FiberLamp™

OPERATION MANUAL
FL5100B

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1. Product Overview

<u>IMPORTANT SAFETY INFORMATION</u>:

The FiberLamp FL5100B is a professional grade fiber optic LED luminaire. Only a licensed professional should install this fixture.

Before installing or powering the FL5100B, read this manual and follow the safety precautions listed below.

- **The FL5100B is for indoor use only, do not expose to rain or moisture.**
- **Supply only with power that complies with local building and electrical code with voltage between 100-240VAC at 50-60Hz.**
- **Never bypass electrical fuse on the fixture. Replace defective fuse with fuses only of specified type and rating.**
- **Do not attempt to modify the fixture.**
- **Allow a minimum 2 inches of clearance from any vent opening on the fixture.**
- **Install away from any location likely to gather dust and debris.**

FL5100B Overview

The FiberLamp FL5100B is an LED based fiber optic luminaire that has dynamic color changing abilities and an effect wheel. It can be controlled with manual, USB, and DMX512 interfaces.

The FL5100B is designed for use with both side and end-emitting fiber optics.

Models

The FL5100B is offered with a single colored light source or a multicolored light source. All models can be equipped with a motorized "twinkle wheel" for use with bundled strands of fiber.

COLOR OPTIONS

Multicolor options are offered as RGBW (Red, Green, Blue, 5000K White) or RGBA (Red, Green, Blue, Amber). An FL5100B with a multicolored light source is the best option when color-changing abilities are required.

Single color options are offered in 2800K, 3000K, 4200K, 4400K, 5000K and 6500K white color temperatures. An FL5100B with a single colored light source is the best option when high light intensity is required.

FIBER INSTALLATION PORT OPTIONS

The FL5100B is offered with a standard 30mm or a custom 33mm fiber installation port. Accessories ACS30 and ACS33 are offered to couple bundles of up to 1200 fibers in the same common end.

2. Hardware Diagram

1. IEC60320 C14 Plug for AC input
2. Power Switch
3. Fuse housing
4. Exhaust vent
5. Fiber set screw
6. Fiber installation port
7. 5mm surface mounting holes
8. 11mm clamp mounting holes
9. Fiber cooling fan vent
10. Light source cooling fan
11. XLR5 male/female connectors for DMX connection
12. RJ45 female connectors for DMX connection
13. Mini-USB connector
14. Preset mode selector pushbutton
15. Twinkle wheel speed selector pushbutton
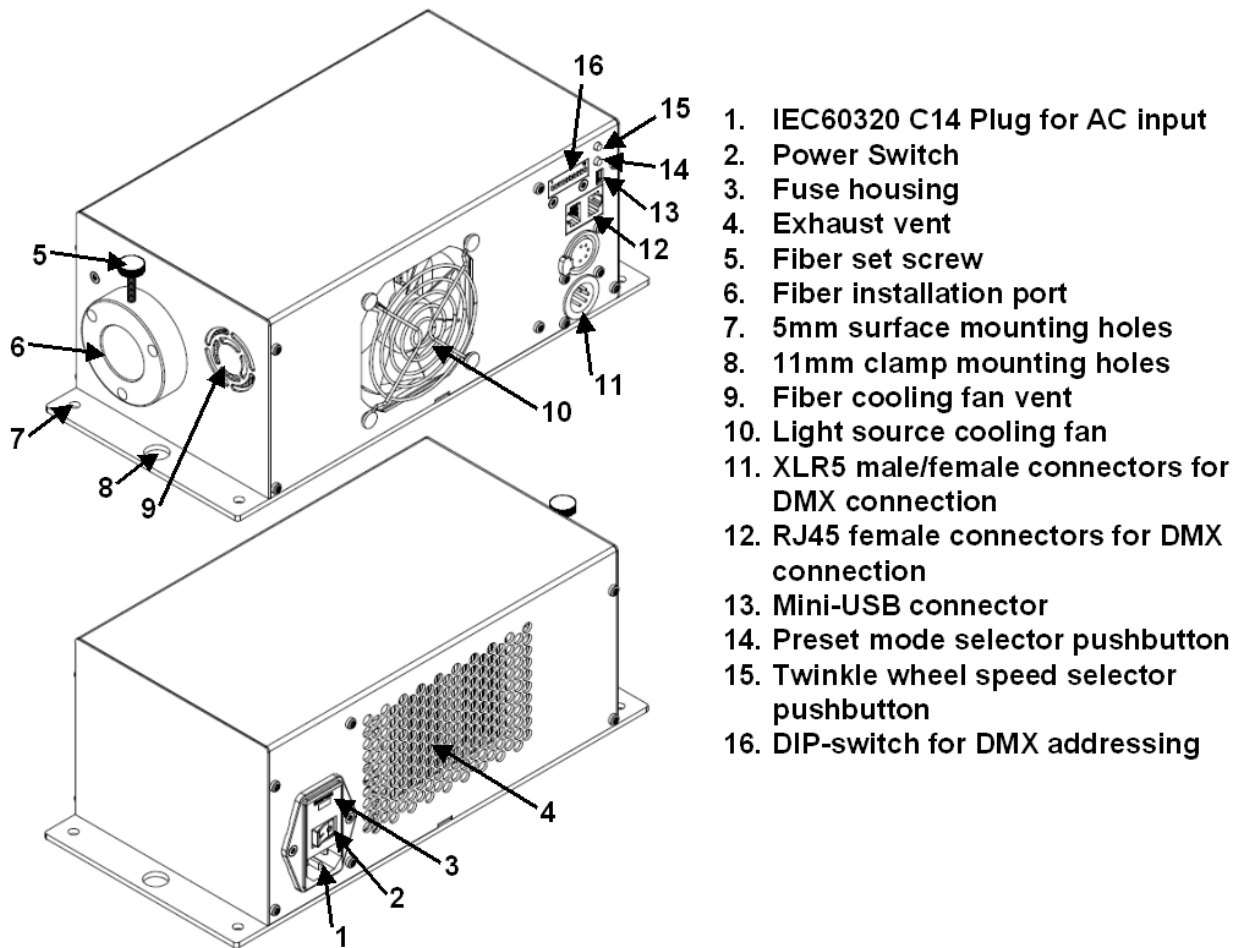16. DIP-switch for DMX addressing

