

General Information (pre sales)

Do programmable thermostats really save energy?

Yes, programmable thermostats can save energy which in turn saves you money on your utility bill. The US Department of Energy states with the proper use of pre-programmed settings, a programmable thermostat can save you about \$180.00 every year in energy costs.

What does a thermostat do?

In the most basic form the thermostat is a temperature controlled on off switch. For example if the thermostat is in the heat mode the thermostat will turn on the heat when the room temperature is lower than the set temperature and turn the heat off when the room temperature is higher than the room temperature. When the thermostat is in the cool mode it will turn on the Air Conditioner (if present) when the room temperature is above the set temperature and turn it off when the room temperature is lower than the set temperature.

How does a programmable thermostat work?

A programmable thermostat follows either a pre-programmed program or a user defined program. The program tell the thermostat what temperature to maintain during a given time period. In most programs there are comfort periods and energy save periods. Energy save period are usually used when you are away or a sleep. Comfort periods are for when you are at home and awake.

Can a mechanical or manual be replaced with a programmable thermostat?

Yes, in most case it can. The Rite Temp programmable thermostats are compatible with low voltage (mili-volt to 24 volt) whole house residential systems. The current wiring on your existing thermostat will be used with the new thermostat. See compatibility chart for details.

Can I use a RiteTemp Thermostat with my system?

Yes, in most case it can. The Rite Temp thermostats are compatible with low voltage (mili-volt to 24 volt) whole house residential systems. The current wiring on your existing thermostat will be used with the new thermostat. We also make units that are compatible with high voltage systems 120 to 240 volts. See compatibility matrix for details.

How do I know if I have a Heat Pump?

If you have a heat pump when your heat is running the unit outside with the fan on top will be running also and it will be blowing cold air. To verify that you have a heat pump, look at the labels on the outside portion of your heating/air conditioning unit (if it is a heat pump this is your heat exchanger). Somewhere on the unit it should say heat pump, If it is a heat pump. Also if you have an "O" or "B" you may have a heat pump.

What is a Heat Pump?

A heat pump is essentially an air conditioner (A/C) in reverse. An A/C pumps heat out of the house into the outside air exchanger and into the outside air. A heat pump uses very similar equipment and pumps heat from the outside air into the house. The heat pump has a "reversing valve" to go from Cool to Heat. An Air Conditioner gets less efficient in cooling a house as the outside air gets hotter. Similarly, the Heat Pump gets less efficient as the outside air gets colder.

What is Emergency heat for on a heat pump?

Emergency heat is a common term for secondary heat. On most heat pumps there are electric heat strips used to quickly heat up the house and it heats to a higher temperature than the heat pump is capable of on its own. If your heat pump cannot bring the house up to temperature it will engage auxiliary along with heat pump to bring the temperature up quicker. But if it is very cold outside under 35 degrees the heat pump is not efficient so it is best to tell the thermostat to only use the 2nd heat source only (emergency heat). This costs more money to run so when the outside temperature increases put the system back in normal heat pump mode. On some units the 2nd heat source is not electric. These systems are called dual fuel systems. The 2nd stage heat may be gas, oil or propane furnace.

How do I know if I can use a Rite Temp thermostat with my heat pump?

Rite Temp thermostats are currently available for single stage heat pumps and heat pumps with auxiliary heat. If you have an emergency heat switch, a W2 wire and/or X2 and /or X and /or E wire on your current thermostat, you need a Rite Temp thermostat compatible with heat pumps with 2 stage heat see compatibility Matrix for compatible models.

Will a Rite Temp thermostat control a two-speed blower?

Yes, but ONLY as a Single speed blower. Use the G1 wire from the blower for low speed all the time or G2 for high speed all the time. Mark and tape off the unused wire.

Can I use this in my trailer or motor home for heating and cooling?

Yes, make sure the single/two source power jumper is set for 2 source power and reset the thermostat. Connect the two wires for your 12V heating to RH and W. Connect your two low voltage AC wires to RC

and Y. If you have a FAN wire from the AC connect it to G. If you have a tow-speed fan control, connect the G1 wire for low speed or the G2 wire for high speed, mark and tape off the unused wire.

