

Overview

The HP5-H48-AMX-120 Processor allows connection of *HomeWorks* Wired Keypads and *HomeWorks* Wired Maestro® Local Lighting Controls. The central processor provides lighting presets and easy integration into an AMX system.

A maximum of 24 Designer-Style keypads may be connected to and powered by the Keypad Link on the HP5-H48-AMX-120 Processor.

Important Notes

Codes: Install in accordance with all local and national electrical codes.

Power: Two separate power inputs exist on this processor:

1. Processor power is provided by the 2 conductor harness that is integral to the HWI-LV24 enclosure. The processor is powered when the green LED labeled "PWR" is on.
2. Connected keypads are powered by the supplied plug-in adapter connected to the power jack labeled "Keypad Link 15 V \equiv ". The Keypad Link is powered properly when the green "Keypad LINK PWR" LED is on. If the red "LINK SHORT" LED is on, the Keypad Link is shorted (between terminal 1 and 2) or overloaded (exceeding 150 LEDs).

Both Processor power and Keypad Link power must be present for the processor and keypads to function properly.

Processor Power: 12 V~ 30 VA

Keypad Link Power: 15 V \equiv 900 mA NEC Class 2;
IEC PELV



Use only the adapter provided by Lutron with the HP5-H48-AMX-120 Processor.

Environment: Ambient operating temperature:
0-40 °C, 32-104 °F, 0-90% humidity, non-condensing.
Indoor use only.

Cleaning: To clean, wipe with a clean damp cloth. **DO NOT** use any chemical cleaning solutions.

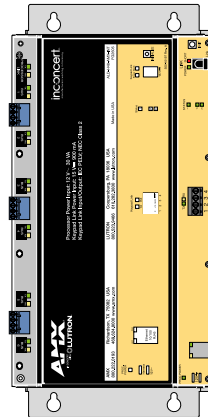


Figure 1 - HP5-H48-AMX-120 Processor

Installation

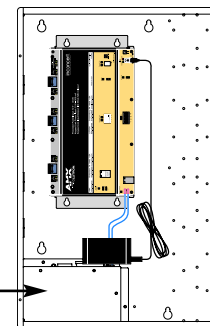
1. Ensure High-voltage cover in HWI-LV24 enclosure is securely installed. Locate and lock supply breaker in the OFF position before installing processor assembly.



Danger - Wiring with power on may result in personal injury.

2. **Install processor assembly in the enclosure:** The HP5-H48-AMX-120 Processor is attached to the HWI-LV24 enclosure using four mounting keyholes and the mounting screws provided.

The HP5-H48-AMX-120 Processor mounts in the upper left corner of an HWI-LV24 enclosure.

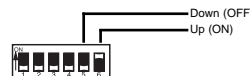


High-voltage enclosure
(shown with cover installed).

Figure 2 - Mounting Diagram

3. **Ensure all DIP switches are in the down position.**

Example: Setting Switch #6 ON.



4. **Connect to HomeWorks lighting controls.** Connect the communication wiring from the *HomeWorks* Maestro Dimmers to the factory installed Dimmer Hub. See Figure 3, page 2. Gray and violet connections are marked on the printed circuit board.

5. **Connect Keypad link:** For keypads that are to be controlled by this Processor, connect the communication wires to the Keypad Link.
6. **Connect power.** Plug the power input harness terminals (blue wires) from the HWI-LV24 enclosure onto the power feed lugs on the HP5-H48-AMX-120 Processor. Connect plug from adapter to Keypad Link Power connector. Plug adapter into receptacle in bottom of HWI-LV24 enclosure. The HP5-H48-AMX-120 Processor has battery-backed memory. The battery provides power during power outages and other temporary power interruptions. In vacation homes and other residences which are not continuously occupied, the Processor **MUST** be powered by a circuit that is never turned off even when the residence is unoccupied.
7. **Turn power ON.** Restore the supply breaker to the ON position.
8. **Connect Ethernet Link.** Connect a standard RJ45 connector to the Ethernet jack on the Processor. If plugging into a network, a standard cable is used (see Figure 4). The orange LED (ACT) will illuminate when there are any Ethernet signals being transmitted or received. The green LED (CON) will illuminate when the Processor is connected to a hub/switch/router or a computer.

