



ENERGY MONITOR

PROGRAMMABLE THERMOSTAT
FOR SINGLE AND MULTI-STAGE HEAT PUMP SYSTEMS

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Installation Manual

PROFESSIONAL INSTALLATION REQUIRED

Read This First Before Installing Thermostat

Due to the complexity and variety of heat pump systems, we strongly recommend this be installed by a professional heating/air-conditioning contractor.

This Hunter thermostat is designed to operate with most single and multi-stage heating and air conditioning heat pump systems having 24 volt controls and relay currents between 0.2A and 2.0A. Common wire of 24V is required for operation of this thermostat.

This thermostat will control up to 2 stages of heat (one stage of compressor heat and one stage of auxiliary

heat) and 1 stage of cool. The thermostat will not be compatible with 3 stage heat/2 stage cool systems.

In the cooling mode, if the set temperature is more than 3°F below the room temperature, the display will show "STAGE II" indication.

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

If you have questions concerning the installation or programming of this thermostat, call us at 901-745-9222 from 8 AM to 5 PM Central Time.

Model 44408



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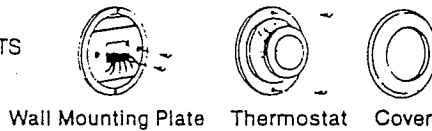
Remove Old Thermostat

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

This thermostat comes with two #8 slotted screws and two wall anchors for mounting. You will need two AA alkaline batteries.

- Turn off the power to the furnace at the main power panel or at the furnace.

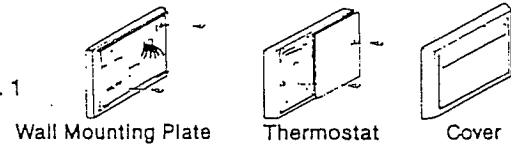
TYPICAL HOME THERMOSTATS



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

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

FIG. 1



Wire Labeling

Before disconnecting any wires, apply the self-adhesive labels (provided) to the wires as shown in Table A. (For example, attach the label marked W to the wire which goes to the W 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 four (for single stage systems), as many as ten, 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.

Wire Labeling (Cont.)

- 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.
- Terminal markings identified as () in Table A are

typical for systems made by Lennox.

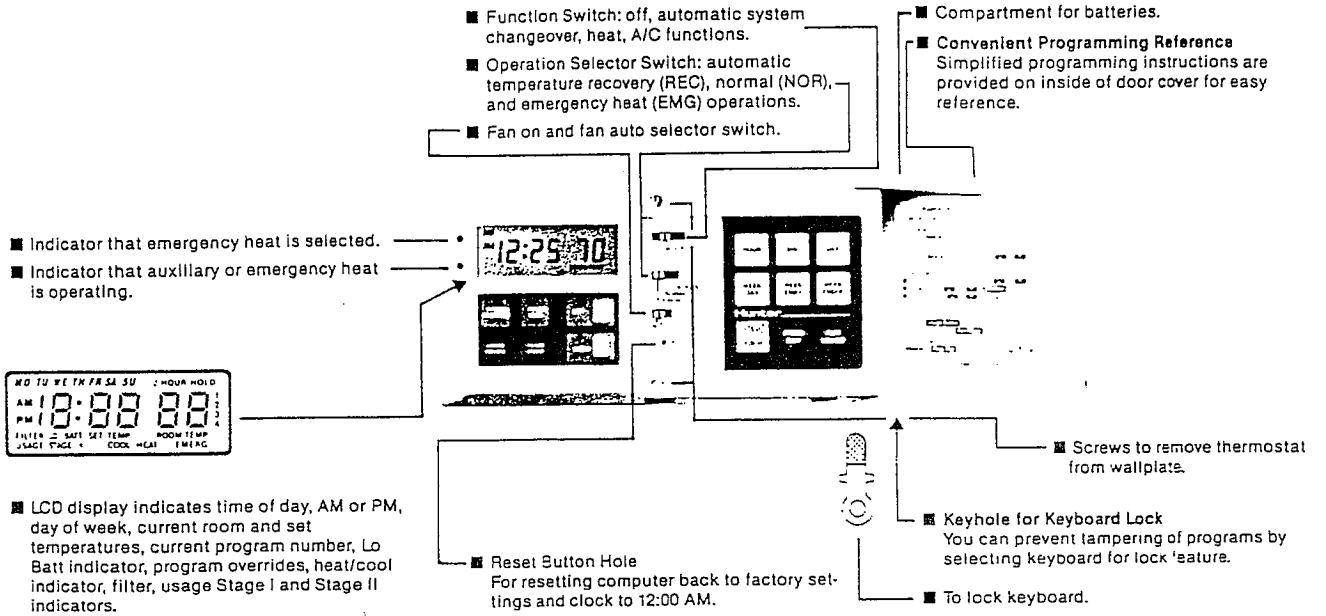
- If your existing thermostat has separate wires going to terminals marked "RC" and "RH", simply label both of these wires for terminal "R", on your Energy Monitor Thermostat.

