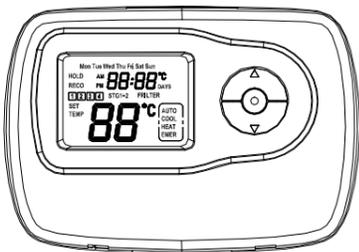# PROGRAMMABLE THERMOSTAT

Owners Manual
Model : A3602

Congratulations!

Your new thermostat will provide years of reliable service. By saving energy, your thermostat will pay for itself during its first season of use. Thanks you for buying our product!

Please read this manual for complete instructions on installing and operating your thermostat. If you require further assistance, please feel free to contact us

IMPORTANT INFORMATION

1. This thermostat is designed to work on the following systems:

- Gas – Standing Pilot
- Gas – Electronic Ignition
- Gas – Fired Boilers
- Gas – Milivolt Systems
- Oil – Fired Boilers
- Oil – Fired Furnace
- Single Stage Heat Pumps – with no auxiliary heat
- Electric Air Conditioning
- Electric Furnace

This thermostat will NOT control multistage heat pumps or 110/220V baseboard electric heating systems.

2. Temperature Range

This thermostat can be programmed between 45˚F and 95˚F (7˚C and 35˚C). However, it will display room temperatures from 30˚F to 99˚F (0˚C and 37˚C). "HI" will be displayed if the temperature is higher than 99˚F (37˚C), and "LO" will be displayed if the temperature is lower than 30˚F (0˚C).

This thermostat will automatically cutoff in Heat mode if the temperature rises above 95˚F (35˚C), and automatically cutoff in Cool mode if the temperature drops below 45˚F (7˚C).

3. Compressor Protection

This thermostat provides a 4 minutes delay after shutting off the cooling system before it can be restarted. This feature will prevent damage to your compressor caused by rapid cycling. It does not prevent a rapid compressor restart due to short power outages.

4. Battery Warning

One fresh AA alkaline batteries should provide well over one year of service. However, when the batteries become drained, the Low Battery Indicator will flash on the display. When this message occurs, install new alkaline batteries. You have approximately 1 minute to change the batteries and keep the thermostat's clock and program settings. Once the batteries have become too low to ensure proper operation, your system will be turned off, and the display will be cleared except for flashing Low Battery Indicator on the LCD display.

 CAUTION: When only the Low Battery icon flashes on the display, the thermostat is shut down, and your system will no longer operate. In this condition, there is no temperature control of your dwelling.
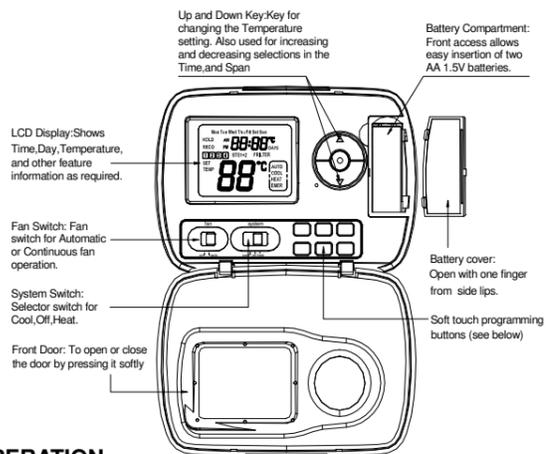
NOTE: The backlight will not function when the thermostat is in low battery condition.

NOTE: If you plan to be away from the premises over 30 days, we recommend that you replace the old batteries with new alkaline batteries prior to leaving.

**5.Power supply**

The thermostat shall be powered by battery.

FEATURES

Structure of thermostat and explanation for the keypad

Up and Down Key:Key for changing the Temperature setting. Also used for increasing and decreasing selections in the Time,and Span.

Battery Compartment: Front access allows easy insertion of two AA 1.5V batteries.

LCD Display:Shows Time,Day,Temperature, and other feature information as required.

Fan Switch: Fan switch for Automatic or Continuous fan operation.

System Switch: Selector switch for Cool,Off,Heat.

Front Door: To open or close the door by pressing it softly

Battery cover: Open with one finger from side lips.