Can I use a Rite Temp thermostat with a two-stage gas, oil, propane or a two stage electric furnace system (W1 and W2)?

Yes, we make several units that will work with this type of system Please see compatibility matrix for specific models. To hook it up you will hook up the first stage of heat (W or W2) to the "W" terminal and the second stage of heat (W1 or W2) to the "W2" terminal.

Will a Rite Temp thermostat work with a three-wire, zoned, hot water system?

Yes, we make several units that will work with this type of system Please see compatibility matrix for specific models.

My Mobile home has a manual Heat/cool switch separate from my thermostat. Can I use a Rite Temp thermostat?

Yes. Connect the two wires to RH and W and leave the thermostat in the Heat position all the time. The thermostat becomes a temperature controlled on off switch. If the thermostat control's seems backwards, re-connect the two wires to RC and Y and leave the thermostat in the cool position all of the time.

Can I use a Rite Temp thermostat in my trailer or motor home?

Yes, we make several units that will work. Please see compatibility matrix for specific models. Then just follow the installation instructions for your heater and Air Conditioning system type (Propane, gas, elect etc)

Can I use a Rite Temp thermostat with a tow stage cooling system?

Yes, we make several units that will work with this type of system Please see compatibility matrix for specific models.

Can I use a Rite Temp thermostat with a Zoned forced air heating and cooling system?

Yes, most zoned forced air systems have a master control board which controls the baffles in the forced air system to allow heat or cool into the areas calling for it. This allows different areas of the house to be at different temperatures as a function of that area's own thermostat using a single heating and cooling system.

The selection of heat or cool is made by the master controller. If you wish to use Rite Temp thermostats at the remotes you must remember to make sure all thermostats are in the same mode either heat or cool.

Some zoned forced air systems master controllers use both B and O and some use just one of the letters. Be sure it is a forced air zoned system before connecting both the O and B. Some of the brands of zoned forced air controllers are Durazone, troll-a-temp and Comfort Zone.

For more information on hooking up these types of system please contact support at 877-505-2353 or support@ritetemp-thermostats.com

Do Rite Temp thermostats work with all types of fuel and heating systems?

Yes, any 2 wire, low voltage, or milli-volt heating system can be used with a Rite Temp thermostat. This includes all 2 wire hydronic (hot water) heating systems, regardless of fuel types. If you have a 3 wire hydronic (hot water) heating system please see compatibility matrix for the correct thermostat model.

Can I use a Rite Temp thermostat with my swamp cooler?

Yes and No. It depends on the swamp cooler. Some of these units are high voltage and others are low voltage. If the unit is low voltage in most cases it will work and be connected like any Air Conditioning system. I.e. RC, Y and G (sometimes G2) If there is a two speed fan, connect just the G fan wire to the thermostat's G terminal for low or both fan wires (G and G2) to the thermostat's G terminal for high fan.

Can I use a Rite Temp thermostat with my baseboard electric heat?

Yes, we make units that will work with 120 to 240 volt systems with a maximum of 18 amps. See compatibility matrix for specific models.

I have a separate humidistat do you make a thermostat that will allow me to combine the humidistat and the thermostat into one unit?

Yes, Rite Temp makes a thermostat that can also control the humidity. It is the 6080.

Do any Rite Temp thermostats also control humidity?

Yes, you can control humidity by using a Rite Temp thermostat equipped with a built-in humidistat (Model 6080). If you have an existing humidifier, with an external humidistat it can be hooked up. You

have 2 modes of operation to choose from. One to only turn on the humidifier when the heat is running and the humidistat is calling for humidity. Two to have the humidifier and fan run any time it is calling for humidity regardless if the heat is on or not.

You can also use the thermostat for de-humidifying with your Air Conditioner. This is very useful in hot moist climates. You again have two options. One you can set it to only turn on the AC when both the humidifier and the thermostat are calling for AC. Two when either the thermostat or the humidistat are calling for AC.