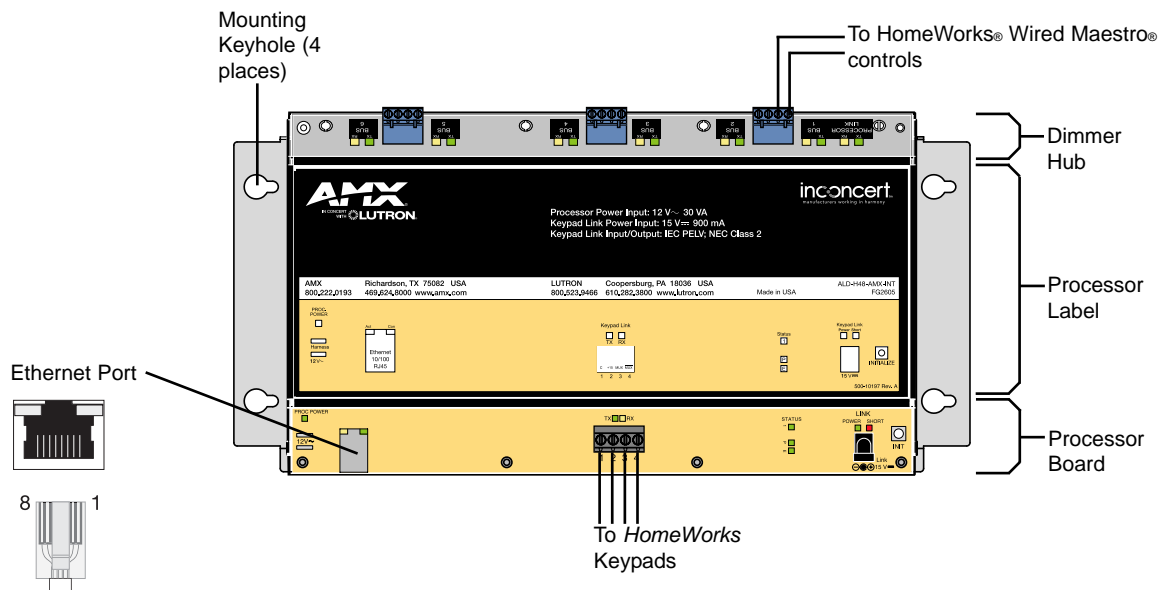


Figure 3 - HomeWorks/AMX inconcert Processor

Quick Start Guide

For more detailed programming instructions, refer to the ALD-H48 Instruction Manual available on-line at www.amx.com.

Overview

The ALD-H48 from AMX is a Lutron lighting solution with a complementary Duet module. The result is a Lutron device that functions within a NetLinx project.

After you have installed the ALD-H48, using the installation documentation included with the unit, you can create a NetLinx project and configure the dimmers. You need NetLinx Studio v2.3 or higher and a NetLinx Master capable of running Duet modules (firmware version **3.0.XXX** or higher).

Using the web interface capabilities of your NetLinx master you can configure dimmers connected to your ALD-H48.

The web interface supports:

- Internet Explorer v 6.0 (and higher)
- Mozilla Firefox v 1.0 (and higher)

Step-By-Step Instructions

Step 1: Downloading The ALD-H48 Workspace

First you must attain the ALD-H48 Workspace file (.AXW). To download the Duet module go to either [amx.com](http://www.amx.com) > **Dealers** > **InConcert** or the Product Catalog page for the ALD-H48. From the InConcert page you can search for and download the ALDH48 Duet module, they are indicated by the **D** within the legend displayed below.



FIG. 1 Module Legend

Included in the .AXW file:

- The NetLinx Main Code (.AXS)
- The Duet module (.JAR)
- Associated TPD4 files

Step 2: Setting The ALD-H48 IP Address

In order for the NetLinx Master to locate the ALD-H48, you must set the IP address for the device.

1. Connect your PC to the H48 serial port using a standard DB-9 serial cable.
2. Open your preferred serial client (HyperTerm, TELNET, etc...)
3. Make sure your serial connection baud rate and handshaking settings match the H48 serial settings. (Default Baud Rate **9600**, Data Bits: **8**, Parity: **None**, Stop Bits: **1**, Flow Control: **None**)
4. Upon a successful connection, you are prompted with

L232>. At the prompt type **SETIP,1, xxx.xxx.xxx.xxx** . Follow the onscreen instructions from this point. (Where **1** is the number of processors present on the H48 and **xxx.xxx.xxx.xxx** is the IP address to be decided by you.)