Soft touch programming buttons (see below)

OPERATION

System Selector Switch

The System Selector Switch on the front of the thermostat determines the Operating mode of the thermostat. You may select COOL ,OFF,HEAT.
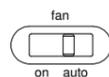

system

cool off heat
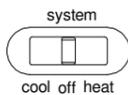
NOTE: Anytime you install or remove the thermostat form the wallplate, slide the System Selector to the OFF position to prevent the possibility of a rapid system On-Off.

Fan Switch

The Fan switch should normally be located in the AUTO position. The Fan will be turned on along with normal operation of your system. In a normal gas or oil furnace, the Fan will be turned on by your furnace after its warm-up delay. For electric heat, air conditioning, and heat pump operation, the Fan will turn on with the system. To run the Fan on continuously, slide the Fan switch to the ON position

fan

on auto

Heating System

1. Move system switch to heat mode. If the auxiliary heating system has a standing pilot, be sure to light it.

2. Press to adjust thermostat setting to 1℃（SPAN）above room temperature. The heating system should begin to operate. The display should show HEAT . However, if the setpoint temperature display is flashing, the compressor lockout feature is operating (see Configuration menu, item 5).

3. Press to adjust the thermostat below room temperature. The heating system should stop operating.

Cooling System

1. Move SYSTEM switch to select the Cool mode.

2. Press to adjust thermostat setting below room temperature. The blower should come on immediately on high speed, followed by cold air circulation. The display

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should show "COOL".

3. Press to adjust the temperature setting above room temperature. The cooling system should stop operating.

CONFIGURATION MENU

Step	Press Button	Displayed (Factory Default)	Press up or down key to select	Comments
		INSTALLER/CONFIGURATION MENU		
1	PROG	RECO(OF)	ON	Recovery function ON or OFF
2	PROG	(SPAN)2	1,3	Span(one stage)
3	PROG	BLIT(ON)	OF	BackLight
4	PROG	(TEMP)F	C	Selects temperature display ° F or ℃
5	PROG	HOUR(12)	24	Selects time format display 12hours or 24hours
6	PROG	COHP(ON)	OFF	Compressor Lockout
7	PROG	FACT(0)	1	Select 1,all the setting will go back to factory default

The configuration menu allows you to set certain thermostat operating characteristics to your system or personal requirements. Set SYSTEM switch to OFF, then simultaneously press PROG keys to enter configuration menu. The display will show the first item in the configuration menu. The configuration menu table summarizes the configuration options. An explanation of each option follows .Press PROG key to change to the next menu item. To exit the menu and return to the program operation, press Hold/Run Key. If no keys are pressed within thirty Seconds, the thermostat will revert to normal operation.

1) Select Energy Management Recovery OFF or ON

Your thermostat is set from the factory with the Auto Recovery Feature enabled, which complies with the EPA ENERGY STAR Program. IF you prefer to use normal recovery, slelect the RECO to ON.

Auto Recovery calculates how early to turn you system back on, so that the room temperature is already comfortable by the start of the comfort temperature program period. Auto Recovery work's in both Heat and Cool modes.

•When the thermostat is in Auto Recovery mode, the display will alternate "RECO" with time, and the program indicator will flash.

•Auto Recovery can be disabled by sliding the Recovery switch on the circuit board to disable.

•Auto Recovery will not operate if Permanent hold or Temporary hold is in operation.

•Auto Recovery can be canceled manually if Hold/run is pressed during the recovery process.

•Auto Recovery will be canceled and change to next period.

2)Fast or Slow Crycle Selection

3)Select Backlight function OFF or ON

4)Select ℉ or ℃ Readout. when you change this parameter. the programming come back to fault. you have to set the programming again.

Changes the display readout to Centigrade or Fahrenheit as required

5) Selects time format display 12hours or 24hours

6)Select Compressor Lockout COMP OFF or ON

Selecting COMP ON will cause the thermostat to wait 4 minutes before turning on the compressor if the heating and cooling system loses power. It will also wait 4 minutes minimum between cooling and heating cycles. This is intended to help protect the compressor from short cycling. Some newer compressors already have a time delay built in and do not require this feature. Your compressor manufacturer can tell you if the lockout feature is already present in their system. When the thermostat compressor time delay occurs it will flash the set point for about four minutes.

7) This model select 1 to back factory Default. The thermostat and controller must be re-match.

Selector Switches

In order for this thermostat to control your system, the system type must be matched by the selector switches on the printed circuit board inside the thermostat.

