LuMaster™

System Installation Instructions
Please Leave for Occupant

Interface Panel
LTMI-5

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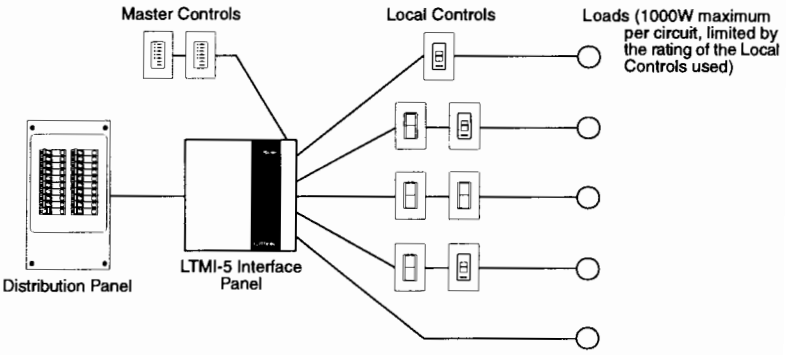
Warnings

Only a qualified electrician should wire this system. Be sure power is off at the circuit breakers, or remove fuses before wiring.
DO NOT WIRE HOT.

Wire in accordance with all national and local electrical codes. Improper wiring can result in personal injury or damage to the control or other equipment. Damage will not be covered by product warranty.

Description

The LuMaster system consists of master control(s), remote mounted interface panel(s) and local control(s) as well as 3-way and/or 4 war switch(es). **Each interface panel operates as five remote actuated 3-way switches.** A maximum of four interface panels can be wired together to provide control of 20 lighting circuits. The LuMaster system can accommodate up to 5 master control locations.



System Components

This instruction sheet provides a LuMaster system overview and LTMI-5 interface panel installation instructions. See component instruction sheets for specific installation instructions.

Model No.	Description
LTMI-5	Interface panel
LTMC-5M	5-circuit master control component with "ALL ON" and "ALL OFF" function*
LTMC-5A	5-circuit master control component*

*Wallplate sold separately

The following Lutron products may be used with the LuMaster system:

Lumea 2™ Ariadni® DIVA® SKYLARK®

LUTRON®

This product may be covered by one or more of the following U.S. patents: 4,835,343; 4,835,816; 4,889,999; 4,939,383; 5,170,068; 5,180,886; 5,207,317; 5,262,678; 5,359,231; DES. 335,282; DES. 342,234 and corresponding foreign patents. Lutron, Ariadni, Diva, Lumea, and Skylark are registered trademarks; and Hi-Power 2•4•6, LuMaster, and Lumea 2 are trademarks of Lutron Electronics Co., Inc. © 1996 Lutron Electronics Co., Inc.

Interface Panel

The interface panel operates as five remote actuated 3-way switches. It is located between the distribution panel and the dimmers and/or switches.

The system is designed to run on:
- 120VAC single phase supply.
- 120/240VAC split phase supply.
- 120/208VAC 3-phase supply.

The LTMI-5 panel is compatible with switching these load types:
- Incandescent
- 120VAC Halogen
- Electronic low voltage
- Magnetic low voltage
- Fluorescent
- HID

The maximum load per circuit is determined by the local control dimmers and switches installed in the LuMaster system.

Maximum Circuit Load: The LTMI-5 interface panel can control five circuits. Each circuit can control a maximum of 1000W, not to exceed the rating of the Local Control.

Panel Hot (terminal P Hot) and Panel Neutral (terminal P Neu) must always be connected to 120V, 60Hz to provide power to the LTMI-5 panel.

In multiple panel systems, Panel Hot (terminal P Hot) in all LTMI-5 panels must be on the same phase.

Multiple circuits of an interface panel can be fed from a single breaker, provided the total load connected does not exceed the current rating of the breaker (see Wiring Diagrams, pages 4 & 5).

Minimum load on each circuit is 10W, or determined by the Local Control used.

