DMX Hepta Color LED Tube System

4 Channel DMX/ LED Neon Tube

Instruction Manual

SDL-109C, SDL-109P, SDL-109L

SDL-109 (LEDNEON Tube) Tube System

Instruction Manual

CAUTION! Read instructions thoroughly before installing or plugging units in. Make sure power supply is off before connecting or disconnecting tubes. To be installed by a professional electrical contractor only!

SPECIFICATIONS: MODELS:

SDL-109C Controller (DMX Controller),

SDL-109P (Power Supply Unit)

SDL-109 (LEDNEON Tube)

SDL-109C Controller (DMX CONTROLLER)

Weight	5.5lbs.
Case Dimensions	19"x6.7"x3.5"
Data Interface	Proprietary Neo-Neon ™ data protocol/ DMX-512
Power Input	America :120VAC/50Hz--60 Hz Japan : 100VAC/50Hz-60Hz Europe/Asia/Australia : 240VAC/50Hz-60Hz
Output	12VDC / 12.5 A
Fuse	16A
Data Connection (Input)	MOLDED INTEGRAL MALE CONNECTOR
Data Connection (Output)	MOLDED INTEGRAL FEMALE CONNECTOR
DMX Connection	XLR
Frequency	1~25Hz
Flash Rate	1-20Hz

SDL-109P (Power Supply Unit)

Weight:	5.5lbs.
Case Dimensions:	13.8"x 5. 4"x 2. 7"
Power Input:	America :120VAC / 50Hz--60 Hz Japan : 100VAC/50Hz-60Hz Europe/Asia/Australia : 240VAC/50Hz-60Hz
Output:	12VDC / 12.5A
Fuse:	16A
Data Connection (Input)	MOLDED INTEGRAL MALE CONNECTOR
Data Connection (Output)	MOLDED INTEGRAL FEMALE CONNECTOR

SDL-109 (LEDNEON Tube)

COLOR RANGE	Red, Green, Yellow, Blue, Purple, Cyan, White
SOURCE	High intensity LEDs – 144 LEDs per 1 meter tube
BEAM ANGLE	250°
DATA CONNECTION (INPUT)	MOLDED INTEGRAL MALE
DATA CONNECTION (OUTPUT)	MOLDED INTEGRAL FEMALE SOCKET
HOUSING	Anodized aluminum
TUBE MATERIAL	Milky white optically diffused polycarbonate

LINKAGE MAX	(3ft. tube/1m.) 4000
WEIGHT	3.3lbs.
TUBE DIMENSIONS	40" x 2.25" x 3"
LISTINGS	CE Certified, Rated IP44
MTFB	>10,000 hrs
LED TOTAL LIFE	>100,000hrs.
ELECTRICAL SPECIFICATIONS	
VOLTAGE	DC12V
POWER CONSUMPTION	Maximum: 16.8 W/meter
POWER SUPPLY	SDL-109P (Power Supply) (after each 8 tubes)
ENVIRONMENTAL SPECIFICATIONS	
TEMPERATURE RANGE	0℃ to 45℃
HUMIDITY RANGE	0-95% non-condensing humidity

Introduction:

RGB LED Tube System

SDL-109 (LEDNEON Tube) Tube system is a seven-color LED tube lighting effect that can produce a wide variety of color changing, chasing and strobe light shows. The output of red, green, and blue (RGB) LEDs (light-emitting diodes) are mixed and diffused to produce pure cyan, magenta, yellow, red, green, blue and white colors that may be programmed for a broad range of moods, from dynamic displays of color in motion to serene color blends. This RGB LED Tube system is comprised of three parts:

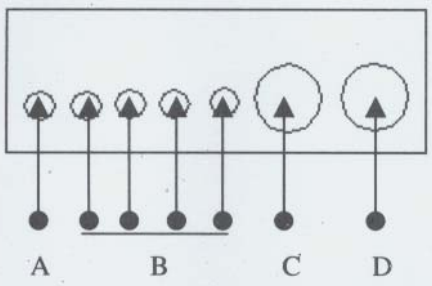
- **SDL-109*C*** *(DMX* controller)
- **SDL-109P** *(power* supply unit)
- **SDL-109** *(LEDNEON Tube)*

The control for the RGB LED Tube System comes from the LED Controller. Four special sockets are provided for outputs; DMX connection is made by way of a 3- pin XLR plug. The mains handling components are over-rated and the outputs are individually, externally fused for safety and reliability.

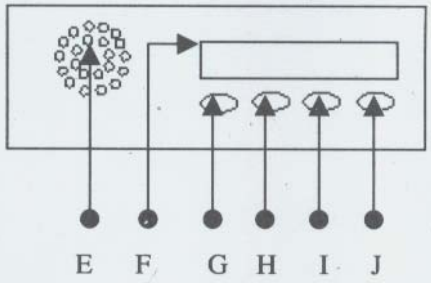
THE **SDL-109** (LEDNEON Tube) controllers function in either 'stand-alone' mode, or as 4-channel DMX-512 fixtures, controllable by any standard DMX console. Each controller can drive up to 1,000 linked **SDL-109** (LEDNEON Tube) per each of its 4 signal output channels, for a maximum total of 4,000 tubes per controller. (4 parallel lines) Power to the tubes is supplied by the controller for the initial 4 meters of a linked run, with LED PSU power supply units required for each subsequent 8 meters. The **SDL-109** (LEDNEON Tube) Controller and SDL-109P PSU units are powered.

