



SINCE

1886

Set 'n Save II Plus™
PROGRAMMABLE THERMOSTAT

Owner's Manual

Model 42223

Table of Contents

Congratulations!

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!

Features	6
Installation	8
Setting Clock/Programming	14
Personal Program Schedule	18
Manual Override	29
Temperature Span	31
Energy Monitor	31
Energy Usage Chart	34
Trouble Shooting Guide	36
Wiring Diagrams	38

Hunter Consumer Service Hotline
Weekdays 8 AM to 5 PM Central Standard Time
901-745-9222

IMPORTANT

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

- Remove the mylar label from the display window.

INSTALLATION

2 All installation is normally performed at your thermostat.

PROGRAMMING

3 You can practice programming before installing your thermostat by inserting and connecting the batteries as shown on page 13,

can be restarted. This feature will prevent damage to your air conditioner compressor caused by rapid cycling. It does not provide a delay when there are power outages.

TEMPERATURE RANGE

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

POWER FAILURE

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

and following the instructions on page 14. 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.

OPERATION

4 Your Hunter Thermostat is designed to operate with most gas, oil, electric or forced hot water heating and air conditioning systems. These have 24-volt or millivolt controls and represent most central heating and air conditioning units in use in the United States.

This Hunter Thermostat will not control multi-stage heating or cooling systems.

COMPRESSOR PROTECTION

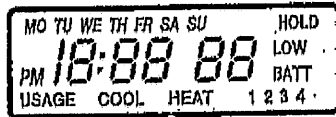
5 The thermostat provides a 4-minute delay after shutting off the compressor before it

BATTERY WARNING

8 When the batteries are low, "LOW BATT" indicator on the display will flash. When this happens, install new batteries (**do not use old batteries**) as soon as possible. The battery should last one year.

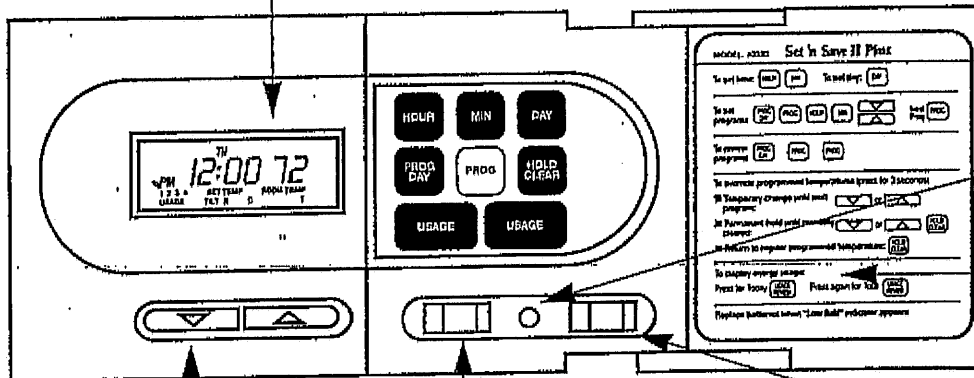
CAUTION: The batteries are the only source of power used to operate your system. If you do not replace the batteries, the display will dim and your heating and cooling system will stop operation.

If you have questions about the installation or programming of the Hunter Thermostat, call us at 901-745-9222 from 8AM to 5PM Central Standard Time.



Display shows time, day, temperature, PM, program number, hold and usage indicator.

Simplified programming instructions are provided on inside of door cover for easy reference.



Reset button for resetting computer back to 12:00 A.M. and clearing all programs.

Door label

Individual pushbuttons for raising or lowering temperature settings.

Manual switch for turning on heating and cooling system.

Manual switch for automatic or continuous fan operation.

For reviewing or entering Weekday and Weekend Program cycles.

For entering minute of day.

For entering day of week.

For entering hour of day.



Provides permanent temperature setting by overriding stored programs or converts to manual operation of thermostat. Also, clears manual override and returns back to current program.

Picks the day/days for programs.



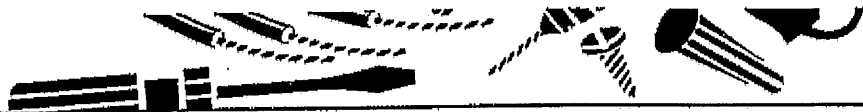
Energy Monitor key recalls energy usage today and total. LCD shows energy usage in hours and minutes.



