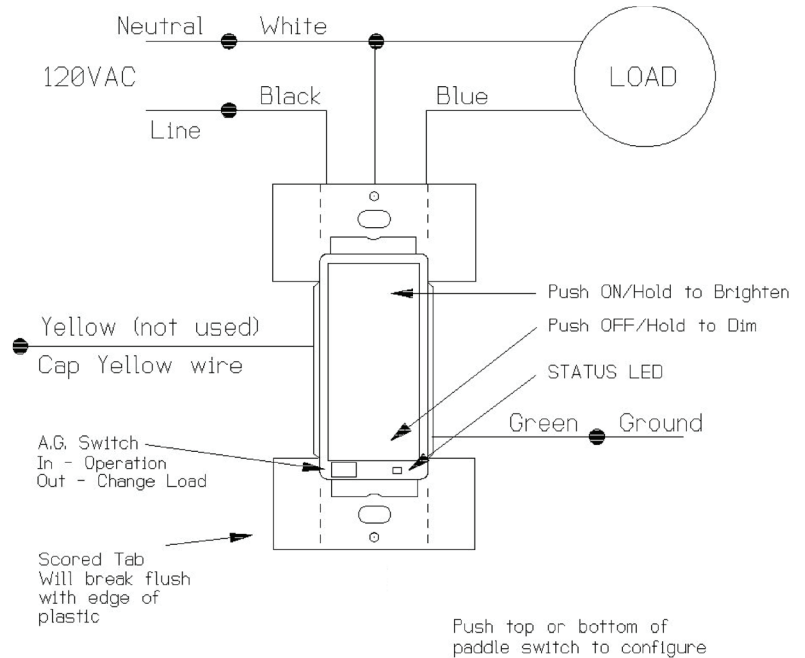




Supplied with matching decorative switch plate

Note: This module must be “Included in the Network” **only where it will be permanently installed.** The proper operation of this node in the mesh network is dependent on it knowing its location with respect to other nodes. You cannot “test bench” configure this module.



The LRM-20 Wall Mounted Dimmer is a component of the HomePro lighting control system. Wire the Wall Mounted Dimmer in place of the standard wall switch according to the diagram above and program from the Wireless Controller to operate loads. Inclusion of the LRM-20 Wall Mounted Dimmer on the EHC-100 Wireless Controller menu allows remote ON/OFF control and dimming of lights connected.

This Wall Mounted Dimmer is designed to work with other EvolveNet enabled devices. EvolveNet nodes of other types can be Included in the network and will also act as repeaters to increase the range of the network. This product can also be used for networking support in systems that stream metadata. An example might include transmission of information from audio devices such as song title, artist, and album information to various displays around the home. 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. It is recommended that a qualified electrician perform this installation. There are no field repairable assemblies on this unit. If service is needed, the unit must be returned where purchased. *to other equipment, do not install to control a receptacle, a motor operated appliance, a fluorescent lighting fixture, or a transformer-supplied appliance, but only permanently installed incandescent lamp fixtures.* Make sure the lamp(s) to be controlled directly from the dimmer receiver total no more than 500 watts. Retain instructions for future use.

With power off, wire this LRM-20 according to the diagram show. Do not wire unit “live” (with power on the circuit) and do not allow the yellow wire to contact line voltage, neutral or ground or you will damage the device. If more than one LRM-20 is to be installed in a wall box, scored tabs on the side can be broken off by bending back and forth with pliers, to accommodate proper fit. Apply power when completed.

Proper Single Gang Installation

Using LRM-20's standard full heat-sink (all tabs), the connected incandescent lamp load shall not exceed 500W.

If a tab is removed from one side of the LRM-20 unit, the connected incandescent lamp load must not exceed 400W.

If both tabs are removed from the LRM-20 unit, the connected incandescent lamp load must not exceed 300W.

Proper Dual Gang Installation

The connected incandescent lamp load must not exceed 400W for each of the two LRM-20 units.