Can a programmable thermostat be programmed to fit my schedule even if there is an Energy Star program per installed?

Yes, the Rite Temp programmable thermostat gives you the flexibility to change the existing program to fit your specific needs. Easy to understand instructions are included to help you change the program and with the copy function it is quick and easy to make the changes.

I was told to get a thermostat with “short Cycle delay”, what is that?

All Rite Temp thermostats with cool capability have a built in approximately 5 minute short cycle delay from the time a compressor turns off until the thermostat will turn it back on. This is to prevent compressor stall. The delay is not present if the thermostat is turned from cool to off and back to cool or heat to off and back to heat and also if you do not have a C wire attached to the thermostat and there is a power outage. But if you have a C wire attached and there is a power outage it will have a delay.

Is it important to level the new Rite Temp thermostat?

No, RiteTemp thermostat are all digital and do not require leveling.

Is there someone I can contact if I have a question about the installation or operation of my RiteTemp thermostat?

Yes, RiteTemp offers a US Based technical support staff to help you with any questions you may have. Technical assistance is available over the phone at 877-505-2353 or Via Email at support@ritetemp-thermostats.com

Installation Questions

How do I determine what type of heat I have?

How do I wire the thermostat?

To wire the thermostat you need to determine what wires you have. To find out what wires you have you should turn off the power to your heating and cooling system. Then remove the thermostat from the wall and note where the wires are attached. The wires will be attached to terminal with letters by them for example the red wire attached to R. Once you determine which wires you have please refer to the wiring diagrams for the model Rite Temp you have.

How should the wires be prepared for installation in the wire terminal block on the 6020 thru 6080 thermostats?

To wire the thermostat strip the wires back about 1/8 of an inch. Insert the wire in the correct terminal making sure you go through both holes and then snug the screw down tight enough to get a good contact but not too tight that you break the wire of the screw. Then pull on the wire to make sure it is connected.

I have 5 wires and 4 of them connect to the old thermostat. Where do I connect the other wire to?

Only re-connect the wires that were connected to the old thermostat. Do not connect any other wired as you do not know where or if they are connected to the heating and or cooling system. Do not connect the extra Wire to the C or any other terminal.

Where should I connect the C wire?

If you have a "C" wire, connect it to the "C" terminal. Do not connect anything else to the "C" terminal.

What do I do with the W2 and/or E and/or X2 wires?

W2, E and X2 wires are used only on two-stage heat pump. Rite Temp has several units that are compatible with heat pump systems. See compatibility Matrix for compatible models. All or just some of these wired may be used with the new thermostat. Please refer to the installation manual or contact support at 877-505-2353 or email support@ritetemp-thermostats.com

Where does the red wire go?

If the red wire was connected to the R terminal on the old thermostat, then connect to the RH terminal on the new thermostat. If a different colored wire was connected to the R terminal on the old unit then label it and connect to the new thermostat in the same way.

My old thermostat has two wires, but the installation instructions for my Rite Temp thermostat show only a three wire installation.

On a two wire low voltage heat only systems connect to the RH and the W terminals. The "C" (common) wire is optional, and is not needed to run the thermostat. If you have the "C" wire, connect it to the "C" terminal, and it will extend the thermostat's battery life substantially.

What do I do with the extra wires in the wall that are not connected?

Leave them disconnected but taped off so they do not touch each other or any other wire. If you do not have a "C" wire next time your furnace is serviced, ask the technician to connect one of the extra wires to the "C" (common) connection at the furnace and the "C" terminal in the thermostat to extend the life of your batteries.

Do I need to match the wire colors to the letters on my Rite Temp thermostat?

No, sometimes the colors match the letters but not always. Be sure to label the wires according to the letters they connected to on the old thermostat first and wire according to terminals the wires were attached to.

What do I do with the W2 or E or X1 or X2 or X or L or T wire?

