HUNTER

NCE 1886

Auto Temp Plus

Owner's Manual

Model 44422

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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!

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

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Features

■ **Manual Override**
For either temporary or permanent temperature adjustments without program change.



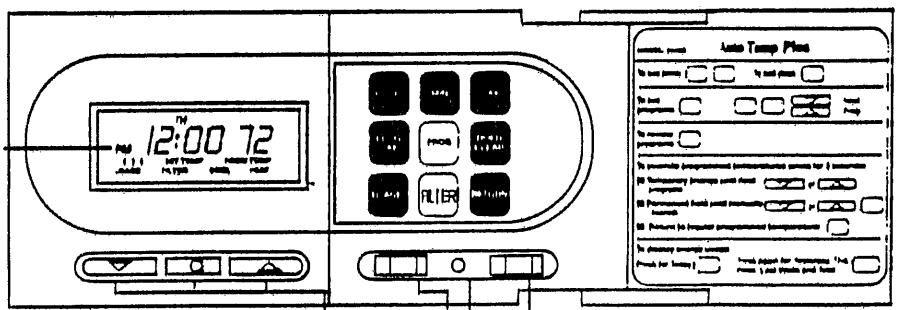
■ **Easy-to-Read Digital Display**
Digital clock (liquid crystal display) indicates time of day AM or PM, day of week, current room temperature, current program number, LO BATT indicator, heat and cool indicator when heat or cool is on, usage and filter indicators.

■ **Stand-by Power System**
Takes over during power failure to prevent loss of programs.

■ **Auto Season Switch-over**
Automatically changes programs between heat and cool.

■ **Fingertip Programming**
Easy touch keyboard. Keys "beep" when pressed.

■ **Low Battery Indicator**
"LOW BATT" flashes when its time to change the batteries.



■ **Vacation Override**
Provides permanent (vacation) temperature setting without program change.

■ **Convenient Programming Reference**
Simplified programming instructions are provided on inside of door cover for easy reference.

■ **Unique Filter Monitor**
Automatically reminds you to clean or replace your heating and air-conditioning filters.

■ **Exclusive Energy Monitor**
Measures and displays the amount of time your heating or air-conditioning system has operated today, yesterday, this week, last week or total. By monitoring and programming your energy usage, you can save 9% to 30% on your fuel bills.

■ **Key Hole For Keyboard Lock**
You can prevent tampering of programs by selecting keyboard lock feature.

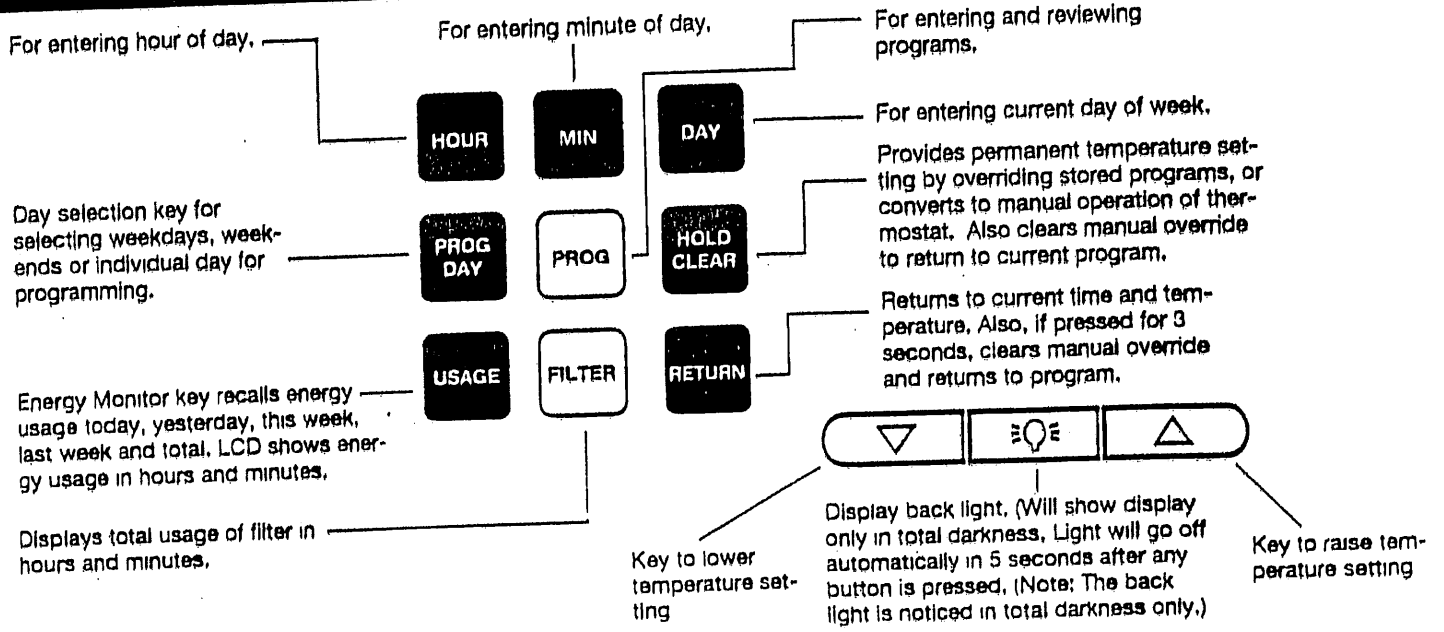
■ Key to lock keyboard.
■ For raising temperature.
■ For lowering temperature.
■ LCD backlight switch to view display in the dark.

