HUNTER®
SINCE 1886

Set 'n Save I

PROGRAMMABLE THERMOSTAT

Owner's Manual

Model 42204

Welcome to the Hunter energy saving family of quality products.

Your Hunter Programmable Thermostat allows you to find your maximum comfort level using the least amount of fuel. Through smart programming, this thermostat should pay for itself during its first season of use.

Thank you for buying Hunter products!

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Read This First Before Installing Thermostat

1 Read the entire installation section (1) of this Owner's Manual thoroughly before you begin to operate your Hunter Thermostat.

2 All installation is normally performed at your thermostat.

3 You can practice programming before installing your thermostat by inserting and connecting the battery as shown on page 13, and following the instructions on page 14 onward. This can be done while you relax in your favorite chair, and is a very good way to familiarize yourself with all the functions of your Hunter Thermostat.

4 Your Hunter Thermostat is designed operate with most gas, oil, electric or forced hot water heating and air conditioning systems having 24-volt controls and relay currents up to 1.5A.

Such systems represent the great majority of residential central heating and air conditioning units in use in the United States.

Some other systems, which are not directly compatible with electronic set back thermostats, may be made to work with your Hunter Thermostat using the Hunter Isolation Relay Model 22201.

Use of the isolation relay will normally allow the Hunter Thermostat control millivolt systems, computer controlled systems, and high voltage electric baseboard or strip heaters. For some of these systems, you will also need an additional 24-volt transformer. Full instructions are included in the isolation relay package. This Hunter Thermostat will not control multi-stage heating or cooling systems.

5 A built-in timer prevents damage to your air conditioner compressor, caused by rapid cycling, by providing a delay of 4 minutes before it will restart.

6 Your thermostat can be programmed between 40° and 90° F. However, it will display room temperatures from 32° F to 99° F.

7 Whenever the main power is interrupted or fails, the battery power is used to retain the programs and current time.

8 When the battery is low, the **entire** display will flash. If this happens install a fresh, new battery (do not use an old battery) as soon as possible.

If the battery is not replaced, the display will get dim and your heating and cooling system will stop operating.

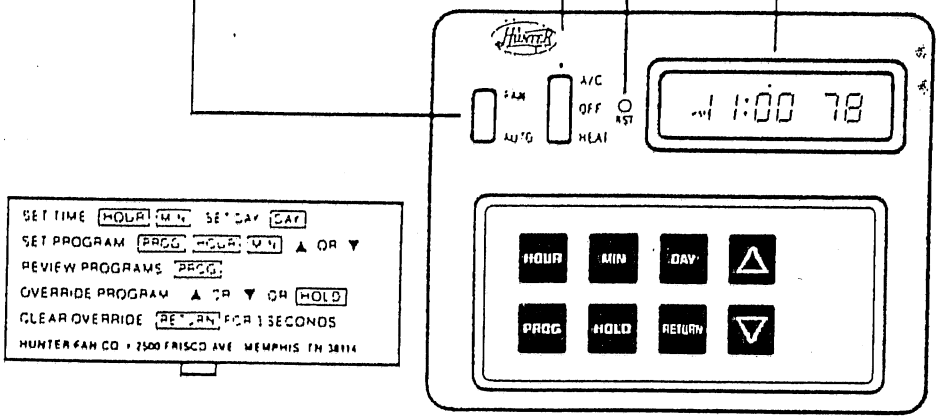
Manual switch for turning on heating and cooling system.

Reset button for resetting computer back to 12:00 a.m. and clearing all programs.

Manual switch for automatic or continuous fan operation.



Display indicates time, day, program number and hold.



