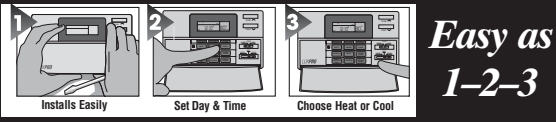


# INSTALLATION AND OPERATING INSTRUCTIONS

## LUXPRO PSP700 SERIES SMART TEMP<sup>®</sup> ELECTRONIC THERMOSTAT



Complete, Easy To Read Programming And Installation Instructions Inside  
LUX PRODUCTS CORPORATION • Mt. Laurel, New Jersey 08054 USA 4321-05

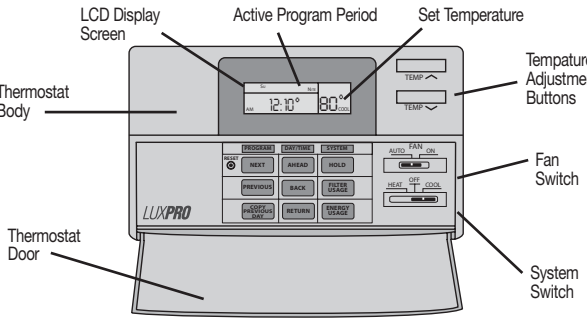
**WARNING: Use Energizer<sup>®</sup> or DURACELL<sup>®</sup> Alkaline Batteries Only.**  
Energizer<sup>®</sup> is a registered trademark of Eveready Battery Company, Inc.  
DURACELL<sup>®</sup> is a registered trademark of The Gillette Company, Inc.

# IMPORTANT!

READ  
INSTALLATION  
INSTRUCTIONS  
FIRST

Thank you for your confidence in our product. To obtain the best results from your investment, please read these instructions and acquaint yourself with your purchase before installing your new thermostat. Then follow the installation procedures, one step at a time. This will save you time and minimize the chance of damaging the thermostat and the systems it controls. These instructions may contain information beyond that required for your particular installation. Please save for future reference.

## FEATURES



- The Unit can be used with most 24 volt gas, oil or electric heating and air conditioning systems, single-stage heat pumps or gas millivolt heating systems. It cannot be used with 120 volt heating systems or multistage heat pumps. Ask your dealer for other LUX thermostats to control those systems.
- The Unit is programmable. There are four programming periods per day. Each period can be programmed separately.
- You can use the built-in time/temperature programs, or alter them to suit your schedule. The Unit provides separate programming for every day of the week- for both heating and cooling. You can override the programmed temperatures for as little as one programming period or for an entire vacation.
- In cool weather, when the system switch is set to HEAT, the Unit will maintain cooler "set back" room temperatures to save energy. It will then change to warmer "comfort" settings - all automatically, at specified times during the day.
- In warm weather, when the system switch is set to COOL, the Unit will maintain warmer "set back" room temperatures to save energy. It will then change to cooler "comfort" settings - all automatically, at specified times during the day.
- A large liquid crystal display shows time, day of the week, and room and set temperatures. It will remind you when the filter should be changed in your blower and track your system's energy usage.
- Temperature swing adjustment lets you fine-tune your system for maximum comfort and economy.
- A 4-minute minimum on/off time in COOL prevents your air conditioning system from being damaged.
- Two Energizer<sup>®</sup> or DURACELL<sup>®</sup> "AA" alkaline batteries (not included) are used to retain your time and temperature programs.

## CAUTION

- Your thermostat is a precision instrument. Please handle it with care.
- Turn off electricity to the appliance before installing or servicing thermostat or any part of the system. Do not turn electricity back on until work is completed.
- Do not short (jumper) across electric terminals at control on furnace or air conditioner to test the system. This will damage the thermostat and void your warranty.
- All wiring must conform to local codes and ordinances.
- This thermostat is designed for use with 24 volt and millivolt systems. The thermostat should be limited to a maximum of 1.0 amps; higher amperage may cause damage to the thermostat. If you are in doubt, call your utility company.

