

# RadioRA®

## Installation and Setup Instructions

*Please Read Before Installing*

## RadioRA® Network Control Interface

### RA-NET-120

### Description

The *RadioRA* Network Control Interface (NCI) allows you to control lighting throughout your home, using any popular web browser on your home network.

### Overview

Before you can begin using the NCI, you need to set up and program the *RadioRA* system.

The NCI communicates with the *RadioRA* system through RS232. The RS232 Interface or Chronos® System Bridge and Timeclock must be installed and RS232 Scenes programmed for the NCI to access them. Refer to the RS232 Interface Setup and Installation Guide (P/N 044-005) or the *Chronos* Setup and Installation Guide (P/N 044-037) for more information.

In addition, you must have at least the following:

- PC or other web browser-enabled device capable of browsing the NCI setup pages (**Note:** Do not connect the NCI directly to a PC)
- Available port on a home or office network with a DHCP Server (commonly found in a router, but not in a hub or switch)
- RA-NET-120 hardware

### Important Notes

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

**Power:** Use only the adapter provided with the NCI.

**Note** - Using an adapter not rated for the following specifications could damage the NCI and possibly overheat the adapter.

- Input: 120 V $\sim$  60 Hz 6 W
- Output: 12 V $\equiv$  300 mA  
NEC® Class 2; IEC PELV

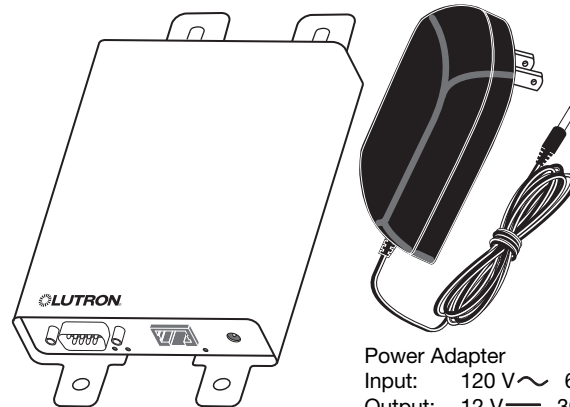
**Environment:** Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0-90% humidity, non-condensing. Indoor use only.

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

**Mounting:** **DO NOT** ground the NCI.

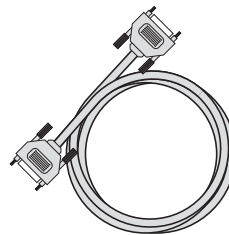
**Setup:** The NCI will not function until it is configured and connected to a *RadioRA* system that has already been setup.

### RA-NET-120 Contents

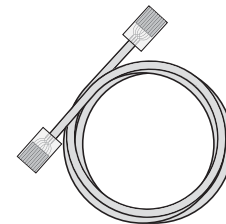


Network Control Interface  
12 V $\equiv$  300 mA

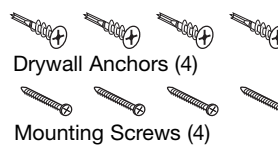
Power Adapter  
Input: 120 V $\sim$  60 Hz 6 W  
Output: 12 V $\equiv$  300 mA  
NEC® Class 2;  
IEC PELV



Serial Cable  
3 ft (91 cm)



Ethernet (Cat5) Cable  
3 ft (91 cm)



Drywall Anchors (4)

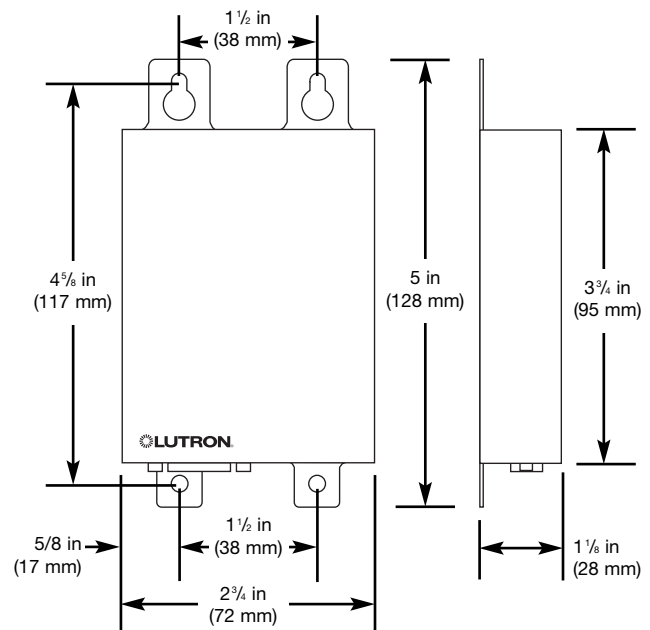
Mounting Screws (4)



Masonry Anchors (4)

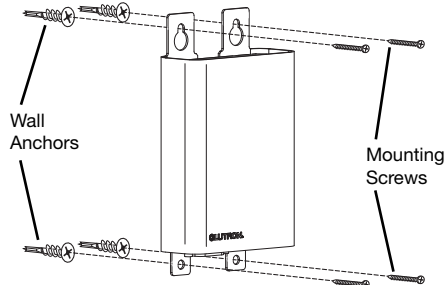
Mounting Screws (4)

### Dimensions



## Setup and Installation

**1. Mount the NCI.** Place the NCI in a clean, dry, and ventilated indoor location, near the RS232 Interface or Chronos® System Bridge and Timeclock. Using the screws and anchors provided, mount the interface in a convenient location.



