

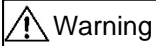
# VSST-LR Switch Box INSTALLATION MANUAL

Thank you for purchasing the Patlite Manually Controlled Signal Tower for your application. Please read these instructions carefully before installation, maintenance and repair. Store this manual in a safe place for future reference. If you have any questions regarding this product, please contact your PATLITE sales representative.

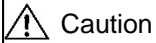
## NOTICE FOR SAFE OPERATION

In order to prevent injury to the user and other personnel or damage to assets, note the following:

- The warning indications are divided into the following classes according to the degree of danger or damage incurred when the warning is not taken into consideration and the product is not correctly used.



Failure to follow these instructions may lead to death or serious injury.



Failure to follow these instructions may lead from slight to medium injury or lead to property damage or injury to others.

- The following symbols explain the nature of the information to be observed.

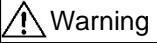


Described action is strictly prohibited. It is not to be carried out under any circumstances.



Described action is "enforced". It should be carried out by all means.

### 1. To operate this product safely, please observe the following:

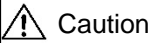


**Warning**

- Be sure to disconnect the power when wiring, mounting, exchanging, or repairing the product. Failure to comply may result in damage of the internal circuitry and the danger of electric shock due to short-circuiting.
- Request the installation and wiring to be accompanied by a professional contractor. Failure to comply may result in electric shock, fire or falling from high places.
- When this product is used for security purposes, it should be inspected daily. In addition, it is recommended that other security products be used together with this product in case the product malfunctions.
- After installing this product, be careful not to use this product to climb onto a machine or to get anything snagged onto this product while it is mounted on equipment, etc. Failure to comply may result in falling off the machinery or product damage may occur.



(Enforced)



**Caution**

- Do not substitute any parts from other products or disassemble this unit for any other purpose than to direct-mount the enclosure. It may cause malfunction or failure.
- The Signal Light runs on 24V DC. 100-240VAC to 24VDC Adapter included.



(Prohibited)

## 2. Model Number Configuration

### HOW TO ORDER:

VSST - [ ] - [ ] 02 L J [ ] W - [ ]

**SIGNAL TOWER:**  
LR4  
LR5  
LR6

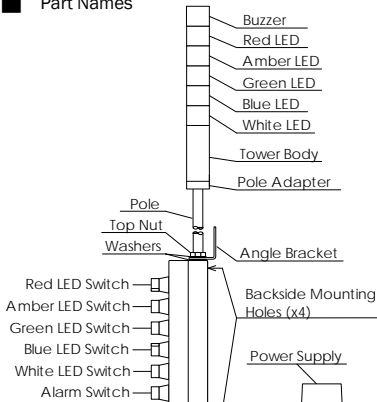
**NUMBER OF TIERS:**  
1 to 5

**B:**  
Flashing /Buzzer  
**N:**  
No Flashing /Buzzer

**COLORS:**  
from top to bottom (R,Y,G,B,C)

## 3. Part Names and Dimensions

### Part Names



### NOTES:

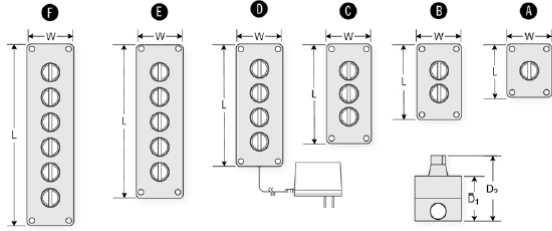
- Control box for 5-color, Flashing/Buzzer style towers shown
- 5 and 6-switch boxes are the same size. There is no alarm switch for 5-color steady-only towers
- Control boxes for 1-tier to 4-tier towers will not have all the switches. Length of the box will vary accordingly

## Part Dimensions

### LR LED Signal Towers Dimensions (mm)

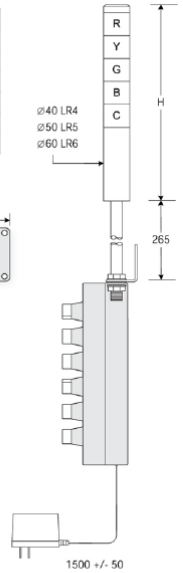
No. of LED Modules	H without Buzzer	Switch Box	H with Buzzer	Switch Box
0	n/a	n/a	133	A
1	139	A	173	B
2	179	B	213	C
3	219	C	253	D
4	259	D	293	E
5	299	E	333	F

\* Must purchase Buzzer for LED flashing function. For VSST dimensions with flashing function, please see 'H with Buzzer.'



