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**Modern
Residential
Retrofit
Lighting
Controls**





Modern Residential Retrofit Lighting Controls

By Millard Schewe

Smart, networked light switches and modules offer solutions that are unique and ideal for retrofit residential lighting control projects. These solutions offer simple, cost effective and convenient controls for the homeowner, simultaneously providing reliability and flexibility for the electrician.

Simply Automated has innovative and straightforward load controls, which are unique, making the solutions highly desirable for many homeowners. Convenience is key. When a homeowner wants to change their controls for accessibility or for larger demands involved with a re-

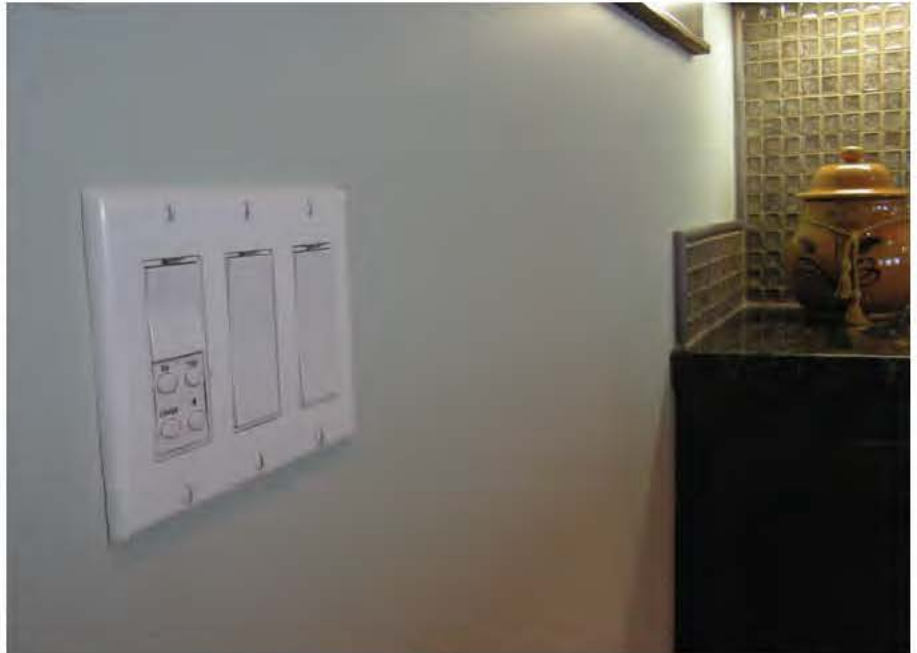
model, they can save on the cost of running new wires. All that is desired can be added with minimal changes to wiring, whether cabinet and under-cabinet lights, recessed, or spot lights. The ease of 'reliably' controlling lights without getting out of bed, or turning off all the lights in a room from the doorway rather than walking to each switch is this innovation. When remodeling kitchens or rooms, additional loads are frequently added. This concept can be applied to any part of the home in addition to supplementary lighting in the garage, creating virtual 3-way, 4-way or more-way

flood lighting. Even setting up holiday light receptacles is simple for remote or automated control. Furthermore, automation with a scheduled timer for celestial lighting control, never needs to be reset for seasons or temporary loss of power. Just about anything is possible, even lighting control from a smart phone or tablet, which alone may be justifiable since no new wiring is needed.

Advanced, reliable power line communication technology makes this all possible, as it transmits well over a mile and has been proven in the field for more than 10 years. The Anywhere Continued on page 8

3-Way Switch Kit is a perfect example of this. It is a cost effective, professional grade solution for adding 3-way, or more way control to a property. Two high quality 900 Watt switches replace existing mechanical wall switches, utilizing same wires of existing wall switches – no traveler wires or batteries needed. They turn on/off circuits from both switches (neutral wire required). They are a simple and cost effective alternative for the professional electrician, versus running costly, new wiring or using wireless consumer DIY solutions which can be unreliable.

The Universal Power line Bus (UPB) communication technology employed is dependable, even when there are a few switches separated across a home or property. It uses powerful 40 volt pulses for communication, placed in a specific position just after the zero crossing on a home's split phase power service. This



The **Universal Power line Bus (UPB)** communication technology employed is dependable, even when there are a few switches separated across a home or property. It uses powerful 40 volt pulses for communication, placed in a specific position just after the zero crossing on a home's split phase power service.

an issue for UPB. On top of this there are several diagnostic tools within the products to quickly verify communication even if there is powerline noise or signal attenuation (low signal strength).

