

**VIVE**  
COMFORT  
Operation Manual

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尺寸：120\*120mm

材质：105g铜版纸，一颗骑马钉，彩印



**Vive Comfort**

Web: [www.vivecomfort.com](http://www.vivecomfort.com)

# TP-N-HP21

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**Caution:**

Equipment damage hazard. Do not switch the system to cool if the temperature is below 50°F (10°C).

Una version en español de este manual se puede descargar en la pagina web de la compañía.

## Thermostat Operation

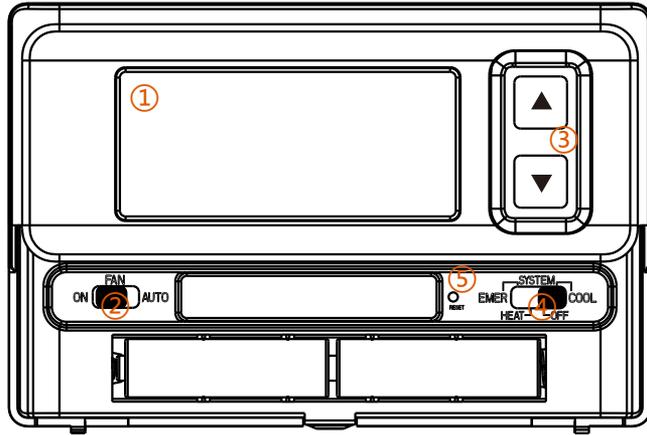


Figure 1

- ① LCD Display
- ② Fan Switch
- ③ Temperature Setpoint Buttons
- ④ System Switch
- ⑤ Reset

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## Thermostat Operation

- ① **LCD Display**  
See page 4 for details about this display read out.
- ② **Fan Switch**  
Select **ON** or **AUTO**. **ON** will run the fan continuously. **AUTO** will cycle the fan on only when the heating or cooling system is on.
- ③ **Temperature Setpoint Buttons**  
Press the ▲ or ▼ buttons to select the desired room temperature.
- ④ **System Switch**  
Selects the operation mode on your HVAC system. Selecting **HEAT** turns on the heat mode. Selecting **COOL** turns on the cool mode. Selecting **OFF** turns both heating and cooling off. Selecting **EMER** is typically used when compressor operation is not desired, or you prefer to use the back-up heating system only.
- ⑤ **Reset**  
If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing the reset button.

### **Caution:**

If the battery icon  on the display is flashing, it indicates that the batteries need to be replaced. When the thermostat is powered only by battery, the battery icon  will flash for approximately 2 months before the batteries are expected to expire.

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## Thermostat Quick Reference

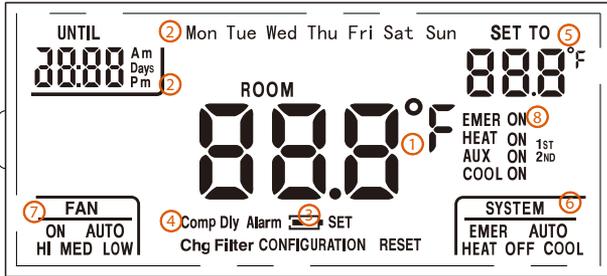


Figure 2

- 1 Indicates the current room temperature
- 2 Time and day of the week
- 3 **Low Battery Indicator:** Replace batteries when this indicator is shown.
- 4 **Compressor protection timer delay**  
Note: When the thermostat compressor time delay occurs, the Cool On or Heat On display will flash during compressor lockout.
- 5 **Setting temperature**  
Displays the user selectable setpoint temperature.
- 6 **System Operation Indicators**
- 7 **Fan: On/Auto**
- 8 **System display**  
The COOL ON, HEAT ON or icon will display when the COOL, HEAT, or (fan) is on.

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## Thermostat Quick Reference



### Important:

The thermostat will operate from 2 size "AA" alkaline batteries or 24VAC power. When operated from batteries, connection to the "C" (common) or (neutral) terminal is not required. NOTE: When operated from batteries only, the LCD display backlight will be lighted less than 5 seconds after each button pressed, when backlight option are set to 2) or 3). If the battery icon on the display is flashing, it indicates that the batteries need to be replaced. When the thermostat is powered only by battery, the battery icon will flash for approximately 2 months before the batteries are expected to expire.

