

# VENSTAR®

WIRELESS  
DIGITAL  
THERMOSTAT  
RECEIVER



RESIDENTIAL  
WIRELESS  
THERMOSTAT  
RECEIVER

**T1100REC**

USE IN  
CONJUNCTION  
WITH T1100RF

UP TO 2-HEAT  
& 2-COOL



- Control up to 2 Heat & 2 Cool Stages
- Wireless Operation
- Receives up to 4 Thermostats
- Flexible Installation Locations
- May be Mounted at Old Thermostat Location or with the Furnace



• Use with most Air Conditioning & Heating Systems including: 1 or 2 Stage Electric Cooling & 2 Stage Gas Heating, Heat Pump, Electric or Hydronic Heat.

## INSTALLATION INSTRUCTIONS

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**CAUTION** Follow *Installation Instructions* carefully.



DISCONNECT POWER TO THE HEATER -  
AIR CONDITIONER BEFORE REMOVING  
THE OLD THERMOSTAT AND INSTALLING  
THE NEW THERMOSTAT.



**WARNING**

**This receiver is designed to operate from 0-70°C**

*This device complies with Part 15 of the FCC  
Rules. Operation is subject to the following  
two conditions: (1) this device may not  
cause harmful interference, and (2) this  
device must accept any interference  
received, including interference that may  
cause undesired operation.*



**P/N T1100REC**

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## STEP #1

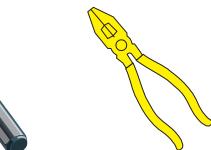
## PREPARATION



Proper installation of the thermostat will be accomplished by following these step by step instructions. If you are unsure about any of these steps, call a qualified technician for assistance.



Assemble tools.



Flat Blade  
Screwdriver



Drill with 3/16  
inch Drill Bit  
(when not using  
j-box)



Make sure your Heater/Air Conditioner is working properly before beginning installation of the thermostat.



Carefully unpack the thermostat. Save the screws, wall anchors, and instructions.



Turn off the power to the Heating/Air Conditioning system at the main fuse panel. Most residential systems have a separate breaker for disconnecting power to the furnace.

## STEP #2 REMOVE & REPLACE OLD THERMOSTAT



Remove the cover of the old thermostat. If it does not come off easily check for screws.



Loosen the screws holding the thermostat base or subbase to the wall, and lift away.



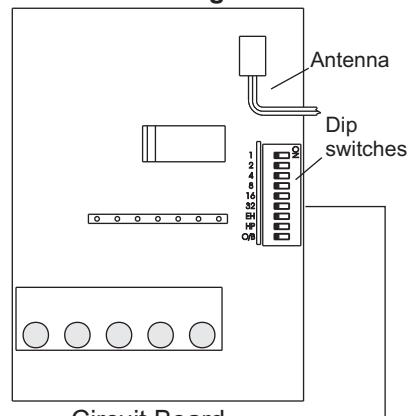
Disconnect the wires from the old thermostat. Tape the ends of the wires as you disconnect them, and mark them with the letter of the terminal for easy reconnection to the new thermostat.



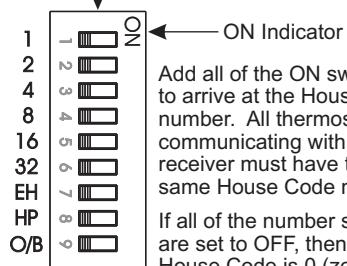
Keep the old thermostat for reference purposes, until your new thermostat is functioning properly.

### STEP #3 DIP SWITCH SETTINGS

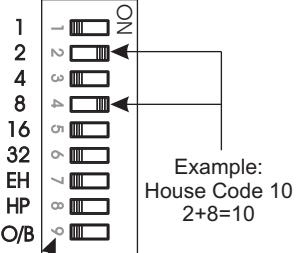
#### House Code Setting



Circuit Board



Add all of the ON switches to arrive at the House Code number. All thermostats communicating with this receiver must have the same House Code number.  
If all of the number switches are set to OFF, then the House Code is 0 (zero).