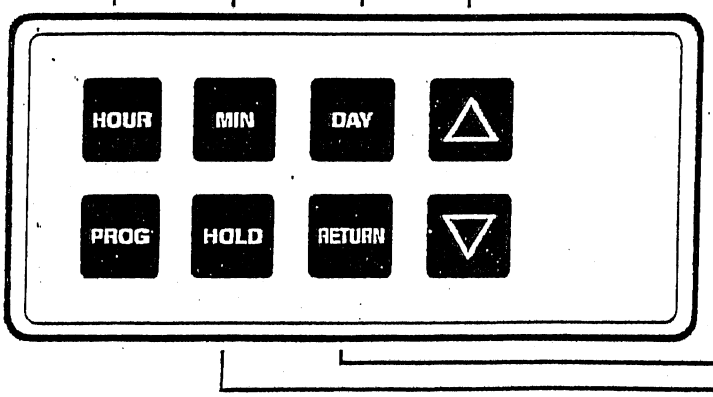
For entering minute of day.

For entering hour of day.

For reviewing or entering Weekday and Weekend program cycles.

For entering day of week.

Individual keys for raising or lowering temperature settings.



Returns display to current time and temperature. Also, if held for 4 seconds, clears manual override.

Provides permanent temperature setting by overriding stored programs, or converts to manual operation of thermostat.

- Battery retains programs during power failure.
- Fingertip programming-easy touch keyboard for entering program and displaying time and temperature setting.

Your Hunter Thermostat comes with two #8 slotted screws and two wall anchors for mounting. To install your unit, you should have the following tools and materials.

- Slotted screwdriver
- Hammer
- Electric drill and 3/16" bit
- One 1.5V (AA size) Alkaline battery

Your Hunter thermostat requires one 1.5 volt battery to power the thermostat. It is essential that you replace the battery whenever the entire display flashes or appears dim. If you do not, the thermostat will quit controlling your system.

Remove Old Thermostat

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

1 Turn your existing thermostat to OFF position. Turn off the power to the furnace at the main power panel to avoid electrical shock.

2 Remove existing thermostat cover and thermostat. Some thermostats will have screws or other locking devices that must first be removed. Once wall is exposed, look for wires.

If wires are not visible, they may be connected to the back of wallplate. Again, look for screws, tabs, etc. Some models have doors that open to expose wires and mounting screws (see Figure 1).

3 Each wire coming from the wall to the existing thermostat is connected to a terminal point on that thermostat. Each of these terminal points is usually marked with a code letter as shown in Table A. Before disconnecting any wires, apply the self adhesive labels provided to the wire as shown in Table A. (For example, attach the label marked W WHITE to the wire which goes 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. 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 don't 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. Don't worry, just connect either of the wires to the "RED" terminal on your thermostat, then connect the other wire to the "WHITE" terminal on your Energy thermostat to complete the circuit.

4 After labeling wires, disconnect them from the existing thermostat terminals.

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

6 If hole in wall is larger than necessary for wires, seal this hole up, 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.

TYPICAL HOME THERMOSTATS

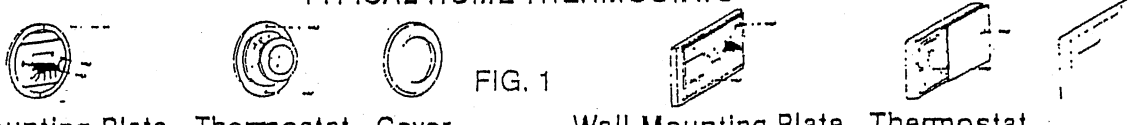


FIG. 1

Wire Labeling

This table will help you match the labels to the wires so you can attach them to your Hunter Thermostat.

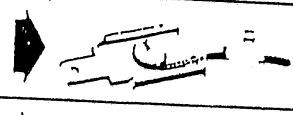
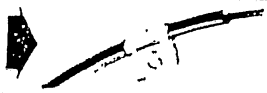
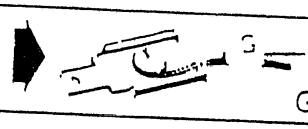
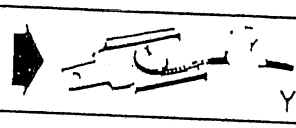
If the code letter on your existing thermostat is	then mark wire with label shown	and connect to thermostat Terminal shown
RH, RC R, M, VR, VC or 4 24 Volt		 RED
G or F Fan		 GREEN
Y or C Air Conditioning		 YELLOW
W or H Heating		 WHITE

TABLE A

NOTE: 5-WIRE SYSTEMS
If your existing thermostat has separate wires going to terminals marked "R" and "RH," simply connect both these wires to terminal marked "RED" on your Energy Monitor. Connect only the wires that were connected to your old thermostat to your new Energy Monitor.

