

Complete, Easy To Read INSTALLATION AND OPERATING INSTRUCTIONS

PSP300 SERIES

SMART TEMP[®] ELECTRONIC THERMOSTAT

ACF Precision Controls
www.LittleGreenhouse.com

IMPORTANT!

Please read all instructions carefully before beginning installation. Save them for future reference.

WARNING:

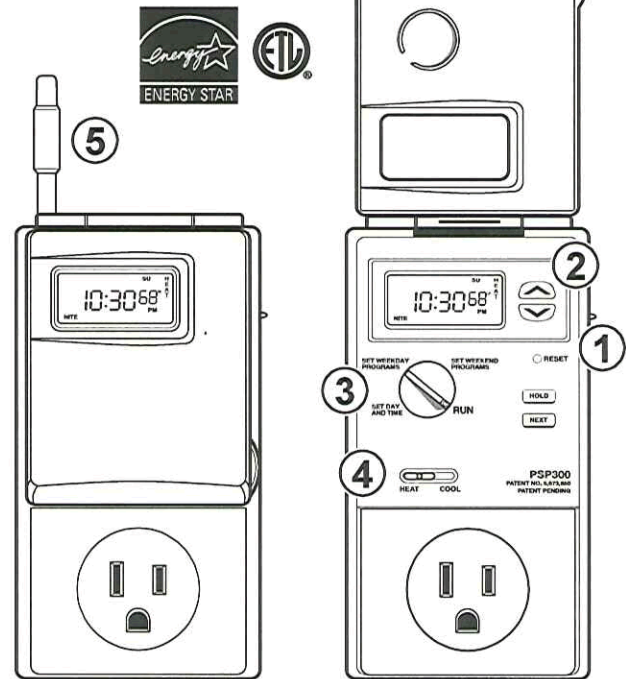
FOR USE ONLY WITH AIR CONDITIONERS AND SPACE HEATERS THAT AUTOMATICALLY RESTART COOLING OR HEATING OPERATION AFTER POWER RECONNECTION

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.

COMPATIBILITY

Your PSP300 Programmable Outlet Thermostat is compatible with 120Volt, 15 Amp Plug, 60 Hz Window Air Conditioning Units and Portable Space Heaters only. It cannot be used with typical 24 V systems, hydronics systems, or heat pumps.

FEATURES



1. ON/OFF SWITCH
2. SOFT TOUCH BUTTONS
3. LUX SPEED DIAL[®]
4. HEAT/COOL SWITCH
5. EXTERNAL TEMPERATURE SENSOR

- Heating and Cooling
- Electronic
- Programmable
- Plugs into normal 110 Volt 15 Amp Electrical Outlet
- 5/2 Day Programming (Weekdays and Weekends can be different)
- Energy Star[®] Compliant
- Default Energy Star[®] Approved Program
- Positive On/Off Switch
- Easy to Install
- 4 Periods Per Day
- 120VAC Powered with Batteries
- 2 G13A size 1.5V Alkaline Button Cell Batteries Included (For Clock Only)
- Temporary and Constant Temperature Override
- Separate Programs for Heating and Cooling
- Armchair Programming
- Easy Programming with LUX Speed Dial[®] (Patent # 5,673,850)
- Battery Free Nonvolatile Memory For All Programs And Settings
- ETL Approved
- User Calibration
- On Screen Low Battery Indicator
- F/C Temperature Display
- Soft Touch Buttons
- 2 Minute Short Cycle Protection
- Adjustable Temperature differential/Cycle Rate (#1 thru #9)
- 1 Year Warranty

ELECTRICAL RATINGS

- 120V/60 Hz
- Maximum load is 15 Amps at 120 Volts
- Power Consumption 2 W (maximum)
- Plug and Receptacle NEMA 5-15R (normal household 15 Amp receptacle)

WARNINGS :

- Read all instructions before using this thermostat.
- To reduce the risk of electric shock, this product has a grounding type plug that has a third (grounding) pin. This pin will only fit into a grounding type power outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
- Do not use Outdoors.
- Do not use in a bathroom. Never locate where it may fall into a bathtub or other water container.
- Do not insert or allow foreign objects to enter any openings as this may cause electric shock, fire, or damage to the thermostat.
- Do not use in areas where gasoline, paint, flammable liquids are used or stored.
- Space Heaters can be dangerous if used improperly. Be sure to follow all the Warnings and Cautions that came with the instruction manual written by the manufacturer of the Space Heater.
- Avoid the use of an extension cord because the extension cord may overheat and cause risk of fire. However, if you have to use an extension cord, the cord should be a 3-wire, grounding type, with No. 14 AWG minimum size and rated not less than 1875 Watts.
- Use this thermostat only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- Never clean this thermostat while it is plugged in. Turn On/Off switch to Off, pull out of the wall, and then clean by using a rag only.