Figure 1: Featured hardware identification diagram.

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3. Manual Operation

Power switch

Once connected to the AC mains, the power switch controls the power supplied to the unit. Be sure to set the power switch to ON before operation.

In the event of a power disconnect, when power is restored, the unit will return to its operating state.

Note: Once the power switch is set to ON, the cooling fan should immediately operate. If the fan fails to turn on with the power switch, but the unit is still able to output light, set the power switch to OFF and contact the manufacturer.

Pushbuttons

There are two pushbuttons on the side of the unit labeled "Wheel Speed" and "Mode" shown in Figure 1.

WHEEL SPEED

If a twinkle wheel is installed in the fixture, the "Wheel Speed" pushbutton is used to control the twinkle wheel. Pressing this pushbutton cycles through different preset twinkle speed modes with rotation in one direction (Note: Both forward and reverse rotation can be controlled with DMX). Each mode corresponds to different twinkle speeds as described in the Table 1 below.

Table 1: *Preset twinkle speed modes that can be selected using the "Wheel Speed" pushbutton*

Mode	Wheel Speed
0	Off
1	Slow
2	Slow-med
3	Medium
4	Med-fast
5	Fast

MODE

The "Mode" pushbutton is used to select through preset lighting modes saved on the fixture. Each mode is either a static color or a Playlist. A static color mode can only display one solid color. A Playlist mode can display a timed sequence of color scenes. Modes 1-7 can only be programmed as static colors. Modes 8-11 can be programmed as static colors or Playlists. Table 2 lists the factory-preprogrammed settings for each model of FL5100B. All modes, except for mode 0, can be reprogrammed using the LightMix software described in section 4 of this manual.

