



## HOW TO WIRE ELECTRIC HEAT RELAYS

There are situations in which it is advantageous to employ electric heat relays and low voltage thermostat controls rather than the conventional line voltage thermostats. Areas that require a heat supply greater than 5,000 watts are prime applicants for their use. It is possible for a room of this size to be controlled with dual thermostats; however it is extremely difficult to adjust them so that the temperature throughout the area remains even. Two thermostats in one room tend to burden one heat source with more than its share of the work load.

In areas requiring over 5,500 watts of heat, it is almost always necessary to provide two circuits to the heaters. These twin circuits are best controlled by sequenced heat relays controlled by a single, centrally located low voltage thermostat. Two circuit line voltage thermostats are available for this situation, but our experience has been that they do not perform to the standards most people desire.

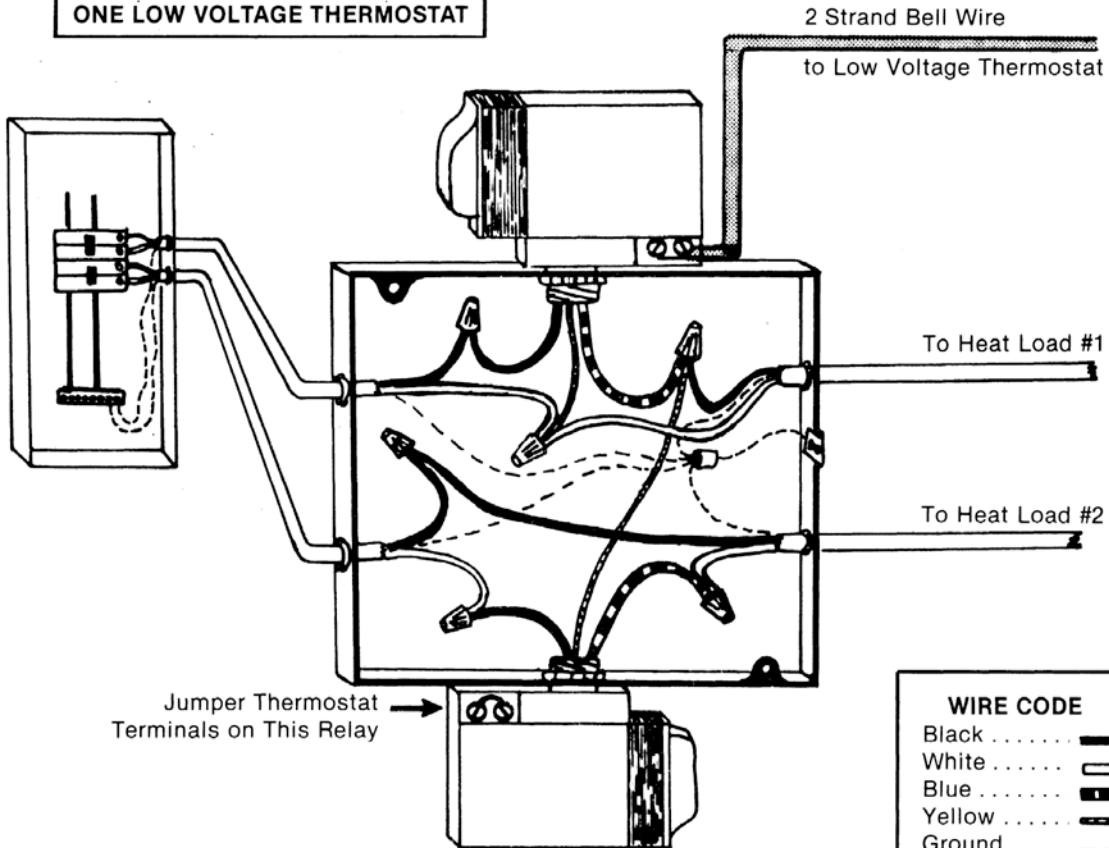
Another attractive benefit derived from using this method of heat control is less variation between high and low room temperatures, thus a possible savings in energy use and therefore money. Most line voltage stats vary from 1-1/2 to 5

degrees between on and off cycling. Let's assume a thermostat is used that varies plus or minus 4 degrees and is set to maintain a 70 degree room temperature. At 66 degrees, when it turns on, it will continue to heat until the room reaches 74 degrees. People tend to acclimate to the higher temperature, but now the heat will be off until the room temperature reaches 66 degrees. It is likely that someone will feel chilled and adjust the control higher to compensate for the swing between high and low. When a heat relay system is used this condition is remedied; most low voltage thermostats vary 1/2 to 1-1/2 degrees keeping the room temperature more consistent.

Because a heat relay may be controlled by any low voltage thermostat, a setback thermostat can be used to update the home heating system and help save heating dollars. Programmable setback thermostats can be adjusted to come on before one rises, lower the temperature during the workday, bring the temperature back up before arriving home and again lower it while the family sleeps. No more waking or coming home to a cold house. These thermostats can be programmed differently on weekends to accommodate needs of non-work days, and models are even available which can be programmed independently for each day of the week.



**WIRING FOR TWO ELECTRIC HEAT  
CIRCUITS CONTROLLED BY  
ONE LOW VOLTAGE THERMOSTAT**



**WIRING FOR ONE ELECTRIC HEAT  
CIRCUIT UP TO 5,500 WATTS**

