

SPECIFICATIONS

Load Types:	Plug-in incandescent, fluorescent, inductive lighting devices
Maximum Load:	400 Watts
Addresses:	1 PLC (X-10) Base (Primary) Address of 256 possible. Up to 64 PLC (X-10) Scene Addresses of 255 possible
On-Level:	(Primary Address) 1 of 31 possible (3.2%-100%) or resume dim (Scene Address) 1 of 32 possible (0%-100%)
Fade-On/Off Rate:	0.125 to 9 seconds if programmed locally 0.125 seconds to 9 minutes if programmed remotely
Maximum number of LampLincs per circuit:	10 (with more than 6, a PLC amplified coupler-repeater is highly recommended)
Minimum load:	25 watts
Minimum PLC transmit level:	3.16 Vp-p across 5 Ohms
Minimum PLC receive level:	10 mV
Surge Protection:	MOV rated for 150 Volts
Feed through outlet:	Maximum 15 amps less the load controlled by the LampLinc module
Input Power:	120 Volts AC +/- 10%, 60 Hertz
Operating Temperature:	32 to 122 degrees Fahrenheit
Dimensions:	4"(h) x 2.5"(w) x 1.5"(d)
Weight:	5 oz

Limited Warranty

Seller warrants to the original consumer purchaser of this product that, for a period of two years from the date of purchase, this product will be free from defects in material and workmanship and will perform in substantial conformity to the description of the product in this Owner's Manual. This warranty shall not apply to defects or errors caused by misuse or neglect.

If the product is found to be defective in material or workmanship, or if the product does not perform as warranted above during the warranty period, Seller will either repair it, replace it or refund the purchase price, at its option, upon receipt of the product at the address below, postage prepaid, with proof of the date of purchase and an explanation of the defect or error. The repair, replacement, or refund that is provided for above shall be the full extent of Seller's liability with respect to this product.

For repair or replacement during the warranty period, call Smarthome customer service to receive an RA# (return authorization number), properly package the product (with the RA# clearly printed on the outside of the package) and send the product, along with all other required materials, to:

Smarthome, Inc.
ATTN: Receiving Dept.
16542 Millikan Ave.
Irvine, CA 92606-5027

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MAKING LIFE MORE CONVENIENT, SAFE AND FUN

Limitations:

The above warranty is in lieu of and seller disclaims all other warranties, whether oral or written, express or implied, including and warranty or merchantability or fitness for a particular purpose. Any implied warranty, including any warranty of merchantability or fitness for a particular purpose, which may not be disclaimed or supplanted as provided above shall be limited to the one year period of the express warranty above. No other representation or claim of any nature by any person shall, be binding upon seller or modify the terms of the above warranty and disclaimer.

In no event shall seller be liable for special, incidental, consequential, or other damages resulting from the possession or use of this product, including without limitation damage to property and, to the extent permitted by law, personal injury, even if seller knew or should have known of the possibility of such damages.

Some states do not allow limitations on how long an implied warranty lasts and/or the exclusion or limitation of damages, in which case the above limitations and/or exclusions may not apply to you. You may also have other legal rights that may vary from state to state.

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rev 120103



LampLinc™

2-Way Lamp Module with Scenes

For models:

#2000STW

LampLinc 2-Way

#2000STW3

LampLinc 2-Way with ground pin

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Congratulations

Congratulations on purchasing LampLinc, the most powerful lamp module available. LampLinc is based on our popular SwitchLinc™ Wall switches and has many of the same features.

Lamp modules are the easiest way to add sophisticated lighting control to your home. No tools required, or no electrical knowledge needed. Just plug LampLinc into a standard wall receptacle and plug the lamp into the outlet on the bottom of the lamp module; it's that simple.

LampLinc was designed for you, the home automation enthusiast. We've been searching for a module that communicates status to other devices and responds to more than one address. Greater dimming control and two-way communications potential included. This manual will explain how to install the LampLinc lamp module and program it to suit your needs.

