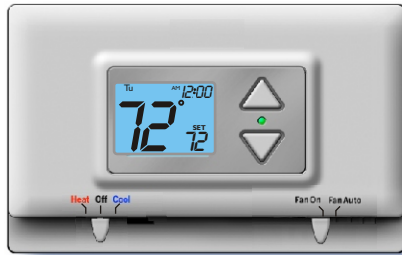


Installation Instructions

TSTATCCPQ501
TSTATBBPQ501
P474-1035

Digital Thermostat

NOTE: Read the entire instruction manual before starting the installation.



**HEAT
&
COOL**

**5+2 DAY PROGRAMMABLE
1-STAGE HEAT, 1-STAGE COOL**

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Safety Warnings

CAUTION Follow *Installation Instructions* carefully.



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




WARNING

 **CAUTION**

The 2 Alkaline “AA” batteries must be replaced at least every 12 months to assure proper operation. The thermostat will display the Low Battery code (fig. 1) on the display of the thermostat when it is time to replace the batteries. If the thermostat is connected to 24v power, the Batteries may still be installed, but are not required.



FIG. 1

When  is displayed the batteries must be replaced within 5 days. The manufacturer cannot be liable for improper operation of the thermostat if the batteries are not replaced within this time period.

The annual battery replacement is especially critical in locations subject to freezing temperatures. The thermostat will be unable to turn on the Heat if the batteries are exhausted.

This device complies with Part 15 of the FCC rules. Operation is subject to the following 2 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.

Step #1

Preparation



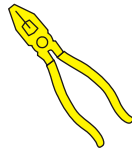
Proper installation of the thermostat will be accomplished by following these step by step instructions. If you are unsure about any of these steps, call a qualified technician for assistance.



These tools will be required:



*Flat Blade
Screwdriver*



*Wire cutter
& Stripper*



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



Carefully unpack the thermostat. Save the screws 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.

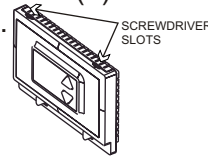


Keep the old thermostat for reference purposes, until your new thermostat is functioning properly.

Step #3 **Installation and Battery Replacement**

Open The New Thermostat

- 1 The top of the thermostat housing has two (2) screwdriver slots to assist when separating.



- 2 To pull the housing apart, insert a small blade screwdriver into the slot and rotate 90°. This will release the top housing snaps.



- 3 Repeat the procedure in the other screw driver slot.

- 4 Separate the housing halves by pulling the top forward until the pins release, and then lift the bottom out.




The batteries must be replaced within 5 days when the thermostat displays the Low Battery code (fig.1).

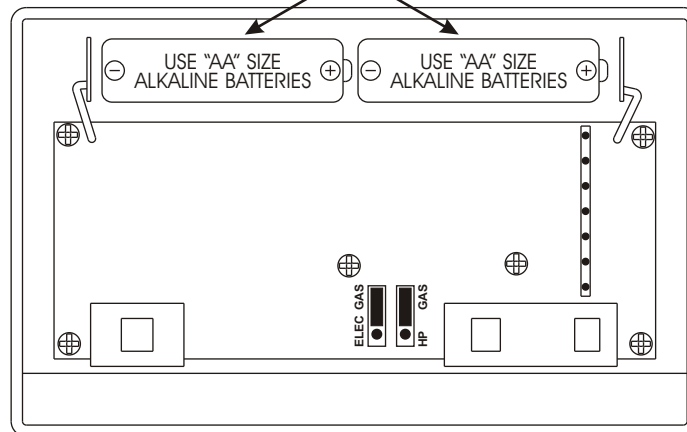


FIG. 1

Battery Replacement

- 5** IF THE THERMOSTAT IS NOT SYSTEM POWERED REPLACE WITH ALKALINE BATTERIES AT LEAST ONCE EVERY YEAR, OR WHEN THE “LOW BATTERY”  ICON APPEARS (pages 2,5).

POSITION BATTERIES AS SHOWN



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.**

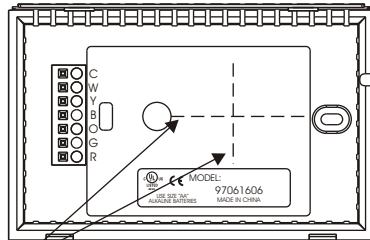
Wire from the old thermostat terminal marked	Function	Install on the new thermostat connector marked
W1, W or H	Heating	W
Y1 or Y	Cooling	Y
B	Rev. Valve (Energize to Heat)	B
O	Rev. Valve (Energize to Cool)	O
G or F	Fan	G
Rh, R, M, Vr, A	Power	R
C	Common	C (optional)

Thermal Insulating Sheet

A label is provided on the backplate that prevents drafts, originating inside the wall, from entering the thermostat.