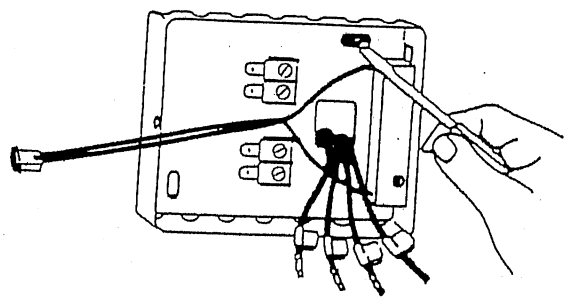
Mount Thermostat Wallplate

Detach the wallplate from your thermostat by removing the two screws located above and below the keyboard.

Position wallplate on wall and pull existing wires through large opening. Then level for appearance. Mark holes for plastic anchors provided if existing holes do not line up with thermostat holes. (Figure 2)

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

Reposition wallplate to wall, pulling wires through large opening, insert mounting screws provided into wall anchor and tighten.

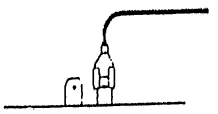


(Figure 2)

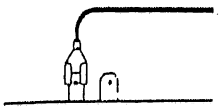
Heating System Selector

The heating system selector is the orange jumper wire on the Printed Circuit Board that is connected to the terminal marked "HG." Leave it in this position if you have a gas furnace or oil burner.

If you have an electric furnace, check to see if the heat comes on when called for, and that the blower fan will also come on. If either does not, then change the orange wire to the "HE" position. If the heat and fan come on normally as expected, then leave the orange wire in the "HG" position. The system selector has no effect in the cooling mode.



HE HG
For gas and most other systems.



HE HG
For certain electric systems.

Connect Wires and Mount Thermostat Cover

1 Match and connect the labeled wires to the appropriate coded terminal screws on the mounting plate (Figure 4). Ignore any wires which may be present, but which were not connected to your old thermostat. Do not connect these to your thermostat.

2 Push excess wire back into hole to prevent interference with mounting of thermostat stat cover.

3 Insert the battery into your thermostat as shown in Figure 5, observing the polarity marked on the unit.

4 Make sure the HEAT-OFF-COOL switch is in OFF position and FAN-AUTO switch is in AUTO position. Push all the connectors at the end of each thermostat wire onto the appropriate spade terminals on the mounting plate (Figure 3). Match letter codes to wire colors (Figure 4). Connect battery lead connectors (Figure 5).

5 Line up the thermostat cover with wallplate, insert faceplate screws

6 Switch on the main power. Press the reset button to reset and start the clock. Use a thin probe such as a straightened paper clip to gently push the reset button through the hole in the front panel (Figure 6). The LCD display should read 12:00 MO and indicate the current room temperature of your house. **If it shows random numbers, or partial digits, press the reset button once again.**