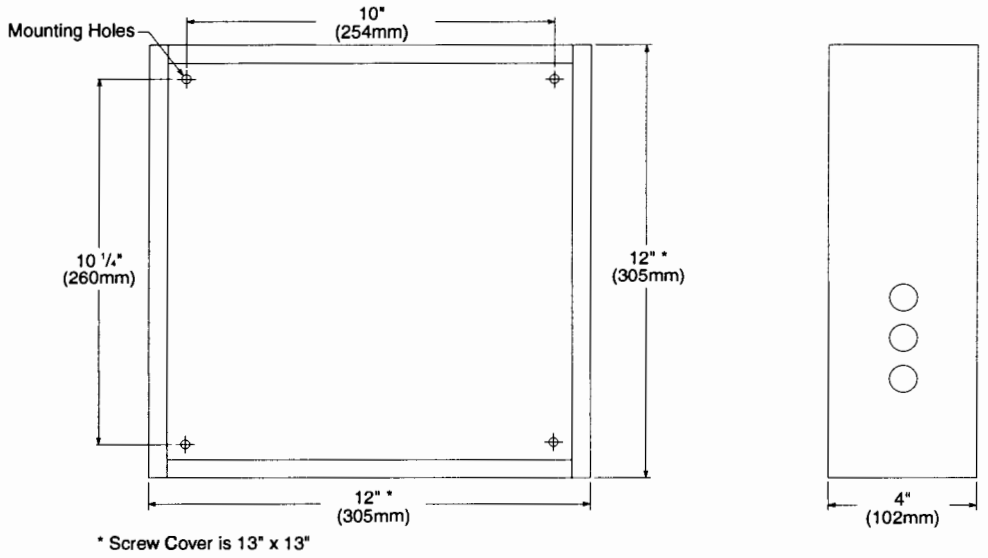


Figure A. LTMI-5 Mounting and Dimensions

Select a convenient indoor mounting location for the interface panel, such as a basement, electrical closet, etc. Internal relays will click while in operation, mount where audible noise is acceptable. The interface panel can be surface or recess mounted. Panel dimensions are given in Figure A. Observe all local and national electrical codes when installing panel.

Mark and drill mounting holes according to mounting dimensions shown in Figure A. Securely fasten the panel to the wall. Panel weight = 12 lbs. 12 oz. (5.8 kg)

Master Controls

The master control component, Model LTMC-5M, (Figure B) controls five lighting circuits in the LuMaster system (Figure D). Each button with a status light will control one circuit. The LTMC-5A (Figure C) can be used in conjunction with the LTMC-5M to provide a 10-circuit (Figure E), a 15-circuit (Figure F) or a 20-circuit (Figure G) LuMaster system. Each additional five circuits require a separate LTMI-5 panel.

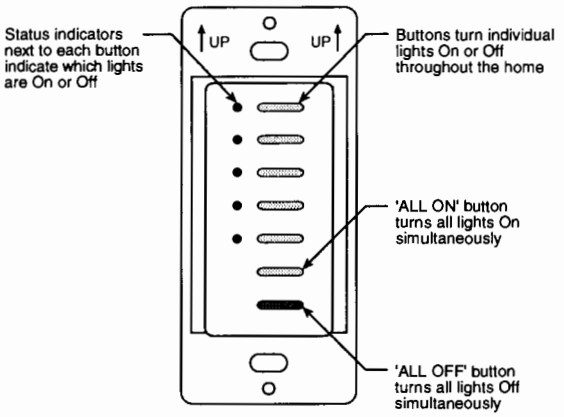


Figure B. LTMC-5M

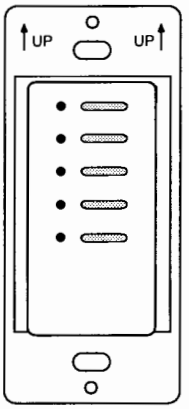


Figure C. LTMC-5A

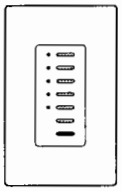


Figure D.
5-circuit control consists of one LTMC-5M and one LT-1H wallplate.

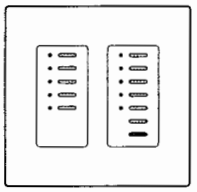


Figure E.
10-circuit control consists of one LTMC-5M, one LTMC-5A and one LT-2H wallplate.