Key Features

- Use with any standard household lamp up to 400 watts
- Responds to 65 different X10/PLC (PowerLine Carrier) signals
- 32 levels of dimming and 32 fading on & off rates
- Signal detection and collision avoidance
- No tools or hardwiring into the electrical system
- Pass through receptacle on the front for other un-controlled electrical devices
- Green Status LED indicator shows powerline activity
- Codes are electronically set (no code wheels) and remembered even if unplugged!
- Two-year warranty

Smarthome automation products have been intelligently engineered to complement the X10/PLC platform that all of our products are derived from, making it easier for you, the customer, to make changes to your home as your lifestyle changes.

SwitchLinc™ 2-Way Wall Switches

This is our top-of-the-line wall switch with a crisp, quality feel of true rocker action. These setup and operate just like the ApplianceLinc™ 2-Way and LampLinc 2-Way. Most of the setup commands are the same for all three. The signals sent between the two are exactly the same so either one can control the other. Turn on a SwitchLinc 2-Way and the ApplianceLinc or LampLinc can come on at the same time.



KeypadLinc™ In-Wall Controllers

Use these elegant in-wall controllers to send signals to all your home automation products. They blend perfectly into even the most upscale décor. When used with SwitchLinc and LampLinc modules, pressing one button can instantly transform the lighting and mood of any room. The KeypadLincs are programmed to communicate the special scene setup and lock-in sequences, making setting up scene lighting a snap.



How Powerline Signals Travel Around A Home and How To Improve Reliability

Most homes in North America have two lines of 120 volts coming into the home from the utility company. This split-single phase electricity is divided out at the home's breaker box into the circuits that feed light switches, plug-in outlets, and appliances. Half of the electricity outlets and wall switches are fed by one of the 120-volt lines and the second 120-volt line feeds the other half. The intermittent operation of PLC/X10 modules usually happens when the transmitter is sending signals on one line and the receiver module is plugged into an outlet on the other line. For the signals to get to the receiver, it must leave the home, travel to the utility company transformer then come back in on the other AC line. By the time the signal gets back to the home, travels through the electrical meter and circuit breaker box, there may not be enough signal left to trigger the module.

The first order of business will be to install a coupler-repeater, also known as amplifier. A coupler-repeater will 'see' the incoming signal, regenerate it, and blast it out over both lines of the 120 volts. We recommend that any home larger than 3000 square feet install a coupler-repeater. In smaller homes, a passive phase coupler also known as a signal bridge may give satisfactory results.

Once the signal has been amplified, it's time to preserve it. Since PLC signals go everywhere in the home, some electrical devices will have more of an effect on the signal strength than other devices. PLC signals are like water pressure in pipes, it actually goes everywhere it can, not just to the receiving module. In the last 20 years, an explosion of electrical devices has invaded our homes. Computers, video gear, and fancy high-end electronics are more present than in years past. The more complicated the electrical power supply is in a device, the more likely it is to absorb PLC signals. Engineers who design power supplies build in traps to filter out and kill electrical noise. Unfortunately, the PLC signals looks like electrical noise to these devices. The result is that a large percent of the transmitted signal is lost to these devices leaving less for the receivers. The most common sources of signal loss are:

- Televisions
- Computer systems
- Audio/Video gear
- Computer UPS's and power strips
- Power supplies for laptops and cell phones

Testing for the problem is simple. If a device is suspected of causing signal absorption, unplug the device and then re-transmit the signal. It is very important that the device is unplugged and not just turned off! If the controlled product begins working after the appliance is unplugged, then a filter will be needed on that device to keep PLC signals from being absorbed and raise the signal strength of the entire home. Smarthome has many filters that will fix the problem. An average home will need between three and five filters. If you are in the business of installing automation systems and not in the 'call-back' business, include some of these in your bid as part of the standard package.