■ **Fan ON and AUTO Selector switch.**

■ **Reset Button Hole**
For resetting computer back to factory program and clock to 12:00 AM.

■ **Function Switch**
Manual switch for turning on heating and cooling system.

Keyboard Quick Reference



Start Up

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 preset programs 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° for two-8 hour periods on winter days can reduce your fuel bill as much as 30%. During the summer, setting your thermostat up 5° for two periods can reduce your fuel bill as much as 25%.

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

The thermostat is truly 7 day programmable and can hold separate programs for winter and summer. It is capable of holding 4 separate heat and 4 separate programs for cool, each day.

You can program Monday to Friday, Saturday and Sunday to same 4 programs as shown in the table or each day can have a different set of 4 programs. (4 for winter and 4 for summer). Also, you can program all 7 days to have the same set of heat and cool programs.

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

Suggested Winter & Summer Programs

Mon.-Fri.	Time	Winter Temperature Settings	Summer Temperatur Settings
Program 1	6:00 AM	68°	78°
Program 2	8:30 AM	60°	84°
Program 3	5:00 PM	68°	78°
Program 4	11:00 PM	58°	80°
Sat.-Sun.			
Program 1	7:00 AM	68°	78°
Program 2	10:00 AM	60°	84°
Program 3	4:00 PM	68°	78°
Program 4	11:00 PM	58°	80°

Before You Start

- The thermostat is preset to 68° and 78°F for all days. Instructions to enter different time and corresponding temperatures for programming the thermostat is explained on page 15.
- Remove mylar label covering display window

Keyboard Lock Feature

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

If you elect to use this feature, remove the cover from the thermostat and look for the switch shown below on the printed circuit board near the key hole. Be careful not to disconnect any wires. Then slide the keyboard switch to "lock" mode.

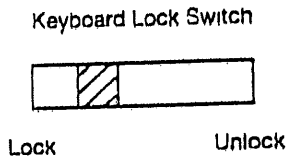


Figure 1

Once the switch is moved to "lock" mode, no entry is possible by the thermostat keys. Even the manual override is not possible. To activate the keyboard (open lock) for changing programs or setting new time, insert the key in the key hole. After programming is completed, remove the key to lock the keyboard again.

If the keyboard selector switch is in "unlock" mode, there is no need to use key. Programs can be changed any time without using the key.

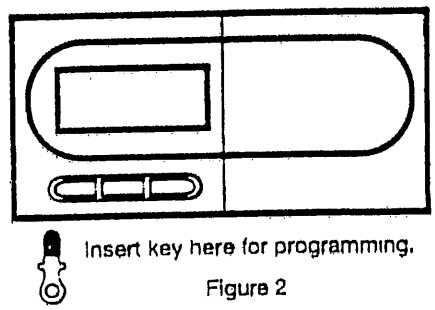


Figure 2

Reset

When you first install the three 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 for all 7 days.

