INSTALLATION AND OPERATING INSTRUCTIONS

LUX ❄ TX500b SERIES

SMART TEMP® ELECTRONIC THERMOSTAT

1 Installs Easily **2** Set Day & Time **3** Choose Heat or Cool

Easy as 1-2-3
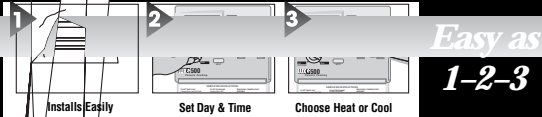
Complete, Easy To Read Programming And Installation Instructions

LUX PRODUCTS CORPORATION • Mt. Laurel, New Jersey 08054, USA

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

52016

ENERGY STAR

IMPORTANT!

READ THE INSTALLATION INSTRUCTIONS FIRST.

Thank you for your confidence in our product. To obtain the best results from your investment, please read this manual 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.
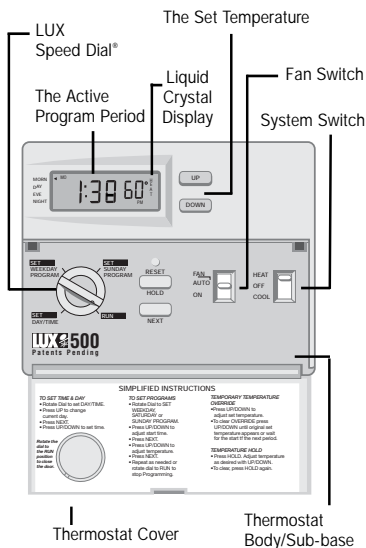
FEATURES

...can be used with most 24 ...il or electric heating and air ...ng systems or gas millivolt ...ms. It cannot be used ...t heating systems or heat ... your dealer for other LUX ...to control those systems.

...TX5...programmable. There ...ming periods per day. ...per...be programmed ...rate...

...can...built-in time/ ...pera...rams, or alter ...m to s...chedule. The ...00 pro...rate programming ...weekd...kends — for both ...ating a...u can override the ...gramm...es for as little as one ...gramm...r an entire vacation.

In cool w......ystem switch is set to HEAT, the TX500 will maintain cooler "set back" ...oom temp...nergy. It will then change to warmer "comfort" settings - all automatically, at ...specified t...

In warm v......tem switch is set to COOL, the TX500 will maintain warmer "set back" room ...temperatu...ll then change to cooler "comfort" settings - all automatically, at specified ...times duri...

A large liq......ime, day of the week, and room and set temperatures.

5/2 Minut......n/Off Time for Short Cycle/Compressor Protection.

Two Energ......aline batteries (not included) are used to retain your time and ...temperatur...

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

CAUTION
• Your therm...dle it with care.
• Turn off ele...vicing thermostat or any part of the system. Do not tur...
• Do not sho...ace or air conditioner to test the system. Th...
All wiring m...
This therm...mostat should be limited to a ...mostat. If you are ...n doubt, c...

The Set Temperature / LUX Speed Dial® / The Active Program Period / Liquid Crystal Display / Fan Switch / System Switch

MORN DAY EVE NIGHT   1:38 60°F PM

UP / DOWN

SET WEEKDAY PROGRAM / SET SUNDAY PROGRAM / RESET / HOLD / NEXT / SET DAY/TIME / RUN

FAN AUTO ON / HEAT OFF COOL

LUX C500 Patents Pending

SIMPLIFIED INSTRUCTIONS

TO SET TIME & DAY
• Rotate Dial to set DAY/TIME.
• Press UP to change current day.
• Press NEXT.
• Press UP/DOWN to set time.

TO SET PROGRAMS
• Rotate Dial to SET WEEKDAY, SATURDAY or SUNDAY PROGRAM.
• Press UP/DOWN to adjust start time.
• Press NEXT.
• Press UP/DOWN to adjust temperature.
• Press NEXT.
• Repeat as needed or rotate dial to RUN to stop Programming.

TEMPORARY TEMPERATURE OVERRIDE
• Press UP/DOWN to adjust set temperature.
• To clear OVERRIDE press UP/DOWN until original set temperature appears or wait for the start if the next period.

TEMPERATURE HOLD
• Press HOLD. Adjust temperature as desired with UP/DOWN.
• To clear, press HOLD again.

Rotate the dial to the RUN position to close the door.

Thermostat Cover | Thermostat Body/Sub-base

INSTALLATION

Please read all instructions carefully before beginning 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.

