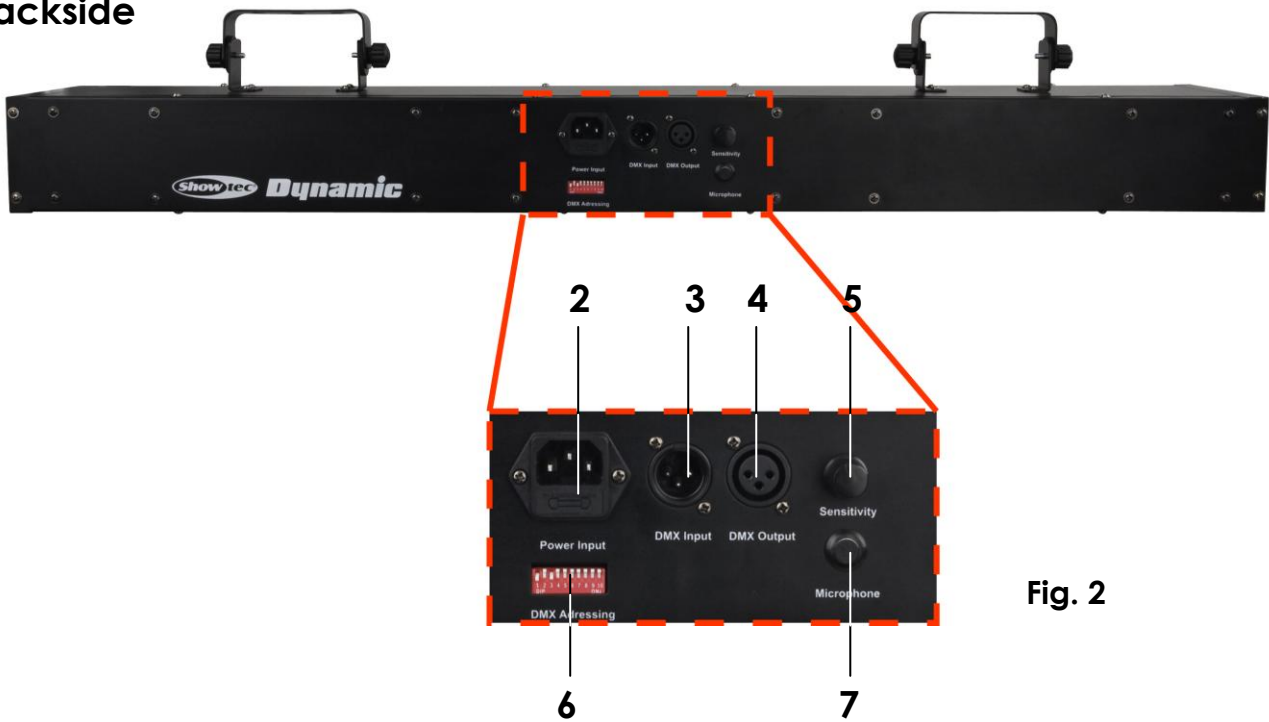


Fig. 2

- 2) IEC Power + Fuse 3A/250V
- 3) DMX signal connector (IN)
- 4) DMX signal connector (OUT)

- 5) Audio Sensitivity
- 6) DMX Dipswitches
- 7) Built-in Microphone

Installation

Remove all packing materials from the Dynamic LED Medium. Check that all foam and plastic padding is removed. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

There are 3 possibilities: Stand Alone Auto Mode
 Sound-active mode
 DMX (See page 8)

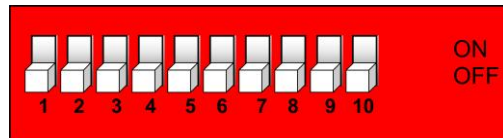
One Dynamic LED (Stand-alone)

1. Fasten the Dynamic LED onto firm trussing. Leave at least 0,5 meter on all sides for air circulation.
2. Plug the cord into a proper electric power supply socket.

FUNCTION	DMX DIPSWITCH CHART									
	1	2	3	4	5	6	7	8	9	10
Auto Mode	---	---	---	---	---	---	---	---	---	---
Sound Active	ON	---	---	---	---	---	---	---	---	---
DMX Mode	Set DMX ADDRESS									ON

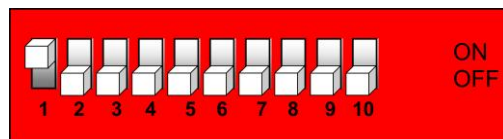
Auto Run Mode

If Dip switches are all set to 0, then the fixture will play all pre-programmed patterns.



Sound-Active

Turn on the music. If Dip switch #1 is set to ON, then the fixture will react to the beat of the music. You can use the Audio sensitivity knob on the back of the Dynamic LED, to adjust the sensitivity reaction to the music.