CAUTIONS :

- 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.
- Be careful not to drop the unit or disturb electronic parts.

INSTALLATION

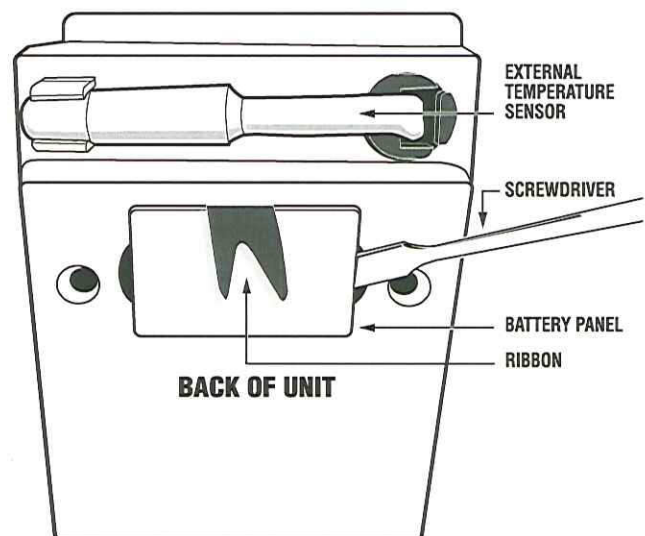
TOOLS REQUIRED: Small regular screwdriver

LOCATION:

- 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 the 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.

PREPARING THE UNIT

1. The PSP300 comes with (2) G13A size 1.5V Alkaline Button Cell Batteries already installed. These batteries power the clock only during normal operation. They also provide backup power to retain the thermostats programs and settings while it is not plugged into the wall. In order to "activate" them, you must remove the black ribbon from between the two batteries prior to using it. Use a small regular screwdriver to pry open the battery holder and pull out the black ribbon.



OPERATING BASICS

RUN MODE

For the thermostat to function, the dial on the face of the thermostat must be turned to the RUN position. If you forget to do this, it will not work and the door will not close all the way.

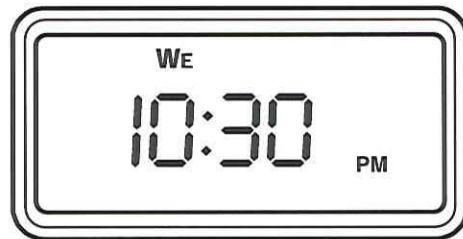
UP/DOWN CHANGE KEYS

- These are the two upper keys, just right of the unit's 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.

SET DAY AND TIME

To set the correct time after the unit has lost power or after reset:

1. Open the door on the front of the thermostat by lifting up the bottom of the door.
2. Rotate the dial to **SET DAY AND TIME**. The abbreviation for the day of week will flash.



3. Use the **UP** key to advance to the current day.
4. Press **NEXT** to adjust the time. Time will flash.
5. Use the UP/DOWN keys to set the time.
6. Pressing **NEXT** again will toggle from Set Time to Set Day, or vice versa.
7. Return the dial to its **RUN** position.

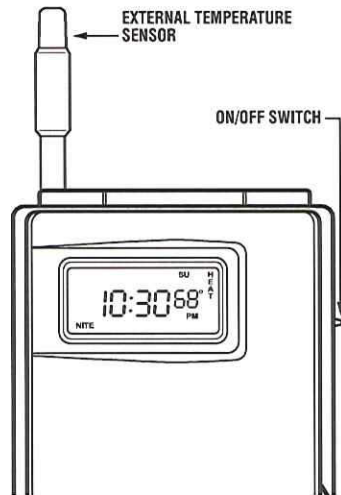
TEMPERATURE CONTROL MODES

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 its default ENERGY STAR® approved program. There is a 2-position slide switch to change temperature control modes. Slide the switch to the mode you would like to use.

2. When you have the black ribbon out, simply push the battery compartment back in while lining up the arrows.

3. On the back of the PSP300, there is an External Temperature Sensor that looks like an antenna. Pull this sensor out of its clip and bend the wire so that it point straight up. This is required for accurate temperature control.

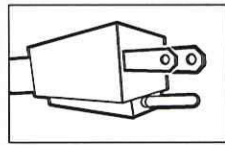
4. On the upper right side of the unit, there is an On/Off switch. Place this switch in the OFF position for right now.



MOUNTING

WARNING :

- If any plugs do not fit into the receptacle that you are trying to plug into, Stop, the PSP300 is not designed for this application.
- If the cord you are plugging into the PSP300 only has 2 prongs, **STOP, not having a ground wire is unsafe.** Your Window Air Conditioner or Space Heater must have a plug with 3 prongs on it.



5. Plug the PSP300 straight into a 110 Volt electrical outlet on the wall nearest your Air Conditioning Unit or Space Heater.