### Battery Door Information

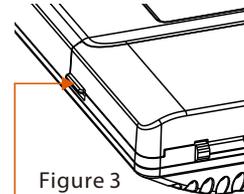


Figure 3

Use the finger bevel on the lower portion of the thermostat to open the easy access battery door.

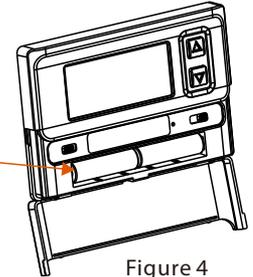


Figure 4

Replace with 2 AA Alkaline Batteries. High quality Alkaline batteries are recommended.

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## Thermostat Quick Reference

### Configuration operation

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Move the SYSTEM switch to the OFF position, then press and hold the ▲ and ▼ buttons for 5 seconds to enter the configuration menu. The display will show the first item in the configuration menu. Press the ▼ button to shift to the next menu item. Use the ▲ button to select each user setting. To exit the configuration menu and return to normal operation, move the SYSTEM switch to the HEAT or COOL position. If no buttons are pressed within 2 minutes, the thermostat will exit the configuration menu. The configuration menu chart summarizes the configuration options.

### Understanding Your Thermostats Staging:

This thermostat controls 2 stages of heating. For reasons of energy efficiency the thermostat will try to maintain your comfort setting using only 1 stage. If the 2nd stage is necessary it will be used and you will see Stage 2 in the display.

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## Thermostat Quick Reference

### Filter review

Move the SYSTEM switch to the HEAT or COOL position, then press and hold the ▲ and ▼ buttons for 5 seconds to review filter running days. To exit the review menu press the ▲ or ▼ buttons one time. Or if no buttons are pressed within 15 seconds, the thermostat will exit the configuration menu. In review mode, press and hold the ▲ and ▼ 15 sec. to clean the filter warning. It will show "dEF" blink.

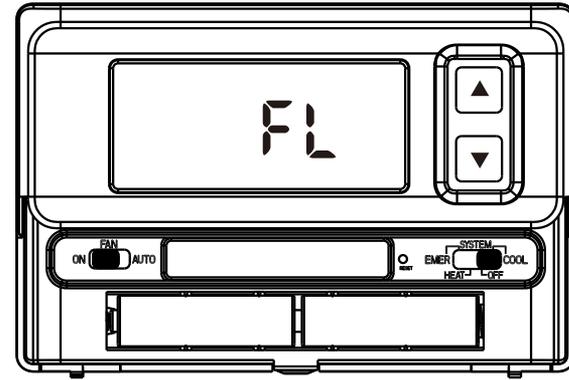


Figure 5

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## Thermostat Quick Reference

### Set Time

Move the SYSTEM switch to the OFF position, then press and hold the ▼ buttons for 5 seconds to enter the clock setting mode. The display will show the HOUR setting first . Use the ▲ button to select each user setting. Press the ▼ button to shift to the next menu item ( MINUTES, WEEK DAY). Use the ▲ button to select each user setting also.

Move the SYSTEM switch to the HEAT or COOL position to exit the setting menu. If no buttons are pressed within 15 seconds , the thermostat will exit the configuration menu.

## Thermostat Quick Reference

### Troubleshooting

If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing the reset button (See Figure 1). If the thermostat has power, and has been reset and still does not function correctly, contact your heating/cooling service contractor .

#### 1. Select cooling cycle rate

The FA setting is used to produce shorter cooling cycles. The SL setting produces a longer cooling cycle. Both settings produce very accurate temperature control and can be set to your personal preference.

FA cycles the system at a 0.5°F (0.5°C) differential, and SL cycles the system at 1.5°F (1.5°C).

#### 2. Select heating cycle rate

The FA setting is used to produce shorter heating cycles. The SL setting produces a longer heating cycle. Both settings produce very accurate temperature control and can be set to your personal preference.

FA cycles the system at a 0.5°F (0.5°C) differential, and SL cycles the system at 1.5°F (1.5°C).

#### 3. Select display backlight

The display backlight improves display contrast in low lighting conditions. Select 1 for NO backlight display. Select 2 for the backlight to come on for approximately 30 seconds when any button of the thermostat is touched. Select 3 for the backlight to remain on continuously.

**Continued on next page...**

## Thermostat Quick Reference

### Troubleshooting (Continue...)

#### 4. Select filter replacement run time

The thermostat will display the Filter Alarm after a set time of operation. This is a reminder to change or clean your air filter. This time can be set from 0 to 12 months in 1 month increments. Selection of 00 WILL CANCEL THIS FEATURE. When Filter Alarm is displayed, you can clear it by pressing the ▲ and ▼ buttons. This resets the timer and starts counting the days until the next filter change.