#4826B
SignalLinc™
Repeater



#1626 FilterLinc™
Plug-In Filter

Smarthome's BoosterLinc™ can solve localized problems

SignalLinc Repeater is ideal for improving the home automation signal strength throughout all the outlets in a home. But, as the PLC signals travel down a circuit and away from the repeater, it will weaken by the same factors listed above. Additionally, the signal will get weaker as it passes installed PLC transmitters. Each PLC transmitter contains a tuned circuit that when it's not sending signals it's absorbing them! In addition to plug-in transmitters, LampLinc™ 2-Way, SwitchLinc™ 2-Ways, ToggleLinc™ 2-Ways, ApplianceLinc™ 2-Ways, KeypadLinc™, or any module with 2-way abilities will load down the available signal. With so many transmitters installed, the signal is loaded down to a point where some modules will be unable to receive a signal. Installing a multiple 2-way devices on one branch circuit may necessitate the use of local amplifier like Smarthome's BoosterLinc.



#4827 BoosterLinc™
Plug-In Amplifier

Problem	Possible Cause	Solution
The lamp turned on by itself.	LampLinc was triggered by a scene or legitimate PLC signals.	Check scene membership and remove any unwanted scenes from LampLinc or perform a Factory Reset to clear it. Install an PLC Signal Blocker in the home to keep signals from neighboring homes from interfering.
The light does not appear to turn on or off when a signal is sent.	The Fade-On/Off Rate may be set too slow.	Set a new fade-on/off rate rate. (Increase brightness, press set button twice.)
The light does not come on when the lamp's switch is manually activated.	The Local Control feature may be set to off (during primary address setting).	Re-set the primary address by sending the house and unit code followed by an "ON" command.
LampLinc is not taking programming of scenes, Fade-On/Off Rates, etc.	It may be in Program Disable mode. May not have been "activated" during the four-minute window.	Re-enable Program Mode or perform a Factory Reset. During scene programming, the LampLinc must be turned on within four minutes of receiving the Clear sequence.
LampLinc is not transmitting to other modules or receiving signals from transmitters.	The PLC transmission may have been disabled.	Re-enable transmit mode or reform a Factory Reset.
	Other modules are loading down the signal.	Install a coupler-repeater or a phase coupler.
	The module is plugged into a power strip.	PLC signals can't travel through power filters. Plugging the LampLinc directly into the wall works best.
The module is locked up.	A surge or excessive noise on the power line may have glitched it.	LampLinc needs 50mV of signal strength for consistently reliable operation. Also, the Green Status LED will blink when there is any activity on the powerline.
		Unplug the module for a 10 seconds and re-install. If the above doesn't work, perform a Factory Reset.
Difficulty setting scenes with a maxi-controller.	The CLEAR, SET, or another command was sent in the wrong order.	Don't hold down the buttons too long, it may send duplicate codes.
The load is buzzing when on or dimmed.	The dimming component inside the LampLinc 'chops' up the sine wave to reduce the voltage.	The bulb filaments are vibrating. Use rough-service bulbs, 130-volt, or appliance grade bulbs to reduce the noise. Run LampLinc in the "full-on" mode or switch to a non-dimming module.
A noticeable delay after LampLinc has been switched off at the lamp and when it transmits the signals to other modules.	There are signals from other modules on the AC line.	LampLinc is "polite." It will look on the line before transmitting and waits if there is signal activity. Once the line is clear, it will transmit the queued up signals.
	PLC/X10 signals take time to transmit.	The LampLinc needs some time to recognize that the light has been turned off, plus it takes .78 seconds to transmit a complete frame of data.
The light does not come on when manually switched on or when an "ON" signal is sent.	Some type of bulbs, especially compact fluorescent lamps can confuse the LampLinc.	Set the Local Control feature to OFF. Go into the Set Primary Address mode (press and hold the Set Button), send the address, (e.g., M8) and an "OFF" command. The LampLinc will not automatically confirm the status, but it will respond to Status Request signals.
When the light is off, occasionally the bulb flashes.	A fluorescent bulb is installed in the lamp controlled by the LampLinc.	The local control sense voltage is charging up components inside the compact fluorescent bulb. When enough electricity is stored, it produces a flash. Setting the Local Control option to OFF will fix this. Also, some brands of CFL's don't do this.
When setting the Primary Address, the lamp's bulb continues to flash after sending the address.	The user is not pressing "ON" or "OFF" to set the Local Control Mode after sending the address during primary address programming.	After sending the signal for the Primary Address, an "ON" command needs to be sent to enable local control. An "OFF" may be sent if local control is not preferred.
The LampLinc does not fit in my North American wall outlet.	The polarized prongs are not compatible with older AC outlets.	The LampLinc's AC prongs are polarized so that it may only be inserted one way into a receptacle. If the home's outlets are over 40 years old, replacing the outlet with a modern one will allow the LampLinc and many other modern devices to be used safely. DO NOT defeat this safety feature.

