52070

LUXPRO® PSPA711a

INSTALLATION AND OPERATING INSTRUCTIONS

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WARNING: Use Energizer® or DURACELL® Alkaline Batteries Only.

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DURACELL® is a registered trademark of The Gillette Company, Inc.

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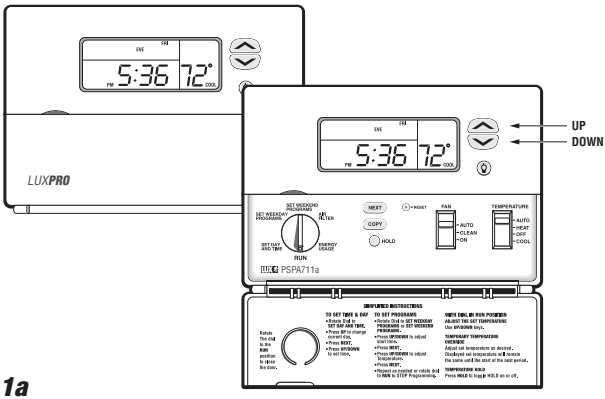


PSPA711a

COMPATIBILITY

Your **PSPA711a** is compatible with most 24 volt: 1-Heat / 1-Cool Gas, Oil, or Electric Heating and/or Cooling systems, including single-stage heat pumps. It cannot be used with: 120 volt heating systems or 3 wire zone valves. Ask your dealer for other LUXPRO® thermostats to control those systems.

2 FEATURES

- ***PSPA711a*** controls a single stage of Heat and Cooling. Terminals: RH, RC, W, Y, G, B, O, C
- Large Display
- Electro-luminescent Display Backlight
- Clean Cycle® (Patent No. 6,988,671) IAQ Independently Programmable Fan
- 7 Day Programming
- 4 Periods Per Day
- Temporary Override 1-4hr (CAT24 Residential Compliant)
- Hold
- Optional Smart Recovery
- F/C Temperature Display
- 12/24 Hour Clock
- Easy Programming with LUX Speed Dial®
- Energy Usage Monitor
- Battery Free Nonvolatile Memory For All Programs And Settings
- Auto-Changeover
- Keyboard Lockout
- Temperature Offset (User Calibration)
- System or Battery Powered (or Both)
- Adjustable Temperature Differential / Cycle Rate
- Programmable Auto-Changeover Dead-Band

3 ELECTRICAL RATINGS

- 30V maximum (24VAC nominal)
- 1.5A maximum per terminal
- 2.0A terminal sum

C A U T I O N:

Your thermostat is protected against normal static electric discharges. To minimize the risk of damaging the unit in extremely dry weather, touch a grounded metal object before touching your thermostat.

4 INSTALLATION

4.1 TOOLS REQUIRED

- #1 Phillips screwdriver (small)
- Drill with 3/16-in. (4.8mm) bit
- Wire stripper/cutter

4.2 LOCATION

On replacement installations, mount the new thermostat in place of the old one, unless the conditions listed below suggest otherwise. On new installations, follow the guidelines listed below.

- Locate the thermostat on an inside wall, about 5 ft. (1.5m) above the floor, in a room that is used often.
- Do not locate where air circulation is poor, such as in a corner or an alcove; or behind an open door.

• Do not install it where there are unusual heating conditions, such as: in direct sunlight; near a lamp, television, radiator, register, or fireplace; near hot water pipes in a wall; near a stove on the other side of a wall.
• Do not locate in unusual cooling conditions, such as: on a wall separating an unheated room; or in a draft from a stairwell, door, or window.
• Do not locate in a damp area. This can lead to corrosion that will shorten thermostat life.
• Do not install the unit until all construction work and painting has been completed.

WARNING:
- ***Read instructions carefully before removing any wiring from an existing thermostat.***
- ***Label wires before they are removed.***
- ***When removing wires from their terminals, ignore the color of the wires since they may not comply with any standard.***

4.3 REMOVAL OF OLD UNIT

1. Switch electricity to the furnace and air conditioner OFF; then proceed with the following steps.
2. Remove cover from old thermostat. Most are snap-on types and simply pull off. Some have locking screws on the side. These must be loosened.
3. Note the letters printed near the terminals. Attach labels (enclosed) to each wire for identification. Label and remove wires one at a time. Make sure the wires do not fall back inside the wall.
4. Loosen all screws on the old thermostat and remove it from the wall.