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

■ Batteries keep programs during power failure.

■ Fingertip programming—easy touch keyboard for entering program and displaying time and temperature setting and energy usages.



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

- Slotted Screwdriver
- Electric drill and 3/16" bit
- Hammer
- Three 1.5V (AA size) Alkaline batteries

Your Hunter thermostat requires three 1.5 volt batteries. You must replace the batteries whenever the Low Battery indicator appears on the display.

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.

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

- 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.

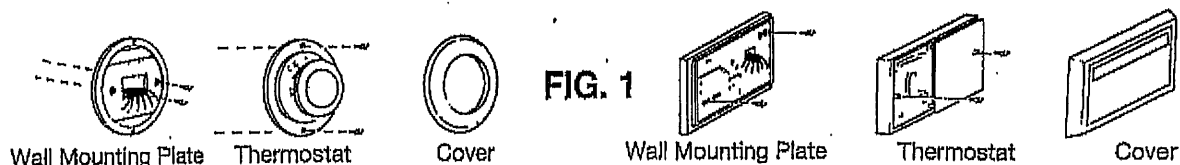
If wires are not visible, they may be connected to the back of wallplate. Again, look for screws, tabs, etc. Some models have doors that open to expose wires and mounting screws (see Figure 1).

- 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.)

only systems. Don't worry. Just connect either of the wires to the "RED" terminal on your Hunter thermostat. Then connect the other wire to the "WHITE" terminal on your 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 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



Wall Mounting Plate

Thermostat

Cover

Wall Mounting Plate

Thermostat

Cover

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 (See Note) 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," do this simple test—momentarily turn the main power on. Lightly scratch the two wires together, (Because this is only a 24V system, there is no danger in performing this test)

then be sure to turn the power off again. If you saw a spark call 901-745-9222 for further information. If there was no spark simply connect both these wires to terminal marked "RED" on your thermostat. Connect only the wires that were connected to your old thermostat to your new thermostat.

NOTE: Do not connect a "Common" wire (sometimes labelled "C" to any terminal on this thermostat. Tape up the wire and do not use.

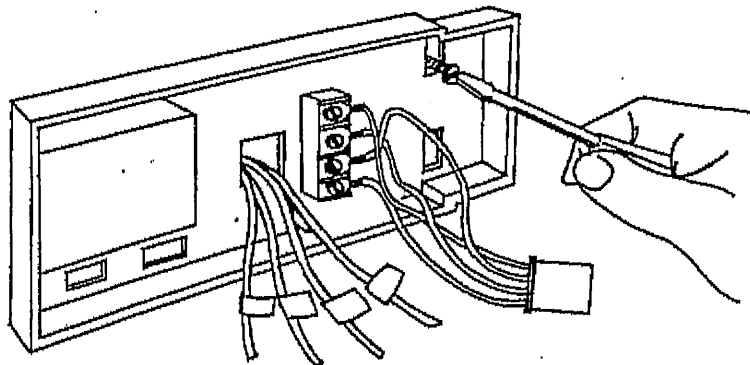
Mount Thermostat Wallplate

Snap open the wallplate from your Hunter thermostat disconnect the battery and leadwire terminal connectors.

Position wallplate on wall and pull existing wires through large opening. Then level for appearance. Use any two of the many rectangular holes provided on the wallplate for mounting. Mark holes for plastic anchors provided if existing holes do not line up with Hunter 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.

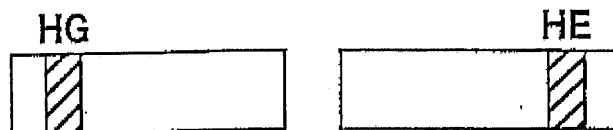


(Figure 2)

Heating Systems Selector

The heating system selector is a switch on the Printed Circuit Board. The switch is at "HG" position. Leave it in this position if you have a gas furnace or an 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 do not, then change the switch to the "HE" position. If the heat and fan come on normally as expected, then leave the switch in the "HG" position. The system selector has no effect in the cooling mode.



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. on the mounting plate, matching letter codes to wire colors (See Figures 3 and 4). Connect battery lead connectors (Figure 5).