Further, at the prompt type **HELP** and a list of all supported command is displayed. In order to get the correct syntax to set the IP address type at the prompt **HELP, SETIP**.

Step 3: Opening The ALD-H48 Workspace

After you have downloaded the ALD-H48 Workspace file you need to open your NetLinx project. The .AXW file provided by AMX is intended to be a starting point for your ALD-H48 project.

5. Launch NetLinx Studio v2.3 or higher.
6. Select **File > Open Workspace** to launch the Open Workspace dialog.
7. Browse to the location where you saved the ALD-H48 Workspace file (.AXW) and click **Open**.
8. Manually enter the IP address assigned to the ALD-48 within `Lutron_H48_UI.axs` and then recompile the project before transferring it to the NetLinx Master. You can also make any additional edits to the ALD-H48 project or elect to send the file to the NetLinx Master as is.

Step 4: Transferring The ALD-H48 Project to A NetLinx Master

NetLinx Studio can transfer the ALD-H48 project file to any connected NetLinx Master with firmware version **3.XX** or higher.

1. Select **Tools > File Transfer** to open the File Transfer dialog.
2. If the Workspace file is not already listed in the window click **Quick Load** to open the corresponding dialog.
3. In the drop down list select the ALD-H48 Workspace.
4. Click **Select All**.
5. Click **OK**.
6. Make sure there is a check in the box next to the ALD-H48 workspace within the File Transfer dialog and click **Send**.

Step 5: Addressing The Dimmers via The Web Interface

Once you have installed the ALD-H48 and dimmers using the hardware installation literature included with the unit, you must now address the dimmers.

You can only select addresses available on the bus to which the dimmer is physically connected. For example, if you want to assign address 17 to a particular dimmer, it must be connected to bus 3 of the ALD-H48 as indicated below.

Bus Address Location	
Bus	Address
1	1-8
2	9-16
3	17-24
4	25-32
5	33-40
6	41-48

To address the dimmers:

- Using your web browser, go to the target NetLinx Master's web page. **Note:** Refer to the NetLinx Master documentation for more detailed information concerning the NetLinx Master Web Interface.
- Click on **Lights** and all connected modules are displayed below *Lights*. There is only one module per device.

Upon your first visit to *Lights*, the page will have the following message, **FIG. 2**.

First enter address mode. Then triple click a dimmer to set its address.

FIG. 2 Initial Lights Configuration Page

- Click **Address Mode** to set the master to look for available dimmers.
- Tap the dimmer you wish to address three times to make it available to the master.
- The displayed addresses are only those that are available on that physical bus that have not been used. Bold text indicates the address has already been assigned. Pick an available number and click **Select** to address the dimmer.

First enter address mode. Then triple click a dimmer to set its address.

Select a Dimmer Address To Use

Dimmer 9	Select
Dimmer 10	Select
Dimmer 11	Select
Dimmer 12	Select
Dimmer 13	Select
Dimmer 14	Select
Dimmer 15	Select
Dimmer 16	Select

FIG. 3 Dimmer Address

Controlling Dimmers via the Web Page

Once a dimmer has been addressed, you have access to a few basic level controls from the master's web page.

- Click the button **Dimmer Control** to open the Dimmer Control page.(FIG. 4)

Select a Dimmer To Control

Dimmer 1	100%
Dimmer 10	50%
Dimmer 22	
Dimmer 23	0%

FIG. 4 Dimmer Control

Listed in the column on the left are all dimmer addresses available for control. On the right is a percentage bargraph representation of the current state of the selected dimmer.

- To change the state of a dimmer, select a dimmer address in the column on the left.
 - Click on 100% to ramp the dimmer completely on and 0% to ramp the dimmer off.
 - Click within the bargraph area on the right to shift the dimmer state up and down to a desired percentage.