Table 2: *Factory preset modes*

Mode	Programming Capability	Multicolor		Single Color
		RGBW	RGBA	
0	Non-programmable	No light	No light	No light
1	Static Color	White	Blue	100% Intensity
2	Static Color	Red	Red	90% Intensity
3	Static Color	Green	Amber	80% Intensity
4	Static Color	Blue	Green	70% Intensity
5	Static Color	Yellow	Orange	60% Intensity
6	Static Color	Cyan	Chartreuse	50% Intensity
7	Static Color	Mixed 5000K White	Mixed 5000K White	40% Intensity
8	Playlist	Rainbow Playlist	Rainbow Playlist	Blank
9	Playlist	Blank	Blank	Blank
10	Playlist	Blank	Blank	Blank
11	Playlist	Blank	Blank	Blank

Note: The Rainbow Playlist slowly fades between colors, while mixing to display all colors on the color pallet.

4. Software Operation

LightMix Overview

The LightMix Software is designed to give users the ability to create and run any lighting scene or sequence of lighting scenes on the FL5100B as a stand-alone fixture. LightMix also provides a way to synchronize lighting scenes between several FL5100B fixtures in an installation.

Software Installation

LightMix is compatible with 32-bit and 64-bit systems running Windows XP, Windows Vista and Windows 7. It is not compatible with any Mac OS.

Before installing LightMix, be sure to completely uninstall any existing versions of LightMix from your computer.

To install, insert the CD that accompanies the FL5100B into the CD drive. Open the contents of the CD and click on the Setup file. A window with the Setup Wizard will appear with instructions. Follow the instructions until installation is complete.
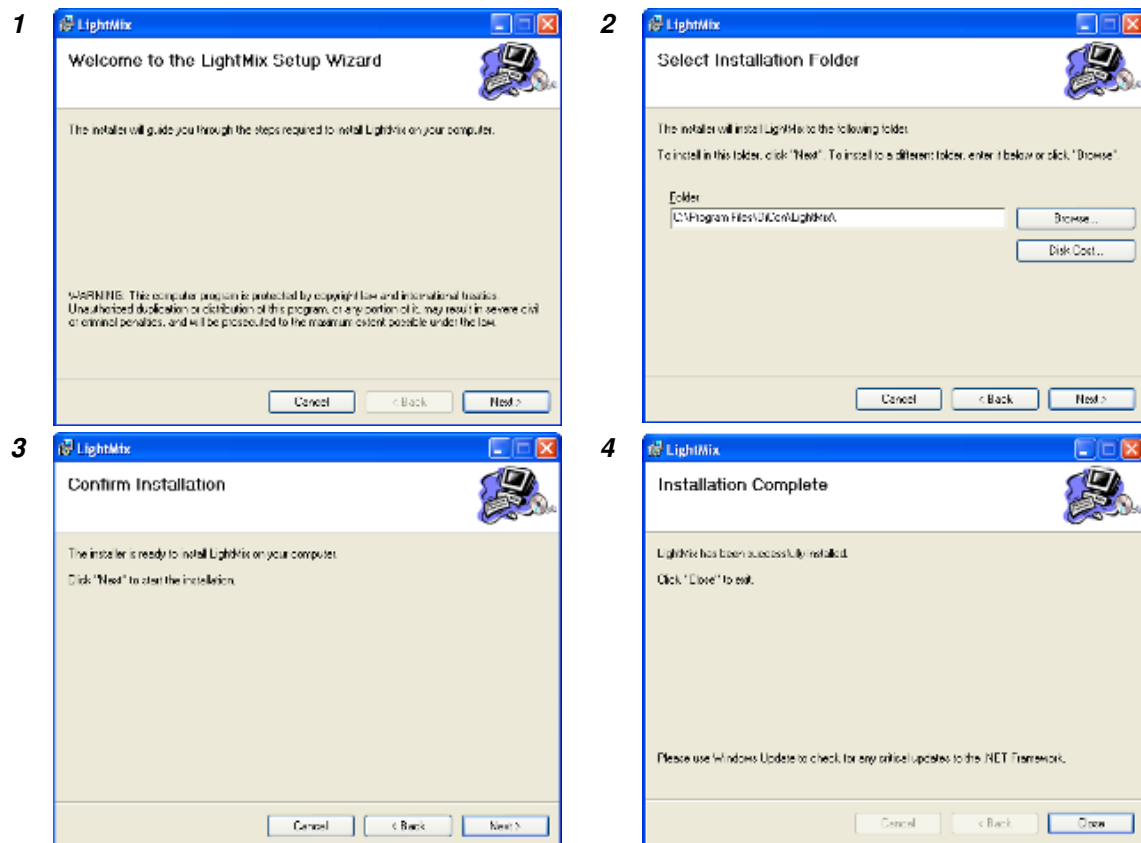
Figure 2: *Installation screenshots (left to right, top to bottom).*

Hardware Setup

1. Make sure that the Power Switch is in the OFF position.
2. Connect the FL5100B to the computer with a USB to Mini-USB cable.
3. Connect the FL5100B to AC mains power.
4. Set the Power Switch to the ON position.
5. Open the program on the computer.