4.4 MOUNTING

5. Strip insulation 3/8 in. (9.5mm) from wire ends and clean off any corrosion.
6. Fill wall opening with non-combustible insulation to prevent drafts from affecting the thermostat.
7. With each thumb on a release tab at the bottom of the body, and fingers over the top of the unit. Release the unit from its base plate by squeezing the tabs into the body.
8. Separate the unit from its base plate by pulling the body outward at its bottom.

CAUTION:
- ***Be careful not to drop the unit or disturb electronic parts.***
- ***Leave the door closed while the body is being removed from the base.***

9. Route the wires through the open areas in the base plate above the terminals. Hold the base against the wall, with the wires coming through. Position the base for the best appearance (to hide any marks from an old thermostat). Attach the base to the wall with the two screws provided.

NOTE: If you are mounting the base to a soft material like plasterboard or if you are using the old mounting holes, the screws may not hold. Drill a 3/16-in. (4.8mm) hole at each screw location, and insert the plastic anchors provided. Then mount the base as described below.

4.5 WIRING

10. Using the terminal descriptions below, wiring diagrams on pages 10-11, and your labels, determine appropriate wiring for you system.
11. If you are unsure or need assistance, call the LUX Technical Assistance Dept.
(see **TECHNICAL ASSISTANCE**.)

4.5.1 TERMINAL DESCRIPTIONS

RH: Provides power for heating terminals.
RC: Provides power for cooling and fan terminals.
B: Energized at any time the unit is in Heat mode.
O: Energized at any time the unit is in Cool mode.
W: Energized while the thermostat is calling for heat.
Y: Energized while the thermostat is calling for cool.
G: The fan terminal is energized at any time the thermostat attempts to turn the blower on.
C: Usage of this terminal permits the thermostat to be powered by the system, instead of (or in addition to) batteries alone.

4.5.2 CONNECTING THE WIRES

12. Loosen wire clamp screws just enough to slide wire under the black top part of the clamp.
13. Connect stripped wire ends, by trapping it between its black clamp and brass terminal. Then tighten its terminal screw.
14. Tape the ends of any unused wires.

4.6 COMPLETING YOUR INSTALLATION

15. Install two new Energizer® or DURACELL® "AA" size alkaline batteries at this time. For instructions, refer to BATTERIES/MAINTENANCE.
16. Configure your thermostat at this time. Refer to SETUP OPTIONS.
17. Install your thermostat on its base. To do this hang the top of the unit by the tabs on the base, then snap the bottom of the unit into place. Do not use unnecessary force. If the body does not snap into place easily, remove the body, re-hang it from the tabs and try again.
18. Turn the power back on to your heating and/or air conditioning system.

19. Verify that the system and its fan are operating properly. When set to a high temperature, the heating system should provide warm air after a short time. Likewise a cooling system should provide cool air after a short time. Usually sound from the furnace and air conditioning units can be heard while they are running. The rush of moving air should be heard within a short time after either has been started.
20. Your installation is now complete.

5 OPERATING BASICS

5.1 UP/DOWN CHANGE KEYS

These are the two upper keys just right of the units display. They are used to adjust set temperatures, and make other setting changes.

- Pressing these keys once will adjust a setting one step in the associated direction.
- If there are many choices for a value, usually that setting will advance while holding one of these keys. Some settings though, must be changed one press at a time.

5.2 SET DAY AND TIME

To set the correct time after the unit has been unpowered or after reset:

- Open the door on the front of the thermostat.
- Rotate the dial to **SET DAY/TIME**. The abbreviation for the day of week will flash.
- Use the UP key to advance to the current day.
- Press **NEXT** to adjust the time. Time will flash.
- Use the **UP/DOWN** keys to set the time.
- Pressing **NEXT** again will toggle from Set Time to Set Day, or vice versa.
- Return the dial to its **RUN** position.

5.3 TEMPERATURE CONTROL MODES

When a unit has first been powered up with the dial in the **RUN** position, your thermostat will begin to control your heating and/or air conditioning system according to it's default program. There is a 4-position slide switch to change temperature control modes. Slide the switch to the mode you would like to use.

