

VENSTAR®

RESIDENTIAL
THERMOSTAT

T1045

DIGITAL
THERMOSTAT

5+2 DAY
PROGRAMMABLE



UP TO
2-HEAT
& 1-COOL
HEAT
PUMP

- Stages: 2-Heat, 1-Cool
- Battery or System Powered
- Auxiliary Heat Indicator
- Back-Lit Digital Display
- Fahrenheit or Celsius
- Service Filter Indicator
- Bi-Color LED (when system powered)

• Use with most 1 or 2 Stage Heat Pump Heat and 1 stage Heat Pump Cool units



OWNER'S MANUAL

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Safety Warnings

P/N T1045


CAUTION Follow *Installation Instructions* carefully.

DISCONNECT POWER TO THE HEATER -
AIR CONDITIONER BEFORE REMOVING
THE OLD THERMOSTAT AND INSTALLING
THE NEW THERMOSTAT.

**WARNING****CAUTION**

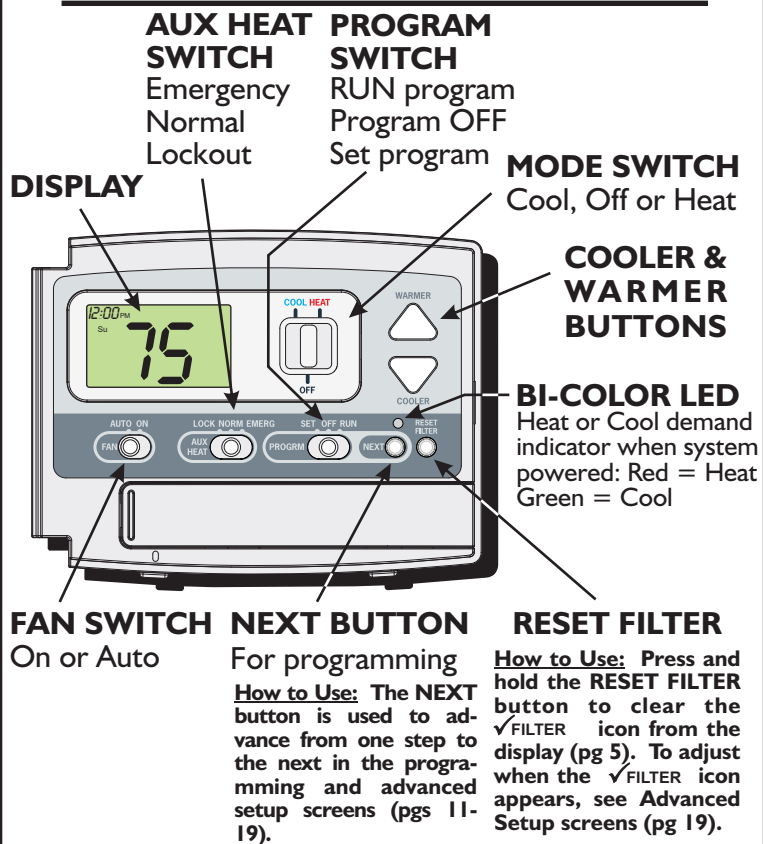
The two Alkaline "AA" batteries must be replaced at least once every 12 months to ensure proper operation. The Low Battery icon (fig. 1) will appear on the display when it is time to replace the batteries. If the thermostat is connected to 24v power, the batteries should still be installed, but are not required.

**FIG. 1**

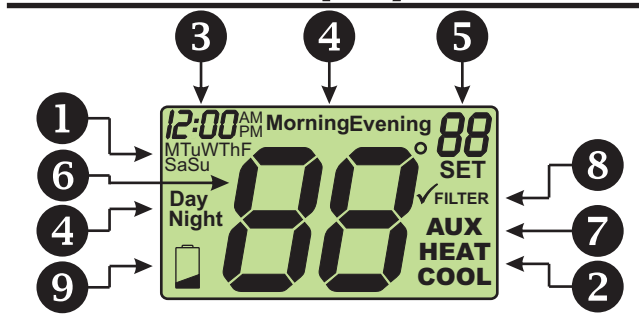
When  is displayed the batteries must be replaced immediately. The manufacturer cannot be liable for improper operation of the thermostat if the batteries are not immediately replaced.