**Note:** The NCI is not designed to be installed in an attic, crawl space, or outdoor location.

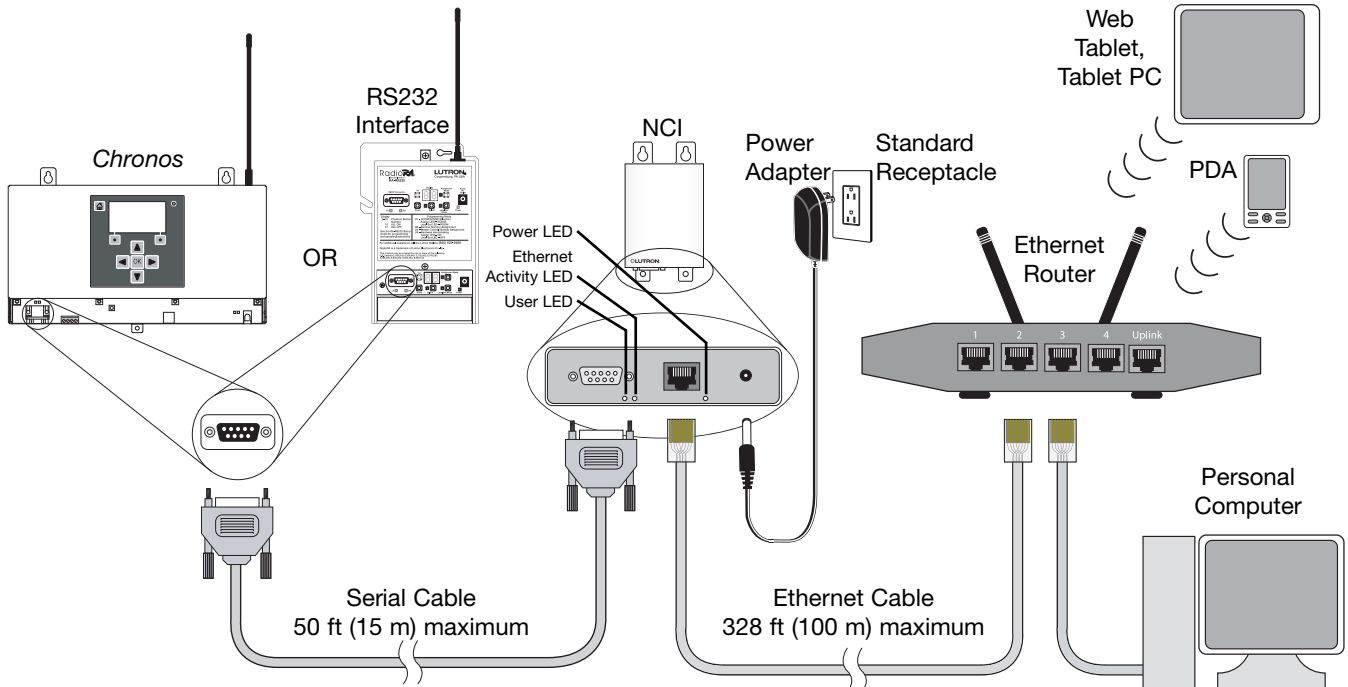
**2. Connect the RS232 Cable.** Connect a standard 9-pin (straight through) serial cable to the serial port on the NCI. Connect the other end of the cable to the serial port on the RS232 Interface (RA-RS232) or Chronos System Bridge and Timeclock (RA-SBT-CHR). (See NCI Connections, below.)

**3. Connect the Ethernet Cable.** Connect a standard Ethernet cable to the RJ-45 jack on the NCI. Connect the other end of the cable to the Ethernet hub/switch/router. (See NCI Connections, below.)

**Note:** Do not connect the NCI directly to a PC.

**4. Connect Power.** Insert the power adapter's barrel plug into the power jack on the NCI. Plug the power adapter into a standard 120 V ~ 60 Hz wall receptacle. The Power LED (see NCI Connections, below) should illuminate when the NCI has power.

## NCI Connections



# Configuring the NCI

## 1. Connecting to the NCI

Once the network hardware is in place, you can initiate communication with the NCI hardware.

**Note:** The NCI requires 1 minute after power is applied before setup can be started. The User LED (see NCI Connections, page 2) will flash once every two seconds when the NCI is ready.

Open the web browser on the computer, and in the Address bar enter:

**http://lutron/setup**



This will bring up the NCI setup start page. Configure the NCI according to the instructions in the next section.