5.3.1 HEAT

- Use HEAT mode to control your furnace and warm your home.
- In HEAT mode, **HEAT** is displayed right of the set temperature.
- While heating is active, **HEAT** will flash

5.3.2 COOL

- Use COOL mode to control your air conditioner, cooling your home.
- In COOL mode, COOL is displayed right of the set temperature.
- While cooling is active, COOL will flash

5.3.3 AUTO CHANGE (AUTO)

- Use AUTO CHANGE mode to allow your thermostat to switch between HEAT and COOL modes automatically. Slide the mode switch to **AUTO** and **AUTO CHANGE** will be displayed above the set temperature. You can determine whether your thermostat is in HEAT or COOL mode by whether HEAT or COOL is visible in the set temperature area of the units display. Initially HEAT or COOL may not be active until a determination is made that HEAT or COOL is necessary.
- The programmed temperature for a given mode will be used as the set temperature for that mode.
- Pressing the **UP/DOWN** keys at the same time will force the unit to change modes and make the programmed set temperature the new set temperature.

5.3.4 OFF

- Slide the MODE switch to **OFF** when no heating or cooling is desired. Heating and cooling will be disabled, and the set temperature side of the display will be empty.

5.4 DEFAULT PROGRAM

- As supplied from the factory, your thermostat will use its default program for temperature control. This program and all other settings maybe restored to their default values via a SOFTWARE RESET. Please refer to DEFAULT TEMPERATURE PROGRAM for program times and temperatures.

5.5 HOLD

Hold is the simplest method to maintain fixed set temperatures.

- Press **HOLD** once to enter permanent temperature HOLD while in RUN or OVERRIDE. **HOLD** will be displayed above the set temperature in the display.
- Pressing this button again will toggle HOLD off and return to RUN and the programmed set temperature.
- Changing system mode or rotating the SPEED DIAL® will also cancel a HOLD.

5.6 OVERRIDE

During RUN, set temperatures may be temporarily altered from their programmed values. Immediately after a set temperature has been altered, the 2-hour default duration may be adjusted within the range from 1 to 4 hours. The temporary set temperature(s) will be used for the duration of the OVERRIDE.

- Press either the **UP** or **DOWN** key. The current modes set temperature will begin to flash.
- Adjust the set temperature as desired.
- After a few seconds the default 2-hour duration will flash in the time area of the display.
- Adjust the duration in 15-minute increments, from between 1 to 4 hours.
- When the duration stops flashing, the OVERRIDE has been initiated and the Set Temperature side of the display will show **OVERRIDE**
- The adjusted temperature will remain the set temperature in the current mode for the duration of the OVERRIDE. Then temperature settings return to their program values.
- OVERRIDE may be cancelled by initiating a HOLD and then canceling it, changing the position of the mode switch, or rotating the SPEED DIAL®

5.7 FAN MODES

The FAN switch controls which of three fan modes your thermostat is to use. These modes are AUTO, CLEAN, and ON.

5.7.1 AUTO

AUTO mode runs the fan only to fulfill your heating and cooling requirements.

5.7.2 ON

ON mode runs your system fan continuously.

5.7.3 CLEAN CYCLE®

LUX's Clean Cycle® allows you to program a forced air system to flow air through your system's filter, cleaning the air in your home, even when heating or cooling is not being utilized. In CLEAN mode the fan maintains the programmed minimum run time; it may run additional time as required to maintain temperature control. The algorithm used avoids additional fan time when the minimum run time has been met over the last hour through temperature control. Minimum fan run times are met by running one third the hourly requirement at twenty minute intervals. The default minimum fan run time is 15 minutes per hour.

5.8 DISPLAY ILLUMINATION

For visibility in the dark, your LUX thermostat incorporates an attractive electro-luminescent display backlight.

- Press the light bulb button right of the display to illuminate.
- Pressing this or other buttons will keep the display illuminated.

5.9 AUDIBLE BEEP

When a key is pressed, the thermostat will emit an audible beep. The beep will terminate within 1/2 second while a button is held.

6 PROGRAMMING

6.1 DEFAULT TEMPERATURE PROGRAM

As supplied from the factory, the following program will be used for temperature control in RUN MODE. This program and all other software settings maybe restored to their default values via a SOFTWARE RESET.