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

3 Insert the batteries 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

5 Line up the thermostat cover with wallplate, snap the thermostat to the wall plate.

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 push gently the reset button through the hole in the front panel (Figure 6). The LCD display should read 12:00 MO and show the current room temperature of your house. If it shows random numbers, or partial digits, press the reset button once again.

7 If you haven't already done so, remove the mylar label from the display window.

Spade Terminal

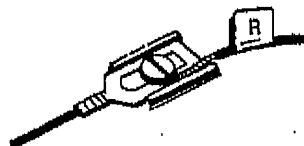


Figure 3

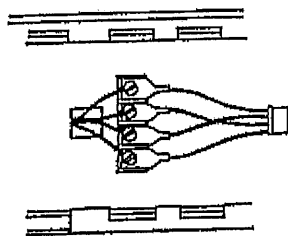


Figure 4

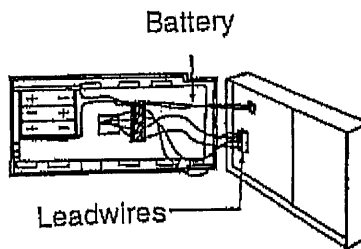


Figure 5

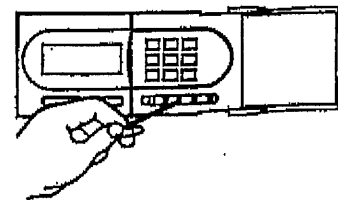


Figure 6

IMPORTANT: READ BEFORE YOU BEGIN TO PROGRAM

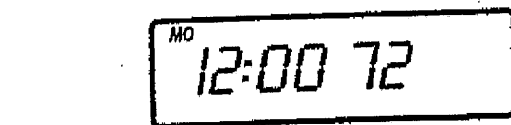
- 1 Remove mylar label covering display window.
- 2 The PM indicator will appear between 12:00 noon and 11:59 p.m. There is no AM indicator.
- 3 When the heating or cooling system is actually operating, "HEAT" or "COOL" will appear on the display.
- 4 If power is interrupted the batteries will keep all programs.
- 5 If "LOW BATT" appears on the display replace the batteries.

Setting the Time and Day of Week

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

The first data you should enter is the current time and day of week. As the keys are pressed, the display will show the data being entered.

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.



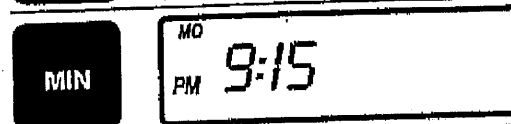
- Initial read-out after pressing reset button.
- Current room temperature is 72°.
- No indication of program number.



- Press once. Temperature digits disappear, show time set mode.



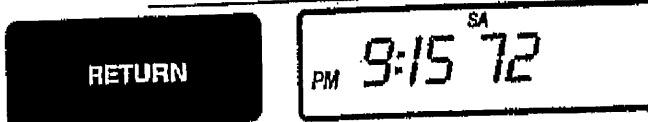
- Press and hold until 9:00 p.m. appears on display.



- Press and hold until 15 minutes appears on display.



- Press 5 times until Saturday appears on display.



- Returns to normal time and temperature.
- If return is not pressed it will return automatically in 15 seconds.

Typical Suggested Summer and 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 separate programs for heat or cool for each weekday and 2 programs for each weekend day. You can program all weekdays, Monday to Friday, to the same 4 programs as shown in the table, or each weekday can have a different set of 4 programs. Similarly weekend programs, Saturday and Sunday, can be the same 2 programs or each weekend day can have a different set of 2 programs.

Weekday Program (Mon. - Fri.)

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

NOTE: The thermostat program will NOT take effect immediately after programming of your Thermostat Monitor but at the next programmed time/temperature change. The Thermostat is pre-set to 68°F for heat and 78°F for air conditioning. So if you want a temperature other than 68°F or 78°F right away, use the temporary manual override feature (described on page 29) 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.

Weekend Program (Sat. - Sun.)

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

Personal Program Schedule

Before programming or changing the program, use this Personal Program Schedule to determine which times and temperature settings will best satisfy both

your comfort and energy saving requirements. Use a pencil so you can revise your records each time you change your temperature settings.