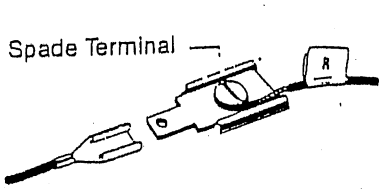


Figure 3

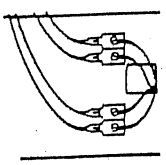


Figure 4

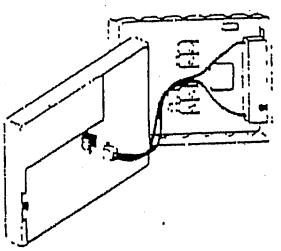


Figure 5

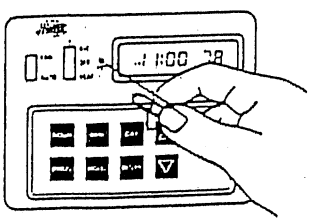


Figure 6

1 The PM indicator will appear between 12 noon and 11:59 p.m. There is no AM indicator.

2 When the heating or cooling system is actually operating, the **temperature digits** will flash.

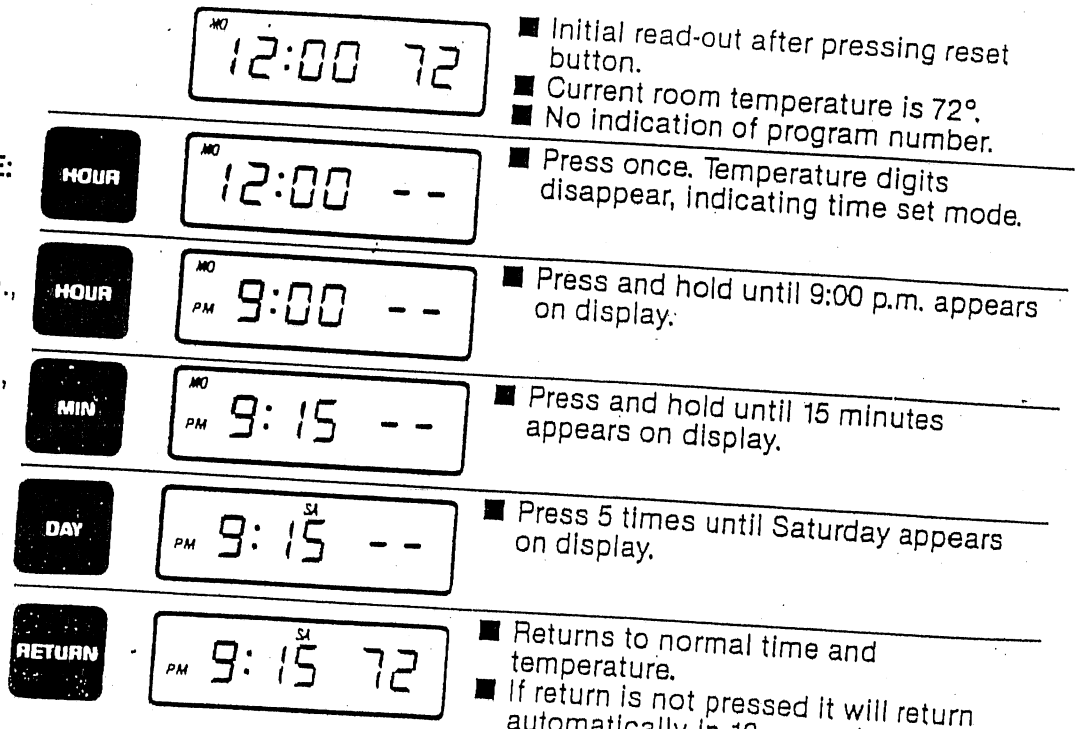
3 If power is interrupted the battery will retain all programs.

4 If the **entire** display flashes, replace the battery.

Setting the Time and Day of Week

When you first install the AA size battery, the thermostat automatically sets the day and time to Monday, 12:00 a.m., shows the current room temperature and is programmed for 68°F in heat mode and 78°F in cool mode.

EXAMPLE: If the unit is being installed at 9:15 p.m., Saturday, to set the thermostat, you would press the keys in the shown sequence:



Typical Suggested Summer & Winter Programs

Studies conducted by the Department of Energy estimate that setting your thermostat back 10°F for two 8-hour periods during winter can reduce your fuel bill by as much as 30%. By setting your thermostat up 5° for two 8-hour periods during summer you can reduce your fuel bill up to 25%.