Period	Heat Mode	Cool Mode
Morning	6:00 AM 70°F (21°C)	6:00 AM 78°F (26°C)
Day	8:00 AM 62°F (17°C)	8:00 AM 85°F (29°C)
Evening	6:00 PM 70°F (21°C)	6:00 PM 78°F (26°C)
Night	10:00 PM 62°F (17°C)	10:00 PM 82°F (29°C)

6.2 EDITING HEAT OR COOL PROGRAMS

You can change any preset times and/or temperatures to suit your schedule for each day of the week. The four periods each day are named Morning (MORN), Day, Evening (EVE), and Night (NITE).

6.2.1 WEEKDAY PROGRAMMING

To change the HEAT or COOL program:

- Set **HEAT**, **COOL**, or **AUTO** with the mode switch
- Rotate dial to **SET WEEKDAY PROGRAMS**.

PROGRAM, **Mo**, **MORN** and **START AT** will be displayed, with the SET TIME flashing.

Programming is performed in the following order.

1 Mo Morn Start Time
2 Mo Morn Heat Set Temperature
3 Mo Morn Cool Set Temperature
4 Mo Day Start Time
5 Mo Day Heat Set Temperature
6 …and so on until Fri Nite is fully programmed at which point pressing NEXT again will begin the list at Mo Morn Start Time.

- Use the **UP/DOWN** keys to change the start time for this period. Press **UP/DOWN** buttons to change the time in 15 minute increments. Hold **UP/DOWN** button to change the time at rate of 60 minutes/second.

• One period ends at the start time of the next period. The end of one period may not be any closer to the beginning of the next period than one 15 minute increment. Moving a start time too close to the next start time results in the latter time being pushed ahead too. Press **NEXT** to accept the displayed start time and advance to the HEAT SET TEMPERATURE, it will flash to show that it may be edited.

• The HEAT SET TEMPERATURE will be displayed on the right side of the display with the **HEAT** indicator visible.

• Edit the HEAT SET TEMPERATURE, then press **NEXT** to accept and advance to the COOL SET TEMPERATURE, it will flash to show that it may be edited.

• There is a minimum value that must be maintained between the HEAT SET TEMPERATURE and COOL SET TEMPERATURE. That value is called the Dead band. Its default is 3°F. It is programmable and may be changed See ADVANCED FEATURES. If you move the heat set temperature to close to the cool set temperature the cool set temperature will move away from the heat set temperature to maintain the dead band. Conversely the heat set temperature will move if you adjust the cool set temperature too close.

• Edit the COOL SET TEMPERATURE, then press **NEXT** to accept and advance to the next period

• When you have changed the Cool set temperature to your desired the temperature, press **NEXT** to advance to the next period. Its start time will be flashing indicating that it is under edit.

• When all the periods for a day have been set, the start time for the next weekday Morning period will be displayed to begin editing the settings for that day.

• Complete programming for all weekdays and rotate the dial back to RUN to accept all current values and end the programming session.

6.2.2 WEEKEND PROGRAMMING

Weekend programming is identical to weekday programming except that you must rotate the dial to SET WEEKEND PROGRAMS and the sequence of days that you may program is Sa and Su, then repeating this two day sequence.

6.3 CLEAN CYCLE® (IAQ FAN PROGRAMMING)

Clean Cycle® programming is similar to temperature programming. It has four consecutive periods, which are independent of the four temperature periods. The default setting for your systems fans CLEAN CYCLE® program requires it to run at least 15 minutes per hour.
Default Program periods are:

Default Periods	Time
MORN	6:00 AM (6:00)
DAY	8:00 AM (8:00)
EVE	6:00 PM (18:00)
NIGHT	10:00 PM (22:00)

To edit the CLEAN CYCLE® program:

• Move Fan switch to **CLEAN**.

• Rotate the dial to **AIR FILTER**

• Press **HOLD** for 2 seconds.

• **PROGRAM**, **FAN**, **START AT**, **MO** (day) and **MORN** (period) will all be visible. Current start time will flash in time area.

Programming is performed in the following order.

1. Mo Morn Start Time
2. Mo Morn Minimum ON Time
3. Mo Day Start Time
4. Mo Day Minimum ON Time
5. …and so on until Sun Night is fully programmed at which point pressing **NEXT** again will begin the list at Mo Morn Start Time.

• Press **UP/DOWN** to change start time for this period in 15 minute increments. Hold **UP/DOWN** button to change the time at rate of 60 minutes/second

• Press the **NEXT** to accept the start time, and advance to set minimum fan on time per hour. Current minimum fan run time will flash with **MIN/HR**.

