Lunar Simulator

© Neptune Systems
6288 San Ignacio Ave. Unit #B
San Jose, CA 95119
Phone (408) 578-3022 • Fax (408) 578-9383

1. Introduction

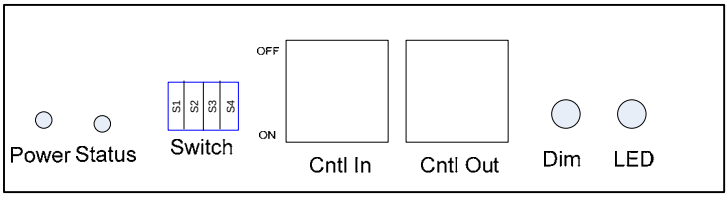
The Lunar Simulator (LS) allows the AquaController to control and vary the intensity to a 2 to 5 LED module for a realistic moon cycle simulation. The moonrise and set times follow the true lunar cycle. The LS uses high intensity LEDs with a wide angle lense (100+ degrees) to provide the best possible coverage.

2. Installation

The Lunar Simulator should be screwed onto a wall or cabinet in a dry location so that water damage is not possible. It is recommended that you follow these guidelines:

1. Mount the LS above the water line of your tank.
2. Be sure to have drip loops on all cords plugging to the LS.
3. The LED boxes should be mounted above the tank and each LED provides approximately 2' of coverage for each LED. For best coverage the LED modules should be mounted about 6-8" above the surface of the water.

Refer to the figure below for the positions of the connectors on the digital control box:



Control Address selection (switch)

The first two dip switches on the left of the box allow for the setting of letter portion of the Control address of the LS. The table below illustrates the four possible settings. Note: only Control address letter codes A-D are available.

Switch 1	Switch 2	Cntl Letter Address
Off	Off	A

On	Off	B
Off	On	C
On	On	D

The right two dip switches on the box allow for the setting of the numeric portion of the Control address. The table below illustrates the four possible settings.

Switch 3	Switch 4	Cntl Number Address
Off	Off	1
Off	On	2
On	Off	3
On	On	4

Sample Setting:

If Switch 1 = On, Switch 2 = Off, Switch 3 = On, Switch 4=On then the LS will respond to control address B4. The AquaController must be configured to use the same addresses as selected on the LS. Refer to the AquaController Owner's manual for more information on how to set up the AquaController.

Light Emitting Diode (LED)

The LED provides a visual indication of the operating status of the LS. When solid on, it means that power is on and the LS is ready to accept control commands. When blinking the LS is receiving control commands.

Control Input (Cntl In)

The left RJ-11 connector (telephone plug) is the input connector for the Control signal. A telephone style cable (4 internal wires, supplied with the LS). The telephone cord should connect between this LS Control In port to the AquaController. The length of this cable should be less than 10 feet.

Control Output (Cntl Out)

The right RJ-11 connector (telephone plug) is the output connector for the Control signal. A telephone style cable (4 internal wires) should be used to connect this Control output port to another LS Control input port. Always connect Control inputs to Control outputs when daisy chaining

multiple Direct Connect boxes together. The last DCx in the chain should either have its Control output unconnected or connected to a Power-line interface (part #IM513).

Dim Adjustment

The dim adjust potentiometer allows for the maximum (full moon) brightness to be adjusted. Turn the potentiometer fully clockwise for maximum intensity.

LED Module

LED light module attaches to the LED port connector.

Neptune Systems Limited Warranty

Neptune Systems warrants this product to be free from defects in material and workmanship for a period of 1 year from the date of purchase. If repair or adjustment is necessary and has not been the result of abuse, misuse, or accidental damage, within the 1-year period, please return the product with proof of purchase, and correction of the defect will be made without charge.

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Neptune Systems will not be responsible for damage resulting from careless or insufficient packaging. Before returning please obtain a return authorization (RMA) number from Neptune Systems at (408) 578-3022. Returned merchandise will not be accepted without a RMA number.

Except for the warranty set forth above, Neptune Systems is not responsible for any damages including, but not limited to, consequential damage occurring out of or in connection with the delivery, use or performance of Neptune Systems' products. Buyer's remedies for breach of warranty shall be limited to repair, or replacement and full or partial adjustment to purchase price.