• Heating System Selector (HG – HE switch)

The factory position for this switch is in the "HG" position. Leave it in this position if you have a gas furnace or an oil burner. If you have an electric furnace, test to see whether the Heat and Fan come on as expected after installation. If the Fan operation is normal, leave it in the "HG" position. If the Fan does not come on within a minute of the thermostat calling for heating, change the switch position to "HE". The system selector has no effect in the cooling mode.

NOTE: "HG" is for gas and most other systems. "HE" position is for certain electric systems having a fan relay.

• System Selector (STANDARD – HEAT PUMP switch)

The factory position for this switch is in the STD position. Leave it in this position if you have ANY system that uses gas, oil, electric, or hot water heating. If you have a single-stage Heat Pump (no auxiliary or emergency heat source), then slide the switch to the HP position. Be sure the reversing valve wire is connected to the correct terminal for your heat pump (Rc/O) or (Rh/B).
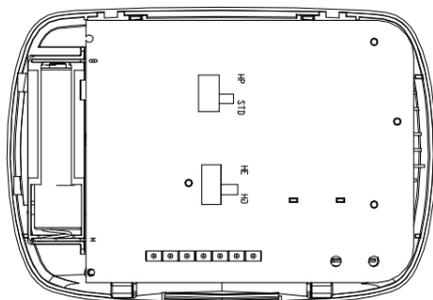
Setting Time And Day

Remove the mylar label covering the LCD display window before operating thermostat.
■ Initial display after power-up. The temperature will update after a few seconds.
■ During time and day setting mode , the temperature will disappear.

Press		Display Reads
Step 1 HOUR	■Press Hour key. The current hour and AM or PM indicator are flashing. ■Press up and down keys until right hour appears on display. Note AM/PM	
Step 2 MIN	■Press Min key. The current min are flashing. ■Press up and down keys until right min appears on display.	
Step 3 DAY	■Press Day key. The current week are flashing. ■Press up and down keys until right week appears on display.	

Step 4 HOLD /RUN ■Press hold/run key. The display will back to normal.
Or after 30 seconds, the thermostat will return to normal automatically.

Programming

The following time and temperature settings are pre-programmed into the thermostat:

		Temperature in ˚F (˚C)	
Program Number	Time	Heat	Cool
1	6:00 am	68˚F(20˚C)	78˚F(26˚C)
2	8:00 am	60˚F(16˚C)	85˚F(29˚C)
3	4:00 pm	68˚F(20˚C)	78˚F(26˚C)
4	10:00 pm	60˚F(16˚C)	82˚F(28˚C)

•All 7 days of the week have the same default programs.

Manual Programming

■ Your thermostat can be programmed for weekdays and weekends, or have unique programs for all 7 days. Use Weekday /Weekend Programs or 7-day Programming to enter or revise programs to match your Personal Program Schedule. The same steps are used when entering programs for the first time.

■ Familiarize yourself with Manual Programming, so that you can easily modify your programs as your comfort needs change. The example below demonstrates the Manual Programming method.

NOTE:

1，The program time can be set in 10-minute increments, and remains the same for both Heat and Cool programs.

2，The program temperature can be set in increments of 1˚F (1˚C).

3，The Heat setpoint can not be set higher than the Cool set point, and the Cool set point can not be set lower than the Heat set point.

4，When setting the program time, note the AM/PM indicator.

5，With the Auto Recovery feature enabled, you do not need to set your comfort program times early. Auto Recovery will determine how early Recovery will determine how early to turn your system on, so that the room is comfortable at the program time.

Weekday/Weekend Programming

Weekday Programs

Press		Display Reads
	■ Normal display of time, temperature, and day of the week.	
Step 1 PROG DAY	■ Selects days Mon to Fir for same set of 4 programs each day.	
Step 2 PROG	■ Program indicator(1) is displayed. ■Mon to Fir is displayed.	
Step 3 PROG	■The Program hour are flashing. ■Press to change the hour. Note AM/PM	
Step 4 PROG	■Press again to change to the minute position. The period minute will be flashing. ■ Press to change the minute	
Step 5 PROG	■ Press again to change to the program COOL set temperature. The period program will be flashing. ■ Press to change the temperature. ■ Note HEAT/COOL	
Step 6 PROG	■ Press again to change to the program HEAT set temperature. The period program will be flashing. ■ Press to change the temperature. ■ Note HEAT/COOL	

Weekday program 1 is complete.