Proper Triple Gang Installation

The connected incandescent lamp load must not exceed 300W for each of the three LRM-20 units.

Air Gap Switch

The LRM-20 has an air gap switch on the face (lower left), that when pulled out, completely removes the power available to the load (simply turning the dimmer off does not). This enables the lamps that are controlled by the device to be changed with minimal danger of electrical shock. The air gap switch must be pushed all the way back in for the dimmer to operate the lamps again.

- Prepare the Controller to include a unit to the network by adding it to a group (method of adding a node to the network). Refer to controller instructions.

LRM-20 Tap either the top or bottom of the LRM-20 switch once.

You should see an indication on your Controller that the "DEVICE WAS INCLUDED" in the network.

it may be that the Home ID and Node ID were not cleared from it after testing. You must first "RESET UNIT" with your controller to remove it from the network. If using the EHC-100 select "SETUP" and scroll to "RESET UNIT"

Although adding it to a group includes it in the network, removing it from a group does not remove it from the network. If removed from a group, it functions only as a repeater.

Local Control

The top or bottom of the LRM-20 switch can be used to carry out inclusion (add to a group), association, exclusion (remove from group) or reset (remove from network).

Pushing the top or bottom of the switch, the LRM-20 allows the user to do the following:

- Turn ON, OFF, DIM or BRIGHTEN the load attached.
- Include or exclude the module from the EvolveNet network.
- Configure to Control Shades or Window Coverings via EvolveNet network.
- Control other EvolveNet enabled devices.

Also, when a controller prompts you to "Send Node ID" or to "Press Button on Unit", quickly tap the top or bottom of the switch once to satisfy those instructions.

- Tapping top of the switch turns the load attached ON.
- Tapping bottom of the switch turns the load attached OFF.
- Pressing and holding the top of the switch will brighten the load attached, and pressing and holding the bottom of the switch will dim the load. When OFF, pressing and holding the bottom of the switch will cause the load will go to the minimum dim level.

Note: Upon restoration of power after a power loss, the LRM-20 returns to previous known state.

LED indication

The LED on the LRM-20 will turn on when the load attached is ON. However, the LED can be user configured to turn ON when the load attached is OFF, if so desired, to act as a night light.

The LRM-20 will flicker its LED when it is transmitting to any of its groups. This can be changed if desired.

Remote Control

The LRM-20 will respond to BASIC and MULTILEVEL commands that are part of the EvolveNet system. Refer to your controller's instructions as to whether your controller can transmit those commands.

All On/All Off

The LRM-20 supports the ALL ON/ ALL OFF commands.

The LRM-20 can be set to respond to ALL ON and ALL OFF commands 4 different ways.

Refer to your controller for information on how to set the LRM-20 to operate in the manner you desire. Some controllers may be only able to set certain settings of ALL ON/ALL OFF response.

The 4 different ways the LRM-20 can be setup to respond to ALL ON and ALL OFF commands are:

- LRM-20 will not respond to ALL ON or the ALL OFF command.
- LRM-20 will respond to ALL OFF command but will not respond to ALL ON command.
- LRM-20 will respond to ALL ON command but will not respond to ALL OFF command.
- LRM-20 will respond to ALL ON and the ALL OFF command (default).

Association

The LRM-20 supports the Association command.

The LRM-20 can be set to control other EvolveNet devices. . You can turn on and off, and even dim other EvolveNet devices once they are "" in groups 2 and 3 with LRM-20.

A NOTE ABOUT DIMMERS IN A GROUP: If you combine EvolveNet enabled dimmers and other types of EvolveNet devices in a group, place a EvolveNet enabled dimmer into the empty group first to ensure that the dimming operates correctly.

Each group is turned on, off or dimmed by tapping or holding the switch a differing amount of times.

Group 2

If you a EvolveNet device into Group 2, you can turn that device on and off by tapping the top or bottom of the switch *twice*. You can brighten or dim devices by tapping the top or bottom of the switch once and then hold it down. The load attached to the LRM-20 is not affected.