Definitions

- **Preset mode:** A static color or Playlist saved on the built-in flash memory of the FL5100B. Accessible through the pushbutton.

- **Playlist:** A collection of steps built in LightMix programmed onto the FL5100B to be played repeatedly as a dynamic color light show.

- **Profile:** A small collection of steps to help construct a large and complicated Playlist, especially useful when repetition appears frequently in the desired Playlist.

- **Step:** The set of attributes (color, fade option, blink rate, time duration) that define individual elements in a Profile or Playlist. This is also referred to as a Scene amongst lighting designers.

- **Blink rate:** Represents how fast the current step will blink. A blink rate of zero means the step does not blink. Blink rates become increasingly faster as the blink rate is increased.

- **Fade:** An option that specifies whether the color of the current step gradually fades into the color of the next step.

- **DMX mode:** Determines a fixtures role in a DMX network (Master or Slave).

- **DMX Master:** If the fixture is in DMX master mode, the FL5100B will continuously send out DMX commands to fixtures set to the same DMX address as the master. The commands will tell DMX slave fixtures to execute the same tasks as what the DMX master executes. When in DMX master mode, the fixture will not follow DMX commands.

- **DMX Slave:** If the fixture is in DMX slave mode, the FL5100B will receive DMX commands. If the commands are for addresses identical to those set on the fixture, the fixture will execute according to the commands. The DMX commands can come from a DMX controller, or a fixture in DMX master mode.

Programming a Static color Preset Pushbutton Mode

Follow the steps below to create a unique sequence of lighting scenes and save it to a preset Playlist Mode of a fixture for stand-alone operation.

1. Use scroll bars in the **Color** section to customize the color of the light output during the step. The scroll bars control the intensity of the single color strings of LEDs in the fixture.
2. Select the static color mode (1-7) in the **Preset Mode** section tab to which the new custom color will be saved.
3. Click the Write button
4. Disconnect the fixture from the computer and use the Mode pushbutton to select the mode to which the new static color has been written.

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Programming a Playlist Preset Pushbutton Mode

Follow the steps below to create a unique sequence of lighting scenes and save it to a preset Playlist Mode of a fixture for stand-alone operation.

1. Use scroll bars in the **Color** section to customize the color of the light output during the step. The scroll bars control the intensity of the single color strings of LEDs in the fixture.
2. Decide how long the step will last by choosing a Play Time in the **Step Duration** section tab.
3. If fading throughout the step to the next step is desired, check the Fade box at the bottom of the **Step Duration** section tab.
4. If blinking is desired throughout the step, set desired the blinking rate using the Blink Rate scroll bar.
5. Once the step is complete, click Add Step at the bottom of the Step Duration section tab and the step will be shown in detail in the **Step Parameters** section as a step.
6. Repeat until the series of steps reflect the desired lighting sequence.
7. Click the Save button on the right hand side of the **Step Parameters** section. After naming the 'Profile', it will be displayed in the **Saved Profiles** section.
8. To write the 'Profile' to the FL5100B, Click and Drag the saved 'Profile' from the **Saved Profile** section to the **Selected Profile** section.
9. In the section **Write Selected Profile to FiberLamp** at the bottom of the LightMix window, select which 'Playlist Number' to assign the newly created 'Profile' by clicking on the empty circle to the left of the 'Playlist Number'. Playlist 1 will corresponds to Pushbutton mode 7, Playlist 2 correspond to Pushbutton mode 8, etc.
10. Click the Write button on the right hand side of the **Write Selected Profile to FiberLamp** section.
11. Disconnect the fixture from the computer and use the Mode pushbutton to select the mode to which the new Playlist has been written.