Step 4 ■ Press PROG to move to program 2,3, and 4 and follow the same steps.

Use PROG to insert or change time and temperature of other programs.

PROG DAY ■Selects weekend days Sat, Sun for same set of 4 programs each weekend day.
 ■ Follow steps 2-4 to enter programs.

Similar to weekday programming.

PROG DAY PROG to insert weekend programs.

Similar to weekday programming.

PROG DAY PROG to insert Individual programs.

NOTE: Another approach to programming is to first program all weekdays Mon through Fir and Sat and Sun as same programs. Then, display and change the programs of only those days which will have different programs.

Temporary Manual Override

To temporarily change the current set temperature without affecting your program:

 ■ Press up or down key for less than 1 second to check Setpoint..
 ■ Press up and down to change to your desired New temperature.

HOLD /RUN ■ Press to RUN to normal mode or wait 30 seconds for it to return automatically.

■ The current program number will flash to signify the Temporary Override. At the next program change, the Temporary Override is canceled, and the next program temperature becomes the setpoint temperature.

To end the Temporary Manual Override:

HOLD /RUN ■ Press and wait for HOLD to display on the lcd.
 ■ Press hold/run key twice. This will return the set temperature to the current program set temperature.

Permanent Override or a Designated Day Override

To hold your Manual Override for vacation or Until a Designated Day.

- Press to make the current program temperature the HOLD temperature. HOLD will be displayed on the LCD, and the Program number will disappear.
- Follow the Temporary Manual Override instructions above to change the Permanent Manual Override temperature.
- You can confirm the held set temperature by pressing for less than 1 second.
- Press again. Hold day will be displayed on the LCD and the clock will disappear
- Press Hour key to increase override days.
- Press Day key to reduce override days.
- Follow the Permanent Override instructions above to change the a Designated Day Manual Override temperature.

To end Override:

Under Permanent Override Press hold key twice. Under a Designated Day Override press the hold once. The thermostat will return to the current program, and the HOLD display will be canceled.

Filter Monitor

Your thermostat also keeps a record of the number of Days your filter has been in use. To maximize your system's performance and energy efficiency, change or clear your filter regularly.

- When the total fan run time reaches 400 hours, you need clean or change your system's filter, "FILTER" will continue to display until the counter is set back to zero.
- Press to review total filter usage. The "FILTER" display.

Then show the filter Monitor counter . After 20 seconds, the display will return to normal mode, or you can hit RUN to exit immediately.

The Filter Monitor will display up to 100 Days of usage. In this example, the counter is at 10 Days.

- To reset the Filter Monitor counter, depress FILTER for 3 seconds when the filter monitor day show. The display will blink, and the counter will be reset to zero.

Keyboard lock

The keyboard can be locked to prevent unauthorized changes to the thermostat.

To lock or unlock the keyboard, press and hold run Key for 3 seconds. The keyboard is locked. when LOCK appears on the display.The keyboard is unlocked.the lcd will blink.

- All keys are locked, Any time a key is pressed, LOCK will appear on the display for 1 second.

Error Mode

If the thermostat is unable to control your system due to an unexpected battery problem, the thermostat will enter Error Mode. In this condition, the thermostat flashes "E1","E2", on the LCD display, and shuts off your system. To correct this problem, replace the battery with one new AA alkaline battery, even if you have recently replaced them. Press the reset button once with a small pin and hold for two seconds then reprogram.
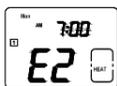
If Error Mode returns, please call us for further information. Information.

Lcd display	information	Lcd display	information
E1	Sensor Error	E2	EEPROM Error

Low Battery Warning

Your thermostat has a lower battery warning system. When the battery are first detected to be weak, the low battery warning is indicated by battery symbol "bAtt" flashing on the LCD display At your earliest convenience, you need to replace the battery with 1 new AA alkaline battery.

INSTALLATION

What You Need

This thermostat includes two #8 slotted screws and two wall anchors for mounting. To install your thermostat, you should have the following tools and materials.