Flexibility comes from the unique universal faceplate design of the switches and the fact the switches and relay/dimmer modules can be located wherever 120VAC power is available. The Universal Dimmer-Controller switch bases are both a transmitter Continued on page 12

pulse-position modulation avoids areas on the power cycle where noise is common. And because the pulses are in a specific location, they are easily recognized and isolated from powerline noise. In addition, the strong pulses are transmitted at a low frequency (4000 Hz), which gives them more energy to travel farther than other technologies. UPB was designed to replace X10 and over the last 10 years, has proven itself in tens of thousands of applications. UPB is so powerful it will transmit well over a mile on 14-2 wire circuit. In fact, in most applications the signals pass between a home's split phases via the street transformer, without the use of a phase coupler. This is in contrast to switches, which use radio frequency (RF) communication and a mesh network, and must rely on multiple switches or repeaters to span long distances, thick floors, walls and concrete. These are not





and a receiver (i.e. transceiver), available with 1x900 or 2x550 Watt output circuits, and can be configured for On/Off or dimming of loads as low as 1 Watt (e.g. LED fixtures). They are unique with 13 detachable and interchangeable faceplate options, along with 6 colors. Each universal switch has 8, tiny micro-switches which can be seen when the faceplate is removed. These micro-switches are actuated by the faceplates. Any one of the single, dual, triple or quad (4) rocker faceplates can attach to the switch and enable control of 1 to 4 lighting zones (or scenes). For example, a switch with a dual rocker located at the front or back door can have one rocker control the local load (porch light) and the second rocker could control a detached garage's light or maybe driveway or holiday lighting. No new wires are needed in most applications. Simply replace the existing switch at the door and at the garage to enable the control. In addition, button faceplates for these smart networked switches offer even more flexibility and lighting scene control capability.

There are 8 button faceplates and a mix of rocker and button faceplates to make controls easy and obvious. For example the single rocker faceplate with 4 buttons is a popular option. The half-height rocker, above the four buttons, is usually configured for local load control; while the buttons are used to convey-

niently control lighting scenes (other switches or modules) within the room or anywhere on the properties' power service. Of even more convenience, a plug-in tabletop pedestal with rockers or up to 8-buttons can be located anywhere there is a standard electrical outlet. At the bedside night stand or on the office desk, remote control of lights in the room or anywhere on the property is easy. Even the TV remote can be used as an interface to control lighting with UPB

switches and modules. Automation of lights on a schedule, especially landscape and holiday lighting, is a very popular application for UPB since wireless RF solutions can rarely reach all around the property or penetrate the remote transformers enclosures where the physical load control is plugged in. Scheduler-timers also have a vacation mode setting that can give a home the 'lived-in look' for added security. With a preset random lighting time variable (e.g. +/- 15 minutes), the lights turn on and off with a different offset each day. The flexibility and convenience offered enables retrofit lighting and load controls wherever power is located.

One of the best things about UPB technology is that only a few switches are needed to get started. Pre-configured kits and the Anywhere Series can be installed and tested without any configuration required. Likewise, if more options are needed, the Simply Automated Custom Series offers one of the broadest solution sets on the market, tailoring to the customer's needs. Consider smart, networked light switches and modules on the next retrofit, remodel or new construction job to minimize wiring costs and win the bid. □

Millard Schewe is the General Manager of Simply Automated Incorporated, who has led the company since 2004.



Simply Automated Anywhere 3-Way Switch Kit



- **3-Way control of lights anywhere on your property without running new wires!**
- **Includes two (2) professional grade 900W switches**
- **A simple cost effective alternative for the professional electrician**

Professional Grade

Two high quality professional grade 900W switches replace existing mechanical wall switches, utilize same wires of existing wall switches - no traveler wires or batteries needed! Turn on/off circuits from both switches (neutral wire required).

A simple cost effective alternative for the professional electrician - versus running costly new wiring or using wireless consumer DIY options that do not always work. Employs Simply Automated's advanced powerline technology – transmits over 1 mile. Wall plates sold separately.

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