If these solutions have been tried, the manual has been reviewed, and you still cannot resolve an issue you're having with the LampLinc, please call our Technical Support Dept. at 949-221-9200 or e-mail tech@smarthome.com.

Caution!

Read and understand these instructions before installing.

This device is intended for installation in accordance with the National Electric Code and local regulations in the United States, or the Canadian Electrical Code and local regulations in Canada. To reduce the risk of overheating and possible damage to other equipment, do not install this product to control a non-lighting load. Use indoors only. Retain these instructions for future reference. Dimming an inductive load (such as a fan) below the minimum voltage set by the manufacturer of the load device could cause damage to the load device from overheating. If the manufacturer of the load device does not recommend dimming, DO NOT use LampLinc's Dimming capabilities or use a non-dimming module. USER ASSUMES ALL RISKS ASSOCIATED WITH DIMMING AN INDUCTIVE LOAD.

Quick Start Instructions

		DEFAULT
Setting the Primary Address	<ol style="list-style-type: none"> 1. Press and hold the Set Button for five seconds 2. Send the signal from any transmitter within 30 seconds 3. Send an "ON" to enable local control OR 4. Send an "OFF" to disable local control (see page 4 for more detailed instructions) 	A-1
Setting the Fade-On/Off Rate	<ol style="list-style-type: none"> 1. Turn on the lamp 2. Adjust the dim level (Brighter = faster dimming) 3. Double tap the Set Button (press it TWICE quickly) (see page 4 for more detailed instructions) 	2 Seconds
Setting the On Dim Level	<ol style="list-style-type: none"> 1. Turn on the lamp 2. Adjust the dim level to the desired level 3. Tap the Set Button ONCE (see page 5 for more detailed instructions) 	100%
Factory Reset	<ol style="list-style-type: none"> 1. Unplug the LampLinc for 10 seconds 2. Holding down the Set Button, plug in the LampLinc 3. Continue holding the Set Button for three seconds then release 4. When the load comes on, the LampLinc is reset (see page 8 for more detailed instructions) 	Resets to settings above

Installation

1. Turn off and unplug the respected lamp
2. Plug the LampLinc module into the receptacle; the Green Status LED indicator will come on
3. Insert the lamp's AC plug into the bottom outlet of the LampLinc
4. Turn the lamp's switch back on; the light will come on

See page 9 for installation tips.

Setting the Primary Address

Each LampLinc requires a primary address to operate. It ships from the factory with “A1” as the default address; it will also have this address after performing a factory reset. Any of the 256 PLC addresses can be programmed.

The LampLinc does not use flimsy code wheels or dials to set its primary address. Instead, it will accept the first address it finds on the powerline once the programming mode is started. Any transmitter can be used to set the primary address.

IMPORTANT: If you plan on sending status requests to multiple LampLincs, make sure each one is programmed with a different primary address. Otherwise, their simultaneous responses to a status request will collide with one another.