Group 3

If you a EvolveNet device into Group 3, you can turn that device on by tapping the top of the switch *three times* or off by tapping the bottom of the switch *three times*. You can brighten devices by tapping the top of the switch twice or dim devices by tapping the bottom of the switch twice and then hold it down. The load attached to the LRM-20 is not affected.

You can up to EvolveNet devices into *each* of these groups. For instructions on how to "" a EvolveNet device into one of these groups, refer to your wireless controller instructions. (If you are using the EHC-100 controller, refer to the Setup Menu, Association section).

A note about dimming, if you combine EvolveNet enabled dimmers and other types of EvolveNet devices in a group, place a EvolveNet enabled dimmer into the empty group 1st to ensure that the dimming operates correctly.

Configuration

The LRM-20 supports the Configuration command.

The LRM-20 can be configured to operate differently than how it works when you first install it. Using the Configuration command you can configure the following:

You can use a EHC-100 to send Configuration commands. (Refer to the Setup Menu, Configuration section)

The LRM-20 can send Dim commands to EvolveNet enabled dimmers. The Dim command has a start level embedded in it. A dimmer receiving this command will start dimming from that start level if this bit is set to 0. If the bit is set to 1, the dimmer will ignore the start level and instead start dimming from its current level. The LED on the LRM-20 will by default, turn ON when the load attached is turned ON. To make the LED turn ON when the load attached is turned OFF instead, set parameter 3 to a value of 1.

To change the top of the switch to OFF and the bottom of the switch to ON, set parameter 4 to 1.

The LRM-20 can control shade control devices via its group 2 if this configuration parameter is set to 1. The LRM-20 can control shade control devices via its group 3 if this configuration parameter is set to 1. **The LRM-20 will flicker its LED when it is transmitting to any of its groups. This flickering can be set to not flicker at all (set to 0), to flicker the entire time it is transmitting (set to 1), or to flicker for only 1 second when it begins transmitting (set to 2). By default, the LRM-20 is set to flicker for only 1 second.** • • • *Each Configuration Parameter can be set to its default setting by setting the default bit in the Configuration Set command. See your controller's instructions on how to do this (and if it supports it).*

All Configuration commands will be reset to their default state when the LRM-20 is excluded from the EvolveNet network by

using the controller to reset the node (on the EHC-100 select "SETUP" and scroll to "RESET UNIT").

Powerlevel

The LRM-20 supports the Powerlevel command.

The Powerlevel command allows controllers to set and get the RF transmit power level of a node and test specific links between nodes with specific RF transmit power. Refer to your controller's instructions for more information if it supports this command. This command is typically used by professional installer SUC Support

There must be a Static Update Controller (SUC) in your EvolveNet system for this feature to work. A Static Controller is one that is not moved after addition to the network. The Static Update Controller can act as a gateway in the system, since other nodes always know its position. The "always listening" advantage of the Static Update Controller is that other nodes can transmit information frames to it whenever needed.

You can assign an "SUC Route" to the LRM-20. Refer to your Controller's instructions on how to do this (if it supports it). Assigning an SUC Route to the LRM-20 allows it to request an update of the EvolveNet devices that are between it and the EvolveNet device to which it was trying to transmit. The LRM-20 will only request an update when a transmission fails.

POWER 120 VAC, 60 HZ

Maximum Load	for control of permanently installed incandescent lamp fixtures only (not for control of receptacles)
Signal (Frequency)	908.42 MHz
Range	Up to 100 feet line of sight between the Controller and /or the closest HomePro Receiver Module

A EvolveNet™ network can integrate devices of various classes, and these devices can be made by different manufacturers. The LRM-20 can be incorporated into existing EvolveNet™ networks.

The top or bottom of the LRM-20 switch can be used to carry out inclusion, association, or exclusion.

The LRM-20 is certified to comply with applicable FCC and IC rules and regulations governing RF and EMI emissions.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.



Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