#### 5. Select °F or °C readout

Changes the display readout to Centigrade or Fahrenheit as required.

#### 6. Select temperature recalibration

This feature allows you to adjust the displayed room temperature up to 4° higher or lower. Your thermostat can be accurately calibrated to match your previous thermostat. The current or adjusted room temperature will be displayed on the display.

#### 7. Select compressor lockout delay 0,1,2,3,4,5

To protect the compressor from short cycling, you can select compressor off-time cycle between 0 to 5 minutes. When the thermostat compressor time delay occurs, the Cool On or Heat On display will flash during compressor lockout.

#### 8. Select AU Offset

Allows the user to select the turn on temperature of the Auxiliary Heating system. 2 = 2° F below set-point, 10 = 10° F below set-point.

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## Warranty Information

### Warranty Registration

Your new thermostat has 1 year limited warranty. You must register your thermostat within 60 days of installation. Without this registration the warranty period will begin on date of manufacture. For warranty issues please contact the HVAC professional that installed this product. You can register your new thermostat here:

Online

Go to the company website, select warranty registration and fill out a short registration form.

### Warranty Registration

Name: \_\_\_\_\_ Thermostat Model: \_\_\_\_\_

Address: \_\_\_\_\_ Date Installed: \_\_\_\_\_

City: \_\_\_\_\_ Complete form to:

State: \_\_\_\_\_ **Thermostat Warranty Registration**

Zip: \_\_\_\_\_ [www.vivecomfort.com](http://www.vivecomfort.com)

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## Installation Manual



Vive Comfort

Web: www.vivecomfort.com

# TP-N-HP21

### Thermostat Application Guide

Description	
Gas or Oil Heat	Yes
Electric Furnace	Yes
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (With Aux. or Emergency Heat)	Yes
Multi-Stage Systems	No
Heat Only Systems (Only Emergency Heating)	Yes
Heat Only Systems - Floor or Wall Furnace	Yes
Cool Only Systems	Yes
Millivolt Conventional Systems	No
Two Transformer Systems	No

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Wiring	18-21
Configuration and operation	22-23

### Power Type

Battery Power for Display not Control  
Hardwire (Common Wire)

**A trained, experienced technician must install this product.**

Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

Una version en español de este manual se puede descargar en la pagina web de la compañía.

### Specifications

Power Supply.....20VAC-30VAC 50-60HZ or Battery power for display not control

Terminal Load.....1.0A per terminal, 3.0A maximum total load

Set Point Temp. Range.....45°F to 90°F (7°C to 32°C).

Accuracy.....+/- 1°F or +/- 0.5°C.

Dimensions.....6.0" W X 4.7" H X 1.1" D

Color.....White

### Installation Tips

#### Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.

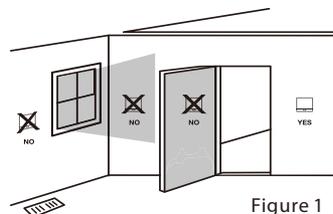


Figure 1



#### Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

#### Do not install thermostat in locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts (in corners or behind doors)
- Where there might be concealed chimneys or pipes

## Subbase Installation

- ① Horizontal Mount
- ② Vertical Mount

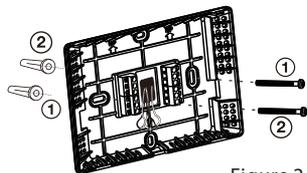


Figure 2

Fasten the base loosely to the wall as shown in Figure 1, using two mounting screws. Place a level against the bottom of the base and adjust until level, then tighten the screws. (Leveling is for appearance only, and will not affect thermostat operation.)

### Installation Tip: Electrical Hazard

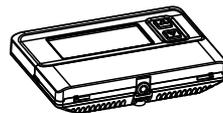
Always turn off power at the main power source by removing the fuse, or switch the circuit breaker to the off position before installing, removing, cleaning, or servicing this thermostat.

### Mercury Notice

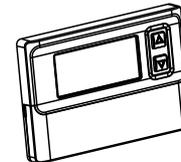
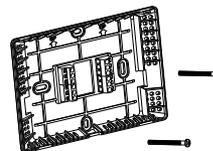
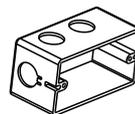
All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.