TABLE A: FOR LABELING WIRES

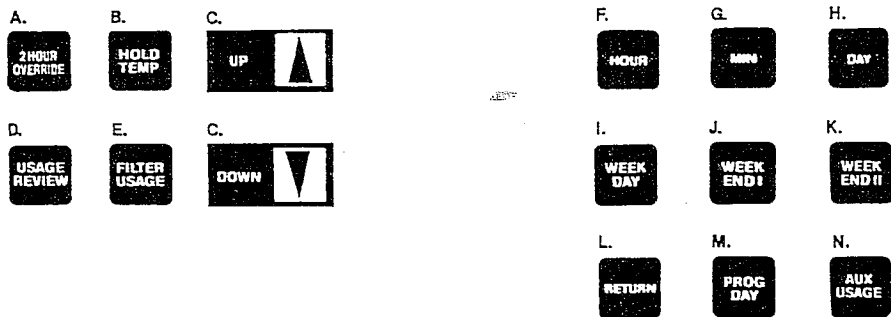
If the code on your existing thermostat is	Function	Mark wire as shown	Connect to Energy Monitor as shown
R, RH, RC, (V), (VR)	24V Wire		RED
Y1 or Y, (M)	First Stage of Compressor		YELLOW
W1 or W, (Y)	Aux. or Second Stage Heating		WHITE
G, (F)	Fan		GREEN
O, B, (R) (See Note 1)	Reversing Valve		ORANGE
C, B, (X) (See Note 2)	Common of 24V Transformer		BLACK (Com)

NOTE: 1 For system with no reversing valve terminal, you should find both W1 and W (in multi-stage heat systems); then W becomes first heat stage -label and connect as O/B.

2 Some mechanical thermostats have a terminal marked "T". This is normally provided for adjustment of mechanical thermostats. This connection is not required for your Hunter thermostat, and must not be used as a common wire. The common wire is usually marked as shown in the table.



Keyboard Guide



- A. 2 Hour Manual Override.
- B. Overrides set programs "permanently" (or until released), or converts to manual operation of thermostat.
- C. For raising and lowering the temperature settings.
- D. Displays energy usage today, yesterday, this week and last week.
- E. Displays total filter usage.
- F. For entering hour of day.
- G. For entering minute of day.
- H. For entering day of week.
- I. For reviewing or entering Weekday program cycles.
- J. For reviewing or entering Weekend I program cycles.
- K. For reviewing or entering Weekend II program cycles.
- L. Returns display to current time and temperature. Also, clears manual override and returns to program.
- M. For programming days of the week into Weekday, Weekend I and Weekend II schedules.
- N. Displays the total usage of auxiliary heat.

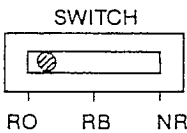
Wire Labeling (Cont.)

- Label only those wires which are shown in Table A on previous page. If more wires were connected to your thermostat, just wrap the ends with electrical tape so they do not short other wires. DO NOT LABEL OR CONNECT TO THE THERMOSTAT.
- After labeling the wires, disconnect them from the existing thermostat terminals.
- Remove existing wallplate. To make sure wires do not back into wall opening, you may want to tape them to wall.
- If hole in wall is larger than necessary for wires, seat 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.

Selector Switch

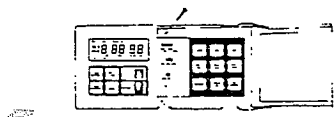
There are three types of heat pump connections relating to the reversing valve. Look for this switch on the printed circuit board.

If the code on your existing thermostat is	Reversing Valve Function	Set Selector Switch To
O	Activates in cool mode	RO
B	Activates in heat mode	RB
W	Connection made internally. No terminal at thermostat (no O or B terminal marked) — instead, there is a separate connection for 1st stage heat.	NR

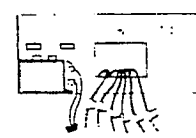


Mount Energy Monitor Thermostat Wallplate

- Detach the wallplate from your Energy Monitor Thermostat. (See Figure 2.)
- Position wallplate on wall and pull existing wires through large opening. Level for appearance. Make additional mounting holes if needed.
- 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. (See Figure 3.) Insert screws and tighten.



(Figure 2)

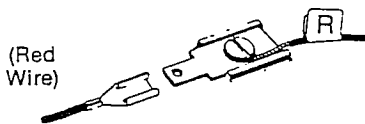


(Figure 3)

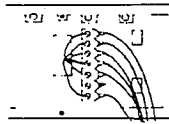
Connect Wires and Mount Thermostat To Wall Plate

- Match and connect the labeled wires to the appropriate coded terminal screws on the mounting plate. (See Figure 4A.) Ignore any wires which may be present, but which were not connected to the old thermostat.
- Push excess wire back into the hole to prevent interference with mounting of the thermostat.
- Make sure the Function Switch is set at OFF, and the FAN-AUTO switch is in AUTO. Push the connectors at the end of each thermostat wire onto the appropriate coded terminals on the wallplate, matching the colors. (See Figures 4 and 4A.)
- Install two AA batteries. (See Figure 5.)
- Plug battery leads into connector marked BATT on the printed circuit board. (See Figure 5A.)
- Line up the thermostat with wallplate, insert faceplate screws and tighten.
- 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. (See Figure 6.)
- LCD display should read 12:00 AM, indicate the current room temperature of your house, and the word "FILTER" should appear. If it shows random numbers or partial digits, press the reset button once again.

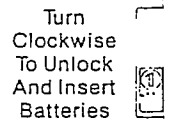
The installation is now complete. See your operating manual for complete operating instructions.



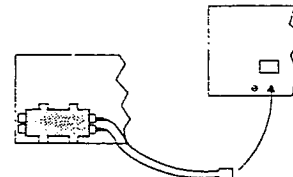
(Figure 4)



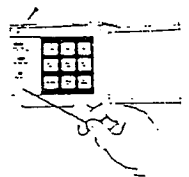
(Figure 4A)



(Figure 5)



(Figure 5A)



(Figure 6)



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Congratulations!

Welcome to the Hunter energy saving family of quality products.