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 day of week as Monday (MO), the current room temperature of your house. If it shows random numbers or partial digits, press the reset button once again.

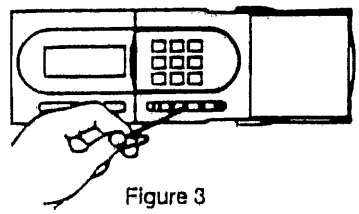


Figure 3



- Initial read-out after pressing reset button.
- Current room temperature is 72°F.
- Day of week is Monday (MO).
- Time is 12:00 AM.
- Filter indicator is on for 5 seconds.

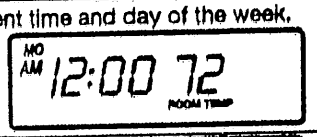


- Thermostat display will return to current time and temp but no filter indication.

Setting the Time and Day of Week

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

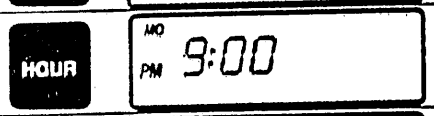
EXAMPLE:
If the unit is being installed at 9:15 PM, Saturday, to set the thermostat, you would press the keys in the shown sequence:



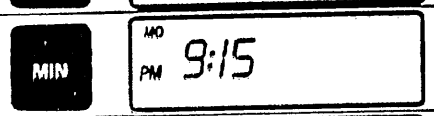
■ Initial read-out after pressing reset button.
■ Current room temperature is 72°F.



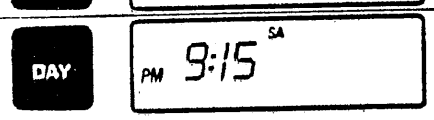
■ Press the HOUR key. Temperature digits disappear, indicating time set mode.



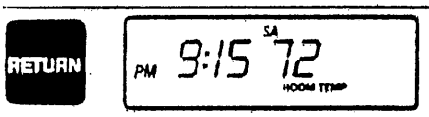
■ Press and hold until 9:00 PM appears on display.



■ Press and hold until 15 minutes appears on display.



■ Press 5 times until SA appears on display.



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

Personal Program Schedule

Use this Personal 7 Day Program Schedule to determine which times and temperatures will best satisfy both your comfort and energy saving requirements. This will also be a helpful guide as you start programming your thermostat.

PROGRAM SELECTION TABLE

MONDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
TUESDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			

WEDNESDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
THURSDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
FRIDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
SATURDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			

SUNDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			

Before Programming

- To program for winter, the function switch (OFF-AUTO-A/C-HEAT) must be in the heat mode.
- Similarly, to program for summer, the function switch must be in cool position.
- Your thermostat is designed to provide automatic changeover between summer and winter programs.
- Because of built-in safety for auto-change feature (automatically changes heat to cool and cool to heat modes), you cannot program heat temperature setting higher than cool temperature setting for that particular program.

  For example, if you program 78°F for summer, the maximum temperature possible to program for heat for that program cannot be greater than 78°F. 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 limit of temperature setting.
- Replace batteries as soon as low battery indicator appears on the display.

  CAUTION: When the batteries are completely dead, the display will fade out and the thermostat will not switch "ON" either your furnace or air conditioning system.

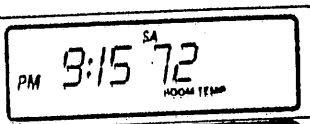
Programming

Familiarize yourself with programming. In this example, your thermostat will be programmed for winter as per suggested program on page 7. However, you can program or change the program of each individual day.

To Program For Winter, Slide Function Switch To HEAT

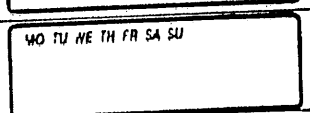
Weekday Programs

Note: During the programming steps, if you don't make any entry within 15 seconds, the display will automatically return to current time and temperature. If this happens, just press the "PROGRAM" key to return to the program number you were entering.