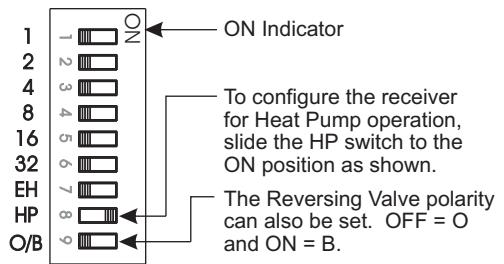


Example:  
House Code 10  
 $2+8=10$

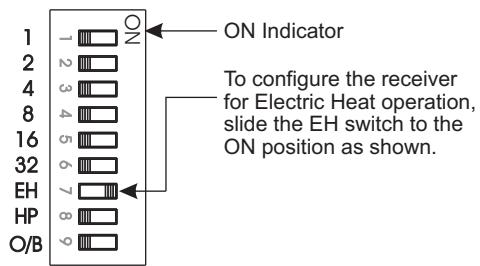
Disregard the numbers located on the actual dip switch and refer only to the markings on the Receiver circuit board.

## Equipment Settings

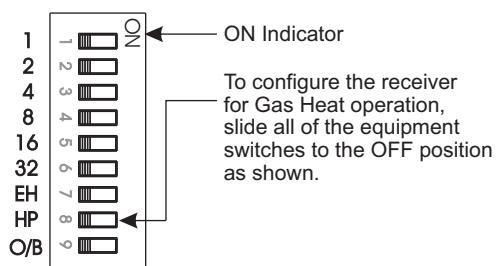
**Heat Pump**  
O or B Reversing  
Valve



**Electric Heat**



**Gas Furnace**



## STEP #4

## WIRE CONNECTIONS



If the terminal designations on your old thermostat do not match those on the new thermostat, **refer to the chart below, or the wiring diagrams that follow.**

| Wire from the old thermostat terminal marked | Function       | Install on the new thermostat connector marked |
|--|----------------|--|
| G or F                                       | Fan            | G  |
| Y1, Y or C                                   | Cooling        | Y1   |
| W1, W or H                                   | Heating        | W1, O, B                                       |
| Rh, R, M, Vr, A                              | Power          | R  |
| C  | Common         | C *  |
| O/B  | Rev. Valve     | W1, O, B**                                     |
| Y2   | 2nd Stage Cool | Y2   |
| W2   | 2nd Stage Heat | W2   |

\* C may not be used on all systems.

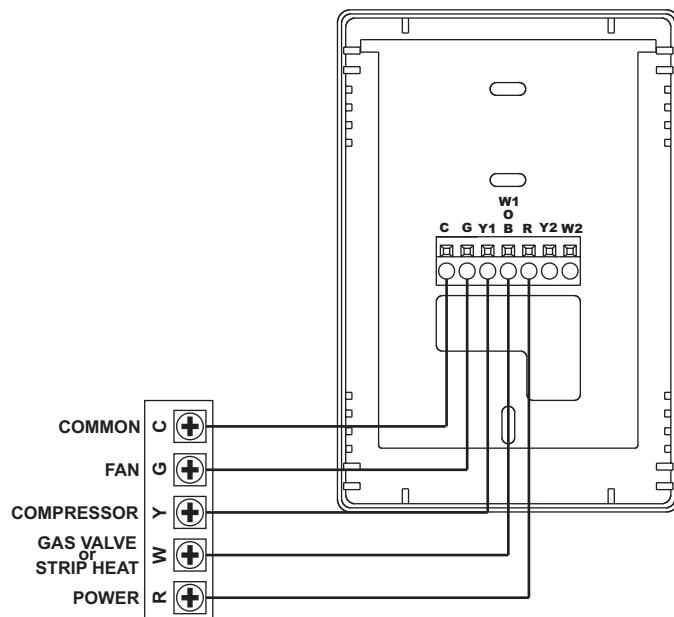
\*\* O/B is used if your system is a Heat Pump.