Your Hunter Energy Monitor 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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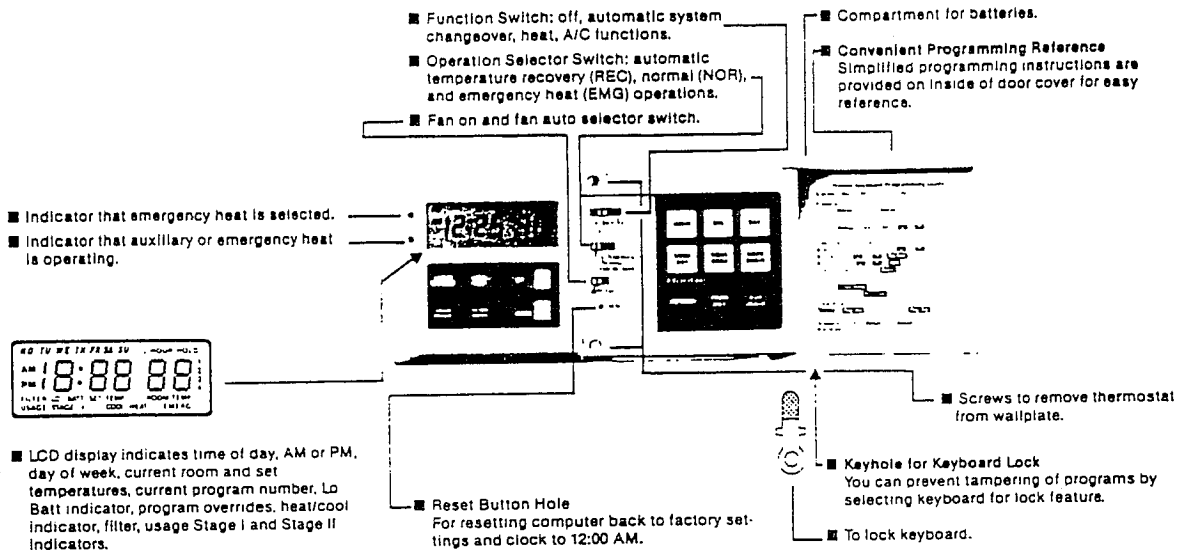
Due to the complexity and variety of heat pump systems, we strongly recommend that this be installed by a professional heating/air-conditioning contractor.

Read This First!

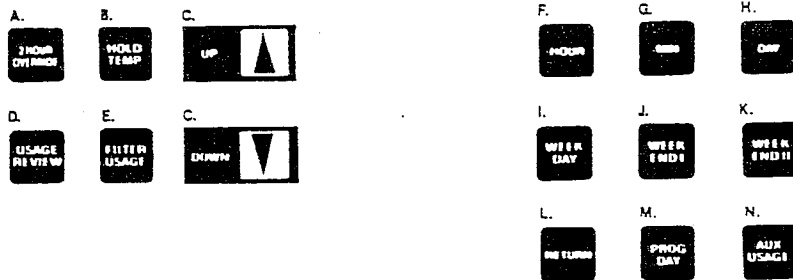
- Read the entire Installation Manual thoroughly before you begin to operate your Hunter Energy Monitor Thermostat.
- You can practice programming before installing your thermostat by inserting and connecting the batteries, as shown on page 8 of the Installation Manual, and following the instructions on page 15 of this Operation Manual. 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 Energy Monitor thermostat.
- Your thermostat is designed to operate with most multi-stage heating and air conditioning heat pump systems having 24 volt controls and relay currents between 0.2A and 2.0A. The Energy Monitor will control up to 2 stages of heat; 1 stage of compressor heat, 1 stage of auxiliary heat and 1 stage of cool.
- A built-in timer prevents damage to your compressor caused by rapid cycling, by providing a delay of 4 minutes before it will restart.
- Your thermostat can be programmed between 40°F and 90°F. However, it will display room temperatures from 32°F to 99°F.
- Whenever the main power is interrupted or fails for an extended period of time, the battery power is used to retain the programs and time.
- When the low battery indicator appears on the display, it is recommended that you install new batteries in your Energy Monitor as soon as possible.
- This thermostat contains an exclusive automatic safety and warning system. If room temperature is found exceeding 99°F or dropping below 32°F, the entire system will turn off and a beep will sound for 1 minute. The sound can be suppressed by touching any key.

If you have questions concerning the installation or programming of the Energy Monitor, call us at 901-745-9222 from 8 AM to 5 PM Central Time.

Model No. 44408



Keyboard Guide



- A. 2 Hour Manual Override.
- B. Overrides set programs "permanently" (or until released), or converts to manual operation of thermostat.
- C. For raising and lowering the temperature settings.
- D. Displays energy usage today, yesterday, this week and last week.
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- N. Displays the total usage of auxiliary heat.

Don't Worry — Programming Is Easy!

This may seem to be a highly comprehensive and lengthy presentation of our product's features — don't be intimidated.

We have a lot to say because our product **does** have a lot of features. And we want to make sure you have complete information. You may find you'll want to use only a simple program...or all the features we have to offer.

Just follow this manual one step at a time and you should quickly begin to feel comfortable with your new thermostat.

Besides, we've installed a preset program at 78° for air conditioning and 68° for heating. These programs are up and running immediately at installation, in case you don't have time to enter your own programs right away.

If you have questions or problems, just call our Customer Service Hotline at 901/745-9222.

How To Save On Energy Costs

You can generate significant savings with a programmable thermostat. The idea is to reduce usage when you don't need it — when you're not home or at night while everyone's asleep. For example, during the heating season you can program lower temperatures during the day while you're at work. Then program a comfortable temperature just before you get home, so you walk into a warm house.

