ADD THIS DOCUMENT TO YOUR OMNIPRO II INSTALLATION MANUAL

Description

The OmniPro II Version 2.7 firmware adds the following new feature:

- Support for Lutron RadioRA Lighting Control

The OmniPro II Version 2.6 firmware adds the following new features (See Attached Addendum):

- Support for UPB (Universal Powerline Bus) Technology
- Added ability to disable Bypass/Restore digital communicator reports when using Contact ID
- Added ability to disable individual digital communicator zone reports when using Contact ID

Lutron RadioRA uses wireless communication technology to control lighting. Each Switch or Dimmer controls one Zone, or area, of lighting in a RadioRA system. A Zone is any individual RadioRA Switch or Dimmer. A RadioRA System has a maximum of 32 Zones. Zone Numbers can be used to identify any individual Zone (one Switch or one Dimmer), in a RadioRA system via the RS232 Interface. The Chronos System Bridge and Timeclock bridges two RadioRA systems for a total of 64 Lighting Zone Controls and 24 Master Controls.

Required Equipment

- HAI OmniLT, Omni II, or OmniPro II Controller:
  Version 2.7 or later firmware is required.

- HAI Model 10A17-1 Serial Interface Module:
  Model 10A17-1 Serial Interface Module with straight thru serial cable (DB9M/F).

Upgrade Kits are available with Firmware Upgrade, Serial Interface Module, and Serial Cable:

- RR OMNILT KIT - RadioRA Connection Kit for OMNILT
- RR OMNI II KIT - RadioRA Connection Kit for Omni II
- RR OMNIPRO II KIT - RadioRA Connection Kit for OmniPro II

- Lutron RadioRA RS-232 Interface (RA-RS232) OR Chronos System Bridge and Timeclock (RA-SBT-CHR):
  The RS-232 Interface allows for integration with HAI controllers. The Chronos bridges two RadioRA systems and provides an RS-232 interface for integration with HAI controllers.

- Lutron RadioRA Switches, Dimmers, and Master Controls:
  Available from Lutron distributors.
RadioRA Setup

The following OmniPro II Setup items must be configured for use with RadioRA:

Serial Setup

The RadioRA RS-232 Interface (RA-RS232) or Chronos System Bridge (RA-SBT-CHR) connects to the OmniPro II to either one of the built-in serial ports on the controller or to the Model 10A17 Serial Interface Module. When connected to the built-in serial port, the “Serial Function” must be configured for the respective serial port. When the Model 10A17 Serial Interface Module is used, the “Module Type” must be configured for the respective expansion module address. Only one interface (built-in port or 10A17 Serial Interface) may be set to RadioRA.

Serial Module Setup

When used, the 10A17 Serial Interface Module (supplied with the RadioRA Upgrade Kit) must be configured to use the RadioRA protocol. From the Installer Setup menu, select the 7 (EXP) key.

The Module Type defines the function of each expansion module on the controller. Module 1 is the module with the ADDR jumper set to 1. Set the module type from the list below. Press ‘#’ to change the module type, then use the arrow keys to select the proper module type, then press ‘#’ to enter:

<table>
<thead>
<tr>
<th>MODULE 1 TYPE</th>
<th>NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT USED</td>
<td>0</td>
<td>No module is installed</td>
</tr>
<tr>
<td>HARDWIRE EXPND</td>
<td>1</td>
<td>Model 10A06 Hardwire Expander installed</td>
</tr>
<tr>
<td>ALC</td>
<td>2</td>
<td>ALC Interface Module is installed</td>
</tr>
<tr>
<td>OMNI-LINK</td>
<td>3</td>
<td>Model 10A17 Serial Interface using the Omni-Link protocol</td>
</tr>
<tr>
<td>PRO-LINK</td>
<td>4</td>
<td>Model 10A17 Serial Interface using the Pro-Link protocol</td>
</tr>
<tr>
<td>UPB</td>
<td>5</td>
<td>Model 10A17 Serial Interface using the UPB protocol</td>
</tr>
<tr>
<td>RADIO RA</td>
<td>6</td>
<td>Model 10A17 Serial Interface using the RadioRA protocol</td>
</tr>
</tbody>
</table>

Plug one end of the straight thru serial cable (supplied with the RadioRA Upgrade Kit) into the RadioRA RS-232 Interface (RA-RS232) or Chronos System Bridge (RA-SBT-CHR) and the other end into the DB-9 connector (J2) on the 10A17 Serial Interface Module.

Serial Function Setup

When used, the built-in serial port must be configured to use the RadioRA protocol.

The Serial Function defines the function (i.e. protocol) of each expansion built-in serial port. Press ‘#’ to change the module type, then use the arrow keys to select the proper module type, then press ‘#’ to enter:

<table>
<thead>
<tr>
<th>SERIAL 1 FUNCTION</th>
<th>NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADIO RA</td>
<td>6</td>
<td>RadioRA Protocol</td>
</tr>
</tbody>
</table>

Set the Serial Function to RadioRA. The serial port is now set to use the RadioRA Protocol.
Enabling RadioRA House Codes

OmniPro II can control up to 64 RadioRA devices. OmniPro II groups devices by “House Code”, which consists of 16 consecutive unit numbers, starting at Unit 1. Only Unit Numbers 1-64 (House Codes 1-4) can be used for Radio RA.