1. Locate the thermostat on an inside wall, about 5 ft. (1.5m) above the floor, and in a room that is used often.
2. 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.
3. 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.
4. Do not locate in a damp area. This can lead to corrosion that will shorten thermostat life.
5. Do not locate where air circulation is poor, such as: in a corner or an alcove; or behind an open door.
6. Do not install the unit until all construction work and painting has been completed.
7. This thermostat does not require leveling.

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.

OFF

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

1. 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.

2. 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.

3. Loosen all screws on the old thermostat and remove it from the wall.

CAUTION
Read instructions carefully before removing any wiring from existing thermostat. Wires must be labeled before they are removed. When removing wires from their terminals, ignore the color of the wires since these may not comply with the standard.

MOUNTING THE TX500 ON THE WALL

1. Strip insulation 3/8 in. (9.5mm) from wire ends and clean off any corrosion.

2. Fill wall opening with non-combustible insulation to prevent drafts from affecting the thermostat.

3. Press up on the button on bottom of thermostat and swing the body away from the base and up to remove the body from the base.

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.

Base | Terminals
G Y W RH RC
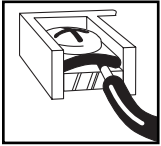Latch Button
Screw Anchors (2)
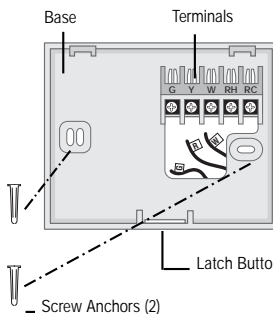
NOTE
If you are mounting the base to a soft material like plasterboard or if you are using the old mounting holes, the screws may not hold. Drill a 3/16-in. (4.8mm) hole at each screw location, and insert the plastic anchors provided. Then mount the base as described.
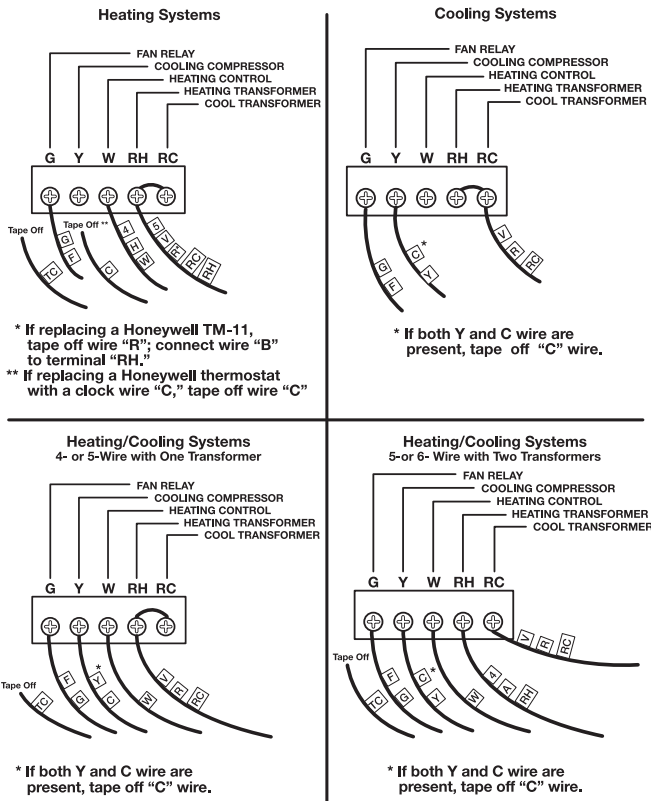
ATTACHING WIRES

4. 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). Attach the base to the wall with the two screws provided.

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C A U T I O N

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 5 electrical terminal screws.
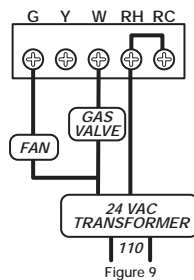
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WIRING DIAGRAMS

Heating Systems

FAN RELAY
COOLING COMPRESSOR
HEATING CONTROL
HEATING TRANSFORMER
COOL TRANSFORMER

G Y W RH RC

Tape Off   Tape Off **

* 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"

Cooling Systems

FAN RELAY
COOLING COMPRESSOR
HEATING CONTROL
HEATING TRANSFORMER
COOL TRANSFORMER

G Y W RH RC

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

Heating/Cooling Systems
4- or 5-Wire with One Transformer

FAN RELAY
COOLING COMPRESSOR
HEATING CONTROL
HEATING TRANSFORMER
COOL TRANSFORMER

G Y W RH RC

Tape Off

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

Heating/Cooling Systems
5- or 6- Wire with Two Transformers

FAN RELAY
COOLING COMPRESSOR
HEATING CONTROL
HEATING TRANSFORMER
COOL TRANSFORMER

G Y W RH RC

Tape Off

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

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These diagrams are provided for new installations or unreferenced wires.