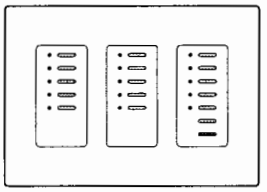


Figure F.
15-circuit control consists of one LTMC-5M, two LTMC-5A and one LT-3H wallplate.

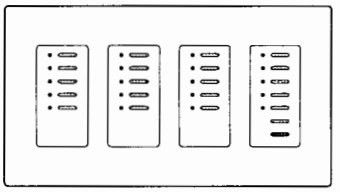


Figure G.
20-circuit control consists of one LTMC-5M, three LTMC-5A and one LT-4H wallplate.

Dimmers and Switches

For coordinated lighting control, the LuMaster system works with the Luméa 2 series of 3-way and 4-way switches and 3-way dimmers. However, other Lutron 3-way or 4-way mechanical dimmers or switches may be used.

Local controls may be wired on the line side or load side of the LTMI-5 interface panel (Figure H). 4-way switches must be wired between the LTMI-5 panel and the 3-way local control (Figure H).

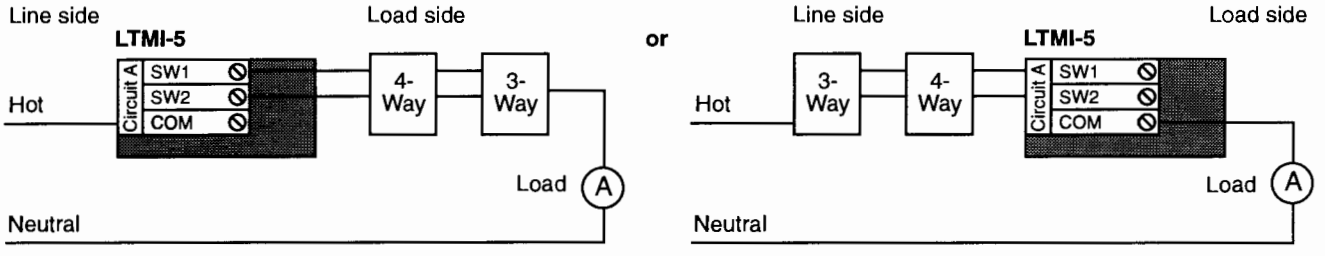
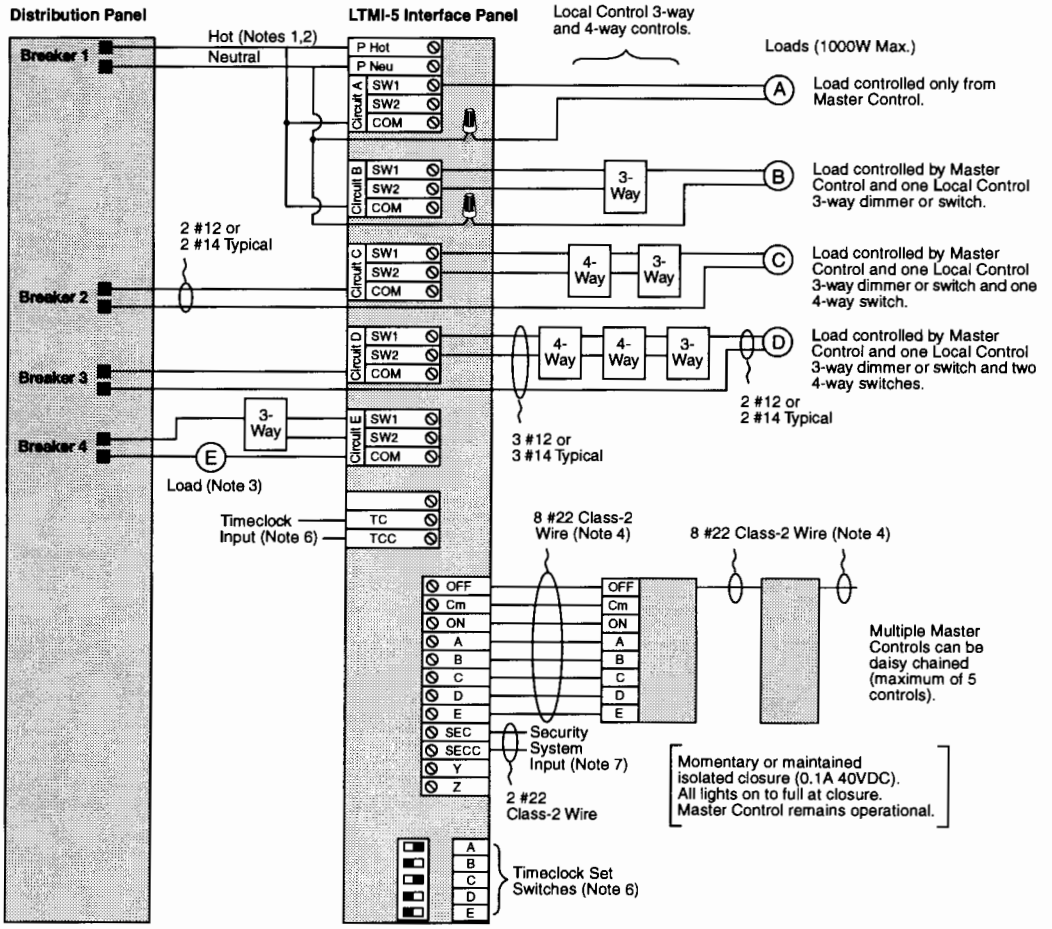