Annual battery replacement is especially critical in locations subject to freezing temperatures. The thermostat will be unable to turn on the heating system if the batteries are exhausted.

Location of Controls



Display



- 1** Day of the week. MTuWThF represent the five weekdays and SaSu represent the two weekend days.
- 2** Heat and Cool indicators.
In normal operation, Heat or Cool appears, depending on the Mode Switch position. When heat or cool is energized, the Heat or Cool indicator will flash. If the thermostat is system powered the bi-color LED will also illuminate (red for heating and green for cooling).
- 3** Clock Display.
- 4** Time period indicators. These indicate the part of the program that is currently active, if the Program Switch is positioned to RUN.
- 5** Desired set temperature.
- 6** Current room temperature.
- 7** Indicates that 2nd stage of heat is energized.
- 8** Indicates when the filter should be serviced. Appears after 0 - 1950 hours of blower operation (adjustable).
- 9** Indicates batteries need replacement.

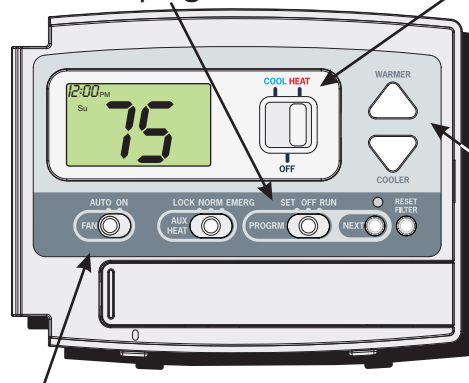
Normal Operation

PROGRAM SWITCH

RUN program
Program OFF
SET program

MODE SWITCH

Cool, Off or Heat



COOLER & WARMER BUTTONS

FAN SWITCH

On or Auto

Manual Operation (Program Switch OFF)

- ❶ Select Cool or Heat with the Mode Switch.
- ❷ Normally leave the fan switched to Auto.
In Fan Auto, the fan will turn on only with a heat or cool demand. When Fan On is selected, the fan will run continuously.
- ❸ Adjust the desired set temperature with the COOLER and WARMER buttons.

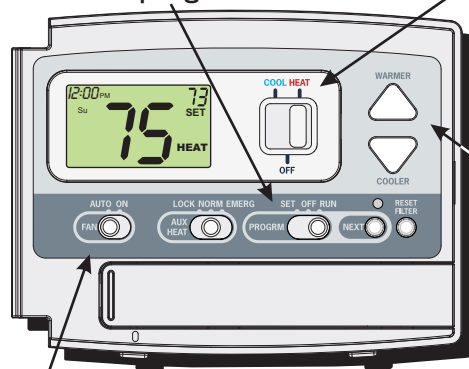
Normal Operation

PROGRAM SWITCH

RUN program
Program OFF
SET program

MODE SWITCH

Cool, Off or Heat



COOLER &
WARMER
BUTTONS

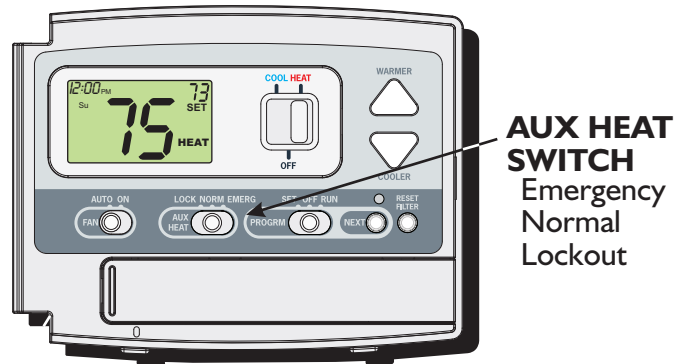
FAN SWITCH

On or Auto

Programmed Operation

- ① Select Cool or Heat with the Mode Switch.
- ② Select RUN with the Program Switch.
- ③ Normally leave the fan switched to Auto.
In Fan Auto, the fan will turn on only with a heat or cool demand. When Fan On is selected, the fan will run continuously.
- ④ The desired set temperature may be temporarily overridden. The thermostat will revert to the programmed settings in the following time period.