Tip:
If you have trouble communicating to the LampLinc, there may be a lot of signal activity on the powerline. Unplug transmitters that send signals that might be intercepted by the module during the programming sequences. RF transceivers, computer controllers, and PLC thermostats should be unplugged to avoid interference.

1. Press and hold the **Set Button** above the green indicator on the right side of the module for 5 seconds until the Green Status LED begins flashing and the lamp goes to 100% brightness.
2. Within 30 seconds, **transmit the desired primary address** (housecode and unit code) from any transmitter. When LampLinc receives the address, the lamp's light will blink.
3. Set the Local Control Feature by **sending an ON or OFF Command** (see page 9 for more details).
 - a) Sending an **“ON”** command immediately after the house and unit code will activate the load detect feature. (Recommended)
 - b) Sending an **“OFF”** command immediately after the house and unit code will disable the load detect feature. (Recommended for lamps with compact fluorescent bulbs.)
4. Once the LampLinc has received a valid address and either an **“ON”** or **“OFF”**, the light controlled by the LampLinc will blink and the Green Status LED will stop flashing.

Controlling the Lamp Remotely

The LampLinc responds to any of the 256 PLC addresses. The LampLinc will respond to ON, OFF, ALL LIGHTS ON, ALL UNITS OFF, PRESET DIM, BRIGHT, and DIM commands. It will also respond to a Status Request command if the transmitter is enabled (see Other Features section). The LampLinc can be controlled remotely from any compatible transmitter by sending its base address (e.g., M6) and the command.

Setting the Fade-On/Off Rate (Optional)

The “Fade-On/Off Rate” is the speed that LampLinc brings the brightness of the light up or down when the module is turned on locally or receives a powerline carrier (PLC) ON or OFF command. The Fade-On/Off rate is adjustable from .1 seconds to nine minutes. The factory default is about three seconds. It may be changed at the module or remotely. (See Advanced Primary Address Programming for instructions on remotely setting the Fade-On/Off Rate.)

Brightness Level	Fade Rate in Seconds
90-100%	0.1
77-87%	0.2
65-74%	0.3
52-61%	0.5
39-48%	2.0
26-35%	4.5
13-23%	6.5
1-10%	8.5
0%	9.0

At the module, the Fade-On/Off rate is adjustable from .1 to nine seconds:

1. Using a transmitter, turn on and **adjust the lights brightness** so that the brighter the light, the faster the Fade-On/Off rate. Refer to the table for more details.
2. Tap the **Set Button TWICE**.

4

The light will blink to confirm the change.

Installation Tips

Due to the size of LampLinc, it will block the bottom outlet of a duplex wall receptacle if plugged into the top outlet. If possible, use the bottom outlet for the lamp module so that the other outlet is accessible for other use. For convenience, a pass through receptacle has been supplied on the lamp module so you don't lose a receptacle.

If the LampLinc is plugged into a receptacle controlled by a wall switch, consider leaving the switch on at all times. This will ensure that the LampLinc never loses power and is always functioning. If the outlet is switched off, the LampLinc will turn the light back on to the last dim level before power was switched off.

A new LampLinc or one that has been Factory Reset (see page 8) will be set to address A-1. If other modules are set to A-1, they may come on when the lamp's on/off switch is turned on.

If the lamp being controlled by the LampLinc has a dimmer, turn that dimmer to full on and allow the LampLinc to control the lamp's brightness.

Never stack LampLinc and/or ApplianceLinc modules together. **The internal heat generated when controlling a load may cause them to overheat or catch fire.**

Understanding the Local Control and Load Detect Feature

The load detect feature, when enabled, allows the LampLinc to monitor the status of the light bulb(s). Local control allows a user to turn on a lamp without having to send a signal to the LampLinc module. A lamp can be turned on and off manually by the switch on the lamp and the LampLinc will respond to this. There are three possibilities:

Turning on a lamp locally when it was turned off remotely	Move the switch on the lamp to the “OFF” position and then back to the “ON” position. The lamp will turn on and LampLinc will transmit its primary house/unit code plus “ON”.
Turning on a lamp locally when it was turned off locally	Move the switch on the lamp to the “ON” position. The lamp will turn on and LampLinc will transmit its primary house/unit code plus “ON”.
Turning off a lamp locally while it's turned on	Move the switch on the lamp to the “OFF” position. The lamp will turn off and LampLinc will transmit its primary house/unit code plus “OFF”.