• Press **UP/DOWN** to alter the minimum ON Time setting by 3 minutes. Time can be adjusted from 0 to minutes to 60 minutes in increments of 3 minutes. Set 0 **MIN/HR** to allow **AUTO** control for particular periods while **CLEAN** is used in others. Set the fan duration to 60 **MIN/HR** to run the fan continuously for this period.

• Press **NEXT** to advance to the next period. After the four program periods of day have been programmed,, pressing **NEXT** will advance to the following days **MORN** period.

• One period ends at the start time of the next period. The end of one period may not be any closer to the beginning of the next period than one 15 minute increment. Moving a start time to close to the next start time results in the latter time being pushed ahead too.

• Rotate the dial away from the **SET FAN PROGRAMS/AIR FILTER** position to exit fan programming.

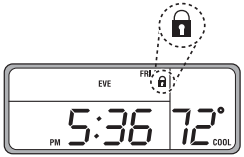
6.4 COPY

Pressing **COPY** will copy the previous days temperature or fan program into the current day and advance the thermostat to the beginning of next day.

7 ADVANCED FEATURES

7.1 KEYBOARD LOCK

This sequence of keys will lock and unlock all settings and programs. When locked, a padlock icon will be visible above the time / temperature area of the display.



7.2 FILTER MONITOR

Your thermostat can alert you that your system's air filter should be changed, by displaying **FILTER** in the time temperature display area once the system's fan has run the number of hours specified by this setting's limit. The presence of the word **FILTER** on the screen will not effect the operation of the thermostat. If equipped, the filter is located in your heating/cooling equipment.

7.2.1 FILTER USAGE

To view the number of hours the thermostat has activated the fan since the last timer reset:

- Rotate the dial to the **AIR FILTER** position. The current filter usage will be shown with **HRS FILTER**
- To reset the timer to 0. press **UP** or **DOWN** once. Pressing **UP** or **DOWN** again will toggle between 0 and the current value. The value in display when you exit this mode will be the value retained in memory. Leave the value at 0 to reset the timer.
- To exit the **AIR FILTER** mode, rotate the dial to another position.

7.2.2 FILTER LIMIT

This general rule will provide you with a good estimate of your filter's life in hours. Assume that the fan will run at 1/3 duty cycle or 8 hours per day. Common 90 day filters are then good for 90*24/3=720 hours of use. This is the default limit value. Setting the filter counter limit to 0000 will disable the change filter indicator. Valid entries are from 0 to 2000hrs.

To set the number of hours of filter use before replacement is indicated:

- Rotate the dial to the **AIR FILTER** position. The current filter usage will be shown with **HRS FILTER**
- Hold **NEXT** for 2 seconds. The Filter limit will be displayed.
- Refer to your Air Filter package to determine your filters recommended life. If given in days, multiply by 8 to find the recommended setting in hours of filter usage.
- Use **UP/DOWN** keys to adjust the filter limit in 10 hour increments to the recommended value.
- Rotate the dial to **RUN** finish this setting.

7.3 ENERGY USAGE

Your thermostat records the total number of hours the thermostat has activated heating and cooling with six separate timers. They measure:

- Today's cumulative heating time
- Yesterdays cumulative heating time
- Total cumulative heating time
- Today's cumulative cooling time
- Yesterdays cumulative cooling time
- Total cumulative cooling time

To view **HEAT** or **COOL** energy usage:

- Slide the mode switch to **HEAT** or **COOL**.
- Rotate the dial to the **ENERGY USAGE** position, to review today's usage. **HRS USAGE**, **Mode** and **Current Day** are all shown along with the usage value.
- Press **NEXT** to review yesterday's usage.
- Press **NEXT** again to review Total usage. The Total timer may be changed to zero by pressing **UP** or **DOWN** while Total time is displayed. To restore count, press **UP** or **DOWN** again.
- To finish review and/or reset of this modes energy monitor, rotate the dial to another mode, the current values will be the values retained in memory. Leave the value at 0 to reset the cumulative timer.

7.4 CALIBRATION OFFSET

Your thermostat is accurately calibrated at the factory to within ±1°F An offset value up to ±5°F may be added to the temperature value that the thermostat measures. This may allow you to match this thermostat to another. To change this offset from its default value of 0:

- Open the door on the front of the thermostat.
- Rotate the dial to **SET DAY/TIME**.
- Simultaneously press **NEXT** and **HOLD**. The Temperature Offset value will flash.
- Use the **UP/DOWN** keys to adjust the offset value.
- Return the dial to its **RUN** position to accept the new value.