6. Plug in the electrical cord from your Window Air Conditioner or Space Heater directly into the front of the PSP300.

COMPLETING YOUR INSTALLATION

7. Configure your thermostat at this time. Refer to OPERATING INSTRUCTIONS.
8. Turn the ON/OFF switch on the upper right side to the ON position.
9. Turn on your Air Conditioner or Space Heater and turn the thermostat all the way up. (This will allow the PSP300 to control the room temperature and maintain a specific temperature)
10. Verify that the Window Air Conditioner or Space Heater 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 can be heard while they are running. The rush of moving air should be heard within a short time after either has been started.
11. Your installation is now complete.

HEAT

- Use **HEAT** mode to warm your home with a Space Heater.
- In HEAT mode, **HEAT** is displayed right of the set temperature.

COOL

- Use **COOL** mode to control your Window Air Conditioner, cooling your home.
- In **COOL** mode, **COOL** is displayed right of the set temperature.

ON/OFF SWITCH

Slide the **SLIDE** switch to **OFF** when no heating or cooling is desired. Heating and cooling will be disabled, even though the set temperature, room temperature, and time will still be in the display.

DEFAULT PROGRAM

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

HOLD

Hold is the simplest method to maintain fixed set temperatures.

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

TEMPERATURE OVERRIDE

- **OVERRIDE** allows you to change the current **SET TEMPERATURE** in **HEAT** or **COOL** until the next program period without changing your temperature control programs.
- Press an arrow key once.
- While the Set Temperature is flashing; press an **UP** or **DOWN** key to adjust the set temperature by one degree in the associated direction. Holding the key will automatically advance the setting in the associated direction.
- The **OVERRIDE** will be canceled at the start of the next program period, and the temperature setting will return to its programmed value.
- An **OVERRIDE** may be terminated by rotating the dial, switching the mode to **OFF**, or initiating a **Hold**.
- Adjusting the set temperature to its program value will also cancel an **OVERRIDE**.

PROGRAMMING

EDITING HEAT OR COOL PROGRAMS

The PSP300 provides two separate programs, one for heating and the other for cooling. Each program has separate settings for weekdays and weekends. Every day a program cycles through four independent periods. You can use the default programs or alter them to suit your schedule.

DEFAULT TEMPERATURE PROGRAM

As supplied from the factory, the following ENERGY STAR® approved program will be used for temperature control in **RUN MODE**. This program and all other software settings may be 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 (30°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 (28°C)

WEEKDAY PROGRAMMING

To change the **HEAT** or **COOL** program:

- Set to **HEAT** if you are using a Space heater.
- Set to **COOL** if you are using a Window Air Conditioner
- Rotate dial to **SET WEEKDAY PROGRAMS**. **MORN, Mo, Tu, We, Th, Fr** will be displayed, with the Start Time flashing.

Programming is performed in the following order.

1. Weekday Morn Start Time
2. Weekday Morn Set Temperature
3. Weekday Day Start Time
4. Weekday Day Set Temperature
5. Weekday Eve Start Time
6. Weekday Eve Set Temperature
7. Weekday Nite Start Time
8. Weekday Nite Set Temperature
9. . . . and so on until **Fri Nite** is fully programmed at which point pressing **NEXT** again will begin the list at **Mo - Fri 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 a faster rate.

- 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 SET TEMPERATURE, it will flash to show that it may be edited.

- The SET TEMPERATURE will be displayed on the right side of the display with the **HEAT** or **COOL** indicator visible (depending on which mode you have it in)

- Edit the SET TEMPERATURE, then press **NEXT** to accept and advance to the next period.

- When all the periods for the weekdays 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.

WEEKEND PROGRAMMING

Weekend programming is identical to weekday programming except that you must rotate the dial to **SET WEEKEND PROGRAMS** and the days that you will program are Sa and Su together. This two day program will repeat.

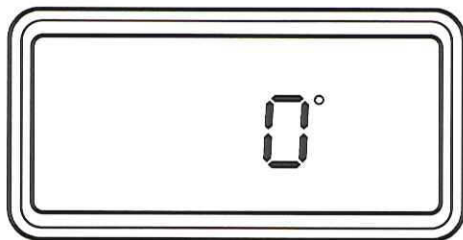
ADVANCED FEATURES

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:

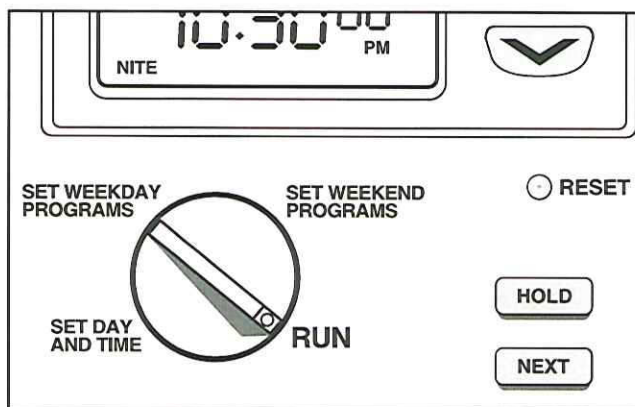
1. Open the door on the front of the thermostat.
2. Rotate the dial to **SET DAY/TIME**.
3. Simultaneously press **NEXT** and **HOLD**. The Temperature Offset value will flash.