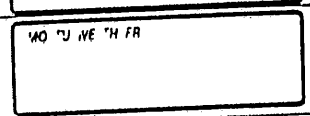
■ Normal display of time, temperature, and day of week.

PROG DAY



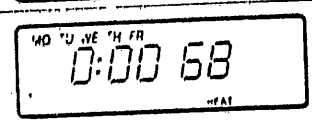
■ All seven days are selected.

PROG DAY



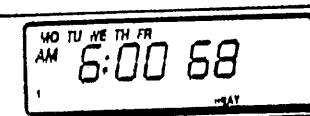
■ Weekdays are selected.

PROG



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

HOUR



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

PROG



■ Program indicator (2) is displayed.
■ 0:00 space for time of second program is displayed.

HOUR



■ Press and hold until 8:00 AM is displayed.

MIN



■ Clock advances in increments of 1 minute. Press and hold until 30 minutes is displayed.



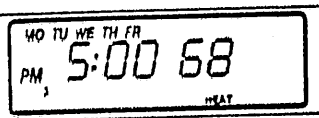
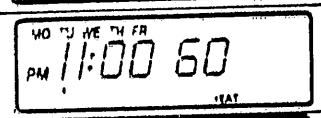
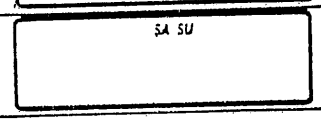
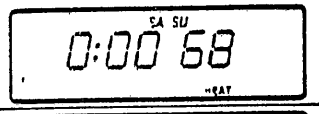
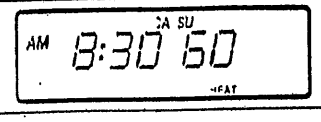
■ Press DOWN ARROW until 60°F is displayed.

PROG

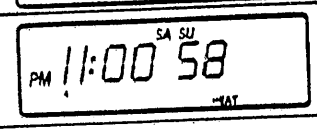


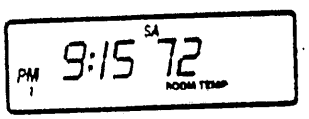
■ Program indicator (3) is displayed.

Programming Your Thermostat (Cont.)

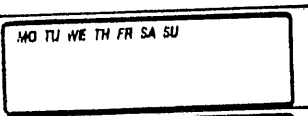
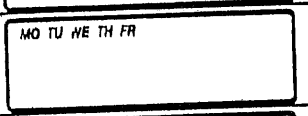
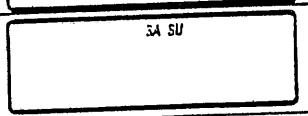
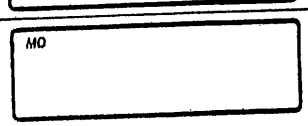
HOUR		■ Press and hold until 5:00 PM is displayed. ■ Weekday Program 3 is complete.
PROG		■ Program indicator (4) is displayed.
HOUR		■ Press and hold until 11:00 PM is displayed.
▽		■ Press the DOWN ARROW until 60°F is displayed.
PROG DAY		■ SA and SU are selected.
PROG		■ SA and SU is displayed. ■ Program indicator (1) is displayed.
HOUR		■ Press and hold until 7:00 AM is displayed. ■ Saturday and Sunday Program is now complete.
PROG		■ Program indicator (2) is displayed.
HOUR		■ Press and hold until 8:00 AM is displayed.
MIN		■ Clock advances in increments of 1 minute. Press and hold until 30 minutes is displayed.
▽		■ Press the DOWN ARROW until 60°F is displayed.

Programming Your Thermostat (Cont.)

PROG		■ Program indicator (3) is displayed.
HOUR		■ Press and hold until 4:00 PM is displayed.
PROG		■ Program indicator (4) is displayed.
HOUR		■ Press and hold until 11:00 PM is displayed.
▽		■ Press DOWN ARROW each time to decrease one degree. ■ When you reach 58°F, Program 4 is complete.

RETURN		■ Press to return to display current time, temperature, current progr number, and day of week. If it is not pressed, thermostat will automatically return to current time and temperature in 15 second

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

PROG DAY		■ All seven days are selected. All seven days will have same progra
PROG DAY		■ MO-FR will have same program.
PROG DAY		■ SA and SU will have same programs.
PROG DAY		■ Only Monday is selected.

