Your new electronic digital thermostat has been designed to provide accurate control and display of room temperature. In addition, it also will display all relevant information pertaining to your 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 whether cooling or heating is currently on. The six buttons on the front of the unit allow complete control of your equipment.

You may select different heating and cooling setpoints for the system to maintain, e.g., 70° in heating and 75° in cooling. Raising or lowering the setpoints in heating or cooling is as simple as pushing a button. In addition, you may choose to display the temperature in °F or °C.

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.

**USER CONTROLS**

**MODE** – Select the desired mode of operation by repeatedly pressing the MODE button:

- indicates cooling system only (the word COOL is displayed for 5 seconds)

- indicates heating system only (the word HEAT is displayed for 5 seconds)

- indicates both the heat and cool systems (the word AUTO is displayed for 5 seconds)

-ulking – indicates cool ON

-ulking – indicates heat ON

OFF – disables thermostat so equipment will not operate (fan operation is still possible in this mode)

**COOLING**

Select the temperature you want your equipment to maintain while in the cooling mode by pressing and holding the " or " button. The control setpoint temperature is displayed for 5 seconds.

**HEATING**

Select the temperature you want your equipment to maintain while in the heating mode by pressing and holding the " or " button. The control setpoint temperature is displayed for 5 seconds.

**TEMPERATURE ACCURACY**

Temperature accuracy will be realized only after the thermostat has been installed and powered for at least one (1) hour.

**THERMOSTAT AND SENSOR CALIBRATION**

Simply press and hold the FAN button for 10 seconds and adjust with the " or " button. The control setpoint temperature is displayed for 5 seconds.

**TEMPORARY TEMPERATURE OVERRIDE WITH KEYPAD LOCKED**

(The keypad may be locked to prevent tampering by selecting the ON position of DIP switch #2.) If the keypad is locked to prevent tampering you may temporarily adjust the setpoint by ±3°F of the programmed day setpoint. Press the " or " button to raise or lower the setpoint for a 1 or 3 hour period, depending on DIP switch settings.

**REMOTE SENSOR (OPTION)**

RS1 – RS2 – RS+V

The thermostat is designed to accept the electronic remote sensor, which will allow you to locate your thermostat in an area away from view. Indoor and outdoor sensors are available separately.

**CLOCK TERMINALS (OPTION) CLK1 – CLK2**

Your thermostat is equipped with a dry contact closure input. By connecting to any relay-based controller or clock timer, the thermostat can be alternated between the day and night (setback) temperature setpoints automatically.

 Upon initial power up of the thermostat, or after a power failure, the thermostat will check the clock terminals and apply the day (open contact) or night (closed contact) temperature setpoints accordingly.

**COMMUNICATIONS (OPTION) X1 – X2**

The thermostat is designed to accept any of the Net/X family of remote communications controllers (available separately). The controllers allow full functionality and control from a distance of up to 1000 feet away.
INSTALLATION INSTRUCTIONS
It is recommended that installation be performed by a qualified installer.

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. You should 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 area behind the thermostat which is not climate controlled;
- where its operation will be affected by the supply air of an adjacent HVAC device;
- near sources of electrical interference such as arcing relay contacts.

Removing the Thermostat from the Subbase
1. Insert a flat blade screwdriver or coin 1/8" into the slot located in the bottom center of the thermostat case and twist 1/4 turn. When you feel 1/8" in the bottom center until it snaps into place.
2. Swing the thermostat out from the bottom.
3. Lift the thermostat up and off the subbase.
4. Place the rectangular opening in the subbase over the equipment control wires protruding from the wall and, using the subbase as a template, mark the location of the two mounting holes (exact vertical mounting is necessary only for appearance).
5. Use the supplied anchors and screws for mounting on drywall or plaster. Drill two 3/16" (5mm) diameter holes at the marked locations; use a hammer to tap the nylon anchors into flush to the wall surface and fasten the subbase using the supplied screws. (Do not overtighten)
6. Connect the wires from your system to the thermostat terminals. Carefully dress the wires so that any excess is pushed back into the wall cavity or junction box. Ensure that the wires are flush to the plastic subbase. The access hole should be sealed or stuffed to prevent drafts from affecting the thermostat.