Figure H. Controls wired on load or line side

Wiring Diagrams

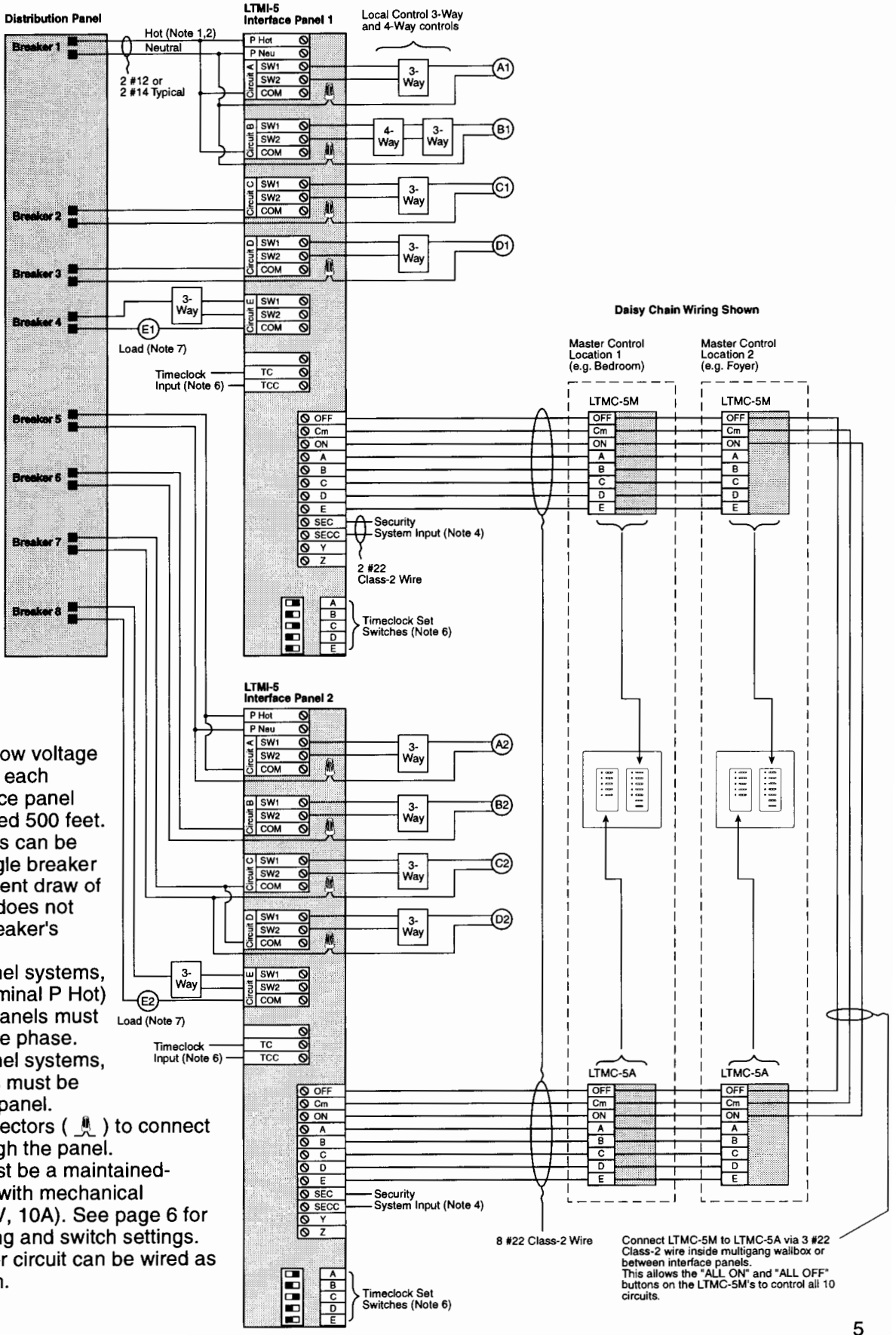
5-Circuit LuMaster System



NOTES:

1. LTMI-5 Panel Hot (terminal P Hot) and panel Neutral (terminal P Neu) **must always** be connected to 120V, 60Hz to provide power to the LTMI-5 panel.
2. Multiple circuits can be fed from a single breaker if the total current of those circuits does not exceed the breaker's rating.
3. Local 3-way dimmers and switches may be wired line side or load side of the LTMI-5 interface panel. Local 4-way switches must be wired between LTMI-5 panel and the 3-way dimmer or switch.
4. Total Class 2 low voltage wire length for each LTMI-5 interface panel must not exceed 500 feet.
5. Use wire connectors ( ) to connect neutrals through the panel.
6. Timeclock must be a maintained-output device with mechanical contacts (120V, 10A). See page 6 for timeclock wiring and switch settings.
7. In multiple panel systems, security inputs must be wired to each panel.

10-Circuit LuMaster System



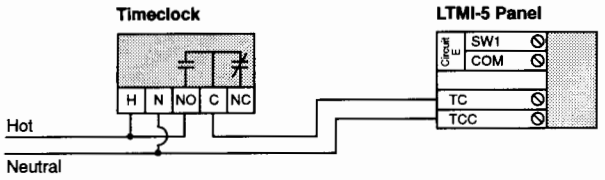
NOTES:

1. Total Class 2 low voltage wire length for each LTMI-5 interface panel must not exceed 500 feet.
2. Multiple circuits can be fed from a single breaker if the total current draw of those circuits does not exceed the breaker's rating.
3. In multiple panel systems, panel Hot (terminal P Hot) in all LTMI-5 panels must be on the same phase.
4. In multiple panel systems, security inputs must be wired to each panel.
5. Use wire connectors ( ) to connect neutrals through the panel.
6. Timeclock must be a maintained-output device with mechanical contacts (120V, 10A). See page 6 for timeclock wiring and switch settings.
7. Each LuMaster circuit can be wired as a 3-way switch.