These drafts, left unchecked, may cause incorrect room temperature readings.

Please do not remove this label from the thermostat. Insert the wires through the slots provided in the label as shown in Fig. 1



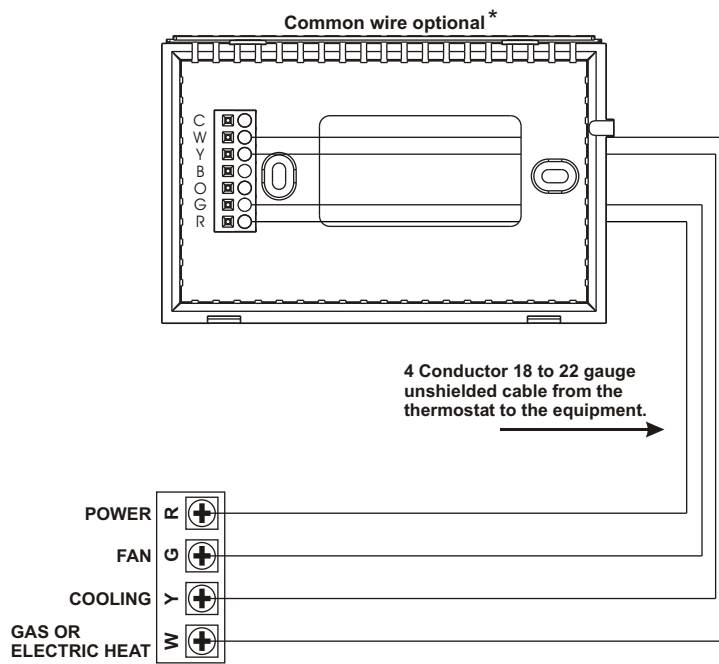
Wire Slots

Fig. 1

Sample Wiring Diagrams

**4 Wire, 1 Stage Cooling, 1 Stage
Gas or Electric Heat**

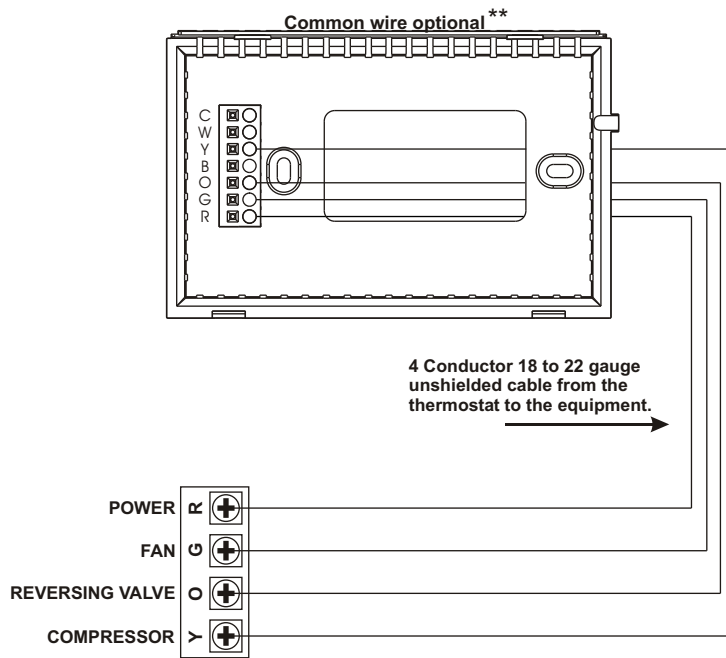
Residential Gas or Electric Heat *,
Electric Cool, split systems & package
units



* Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Sample Wiring Diagrams

4 Wire, 1 Stage Cooling, 1 Stage Heat-Heat Pump with O reversing valve*.
Residential Heat Pumps, split systems & package units, with no auxiliary heat.

