



# OWNER'S MANUAL

**CPV210**  
Commercial  
Non-Programmable  
Thermostat

Part Number P374-2100

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**IMPORTANT:** Read entire instructions before configuring the thermostat.

### **GENERAL**

The commercial, non-programmable thermostats are wall-mounted, low-voltage thermostats which maintain room temperature by controlling the operation of an HVAC (heating, cooling and ventilation) system. Separate heating and cooling set points and auto-changeover capability allow flexibility. Dry contacts are provided for optional wiring to field-supplied external output device to control thermostat to occupied and unoccupied set points for energy savings.

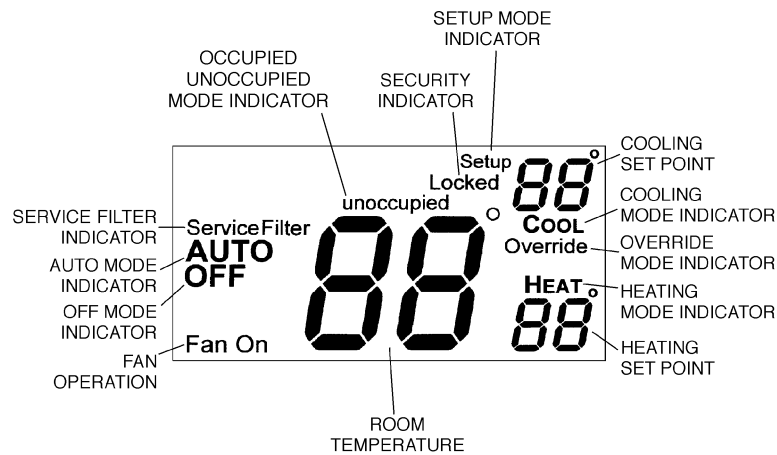
Batteries are not required. During power interruption the internal NEVERLOST™ memory stores thermostat configuration for an unlimited time.

**IMPORTANT:** The thermostat has a security option which can be configured by the installer to limit certain functions of the thermostat such as changing set points. If the thermostat does not allow modification of these functions, call the installer to perform desired changes.

## CONFIGURATION

**Thermostat Display** — The thermostat display is located in the center of the thermostat. See Fig. 1. The following information can be displayed on the screen:

- mode (OFF, HEAT, COOL, or AUTO)
- fan setting (FAN ON or blank)
- override indication
- room temperature
- desired temperature
- service filter indicator
- outside temperature
- Occupied or Unoccupied mode (with dry contact connection to external device)
- setup indicator (configuration mode)
- lock indicator



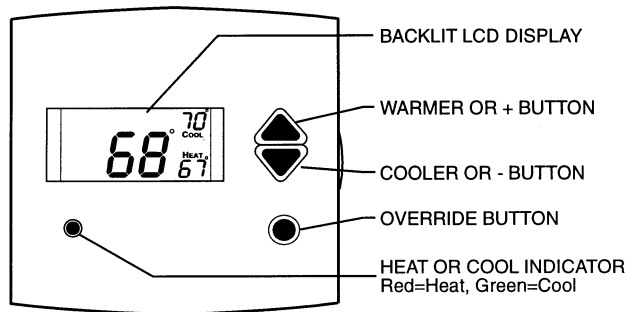
**Fig. 1 — Thermostat Display**

**Heat or Cool Indicator** — A Heat or Cool indicator is located on the bottom left cover of the thermostat. See Fig. 2. The light will be red if the thermostat is in Heating mode. The light will be green if the thermostat is in Cooling mode.

**Thermostat Front Panel Buttons** — The thermostat has buttons on the front cover which are used to raise or lower the desired set point and override the current program. See Fig. 2.

**SET POINT BUTTONS** — The UP ARROW and DOWN ARROW buttons will raise or lower the current desired temperature set point. If the thermostat is in AUTO mode, pressing the UP ARROW or DOWN ARROW buttons will adjust both the heating and cooling set points. Pressing the UP ARROW or DOWN ARROW buttons in cooling mode will adjust only the cooling set points. Pressing the UP ARROW or DOWN ARROW buttons in heating mode will adjust only the heating set points. The UP ARROW and DOWN ARROW buttons are also used in programming mode.