FOR WINTER

	PROGRAM 1	PROGRAM 2	PROGRAM 3	PROGRAM 4
MONDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
TUESDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
WEDNESDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
THURSDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
FRIDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
SATURDAY	TIME: TEMP	TIME: TEMP		
SUNDAY	TIME: TEMP	TIME: TEMP		

FOR SUMMER

	PROGRAM 1	PROGRAM 2	PROGRAM 3	PROGRAM 4
MONDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
TUESDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
WEDNESDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
THURSDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
FRIDAY	TIME: TEMP	TIME: TEMP	TIME: TEMP	TIME: TEMP
SATURDAY	TIME: TEMP	TIME: TEMP		
SUNDAY	TIME: TEMP	TIME: TEMP		

Programming Your Thermostat

Familiarize yourself with programming. In this example your thermostat will be programmed for winter as per suggested program on pages 16 and 17. However, you can program or change program of each individual day.

- 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.

Weekday Programs

The image shows a thermostat display with the following information:

- Time: 9:15 PM
- Temperature: 72°F
- Day: SA

 Below the display are two buttons:

- PROG DAY**: Shows the selected days 'MO TU WE TH FR'.
- PROG**: Shows the program time '0:00' and temperature '68'.

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

■ Selects days MO to FR for same set of 4 programs each day.

- Program indicator (1) is displayed.
- 68°F is displayed.
- 0:00 space for time is displayed.
- MO to FR is displayed.

Programming Your Thermostat (Cont.)



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



- Program Indicator (2) is displayed.
- Space for time of second program is displayed.



- Press and hold until 8:00 is displayed.



- Clock advances in increments of 15 minutes.



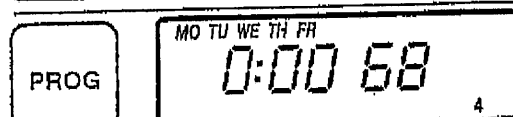
- Pressing the DOWN arrow each time decreases one degree.
- When you reach 60°F, Program 2 is complete.



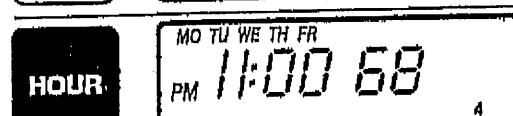
- Program Indicator (3) is displayed.



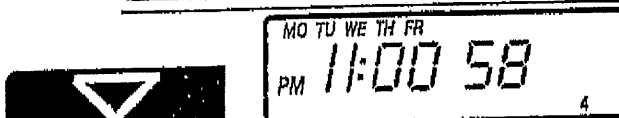
- Press and hold until 3:00 p.m. is displayed.
- Weekday Program 3 is complete.



- Program Indicator (4) is displayed.



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



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

Programming Your Thermostat (Cont.)

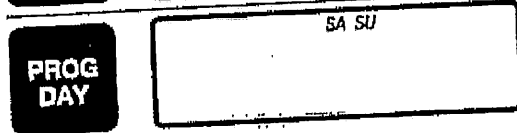


- Press RETURN to display current time, temperature, and day of week. If it is not pressed, Thermostat will return to current time and temperature in 15 seconds.

Weekend Programs



- Selects days MO to FR for same set of 4 programs each day.



- Selects weekend days SA, SU for same set of 2 programs each weekend day.



- 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.



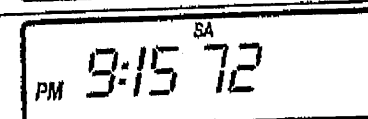
- Program indicator (2) is displayed.



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



- Pressing the DOWN arrow 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 15 seconds.

Programming Your Thermostat (Cont.)

To program for each individual day separately by a different set of programs, first select day by displaying the day of program, then insert the desired times and temperatures.

PROG DAY

■ MO to FR are selected. MO to FR will have same programs.

PROG DAY

■ SA and SU will have same program.

PROG DAY

■ MO is selected, program for MO only.

Use **PROG** **HOUR** **MIN**   to enter programs for Monday.

Similarly **PROG DAY**

■ TU is selected.

PROG DAY

■ WE is selected.

Display the day to be programmed and use **PROG** **HOUR** **MIN**   to enter programs.

NOTE: Another approach to programming is to first program all weekdays MO through FR and SA and SU as same programs. Then, display and change the programs of only those days which will have different programs.