Studies conducted by the Department of Energy estimate that setting your thermostat back 10°F for two 8-hour periods on winter days can reduce your fuel bill as much as 35%. During the summer, setting your thermostat up 5°F for two periods can reduce fuel bills as much as 25%.

Also, the digital display on your Energy Monitor thermostat gives you precise temperature control for convenience as well as maximum savings and comfort.

The Energy Monitor holds separate programs for winter and summer. It is capable of holding 4 programs for weekdays and 4 programs for each weekend setting.

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

Suggested Winter & Summer Programs

Weekdays	Time	Winter Temperature Settings	Summer Temperature Settings
Program 1	8:00 AM	68°	78°
Program 2	8:30 AM	60°	84°
Program 3	5:00 PM	68°	78°
Program 4	11:00 PM	58°	80°
Weekend I			
Program 1	7:00 AM	68°	78°
Program 2	10:00 AM	60°	80°
Program 3	4:00 PM	68°	78°
Program 4	11:00 PM	58°	80°
Weekend II			
Program 1	7:00 AM	68°	78°
Program 2	10:00 AM	60°	80°
Program 3	4:00 PM	68°	78°
Program 4	11:00 PM	58°	80°

Before You Start

■ Your thermostat program will NOT take effect immediately after programming of your Energy Monitor, but at the next programmed time/temperature change.

The Energy Monitor 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 manual override feature (described on page 28) 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.

■ Your thermostat is pre-set so that Weekdays are Monday through Friday, Weekend I is Saturday and Weekend II is Sunday. You can program your thermostat to select days of your choice for Weekday, Weekend I and Weekend II.

You can assign different days of your choice as explained on page 22.

Keyboard Lock Feature

Your thermostat is provided with an optional electronic keyboard lock. You may use this feature to prevent tampering of the programs. The keyboard can be made active by using the key provided with your Energy Monitor.

If you elect to use this feature, you will need to adjust this switch. Remove the thermostat from the wall plate by taking out the two screws on the front. Look for the switch shown below on the printed circuit board (back of the thermostat). Slide the switch to "lock". (Figure 1).

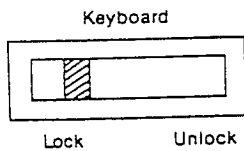
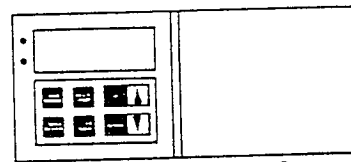


Fig. 1

Once the switch is moved to "lock" mode, only the set programs will operate—the keyboard and function switches will not respond unless the key is inserted.

If the keyboard selector switch is in the "unlock" mode, there is no need to use the key. Programs can be changed any time.



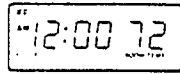
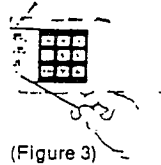
Insert key here for programming.

Fig. 2

Reset

When you first install the two AA size batteries, as directed in the installation instructions, the thermostat automatically sets the day and time to Monday, 12:00 AM, shows the current room temperature and is programmed for 68° in heat mode and 78° in cool mode.

To 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. (See Figure 3.) The LCD display should read 12:00 AM, indicate the current room temperature of your house, and the word "FILTER" should appear. If it shows random numbers or partial digits, press the reset button once again.



- Initial read-out after pressing reset button.
- Day and time shows Mon. 12:00 AM.
- Current room temperature is 72°.
- Filter Indicator is on.

Clear Filter Indication

"Filter" indication on the display tells you when you need to clean or change your filter. In order to set your filter usage counter to zero, press "FILTER USAGE" and hold:

Press and Hold



- After 3 seconds, the Beep will sound and the counter is reset to zero.

After Release



- Thermostat display will return to current time and temp but no filter indication.

Setting the Time and Day of Week

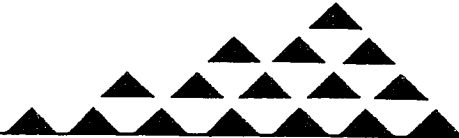
The first data you should enter is the current time and day of the week.

EXAMPLE:

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

		<ul style="list-style-type: none"> ■ Initial read-out after pressing reset button. ■ Day and time shows Mon. 12:00 AM. ■ Current room temperature is 72°.
		■ Press once. Temperature digits disappear, indicating time set mode.
		■ Press and hold until 9:00 PM appears on display.
		■ Press and hold until 15 minutes appears on display.
		■ Press 5 times until Saturday appears on display.
		<ul style="list-style-type: none"> ■ Returns display to current time and temperature. ■ If return is not pressed, display will return automatically in 15 seconds.

During the programming process, if you are interrupted or pause for more than 15 seconds, the display will return to the current time and temperature. To return to the programming mode, just start over.



Personal Program Schedule

Your thermostat is programmed so that MO to FR are assigned as Weekday, SAT as Weekend I and SUN as Weekend II. However, you can change the program to suit your own personal schedule.

You can assign days of the week to any of the three program schedules—Weekday, Weekend I and Weekend II. This will be discussed in detail under "Programming Days!" (See page 22.)

For example, if you work Mon.-Wed.-Fri., you may want to program these days as a Weekday schedule. Then, you would want different program schedules for Tues.-Thurs., which might be Weekend I, and Sat.-Sun., which might be Weekend II.

Use these personal program schedules to plan your programs to meet your own lifestyle. This will guide you and make entering your programs faster and easier.