**OVERRIDE BUTTON** — The Override button is used to force the thermostat from Unoccupied mode into the Occupied mode comfort settings when used with dry contacts and an external device. The Override period will be set at 30 minutes. The thermostat will then return to Unoccupied mode. To increase the amount of time in Override mode, press the Override button



**Fig. 2 — Thermostat Front Panel Buttons**

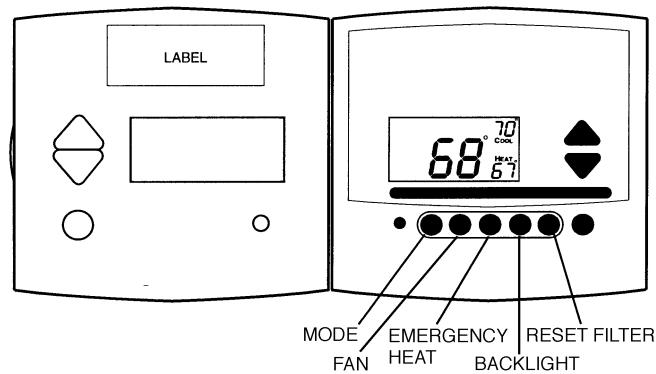
again. Thirty minutes of override time will be added for each time the Overrided button is pressed up to a maximum of 4 hours. After the 4-hour limit has been reached, press the Override button again to cancel override mode.

While in Override mode, the Override icon and the Occupied 1 icon will be displayed on the thermostat. The time of day and the minutes remaining in Override mode will alternate on the thermostat display.

The set points are adjustable with the UP ARROW and DOWN ARROW keys during override mode.

**Thermostat Inner Panel Buttons** — The thermostat has inner panel buttons which are used to change the configuration of the thermostat, set the mode, and reset the filter. The buttons are accessible from underneath the thermostat cover. To access the inner panel buttons, pull on the hinged thermostat cover. See Fig. 3. The programming buttons are: Mode, Fan, Emergency Heat, Backlight, and Reset Filter.

The UP ARROW and DOWN ARROW buttons are used to choose configuration settings. The buttons are also used to answer yes or no.



**Fig. 3 — Thermostat Inner Panel Buttons**

**MODE BUTTON OPERATION** — The Mode button selects the operating mode of the thermostat. If OFF is selected, the thermostat will not enter heating or cooling mode. If HEAT is selected, the thermostat will only enter Heating mode (if the room temperature is below the heating set point). If COOL is selected, the thermostat will only enter Cooling mode (if the room temperature is above the cooling set point). If AUTO is selected, the thermostat will enter Heating or Cooling mode based on the room temperature and the heating and cooling set points.

**AUTO-CHANGEOVER** — When the thermostat mode is set to AUTO, the thermostat will provide automatic changeover from Heating to Cooling mode and Cooling to Heating mode when required. The thermostat will automatically switch to maintain the desired temperature setting. The thermostat does not need to be manually changed from heating to cooling or cooling to heating operation.

**FAN BUTTON OPERATION** — The Fan button selects fan operation. When the fan is set to FAN ON, the fan will run continuously for improved air circulation.

**NOTE:** When the thermostat is in Unoccupied mode, the fan will run only during heating or cooling operation, even if the fan is set to FAN ON, this is the energy-saving smart fan option.

When the fan is not set to FAN ON (no icon displayed on thermostat screen), the fan will run during heating and cooling operation only.

**EMERGENCY HEAT BUTTON** — Emergency heat is available for heat pump applications. To turn on emergency heat, press the Emerg. Heat button. An "EH" will be displayed. During emergency heat, the fan will operate and the second stage of heat will be energized (locking out the first stage compressor). To exit emergency heat, press the Emerg. Heat button. During emergency heat, only OFF and HEAT modes are available.

**BACKLIGHT BUTTON** — The Backlight button is used to change the setting of the Backlight display. If the configuration is set to Yes, the backlight will be lit continuously. If the configuration is set to No, the display will be lit only after a button is pushed. The display will stay lit until action has ceased.

**RESET FILTER BUTTON** — The Reset Filter button is used by the service person to reset the Service Filter icon display.