## Sample Wiring Diagrams

# Gas or Electric Heat

### 5 Wire, 1 Stage Cooling, 1 Stage Gas Heat

Residential Gas or Electric Heat\*,  
Electric Cool, split systems & package  
units.



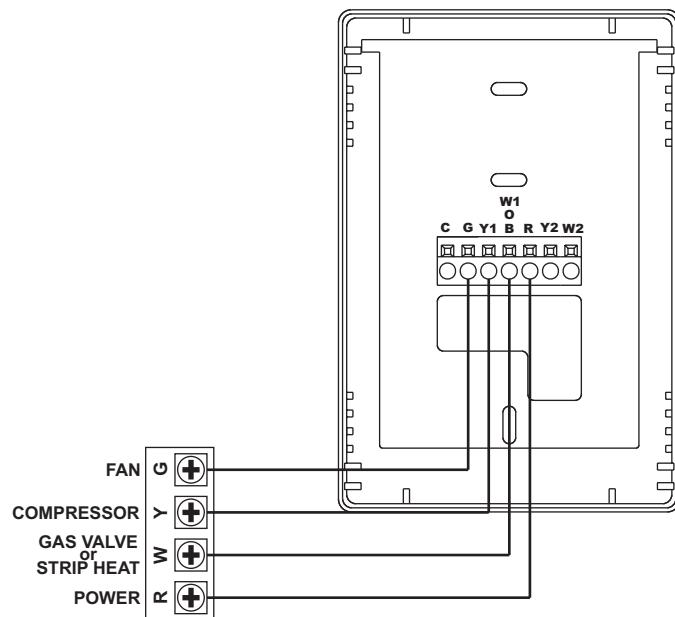
\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

## Sample Wiring Diagrams

# Gas or Electric Heat

### 4 Wire, 1 Stage Cooling, 1 Stage Gas Heat

Residential Gas or Electric Heat\*,  
Electric Cool, split systems & package  
units.

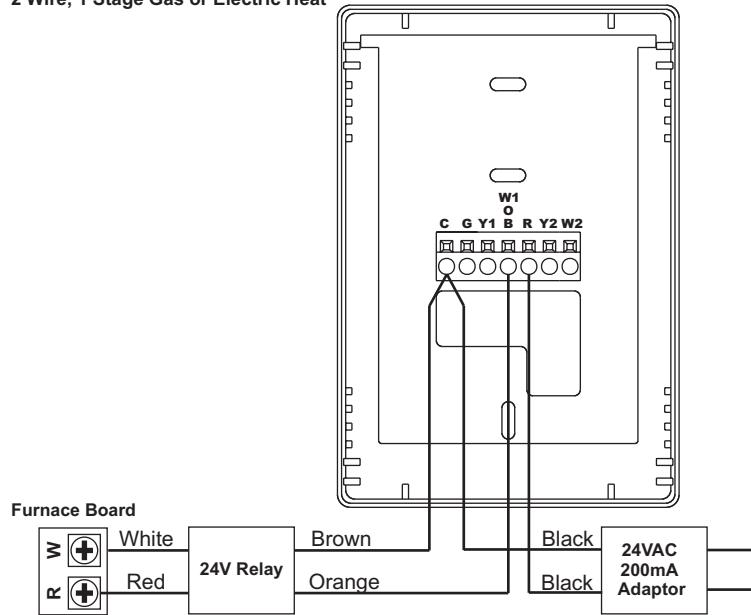


\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

## Sample Wiring Diagrams

### Gas or Electric Heat

2 Wire, 1 Stage Gas or Electric Heat



The ACC0436 Wireless Thermostat Two-Wire Kit can be purchased separately.