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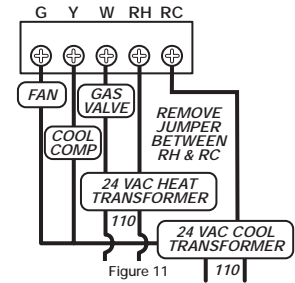**TYPICAL HOOKUP FOR 2-WIRE 24V HEATING SYSTEM AND MILLIVOLT SYSTEM**

G Y W RH RC

GAS VALVE

24 VAC TRANSFORMER OR THERMOPILE

110

Figure 8
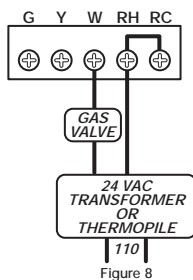
TYPICAL HOOKUP FOR 3-WIRE HEAT SYSTEM IF THIRD WIRE IS FAN WIRE

G Y W RH RC

GAS VALVE

FAN

24 VAC TRANSFORMER

110

Figure 9

TYPICAL COOLING AND HEATING SYSTEM (4-WIRE)

G Y W RH RC

FAN
GAS VALVE
COOL COMP

24 VAC HEAT TRANSFORMER

110

Figure 10

TYPICAL COOLING AND HEATING SYSTEM (5-WIRE)

G Y W RH RC

FAN
GAS VALVE
COOL COMP

REMOVE JUMPER BETWEEN RH & RC

24 VAC HEAT TRANSFORMER

110

24 VAC COOL TRANSFORMER

Figure 11   110
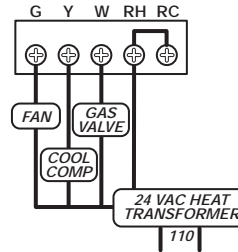
INSTALLING BATTERIES/ MAINTENANCE

The TX500 requires two new Energizer® or DURACELL® "AA" size alkaline batteries to operate your furnace and retain its programming in memory. Replace the batteries when the LO BATT indicator appears in the display or at least once a year.

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N O T E

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.

</div>

1. Remove fresh batteries from their carton.
2. Remove body of thermostat as described at bottom of first column.
3. Remove the used batteries.
4. Install two new Energizer® or DURACELL® "AA" size alkaline batteries in the battery compartment. Observe the polarity marking shown in the compartment. Place body back on wall.
5. Place the body back on the wall. Hook the top of the body onto the base, swing the body down and snap the body onto the base.

DAY
EVE
NIGHT
LO BATT

REPLACE BATTERIES WHEN INDICATOR APPEARS

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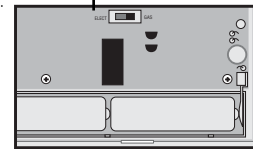
WARNING: Use Energizer® or DURACELL® Alkaline Batteries Only.

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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.

Heat Selector

Battery Compartment

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N O T E

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

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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.luxproducts.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.

WARRANTY

OPERATION

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

The TX500 alternately displays the current time and the room temperature. It also displays the day of the week and the currently active control program that is controlling the temperature: MORN, DAY, EVE, or NIGHT.

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.

N O T E
The FAN switch works only if your system provides a wire for the TX500's "G" terminal.

THE BUILT-IN ENERGY STAR® PROGRAMS

Push in the RESET key. This sets the built-in heating and cooling programs. To review the built-in programs, rotate the dial to SET WEEKDAY PROGRAM or SET WEEKEND PROGRAM.

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.

	PERIOD	HEAT	COOL
WEEKDAYS preprograms	MORN	6:00 AM 70°	6:00 AM 78°
	DAY	8:00 AM 62°	8:00 AM 85°
	EVE	6:00 PM 70°	6:00 PM 78°
	NIGHT	10:00 PM 62°	10:00 PM 82°
SAT & SUN preprograms	MORN	6:00 AM 70°	6:00 AM 78°
	DAY	8:00 AM 62°	8:00 AM 85°
	EVE	6:00 PM 70°	6:00 PM 78°
	NIGHT	10:00 PM 62°	10:00 PM 82°

The dial must be in the RUN position to close the door.