7.5 RESET

Your thermostat has two RESET buttons. The Software RESET is on the front of the thermostat behind the door. It is labeled **RESET**. HARDWARE RESET is on the rear of the circuit board.

7.5.1 HARDWARE RESET

Use this small white button labeled **H_RST** after changing Setup Option Jumper positions to effect the changes. The Hardware RESET turns Heat, Air and Fan off, resets the units' clock, and reads the Setup Option jumper positions, before initiating normal operation.

7.5.2 SOFTWARE RESET

Use this feature to make all settings and programs their default values The Software RESET button turns Heat, Air and Fan off, resets the units' clock, and reads the Setup Option jumper positions. It then makes all settings and programs their default values before initiating normal operation.

N O T E: Pressing this button will overwrite your program and install the default values of all temperature programs and setup values into the unit's nonvolatile memory. To ease reprogramming later, record your thermostat's programs and settings in the table provided before using this button. (See Page 12.)

7.6 TEMPERATURE VARIATION / SWING

Your thermostat works by turning your heating or cooling system on and off whenever the room temperature varies a certain number of degrees from the set-point temperature. This variation is the "swing." Your system should cycle on about 3 to 6 times per hour. A smaller swing number increases the number of cycles, so room temperature is more constant. A larger swing number decreases the number of cycles, saving energy in most cases.

7.6.1 SWING 1 - 1st STAGE

This setting controls when the heating or cooling turns on and off.

- Swing 1 sets the temperature variation that the system allows above and below the set temperature before switching the heating or cooling unit on and off.

To change this value:

- Rotate the **SPEED DIAL**® to **ENERGY USAGE**
- Press **NEXT** and **HOLD** simultaneously. The Temperature section of the display shows **SET TEMP SWING** and **1** denoting that you are setting **SWING 1**. The Time section flashes the current setting.
- Select one of the 9 values from 025 to 225 with the **UP/DOWN** buttons. The smallest setting of 025 provides the most accurate temperature control, and the system will cycle on/off the most frequently. The largest setting of 225 provides the widest temperature differential, and the system will cycle on/off less frequently.
- Return the **SPEED DIAL**® to **RUN**

7.7 DEAD BAND

When using Auto-Changeover, dead band provides a disallowed temperature range between the maximum heat set temperature and minimum cool set temperature. dead band may be set from 1 to 6 degrees. With auto-changeover active, dead band set to 3°F and heat set to 70°F the minimum allowed cool set temperature will be 73°F. If the cool set temperature is lowered, then the heat set temperature will be lowered by the same amount maintaining the 3°F dead band.

To change this setting:

- Set **SPEED DIAL**® to **RUN**
- Set MODE to **AUTO**
- Press **NEXT** and **COPY** simultaneously for 2 seconds. The display shows **SET DEAD BAND**, while the Time/Temperature section flashes the current setting.
- Use **UP/DOWN** keys to adjust the DEAD BAND in 1 degree increments.
- Press and release **NEXT** to return to **RUN**. Or, after 30 seconds the unit will automatically revert to **RUN** mode.

8 SETUP OPTIONS

There are five jumpers; each controls a setting depending on its position. Jumpers are located on the rear of the thermostats circuit board. For reference there a table of settings and jumper positions printed there as well. They are described here from J3, the rightmost jumper, to J7, the leftmost jumper.

8.1 MINIMUM RUN TIME J3

The position of J3 sets the minimum length of time that the thermostat must remain with **HEAT** or **COOL** either On or Off, before it will automatically switch to the alternate On or Off state. This Delay prevents rapid cycling of your system and provides equipment protection for cooling units. Switch position OFF is a 5 minute delay, and ON is a 2 minute delay. 5 minutes is the default setting, and is good for most applications. If you feel that your system is trying to cycle more rapidly than every 5 minutes, you may try the 2 minute setting.

8.2 CLOCK FORMAT J4

The time shown on the thermostats clock may be displayed in 12 or 24-hour format. Set this option to your preference.

8.3 TEMPERATURE DISPLAY FORMAT (F/C DISPLAY) J5

Temperature may be displayed in Fahrenheit or Celsius with this option.