### Switch Box Dimensions (mm)

Switch Box	No. of Switches	W	L	M	D1	D2
A	1	68	78	42	64	91
B	2	68	111	75	64	91
C	3	68	151	115	64	91
D	4	71	186	150	68	95
E	5	71	236	240	68	95
F	6	71	276	240	68	95



## 4. Installation



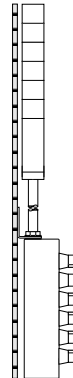
**Caution**

- This product is for indoor use only (Do not use it outdoors).
- Do not use this product in dusty places, or where water can get inside.
- When installing, ensure the mounting surface has sufficient strength to hold the weight of the product. Also, make sure there is no vibration on the mounting surface. Otherwise, there is a risk of injury or product damage in case the product should fall.

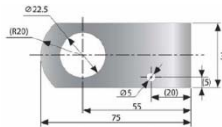


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### Bracket Mount

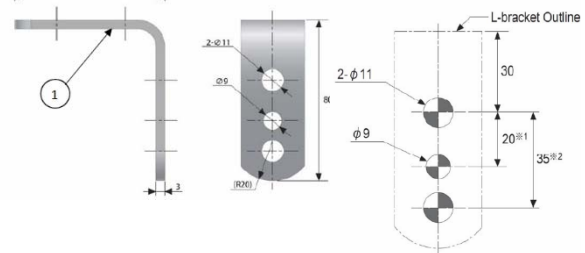


- Refer to the Dimensions Section as needed to facilitate mounting.
- Be sure to match the correct data to the tower that is being mounted.
- Keep the assembly vertical as shown.
- Make sure there is an AC outlet within reach (1500mm) of the plug-in style power supply.
- Prepare the mounting surface as required for mounting the assembly.
- Referring to the Bracket Mounting diagram, drill the angle bracket mounting holes.
- Provide M8 screws or equivalent of the type and length needed for this installation.
- Install the bracket securely enough so the assembly cannot be moved out of position.



No.	Name	Material
1	L-bracket	SPHC-P

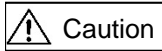
(Unit:mm)



Screw / Nut
φ8: M8x2pcs
φ7: M10x2pcs

Recommended Torque
T2.2N·m

■ Box Mount



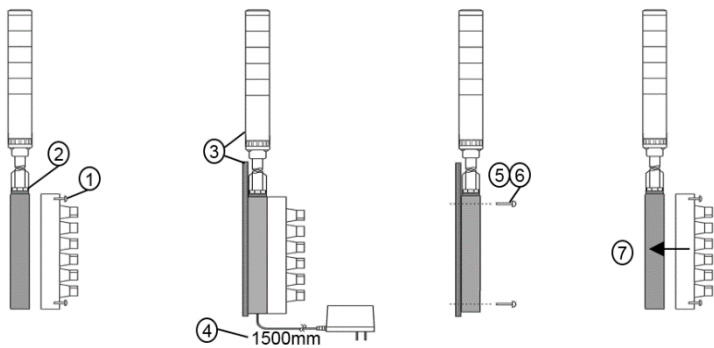
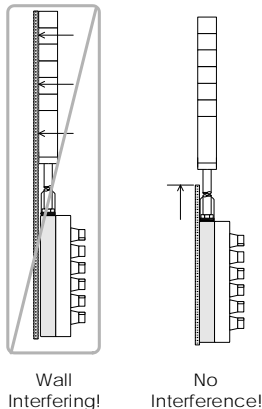
**Caution**



(Prohibited)

- ◆ Before proceeding to install using the Box-Mount method, check that the tower has sufficient clearance so it does not contact the wall.

1. On the front cover, back out the captive screw at each corner and separate the front & back half of the box.
2. Loosen the pole nut if necessary and turn the angle bracket 90° either direction. Be careful not to over-tighten the nut as it may break the enclosure.
3. Choose a configuration so that the tower will not interfere with the vertical mounting surface.
4. Make sure there is an AC outlet within reach (1500mm) of the plug-in style power supply.
5. See the dimensions provided to position and drill the mounting holes.
6. Mount the box by inserting user-supplied mounting hardware into the holes provided through the back half of the box.
7. Keep the front & back half of the box aligned and tighten the captive screws at each corner. Be careful not to pinch the wiring.



**5. Operation**

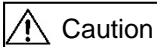
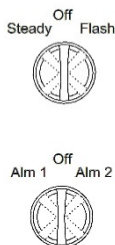
■ LED Light Tower Operation without Flashing / Alarm Capability

1. Plug in the wall-plug-style power supply into the AC outlet supplying the correct AC voltage level per the specifications of this product. (Power Supply is included)
2. Each switch is color-coded to correspond to the color of the corresponding LED light on the tower.
3. Turn the 2-position rotary switch on the enclosure to the left to turn off the tower light
4. Turn the 2-position switch to the right to turn on the tower light in steady mode.