## INSTALLATION

### CAUTION

To avoid electrical shock and to prevent damage to the furnace, air conditioner, and thermostat, disconnect the power supply before beginning work. This can be done at the fuse box, at the circuit breaker, or at the appliance.



Please read this ENTIRE instruction manual carefully and completely before beginning your thermostat installation.

### TOOLS REQUIRED

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

### THERMOSTAT 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, and in a room that is used often.
- Do not install it where there are unusual heating conditions, such as: in direct sunlight; near a lamp, radio, 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 locate where air circulation is poor, such as: in a corner or an alcove; or behind an open door.
- Do not install the unit until all construction work and painting has been completed.
- This thermostat does not require leveling.

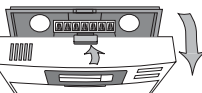
### REMOVING THE OLD THERMOSTAT

Switch electricity to the furnace and air conditioner OFF; then proceed with the following steps.

- 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.
- Note the letters printed near the terminals. Attach labels (enclosed) to each wire for identification. Remove and label wires one at a time. Make sure the wires do not fall back inside the wall.
- Loosen all screws on the old thermostat and remove it from the wall.

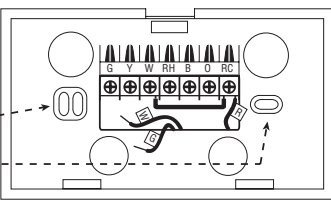
### MOUNTING THE UNIT ON THE WALL

- Strip insulation 3/8 in. (9.5mm) from wire ends and clean off any corrosion.
- Fill wall opening with non-combustible insulation to prevent drafts from affecting the thermostat.
- While holding thermostat, press button on TOP of the housing and swing the front down and away from the back plate to separate the front and back portions.



## CAUTION

Be careful not to drop the body or disturb electronic parts. Leave the cover closed while the body is being removed from the base.

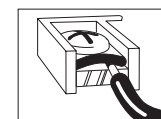


### NOTE

If you are mounting the base to a soft material like plaster-board 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.

### Attaching Wires

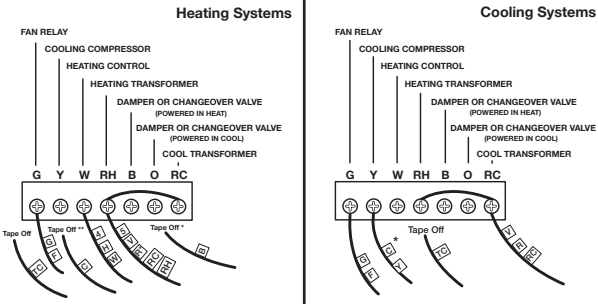
- Hold the base against the wall, with the wires coming through wherever it is convenient for wiring. Route the wires to below the terminal block. Position the base for best appearance (to hide any marks from an old thermostat). An optional wall plate is included for covering old mounting holes. Attach the base to the wall with the two screws provided.



## CAUTION

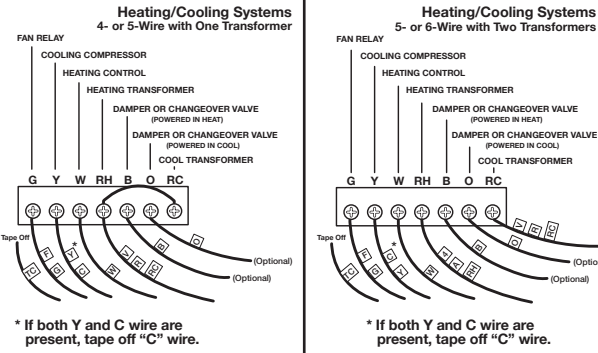
Do not allow wires to touch each other or parts on thermostat. Wires must be trapped between black spacer and brass terminal. Also, be sure to tighten securely all 7 electrical terminal screws.