In most cases these wires are not used and should be individually taped off. But sometimes they are used for example W2 is 2nd stage of heat in a conventional heating system and should be connected to W2. In a heat pump system W2, E, X1 or X2 are used to turn on auxiliary/emergency heat and one of them should be attached to the W2 terminal which one depends on the system. The X wire sometimes corresponds to the C wire which is 24AC common power. The L wire is a system monitor and used to light a light on the thermostat – not used on the Rite Temp thermostat. The T wire is an external temperature sensor and is not used with the Rite Temp thermostat. So they can be taped off and put in the wall.

I am not sure if I have a C wire. How do I determine if I do?

There are two ways to determine if you have a "C" or common wire. 1) If there is a wire hooked up to the "C" terminal on the old thermostat, hook it up to the new thermostat on the C terminal. 2) If you have a spare wire in the wall you can go to the connector panel at the furnace/air handler end and check for a "C", 24VC, or common connector and connect the extra wire to there and then to the "C" on the Rite Temp thermostat. (Sometimes the C wire is also labeled different for example it may be a the B wire or X depending on the manufacture of the system/thermostat.)

Can my thermostat be used on batteries as well as 24AC from the heater?

Yes, Rite Temp thermostats will operate on batteries and 24 volts AC, the 24 volts AC common will be connected to the "C" connector. The Batteries will last significantly longer using both the 24 Volts AC from the system along with the batteries.

C Wire Install

The C wire stands for COMMOM. The RED wire coming up to the thermostat is one side of the 24VAC transformer. The other side of the transformer goes to the HEAT relay, the COMPRESSOR relay, and the FAN relay, hence the expression "common" wire.

Generally, this connection is indicated with "C", "comm." Or "24VC" wherever the rest of the thermostat wires connect at the furnace. Sometimes it is directly available at the transformer on older systems. All 24VAC systems by definition have the common side of the transformer. Finding and connecting to it takes a qualified HVAC repairman as there are lethal (115AC) voltages in the furnace. We cannot recommend you doing the connection yourself. That is why we say "if there is a C wire, connect it". The C wire is not necessary for most mechanical thermostats so seldom brought up.

Once the C connection is located, if you have an extra wire in the cable going to the thermostat, you could use it for the C wire. If not, a new wire would have to be put in.

2nd Transformer:

If the 24VAC common wire (C) is not available at the thermostat, any external 24VAC plug-in adapter can be connected to run the thermostat.

The Radio Shack part number 273-1690 for \$15.99 can be used with its switch in the 24V position. Another 24 volt transformer you can use is a Rain Bird replacement power adaptor UT1 Home Depot part number #26C06505. Cut off the connector and strip the wires as shown in the picture. Then connect the wires to RH and C. There is no polarity, either wire can go to either terminal (RH or C).

Transformer rating is 24 volts AC at 500 to 1000 mili-amps

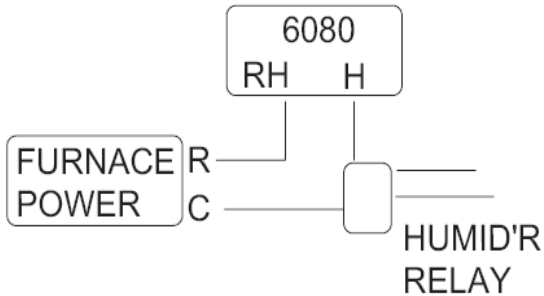
I have 2 wires coming from my humidistat how do I wire them to the 6080?

There is no polarity so you will just put one wire on H and the other on RH with your other RH wire. When you need to put two wires in to one space, splice the wires together before the terminal block and then just insert one wire into the block.

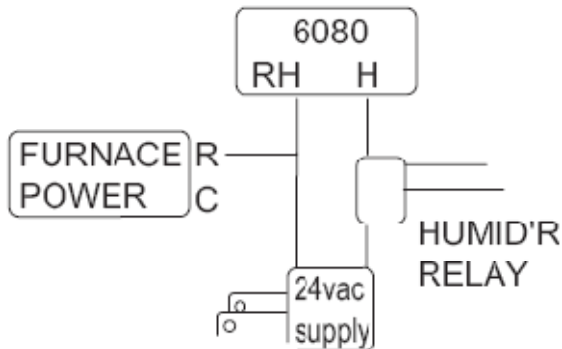
How do I wire my humidifier to the 6080?