DAY SELECTION TABLE									
WEEKDAY					WEEKEND I		WEEKEND II		
Factory Set	MO	TU	WE	TH	FR	SA		SU	
Personal Setting Example	MO	WE	FR			TU	TH	SA	SU
Your Setting									

PROGRAM SELECTION TABLE			
WEEKDAYS	TIME	WINTER TEMPERATURE	SUMMER TEMPERATURE
PROGRAM 1			
PROGRAM 2			
PROGRAM 3			
PROGRAM 4			
WEEKEND I			
PROGRAM 1			
PROGRAM 2			
PROGRAM 3			
PROGRAM 4			
WEEKEND II			
PROGRAM 1			
PROGRAM 2			
PROGRAM 3			
PROGRAM 4			

Before Programming

- To program for winter, the function switch (OFF-Auto-Heat-A/C) must be in the heat position.
- Similarly, to program for summer, the function switch must be in A/C position.
- Your thermostat also has an automatic Heat-A/C changeover feature. In the "Auto" mode, it will automatically change from heat to A/C systems as needed.
- Because of built-in safety for auto-change feature (automatically changes heat to A/C and A/C to heat modes), you cannot program heat temperature setting higher than A/C temperature setting for that particular program.

For example, if you program 74°F as the lowest temperature setting for summer, the maximum temperature that can be set for winter is 73°F—so there's no overlap of summer and winter settings. This will prevent cycling of heating and cooling systems frequently.

If winter and summer program temperatures are the same, the program digits will flash, indicating the temperature setting overlaps and cannot be accepted.

- Your thermostat requires 3 volts or 2 AA batteries to power the thermostat during power failures to prevent memory loss and avoid reprogramming. Replace batteries as soon as low battery indicator appears on the display.
- Any time you want to start the programming process again, just press reset.

Programming










To familiarize you with programming, this example programs your thermostat for the winter schedule suggested program on page 7.

To program for winter, slide function switch to heat.

Weekday Programs








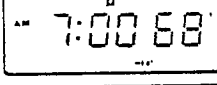

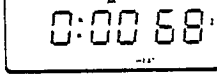
	<ul style="list-style-type: none"> ■ Normal display of time, temperature and day of week.
	<ul style="list-style-type: none"> ■ MO-FR is displayed. ■ 0:00 space for time is displayed. ■ 68°F is displayed. ■ Program indicator (1) is displayed. ■ HEAT system indicator.
	<ul style="list-style-type: none"> ■ Press and hold until 6:00 AM is displayed. ■ Weekday Program 1 is complete.
	<ul style="list-style-type: none"> ■ Program indicator (2) is displayed. ■ Space for time of second program is displayed.
	<ul style="list-style-type: none"> ■ Press and hold until 8:00 AM is displayed.
	<ul style="list-style-type: none"> ■ Press and hold until 30 minutes is displayed.

Programming Your Thermostat (Cont.)




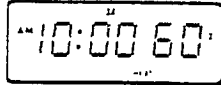




		<ul style="list-style-type: none"> ■ Pressing  each time decreases one degree. ■ Press until you reach 60°F. ■ Program 2 is complete.
		<ul style="list-style-type: none"> ■ Program indicator (3) is displayed.
		<ul style="list-style-type: none"> ■ Press and hold until 5:00 PM is displayed. ■ Weekday Program 3 is complete.
		<ul style="list-style-type: none"> ■ Program Indicator (4) is displayed.




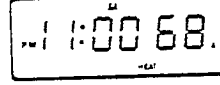

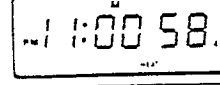
If you pause for more than 15 seconds during the programming process, the display will return to current time and temperature. If this happens, just press "Weekday" until you get back to the program you were working on.

Weekend Programs

		<ul style="list-style-type: none"> ■ Press and hold until 11:00 PM is displayed.
		<ul style="list-style-type: none"> ■ Press until 58°F is displayed. ■ Program 4 is complete.
		<ul style="list-style-type: none"> ■ SA is displayed. ■ Program indicator (1) is displayed.
		<ul style="list-style-type: none"> ■ Press and hold until 7:00 AM is displayed. ■ Weekend Program 1 is complete.
		<ul style="list-style-type: none"> ■ Program indicator (2) is displayed.


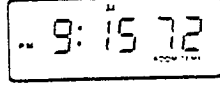
Programming Your Thermostat (Cont.)

		<ul style="list-style-type: none"> ■ Press and hold until 10:00 AM is displayed.
		<ul style="list-style-type: none"> ■ Press until 60°F is displayed. ■ Program 2 is complete.
		<ul style="list-style-type: none"> ■ Program Indicator (3) is displayed.
		<ul style="list-style-type: none"> ■ Press and hold until 4:00 PM is displayed. ■ Program 3 is complete.

		<ul style="list-style-type: none"> ■ Program indicator (4) is displayed.
		<ul style="list-style-type: none"> ■ Press and hold until 11:00 PM is displayed.
		<ul style="list-style-type: none"> ■ Press until you reach 58°F. ■ Weekend Program 4 is complete.

Continue Weekend II Programs

Just as you did for Weekday and Weekend I, continue programming Weekend II as per table on page 7.

		<ul style="list-style-type: none"> ■ 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.
---	---	---

When you enter your own programs, remember these will not take effect until you get to the time of a program change, e.g., if you finish installing your programs at 3 PM and your next scheduled program change is at 4 PM, the thermostat will maintain at the preset 78°F cool or 68°F heat until 4:00 PM. Then your programs will take over. If you

want a different temperature right now, just use temporary manual override. See page 27.