5. DMX Operation

DMX Overview

DMX is an abbreviation for "digital multiplex". It is an RS-485 based protocol that has become the industry standard for digital lighting control interfaces. DMX allows users to synchronize lighting effects between fixtures with a centralized lighting controller.

DMX Hardware

The FL5100B is equipped with two RJ45 female connectors, an XLR5 female connector and an XLR5 male connector. These connectors are provided such that they can be placed in a DMX daisy chain with DMX input and output ports. If at the end of a daisy chain, a 120-Ohm termination resistor should be applied to the DMX output port of the FL5100B.

XLR CABLE

In entertainment lighting, XLR cable is the standard for daisy chaining because its robust construction is better suited for modular and temporary installations. This cabling can be coupled with XLR5 connectors, which have also become standardized by the entertainment lighting industry. The female XLR5 connector is typically used to accept a DMX data signal and the male XLR5 connector passes a DMX signal. The male XLR5 connector is used as the DMX output port whether in series with a daisy chain while acting in DMX slave mode, or acting in DMX master mode.

CAT-5E CABLE

Most architectural installations use Cat-5e cable to transmit DMX data to fixtures. This cabling can be coupled with RJ45 connectors to be compatible with the one of the RJ45 connectors on the FL5100B. In order to daisy chain, a second Cat-5e cable with RJ45 connector can be connected to the second RJ45 connector on the FL5100B.

PINOUTS

Table 3: *Pinout assignments for RJ45 and XLR5 connectors on the FL5100B*

Function	XLR5	RJ45	Color
Data (+) in	3	1	White/Orange
Data (-) in	2	2	Orange
Not Assigned	5	3	White/Green
Internal use only	-	4	Blue
Internal use only	-	5	White/Blue
Not assigned	4	6	Green
DMX Ground	1	7	White/Brown
DMX Ground	1	8	Brown

DMX Wiring Configurations

Depending on the size of the installation, there are several configurations that will ensure that each fixture receives a clear signal.

INSTALLATIONS WITH LESS THAN 32 FIXTURES

For installations under 32 fixtures and installations less than 1,200 meters (3,900 feet) in cable length, the signal can be daisy chained in series from one unit to the next using either Cat-5e cable or XLR cables.

LARGER INSTALLATIONS OR LONG DISTANCE

Installations requiring more than 32 fixtures or installations spanning cable lengths greater than 1,200 meters (3,900 feet) will need to use a DMX amplifier. Due to the limitations of the RS-485 protocol, this is needed to ensure that each string of 32 fixtures receives sufficient signal strength.

DATA TERMINATION

It is always recommended to terminate DMX daisy chains with a resistor of the same characteristic impedance as the cable (typically 100-120 Ohms). To terminate a DMX daisy chain, place the resistor across Data pin (+) and Data pin (-), which are specified in Table 3.

DMX Addressing

The FL5100B is controlled with 8 DMX channels and must be assigned to 8 DMX addresses. The DIP-switch on the side of the FL5100B defines the first DMX address of the sequence of 8 DMX addresses. The 7 remaining addresses are automatically assigned to the 7 addresses that succeed the address set on the DIP-switch. (For example, if the DIP-switch is set to address #4, the FL5100B will be controlled by DMX channels 4, 5, 6, 7, 8, 9, 10 and 11.)

Table 4 can be used as a guide for configuring the DIP-switch to any DMX address. To determine the DIP-switch configuration that corresponds to a DMX address, find the DMX address in the table below. Then set the DIP-switch such that pins 1-5 are set as described on the left hand side of the table and pins 6-9 are set as described at the top of the table, with respect to the specific DMX address.

Table 4: *DIP-switch setting table for assigning an FL5100B to a specified DMX address*

DIP #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

DIP-switch Settings: 0 = OFF, 1 = ON

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DMX Controls

The FL5100B is controlled with 8 DMX channels as shown in Table 5 below. These channels can be assigned, in series only, to any of the 512 addresses within the DMX universe.