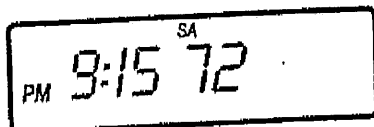
Now slide "Heat/Off/Cool" switch to "Heat."

NOTE: If program time remains 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.

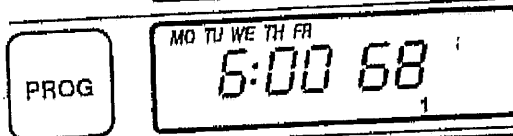
Displaying Programs

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

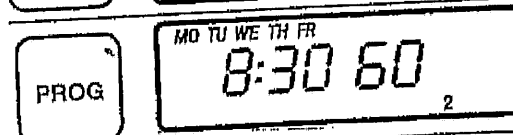
Weekday Program



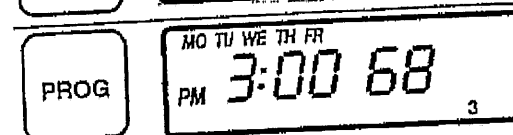
- Normal display of current time, temperature, day of week.



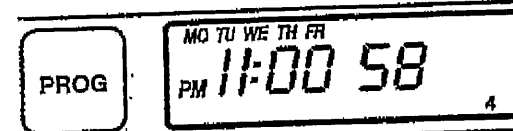
- 1st weekday program is displayed.
- Program indicator (1) appears.
- MO to FR indication appears.



- 2nd weekday program is displayed.
- Program indicator (2) appears.
- MO to FR remains.



- 3rd weekday program is displayed.
- Program indicator (3) appears.
- MO to FR remains.

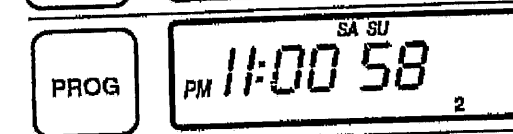


- 4th weekday program is displayed.
- Program indicator (4) appears.
- MO to FR remains.

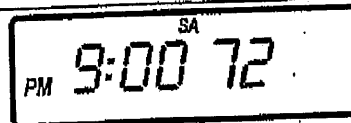
Weekend Program



- 1st weekend program is displayed.
- Program indicator (1) appears.
- SA and SU indications appear.



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



- 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 15 seconds.

If the thermostat is programmed for individual day, press the programs of that particular day.



to display the day, then press



to view

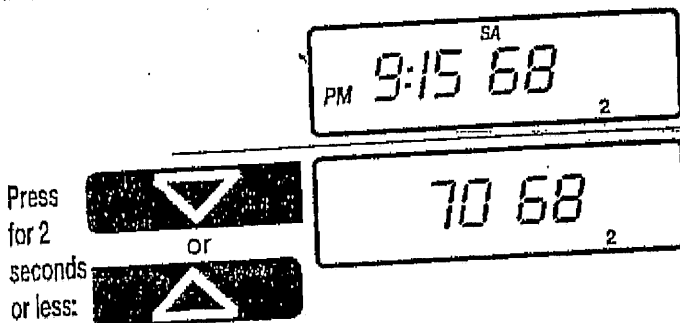
NOTE: The temperatures you have entered will NOT take effect immediately, but at the next program time change. The Thermostat is pre-set to 68°F in heat mode and 78°F in cool mode. If you want a temperature other than 68°F or 78°F right away, you must use the manual override feature described below to enter the temperature you want.

When your entered program becomes effective, the corresponding program number will appear on the display.

After programming, confirm the new programs by pressing



To Review The Current Temperature Setting:



■ Current time and temperature.

■ 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.

Manual Override of Program

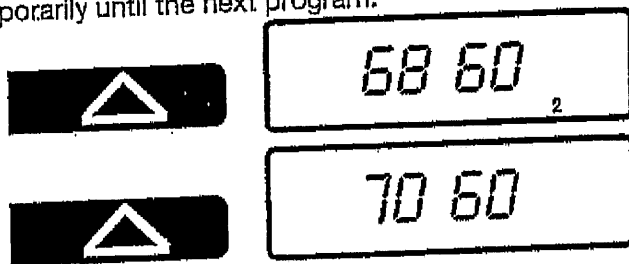
If You Want to Change the Temperature Without Affecting Your Program:

Press and hold  to raise temperature.