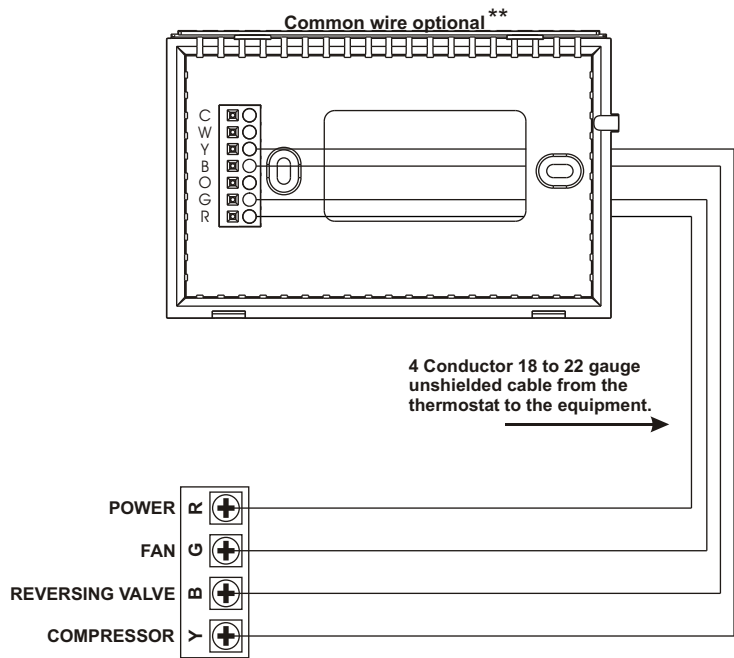


* See page 14 regarding jumper configuration.

** Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Sample Wiring Diagrams

4 Wire, 1 Stage Cooling, 1 Stage Heat-Heat Pump with B reversing valve*.
 Residential Heat Pumps, split systems & package units, with no auxiliary heat.



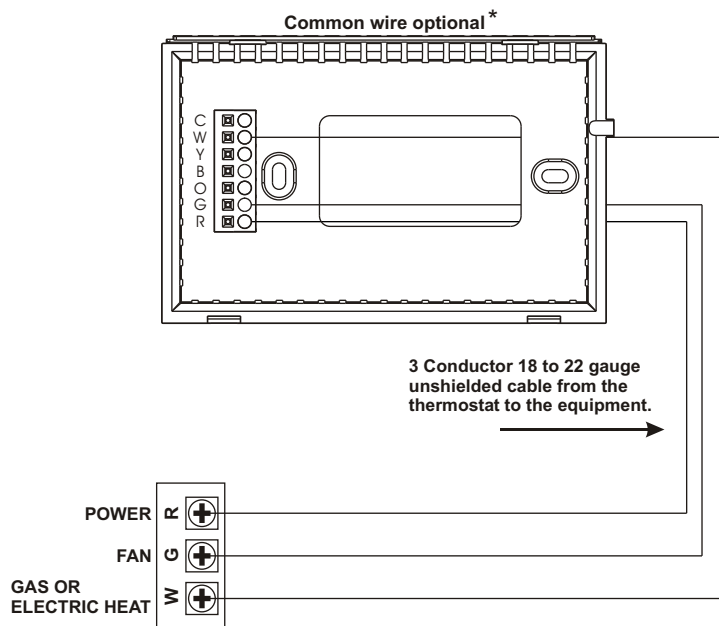
* See page 14 regarding jumper configuration.

** Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Sample Wiring Diagrams

3 Wire, 1 Stage Heat

Residential Gas or Electric Heat units with a separately controlled fan.

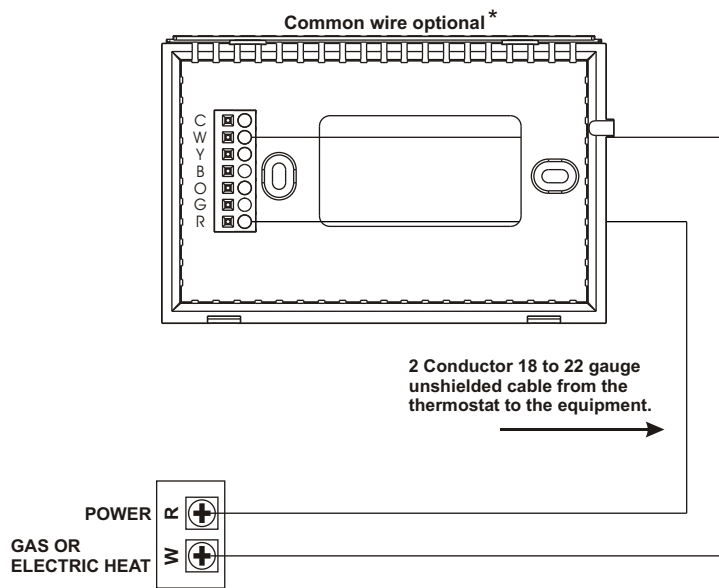


* Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Sample Wiring Diagrams

2 Wire, 1 Stage Gas Heat

Residential Gas or Millivolt units.