Table 5: *DMX channel sequence table for different models.*

DMX Channel Sequence	Model		
	Single Color	Multicolor	
		RGBW	RGBA
1	White Light	5000K White Light	Blue Light
2	White Light	Red Light	Red Light
3	White Light	Green Light	Amber Light
4	White Light	Blue Light	Green Light
5	Mode 7	Mode 7: Mixed 5000K White	Mode 7: Mixed 5000K White
6	Master Intensity		
7	Twinkle Wheel		
8	Strobe		

LIGHT OUTPUT CONTROL

Channels 1-6, in the sequence of 8 shown in Table 5, are channels that control the light output of the FL5100B. As DMX controls operate on an incremental number scale from values of 0 to 255, a DMX value of 0 corresponds to no light and a DMX value of 255 corresponds to maximum light output.

Channels 1-4 correspond to individual colors on the LED light source. In multicolor models, new colors can be achieved with varying intensity combinations.

Channel 5 controls the intensity of a color combination created in the LightMix software and saved to Mode 7. For multicolor models, Mode 7 is calibrated at the manufacturing facility to the brightest 5000K White light possible from the light source.

Channel 6 is the master intensity control (If channel 6 is set to DMX value 0, then no light will turn on, even with channels 1-5 set to max intensity). Having a Master intensity channel gives the advantage of finding a color using channels 1-4 and controlling its intensity without changing that color.

TWINKLE WHEEL CONTROL

The twinkle wheel control operates on the same incremental number scale from values of 0 to 255 as all other DMX controls. DMX channel 7 of the FL5100B controls both the rotational speed and direction of the twinkle wheel.

The values in this channel are split. The lower half of the number values, 1 to 127, correspond to twinkle wheel speeds in one rotational direction, and the higher half of the number values, 129 to 255, correspond to twinkle wheel speeds in the opposite rotational direction. The values 0 and 128 are reserved to stop the twinkle wheel from rotating as shown in Table 4 below.

Table 6: *Twinkle wheel response to DMX signals*

DMX Value	0 - 1	1 - 127	126 - 131	132 - 255
Wheel Response	Stop	Slow → Fast	Stop	Fast → Slow in opposite direction

STROBE CONTROL

DMX channel 8 controls the strobe rate of the light. A DMX value of 0 on this channel will not strobe the light. A DMX value of 255 on this channel will strobe the light settings on channels 1-6 very fast.

Master/Slave Operation

The FL5100B is able to act as a DMX Slave or a Master on the DMX line, depending on the settings declared using the software. Each FL5100B is preprogrammed to DMX Slave mode as a factory default setting.

DMX MASTER OPERATION

When in DMX Master mode, the FL5100B broadcasts the display color, twinkle wheel speed and strobe rate as a DMX signal at the configured DMX addresses on the fixture from the DMX ports described in the DMX Hardware section above. *Note: When in DMX Master mode, the FL5100B cannot not receive incoming DMX signals.*

To engage DMX Master Mode, follow these instructions:

1. Connect the FL5100B to a PC with the USB cable and launch the LightMix software.

2. On the designated master FL5100B fixture, verify that the DMX base address is the same as all of the Slave units in the installation. If not, set the respective DMX address on the fixtures DIP-switch.

3. In the DMX mode section to the bottom left of LightMix window, check the "Master" bubble and click "Set."

4. After the FL5100B has been properly installed at the desired physical location, turn on the unit. Use the push button to access the desired preprogrammed mode, and then plug in the DMX data cable that connects it to the Slave units.

DMX SLAVE OPERATION

When in DMX Slave mode, the FL5100B receives DMX signals from a DMX controller, and will respond if the DMX addresses it is configured to matches that of the DMX controller. *Note: The DMX controller may be either a third party device or the FL5100B configured in DMX Master mode.*

To ensure that the FL5100B responds properly to DMX signals, make sure the unit is configured to be in DMX Slave mode and set to the correct DMX addresses.

To engage DMX Slave Mode, follow these instructions:

1. Connect the FL5100B to the PC with the USB cable and launch the LightMix software.

2. On the FL5100B fixture, verify that the DMX base address corresponds to the respective addresses on the DMX controller. If not, set the respective DMX address on the fixtures DIP-switch

3. In the DMX mode section to the bottom left of LightMix window, check the "Slave" bubble and click "Set."

4. After the FL5100B has been properly installed at the desired physical location, turn the unit on, and plug in the data cable from the DMX controller. Verify that the DMX controller is outputting signal and that the FL5100B is responding accordingly.