Press and 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 set and room temperatures.

■ 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).

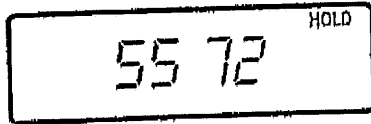
■ Program number disappears.

■ Press return or in 15 seconds it will return to showing current time and temperature.

- 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°F until the next program indicator number has disappeared until the next program time comes into effect.

Permanent Manual Override

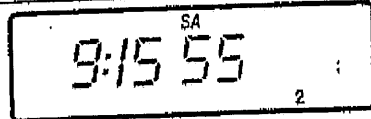


In the event you wish to hold your manual override for vacation or just an extended period of time, follow the temporary manual override instructions on page 29, then immediately press HOLD/CLEAR.

This will maintain override setting indefinitely. "HOLD" will appear on the display.



To Return
To Program*



■ To return immediately to the current program, press HOLD/CLEAR until program number appears. "HOLD" will disappear if you were in permanent manual override.



(*From temporary or permanent manual override state)

NOTE: You can also return the current program by pressing "HOLD TEMP." once in permanent override mode.

Other Features

Temperature Span

Your thermostat is pre-programmed at the factory to cycle when the temperature rises 1° above

or 1° below the temperature setting. It cannot be changed.

The Energy Monitor

The Energy Monitor measures and stores the amount of time the heating and air-conditioning system operates. By pressing the key sequence shown, the usage can be displayed for the present day, the

previous day, and the total. By monitoring on a daily basis, you can gradually adjust winter or summer temperature settings and monitor the effect of your energy conserving efforts.

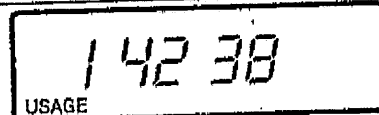


■ Normal display of current time and room temperature on Saturday.

Using
The
Energy
Monitor



■ Press USAGE REVIEW to display amount of time system has run today (Saturday 12:01 a.m. through present time).



■ Press again to display total usage in hours and minutes since usage counter was set to zero. (See note below.)

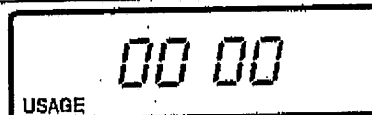


■ Returns to normal time and temperature.
■ Auto return after 15 seconds if no key is pressed.

NOTE: After 999.59 hours of usage the Energy Monitor will restart from zero.

Resetting Energy Monitor

To reset the usage Energy Monitor back to zero, simply press and hold the USAGE REVIEW button for 4 seconds.



■ All usage monitors set to zero.



■ Return to normal time and temperature.

Problem

Solution

SCRAMBLED OR DOUBLE DISPLAY (numbers over numbers)

1. Remove clear mylar sticker.

NO DISPLAY

1. Check battery connections and batteries.
2. Press reset button once with a small pin and hold in for two seconds.

ENTIRE DISPLAY DIMS

1. Replace batteries.

PROGRAM DOES NOT CHANGE AT YOUR DESIRED SETTING

1. Check that time is set properly to "AM" or "PM."
2. Check that thermostat is not in "HOLD" mode.
3. Check for correct day setting.

HEAT/FAN DOES NOT COME ON

1. Move HG/HE system selector to opposite position.

HEATING OR COOLING DOES NOT GO ON OR OFF

1. Check that function switch is in correct position ("HEAT" or "COOL").
2. There may be as much as 20 seconds delay in the thermostat turning the system on - wait and check.
3. Check your circuit breakers and switches to ensure there is power to the system.
4. Replace batteries.
5. Make sure your furnace blower door is closed properly.

IF TEMPERATURE RISES WHEN AC IS ON/
IF THERMOSTAT CONSISTENTLY READS ROOM
TEMPERATURE TOO HIGH

1. Thermister out of place. The thermister is the small red part that should fit in the slot at the bottom of the unit and be exposed to the air.

ERRATIC DISPLAY

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

IF UNIT CONTINUES TO OPERATE IN OFF POSITION

1. Replace unit.

THERMOSTAT READS EE, HI, LO

1. Replace unit.

If you experience any other problems, call 901-745-9222 from 8AM to 5PM. Central Standard time.

Typical Thermostat

Typical 4-wire system.