It will depend on how your humidifier is wired. Some units have their own transformer and others use the furnace transformer. See options below:

HUMIDIFIER USING HEATING SYSTEM'S 24VAC



Humidifier using a separate 24 VAC power supply



My old thermostat had a anticipator adjustment. Where is it on yours?

Rite Temp thermostats do not require an anticipator adjustment because it is an electronic thermostat. Electronic thermostats typically use temperature sensing devices called thermistors which are very small, with almost no thermal mass. These devices track the air temperature very well so no anticipator is necessary. Rite Temp thermostats are specified and checked at +/- 1F.

Operation

How long do the batteries last?

All of the Rite Temp thermostats run on batteries with an optional C wire (24Vac) to provide power to the thermostat so it will run. If you are using a good quality brand of alkaline batteries they will typically operate the thermostat for 10-12 months. Therefore they should be replaced regularly ones a year or whenever the low battery indicator appears. If you are using lesser quality brand batteries , more frequent replacement may be needed.

What does the red blinking light mean?

On some of the Rite Temp thermostats there is a Red light that will blink when the batteries get low. If you see a blinking red light please change the batteries on your thermostat with a new set of alkaline batteries they will be ether a pair of AA or AAA batteries depending on the thermostat model.

What does the half full battery icon mean?

On the Rite Temp thermostats with a digital display a half full battery icon will be displayed when the batteries get low. If you see a half full battery icon please change the batteries on your thermostat with a new set of alkaline batteries they will be ether a pair of AA or AAA batteries depending on the thermostat model.

Can I use rechargeable batteries in the Rite Temp thermostat?

No, Rite Temp thermostats run on 3 Volts (2 x 1.5 volt batteries), and the "Battery Low" indicator comes on at about 2.6 volts. The thermostat stops working at about 2.5 Volts. Two AA or AAA rechargeable batteries only put out 2.2 volts, which means that there maximum power level is too low to operate the thermostat.

The thermostat is blinking between time and temperature how can I stop this?

There is no way to stop the unit from showing both the time and the temperature.

When in calibration mode what does the T-FACTOR on my thermostat mean?

The (delta sign) T-FACTOR that appears on some of the thermostat during calibration mode means the change in the room temperature setting when you "calibrate" the room temperature to your liking. When you change the room temperature with the "calibration" function, the display shows you both the new room temperature and the T-FACTOR which is how much you changed the room temperature by.

Trouble Shooting

Why are the light on the bottom of the Rite Temp 6080 thermostat not functioning?

If you do not have a C wire connected to the thermostat they will not function. If you do have a C wire connected it may not be working correctly. To test to see if the C wire is working, remove the batteries from the thermostat and see if it still functions. If not the C wire is not working.

If you want to install a C wire see FAQ how to install a C wire?

Why doesn't the remote work on my Rite Temp thermostat?

Make sure both the thermostat and the remote are on the same channel. Also some channels work better than others depending on your situation.

If you do not have a C wire connected to the thermostat the remote will not function. If you do have a C wire connected it may not be working correctly. To test to see if the C wire is working, remove the batteries from the thermostat and see if it still functions. If not the C wire is not working.

If you need to install a C wire see FAQ How to install a C wire?

I installed a new thermostat and my heating and/or cooling does not come on, why?

If your unit has a fan if you turn on fan switch to on to see if the fan turns on. If not then you may not be getting power to the thermostat. If the fan does come on then check to make sure the wires are making good contact see FAQ how to prepare wires for the thermostat?

Also check to make sure you have a good set of batteries in the unit. Make sure the unit is calling for either heat or cool. When it is calling for heat or cool the word heat or cool will be flashing. This means the heat/cool should be running.

For more help please contact support at 877-505-2353 or email support@ritetemp-thermostats.com

I installed a new thermostat and my system is running continuously, why?

There could be several reasons for this:

It may be a wiring issue.

The batteries may not be good.

Is the thermostat calling for heat or cool? You can tell if it is calling by the word heat or cool will be blinking.