8.4 SMART RECOVERY J6

Smart Recovery allows your HVAC system to attempt to recover from a setback period and reach your desired comfort temperature by the beginning of your programmed comfort period. This jumper allows you to choose whether to use Smart Recovery.

- An initial Smart Recovery will start 1/2 hour before the programmed comfort temperature.
- Maximum Smart recovery time is one hour.
- If enabled, Smart Recovery will initiate if:
- Recovery is valid, from an evening setback to morning comfort or day setback to evening comfort period
- In Heat mode the set temperature of the comfort period must be higher than the setback period
- In Cool mode the set temperature of the comfort period must be lower than the setback period

8.5 GAS/ELECTRIC MODE J7

This setting changes how the system's blower fan (if applicable) is controlled while in HEAT mode, and with the Fan switch in the AUTO position. This setting does not affect fan operation while in COOL mode. When set to "Gas", the fan is controlled solely by the heating system itself. When set to "Electric", the fan is controlled directly by the thermostat. NOTE: If your blower fan does not operate properly after installation, move the Gas / Electric option to the "Electric" setting.

8.6 REPOSITIONING JUMPERS

Use the table on Page 12 to determine the jumper position corresponding to the option you desire. The table is also printed on the circuit board. If necessary change the jumper position by pulling it straight off the pins it covers. Replace the jumper over one pin for OPEN, or both pins for CLOSED. When all changes have been made, press the **Hardware Reset Button**. See HARDWARE RESET.

These jumpers are located inside the thermostat on the rear of its circuit board. To access them remove the unit from the wall by pressing up on the thumb latch at the bottom of thermostat, and swinging the body up and away to separate them.

To change a setting, the jumper must be repositioned and a Hardware reset must be performed. See HARDWARE RESET.

9 BATTERIES/MAINTENANCE

Depending on your installation, your unit may require batteries to control your HVAC system. Replace your thermostats batteries at least once a year or when the battery symbol appears in the display.

9.1 BATTERY INSTALLATION

1. Remove fresh batteries from their carton.
2. Remove body of thermostat from the wall as described in installation.
3. Remove the used batteries if present and replace them within 90 seconds to avoid having to reset the day and time.
4. Install two new "AA" size Energizer® or Duracell® alkaline batteries. Observe the polarity marking shown in the battery compartment.

W A R N I N G:

Replace your thermostat's batteries with new Energizer or Duracell alkaline batteries at least once a year or when the battery symbol appears in the display. Use of high quality alkaline batteries is absolutely required for your thermostat to operate properly.

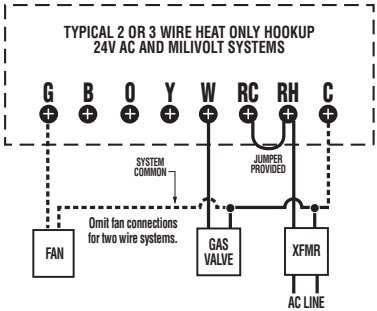
5. Re-hang on it's base plate as described in installation.

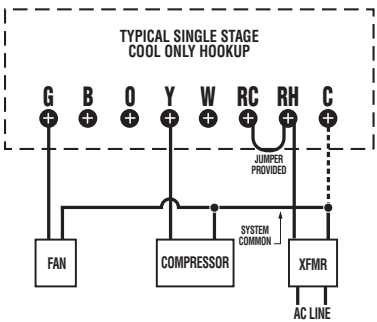
10 TECHNICAL ASSISTANCE

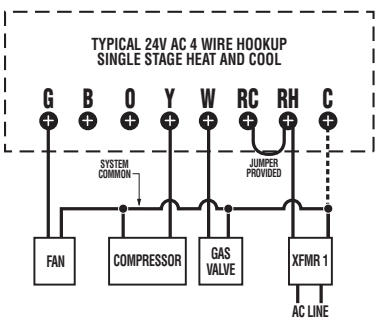
If you have any problems installing or using this thermostat, please carefully and thoroughly review the instruction manual. If you require assistance, please contact our Technical Assistance Department at 856-234-8803 during regular business hours between 8:00AM and 4:30PM Eastern Standard Time, Monday through Friday. You can also receive technical assistance online anytime day or night at **http://www.luxproproducts.com.** Our web site offers you answers to the most common technical questions, and also permits you to email your questions to our technical support staff at your convenience.

