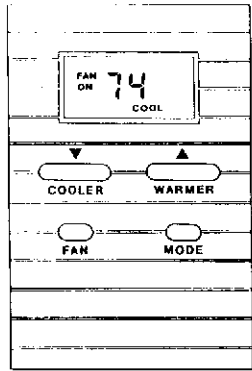


## MODEL DSP-200 OPERATING INSTRUCTIONS



SEE OTHER SIDE FOR  
INSTALLATION INSTRUCTIONS

## OPERATING INSTRUCTIONS FOR MODEL DSP-200

Your new Digital Setpoint Thermostat has been designed to provide accurate control and display of room temperature. In addition it will also display all relevant information pertaining to your heating and cooling system.

The clearly marked buttons and informative display make it extremely easy to understand and simple to use.

Please take a few moments to read the brief instructions and familiarize yourself with the various functions in order to obtain maximum benefit from this truly unique electronic control.

## GENERAL INFORMATION

The thermostat normally displays room temperature, mode of operation and which system is currently on. The four buttons on the front of the unit allow complete control of your heating and cooling system.

Raising or lowering the setpoint is as simple as pushing a button. You may also choose °F or °C for the display.

The thermostat also allows you to select continuous fan operation, (useful when using an air cleaner) or have the fan come on with the equipment.

### ----- IMPORTANT -----

The thermostat requires a one minute startup period after power is first applied (it will not control equipment or display temperature during this time).

## (1) USER CONTROLS

### MODE:

Select the desired mode of operation by repeated pressing of the MODE button:

COOL- controls Cooling system only  
HEAT- controls Heating system only  
OFF- systems will not operate

### COOLER : WARMER

Select the temperature you want your system to maintain by pressing and holding the ▼ or ▲ button until the desired temperature is displayed. When the display shows SET TEMP and HEAT or COOL the temperature shown is the control temperature for your system. The word ON will appear beside HEAT or COOL when the system is operating.

## (2) USER CONTROLS (continued)

### FAN:

The Fan will come on automatically when the cooling system is operating but there is no indication of this on the display. To select continuous Fan operation, press the FAN button and the display will show FAN ON. This is recommended for electronic air cleaners and continuous ventilation requirements.

### DISPLAYED FUNCTIONS

#### OFF:

When the word OFF is displayed the Heating and Cooling systems will not operate. Display shows room temperature and FAN is operable.

*Avoid using the OFF mode during extremely cold weather to prevent damage from freezing.*

## (3) DISPLAYED FUNCTIONS (cont.)

### SET TEMP:

This is displayed when pressing either the COOLER or WARMER button.

The number that is displayed when the button is released is the new setpoint or control temperature for the appropriate system. The display will then return to showing it's normal readout of room temperature.

## POWER FAILURES

Your thermostat employs the latest developments in solid state electronic technology. The innovative use of this technology has enabled us to provide features never before possible in an electronic thermostat.

One of the unique features of your thermostat is that there is no battery required to maintain your selected setpoint or mode of operation in the event of a power loss, as the memory is unaffected by power failures of any duration.

During power outages of up to 10 minutes the thermostat will continue to operate the display.

When power is restored the thermostat will continue operating as if the power had never been off.

## WARRANTY

### FULL TWO YEAR WARRANTY.

Valera Electronics Inc. warrants to the original purchaser that it's **enerstat** and component parts will be free from defects in workmanship and materials for a period of two years from the date of purchase. Your dealer will provide free replacement of your **enerstat** upon proof of purchase.

### EXCLUSIONS

This warranty does not apply in the event of misuse, abuse or as a result of unauthorized alterations or repairs. Valera Electronics Inc. will not be liable for any consequential damages including without limitation, damages resulting from defects, loss of use, or misuse.

This equipment, if installed in strict accordance with the manufacturers instructions, complies with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC rules.

**a) INSTALLATION INSTRUCTIONS LOCATION:**

To ensure proper operation, the thermostat should be mounted on an inside wall in a frequently occupied area of the building. In addition, its position must be at least 18" (46cm) from any outside wall, and approximately 5' (1.5m) above the floor in a location with freely circulating air of an average temperature.