Does the heat or AC turn off if you move the switch the auto fan and off position if not does it turn off you remove the RH and or RC wires. If not then there is a problem with the wiring to the heating and or cooling system or an issue with the system itself. If that is the case turn off the power to your system.

For more help please contact support at 877-505-2353 or email support@ritetemp-thermostats.com

Why does the temperature fluctuate uncomfortably with my new thermostat?

This may be caused by what is called swing, swing turns on and off the system 1 or more degrees on either side of the set temperature so the system will not cycle as often and save energy and extends the life of your system. On all of the Rite Temp programmable thermostat you can change the swing. By changing the swing setting to a smaller value the lower value keeps the temperature more even by cycling the furnace more often. On non-programmable thermostats the swing is fixed to one degree on either side of the set temperature.

The room temperature reading appears to be incorrect, Why?

If you just installed or programmed the unit the temperature reading may be off and is most likely reading high. The thermostat has picked up heat from you touching the unit. It could take several hours to settle in. If after several hours if the temperature is still off and you unit has a digital display you can calibrate the unit. See operation manual for how to calibrate your specific thermostat.

The thermostat occasionally resets to factory setting. What could be causing this?

In most cases the reason the unit is resetting is there is some type of RF interference. This is most common with spark igniter furnaces but could come for other sourced like static electric air cleaners etc. One of the ways to filter RF interference is with a ferrite choke. You may have seen them on power cables to your computer, or printer or on interface cables. This usually solves the problem.

The Radio Shack Ferrite Data-Line Filter (273-105) is a round, in-line, snap on device that must be snapped around ALL the leads coming out of the wall (if there is enough room). If that does not completely solve the problem, or if there is not enough room at the thermostat, put a filter on the thermostat wires as close as possible to the furnace.

If the wires are long enough, an even better ferrite filter is the rectangular, Radio Shack snap on RF Choke (273-104). This one's hole is large enough to loop the thermostat cable through it at least twice (if there is enough wire). The more loops the better but even one will help. This comes two ferrite cores in a package so one filter can be put at the thermostat and the other filter at the furnace. Once installed, the ferrite cores must be shut tight and be latched to be effective.

My thermostat is not responding to input since it received a static shock. What can I do?

All electronics are susceptible to static shock. It minimize static please ground yourself (touch something else before you touch the thermostat) or if you unit has a stylus use it. Since the unit is not responding please try the following to remedy the situation. Please take the batteries out of the unit and remove the C wire if available for 15 minutes. Then put a new set of alkaline batteries back into the unit and re-install the C wire if available, Next reset the thermostat and try it again.

My heat is shutting down before it reaches temperature?

This could be either a heater/furnace issue or a thermostat issue. One thing to check is your air filter make sure it is clean or replace it with a new one. Then try the system again. For further tests please contact support at 877-505-2353 or support@ritetemp-thermostats.com

Why does the room temperature take so long to respond?

It may be on a wall that is either very cold or warm and it is picking up the temperature from the wall. Try remounting it with the standoffs so the unit can get better air flow.

Why does the thermostat change settings by itself?

If you have a programmable thermostat and you override the setting by using the up and down temperature buttons. The thermostat will revert to the program at the next program time setting. When you have changed the program setting this way the thermostat will say temp or override. If you want to keep a specific temperature and not use the program you will need to put the unit in hold. See operation manual for your thermostat on how to put the unit in hold.

My unit is blinking the word heat, what does this mean?

When the thermostat is blinking the word heat it means the thermostat is calling for heat and your heat should be running.

My unit is blinking the word cool, what does this mean?

When the thermostat is blinking the word cool it means the thermostat is calling for Cool and your Air conditioning should be running.

The heat /cool worked before but is not working now. What should I check?

Make sure you have a good set of batteries in the thermostat. Please use a good set of name brand batteries (do not use rechargeable batteries).

Reset the thermostat.

Make sure all the breakers and fuses to your HVAC are good

If you have a fan see if the fan will turn on in the fan on position (If not the problem may be elsewhere in the system)

Check for loose or broken wires