- Slotted Screwdriver(s)
- Small Philips screwdriver
- Hammer..
- Electric drill and 3/16" bit
- One1.5V (AA) size alkaline batteries (included)

Remove Old Thermostat

CAUTION: Do not remove any wiring from existing thermostat before reading the instructions carefully. Wires must be labeled prior to removal.

INPORTANT! Turn off the power to the furnace at the main power panel or at the furnace.

Remove existing thermostat cover and thermostat. See Figure 1. Some thermostats will have screws or other locking devices that must first be removed. Once the wall mounting plate is exposed, look for wires. If wires are not visible, they may be connected to the back of the wall plate. Again, look for screws, tabs, etc. Some models have doors that open to expose wires and mounting screws. See Figure 1.

Typical Home Thermostats

Figure 1

Wall mounting Plate   Thermostat   Cover

Wall mounting Plate   Thermostat   Cover
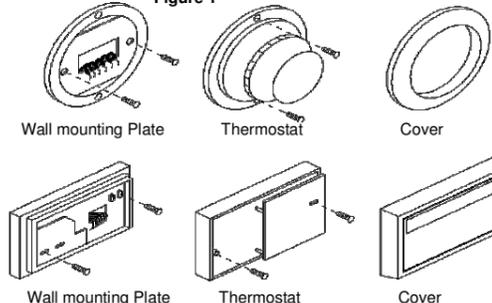
Wiring Labeling

- Each wire coming from the wall to the existing thermostat is connected to terminal point on that thermostat. Each of these terminal points is usually marked with a code letter as shown in Table A below.
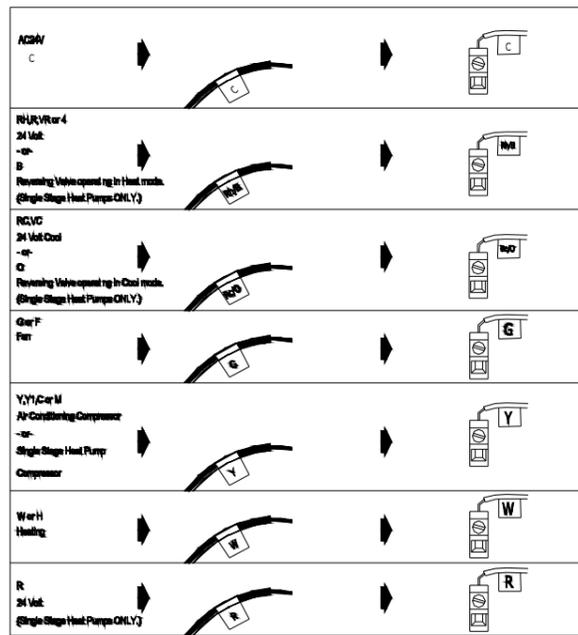
- Note that this thermostat has multiple function terminals that allow Single-Stage Heat Pump capability. Standard systems use: Rh, Rc, Y, W. [Single-Stage Heat Pumps use: R, Y, G, and O or B.] Table A below shows the multiple functions of the terminals. Use the terminals that match your system.

- The number of wires in your system can be as few as two (for heat only systems), as many as eight, or any number in between. If you follow the labeling procedures correctly, you do not have to be concerned about how many wires there are.
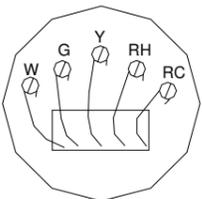
- There is often no terminal marking on the existing thermostat of two wire, heat only systems. Just connect either of the wires to the RH terminal, then connect the other wire to the W terminal to complete the circuit.

- IMPORTANT! BEFORE DISCONNECTING ANY WIRES, APPLY THE SELF-ADHESIVE LABELS PROVIDED TO THE WIRE AS SHOWN IN TABLE A BELOW. (For example, attach the label marked W to the wire that toes to the W or H terminal on your existing thermostat.) IGNORE THE COLOR OF THE WIRES since these do not always comply with the standard.

- After labeling wires, disconnect them from the existing thermostat.

- Remove existing wall plate. To make sure wires do not fall back into wall opening, you may want to tape them to the wall.

- If hole in wall is larger than necessary for wires, seal this hole with insulating material so that no hot or cold air can enter the back of the thermostat from the wall. This air could cause a false thermostat reading.