To configure RadioRA House Codes, from the Set Up menu, press the 6 (MISC) key.

House Codes 1-4 Format

House Codes 1-4 can be configured to use the Standard (Preset Dim Command), Extended Code (Level Command), Lightolier’s Compose Mode, UPB, and RadioRA transmission format.

HC 1 FORMAT: 1
1=EXTENDED #=CHNG ↓

To change format for House Code 1, press the ‘#’ key, then use the arrow keys to scroll through the list of formats. Press the ‘#’ key to select a new type. Press the down-arrow key to change the format for the next House Code.

<table>
<thead>
<tr>
<th>FORMAT</th>
<th>NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD</td>
<td>0</td>
<td>Preset Dim Command (X-10, X-10 Pro, PCS, etc.)</td>
</tr>
<tr>
<td>EXTENDED</td>
<td>1</td>
<td>Extended Code Level Command (Leviton)</td>
</tr>
<tr>
<td>COMPOSE</td>
<td>2</td>
<td>Compose Mode (Lightolier’s Compose)</td>
</tr>
<tr>
<td>UPB</td>
<td>3</td>
<td>Universal Powerline Bus</td>
</tr>
<tr>
<td>RADIO RA</td>
<td>4</td>
<td>Lutron RadioRA</td>
</tr>
</tbody>
</table>

The default setting for HC 1-16 Format is 1. Note: Only HC 1-4 can be used for RadioRA.
ADD THIS DOCUMENT TO YOUR OMNIPRO II INSTALLATION MANUAL

Description

The OmniPro II Version 2.6 firmware adds the following new features:

- Support for UPB (Universal Powerline Bus) Technology
- Added ability to disable Bypass/Restore digital communicator reports when using Contact ID
- Added ability to disable individual digital communicator zone reports when using Contact ID

UPB is a new powerline communications standard for lighting and home control. UPB is a robust, two-way digital powerline carrier communications protocol which transmits signals over the existing wires in a home.

UPB signals are transmitted using a digital pulse (pulse position modulation) instead of a 120 kHz tone over the existing house wiring. The UPB pulse has a broad frequency spectrum, about 4 to 40 kHz, which travels better on the powerline. Attenuation on the powerline is lower at UPB frequencies and less susceptible to noise. UPB can coexist peacefully with X-10 systems, intercoms, baby monitors, speakers, etc. that communicate over the powerline.

Required Equipment

- HAI OmniLT, Omni II, or OmniPro II Controller:
  Version 2.6 or later firmware is required.

- HAI Model 10A17-1 Serial Interface Module:
  The PCS Serial PIM will not work with built-in serial ports on the OmniPro II controller. It must be used with the Model 10A17-1 Serial Interface Module.

- UPB Powerline Interface Module – Serial (PIM-S):
  Available from PCS and/or its distributors. To work with OmniPro II, the PIM must be Version 4.15 or later and it must be the “Serial” version (not the USB version). The PCS Serial PIM comes with the proper cable for the 10A17-1 Serial Module.

- UPB Switches, Modules, and/or Keypad Controllers:
  Available from PCS and/or its distributors.

- UPB UPStart Setup Tool Software:
  Free download from PCS (www.pcslighting.com). UPB switches, modules, and keypad controllers are configured using the UPB UPStart program running on a PC while connected to the PIM. Instructions on installing, configuring, and operating UPB UPStart and PCS UPB devices are available from PCS. This document will give you some general guidelines for configuring UPB devices with UPB UPStart for optimal communications with the OmniPro II controller.

Note: Although the UPB protocol is extremely robust and less susceptible to powerline conditions, for professional installations, HAI recommends the use of a UPB Phase Coupler.
UPB Setup

The following OmniPro II Setup items must be configured for use with UPB:

UPB Network ID:

A new item has been added to “Setup>>Installer>>Control” to set the “Network ID” for the UPB network. The Network ID must be the same as the one that is established using the UPStart software.

From the Installer Setup menu, select the 1 (CTRL) key. Scroll to the Network ID setting:

```
UPB NETWORK ID:        1
1-255
```

Enter the Network ID (1-255) followed by the ' # ' key.

UPB Password:

The UPB Password must be the same as the one established using the UPStart software.

```
UPB PASSWORD:       1234
0000-FFFF
```

Enter the UPB Password (0000-FFFF) followed by the ' # ' key.

Serial Module Setup

The 10A17 Serial Interface Module must be configured to the UPB protocol. From the Installer Setup menu, select the 7 (EXP) key.