Your thermostat is capable of holding up to 4 programs for weekdays and 2 programs for weekends.

Suggested winter and summer weekday and weekend programs are shown at the right.

Weekday Program (Mon.-Fri.)

		Summer	Winter
Weekday Program 1	6:00 AM	78°F	68°F
Weekday Program 2	8:30 AM	84°F	60°F
Weekday Program 3	3:00 PM	78°F	68°F
Weekday Program 4	11:00 PM	80°F	58°F

Weekend Program (Sat.-Sun.)

Weekend Program 1	7:00 AM	78°F	68°F
Weekend Program 2	11:00 PM	80°F	58°F

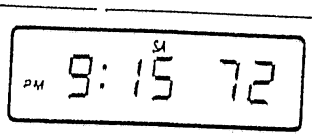
NOTE: The thermostat program will NOT take effect immediately after programming of your thermostat but at the next programmed time/temperature change. The thermostat is pre-set to 68°F for heat or 78°F for air conditioning. So if you want a temperature other than 68°F and 78°F right away, use the manual override feature (described on page 27) to enter your desired temperature setting.

When your program becomes effective at the next time/temperature setting, the appropriate corresponding program number will appear on the display.

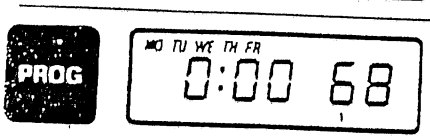
Programming Your Thermostat

In this example your thermostat will be programmed for winter as per suggested program on pages 16 and 17.

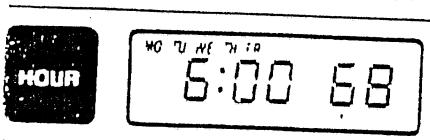
NOTE: 1) The program time is set in increments of 15 minutes.
2) The program temperature is set in increments of 1°F.
3) When setting PM time, make sure the "PM" indicator appears on the display.



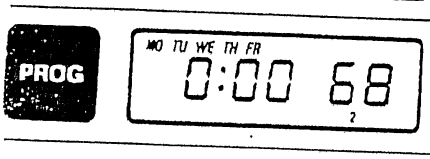
■ Normal display of time, temperature, and day of week.



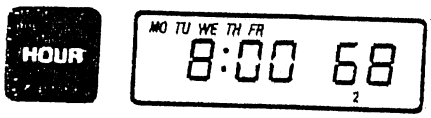
■ Program indicator (1) is displayed.
■ 68°F is displayed.
■ 0:00 space for time is displayed.
■ Mo-Fr is displayed.



■ Press and hold until 6:00 is displayed.
■ Weekday Program 1 is complete.



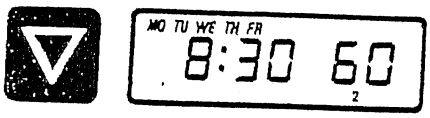
■ Program indicator (2) is displayed.



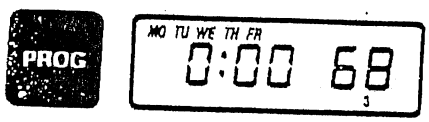
■ Press and hold until 8:00 is displayed.



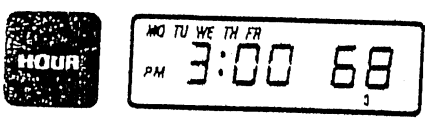
■ Clock advances in increments of 15 minutes.



■ Pressing ▽ each time decreases one degree.
■ When you reach 60°F, Program 2 is complete.

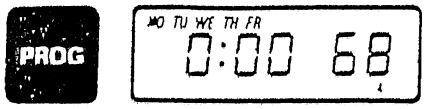


■ Program indicator (3) is displayed.

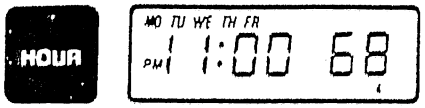


■ Press and hold until 3:00 p.m. is displayed.
■ Weekday Program 3 is complete.