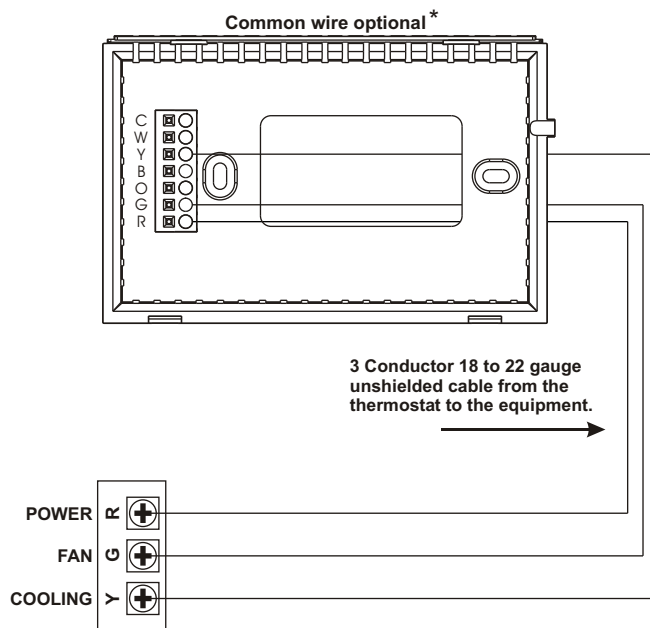


* Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Sample Wiring Diagrams

3 Wire, 1 Stage Cooling

Residential Electric Cool units

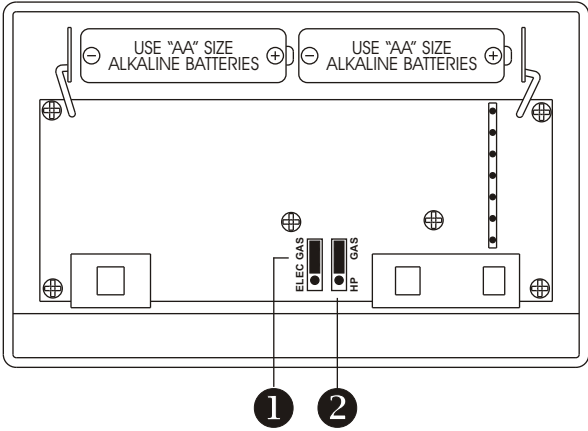


* Common wire is optional in all installations. If a common wire is not used the thermostat must be powered by the two AA Alkaline batteries (page 6). These batteries must be replaced each year or when the Low Battery indicator is displayed (page 2, 5).

Step #5 Jumper Configuration

Figure-A)

IF THERMOSTAT IS NOT SYSTEM POWERED
REPLACE WITH ALKALINE BATTERIES ONCE EVERY YEAR



Jumper 1 and Jumper 2 are shown in the factory default positions for typical gas furnace heating with electric cooling.

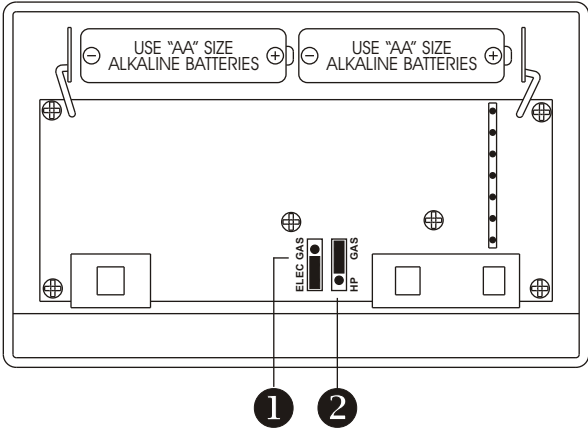
	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O*	Y, G, O*
Heating Mode	B*	W, B*

*Outputs active - For normal operation do not connect to equipment

Step #5 Jumper Configuration

Figure-B)