PROGRAMMING THE TX500

You can change any of the preset times and/or temperatures to suit your schedules for the weekday and weekend programs. Each day is divided into four periods: Morning, Day, Evening, and Night. Each period is programmed for HEAT and for COOL.

A blank programming chart is provided below for you to record your temperature settings in that chart.

Select HEAT to program the TX500 for controlling your heater.

OR Select COOL to program the TX500 for controlling your air conditioner.

Rotate dial to SET WEEKDAY PROGRAM. To program the WEEKEND, rotate the dial to SET WEEKEND PROGRAM. With dial on **SET WEEKDAY PROGRAM**, you will see this display.

UP	DOWN	To change the start time for MORN.
NEXT		To program temperature.
UP	DOWN	To change the temp. setting for MORN.
NEXT		To move to DAY.
UP	DOWN	To change start time for DAY.
NEXT		To program temperature.
UP	DOWN	To change the temp. setting for DAY.
NEXT		To move to EVE.

UP	DOWN	To change the start time for EVE.
NEXT		To program temperature.
UP	DOWN	To change the temp. setting for EVE.
NEXT		To move to NIGHT.
UP	DOWN	To change the start time for NIGHT.
NEXT		To program temperature.
UP	DOWN	To change the temp. setting for NIGHT.

Rotate dial to RUN position to start the programs.

SETTING THE TIME AND DAY

C A U T I O N
The TX500 is protected against normal static electric discharges. However, in extremely dry weather you should touch another metal object before the TX500 to avoid potential loss of programs.

Open the drop down door on the front of the thermostat. Rotate the dial to the SET DAY/TIME position. You should see the display pictured above with a flag pointing to a day of the week flashing. When you are finished setting the day and time, rotate the dial to RUN to return to normal operation or to another position to continue programming.

UP	To change current day.
NEXT	To set current time. The time (e.g."12:00 AM") will be flashing.
UP / DOWN	To change the current time.

TEMPERATURE OVERRIDE AND TEMPERATURE HOLD

These features let you change the current Set Temperature without changing the programs stored in your thermostat's memory.

TEMPORARY TEMPERATURE OVERRIDE

- Press UP/DOWN to change the current temperature setting. The OVERRIDE indicator appears on display.
- The Override feature will be automatically canceled at the start of the next program period.
- To cancel OVERRIDE prior to next program period press UP/DOWN until original set temperature appears. OVERRIDE indicator will disappear from display.

VACATION TEMPERATURE HOLD

- Press HOLD. Adjust temperature as desired with UP/DOWN.
- Temperature setting will not change even after next program period begins.
- To clear, press HOLD again.

ADVANCED FEATURES

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 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, to save energy in most cases.

SWING SETTINGS

Dial must be in the run position

HOLD	NEXT	Press together
UP	DOWN	To change swing
NEXT		Press to set.

5 MIN / 2 MIN MINIMUM ON/OFF TIME

Your thermostat has an internal timer built in to protect your compressor. The timer forces a minimum on/off time of 5 minutes. You may change this minimum on/off time to 2 minutes. To accomplish this, place the jumper labeled JP3 over both pins. You must press the small reset button on the face of the thermostat for the changes to take effect.

CHANGING FROM °F TO °C AND A 12HR CLOCK TO A 24HR CLOCK

- **WARNING:** Making these changes will require you to reset the thermostat. Copy any of your customized programs onto the chart below. This will be your reference to reenter the programs afterwards.
- Located at the top center of the thermostat are two jumpers - C/F and 12/24.
- To change to Celsius - remove jumper - C/F.
- To change to a 24HR clock - remove jumper- 24/12H.
- Press the reset key on the front of the thermostat for changes to take effect.
- Reprogram as necessary.

			CLOSE	OPEN
		JP3	5MIN	2MIN
		JP2	F	C
	ELEC GAS	JP1	12HR	24HR

JP3
JP2
JP1
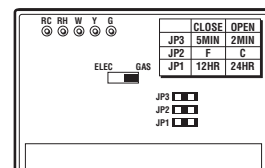
P R O G R A M M I N G   C H A R T

DAY	PERIOD	HEAT		COOL	
		TIME	TEMP.	TIME	TEMP.
MON. THRU FRI.	MORN				
	DAY				
	EVE				
	NIGHT				
SAT. and SUN.	MORN				
	DAY				
	EVE				
	NIGHT				