**Note:** During the setup process, the NCI is referred to as a “node”, which is a generic term for a network device.

## 2. Configuring the NCI

**Note:** Select Devices before you perform any other setup task. Every time you select a new device, it will be necessary to enter the configuration settings again.

NCI configuration is divided into four procedures:

- Select Devices
  - Enter custom name for accessing NCI through a web browser (optional)
  - Select the **Lutron\_RadioRA RS232** device file
- Configuration
  - Setup Pages—choose number of buttons, enter button names, and select button functions
  - Enable/Disable Pages
- Enter Contact Information
- Save Settings

These procedures are accessed through the NCI setup pages. The Navigation bar on the left of the page allows direct access to any step in the process. Changing the device setup will affect other settings and may require you to make changes to the configuration.

The wizard steps through all four procedures in order. Start the wizard by pressing the Start Wizard button on the setup start page.

## 3. Using the NCI

Open the web browser on the computer, and in the Address bar enter:

**http://lutron** (or the custom network name entered during device setup)



This will bring up the NCI user pages that were configured in Step 1.

From a PDA, enter:

**http://lutron/pda**

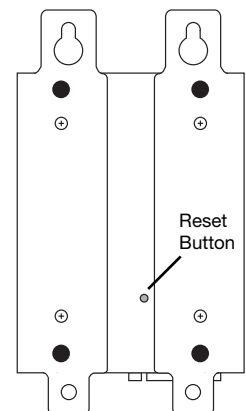


**Note:** The PDA control page will display the first five buttons of the first page for PDA control.

## Returning to Default Factory Settings

Returning a Network Control Interface to Default Factory Settings will permanently delete all current programming in the NCI.

To return to Default Factory Settings, press and hold the reset button (located on the bottom of the NCI) until the User LED (see NCI Connections, page 2) begins to flash rapidly (approximately 5 seconds). When the reset button is released, the NCI will reset.



## Troubleshooting Guide

### Definitions of Common Terms:

- **setup device** - A setup device is any device with a web browser capable of configuring the RadioRA® Network Control Interface (e.g. personal computer, tablet PC, PDA)
- **user pages** - The user pages (<http://lutron>) are web pages served by the Network Control Interface to the user's web browser. They allow control of the *RadioRA* lighting system through web-based buttons.
- **setup pages** - The setup pages (<http://lutron/setup>) are web pages served by the Network Control Interface to the user's web browser. They allow setup and configuration of the buttons displayed on the user pages.

Symptom	Possible Cause	Remedy
Power LED is not lit.	No power to the Network Control Interface (NCI).	Verify that there is power to the NCI. Verify the power LED is lit.
The Ethernet Activity / Link LED is not lit.	The NCI is not plugged into the network.	Verify that the NCI is connected to the network using the standard Cat 5 Ethernet cable provided. <b>Do not</b> use a crossover cable. <b>Do not</b> connect the NCI directly to a personal computer.
Typing " <a href="http://lutron/setup">http://lutron/setup</a> " in the web browser address bar does not load the setup pages.	The NCI requires 1 minute to boot up after power is applied, before setup can be started.	Wait 1 minute for the NCI to boot up. The User LED will flash once every 2 seconds when the NCI is ready.
	The setup device is not plugged into the network.	Verify that the setup device is connected to the network using a standard Cat 5 Ethernet cable.
	The setup device (PC, PDA, etc.) does not have an IP address.	Verify that the setup device has a valid IP address and can communicate with the network. For further information on connecting the setup device to the network, refer to the instructions provided by the manufacturer of the setup device.
	The setup device and/or NCI are connected to a network that does not have a DHCP Server.	Networks with a router (not a hub or switch) typically have a DHCP Server. Verify that the network has a DHCP Server, and it is enabled.
Dimmers, Switches or GRAFIK Eye® Control Units do not respond to button presses on user pages.	RS232 cable is not connected to both devices.	Verify that the RS232 cable is present and connected properly (do not use a null modem cable). On an RS232 Interface or Chronos® Bridge verify that the RS232 Tx and Rx LEDs flash when a button is pressed on the web page.
	<i>Chronos</i> Bridge using incorrect baud rate.	Verify baud rate on the <i>Chronos</i> Bridge is set to 9600 baud. See <i>Chronos</i> Setup and Installation Guide (P/N 044-037) for details.
	The scene being activated in the <i>Chronos</i> Bridge or RS232 Interface is not programmed.	Program the scene being activated through the <i>Chronos</i> Bridge or RS232 Interface. See Overview (page 1).
	User page button is activating incorrect scene in <i>Chronos</i> Bridge or the RS232 Interface.	Verify user page button function is configured correctly in the setup pages. On a <i>Chronos</i> Bridge use the Terminal (under RS232 Setup) to verify incoming commands. See Configuring the NCI (page 3).

**Warranty:** For Warranty information, please see the Warranty enclosed with the product, or visit [www.lutron.com/resinfo](http://www.lutron.com/resinfo).

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