Multiple Dynamic LEDs (DMX Control)

1. Fasten the effect light onto firm trussing (Use a 30-kg rated or stronger C-clamp bolted onto the Showtec Dynamic LED bracket). Leave at least 0,5 meter on all sides for air circulation.
2. Use a 3-p XLR cable to connect the Dynamic LEDs and other devices.
The pins:



1. Earth
2. Signal -
3. Signal +

3. Link the units as shown in (figure 3), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
4. Set DMX dip switches as follows.

Dynamic LED	Address Value	DMX Dip Switches "ON"
Unit 1	0	ONLY Dipswitch #10.
Unit 2	5	#1, #3 DMX and for DMX #10.
Unit 3	10	#2, #4 and for DMX #10.
Unit 4	15	#1, #2, #3, #4, and for DMX #10.

5. Supply electric power: Plug the end of the mains power cord into proper electric power supply sockets.
Do so for all units and the controller.

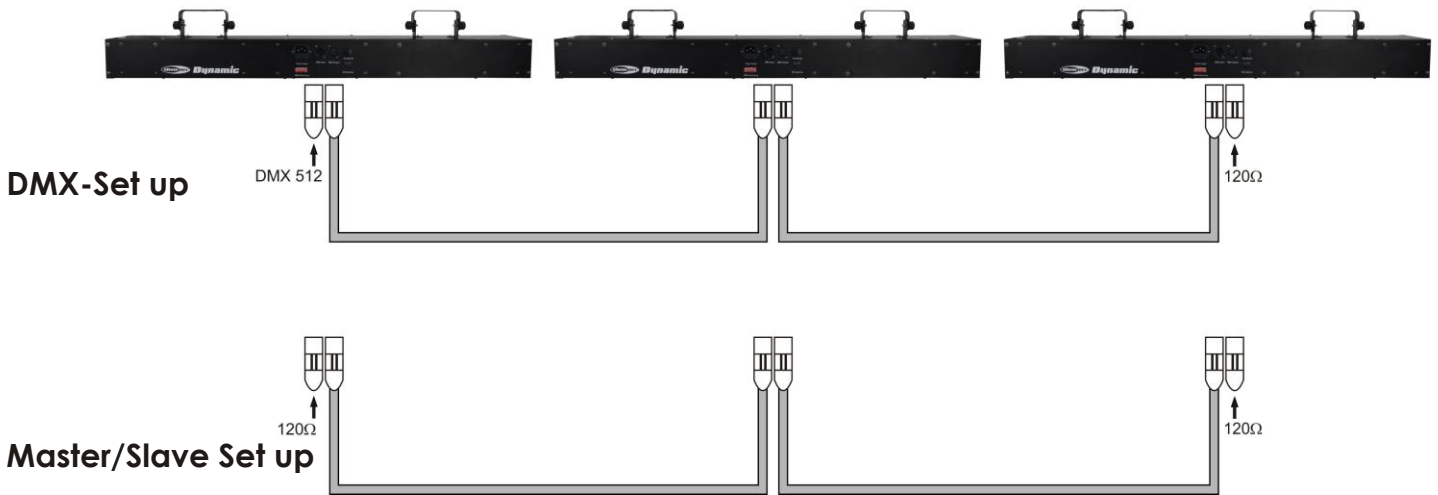


Fig. 3

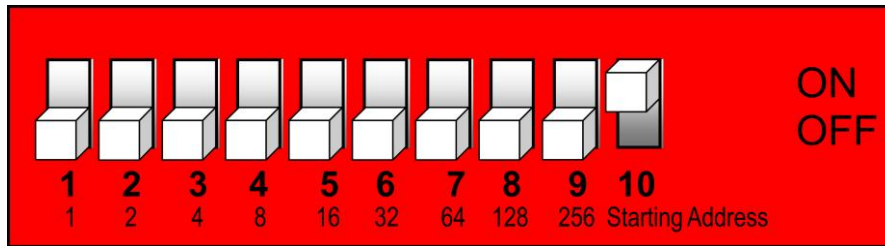
Note : Link all DMX cables and set dip switches before connecting electric power

6. Do not supply power before the whole system is set up and connected properly.
Design your show according to your DMX controller functions.

DMX Dip Switch Value Guide

DMX products must have their own "address" to receive DMX signals. Addresses on the Showtec Dynamic LED are set by flipping the appropriate DMX dip switches.

Note: You only have to use Dipswitch #1 - #9 to set the DMX Address. Dipswitch #10 must be set to ON when working in DMX Mode.



You need to know that DMX address settings are the sum of the dip switch values. A standard DMX address for a Showtec Dynamic LED, which has 5 channels is as follow:

Example

Dynamic LED **Address Value** **DMX Dip Switches "ON"**
 Unit 5 20 #3 , #5 and for DMX #10.

Switch	Value
#3	4
#5	16 +
Total sum	20

DMX Mode: Dipswitch #10 must be set to ON.