Programming Your Thermostat (Cont.)

Use PROG MIN ▽ △ to enter programs for Monday.

PROG DAY → TU ■ Tuesday is selected.

PROG DAY → WE ■ Wednesday is selected.

Display the day to be programmed and use PROG MIN ▽ △ to enter programs.

NOTE: Another approach to programming is to first program all seven days the same, then display a particular day by PROG DAY and change the programs of only that individual day by using PROG HOUR MIN ▽ △

NOTICE: During the programming steps, if you don't make an entry within 15 seconds, the display will automatically return to current time and temperature. If this happens, just press the "PROGRAM" key to return to the program number you were entering.

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

First, display the day of program by pressing "PROG DAY", change the temperature to the desired summer temperatures.

Any change of time will be effective for both summer and winter. If your summer schedule is different, however, just revise the program

If program time is left at 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

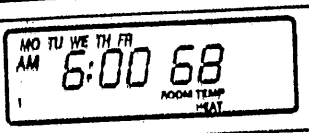
To review programs for winter, slide function switch to HEAT

PM 9:15 SA 72 ROOM TEMP ■ Normal display of time, temperature, and day of week.

Programming

Displaying Programs (Cont.)

PROG



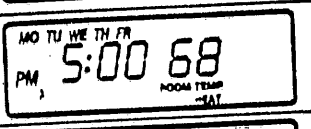
- 1st Weekday Winter program is displayed.
- Program indicator (1) is displayed.
- Monday through Friday indicator is displayed.
- HEAT appears indicating heat program for Winter.

PROG



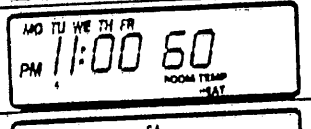
- 2nd Weekday program is displayed.
- Program indicator (2) appears.
- Monday through Friday remains.

PROG

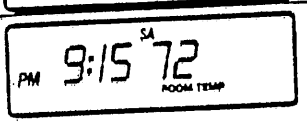


- 3rd Weekday program is displayed.
- Program indicator (3) appears.
- Monday through Friday remains.

PROG



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



Continue Pressing PROG for other programs

To display the program of one particular day, first display the day by pressing "PROG DAY" key and then use "PROG" key to display or change progra
To review programs for summer, slide function switch to A/C.

Operations

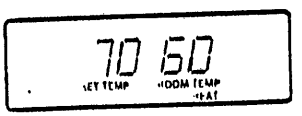
To Review the Current Temperature Setting



- Current time and room temperature.

Press for 2 Seconds or Less:

▽ or △



- 70 F indicates the current setting of the thermostat.
- 68 F indicates current room temperature.
- If pressed for more than 2 seconds, you will manually override you present temperatures to a new setting as explained below.

Operations

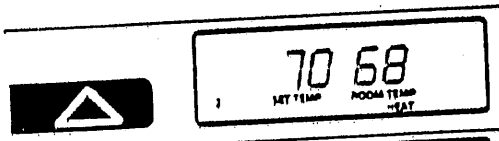
Manual Override of Program

Sometimes you will want to "override" set programs for a particular occasion, and then return to your normal schedule later, without having to re-enter all your programs. Here are two ways to do this: "temporary" and "permanent."

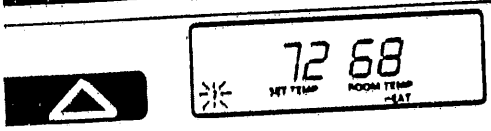
Temporary Manual Override

(OVERRIDE UNTIL NEXT PROGRAM)

In the following example, we are raising the temperature from a program setting of 70°F to a temporary setting of 72°F until the time of the next program change. You might use this, for example, on a holiday when you don't want the daytime set-back to take effect.



- Press arrow to display current temperature setting.
- 68°F is the current room temperature.
- 70°F is the present program (#2) setting.