One of the long-running criticisms of X10/PLC technology was the lack of 2-way communications. Up until now, it was nearly impossible to know for certain if a transmitted signal was received **and** activated the connecting device. LampLinc has a load detect feature that goes beyond just acknowledging that the module is on, it can tell if a lamp's on/off switch is turned off or detect whether the bulb is burnt out. If either the lamp's on/off switch is in the off position, or if the light bulb is burnt out, the LampLinc will immediately transmit its primary address and “OFF” after being remotely commanded to turn on.

The load detect feature can be used safely with any incandescent or filament type bulb. However, using the load detect feature with a lamp that has a built in dimmer, fluorescent lamps, or other electric/electronic controls may result in false status results or triggering. For non-incandescent bulbs, it is recommended that the load detect feature be turned off, (by sending an OFF during the setting of the primary address).

About LampLinc's Certification

LampLinc has been thoroughly tested by ITS ETL SEMKO, a nationally recognized independent third-party testing laboratory. Products bearing North American ETL Listed mark signifies that the product has been tested to and has met the requirements of a widely recognized consensus of U.S and Canadian product safety standards, that the manufacturing site has been audited, and that the manufacturer has agreed to a program of quarterly factory follow-up inspections to verify continued conformance.



Disable Programming

Once the LampLinc is set up, it can be programmed to lockout any changes. Any changes made at the module (by pressing the Set Button) or remotely will be ignored. Please note that all LampLinc and SwitchLinc that are plugged in or electrically active will be locked out.

- Send the following command sequence to disable the programming:

M16	O16	P16	N16	P16
-----	-----	-----	-----	-----

The lamp's light will blink (if it is on) indicating the LampLinc received the command.

Re-Enable Programming (default is enabled)

- Send the following command sequence to enable programming:

N16	M16	O16	P16	P16
-----	-----	-----	-----	-----

The lamp's light will blink (if it is on) indicating that the LampLinc received the command.
The LampLinc can now be programmed again.

Other Features

Power Restore

In the event of a power loss, LampLinc will automatically return the lamp being controlled to its last brightness level before the power was interrupted. If the LampLinc is plugged into an outlet controlled by a wall switch, turning on the wall switch will restore power to the module and it will come back on to its last state.

Status Request

It is possible with some home automation products to query the status of a LampLinc module. LampLinc will respond to Status Request signals that are received for its primary address.

If the transmitter has been disabled, LampLinc will ignore this command:

The following is a sample session from a HouseLinc controller:

Transmit: HC: A Unit(1)

Transmit House A, Unit(1), Status Request

Receive: HC: A Unit(1)

Receive House A, Unit(1), Preset Dim High 51% (indicates the module's dim level)

Factory Reset (to default settings)

The factory reset procedure can be used to clear the LampLinc's memory and restore its factory default settings. This procedure will clear the unit of all scene addresses and programmed fade-on/off rates.

- Unplug the LampLinc from the receptacle for about 10 seconds.
- While holding down the set button on the lower right-hand side, plug it back in.
- After plugging the module back in, continue to hold down the set button for about 2 or 3 more seconds.
- Release the set button, the Green Status LED will remain on and the load (lights controlled by the LampLinc) will be off.
- After 30 seconds, the lamp's light will come on to full brightness. This indicates that the factory reset is complete. The module is now reset to all the default settings, responds to primary address A-1, and is ready for programming or use.

