



- **+wire®** adaptor continuously charges smart thermostat batteries and enables control of 24VAC Heating, Ventilating, Air Conditioning (HVAC) systems, gas furnaces, wall furnaces, heat pumps, hydronic, and/or radiant heating systems without a common wire
- **+wire®** with 120/24VAC transformer continuously charges smart thermostat batteries and enables control of 2-wire millivolt gas furnaces or gas fireplaces with no common wire and no built-in 24VAC transformer (step 2a next page)¹
- **+wire®** is made in USA, easier to install, more reliable, lasts 10 times longer, and uses 2 times less power than other common-wire adaptors
- **+wire®** has a 5-year warranty and lasts for life of HVAC system or gas fireplace
- **+wire® thermostat element** blue wire connects to smart thermostat common wire input, white wire connects to heat W input (or fan G for heat pump), and black wire connects to thermostat white wire
- **+wire® switch element** black wire connects to white wire from thermostat (or fan G for heat pump) and other wires connect as shown in steps 2a, 2b, 2c, or 2d (next page)

¹ US Energy Information Agency (EIA) indicates that 9 to 10 million U.S. homes have HVAC systems with 2-wire millivolt gas valves or 24VAC systems with only two wires, and 88% of 120 million U.S. homes do not have a common wire at the thermostat which is required to provide reliable power to smart thermostats.

greenfan®

+wire®

continuously charges smart thermostat batteries and enables control of HVAC systems or fireplaces without a common wire or with 2-wire controls such as heat-only systems or millivolt gas valves

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greenfan® +wire® works on all 24VAC HVAC systems or millivolt gas valves

Step 1: Thermostat Element (TE) installation at thermostat on all systems. TE has 3 wires: blue, white, and black.

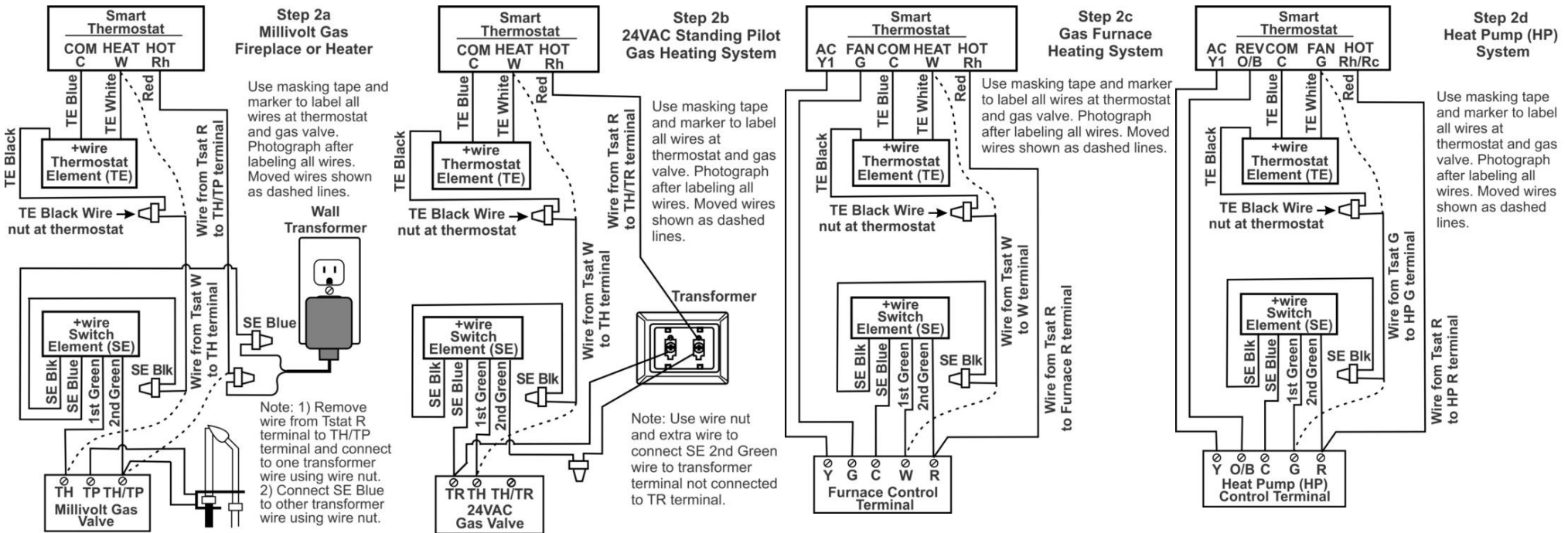
1. Turn off power to HVAC system. Use masking tape and marker to label wires at Thermostat (Y1, G, W1, C, Rh or HP Rc and O/B), and at gas valve (TH, TP, TH/TP, TR, TH/TR), furnace/AC (W, Y, G, C, R), or HP (W, Y, G, O/B, C, R).

Photograph all existing wire connections after labeling wires at thermostat, gas valve, furnace, or Heat Pump (HP).

TE fits behind thermostat base plate which might require enlarging hole in wall behind base plate.

2. **If replacing thermostat:** After labeling wires remove thermostat wires and base plate and install new base plate.
- 3a. **Fireplace or Gas heat or with or without AC (not heat pump):** Use wire nut to connect +wire TE black wire to wire in wall previously connected to W terminal. Connect +wire TE white wire to base plate W terminal. Skip to **Step 1.4**.
- 3b. **Heat pump (HP):** Use wire nut to connect +wire TE black to green wire in wall previously connected to G terminal. Connect +wire TE white wire to base plate G terminal. Proceed to **Step 1.4**.
4. **All systems:** Connect +wire TE blue wire to base plate C terminal, connect wire in wall labeled R to base plate Rh terminal for furnace or Rc for HP. Connect remaining wires in wall to base plate terminals: yellow to Y1, green to G, HP reversing valve orange (O) or brown (B) wire to O/B terminal.

Step 2: Install Switch Element (SE) in Step 2a, 2b, 2c, or 2d.



Step 3: System test

1. Install Smart Thermostat face plate and turn on power to HVAC system. Plug in transformer for millivolt system.
2. **For Nest:** verify "equipment" screen shows common C wire and all other wires connected. For heat only: C, W1, Rh, and possibly G. For heat/AC: C, Y1, W1, G, and Rh. For heat pump: C, Y1, O/B, G, and Rc.
3. Follow Smart Thermostat setup instructions.
4. **For heat only:** place system in heat mode and raise setpoint to verify heat operation.
5. **For AC or heat pump:** place system in cooling and lower setpoint to verify AC operation.
6. **For fan control:** set FAN to ON or ALWAYS and verify fan operation.