Table A

If the code letter on your existing Thermostat is	then mark the wire with label shown	and connect to thermostat terminal shown
AC24V C		C
RH,VR,VR or 4 24 Volt -or- B Reversing Valve opened rig in Heat mode. (Single-Stage Heat Pumps ONLY.)		RVH
RC,VC 24 Volt Cool -or- O Reversing Valve opened rig in Cool mode. (Single-Stage Heat Pumps ONLY.)		RVO
Gar F Fan		G
Y,Y1,Cor M Air Conditioning Compressor -or- Single Stage Heat Pump Compressor		Y
W or H Heating		W
R 24 Volt (Single-Stage Heat Pumps ONLY.)		R

NOTE: *Do not connect a "Common" wire (sometimes labeled "C") to any terminal on this thermostat. Tape up the wire and do not use. This wire provides electricity to non-battery powered thermostats.*

Mount Wall plate and Thermostat

- Remove the wall plate from your thermostat by pressing the release tab on the bottom of the thermostat. See Figure 2.
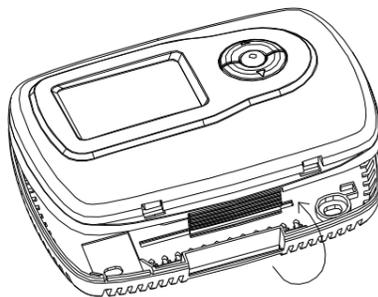

Figure 2.

- Position wallpate on wall and pull existing wires through large opening. Then level for appearance. Mark holes for plastic anchors provided, if your existing holes do not line up with those on the wall plate.

- Drill holes with 3/16" bit and gently tap anchors into the boles until flush with wall.

- Reposition wallplate to wall, pulling wires through large opening. Insert mounting screws provided into wall anchor and tighten. See Figure 3.
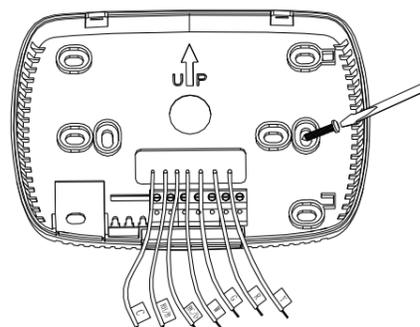

Figure 3.

NOTE: 5- Wire Systems

If your thermostat has one wire marked R or Rh (2, 3, or 4-wire system), then leave the jumper wire between the Rh and Rc terminals on the wall plate. Otherwise, if you have separate Rh and Rc wires (5-wire system), then remove the jumper wire between the Rh and Rc terminals.

Connect Wires and Mount Thermostat to Wallplate

- Match and connect the labeled wires to the appropriate coded terminal screws on the wallplate. (See Figure 4, 5.) Ignore any wires which may be present, but which were note connected to the old thermostat.

- Refer to the Wiring Diagrams below to be sure your system is wired correctly.

- If your system is a single stage heat pump and uses an O or B wire, you must move the System Selector switch inside the thermostat to the Heat Pump position. If you have a normal furnace or electric system, leave the switch in the Standard position. Refer to the System Selector section on the back for more information on this switch.

- Be sure to tighten the terminal screws securely, otherwise a loose wire could cause operational problems with your system or thermostat.

- Push excess wires back into the hole to prevent interference when installing the thermostat to the wallplate.

- Make sure the System Switch is set to OFF, and the Fan Switch is set to AUTO.

- Insert the bottom tabs on the thermostat body into the slots at the bottom of the wallplate. Press the top of the thermostat body to snap it into the wallplate. Refer to Figure 6.

NOTE: *Do not force the thermostat onto the wallplate, as the terminal pins may be damaged. If it does not snap properly, the thermostat may not work.*

- Insert the two AA size alkaline batteries, observing the polarity marked inside the

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battery compartment.