■ LED Light Tower Operation with Flashing / Alarm Capability

1. Plug in the wall-plug-style power supply into the AC outlet supplying the correct AC voltage level per the specifications of this product. (Power Supply is included)
2. Each switch is color-coded to correspond to the color of the corresponding LED light on the tower.
3. Turn the 3-position rotary switch on the enclosure to the left to turn on the tower light in steady mode.
4. Turn the 3-position rotary switch on the enclosure to the center to turn the tower light OFF.
5. Turn the 3-position switch to the right to turn on the tower light in flashing mode.
6. Turn the gray 3-position switch on the enclosure to the left to select Alarm 1 (fast beep)
7. Turn the gray 3-position switch on the enclosure to the center to turn the alarm off.
8. Turn the gray 3-position switch on the enclosure to the right to select Alarm 2 (slow beep)



**Caution**



(Prohibited)

- ◆ Do not operate the switches with excessive force. There is the risk of breaking the switch components.

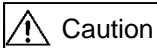
**6. Specifications**

Rated Voltage	DC24V (No polarity) AC to DC Adapter Included
Operating Voltage	Rated Voltage +/- 10%
Mounting Location	Indoor use only, Flat wall surface without vibration

Model	LED Luminous Intensity in average mcd units				
	Red	Yellow	Green	Blue	White
LR4	2290	5250	5430	1840	8230
LR5	2350	4740	4720	1500	7370
LR6	2250	4500	4580	1670	6880

Buzzer Sound/Typical Frequency Dip Switch Selectable	
No. 1	Rapid Intermittent Beep / 3378 Hz
No. 2	Continuous Beep Sound / 3378 Hz
No. 3	Rapid Hi-Lo / 2016 Hz & 3012 Hz
No. 4	Sweep Sound / 1000 Hz-4032 Hz

Sound Pressure Level		
LR4	Typical 85dB	Sound Reduction Approx. -10dB Depending on DIP Switch Settings
LR5	Typical 85dB	
LR6	Typical 88dB	



**Caution**



(Prohibited)

- ◆ PATLITE Corporation disclaims all liability for any malfunction or damage that occurs as a result of handling contrary to the instructions, cautions and warnings mentioned in this manual.
- ◆ Specifications may change without notice due to continual product improvement.

**Limited Warranty:**

PATLITE (USA) CORPORATION ("PATLITE") warrants its products to be free from defects in material and workmanship under normal and proper use for a period of one (1) year from the initial date of shipment by PATLITE. In the event of a defect not caused by misuse or damage to the products, PATLITE will, at its option, repair, replace or return the purchase price for, defective products upon PATLITE's inspection. EXCEPT FOR THE EXPRESS PRODUCT WARRANTY SET FORTH IN THESE TERMS AND CONDITIONS, (A) NEITHER PATLITE NOR ANY PERSON ON PATLITE'S BEHALF HAS MADE OR MAKES ANY EXPRESS OR IMPLIED REPRESENTATION OR WARRANTY WHATSOEVER, EITHER ORAL OR WRITTEN, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, OR NON-INFRINGEMENT OR PERFORMANCE OF GOODS OR PRODUCTS TO STANDARDS SPECIFIC TO THE COUNTRY OF IMPORT, WHETHER ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED, AND (B) DISTRIBUTOR ACKNOWLEDGES THAT IT HAS NOT RELIED UPON ANY REPRESENTATION OR WARRANTY MADE BY PATLITE, OR ANY OTHER PERSON ON PATLITE'S BEHALF, EXCEPT AS SPECIFICALLY PROVIDED IN THESE TERMS AND CONDITIONS. DISTRIBUTOR SHALL NOT EXTEND OR INCREASE PATLITE'S WARRANTY OR ASSUME ON BEHALF OF PATLITE ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH THE SALE OF PRODUCTS. THIS AGREEMENT SETS FORTH DISTRIBUTOR'S SOLE REMEDY AND PATLITE'S ENTIRE LIABILITY FOR ANY BREACH OF THE LIMITED PRODUCT WARRANTY UNDER THESE TERMS AND CONDITIONS. IN NO EVENT SHALL PATLITE OR ANY PARENT OR AFFILIATE OF PATLITE BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL DAMAGES. To request warranty assistance, contact PATLITE to obtain a Return Merchandise Authorization ("RMA") number and return the product to PATLITE with the RMA number. Warranty assistance does not apply if the product is altered or modified in any way after shipment by PATLITE.

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