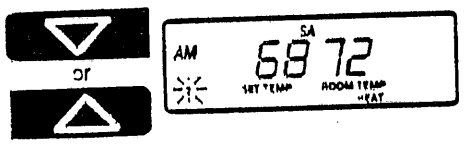
- Continue pressing arrow. After 3 seconds, the set temperature will begin to increase. Release the button at 72°F.
- Program number will flash, indicating your thermostat program has been overridden until next program.
- Press return or after 10 seconds it will return to current time and temperature.

- TO DISPLAY TEMPORARY MANUAL OVERRIDE SETTING YOU JUST ENTERED PRESS EITHER ARROW FOR LESS THAN 2 SECONDS.

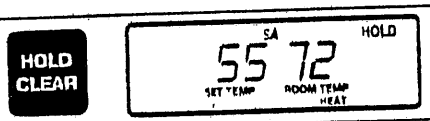
Permanent Manual Override

(OVERRIDE UNTIL MANUALLY RETURNED TO PROGRAM)

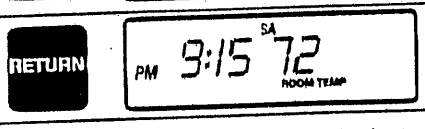
In the event that you want to set one temperature for an extended period, such as vacation, use the permanent manual override.



- Set the function switch to either "A/C" or "HEAT", depending on the season.
- Press either arrow and hold for 3 seconds or more to achieve desired temperature setting.
- Program number will flash.



- Press HOLD TEMP to maintain override setting indefinitely. HOLD will appear on LCD.
- Program number will disappear.



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

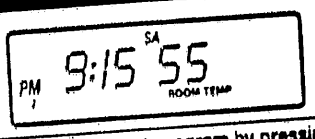
NOTE: If you perform manual override in the auto mode, and if the last run system was heat, the manual override temperature just entered will be effective for heat only. Similarly, if last run system was A/C, the override temperature will be effective only for air conditioning.

- TO DISPLAY PERMANENT MANUAL OVERRIDE SETTING YOU JUST ENTERED, PRESS EITHER ARROW FOR LESS THAN 2 SECONDS.

Operations

To Return To Program From Manual Override

Press and Hold for 3-4 Seconds — RETURN

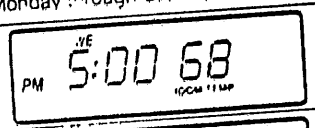


■ Press RETURN for 3 seconds. Program number will appear. HOLD will disappear if you were in permanent manual override.

Note: You can also return to current program by pressing HOLD CLEAR once in permanent override mode or twice in temporary override mode.

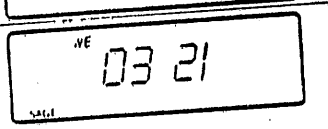
Using the Energy Monitor Usage Review

The Energy Monitor feature measures and stores the amount of time the heating and air conditioning system has been on. 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), the last week (Monday through Sunday), and total (cumulative total up to 999 hours and 59 minutes of all days since the counter was reset to zero). 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 pages 30 and 31.



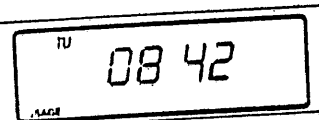
■ Normal display of time and temperature.

Press For 2 Seconds Or Less — USAGE



■ Press USAGE REVIEW to display the amount of time the system has run today (Wednesday, since 12:01 AM). For example, 3 hours and 21 minutes. If held for more than 2 seconds the counter will reset to zero

USAGE



■ Press again to display the amount of time the system ran yesterday (Tuesday, 12:01 AM through midnight).

USAGE



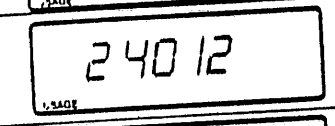
■ Press USAGE REVIEW to display the amount of time the system has run this week (as of Monday, 12:01 AM).

USAGE



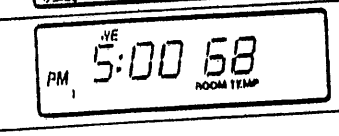
■ Press again to display the amount of time the system ran last week (Monday through Sunday).

USAGE



■ Press again to display total usage in hours and minutes since the counter was set to zero.