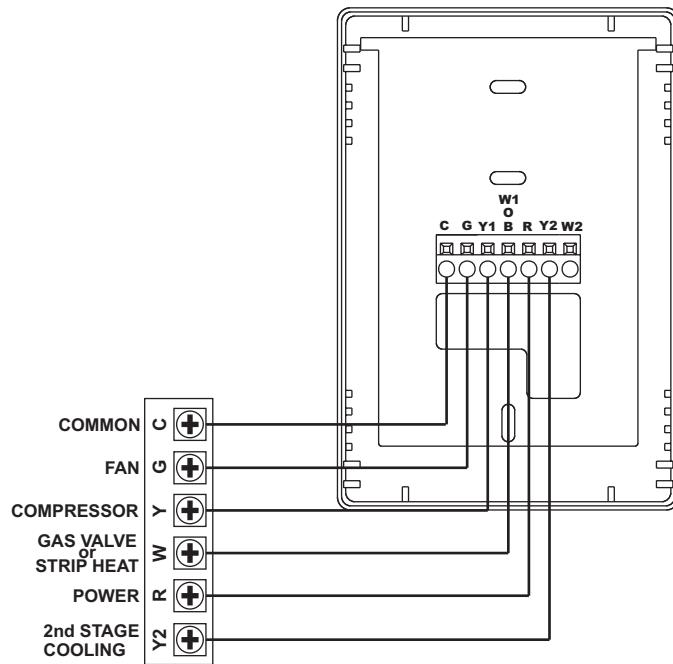
\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

## Sample Wiring Diagrams

# Gas or Electric Heat

6 Wire, 2 Stage Cooling, 1 Stage Gas Heat

Residential two stage cooling with  
Gas or Electric Heat.\*



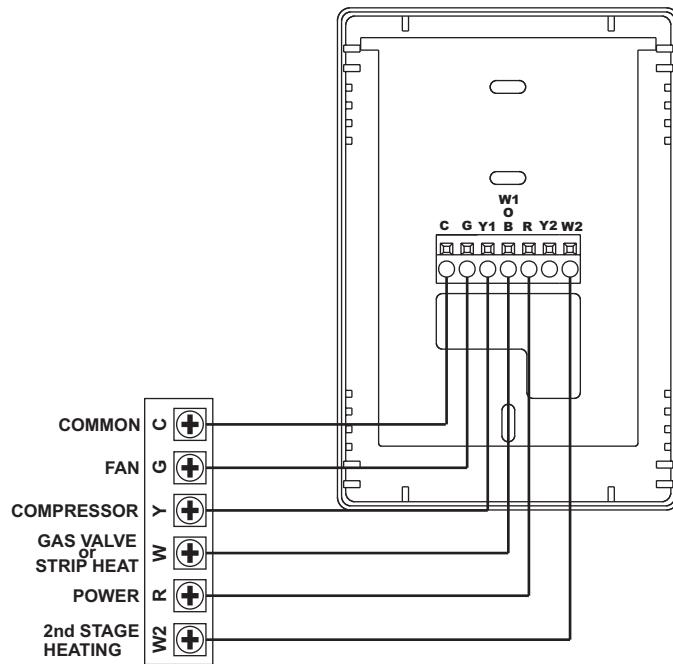
\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