If no program time is entered, that program will not be effective. For example, if program 2 has time 0:00, the thermostat will maintain program 1 until program 3 has started.

Programming Your Thermostat (Cont.)

To program for summer, slide function switch OFF-AUTO-HEAT-A/C switch to A/C. The programming procedure is the same as for winter.

All the days and times you entered for your HEAT or winter schedule will carry over to your A/C or summer schedule—all you have to do is enter the temperature. Just press the "Weekday" key to display your first program. Then press the "up" or "down" arrows to enter the temperature.

Program times are the same for both HEAT and A/C schedules. However, if your summer schedule is different, just change the times as needed at the beginning of the season.

Remember, the pre-programmed temperatures (68°F for heat and 78°F for A/C) are in effect until your next program change. Just use the manual override (see page 27) if you need to adjust the temperature right away.

Displaying Programs

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

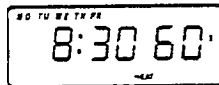
To review programs for winter, slide function switch to heat.

Remember, the factory preset example has Mon.-Fri. grouped in the Weekday schedule. However, you can program any day(s) to any of the three schedules—Weekday, Weekend I, Weekend II. (See page 22.)

Weekday Program



- 1st Weekday Winter program is displayed.
- Program Indicator (1) appears.
- Monday through Friday Indication appears.



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



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

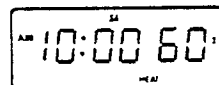


- 4th Weekday program is displayed.
- Program indicator (4) appears.
- Monday through Friday remains.

Weekend Program



- 1st Weekend program is displayed.
- Program Indicator (1) appears.
- Saturday Indication appears.

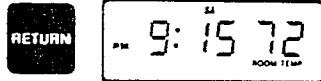


- 2nd Weekend program is displayed.
- Program indicator (2) appears.

Displaying Programs (Cont.)

Continue pressing for Weekend I programs. Press the "Weekend II" key to review Weekend II programs. To review the summer programs, slide function switch to A/C. Repeat

like previous page by pressing "Weekday", "Weekend I" and "Weekend II".



- Press to return current time, temperature and day of week. If it is not pressed, the thermostat will automatically return to display of current time, temperature and day of week in about 15 seconds.

Programming Days

Your thermostat is pre-set so that Weekdays are Monday through Friday, Weekend I is Saturday and Weekend II is Sunday. You can program your thermostat to select days of your choice for Weekday, Weekend I and Weekend II.

In the example shown, the thermostat will be programmed such that Weekday programs are effective for MO, WE and FR, Weekend I for TU and TH, and Weekend II for SA and SU.

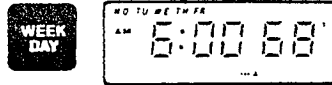
If you do not want to use all three schedules, you can

program all seven days of the week to the Weekday schedule, or just use the Weekday and Weekend I schedules.

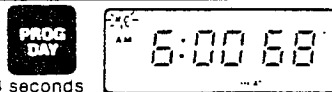
Overlapping of the days is not possible. If overlapped, the latest entry will cancel the previous assigned day.

When you enter the program day mode, each day will flash for 5 seconds in sequence. To select a day, press the "PROG DAY" key while it is flashing. If you do not want to select that day, let it flash for 5 seconds and advance to the day you wish to select.

To Select Weekdays Press



- 1st Weekday program is displayed.



3-4 seconds

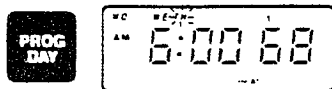
- Press for 3-4 seconds to enter into program day mode for Weekday selection.
- MO will flash.

NOTE: If you do not perform next step within 5 seconds, TU will flash. After next 5 seconds, WE will flash, and so on.

Since MO is our first Weekday to be selected, perform next step immediately when MO is flashing. If you miss the flashing of MO, repeat above steps again to enter program day mode for Weekday.



- Press when MO is flashing. It will select MO for Weekday.
- TU will flash. Since TU is not our choice for Weekday, let TU flash for 5 seconds and wait until it advances to next day.

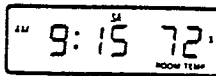


- Press while WE is flashing. It will select WE, second day for Weekday.
- TH will flash. Since TH is not our choice for Weekday, let TH flash for 5 seconds and wait until it advances to next day.

Programming Days (Cont.)



- Press while FR is flashing. It will select FR for Weekday.
- SA starts flashing. This completes selection of Weekdays. Press



- Returns to current time and room temperature.

To check the Weekday pattern you just programmed, press



- Program 1 of Weekday is displayed.
- MO, WE and FR are displayed. Note: TU, TH, SA and SU are not displayed.

If you miss the sequence or make an error in selection, repeat the procedure for selecting Weekdays.

To Select Weekend I and Weekend II

Procedure for selection of days for Weekend I and Weekend II is similar to the procedure just performed for Weekdays.


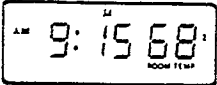


Use **WEEK END I** and **WEEK END II** keys instead of **WE FR DAY**

Note: In case you overlap Weekday and Weekend days, the latest entry will cancel the previous assigned day. For example, if any of the days are not selected either for Weekday or Weekends, the effective program for that day will be the last program of the previous day.



To Review the Current Temperature Setting

Press For 2 Seconds Or Less

		■ Current time and temperature.
or		
		<ul style="list-style-type: none"> ■ 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 Programs




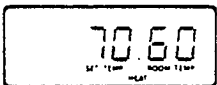
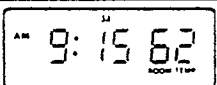
You can manually override the programs in three different ways—

1. Temporary manual override until next program
2. Temporary manual override for two hours.
3. Permanent manual override until you manually return to program.