SDL-109C LED CONTROLLER

Controller REAR view:



Controller FRONT view:



A) MAIN POWER
B) SIGNAL OUTPUT
C) DMX OUTPUT
D) DMX INPUT
E) VENTILATION HOLES
F) LCD
G) MODE
H) SET UP
I) UP
J) DOWN

General Functions (REAR):

A. **POWER INPUT:** 120VAC /50 Hz
B. **SIGNAL/ OUTPUT:** 4 in total
C. **DMX SIGNAL OUTPUT:** Molded integral female connector used to send **DMX** signals.
D. **DMX SIGNAL INPUT:** Molded integral male connector used to receive **DMX** signals.

General Functions (FRONT):

E. VENTILATION
F. MENU DISPLAY
G. **MODE:** Adjust program parameters to produce desired modes (See **G-Mode Table Below).**
H. **SET UP:** Adjust SET UP Options to produce desired Master/Slave setting (See **H-SET UP** Table Below).
I. **UP:** Increase parameter values.
J. DOWN: Decrease parameter values.

Press the button E to set a desired mode option, press the button D to set the set up option, and press the B/C button to set the parameter value respectively.

Mode option (E button)	Available colors
Static color	Blackout, static red, static red, static green, static yellow, static blue, static purple, static cyan, static white

Mode option (E button)	Set up option (D button)	Up/down (B / C button)
Color change	Run Speed: Flash freq.:	1-100 1-100
Slow flow 1	Run Speed: Flash freq.:	1-100 1-100
Slow flow 2	Run Speed: Flash freq.:	1-100 1-100
Roll chase 1	Run Speed: Flash freq.:	1-100 1-100
Roll chase 2	Run Speed: Flash freq.:	1-100 1-100
Multi-color	Run Speed: Flash freq.:	1-100 1-100
Fast flow 1	Run Speed: Flash freq.:	1-100 1-100
Fast flow 2	Run Speed: Flash freq.:	1-100 1-100
2 color chase	Run Speed: Flash freq.: Color sort: (color available in note 1)	1-100 1-100 0-20
2 color flow	Run Speed: Flash freq.: Color sort: (color available in note 2)	1-100 1-100 0-20
Color fade	Run Speed: Flash freq.:	1-100 1-100
Auto run	Run Speed: Flash freq.:	1-100 1-100
System mode	Led tube address setting: Tube amount setting: DMX address setting:	[YES]/[NO] (note 3) 1-1000 0-508 (note 4)

Note1:R+G,R+Y,R+B,R+P,R+C,R+W,G+Y,G+B,G+P,G+C,G+W,Y+B,Y+P,Y+C,Y+W,B+P,B+C,B+W,P+C,P+W,C+W

Note2:R+G,R+Y,R+B,R+P,R+C,R+W,G+Y,G+B,G+P,G+C,G+W,Y+B,Y+P,Y+C,Y+W,B+P,B+C,B+W,P+C,P+W,C+W

Note3: In order to control the tubes; it is necessary to set a respective address for each tube when the whole system is installed for the first time. Reset the addresses if there is any change to the connection of the tubes, i.e. the change of order or number. Once you set the address, it will be stored in the memory of the chip in the tube; there is no need to reset it anymore, unless there is change again.

Note4: DMX address = 0 controlled by SDL-109C controller independently.
DMX address = 1-508 connected with and controlled by DMX512 controller.

DMX MODE

Set the DMX address =1-508, then the system is in DMX mode. Control the system directly via the sliders on the panel of the DMX512.

Each successive four sliders on the controlling panel correspond to the B, C, D, E button on the SDL-109C controller. For example, set the address to be 5, the slider of channel5 corresponds to the button E. Then, adjust the value of channel5, 6, 7, and 8 via sliders on the panel. Adjust the values to get the desired option referring to the table below:

Channel1

Value	Option	Value	Option
0-12	Blackout	130-142	Slow Flow 2
13-25	Red	143-155	Roll Chase 1
26-38	Green	156-168	Roll Chase 2
39-51	Yellow	169-181	Multi Color
52-64	Blue	182-194	Fast Flow 1
65-77	Magenta	195-207	Fast Flow 2
78-90	Cyan	208-220	2 Color Chase
91-103	White	221-233	2 Color Flow
104-116	Color Change	234-246	Color Fade
117-129	Slow Flow 1	247-255	Auto Run

Channel 2

Speed Setting: Varied from 1 step per minute to 100 steps per second (0-255)

Channel 3

Flash Setting: Varied from OFF to 20Hz (0-255)

Channel 4

Value	Option	Value	Option
0-11	R + G	132-143	Y + B
12-23	R + Y	144-155	Y + P
24-35	R + B	156-167	Y + C
36-47	R + P	168-179	Y + W
48-59	R + C	180-191	B + P
60-71	R + W	192-203	B + C
72-83	G + Y	204-215	B + W
84-95	G + B	216-227	P + C
96-107	G + P	228-239	P + W
108-119	G + C	240-255	C + W
120-131	G + W		