### WIRING DIAGRAMS



\* If replacing a Honeywell TM-11, tape off wire "R"; connect wire "B" to terminal "RH."  
\*\* If replacing a Honeywell thermostat with a clock wire "C," tape off wire "C"

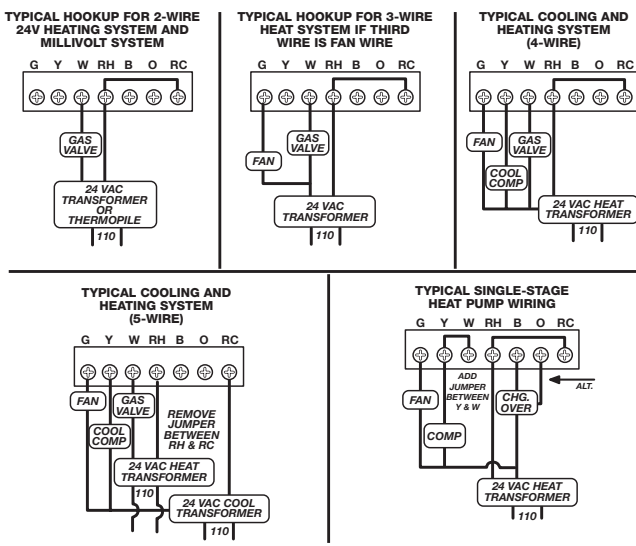
\* If both Y and C wire are present, tape off "C" wire.



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These diagrams below are provided for new installations or unreferenced wires.



### BLOWER FAN

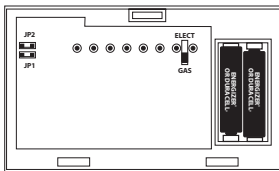
There is a switch on the back of the circuit board which has (2) positions, GAS and ELECTRIC. Choose the GAS switch position to have your furnace control the fan operation while in heat mode, or choose the ELECTRIC switch position to have the thermostat control the fan operation while in heat mode.

### NOTE

If you have an electric system and the blower does not operate after installation, find the electric/gas heat selector on the back of the body. Move the selector to the ELEC position.

### INSTALLING BATTERIES

The Unit requires batteries to operate your furnace and retain its programming in memory. Replace the batteries when the REPLACE indicator appears in the display or at least once a year.



**WARNING: Use Energizer<sup>®</sup> or DURACELL<sup>®</sup> Alkaline Batteries Only.**

### NOTE

When replacing batteries, you have approximately 1 minute before the programs are lost.

### REPLACE BATTERIES WHEN THE "REPLACE" INDICATOR APPEARS

- Remove fresh batteries from their package.
- Remove body of thermostat as described earlier.
- Remove existing batteries if they are being replaced.
- Install two new Energizer<sup>®</sup> or DURACELL<sup>®</sup> "AA" size alkaline batteries in the battery compartment. OBSERVE THE POLARITY MARKINGS SHOWN.
- Place body back on the wall. Hook the bottom of the body onto the base, swing the body up and in, and snap the body onto the base.

Installation is now complete. Be sure to turn the power back on to your heating and /or air conditioning system. If this is the first time you are installing batteries, the thermostat will display "SUN 12:00 AM". Within 90 seconds the thermostat will begin to display the room temperature alternately with the time. To correct the display, see "Setting the TIME and DAY," after you set the programs.

## OPERATION

This thermostat is "armchair programmable" You can make any program or setting change with the thermostat body on or off the wall.

The Unit alternately displays the current time and room temperature. It also displays the day of the week and the currently active program period that is controlling the temperature: MORN, DAY, EVE, or NITE.

The set point temperature will appear in the right side of the display. In the winter, set the system switch to HEAT to control your heating system. In the summer, set the switch to COOL to control your air conditioner. In spring and fall or when windows are open, you can set the system switch OFF.

Setting the FAN switch to AUTO automatically runs your system's fan during heating and cooling. Setting the FAN switch to ON runs your system's fan continuously even without heating or cooling.

### NOTE

The FAN switch works only if your system provides a wire for the Unit's "G" terminal.

### THE BUILT IN TEMPERATURE PROGRAMS

Push in the RESET key. This sets the built-in heating and cooling programs. To review the built-in programs, press NEXT or PREVIOUS repeatedly; when you are done, press RETURN.

You can use the built-in programs as shown, or change them as you wish. Each day is divided into four periods. Each period has its own starting time and temperature.