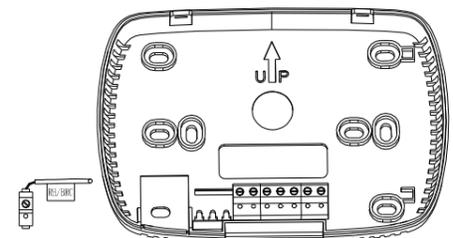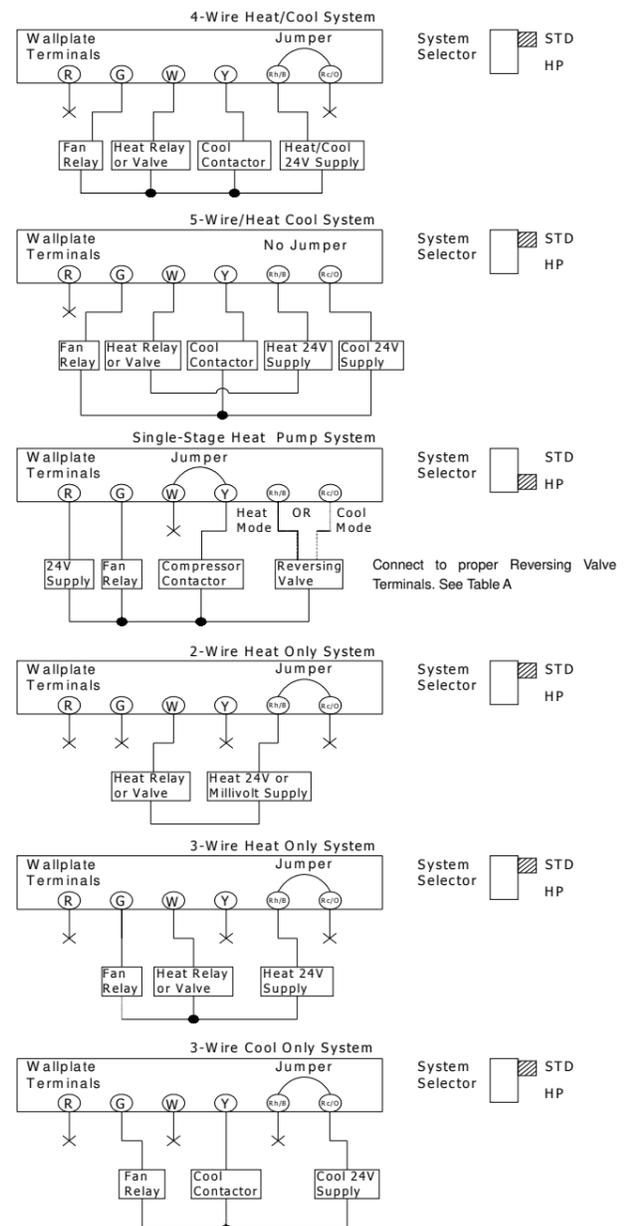- Switch on the main power at the panel or furnace.

Figure 4   Figure5

Wiring Diagrams

CAUTION:

To prevent electrical shock and/or equipment dam- damage, age, disconnect electric power to system at main fuse or circuit breaker box until installation is complete.

WARNING

Do not use on circuits exceeding specified voltage. Higher voltage will damage control and could cause shock or fire hazard. Do not short out terminals on gas valve or primary control to test. Short or incorrect wiring will damage thermostat and could cause personal injury and/or property damage.

TROUBLE SHOOTING

Problem	Solution
SCRAMBLED OR DOUBLE DISPLAY (numbers over numbers)	1.Remove clear mylar sticker.
NO DISPLAY	1.Check battery connections and battery 2.Relplace Battery
ENTIRE DISPLAY DIMS	1.Replace Battery
PROGRAM DOES NOT CHANGE AT YOUR DESIRE SETTING	1.Check that the time is set properly to "AM" or "PM" 2.Check that the thermostat is not in "HOLD" mode. 3.Check for the correct day settings.
AUTO/FAN DOES NOT TURN ON	1.Change HE/HG parameter to opposite setting . 2.The Fan may be in the AUTO Mode. Look for "AUTO" on the LCD display. If the Heat and Cool program temperature are close, then the thermostat requires a larger room temperature change before changing from Heat or Cool. 3. There may be as much as 4 minute delay before the Heat or Cool system turns On-wait and check. (Compressor protection delay). 4．Check your circuit breaks and switches to ensure there is power to the system. 5. Replace battery. 6. Make sure your furnace blower door is closed properly.
ERRATIC DISPLAY	1. Replace Battery
CONTROLLER NO OUTPUT	1.Check if the thermostat is working, if the battery is effective.
COMMUNICATION FAILED	1. Check if the thermostat is working, if the battery is effective, and if the power is supplied to the controller.

If you experience any other problems, call us for technical assistance.

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