Temporary Manual Override Until Next Program

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. The current setting or program

temperature is 68°F. You might use this feature, for example, on a holiday when you do not want the daytime set-back to take place.

		<ul style="list-style-type: none"> ■ Press arrow to display current temperature setting. ■ 60°F is the current room temperature. ■ 60°F is the present program (2) setting.
		<ul style="list-style-type: none"> ■ 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.
		<ul style="list-style-type: none"> ■ Press return or in 15 seconds it will return to current time and temperature. ■ In the override mode, the thermostat will call for heat to achieve the 70°F desired setting.
		<ul style="list-style-type: none"> ■ To display a temporary 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 change. Please note the program indicator number has disappeared until the next program time comes into effect.



Temporary Manual Override For 2 Hours

In the event you wish to hold your manual override for a period of 2 hours, follow the temporary manual override instructions on previous page, then immediately press the "2 HOUR OVERRIDE" key.



■ "2 HOUR" appears and flashes.

When two hours are over from the time you do this operation, it will return to corresponding current program automatically and the "2 HOUR" display will disappear.

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 the "HOLD TEMP" key.



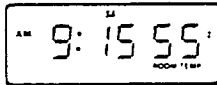
■ "HOLD" appears and flashes.

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

To Return To Program From Manual Override

To return to your normal program schedule from temporary, 2 hour or permanent manual overrides:

Press and Hold



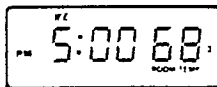
■ Hold the "RETURN" key for 4 seconds. The appropriate program number will appear. "HOLD" or "2 HOUR" will disappear, if you were in any one of these modes.

NOTE: You can also return to program from permanent or two hour manual override by pressing "HOLD" or "2 HOUR OVERRIDE" key again.

Using the Energy Monitor Usage Review

The Energy Monitor feature 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 (as of 12:01 AM), the previous day (12:01 AM through midnight), for the entire week (as of Monday) and last week (Monday through Sunday).

By monitoring your energy usage, you see how much the set-back periods are saving for you and you can test program adjustments which could save you even more. Use the table on page 37 to track.



■ Normal display of current time and room temperature.



Using the Energy Monitor Usage Review (Cont.)

Press For
2 Seconds
Or Less

		<ul style="list-style-type: none"> ■ Indicates the amount of time system has run today (as of 12:01 AM) in hours and minutes, for example 3 hours, 21 minutes. ■ WE (today) is displayed.
		<ul style="list-style-type: none"> ■ Press again to display amount of time system ran yesterday (Tuesday 12:01 AM through Midnight). ■ TU (yesterday) is displayed.
		<ul style="list-style-type: none"> ■ Press again to display amount of time system has run this week (as of Monday 12:01 AM). ■ MO-WE is displayed.
		<ul style="list-style-type: none"> ■ Press again to display amount of time system ran last week (Monday through Sunday). ■ All 7 days displayed.

To review the usage of auxiliary heat (Stage II) press:

Press For 2
Seconds Or
Less

		<ul style="list-style-type: none"> ■ Indicates the total usage in hours and minutes since the counter reset, for example 45 hours, 23 minutes.
		<ul style="list-style-type: none"> ■ Immediately returns the display to normal time and temperature. ■ Auto return after 15 seconds if no key is pressed.

To reset the Usage Counter to zero:

Press And Hold

		<ul style="list-style-type: none"> ■ A beep will sound after 3 seconds. The counter is reset to zero.
3-4 seconds		<ul style="list-style-type: none"> ■ Then the display automatically returns to current time and temperature.

To reset the Auxiliary Usage Counter to zero:

Press And Hold

		<ul style="list-style-type: none"> ■ A beep will sound after 3 seconds and resets to zero.
3-4 Seconds		<ul style="list-style-type: none"> ■ Then the display automatically returns to current time and temperature.

Using the Filter Usage Feature

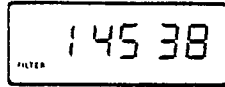
Your thermostat also keeps a record of the number of hours your filter has been in use. For maximum energy efficiency, change or clean your filter regularly.

To help you remember, at 350 hours, the word "FILTER" will appear on the display, reminding you to change the filter

and reset the counter back to zero. The "FILTER" will continue to display until the counter is reset.

Filter usage will display up to 999 hours and 59 minutes of usage. Then the counter will start from zero again.

Press For 2 Seconds Or Less



■ Indicates the usage of filter in hours and minutes. For example, 145 hours and 38 minutes.



■ Returns display to current time and temperature.
 ■ Auto return after 15 seconds if key is not pressed.

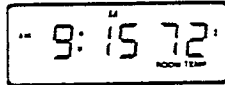
Press for 2 seconds or less, if held for more than 2 seconds, the counter will reset to zero.

To Reset the Filter Counter to Zero

Press And Hold



■ A beep will sound after 3 seconds. The counter is reset to zero.



■ Display automatically returns to current time and temperature.

Using Automatic Control Mode

If you are using the Energy Monitor in auto mode (OFF-AUTO-HEAT-A/C in auto position), your heating and cooling systems will automatically switch, depending upon your program.

Note: It is recommended that you keep summer and corresponding winter program temperatures at least 4°F apart to minimize system cycling and change-overs. However, the thermostat has a built-in program to prevent switching of heating and cooling systems if overlapping of temperature occurs.

Temperature Span

Your thermostat is pre-programmed at the factory to cycle various stages in a definite sequence. For example, if the program temperature for heat is 68°F and 78°F for A/C, the sequence of operation for various stages will be as per the following table.