6. Installation Recommendations

General

The FL5100B is intended for indoor use only. Installation should take into consideration room for access to all input and output ports, as well as easy access to manual controls.

COOLING FAN OBSTRUCTION

The cooling fan is an important factor in prolonging the lifetime of the LED light source. It is important that the input and output vents are clear of any obstructions so that there is proper airflow though the device for cooling.

Install the FL5100B in a location free from dust and debris, as the fan will pull in any dust and debris within a close proximity. Excessive dust and debris build up within and around the FL5100B will decrease the performance of the thermal management system, resulting in a shortened lifetime of the LED light source.

Mounting

The FL5100B uses dynamic thermal management and can therefore be mounted in any orientation seen fit by the installer.

SURFACES

The mounting plate at the bottom of the unit is fit to be mounted on wood, masonry, drywall, or metal. Use the four 5mm holes on the four corners of the base to mount to a surface with recommended M4 screws. Be sure that the mounting surface is capable of supporting the weight of the unit.

HANGING APPARATUS

There are two 11mm holes at the center of the front and back ends of the mounting plate. These holes are meant to secure two rigging clamps to the unit using recommended M10 bolts and lock nuts. Verify that the clamps and mounting structure can safely support the weight of the unit along with anything else relying on the structure for support.

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7. Troubleshooting

Table 5: *Possible problems and remedies for FL5100 failure.*

Problem	Remedy
Unit does not turn on	Make sure that the power switch is set to ON.
	Hit the push button several times to make sure that the unit is not in the "off" mode or a blank mode.
	Use LightMix and check for individual light channel response. If responsive, click the "Restore" button to restore the preset modes to the external pushbuttons.
Light output only appears red	Make sure that the protective dust cover on the end cap has been removed.
	Push the button several times to engage different color modes.
Fan does not turn on	The fan should be on constantly while the power switch is set to ON. If the fan fails to engage, turn off the unit immediately and contact the manufacturer.
Unit is not emitting all of the colors	Hit the push button several times and scroll through the factory preset modes. If any of the colors appear unusually dim, check each scroll bar in LightMix for full intensity control. If still dimmer than usual, please contact the manufacturer.
	Use LightMix to check for individual color channel response. If responsive, click the "Restore" button to restore the preset modes to the external pushbuttons. If any of the channels are not completely responsive, please contact the manufacturer.
Unit is not responding to DMX signal	Verify that the addresses set on the DIP-switch correspond to the channels being controlled on the DMX controller.
	If there is no light, make sure that the 6th channel in the address sequence is set to a DMX value >0.
	Make sure the fixture is not set to DMX Master mode.
	Make sure the pin assignments and polarities on the DMX connectors are properly aligned.
	Terminate the DMX signal line with a resistor of the same characteristic impedance as the cable.
	Check to verify that the DMX controller is broadcasting a signal by connecting it to a different fixture.
Unit flickering issue	Check to make sure that the twinkle wheel is stopped.
	If occurring on a Playlist mode, write another Playlist to the flickering Playlist mode and check if flickering still occurs. If flickering persists, contact manufacturer.
	If occurring on a static factory preset mode, contact manufacturer.
	If connected to DMX, make sure the strobe channel is set to a DMX value of 0.
	If warm and the fan is not operating correctly, turn off and contact manufacturer.
There is no light output and the unit is no longer cool to the touch	Check to make sure the fan is operating properly and the device is being used within its environmental temperature range defined in the Specifications section.
	Make sure there is nothing obstructing the airflow to the FiberLamp.

8. Specifications

Environmental Specifications

Table 6: *Environmental Specifications for the FL5100B*

Operating Temp. Range	Storage Temperature Range	Humidity
0/40℃	-40/+70℃	10-90%

Electrical Specifications

Table 7: *Electrical Specifications for the FL5100B*

Input Voltage Range	Input Frequency Range	Power Rating
100-240V AC	50-60Hz	100W

Mechanical Dimensions

Table 9: *Mechanical Dimensions*

Parameter	Dimension
Base	289mm x 135mm
Height	110mm

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Mechanical Drawing

All measurements are in mm.