Connecting To Other Manufacturer's Equipment

Timeclocks

Wiring diagram for a 5-circuit system



Wiring diagram for a 10-circuit system

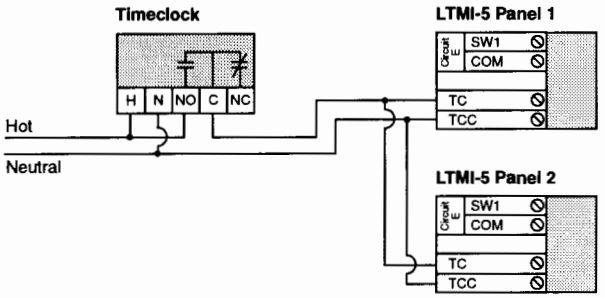


Figure I. One timeclock for multiple panels

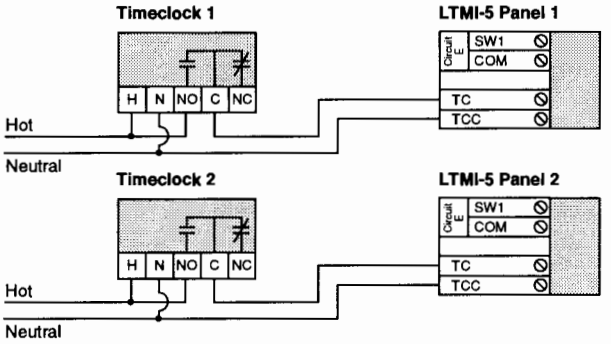


Figure J. Different timeclock for each panel

Which circuits are timeclock-controlled?
To set which circuits are controlled by the timeclock, locate the timeclock set switches (small box next to the timeclock input terminals). For each circuit to be controlled by the timeclock, move the corresponding DIP switch in this box to the **on** position (see Figure K). The circuits with DIP switches in the **off** position will not be affected by the timeclock inputs.

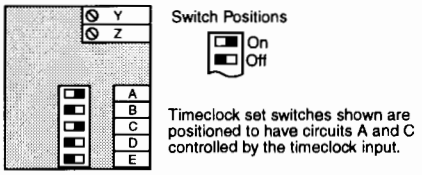


Figure K. Timeclock Set Switches

A circuit that is controlled by timeclock input will turn on when the timeclock turns on, and off when the timeclock turns off. Both local and master controls remain fully-functional after timeclock commands.

Use one of the following recommended timeclocks:

Manufacterer	Model No.	Description
Intermatic	ET100C	Solid-state, 24 hour, 8 set points
Paragon	EC7000	Solid-state, 7 day, 16 set points
Tork	E101	Solid-state, 24 hour, 14 set points
Paragon	EC71ST-N3/120	Solid-state, 24 hour, astronomical, sunrise/sunset, 2 events/day
Tork	DZS100	Solid-state, 365 day astronomical, sunrise/sunset, 48 events/week

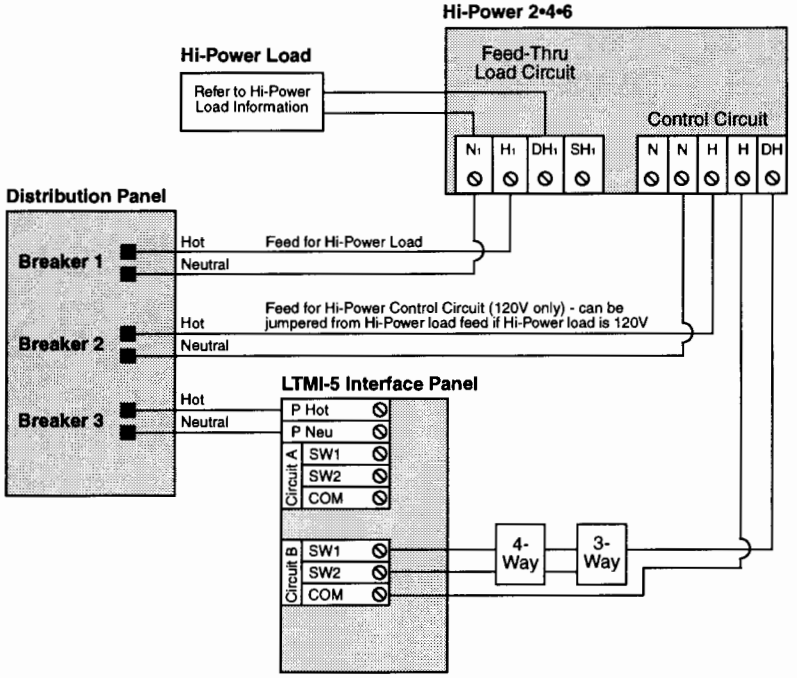
Connecting To Other Manufacturer's Equipment

Security Systems

See pages 4 and 5 for wiring diagrams.
A security system closure to the LuMaster system turns all the lights on similar to the "all on" command. Both local and master controls remain fully functional after security system inputs.

Large Load Switching

Wiring diagrams for a single LuMaster circuit.
For **switched** loads greater than 1000W, a Lutron Hi-Power 2•4•6 rated appropriately to the load should be used in conjunction with the LuMaster panel.