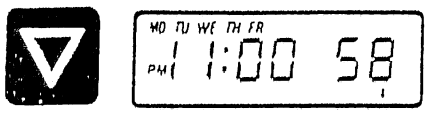
Programming Your Thermostat (Cont.)



- Program indicator (4) is displayed.



- Press and hold until 11:00 p.m. is displayed.

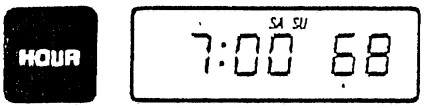


- Pressing ▽ each time decreases one degree.
- When you reach 58°F, Program 4 is complete.

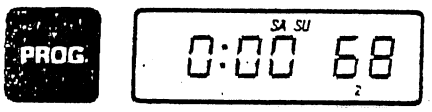
Continue for weekend programs



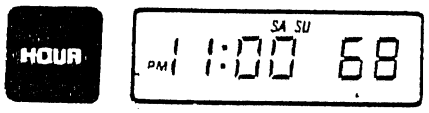
- SA and SU displayed.
- Program indicator (1) is displayed.



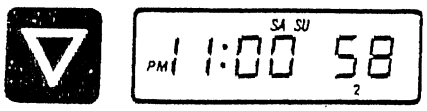
- Press and hold until 7:00 a.m. is displayed.
- Weekend Program 1 is now complete.



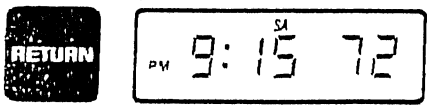
- Program indicator (2) is displayed.



- Press and hold until 11:00 p.m. is displayed.



- Pressing ▽ each time decreases one degree.
- When you reach 58°F, Weekend Program 2 is complete.



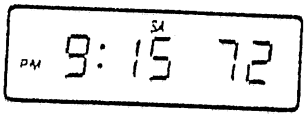
- Press to return to display current time, temperature and day of week. If it is not pressed, thermostat will automatically return to current time and temperature in 10 seconds.

Now slide "HEAT/OFF/COOL" switch to "HEAT."

Note: If program time is left as 0:00, that particular program will not be effective; e.g., if Program #2 has time 0:00, the thermostat will jump from Program #1 to Program #3.

Displaying Programs

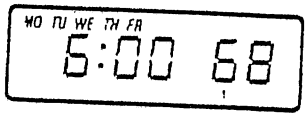
You may want to review the programs to see that the settings are compatible with your lifestyle.



- Normal display of current time, temperature, day of week.

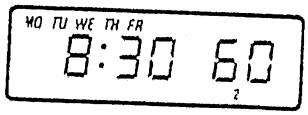
Weekday Program

PROG



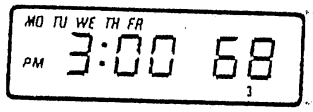
- 1st Weekday program is displayed.
- Program indicator (1) appears.
- Monday through Friday indication appears.

PROG



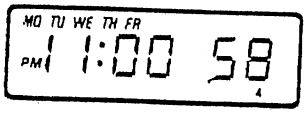
- 2nd Weekday program is displayed.
- Program indicator (2) appears.
- Monday through Friday remains.

PROG



- 3rd Weekday program is displayed.
- Program indicator (3) appears.
- Monday through Friday remains.

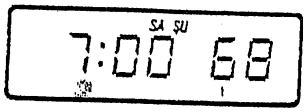
PROG



- 4th Weekday program is displayed.
- Program indicator (4) appears.
- Monday through Friday remains.

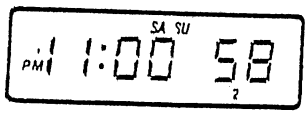
Weekend Program

PROG



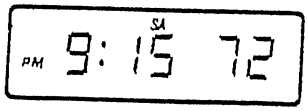
- 1st Weekend program is displayed.
- Program indicator (1) appears.
- Saturday and Sunday indications appear.

