User’s Manual
TP32U03 Programmable / Non-Programmable
TP32U04 Programmable/ Non-Programmable with Humidity Control
TP32U05 Programmable with Daughter Board (4-Wire)

Menu Driven Display
I. THERMOSTAT OPERATION

ADJUSTING TEMPERATURE (Temporary Override in Programmable models)
1. Before you can adjust the temperature, a MODE must be selected. If you are already in a Heating or Cooling mode, then skip to step 5.
2. To select a MODE, use the keypad arrows to scroll to MODE, and then press the center button on the keypad to enter the operating mode menu.
3. Select the desired mode by scrolling up or down, with the arrows, and then press the center button on the keypad to enter into that mode.
4. You are now returned to the Main Menu and Figure 1 is a similar view. NOTE: Outdoor temperature is only displayed if an outdoor sensor is installed.
5. To increase the temperature set point, use the up arrow button. To decrease the set point, use the down arrow button. Press the center button on the key pad for the new set point to be effective.

SETTING DATE AND TIME
1. From the Main Menu, scroll to MENU and press the center button on the keypad.
2. Select SET DATE AND TIME
3. If your area observes daylight savings time, select AUTO DAYLIGHT SAVING, scroll to ON, then press the center button to save. You will be returned to the select SET DATE AND TIME menu. Scroll to SET DATE AND TIME and press the center button on the keypad.
4. SET MONTH by using the up and down arrows ▲▼, and then press the center button on the keypad to save the month.
5. SET DAY by using the up and down arrows ▲▼, and then press the center button on the keypad to save the day.
6. SET YEAR by using the up and down arrows ▲▼, and then press the center button on the keypad to save the year.
7. SET HOUR by using the up and down arrows ▲▼, and then press the center button on the keypad to save the hour.
8. SET MINUTE by using the up and down arrows ▲▼, and then press the center button on the keypad to save the minute.
9. Date and Time are now set. You can return to the Main Menu by pressing the left arrow key to return to the previous menu.

HOLD SETTINGS -- Vacation & Permanent (Programmable models only)
This section describes the HOLD functions. You can program the thermostat to hold the temperature for a period of time. If you want to hold the temperature for a few hours or a few weeks, your thermostat can accommodate your schedule.

VACATION HOLD (Programmable models only)
1. From the Main Menu, scroll to MENU and press the center button on the keypad.
2. Select HOLD → VACATION
3. First, the thermostat prompts you for a temperature to hold. If you are in AUTO MODE you will be prompted for both a heat setting and a cool setting. Use the up and down arrows keys ▲▼ to select the desired temperature and press the center button on the keypad.
4. Next it will prompt you for a date and time that you wish to return to programmed operation. Returning to the Main Screen, you will notice that in the upper part of the screen is alternating HOLD TIL *date and time you specified* and the actual date and time.
5. To cancel this hold, scroll to CANCEL HOLD from the Main Menu and press the center button ■.

PERMANENT HOLD (Programmable models only)
1. From the Main Menu, scroll to MENU and press the center button ■ on the keypad.
2. Select HOLD → PERMANENT
3. First, the thermostat prompts you for a temperature to hold. If you are in AUTO MODE you will be prompted for both a heat setting and a cool setting. Use the up and down arrows keys ▲▼ to select the desired temperature and press the center button on the keypad.
4. Returning to the Main Screen, you will notice that in the upper part of the screen is alternating PERMANENT HOLD and the actual date and time.
5. You can adjust to permanent hold temperature at will, and the temperature you select will remain until the permanent hold is canceled.
6. To cancel this hold, scroll to CANCEL HOLD from the Main Menu and press the center button ■. This will revert to the programmed settings.

FAN OPERATION
The thermostat can operate the fan in four ways:
- AUTO (on only during heating and cooling calls)
- ON (always on)
- INTERMITTENT (cycles fan) Pg. 3
- PROGRAMMED FAN (fan follows the program set in the program menu screen) (programmable models only) Pg. 3
1. From the Main Menu, scroll to (FAN) and press the center button on the keypad ■.
2. Select the operation you desire as described above.

CHANGING MODES
1. From the main screen select MODE.
2. Select the operating mode you need and press the center button ■.

FAHRENHEIT OR CELSIUS
1. From the Main Menu, scroll to MENU and press the center button ■ on the keypad.
2. Select SETTINGS → SCREEN SETTINGS → FAHRENHEIT OR CELSIUS
3. Select which scale you prefer.