Aux Heat



Emergency - Disables all compressor functions and energizes only Aux Heat to satisfy the heat demand.

Normal - Aux Heat is allowed to run, if necessary, along with the heat pump to satisfy the heat demand.

Lockout - Aux Heat will never turn on regardless of the heat demand.

* When the Aux Heat switch is in the Emergency position the compressor will also be locked out during cooling operation.


Clock Set



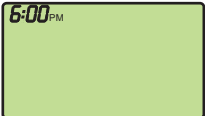
Slide the Program Switch to the SET position.

Setting the time & day are the first two steps after sliding the Program Switch to SET.


Press **NEXT** to advance



6:00 PM




Use these buttons to adjust the current time.




To slew the time more rapidly, push and hold the COOLER or WARMER buttons.

Su



Use these buttons to adjust the current day.



This thermostat is preprogrammed from the factory to operate 1 or 2-Stage equipment without the need for further programming. To optimize the installation of this thermostat follow the instructions in the Advanced Setup section.

Time Period Programming

Overview

PROGRAM SWITCH

- Slide the Program Switch to the SET position.
- The blinking icon(s) on the display may be changed by pressing the COOLER or WARMER buttons.
- After the blinking icon is changed to the desired selection, press the NEXT button.
- Each item in the time period programming screens will flash and can be modified with the COOLER & WARMER buttons.
- Continue the steps above until programming is complete.
- Slide the Program Switch to RUN and the thermostat will run the time period programming.
- If the Program Switch is in the OFF position, the thermostat will not run the time period program. In this case, the thermostat will be a manual heat or cool only thermostat.



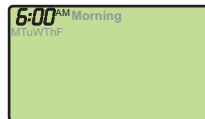
Time Period Programming

Weekday Programming



Setting the time & day are the first two steps after sliding the Program Switch to SET (page 9).

Press **NEXT**
to advance



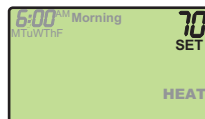
Use these buttons to
adjust the start time for
the morning time period.

Press **NEXT**
to advance



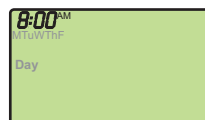
Use these buttons to
adjust the cool setpoint for
the morning time period.

Press **NEXT**
to advance



Use these buttons to
adjust the heat setpoint for
the morning time period.

Press **NEXT**
to advance



Use these buttons to
adjust the start time for
the day time period.

Next Page

Time Period Programming

Weekday Programming

Press **NEXT**
to advance



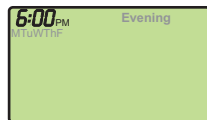
Use these buttons to
adjust the cool setpoint for
the day time period.

Press **NEXT**
to advance



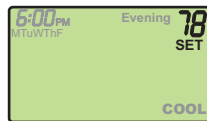
Use these buttons to
adjust the heat setpoint for
the day time period.

Press **NEXT**
to advance



Use these buttons to
adjust the start time for
the evening time period.