The Module Type defines the function of each expansion module on the controller. Module 1 is the module with the ADDR jumper set to 1. Set the module type from the list below. Press ‘ # ’ to change the module type, then use the arrow keys to select the proper module type, then press ‘ # ’ to enter:

```
MODULE 1 TYPE          5
UPB             #=CHNG
```

Set the Serial Interface Module to UPB. For example, if the jumper on the Serial Interface Module is set to 1, set “Module 1” Type to “5” (UPB). The Serial Interface Module is now set to use the UPB Protocol.

<table>
<thead>
<tr>
<th>MODULE TYPES</th>
<th>NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT USED</td>
<td>0</td>
<td>No module is installed</td>
</tr>
<tr>
<td>HARDWIRE EXPNDR</td>
<td>1</td>
<td>Model 10A06 Hardwire Expander installed</td>
</tr>
<tr>
<td>ALC</td>
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<td>3</td>
<td>Model 10A17 Serial Interface using the Omni-Link protocol</td>
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<td>4</td>
<td>Model 10A17 Serial Interface using the Pro-Link protocol</td>
</tr>
<tr>
<td>UPB</td>
<td>5</td>
<td>Model 10A17 Serial Interface using the UPB protocol</td>
</tr>
</tbody>
</table>

Plug one end of the serial cable (supplied with the PCS Serial PIM) into the PIM and the other end into the DB-9 connector (J2) on the 10A17 Serial Interface Module.
Note:

After connecting the PCS Serial PIM to the HAI Serial Interface Module, if the “Receive” LED on the HAI Serial Interface Module is on steady, the PIM is likely in Pulse Mode. HAI controllers use the Powerline Interface Module (PIM) in Message Mode. While Message Mode is the factory default mode of the PCS Serial PIM, the PCS UPStart application uses the Pulse Mode of the PIM. When connected to the HAI Serial Interface Module, the PIM can manually be put into Message Mode using the Program pushbutton on the PIM as follows:

**Setting the PCS Serial PIM to Message Mode**

<table>
<thead>
<tr>
<th>Step</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Press the Program pushbutton five (5) times quickly in a row.</td>
</tr>
<tr>
<td>2</td>
<td>The LED should start to blink green to indicate it is in Setup Mode.</td>
</tr>
<tr>
<td>3</td>
<td>Press the Program pushbutton ten (10) times quickly in a row.</td>
</tr>
<tr>
<td>4</td>
<td>The LED should start to blink red to indicate that the Factory Defaults have been set.</td>
</tr>
<tr>
<td>5</td>
<td>Press the Program pushbutton one (1) more time.</td>
</tr>
<tr>
<td>6</td>
<td>The LED should stop blinking to indicate that it is ready for normal operation.</td>
</tr>
</tbody>
</table>

*Repeat these steps after every use of the PIM with the PCS UPStart application.

**Enabling UPB House Codes**

OmniPro II can control up to 250 UPB devices. Each UPB device (switches, modules, and keypad controllers) has its own Unit ID (1-250). OmniPro II groups devices by “House Code”, which consists of 16 consecutive unit numbers, starting at Unit 1.

To configure UPB House Codes, from the Set Up menu, press the 6 (MISC) key.

**House Codes 1-16 Format:**

House Codes 1-16 can be configured to use the Standard (Preset Dim Command), Extended Code (Level Command), Lightolier’s Compose Mode, and UPB transmission format.

\[
\text{HC 1 FORMAT: 1} \\
\text{1=EXTENDED  #=CHNG} \\
\]

To change format for House Code 1, press the ’ # ’ key, then use the arrow keys to scroll through the list of formats. Press the ’ # ’ key to select a new type. Press the down-arrow key to change the format for the next House Code.

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<td>3</td>
<td>Universal Powerline Bus</td>
</tr>
</tbody>
</table>

The default setting for HC 1-16 Format is 1.
Digital Communicator Setup

Report Bypass / Restore:

A new item has been added to “Setup>>Installer>>DCM” to enable/disable reporting to the central station when a zone is bypassed or restored when using Contact ID.

The communicator can be configured to send bypass/restore signals to the central station when using Contact ID. Whenever a zone is bypassed, the communicator will send a zone bypassed report to the central station. When a zone is restored, the communicator will send a zone restored report to the central station.

To disable the communicator from sending bypass and restore reports to the central station, select the 0 (NO) key.

Disable Individual Zone Reports:

A new feature has been added that allows you to disable digital communicator reporting for specific zones when using Contact ID. Previously, Contact ID reports whenever any zone is tripped, goes in trouble, or is bypassed and restored. Now, a zone can be configured to never report when a zone is tripped, goes into trouble, or is bypassed and restored.

When using Contact ID, if the DCM code (under the 4/2 and 3/1 Alarm Code Formats) is set to anything other than “0” or “00”, then OmniPro II reports the typical Contact ID report code. However, if the DCM code (under the 4/2 and 3/1 Alarm Code Formats) is set to “0” or “00”, then OmniPro II will not make a call to the central station to report that code.

To disable digital communicating reporting for a specific zone, set the alarm code to “0” or “00”.

Enter the alarm code (0 or 00) and then press ‘#’ to disable the zone from reporting to the central station.