Setting the Default On-Level

The Default ON-Level is the brightness level that LampLinc will adjust the light when the switched on locally or by a powerline carrier (PLC) ON-command. Each time the LampLinc is turned on, the light will come to the same level. This is ideal for situations where the existing light bulb produces too much light. (See Advanced Primary Address Programming for instructions on Remotely Setting the ON-level.)

Alternatively, the LampLinc can be set to Resume Dim. When LampLinc receives an "ON" command, it will come back on to the last dim level it was at before being turned off.

One exception to this is when an "ALL LIGHTS ON" command is received. The LampLinc will go to 100% brightness at its programmed fade-on/off rate.

Setting a fixed brightness level:

- Adjust the brightness to the desired level by sending BRIGHT or DIM commands.
- Tap the Set Button ONCE. The light will blink to confirm the change.

Setting resume dim:

- Turn the light off by sending an "OFF" command.
- Tap the Set Button ONCE.

Advanced Primary Address Programming

The LampLinc's Fade-On/Off Rate and Default On-Level can be remotely set using a Maxi-Controller (Smarthome #4020 or X10 #SC503 OR PHC02) or an equivalent transmitter capable of sending a Housecode and Unit Code without an ON or OFF command. These procedures and all the following ones will not work with a transmitter that sends the address with a command. Transmitters in which one button is pressed to turn on or off a load will not work.



Remotely Setting the Fade-On/Off Rate

This is the alternative method of adjusting the LampLinc's Fade-On/Off Rate.

- Transmit the "clear" sequence:

O16	N16	M16	P16	M16
-----	-----	-----	-----	-----

- Send the house/unit code for the lamp module followed by the PRESET DIM from the table below. (Alternatively, send BRIGHT or DIM signals to change the lamp's brightness to a comparable level.)

Preset Dim Level	Fade-on/off Rate in Seconds
100%	0.1
97%	0.2
94%	0.3
90%	0.5
87%	2.0
84%	4.5
81%	6.5
77%	8.5
74%	19.0
71%	21.5
68%	23.5

Preset Dim Level	Fade-on/off Rate in Seconds
65%	26.0
61%	28.0
58%	30.0
55%	32.0
52%	34.0
48%	38.5
45%	43.0
42%	47.0
39%	60.0
35%	90.0
32%	120.0

Preset Dim Level	Fade-on/off Rate in Seconds
29%	150.0
26%	180.0
23%	210.0
19%	240.0
16%	270.0
13%	300.0
10%	360.0
6%	420.0
3%	480.0
0%	540.0

- Send the following command sequence to lock-in the new fade-on/off rate

O16	P16	N16	M16	O16
-----	-----	-----	-----	-----

The lamp's light will blink indicating that it has set the new fade-on/off rate.

Remotely setting the Default On-Level (Optional)

This is the alternative method of adjusting the LampLinc's default on-level.

1. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
-----	-----	-----	-----	-----

2. Send the house/unit code for the lamp module and adjust the dim level or send preset dim level.
3. Send the following command to lock-in the new on-level.

P16	N16	M16	O16	M16
-----	-----	-----	-----	-----

Tip: Whenever the CLEAR sequence is sent, you will have 4 minutes to make your adjustments.

The lamp's light will blink indicating that it has set the new on-level.

Scene Address Programming

Each LampLinc can be a member of up to 64 scenes. A scene address is simply a single PLC address (just like a primary address), and is set at the time scene membership is programmed. Using a single PLC command to trigger a scene is much less complicated than using an intelligent computer controller to initiate a macro that in turn sends dozens of commands over the next few minutes to turn on modules and set the brightness levels. When an ON signal is transmitted to activate a scene, all LampLinc modules programmed to be members of that scene will turn on to their independent ON-levels and at their independent fade-on/off rates for that scene. Transmitting an OFF for a scene address will turn off all modules that are members of that scene. Modules will react to dim and bright commands after the scene address is sent, however, they will ignore All Lights On and All Units Off commands for the scene address' house code.