PROG



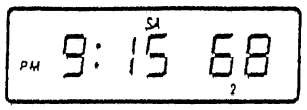
- 2nd Weekend program is displayed.
- Program indication (2) appears.

RETURN



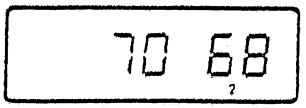
- Press to return to display current time, temperature, day of week.
  If it is not pressed, thermostat will automatically return to display of current time, temperature and day of week in about 10 seconds.

To Review The Current Temperature Setting:



■ Current time and temperature.

Press for 2 seconds or less: ▲ or ▼



■ 70 indicates the current setting of the thermostat is 70°F. 68 shows the present room temperature as 68°F.
■ If held for more than 2 seconds, you will manually override your present temperature to a new setting as explained below.

Temperature Span

Your thermostat is set at the factory to cycle when the temperature rises 2° above or 1° below the temperature setting. It cannot be changed.

Manual Override of Program

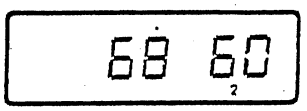
Press & hold ▲ to raise temperature.

Press & hold ▼ to lower temperature.

Temporary Manual Override

In the following example, the present room temperature is 60°F and we want to raise the temperature to 70°F temporarily until the next program.

▲



■ Press arrow to display current setting and room temperature.

▲

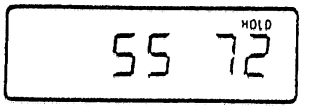


■ Continue pressing arrow. After 2 seconds, the set temperature digits will blink and begin to increase until the button is released at the desired setting (in this case 70°F).
■ Program number disappears.

■ To display a manual override setting, press either arrow for less than 2 seconds.
■ When arrow is released, the display will show current time and temperature.

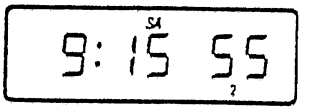
■ Your thermostat is now in manual override mode to 70° until the next program change. Please note the program indicator number has disappeared until the next program time comes into effect.

Permanent Manual Override



In the event you wish to hold your manual override for vacation or just an extended period of time, follow the temporary manual override instructions above, then **immediately** press HOLD or HOLD TEMP HOLD. This will maintain override setting indefinitely. "HOLD" will appear on the display.

To Return To Program* RETURN



(*From temporary or permanent manual override state)

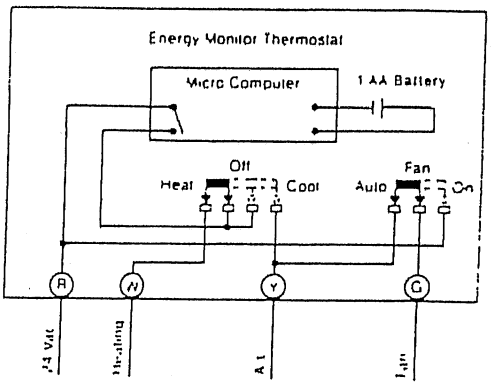
■ To return immediately to current program, press and hold RETURN for 3 seconds. Program number will disappear. "HOLD" will disappear if you were in permanent manual override.

Problem	Solution
No Display	1. Check battery connection and battery. 2. Press reset button once with a small pin and hold in for two seconds.
Entire Display Dims or Flashes Rapidly On and Off	1. Replace battery.
Program Does Not Change At Your Desired 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 correct day setting.
Heating or Cooling Does Not Go On or Off	1. Check that function switch is in the correct position ("HEAT" or "COOL"). 2. There may be as much as 10 seconds delay in the thermostat turning the system on—wait and check. 3. Check your circuit breakers and switches to ensure that there is power to the system. 4. Replace battery.

Erratic Display	1. Press the reset button once with a small pin and hold in for two seconds. Then reprogram.

Hunter Thermostat

Typical 4-wire system.



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