VersaCap Lighting System

Installation Instructions For Multi-Universe Lighting Systems

Manual Version: V1.4

Installation Instructions For Multi Universe System

Introduction
The Versa Cap LED Lane Cap Lighting System is a high output LED lighting system that provides effects lighting on small gutter capping for each bowling lanes. The system uses LED light strands with R(red), G(green), B(blue) LEDs with PC based control.

System Includes
The Versa Cap lighting system includes: LED light strips, pre-programmed PC controller, control cables, network switch, converters, mounting track, impact resistance protective covers.

Signal Converter
The converter provides the control signal to the LED strips. The converters have been pre-addressed so do not change the setting.

Network Switch
Generic network switch outputs connected to each LED strip Converter. One output is connected to the PC lighting controller.

Power Supply
The power supply is a 12V power supply that accommodates input voltages ranging from 100 VAC to 240 VAC. It connects to the converter and a electrical power outlet. The LED lane power supplies are line voltage 100-240 volt 50/60Hz to 12v DC to the signal converter.

PC Controller
PC lighting control with USB to ethernet adapter. PC includes Madrix lighting control software with pre-programmed shows.

LED Strip
The LED Strip is includes red, green and blue LEDs. It is powered and operated by the signal converter.

Starter Track
The Starter Track is the first piece of track to be installed at the foul. This track has a small opening to for the power cable connector. The opening must be install closest to the foul line.

Track
The track is used to mount the LED strip and as a conduit for the power cable.

Cover
The high strength cover is installed on the track and used to protect the LED strip and track.

Power Cable
Provides power to the foul line end of the LED strip.

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Installation of the System

1. Mount Track

   A.   Mount the 48" track to the top of the small capping on the bowling lanes.

   B.   Start at the beginning of the lanes by the foul line and work your way towards the pins.

   C.   Center a piece of Starter Track at the beginning of the small capping with the opening for the power connector to the foul line. Start at the beginning at the small cap not the bull-nose of the cap.

   D.   Use three .75" screws to attached the track to the capping. Screw through the opening in the track so the screw head pulls through the first layer of the track and into the capping.   This will secure the track. Place screws at the beginning about an inch from the end, middle and at the end at about an inch from the end. Be sure not to over tighten the screws.

   E.   Continue mounting the track the length of the capping and stop at the masking unit or scoring reflector. Generally, each lane takes about 15 pieces of track. It may be necessary to cut the last piece of track to size. We recommend installing the track up to the masking unit leg since the control wires will be attached to the masking unit leg and run up to the control equipment mounted on the curtain wall.

   F.   Move to the next lane.

2. Install The LED Strip Power Cable

   A.   The LED strip power cable is the white, seventy-five foot cable with this   connector on one end.

   B.   Starting with the connector in the opening of the Stater Track by the foul line, push the cable through the center of the track into the groove.

   C.   Continue feeding the cable through the track until you get to the end of the track by the masking unit.

3. Install LED Lighting Strips

WARNING! DO NOT step or walk on the LED light strips!!!

   A.   Remove the light strings from the packing

   B.   Unroll the light string and stretch out the strip the length of the lane. The end of the LED strip with the power connector starts at the foul line. Be careful not to bend the LED strip.

   C.   Place the entire LED strip into the top pf the track.

   D.   Plug the LED strip and the power cable connectors together connector at the foul line.

   E.   Slide the power connection into the power connector of the power cable at opening of the starter track near the foul line.

   F.   Press the cable of the LED strip into the track.

   G.   Line up and center the LED strip in the track. At the beginning of the LED strip, gently fold the LED strip over and hold it as flat and straight as possible and centered in the track. At the beginning of the LED Strip, begin to remove the tape backing from the back of the LED strip and gently press the strip in to place. The track and LED strip should look like this when finished.

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Installation of the System

4. **Install LED Lighting Strips Continued.**
   D.   Continue with the LED strip the rest of the length of the strip.
   E.   At the masking unit leg; secure the LED light cables to the masking unit leg with tie wraps.
   F.   Be sure the cable is secure and away from the path of any bowling ball.

5. **Leader Control Cables**
   A.   The leader cable is used to extend the control and power from the converter to the light strip.
   B.   Connect the leader cable to the converter and secure the cable with tie wraps.
   C.   Continue running the leader cable to the converter with three pin connector.

6. **Install LED Strip Protective Covers**
   A. The protective covers are use to protect the LED lights from bowling balls.
   B. Start at the foul line end of the light strip.
   C. Carefully slide the cover over the strip and mounting track. (It is also possible to snap the covers over the lighting strips and track.)
   D. Slide the cover down the track towards the masking unit and stop at the end of the track.
   E. Then continuing with installing additional covers. It is possible to slide more than one cover down the lane at a time. Stop adding covers when the light string and track are completely covered. It may will be necessary to cut the last protective cover to size for each lane.
   F. If the light string and leader cables are not secured and covered by the protective cover at the masking unit; add track and covers cut to size to secure them.

7. **Install The Signal Converter**
   A. The signal converter provides the control signal and power to the LED strips.
   B. The signal converter has been pre-addressed, so do not change the setting.
   C. Mount the signal converter to the curtain wall next to the power supply on the pinsetter curtain wall with two screws.
   D. Connect the power cable from the LED strip to the signal converter. This cable is green, red & white.
   E. The RJ45 connector from the LED strip is connected to the output of the signal converter.

8. **Install The Power Supply**
   A. The power supply is used to provide power to the signal converter.
   B. Remove the power supply from the packaging.
   C. Install the provided IEC power tail in to the power supply.
   D. Mount the power supply next to the signal converter on the pinsetter side of the curtain wall with screws.
   E. Connect the power leads from the power supply to the signal converter.
   F. Be sure to secure and dress all cables on the back side of the curtain wall. Failure to do so can result in cables damaged by moving parts.

9. Install the Network Switch

A. Mount the network switch to the curtain wall next to the first signal converter.

B. Install one CAT5 data cable from the switch to each of the converters at each lane.

C. Install the IEC power cable into the network switch and connect to an electrical outlet.

D. Install a CAT5 data cable from the network switch to the PC Lighting Controller.

10. PC Lighting Controller

A. The light controller is generally installed at the customer service desk or at any location you desire. Once at the desired location remove the PC lighting controller from its packaging.

B. Then connect the power supply and USB to Ethernet adapter to the PC.

C. Plug the PC power cord into an electrical outlet.

D. Connect the CAT5 data cable from the network switch on the curtain wall into the ethernet adapter of the PC.

E. Install Madrix USB software key into an open port on the PC. The software will not work properly without the key.

F. Open the Madrix lighting control software that has already been installed on the PC. There are several pre-programmed light shows for your location.

G. When the software is open.

Press one of the playback buttons here.

Press one of the playbacks of the software and test the lighting system to be sure everything is working properly. If you would like the Madrix software manual press F1 on the PC keyboard.

A. If the system does not work correctly; trouble shoot the issue by making sure all of the connections are properly made.

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