TABLE

PROGRAM TEMP.	HEAT = 68°F A/C = 78°F	HEAT ON	HEAT OFF	A/C ON	A/C OFF
Compressor Stage I		67	70	80	77
Auxiliary Heat		65	69	—	—

In Temperature Recovery Mode, the sequence of operation of different stages during the temperature recovery period is governed by a complex calculated characteristic to achieve the temperature recovery in an efficient and economical way.

Operation Modes

Your thermostat has an additional operational switch which enables you to select 3 different modes of operation.

Normal Operation:

In this operation your thermostat will function in accordance to your heating and A/C programs. The sequence of operation of different stages will be as per table above.

Emergency Operation:

In this operation the compressor will not operate. Only auxiliary heat will control the room temperature as per your heating program. For example, you might select this mode to bypass your heat pump, if you suspect it is not operating properly.

Auto Recovery Operation:

See next section for detailed explanation.

What is Temperature Recovery?

Consider the following example for explanation.

Suppose the Energy Monitor is programmed to turn the heat on at 6:00 AM to raise the temperature from a set-back temperature of 60°F to 68°F. In the normal operation mode, the heat will turn on at 6:00 AM and begin to raise the temperature to 68°F. The room will attain 68°F sometime after 6:00 AM, for example 30 minutes later at 6:30 AM.

The time to raise the temperature from 60°F to 68°F will depend on several factors like outside temperature, efficiency of the unit and insulation of the house. At about 6:30 AM the temperature in the house will be the desired temperature of 68°F.

In temperature recovery mode, the heat will turn on sometime before 6:00 AM, so that at 6:00 AM, the program time, the temperature in the house will already have achieved the desired temperature of 68°F. This early turn on time period is called recovery time.

The Hunter Energy Monitor has an exclusive method built into the thermostat computer. This method is designed to maximize efficiency of recovery in the most economical way, which will result in maximum savings in various weather conditions.

Operation Modes (Cont.)

How Does Temperature Recovery Work? Consider The Following Example.

PROGRAM #	TIME	PROGRAM TEMPERATURE
1	6:00 AM	68°F
2	8:30 AM	60°F
3	4:00 PM	68°F
4	11:00 PM	58°F

Present time is 2:00 AM, the effective current program is number 4. The next program is at 6:00 AM at 68°F.

In the normal operation, at 6:00 AM, the furnace will turn on to raise the temperature from 58°F. Your house will attain 68°F some time after 6:00 AM. For our understanding, say 6:35 AM. The time required to reach 68°F will depend upon outside temperature on that day and the efficiency of your heating system.

In temperature recovery operation, your system will gradually raise the house temperature some time prior to 6:00 AM, so that at 6:00 AM your system will have achieved the programmed temperature.

At 6:00 AM, the recovery cycle stops and automatically controlling the system normally, auto recovery will also take place during program 2, to raise the temperature from 60°F to 68°F just prior to reaching program 3 at 4:00 PM.

Auto recovery will work conversely in the A/C mode.

We recommend using this exclusive feature of auto recovery as often as you can to optimize the efficient use of energy.

When temperature recovery is activated, the program number of that program will flash, indicating that recovery has begun. When the set temperature is achieved and the next program time is reached, the recovery cycle ends and

The time to activate temperature recovery and sequence of operation of different stages of the system is set by an internal computer after several complex computations based on how "hard" your system needs to work to maintain the programmed temperature.

the number stops flashing and changes to the next program number.

Energy Usage Chart

This Energy Usage Chart will help you track your most efficient energy saving comfort zone by recording your energy usage on a daily or weekly basis.

Date Begin: Month	Day							Year
	MON	TUES	WED	THURS	FRI	SAT	SUN	
WEEK 1								
WEEK 2								
WEEK 3								
WEEK 4								
WEEK 5								
WEEK 6								
WEEK 7								
WEEK 8								
WEEK 9								
WEEK 10								
WEEK 11								
WEEK 12								

Model No. 44408

Problem	Solution
No Display	Check wiring, connections and battery. check compatibility.
Heating or A/C Does Not Go On or Off Immediately	There may be as much as 8 seconds delay in the computer turning the system on. Wait and check.
Indicates Incorrect or No Program Number	Wait until next program time. It will be automatically corrected. You may set the desired temperature now by using manual override.
Display Is Erratic or No Display	Press "RESET" button once with a small pin. Reset button hole is located between FAN-AUTO and OFF-AUTO-HEAT-A/C switches.
Temperature Display Incorrect	Adjust temperature calibration potentiometer marked "TEMP" on Printed Circuit Board.
Heating and A/C Will Not Come On	<p>Check that the slide switch is in the proper position.</p> <p>Check that the power to the Heating-A/C system is on.</p> <p>For a new installation, check to be sure all wires are properly connected.</p>
<p>To check the thermostat operation during winter, manually set the temperature to 5 degrees greater than the room temperature. set the slide switch to "HEAT." Within 10 seconds, the heating system will be turned on.</p>	
<p>During summer, set the temperature to 5 degrees lower than the room temperature and set the slide switch to "A/C."</p>	
<p>Also remember there is a four minute delay built into the A/C mode to prevent compressor damage due to frequent cycling.</p>	
Keyboard Does Not Operate	Check whether keyboard lock switch is at lock position. To operate, use key provided with your thermostat or slide switch to unlock position.
Heat Comes On When Calling For A/C To Turn On	Check the Selector Switch position. If on R0 change to R8 or if on R8 change to R0.