Additionally, the LampLinc is compatible with other scene-enabled Smarthome products:

- 3-Wire SwitchLinc & ToggleLinc™ 2-Way and Plus Dimmers
- KeypadLinc Wall Mounted Controllers with Integrated Dimmer
- ApplianceLinc 2-Way and Plus Modules
- SwitchLinc RX Plus Dimmers
- LampLinc Plus Modules

The scenes for all these modules can be setup simultaneously using the same programming sequence. Signals transmitted by SwitchLinc 2-Way, all KeypadLincs, and other LampLinc 2-Way will be received and understood by the LampLinc module!

Scenes can be programmed with a Maxi-Controller or any transmitter capable of sending a Housecode and Unit Code address without an ON or OFF command. Transmitters in which one button is pressed to turn a load on or off WILL NOT WORK. When using a Maxi-Controller or an equivalent transmitter, be careful when pressing the buttons. LampLinc will ignore some commands if they are not in the right sequence. "Fat-Fingering" or accidentally pressing the same button twice may prevent the programming from being accepted.

If KeypadLinc controllers are installed in the house and one of their buttons is programmed to transmit to SwitchLinc 2-Ways, it can be used to quickly set up scenes (see the KeypadLinc manual for more information). If a TouchLinc™ 4.0 Touchscreen is available, use the SmartLinc™ Lighting Control drop-in app to help automate the scene setting process. It can be downloaded from the Smarthome website at this address:

http://www.smarthome.com/files/1270_control.zip

Programming Scene Membership and On-Levels:

1. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
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2. Activate the module by turning it on and/or adjusting its brightness with a controller. (A scene can trigger a module to go off by setting the dim level to 0%.)
3. Send the following command sequence:

M16	N16	O16	P16
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4. Transmit the desired scene address (house and unit code) to lock-in new scene.

6 The lamp's light will blink indicating that it has set the new scene.

Removing a module from a Scene:

1. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
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2. Using a controller, send the module's primary address plus an ON or OFF.
3. Send the following command sequence:

O16	P16	M16	N16
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4. Transmit the scene address (house and unit code) that is to be removed.

The lamp's light will blink indicating that the scene has been removed.

Programming Scene Fade-On/Off Rates (optional):

The Fade-On/Off Rate of each in each scene is adjustable. If this setting is not adjusted, the LampLinc will use the rate of the primary address for the scene. See "Setting the Fade-On/Off Rate" for information on how to set the module's primary address fade-on/off rate.

1. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
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2. Using a Controller, send the module's primary address and adjust the dim level corresponding to the fade-on/off rate time you want using the table in the "Remotely Setting the Fade-On/Off Rate" section, (brighter=faster).

3. Send the following command sequence:

N16	O16	P16	M16
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4. Transmit the scene address (house and unit code).

The lamp's light will blink indicating that the new fade-on/off rate has been set.

Other Options

Disable PLC transmissions

The LampLinc's ability to transmit may be disabled if the feature is not needed, interferes with other home automation tasks, or just to cut down on the amount of signal traffic on the lines. It can be re-enabled later if necessary.

1. Send a signal to turn off the LampLinc.

2. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
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3. Send an "ON" signal to the LampLinc's primary address (or if local control is enabled, turn on the lamp's ON/OFF switch to on).

4. Send the following command sequence to disable the transmitter:

M16	N16	P16	O16	P16
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The lamp's light will blink indicating that LampLinc's transmitter is now disabled.

Enable PLC transmissions (default is enabled)

1. Send a signal to turn off the LampLinc.

2. Transmit the "clear" sequence:

O16	N16	M16	P16	M16
-----	-----	-----	-----	-----

3. Send an "ON" signal to the LampLinc's primary address (or if local control is enabled, turn on the lamp's ON/OFF switch to on).

4. Send the following command sequence to enable the transmitter:

O16	M16	N16	P16	P16
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The lamp's light will blink indicating that LampLinc's transmitter is now enabled.