**BE SURE TO AVOID THE FOLLOWING LOCATIONS:**

- behind doors or in corners where freely circulating air is unavailable
- where direct sunlight or radiant heat from appliances might affect control operation
- on an outside wall
- adjacent to, or in line with, conditioned air discharge grilles, stairwells, or outside doors
- where its operation may be affected by steam or water pipes or warm air stacks in an adjacent partition space, or by an unheated/uncooled area behind the thermostat
- where its operation will be affected by

**b) the supply air of an adjacent unit**  
 - near sources of electrical interference such as arcing relay contacts

1) Remove the mounting plate from the back of the thermostat by grasping the plate firmly and pulling it straight out.

2) Position the plate on the wall so that it appears level and with the large rectangular hole near the bottom with the wires from the equipment protruding through the hole. Mark the location of the two mounting holes on the wall and drill holes using a 3/16" (5mm) bit. Install supplied anchors and secure plate to wall with supplied hardware. The thermostat may also be mounted on a vertical 2x4 junction box using field supplied hardware.

3) Connect the wires from your system to the thermostat using one of the wiring diagrams below. Single transformer systems require a jumper between R and RC terminals.

**c) The X terminal is only required for single transformer systems with sensitive controls or as a separate source of power to the thermostat. Strip 1/4" (6mm) of insulation from control wires (longer strip lengths may short).**

4) Carefully align the thermostat with the mounting plate ensuring that the surplus wire length is pushed into the wall cavity or junction box as the thermostat is pushed onto the mounting plate.

**SLIDE SWITCH SETTINGS**

Switch	Position	Function
1	OFF	Fan control by system
1	ON	Fan on with heat call
2	OFF	3 cycles per hour
2	ON	6 cycles per hour
3	OFF	Fahrenheit
3	ON	Celsius

**d) PUSHBUTTON: Temperature Calibration**  
 To calibrate, perform the following steps  
 - ensure 24Vac is present at terminals  
 - determine correct space temperature  
 - depress and hold 'Calibrate' button  
 - depress appropriate ▼ or ▲ button until "calibration" temperature is displayed  
 - releasing buttons completes calibration

**OUTPUT TERMINAL FUNCTIONS**

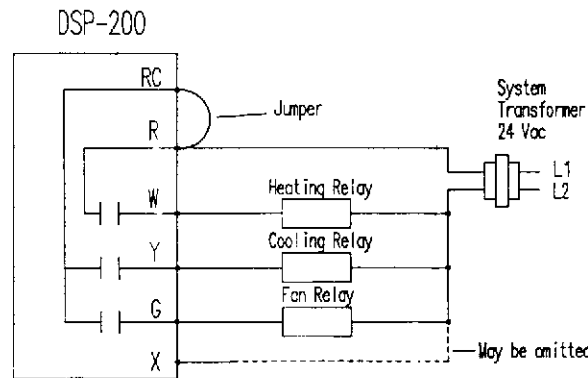
- RC** 24Vac from cooling/fan transformer. (jumper to R for single transformer systems).
- G** Fan energized when FAN is on or cooling equipment is operating.
- X** 24Vac common side of transformer.
- Y** Cooling - energized with cool call.
- R** 24Vac from heating transformer.
- W** Heat - energized with heating call.

**SPECIFICATIONS**

- Rated Voltage** 20-30 Vac, 24 nominal.
- Rated Current** 0.10-1.5A continuous per output with surges to 4A. Maximum 3Amp continuous total output.
- Cycle Rate** 3CPH in cooling, 3 or 6 CPH in heating (switch selectable).
- Control Range** Heating 41-96F (6-34C)  
Cooling 43-98F (7-35C)
- Measurement Range** 38 to 109F or 5 to 41C
- Control Accuracy** ±1F at 68F, ±0.5C at 20C
- Minimum On /Off Times** 4 minutes in cooling, 2 or 4 minutes in heating (selectable).

**NOTE:** This thermostat contains electronic circuitry replacing the conventional mechanical anticipator.

**SINGLE TRANSFORMER SYSTEM**



**TWO TRANSFORMER SYSTEM**