**IF THERMOSTAT IS NOT SYSTEM POWERED
REPLACE WITH ALKALINE BATTERIES ONCE EVERY YEAR**



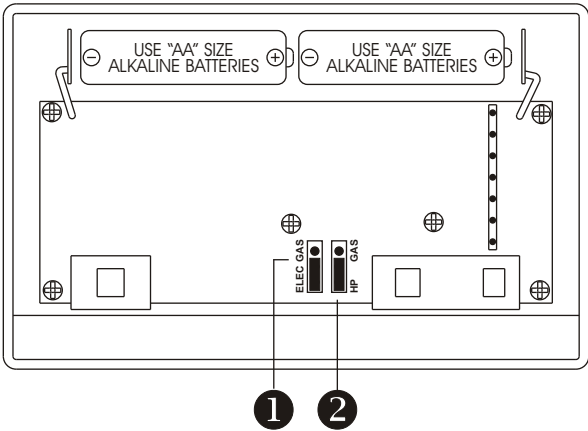
Jumper 1 is used to select Fan On (G) with Heat (W). Jumper 2 shown in the factory default position.

	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O*	Y, G, O*
Heating Mode	B*	W, G, B*

*Outputs active - For normal operation do not connect to equipment

Step #5 Jumper Configuration

Figure-C) **IF THERMOSTAT IS NOT SYSTEM POWERED
REPLACE WITH ALKALINE BATTERIES ONCE EVERY YEAR**



Jumper 1 and Jumper 2 are used to select heat pump operation. **Note:** Thermostat Does Not Have Auxiliary Heat / Emergency Heat Capability. Leave jumpers in original factory default positions (figure-A) for non heat pump applications.

	OUTPUTS	
	No Demand	With Demand
Cooling Mode	O*	Y, G, O*
Heating Mode	B**	Y†, G, B**

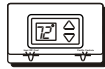
* Output active in Cooling
 ** Output active in Heating
 † Y active in Heating

Step #6

Test Operation



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



Adjust the Slide Switch until it is located under the word **HEAT** on the thermostat. Press the Up or Down buttons until the set temperature is 10 degrees above room temperature. The HVAC unit should energize in the heating mode.



Adjust the Slide Switch until it is located under the word **COOL** on the thermostat. Press the Up or Down buttons until the set temperature is 10 degrees below room temperature. The HVAC unit should energize in the cooling mode.



Adjust the Slide Switch until it is located under the word **OFF**. Adjust the other slide switch until it is located under the word **Fan On**. The fan should turn on and run continuously.

Troubleshooting



SYMPTOM: The slide switches on the thermostat are very difficult to move.

CAUSE: The backplate of the thermostat is deformed by being screwed tightly into a wall that is not perfectly flat.

REMEDY: Loosen the screws holding the thermostat into the wall.



SYMPTOM: The backlight on the thermostat doesn't stay on continuously, it only stays on for 10 seconds after a button press.

CAUSE: The backlight is turned OFF in Advanced Setup or a common wire is not connected.

REMEDY: To turn ON the backlight see Advanced Setup on page 16 or 17 of the Owner's Manual. To connect a common wire see pages 8-13 of this manual.

Troubleshooting



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

CAUSE: The cooling setpoint is set too high or the Mode Switch is not set for Cool, or the batteries are too weak.

REMEDY: Consult the Normal Operation section of this manual to lower the cooling setpoint and to correct the Mode Switch position, or replace the batteries.



SYMPTOM: The heating does not attempt to turn on.

CAUSE: The heating setpoint is set too low or the Mode Switch is not set for Heat, or the batteries are too weak.

REMEDY: Consult the Normal Operation section in this manual to raise the heating setpoint and to correct the Mode Switch position, or replace the batteries.

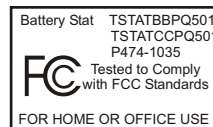
Troubleshooting



SYMPTOM: The thermostat does not run the program correctly.

CAUSE: The time periods are not set in chronological order.

REMEDY: Please be certain to program each time period in chronological order to ensure proper programmed operation of the thermostat. For example, if the Morning Start Time is 6:30am, then the Day Start Time **MUST** be programmed for any time **AFTER** the 6:30am Morning Start Time. Also, if the Day Start time is set for 10:30am, then the Evening Start Time **MUST** be programmed for any time **AFTER** the 10:30am Day Start Time. Finally, if the Evening Start Time is set for 5:30pm, then the Night Start Time **MUST** be programmed for any time **AFTER** the 5:30pm Night Start Time.



P/N 88-406
Rev. 2

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Catalog No. 63TS-TA12