12 OR 24 HOUR CLOCK
Within this menu option, you can change the time displayed by your thermostat to 24 Hour time (Military Time).
1. From the Main Menu, scroll to MENU and press the center button ■ on the keypad.
2. Select SETTINGS → SCREEN SETTINGS → 12 OR 24 HOUR CLOCK
3. Select which time base you prefer.

CONTRAST ADJUSTMENT
You can change the contrast level of your thermostat screen to be displayed to your preference.
1. From the Main Menu, scroll to MENU and press the center button ■ on the keypad.
2. Select SETTINGS → SCREEN SETTINGS → CONTRAST
3. Use the up and down arrows ▲▼ to increase or decrease the contrast level.
4. Press the center button to accept the new setting.

BACKLIGHT ON TIME
This thermostat has a two color backlight feature. Anytime a button is pressed, the blue backlight stays on for a certain amount of time. A red backlight is visible if you are selecting Emergency Heat mode. You can adjust the amount of time the backlight stays on in the menu options.
I. From the Main Menu, scroll to MENU and press the center button ▼ on the keypad.

II. To save these settings, scroll to SAVE, and press the center button ▼.

III. When programming everyday, weekdays, weekends, or individual days. Once you’ve selected a certain day to program, a screen appears that allows you to set the time, heat setting, cool setting, and fan operation for each event.

1. From the Main Menu, scroll to MENU and press the center button ▼ on the keypad.

2. Select PROGRAM

3. You can program each day differently by going through each day and personalizing them. Or, you can program everyday the same by scrolling to EVERYDAY. Or, you can program the weekdays or weekends the same by selecting the appropriate menu item.

4. To program everyday the same, select EVERYDAY and then press the center button ▼.

5. Using the right arrow button ►, highlight the WAKE time, and change to desired time by using the up and down arrows ▲▼ buttons. Move to the next entry by using the right arrow button ►. To change the HEAT set point, use the up and down arrows. Continue this process until all settings are to your liking.

6. To save these settings, scroll to SAVE, and press the center button ▼.

In the PROGRAM menu, there is an option to COPY. The option can be used to copy the program from one day to another. After COPY is selected, the thermostat will prompt you for which day to copy from. Next, it will prompt you for which day to copy the program to. After these selections, it will then confirm what is being copied to where. At this point you have the option of canceling the copy process, by pressing ▼. The SAVED screen will appear returning you to the copy menu. Pressing ▼ will return you to the PROGRAM menu. Pressing ▼ again will return you to the MAIN MENU.

OFFSETS

1. MENU → SETTINGS → OFFSETS

TEMPERATURE OFFSETS

This option allows calibration (or deliberate miscalibration) of the room temperature sensor(s). There are various reasons why the displayed temperature would be adjusted to a higher or lower value. NOTE: Do not adjust for 30 minutes after installation because board may be heated by handling. The selected number is the number of degrees, plus or minus, which will be added to actual temperature. The numbers can range between -5° and +5°. Default values are set to 0° offset.

Humidity Offset

This option allows calibration of the humidity sensor. Adjustments can range between -10% and +10%. Default is 0% offset.

AUTO CHANGEOVER

With auto changeover, the thermostat automatically switches itself from heating to cooling, or vise versa, based on the setpoints. When setting up the thermostat you have to enter both a cooling setpoint and a heating setpoint. The thermostat will also prevent the user from setting the cooling setpoint lower than the heating setpoint. Mode is set to AUTO for this operation to work.

INTERMITTENT FAN

Temperature conditions can vary widely between the thermostat location and extremities of the space the thermostat serves. This air stratification problem can be especially pronounced during mild outdoor conditions when long periods elapse between space conditioning demands from the thermostat. This intermittent fan operation can also improve the performance of air cleaning or special filtration systems that locate the cleaning or filtration media at the return air side of the fan.

SERVICE INFORMATION

These screens help an installer or contractor to have a good understanding of what problems might be occurring before arriving for service.

WARNING: Before installing thermostat, turn off all power to unit. There may be more than one power disconnect. Electrical shock can cause personal injury or death.
SAFETY CONSIDERATIONS
Improper wiring or installation may damage thermostat. Wiring must conform to local and national electrical codes.

INTRODUCTION
The thermostat is a wall mounted, low-voltage thermostat which maintains room temperature by controlling the operation of a heating and air conditioning system. Batteries are not required; temperature and mode settings are preserved with the power off.

INSTALLATION CONSIDERATIONS
The thermostat requires no batteries. The thermostat is not a power stealing device and MUST have both R and C connected.