## Installation Tips

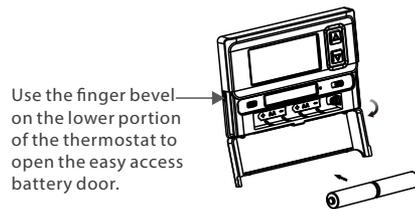
### Mount Thermostat



1. Push the button to open thermostat front cover

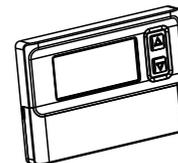


2. Installing the screws in the base cover into the junction box and finish wiring.



Use the finger bevel on the lower portion of the thermostat to open the easy access battery door.

3. Open the slide cover, fitting the 2AA battery



4. Close the lid.

Figure 3

## Thermostat Quick Reference

### Getting to know your thermostat

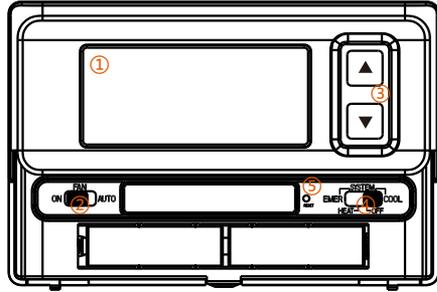


Figure 4

- 1 LCD Display**  
See page 5 for details about this display read out.
- 2 Fan Switch**  
Select **ON** or **AUTO**. **ON** will run the fan continuously. **AUTO** will cycle the fan on only when the heating or cooling system is on.
- 3 Temperature Setpoint Buttons**  
Press the ▲ or ▼ buttons to select the desired room temperature.
- 4 System Switch**  
Selects the operation mode on your HVAC system. Selecting **HEAT** turns on the heat mode. Selecting **COOL** turns on the cool mode. Selecting **OFF** turns both heating and cooling off. Selecting **EMER** is typically used when compressor operation is not desired, or you prefer to use the back-up heating system only.
- 5 Reset**  
If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by pressing the reset button.

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## Thermostat Quick Reference

### Getting to know your thermostat

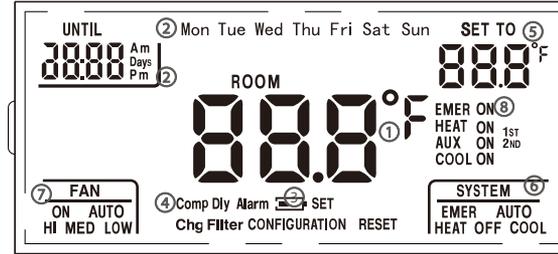


Figure 5

- 1 Indicates the current room temperature**
- 2 Time and day of the week**
- 3 Low Battery Indicator:** Replace batteries when this indicator is shown.
- 4 Compressor protection timer delay**  
Note: When the thermostat compressor time delay occurs, the Cool On or Heat On display will flash during compressor lockout.
- 5 Setting temperature**  
Displays the user selectable setpoint temperature.
- 6 System Operation Indicators**
- 7 Fan: On/Auto**
- 8 System display**  
The COOL ON, HEAT ON or icon will display when the COOL, HEAT, or (Fan) is on.

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## Important

### Installing batteries backwards can damage the thermostat.

1. Install two fresh "AA" alkaline batteries in the battery compartment. Be sure to match positive (+) ends of batteries with positive (+) battery terminals in the battery compartment (The thermostat will not operate from 2 size "AA" alkaline batteries or 24VAC power. When batteries are installed the clock will be maintained during power outages.).
2. Replace the cover on the thermostat by snapping it in place.
3. Turn on power to the system at the main service panel.
4. Test thermostat operation as described in the following section.

## Wiring

### REMOVE THE OLD THERMOSTAT



#### **WARNING !** Electrical Shock Hazard

1. Turn off power to the heating and cooling system by removing the fuse or switch the appropriate circuit breaker off.
2. Turn off power to the heating and cooling system by removing the fuse or switch the appropriate circuit breaker off.
3. Remove the cover of the old thermostat. This should expose the wires.
4. Label the existing wires from the existing thermostat before removing.
5. After labeling the wires, remove the wires from the wire terminals.
6. Remove the existing thermostat from the wall.
7. Refer to the following section for instructions on how to install this thermostat.