Press **NEXT**
to advance

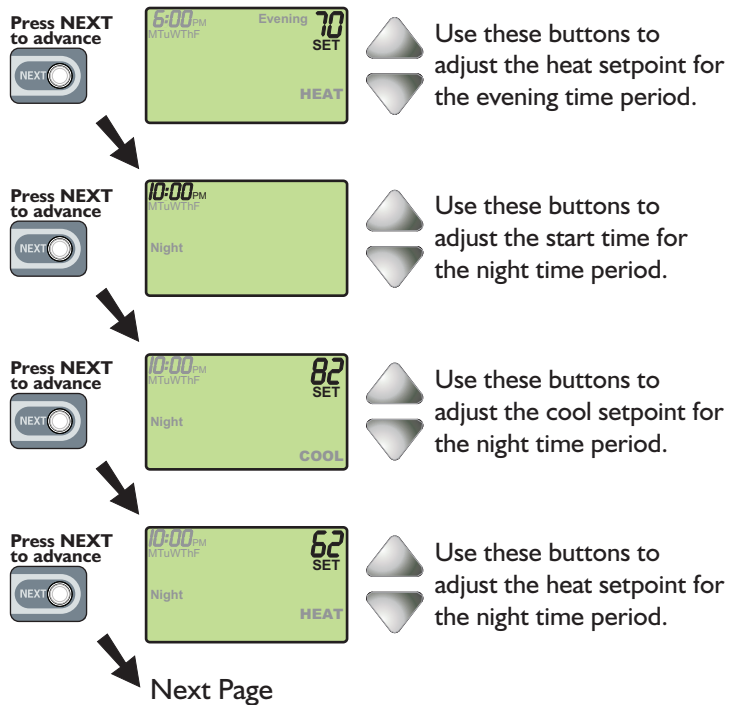


Use these buttons to
adjust the cool setpoint for
the evening time period.