### PROGRAMMING THE UNIT

You can change any preset times or temperatures to suit your schedules for the Weekday, Saturday or Sunday programs. Each period (Morning, Day, Evening, and Night) is programmed separately for HEAT and COOL. On the System Switch, select HEAT mode to program the heating values, and select COOL mode to program the cooling values.

**NOTE**  
HEAT and COOL may have different temperatures.

	PERIOD	HEAT	COOL
MON-FRI (Weekday) preprograms	MORN	6:00 AM 70°	6:00 AM 75°
	DAY	8:30 AM 60°	8:30 AM 85°
	EVE	3:00 PM 70°	3:00 PM 75°
	NIGHT	11:00 PM 65°	11:00 PM 80°

	PERIOD	HEAT	COOL
SAT-SUN (Weekend) preprograms	MORN	6:00 AM 70°	6:00 AM 75°
	DAY	6:15 AM 70°	6:15 AM 75°
	EVE	3:00 PM 70°	3:00 PM 75°
	NIGHT	11:00 PM 65°	11:00 PM 80°

- NEXT** To start programming, and to advance the display to the next program period (e.g., Mo).
- BACK** To change the start time for the displayed period (e.g., MORN).
- TEMP UP** To change the temperature setting for the displayed period.
- NEXT** To move to the next period (e.g., DAY).
- BACK** To change the start time for DAY.
- TEMP UP** To change the temperature setting for DAY.
- NEXT** To move to EVE.
- TEMP UP** To change the start time for EVE.
- NEXT** To move to NITE.
- BACK** To change the temperature setting for NITE.
- TEMP UP** To change the temperature setting for NITE.
- NEXT** To move to the next day (e.g., DAY).
- BACK** To change the start time for DAY.
- TEMP UP** To change the temperature setting for DAY.
- NEXT** To move to EVE.
- TEMP UP** To change the start time for EVE.
- NEXT** To move to NITE.
- BACK** To change the temperature setting for NITE.
- TEMP UP** To change the temperature setting for NITE.
- NEXT** To move to the next day (e.g., Tu).
- BACK** To change the start time for DAY.
- COPY PREVIOUS DAY** To copy all four of the previous day's programs into the current day. This also automatically advances the display to the following day.
- PREVIOUS** To view and change settings for the previous program period.
- RETURN** To store all changes (This will occur automatically if no buttons are pressed for 20 seconds).

### SETTING THE TIME AND DAY

Open the drop down door on the front of the thermostat. Press the AHEAD button. You should see a day of the week (e.g., "MO") flashing in the display. When you finish setting the correct time and day of the week, press the RETURN button to store your changes.

**AHEAD** To change the current day.

**NEXT** To set the current time. The time (e.g., "6:28") will be flashing.

**AHEAD** **BACK** Use both of these to change the current time.



### TEMPORARY TEMPERATURE OVERRIDE

This feature lets you temporarily change the current set temperature without changing the programs stored in your thermostat's memory. This setting is considered "temporary", because the stored program temperature will again take over at the next scheduled program period.

Use the Temp UP and Temp DOWN buttons to initiate the temporary override. The word "Override" will be displayed on the screen while this is in effect (as shown to the right).



Note: If you have already altered the set temperature, and then use the Temp UP and Temp DOWN buttons to return the set tempore to the same value as the current program temperature, the override will be terminated and the "Override" indicator on the screen will turn off. An override may also be canceled by pressing the RETURN button.

### MANUAL TEMPERATURE HOLD

This feature lets you manually change the current set temperature for an indefinite amount of time without having to change the programs stored in your thermostat's memory. This will, in effect, make the thermostat "act" like a non-programmable unit as long as it remains in the HOLD mode.

To initiate a Manual Temperature Hold, start by changing the set temperature using the Temp UP and Temp DOWN buttons to your desired "holding" temperature (just as in a temporary temperature override above). Now press the HOLD button. The word "Hold" will be displayed on the screen while this is in effect (as shown in the drawing to the right). While Hold is being shown on the screen, the temperature will remain at the set temperature until the hold is canceled by the user.