11 WARRANTY

Limited Warranty: If this unit fails because of defects in materials or workmanship within three years of the date of original purchase, LUX will, at its option, repair or replace it. This warranty does not cover damage by accident, misuse, or failure to follow installation instructions. Implied warranties are limited in duration to three years from the date of original purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Please return malfunctioning or defective units to the location from which the purchase was made, along with proof of purchase. Please refer to "TECHNICAL ASSISTANCE" before returning thermostat. Purchaser assumes all risks and liability for incidental and consequential damage resulting from installation and use of this unit. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Applicable in the U.S.A. and Canada only.



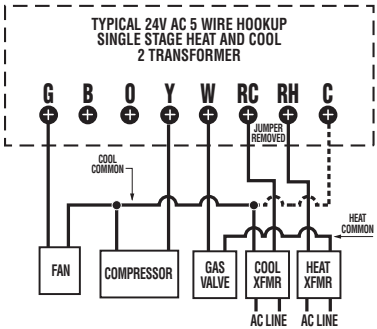


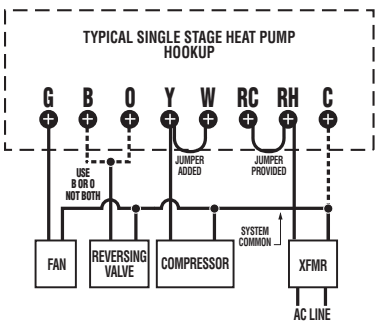


WIRING DIAGRAM NOTES

1. Dashed lines are optional.
2. Optional common wire allows system to power thermostat.
3. Use "B" or "O" wire - but not both in heat pump systems. Generally neither are required in a conventional system.
4. If "Y" and "C" wires are both present, then "C" is a common wire.
5. If a "B" wire in your system is a common wire then connecting it to the B terminal may cause damage to your system.

WARNING: THIS IS A LOW VOLTAGE THERMOSTAT (24 volts). A SERIOUS RISK OF FIRE EXISTS IF YOU CONNECT THIS THERMOSTAT TO A LINE VOLTAGE APPLICATION (typically 115 or 230 volts). IF UNCERTAIN ABOUT THE VOLTAGE CONSULT A PROFESSIONAL ELECTRICIAN.





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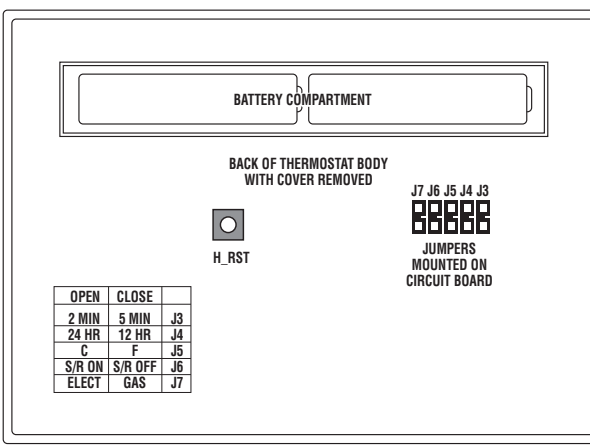
13 USER PROGRAM TABLE

To ease reprogramming later, record your thermostat's programs and settings in the table provided below.

DAY	PERIOD	HEAT		COOL	
		TIME	TEMP.	TIME	TEMP.
MON	MORN				
	DAY				
	EVE				
	NIGHT				
TUES	MORN				
	DAY				
	EVE				
	NIGHT				
WED	MORN				
	DAY				
	EVE				
	NIGHT				
THURS	MORN				
	DAY				
	EVE				
	NIGHT				
FRI	MORN				
	DAY				
	EVE				
	NIGHT				
SAT	MORN				
	DAY				
	EVE				
	NIGHT				
SUN	MORN				
	DAY				
	EVE				
	NIGHT				

14 JUMPER TABLE



OPEN	CLOSE	
2 MIN	5 MIN	J3
24 HR	12 HR	J4
C	F	J5
S/R ON	S/R OFF	J6
ELECT	GAS	J7

MERCURY WARNING AND RECYCLING NOTICE:

Mercury is considered to be a hazardous material. If this product is replacing a thermostat that contains mercury in a sealed tube, contact your local waste management authority for instructions regarding recycling and proper disposal. It may be unlawful in your state to place it in the trash.