IV. THERMOSTAT LOCATION
Thermostat should be mounted:
- Approximately 5 ft. (1.5m) from floor.
- Close to or in a frequently used room, preferably on an inside partitioning wall.
- On a section of wall without pipes or duct work.

Thermostat should NOT be mounted:
- Close to a window, on an outside wall, or next to a door leading to the outside.
- Exposed to direct light and heat from a lamp, sun, fireplace, or other temperature-radiating object which may cause a false reading.
- Close to or in direct airflow from supply registers and return-air grilles.
- In areas with poor air circulation, such as behind a door or in an alcove.

V. INSTALL THERMOSTAT
1. Turn off all power to unit.
2. If an existing thermostat is being replaced:
   A. Remove existing thermostat from wall.
   B. Disconnect wires from existing thermostat, one at a time. Be careful not to allow wires to fall back into the wall.
   C. As each wire is disconnected, record wire color and terminal marking.
   D. Discard or recycle old thermostat.

   NOTE: Mercury is a hazardous waste and MUST be disposed of properly.

3. Separate the front and back pieces of plastic.
4. Route thermostat wires through hole in back piece of plastic. Level plastic case can interfere with proper air flow across the temperature sensor.
5. Drill two 3/16-in. mounting holes in wall where marked. (Note: Mounting holes on thermostat are designed to fit on a horizontal J-box).
6. Secure back plastic to wall with 2 anchors and screws provided making sure all wires extend through hole in plastic.
7. Connect wires to proper terminal of the connector block in the front plastic.
8. Push any excess wire back into wall. Excess wire inside the thermostat plastic case can interfere with proper air flow across the temperature sensor. Seal hole in wall to prevent air leaks. Leaks can affect operation.
9. Snap front and back pieces of plastic together.
10. Turn on power to the unit.

VI. WIRING DIAGRAMS
All excess wire should be pushed back into the wall as far as possible. Excess wire inside the thermostat plastic case may interfere with the air flow across the temperature sensor.

THERMOSTAT CONNECTIONS
C – 24V Common for Control Circuit
R – 24V Supply for Control Circuit
W1 – Auxiliary Heat
W2 – Not Used
H – Humidifier (When used)
DH – Dehumidifier (When used)
O – Reversing Valve - energized in COOL mode
Y2 – 2nd Stage Compressor / Cooling / Heating
Y1 – 1st Stage Compressor / Cooling / Heating
G – Fan
L – Alarm Input
Y – Not Used
A+, B – Not Used
OD – Outdoor Temperature Sensor
ID – Indoor Temperature Sensor

ACCESSORIES
Each of these options has settings for Cumulative Run Time and Calendar Time. Messages will flash at the top of the Main screen when these events are met to alert the owner that it is time service these options.
**Air Filter** - Cumulative Run Time default is 1000 hours and Calendar Time is 6 months. Values can range from 400-3600 hours for Cumulative Run Time (in 100 hour increments), or Calendar Time can be set to OFF, or 3-48 months (in 3 month increments).

**Humidifier** - Cumulative Run Time default is 0 hours (OFF) and Calendar Time is OFF. Values can range from 400-3600 hours for Cumulative Run Time (in 100 hour increments), or Calendar Time can be set to OFF, or 3-24 months (in 3 month increments).

**UV Lamp** - Cumulative Run Time default is 0 hours (OFF) and Calendar Time is OFF. Values can range from 400-3600 hours for Cumulative Run Time (in 100 hour increments), or Calendar Time can be set to OFF, or 3-48 months (in 3 month increments).

**Air Cleaner** - Cumulative Run Time default is 0 hours (OFF) and Calendar Time is OFF. Values can range from 400-3600 hours for Cumulative Run Time (in 100 hour increments), or Calendar Time can be set to OFF, or 3-24 months (in 3 month increments).

To cancel the message, select the CANCEL ALARM, and press the center button.

**INPUT DEALER INFO**
Contractors are able to input Brand Name, Model Number, Contractor Name, and Contractor Phone number into these screens. This way, the owner could give this information to the contractor so that he would know what system the owner has prior to the service visit.

1. Scroll to the info you want to enter and press the center button.
2. Enter the information by scrolling through the characters using the up & down arrows. Once the character you want is set, press the right arrow to move to the next space and begin entering another character.
3. Once you’ve completed filling out the field, press the center button to save the entry and return to the INPUT DEALER INFO screen. Repeat this process for all fields you want saved.
4. Once all fields have been entered, scroll to SAVE and press the center button.

**FAN WITH HEAT OPTION**
Options are ON or OFF. This selection determines whether G (fan) output is to be ON or OFF when W (auxiliary heat) output is ON.