Establishing And Modifying Scenes

Once your dimmers have been addressed and states set, you can create a scene. A scene is a collection of dimmers with specific states for each dimmer, i.e., Scene 1 could be set as a meeting scene where Dimmers 1 and 12 ramp down to 45%, Dimmers 6 and 14 ramp to 80% and Dimmers 2 through 5 ramp to 0%. A dimmer can be a part of many different scenes. To create a scene:

1. Click the **Scenes** button at the top of the page. Shown below is the Scenes page.



FIG. 5 Scenes Page

2. Click the **Modify** button for the Scene you would like to set. This opens the Modify Scene page.

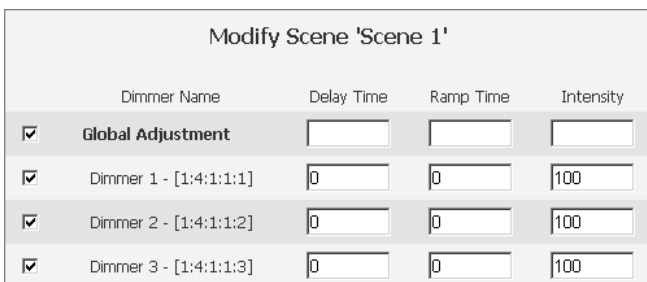


FIG. 6 Modify Scene

3. Moving left to right the first field is a check box. Placing a check in the box includes the dimmer in the scene.

Once you have all of your desired dimmers selected you can set the Delay time.

- The delay time is the duration, in 1/10ths of seconds, it takes the dimmers to respond to the button push.

4. Type a number value in the field *Delay Time*.

The next field is the ramp time.

- The ramp time is the duration, in 1/10ths of seconds, it takes the dimmers to go from their current intensity state to that set in the scene.

5. Type a number value in the field *Ramp Time*.

The next field is intensity.

- Intensity is a percentage value, 0-100%, for the luminosity of the light.

6. Type a number value in the field *Intensity*.

7. Click **Save** to set your scene.

Global Adjustment allows you to select and deselect all dimmers at one time, and to set the *Delay Time*, *Ramp Time* and *Intensity* values for all dimmers, to the same value.

When modifying scenes, ignored dimmers will display their current intensity level while dimmers included in the scene will display their defined intensity level, not necessarily the current state.

Establishing And Modifying Groups

For the purpose of controlling several dimmers at one time you can place them into groups. The groups can then be manipulated collectively.

1. Click the **Groups** button to list all available group numbers.
2. Click the **Modify** button for the Group you would like to set. This opens the Modify Group page, shown below.

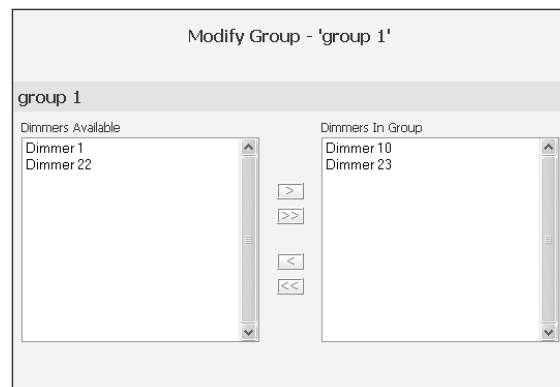


FIG. 7 Modify Group

In the column on the left is a list of all dimmers available for adding to the group. The column on the right is a list of all dimmers currently included in the selected group.

3. Select an available dimmer on the left and click the ">" button in the center to move it to the included list on the right. You can move all dimmers at one time by clicking on the ">>" button, remove a dimmer from the scene list by clicking the "<" button and remove all dimmers by clicking "<<".

4. Click **Save** to set your group.

Advanced ALD-H48 Configuration

Consult the ALD-H48 Instruction Manual available at www.amx.com.

Technical and Sales Assistance AMX

If you need assistance, call the toll-free **AMX Technical Support Center**. Please provide exact model number when calling.

1.800.222.0193

Tel: 469.624.8000

www.amx.com

Lutron

If you need assistance, call the toll-free **Lutron Technical Support Center**. Please provide exact model number when calling.

1.800.523.9466 (U.S.A., Canada and the Caribbean)

Other countries call:

Tel: 610.282.3800

Fax: 610.282.3090

Visit our Web site at www.lutron.com

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