#### **WARNING !** Electrical Shock Hazard

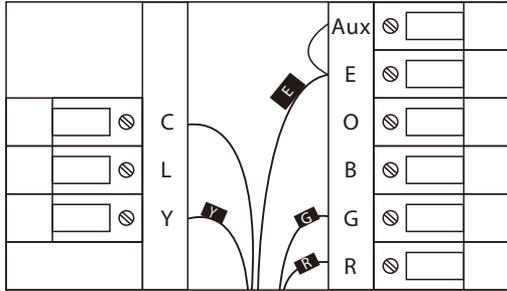
Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.

1. Turn off power to the heating and cooling system by removing the fuse or switching the appropriate circuit breaker off.
  2. Place the system switch (EMER/HEAT/OFF/COOL) in the OFF position.
  3. Place the FAN (ON /AUTO) switch in the AUTO position.
  4. Gently pull the cover straight off the base. (See Figure 3.)
  5. Put the thermostat base against the wall where you plan to mount it. (Be sure the wires will feed through the wire opening in the base of the thermostat.)
  6. Mark the placement of the mounting holes.
  7. Move the base out of the way. Drill mounting holes. Use a hammer to tap in the supplied anchors into the mounting holes.
  8. Fasten the base loosely to the wall as shown in Figure 1, using two mounting screws. Place a level against the bottom of the base and adjust until level, then tighten the screws. (Leveling is for appearance only, and will not affect thermostat operation.)
  9. Insert stripped, labeled wires into matching wire terminals.
- See "Wiring Diagrams", Figure 6/7.

# Wiring

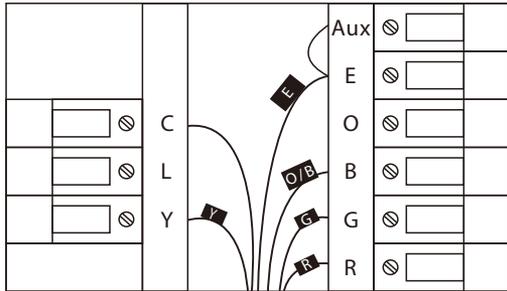
## Wiring Diagrams

Power from C wire (Without battery)



2H/1C conventional wiring diagram

Figure 6



Heat pump wiring diagram

Figure 7

## Terminal Designations

Heat Pump System 1 HEAT 1 COOL / 2 HEAT 1 COOL	
<b>R</b>	Transformer Power
<b>C</b>	Transformer Common
<b>B</b>	Changeover Valve Energized in HEAT
<b>O</b>	Changeover Valve Energized in COOL
<b>G</b>	Fan Relay
<b>Aux</b>	Auxiliary Heat (Require a jumper to connect Aux and E in two stage of heating)
<b>E</b>	Emergency Heat
<b>Y</b>	First Stage of Heat and Cool

Figure 8

## Configuration and operation

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Move the SYSTEM switch to the OFF position, then press and hold the ▲ and ▼ buttons for 5 seconds to enter the configuration menu. The display will show the first item in the configuration menu. Press the ▼ button to shift to the next menu item. Use the ▲ button to select each user setting. To exit the configuration menu and return to normal operation, move the SYSTEM switch to the HEAT or COOL position. If no buttons are pressed within 2 minutes, the thermostat will exit the configuration menu. The configuration menu chart summarizes the configuration options.

Step	Press Buttons	Displayed (Factory Defaults)	Press ▲ or ▼ to select	Description
1	▲ and ▼ 5 seconds	CC (FA)	FA or SL	Select (FA)st or (SL)ow cooling cycles Default = FA
2	▼	HC (FA)	FA or SL	Select F(ast) or (S)low Heating cycles. Default = FA
3	▼	bL (2)	1-3	Select display backlight (1) = OFF, (2) = 30 seconds on any button push, (3) = ON. Default = 2. Option (3) can be activated only if the common is used.
4	▼	FL (00)	00, 1 to 12	Select filter time in months. Default = 00. A selection of "00" deactivates the filter feature.
5	▼	FC (F)	F or C	°F or °C display. Default = F
6	▼	CL (0)	+4 to -4	Select temperature calibration point up to 4° higher or 4° lower. Default = 0
7	▼	CP (5)	0 to 5	Compressor Lockout delay. 0 = none, 1= 1 Min'; 2=2 Min'; 3=3 Min'; 4=4 Min'; 5 = 5 Minutes Default = 5
8	▼	AU (2)	2 or 10	Aux Heat offset , Default = 2 2 = 2° below "Y" on 10 = 10° below "Y" on

Figure 9

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