4. The default value is 0 and in most cases should remain untouched.
5. Use the **UP/DOWN** keys to adjust the offset value.
6. Return the dial to its **RUN** position to accept the new value.

SOFTWARE RESET

Use this feature to make all settings and programs return to their default values. Press and release [RESET] button using a pen or pencil. It will perform a system check and then returns all settings to their original default values before initiating normal operation.



NOTE: 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 at the page bottom before using this button.

TEMPERATURE VARIATION / SWING

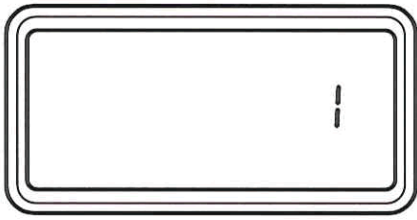
Your thermostat works by turning your heating or cooling system on and off whenever the room temperature varies a certain number of degrees from the set-point temperature. This variation is the "swing". Your system should cycle on about 3 to 6 times per hour. A smaller swing number increases the number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

SWING ADJUSTMENT

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

- The Swing setting sets the temperature variation the system allows above or below the set temperature before turning on the heating or Cooling. To change this value:

1. Rotate the **SPEED DIAL®** to **RUN**.
2. Press **NEXT** and **HOLD** simultaneously. The Temperature section of the display shows a single digit number between 1 and 9.



3. Select one of the 9 values the **UP/DOWN** buttons.
4. [1] is the maximum comfort setting (narrow control).
[9] is the maximum energy savings setting (wide control).
5. Press **NEXT**

TEMPERATURE DISPLAY FORMAT

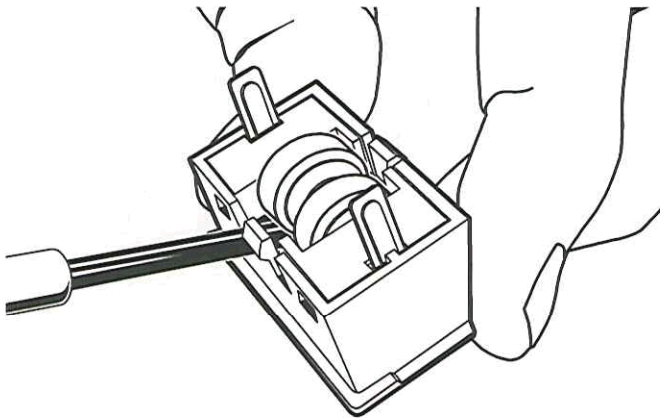
- This feature allows you to display temperature in either degrees C or degrees F.
- To toggle the display mode from Fahrenheit to Celsius or vice versa press and release **[NEXT]** and **[HOLD]** simultaneously in **<SET WEEKDAY PROGRAMS>** position.

BATTERIES/MAINTENANCE

The PSP300 comes with (2) G13A size 1.5V Alkaline Button Cell Batteries. During normal use, these batteries are used for the clock only. However, they also serve as backup power to retain your programs and settings if you unplug it from the wall. These (2) batteries will need to be changed once every year. The thermostat will alert you when the batteries are low by displaying "LO BATT" in the display.

BATTERY INSTALLATION

1. Remove fresh batteries from their carton.
2. Remove the thermostat from the electrical outlet.
3. Use a small regular screwdriver to remove the battery cartridge from the back of the thermostat. Use the small regular screwdriver to remove the 2 batteries from the holder.



4. Remove the used batteries if present and replace them within 90 seconds to avoid having to reset the day and time.
5. Install two new G13A size 1.5V Alkaline Button Cell Batteries batteries. Observe the polarity marking (pictures) shown on the battery cartridge.
6. Push the battery compartment back into the PSP300 while lining up the arrows.
7. Plug the thermostat back into the wall.

TECHNICAL ASSISTANCE

If you have any problems installing or using this thermostat, please reread the instructions carefully.

If you feel you require assistance, please email help@LittleGreenhouse.com or call 434-374-2706 between the hours of 8:00 am and 5:00 pm EST.

WARRANTY

Limited Warranty: If this unit fails because of defects in materials or workmanship within one year of date of original purchase, ACF 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 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 dealer from which 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. only.

PROGRAMMING CHART

The chart below is provided for you to write down your existing Weekday and Weekend program times and temperatures in case you have to enter them again at a later time.

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