Operation

1. Turn main power to all circuits ON.
2. On the master control, press each of the first five buttons to toggle the lighting circuits. The status indicator next to each button will indicate whether the lights are on or off.
3. On the master control model LTMC-5M only, press the sixth button "ALL ON" to turn on all the lights simultaneously. All status indicators should turn on. Then, press the seventh button (dark gray) "ALL OFF" to turn all the lights off. All status indicators should dim.
4. Repeat steps 2 and 3 for each master control installed.
5. Verify that each dimmer and switch connected to the system functions correctly.

If any problems arise, refer to the Troubleshooting Guide (page 8).

Troubleshooting Guide

Symptom	Possible Cause	Remedy
Timeclock doesn't operate LuMaster or controls wrong circuits.	Wiring error.	•Check appropriate wiring diagram on page 6. Power must feed through timeclock.
	Timeclock set switches in wrong position.	•Check instructions on setting switches (page 6).
	Wrong type of timeclock.	•See list of recommended timeclocks (page 7).
No lights, breaker is on.	Wiring error.	•Check wiring to switches and/or dimmers. •Check wiring to line voltage terminal block in interface panel. •Check that terminals P Hot and P Neu are connected.
Breaker tripped. IMPORTANT: Do not reset breaker until wiring is thoroughly checked.	Wiring error.	•Check for hot to neutral or hot to ground short in fixtures, interface panels, switches, and/or dimmers.
	Breaker overloaded, load current greater than breaker rating.	•Reduce number of circuits on breaker to ensure that total load current is lower than breaker rating. •Reduce circuit loads to ensure that total load current is lower than breaker rating.
Master control status indicator(s) stay on.	Error in wiring switch or dimmer.	•Check switch or dimmer wiring.
	No load connected to circuit or incandescent lamp blown.	•Install or replace lamp(s). Status indicators will stay on when no load is connected to circuit.
	Breaker(s) off.	•Check all breakers wired to system.
	3-way and/or 4-way switches in circuit(s) are not in fully on or off positions.	•Ensure that all switches in circuit(s) are in fully on or off position.
Nothing happens when master control buttons are pressed.	Breaker(s) off.	•Check all breakers wired to system.
	Low-voltage (Class 2) wiring error.	•Check wiring between interface panel and master control(s).
	High-voltage (Class 1) wiring error.	•Check that terminals P Hot and P Neu are connected.
Buttons on master control(s) operate wrong circuits.	Low-voltage (Class 2) wiring to each master control incorrect.	•At each control, rewire terminals A through E for proper button/circuit assignment. Note: Terminals A through E correspond to the first five controller buttons, respectively.
Status indicator flickers or blinks randomly.	Loose wiring connection.	•Check high-voltage wiring at interface panel, dimmers, and/or switches. •Check low-voltage wiring at interface panel and master control(s).
	Insufficient load connected to circuit.	•Ensure that load is above 10W.
"ALL ON" and "ALL OFF" buttons do not function properly.	Panel Hot (terminal P Hot) in all interface panels is not connected to the same phase Hot.	•Rewire so that all interface panels have P Hot on same phase.
	Low-voltage (Class 2) wiring error.	•Check wiring between interface panel and master control(s).

Worldwide Technical and Sales Assistance

If you need assistance, call the toll-free ***Lutron Technical Assistance Hotline***:

(800) 523-9466 (U.S.A., Canada, and the Caribbean)
Other countries call: (610)-282-3800
Fax (610) 282-3090

Warranty

Lutron warrants each new unit to be free from defects in material and workmanship, and to perform under normal use and service. This warranty shall run only for a period of one year from the date of purchase and Lutron's obligations under this warranty are limited to remedying any defect or replacing any defective part and shall be effective only if the defective unit is shipped to Lutron postage prepaid within 12 months after purchase.
Damage due to abuse, misuse, inadequate wiring or insulation is not covered by this warranty.
In no event shall Lutron or any other seller be liable for any other loss or damage including consequential or special damages that may arise through the use by a purchaser or others of this device and the purchaser assumes and will hold harmless Lutron in respect of all such loss.

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