**HUMIDITY OPTION TP32U04 only**
If your system is setup with a humidifier, or you desire a dehumidification option, select the appropriate setting.

HUMIDIFY (TP32U04 only)
DEHUMIDIFY (TP32U04 only)
BOTH (H or DH)
NONE

To adjust the Set Point for Humidification or Dehumidification, Select the RH from the Main menu. The values can be selected and adjusted from that screen. NOTE: If you have an outdoor sensor attached to the thermostat, the Humidification setting is adjusted automatically based on the outdoor humidity.

HUMIDIFY - Turns on the H output when the room humidity is below the set point and MODE is set to HEAT, EHEAT, or AUTO when Heating was the last mode run.

DEHUMIDIFY – Turns on the DH output when the room humidity is above the set point and the MODE is set to COOL or AUTO when Cool was the last mode run.

BOTH – HUMIDIFY operates in the HEAT mode and DEHUMIDIFY operates in COOL mode.

NONE – Neither is active.

**REVERSING VALVE OPTION**
Option of the reversing valve (O output) being on when in cooling or heating. Default is COOLING.

**RESTORE DEFAULTS**
This will allow you to revert to the factory default settings.

**ANTICIPATOR**
This adjustment controls the sensitivity and cycle rate of the thermostat. Higher numbers decrease the cycle rate. Lower numbers increase the cycle rate. Default value is 0, and the range is 0-4.

**DIFFERENTIAL**
This adjustment will vary the number of degrees, from the set point, before a call for heating or cooling is made. Adjustments can range between 0.5° and 4° differential. Default is 0.5° offset. (If your set point is 70°F in heating, your thermostat will not call for heat until the temperature is 69.5°F, with a 0.5 differential).

**CYCLES PER HOUR**
This feature will not allow more than the specified number of equipment cycles per hour. Values can range from 4 or 6 (1 cycle every 15 minutes (default) or 1 cycle every 10 minutes, if 6 is set). Factory default setting is 4. This default selection will provide optimum performance in nearly all installations.

**PROGRAM SETTINGS**
1. MENU → SETTINGS → CYCLES PER HOUR

**SMART RECOVERY**
Smart recovery is a feature of your thermostat designed to improve comfort and system efficiency by adjusting temperatures to achieve a room temperature that is programmed. When it’s time for a programmed temperature change, smart recovery begins working in advance, turning the system on and off to adjust the indoor temperature. During these transition periods, you may notice that the actual temperature and your temperature setting don’t match. That’s smart recovery in action, adjusting temperatures in small increments for greater energy efficiency. This is more energy efficient than simply allowing the system to operate at full capacity until the desired temperature has been met. Smart Recovery helps avoid excessive use of auxiliary heat when recovering from night setback in the heating mode.

**EVENTS PER DAY**
This is where you can set the number of events per day. (An event is a period of time scheduled with a certain heating and cooling setpoint.) For instance if you are away from your home from 8am to 5pm, make this period of time an event and set the thermostat at an energy saving setting. You have the option of setting the events per day to 4.

RESIDENTIAL (4 events), 2-RESIDENTIAL (2 events) or 2-BUSINESS (2 events).

**SMART HEAT STAGING** (HEAT PUMP ONLY)
This delays 3rd stage heating for a set time. Options are ON or OFF. Default is OFF. Range for this is 0-120 minutes in 5 minute increments. If set to ON, 30 minutes is the default time (if ‘ON’ is selected and the demand has not been satisfied the thermostat will energize electric heat after the selected time has expired regardless of demand.)

**COOLING LOCKOUT**
When an outdoor temperature sensor is installed, it can be set up so cooling option doesn’t energize if the outdoor temperature is below a certain temperature. Ranges for this are NONE (default), 45°F, 50°F, or 55°F.

**ELECTRIC HEAT or Dual Fuel LOCKOUT**
When an outdoor temperature sensor is installed, you can set it up so the electric heat or Dual Fuel option doesn’t energize if the outdoor temperature is above a certain temperature. Ranges for this are NONE (default), 5°F to 60°F in 5° increments.

**COMPRESSOR SATISFY**
Normal - allows compressor downstaging from Y2 to Y1. Recommended setting for Envision series products.
Y2 Finish - Once the heat pump has engaged Y2 the thermostat will not allow downstaging to Y1. The call is satisfied in Y2.

**REMOTE SENSOR**
Allows selection of the remote sensor to determine indoor temperature. Options are REMOTE SENSOR, AVERAGE, and STAND ALONE. The REMOTE SENSOR is connected to the ID and GND on the thermostat terminals.