Replacing the Thermostat on Subbase
1. Position the thermostat on the hinged tabs at the top of the subbase.
2. Gently swing the thermostat down and press on the bottom center until it snaps into place.

Thermostat Cover Lock
This switch must remain in the OFF position.

Positioning the DIP switches in either the ON or OFF position enables you to choose between two different options. The DIP switches are located on the interior of your thermostat and may be accessed by following the procedure for removing the thermostat from the subbase. The following list describes your DIP switch options.

1. DIP Switch
2. DIP Switch OFF
3. Not used (OFF position)
4. 1 hour override
5. 4 minute minimum ON
6. 2 minute minimum ON
7. Keypad Unlock
8. Fan on with heat call
9. Fan on with plenum switch
10. Single Stage
11. Multi-stage
12. LED #1+No Icon
13. LED #1+
14. Filter Icon
15. LED #2+
16. Fault Icon

TERMINAL DESIGNATIONS
W2........Energizes on a call for second stage heating
W1........Energizes on a call for first stage heating
G........Fan operates with a call for heating or cooling by pressing the P/T button.
R........Power from equipment
24V........24 VAC hot and common to power the thermostat
24V(c)....24 VAC hot and common to power the thermostat
RS1........Connect to use up to 6 (XC-ID) indoor and/or 1
RS2........Connect to use up to 6 (XC-ID) outdoor remote sensor/s.
RS+V........Connecting the thermostat will automatically use the XC-ID temperature sensor and its own.

LED1........Free lights for status or function indication
LED2........Free lights for status or function indication
CLK1........Remote communications. Refer to the instructions included with the sensor.
CLK2........Remote communications. Refer to the instructions included with the remote communications adapter and software.
X...........Remote

DIP SWITCH OPTIONS AND FUNCTIONS

Positioning the DIP switches in either the ON or OFF position enables you to choose between two different options. The DIP switches are located on the interior of your thermostat and may be accessed by following the procedure for removing the thermostat from the subbase. The following list describes your DIP switch options.

1. Not Used. This switch must remain in the OFF position.
2. Temperature Override Sets a temperature override to either 1 hour or 3 hours when the keypad is locked.
3. 2 Minutes or 4 Minutes On Times This option allows you to run the equipment for either 2 or 4 minutes minimum off and on time.
4. Keypad Lock A in the ON position locks out all buttons except the OUTDOOR temperature button.
5. Plenum Fan Switch In the OFF position, the fan comes on immediately with a call for heat. In the ON position, the fan is controlled by the equipment operation setting.
6. Single or Multi-stage This option allows you to select up to two (2) stages of heating and cooling.
7. LED #1 + Indication In the OFF position LED #1 will light when the terminal is energized. In the ON position LED #1 will light and a Filter Icon will be displayed on the LCD when the terminal is energized.
8. LED #2 + Indication In the OFF position LED #2 will light when the terminal is energized. In the ON position LED #2 will light and a Fault Icon will be displayed on the LCD when the terminal is energized.

SPECIFICATIONS

Rating Voltage .......... 20-30 VAC, 24 nominal
Rated A.C. .............. 0.050 Amps to 0.75 Amps continuous
Rated D.C. .............. 0 Amps to 0.75 Amps continuous
Current per output with surge to 3 Amps Max.

Control
- Heating: 38° to 88°F in 1° Steps
- Cooling: 50° to 80°F in 1° Steps

Thermostat
- Range 10° to 30°C in 1° Steps
- 10° to 32°F in 1° Steps
- 5° to 30°C in 1° Steps
- 5° to 40°F in 1° Steps

Deadband
- 2°C or 4°F

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