## Sample Wiring Diagrams

# Gas or Electric Heat

6 Wire, 1 Stage Cooling, 2 Stage Heat

Residential & Commercial 1 Stage Cooling,  
with 2 Stage Gas or Electric Heat.\*



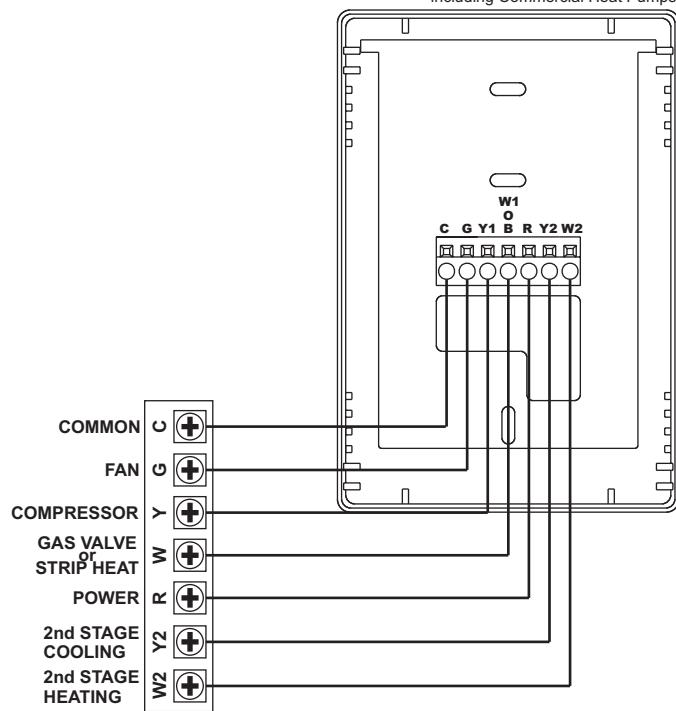
\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

## Sample Wiring Diagrams

### Gas or Electric Heat

7 Wire, 2 Stage Cooling, 2 Stage Heat

Commercial Gas or Electric Heat\*,  
Electric Cool, split systems & package units  
including Commercial Heat Pumps.\*\*



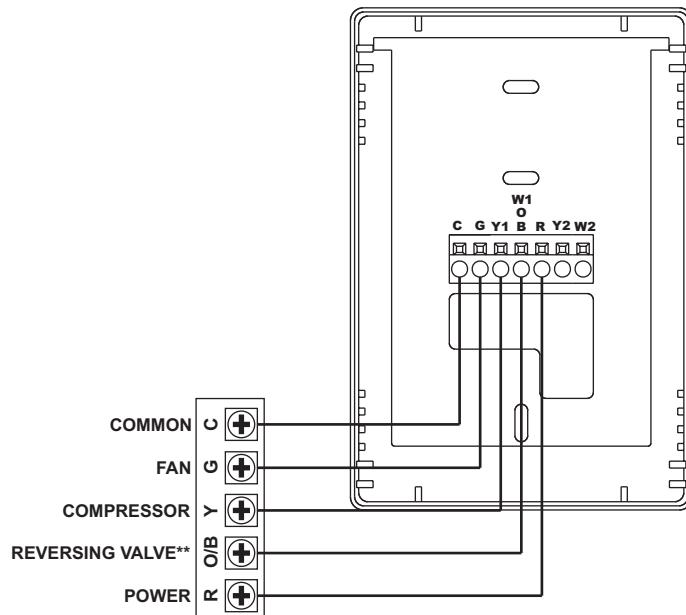
\* If using first stage electric heat, the "EH" dip switch must be set to ON (see page 5).

\*\* If using a Commercial heat pump, the "HP" dip switch must be set to OFF (see page 5).

## Sample Wiring Diagrams

### Heat Pump

**5 Wire, 1 Stage Cooling, 1 Stage Heat, Heat Pump\*** with O or B reversing valve\*\*.  
Residential Heat Pumps, split systems & package units, with no auxiliary heat.