Explanation: Since each unit has 5 channels, each address advances 5 values (See Address Value above).

Once address values are determined, add DMX dip switch values to obtain the appropriate address (DMX Dip Switches "ON") for each unit. Flip appropriate DMX dip switches on each unit. All Dynamic LEDs with the same starting address work synchronically.

Example:

1. If you want to give a Dynamic LED DMX address 133, you first have to find the number 133 in the DMX Chart.
2. Then look at the left side (Dip Switches #1-#5) horizontally from 133. In the Table you'll see #1=ON, #2=OFF, #3=ON, #4=OFF, #5=OFF.
3. Finally look at the upper side of the table (Dip Switches #6-#9) vertically from 133. In the Table you'll see #6=OFF, #7=OFF, #8=ON, #9=OFF.

DMX Address Quick Reference Chart

DMX DIP SWITCH SET 0=OFF 1=ON					#9	0	0	0	0	0	0
					#8	0	0	0	0	1	1
					#7	0	0	1	1	0	0
					#6	0	1	0	1	0	1
#1	#2	#3	#4	#5							
0	0	0	0	0							
1	0	0	0	0							
0	1	0	0	0							
1	1	0	0	0							
0	0	1	0	0							
1	0	1	0	0							
0	1	1	0	0							

	32	64	96	128	160
1	33	65	97	129	161
2	34	66	98	130	162
3	35	67	99	131	163
4	36	68	100	132	164
5	37	69	101	133	165
6	38	70	102	134	166

DMX Address Quick Reference Chart

Dip Switch Positior

DMX DIP SWITCH SET 0=OFF 1=ON					#9	0	0	0	0	0	0	0	0	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	

Dip Switch Position

DMX Address

DMX Channels

Channel 1 – Strobe / Dimmer

0-127	Strobe effect, from slow to fast (0-10 flashes/sec.)
128-255	From black to brightest

Channel 2 – Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 3 – Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Built-in Programs

0	Enable Channel 1, 2, 3 and 4
1-9	Program 1
10-18	Program 2
19-29	Program 3
30-38	Program 4
39-49	Program 5
50-59	Program 6
60-69	Program 7
70-79	Program 8
80-89	Program 9
90-99	Program 10
100-109	Program 11
110-119	Program 12
120-129	Program 13
130-139	Program 14
140-149	Program 15
150-159	Program 16
160-169	Program 17
170-179	Program 18
180-189	Program 19
190-199	Program 20
200-209	Program 21
210-219	Program 22
220-229	Program 23
230-239	Program 24
240-255	Program 25

Maintenance

The Showtec Dynamic LED requires almost no maintenance. However, you should keep the unit clean. Otherwise, the fixture's light-output will be significantly reduced. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Wipe lens clean with glass cleaner and a soft cloth. Do not use alcohol or solvents. Keep connections clean. Disconnect electric power, and then wipe the connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:

1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
4. The electric power supply cables must not show any damages or material fatigue.

Replacing a Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below to do so.

1. Unplug the unit from electric power source.
2. Insert a flat-head screwdriver into a slot in the fuse cover. Gently pry up the fuse cover. The fuse will come out.
3. Remove the used fuse. If brown or unclear, it is burned out.
4. Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Troubleshooting

This troubleshooting guide is meant to help solve simple problems.

If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. If the device does not operate properly, unplug the device.
2. Check the power from the wall, the fuse, all cables etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If you are unable to determine the cause of the problem, do not open the Dynamic LED, as this may damage the unit and the warranty will become void.
5. Return the device to your Showtec dealer.

No Light

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

If the light effect does not operate properly, refer servicing to a technician.

Response: Suspect three potential problem areas: the power supply or the LEDs.

1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The LEDs. Return the Dynamic LED to your Showtec dealer.
3. The fuse. Replace the fuse. See page 12 for replacing the fuse.

No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

1. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
2. Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

Product Specification

Model: Showtec Dynamic LED
Voltage: 240V-50Hz (CE)
Fuse: 3A / 250V
Dimensions: 935 x 150 x 150 mm (LxWxH)
Weight: 4,7 kg

Operation and Programming

Signal pin OUT: pin 1 earth, pin 2 (-), pin 3 (+)
Set Up and Addressing: Dipswitches
DMX Channels: 5
Signal input 3-pin XLR male
Signal output 3-pin XLR female
Flashrate 1-20 Hz
Bright light output
Light compact housing
LED system: 24 x red, 24 x green, 16 x blue
Mode: Auto and Music controlled
Sound-controlled via built-in microphone



Minimum distance:

Minimum distance from flammable surfaces: 0.5m
Minimum distance to lighted object: 0.8m

Design and product specifications are subject to change without prior notice.



Website: www.Showtec.info
Email: service@highlite.nl



© 2009 Showtec.