If the Reset Filter button is pressed during normal thermostat operation, the number of hours of fan operation is displayed.

**KEYPAD LOCK** — The thermostat has a keypad lockout feature which will not acknowledge front panel buttons until the lockout sequence is entered. To disable or lock the keypad, press and hold the Mode button. While holding down the Mode button, press the UP and DOWN ARROW buttons simultaneously. The "Locked" icon will appear on the display.

The thermostat is unlocked by performing the same procedure. Press and hold the Mode button. While holding down the Mode button, press the UP and DOWN ARROW buttons simultaneously. The "Locked" icon will be removed from the display.

## OPERATION

**Mode** — The Mode button selects the operating mode of the thermostat. If OFF is selected, the thermostat will not enter Heating or Cooling mode. If HEAT is selected, the thermostat will only enter Heating mode (if the room temperature is below the heating set point). If COOL is selected, the thermostat will only enter Cooling mode (if the room temperature is above the cooling set point). If AUTO is selected, the thermostat will enter Heating or Cooling mode based on the room temperature and the heating and cooling set points.

**Two-Stage Operation** — The second stage of heat or cool is turned on when the first stage has been on for a minimum of 2 minutes and the temperature differential from the set point is equal to or greater than the set point plus the deadband plus 2 degrees.

**Electric Heat** — When the Electric Heat option in the advanced set up is set to ON, the thermostat will turn on the fan immediately any time there is a heat demand. This feature should only be used on electric heating applications. Do not use with gas heat.

**Dry Contact Switch/External Control** — A dry contact switch is provided to allow an external device to force the thermostat into Unoccupied mode. When the thermostat is forced into Unoccupied mode via the dry contact closure, the Unoccupied mode icon will blink each second.

**SOFT START** — When multiple thermostats are controlled by the same external device, a Soft Start option can be used to stagger the turn on times of the HVAC equipment. This feature may cause a delay in operation after entering or leaving Unoccupied mode.

**Remote Temperature Sensor** — A remote temperature sensor is available to read the temperature from a space. If a remote temperature sensor is connected, the thermostat will ignore the reading of its internal sensor. When the thermostat is using a reading from a remote sensor, the degree symbol above the temperature reading will blink.

**Outdoor Temperature Sensor** — An outdoor temperature sensor may be provided to read the outside temperature. Outside temperature can be viewed by pressing and holding the Mode button for 2 seconds.



**Replacement Components Division  
Carrier Corporation**



**ALL PRODUCT  
LIMITED WARRANTY**

**ONE-YEAR WARRANTY** - This CARRIER CORPORATION (herein after referred to as "COMPANY") product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the COMPANY'S sole option, to replace any defective part will be provided without charge for the part itself; PROVIDED the defective part is returned to our distributor through a qualified servicing dealer.

**THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS** incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO THE PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

**LIMITATIONS OF WARRANTIES** - ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Effective on products manufactured after January 1, 1996. Supersedes any other warranty certificates supplied with the product.

AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

**THE COMPANY WILL NOT BE RESPONSIBLE FOR:**

1. Normal maintenance as outlined in the installation and servicing instructions or owners manual including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the COMPANY.
5. Parts not supplied or designated by the COMPANY, or damages resulting from their use.
6. COMPANY products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

CATALOG NO. 397-56049-1

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**IF YOUR UNIT DOES NOT WORK, FOLLOW THESE STEPS IN ORDER:**

**FIRST:** Contact the installer. You may find his name on the product or in your Homeowner's Packet. If his name is not known, call your builder if yours is a new residence.

**SECOND:** Contact the nearest TOTALINE distributor. (See telephone yellow pages.)

**THIRD: Contact:**

**CARRIER CORPORATION**  
Consumer Relations Department  
P.O. Box 4808  
Syracuse, NY 13221  
Telephone: 1-800-227-7437

Unit Model No. \_\_\_\_\_  
Unit Serial No. \_\_\_\_\_  
Date of Installation \_\_\_\_\_  
Installed by \_\_\_\_\_  
Name of Owner \_\_\_\_\_  
Address of Installation \_\_\_\_\_



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*Signature*

Your Assurance of Quality

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