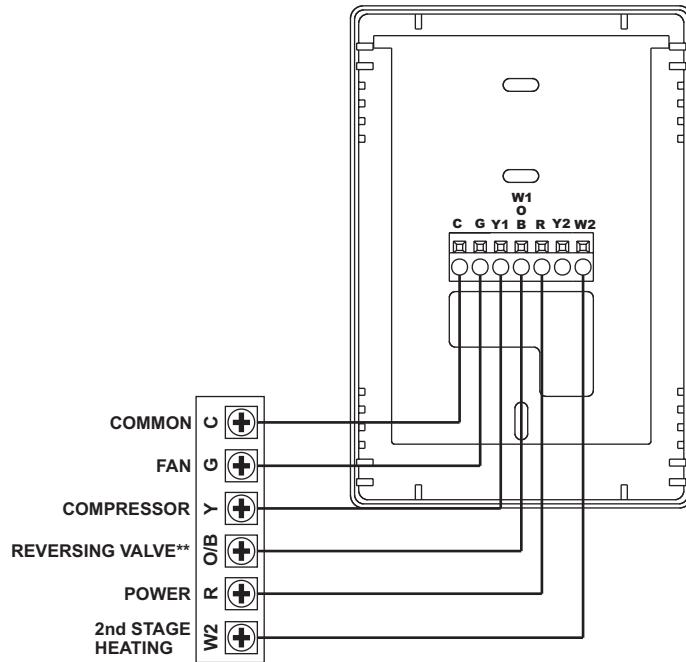
\* The "HP" dip switch must be set to ON (see page 5).

\*\* The "O/B" dip switch must be set to O or B (see page 5).

## Sample Wiring Diagrams

# Heat Pump

**6 Wire, 1 Stage Cooling, 2 Stage Heat, Heat Pump\* with O or B reversing valve\*\*.**  
Residential Heat Pumps, split systems & package units, with auxiliary heat.



\* The "HP" dip switch must be set to ON (see page 5).

\*\* The "O/B" dip switch must be set to O or B (see page 5).

## STEP #5

## TEST OPERATION



Turn the power on to the Heating/Air Conditioning system.



Press the MODE button repeatedly until the **HEAT** icon appears on the display. Press the UP or DOWN button until the set temperature is 10 degrees above room temperature. The HVAC unit should energize in the heating mode.



Press the MODE button repeatedly until the **COOL** icon appears on the display. Press the UP or DOWN button until the set temperature is 10 degrees below room temperature. The HVAC unit should energize in the cooling mode.

**NOTE:** *Most equipment has a time delay of 5 minutes between cooling cycles. This feature is defeatable on the thermostat (see page 13, step 8 of the Thermostat Manual).*



Press the UP button until the setpoint is equal to the room temperature. Press the FAN button to **Fan On**. The fan should turn on and run continuously.

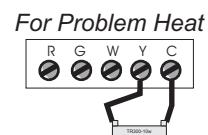
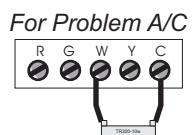
## TROUBLESHOOTING



**SYMPTOM:** When using 4 wires (R, G, W, Y), the air conditioning or heating equipment tries repeatedly to turn on, but cannot.

**CAUSE:** There is not enough power available to "power share".

**REMEDY:** Connect a 250 ohm, 10 watt power resistor at the furnace as shown below.



*Note: 2 resistors may be used at the same time.  
Not applicable with Heat Pump systems.*



**SYMPTOM:** The air conditioning does not attempt to turn on.

**CAUSE:** The compressor timer lockout may prevent the air conditioner from turning on for a period of time.

**REMEDY:** See page 13 of the Thermostat Manual and configure step 8 to defeat the 5-minute compressor lockout.



**SYMPTOM:** The display is blank.

**CAUSE:** Lack of proper power.

**REMEDY:** Make sure power is turned on to the furnace and 24vac exists between R & W. If C is used, 24vac between R & C.

## TROUBLESHOOTING



**SYMPTOM:** When controlling a residential heat pump, and asking for cooling, the heat comes on.

**CAUSE:** The Heat Pump dip switch is set to OFF.

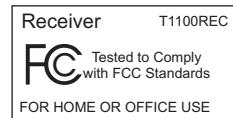
**REMEDY:** See page 5 of this manual and set the Heat Pump (HP) switch to ON.



**SYMPTOM:** When calling for cooling, both the heat and cool come on.

**CAUSE:** The Heat Pump dip switch is set to ON and the HVAC system is a "conventional" (non-heat pump) system.

**REMEDY:** See page 5 of this manual and set the Heat Pump (HP) switch to OFF to enable gas electric operation.



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Rev. 3

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