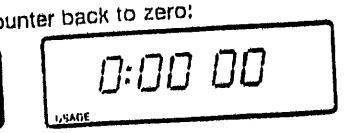
RETURN



■ Returns to normal time and temperature.
■ Auto-return after 10 seconds if no key is pressed.

To reset the Energy Monitor's usage counter back to zero:

Press and Hold for 3-4 Seconds — USAGE



■ Resets all usage digits to zero.
■ When released, returns to current time and temperature.

Using the Filter Review Feature

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

To help you remember at 500 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 if the counter is not set back to zero.

Filter review will display up to 999 hours and 59 minutes of usage. Counter will start from zero after 999 hours and 59 minutes of usage.

Press For 2 Seconds Or Less

FILTER → 145 38 FILTER

- Indicates the usage of filter or total usage in hours and minutes. For example, 145 hours and 38 minutes. (If held for more than 2 seconds the counter will reset to zero).

RETURN → PM 9:15 SA 72 ROOM TEMP HEAT

- Back to normal display of time and temperature.
- Auto-return after 15 seconds if no key is pressed.

To reset the Energy Monitor's filter counter back to zero:

Press and Hold 3-4 Seconds

FILTER → 360 00 FILTER

- Indicates the usage of filter or total usage in hours.

000 00 FILTER

- A beep will sound after 3 seconds. The counter will reset to zero.
- When released, returns to current time and temperature.

Using Automatic Control Mode

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

It is recommended to keep summer and corresponding winter program temperatures at least 4° apart to assure the systems do not overlap. However, there is a built-in program to prevent unnecessary switching of heating and cooling systems.

Temperature Span

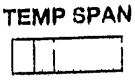
Your thermostat is set at the factory at normal span to cycle when the temperature rises 1° above or 1° below the temperature setting.

For example, if your air-conditioner is programmed to maintain a 75° setting, the unit will cycle on when the room temperature reaches 76° (1° above the set point of 75°) and stay on until the temperature reads 74° (1° below set point of 75°).

Conversely, to maintain a 75° setting in winter, the furnace would come on at 74° and go off at 76°.

If the factory set span of 1° above and 1° below cycles your system too often, you can lower the rate by increasing the span to 2° above and 1° below by using the slide switch provided on the printed circuit board.

TEMP SPAN



Normal (1° above) (1° below)

Increase (2° above) (1° below)

Operations

Energy Usage Chart

The Hunter Thermostat measures, stores and displays the amount of time your heating or air conditioning system has operated the present day, the previous day, this week, last week and total so far.

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

Simply enter the hours displayed when you press the orange Energy Monitor Review Key.

Date Begin: Month _____ Day _____ Year _____

	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTAL
WEEK 1								
WEEK 2								
WEEK 3								
WEEK 4								
WEEK 5								
WEEK 6								

	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTAL
WEEK 7								
WEEK 8								
WEEK 9								
WEEK 10								
WEEK 11								
WEEK 12								
WEEK 13								
WEEK 14								
WEEK 15								
WEEK 16								
WEEK 17								
WEEK 18								
WEEK 19								
WEEK 20								

Operations

Trouble Shooting

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 AT NORMAL ROOM TEMPERATURE	1. Replace unit.

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

Operations

Specifications

Total Programs	8 each day (4 for heat and 4 for cool) 56 Programs Total
Temperature Span	2 Adjustments
Room Temperature Range	32°F-99°F
Program Temperature Range	40°F-90°F
Manual Override	Temporary Permanent
Usage Review	Today, Yesterday, This Week, Last Week, and Total
Filter Reminder	"FILTER" at 500 Hours
Lo-Bat Indicator	"LO-BATT"

System On Indicator	"COOL" and "HEAT"
Compressor Safety	4 Minute Compressor Delay
Program Time Increment	1 minute
Program Temperature Increment	1°F
Battery	3 X 1.5V
Battery Life	Approximately 1 year
Key Board Lock	Operates with Key Only in Lock Mode
Auto Change	Automatically Changes Heat to Cool or Cool to Heat Modes
Operating Volts	20/30V AC/DC or Millivolt Systems
Maximum Current	1.2 A
Display Light	Helps to View and Program in the Dark. Turns Off Automatically.