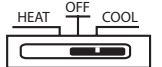
To cancel an existing hold, you can either push the HOLD button again, or push the RETURN button. When the "Hold" indicator disappears from the screen, the hold will be canceled and the thermostat will be back in normal "Run" mode and follow the programs stored in memory.

## ADVANCED FEATURES

### ENERGY USAGE MONITOR

A timer in the thermostat records your systems' ON time for the current day, the previous day, and also cumulatively to let you see the effects of your temperature settings and varying weather conditions.

Select HEAT mode to monitor heating energy usage, OR Select COOL mode to monitor cooling energy usage.



To view the first usage monitor. The current day (e.g., "Fr") will appear. The "Usage" and "H" indicators will appear on the screen. The time displayed indicates the total Energy Usage just for today. Below is an example of the screen while displaying the Energy Usage monitor.



- NEXT** To display yesterday's total Energy Usage.
- NEXT** To display the total Energy Usage since the usage monitor was last reset back to zero.
- AHEAD** To reset display to 000.
- AHEAD** To undo the previous "reset display to 000"
- RETURN** To store all changes (This occurs automatically if no buttons are pressed for 20 seconds.)

### FILTER USAGE MONITOR

The FILTER Monitor counts the hours since the filter in your blower fan unit was last changed. After 250 hours of use, "Filter" will appear in the display. After you change the filter, set the thermostat's FILTER Monitor back to zero as follows.



- FILTER USAGE** To display the Filter Usage Monitor.
- AHEAD** To reset the display to 000.
- AHEAD** To undo the previous "reset display to 000"
- RETURN** To return to Run mode (This occurs automatically if no buttons are pressed for 20 seconds.)
- TO CHAGE THE Filter Usage Monitor limit:**
- FILTER USAGE** Hold this button down for 3 seconds to display the Filter Usage Monitor Limit value.
- AHEAD** **BACK** To adjust the limit value to between 100 and 500 hours.
- RETURN** To store all changes (This occurs automatically if no buttons are pressed for 20 seconds.)

### TEMPERATURE SWING

A 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 amount of variation above and below the set point is called the "swing" amount.

Your system should cycle on approximately 3 to 6 times per hour. A smaller swing number setting increases the number of cycles per hour, which has an end result of making the room temperature more constant and precise.

A larger swing number setting decreases the number of cycles per hour. This will make the room temperature vary a larger, however this will provide an energy savings in most cases.

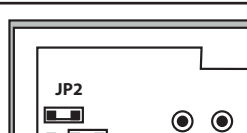


- TEMP UP** **TEMP DOWN** Use these two buttons to change the Temperature Swing value (Range: #1 - #9).
- RETURN** To store all changes (This occurs automatically if no buttons are pressed for 20 seconds.)

### ADDITIONAL OPTIONS: °F TO °C DISPLAY, AND 12HR TO 24HR CLOCK

### NOTE

Making these changes will require you to reset the thermostat after making the change. Please write down any heating or cooling program times or temperatures that you may have stored in memory as these will be lost during the reset.



Remove the front half of the thermostat on the back plate. Looking at the upper-left of the circuit board on the rear of the unit, there will be two jumper caps which are labeled "JP1" and "JP2" (as shown in the drawing to the right).

To change °F to °C, remove the bottom jumper (JP1). To change 12HR to 24HR, remove the top jumper (JP2). Once finished, press the small "RESET" button to the left of the keypad buttons for changes to take effect. Reprogram any time or temperature settings as needed.

### TECHNICAL SERVICE

If you have any problems installing or using this thermostat, please carefully and thoroughly review the instruction manual again. 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 at http://www.luxproducts.com anytime day or night. 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.

### WARRANTY

Limited Warranty: If this unit fails because of defects in materials or workmanship within one year from 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 one year from date of purchase. Some states do not allow limitations on how long an implied warranty last, so the above limitation may not apply to you. Please return malfunctioning or defective units to the participating retailer from which purchase was made, along with proof of purchase. Please refer to Technical Service Section 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. only.