Next Page

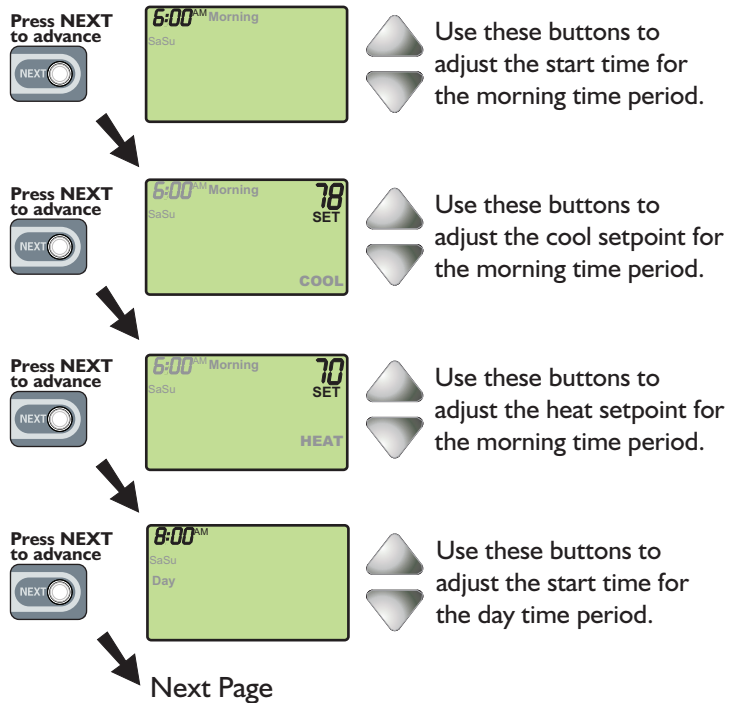
Time Period Programming

Weekday Programming



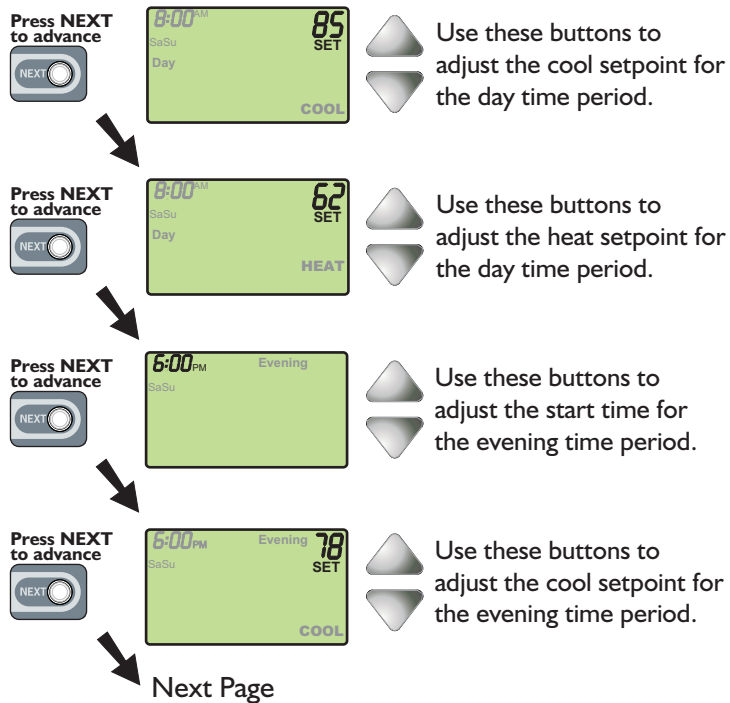
Time Period Programming

Weekend Programming



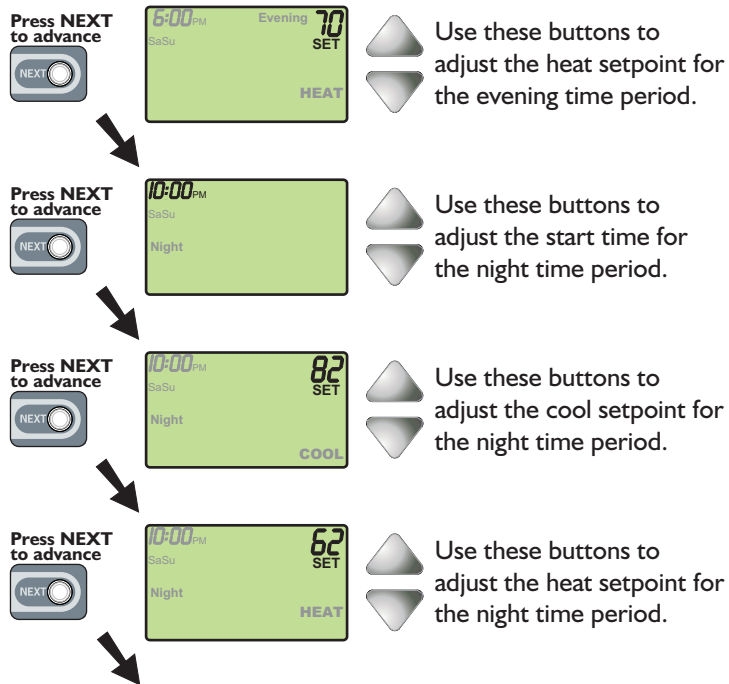
Time Period Programming

Weekend Programming



Time Period Programming

Weekend Programming



Time Period Programming

After you have completed setting the time period programming, you have two options:

- 1) Run the time period program by sliding the Program Switch to the RUN position.



Or,

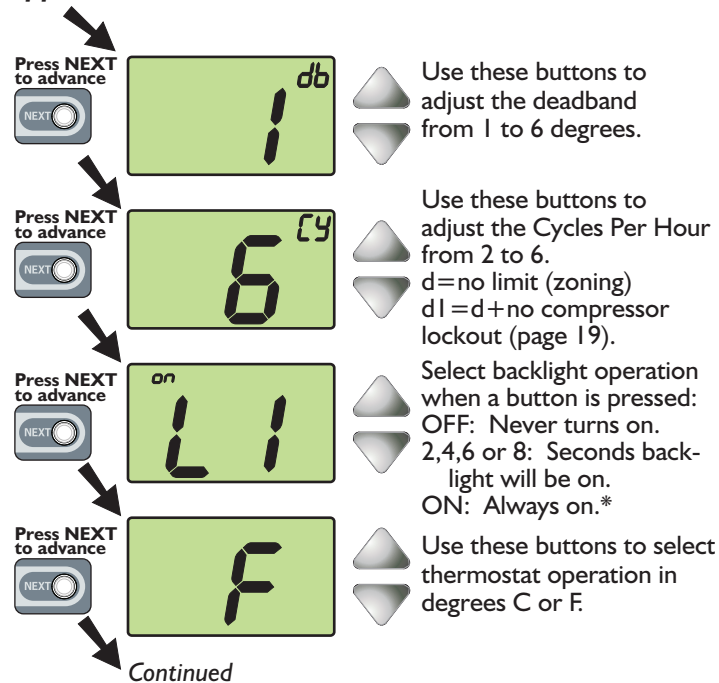
- 2) Do not run the time period program. The thermostat will operate as a manual heat or cool thermostat. Slide the Program Switch to OFF in this case.



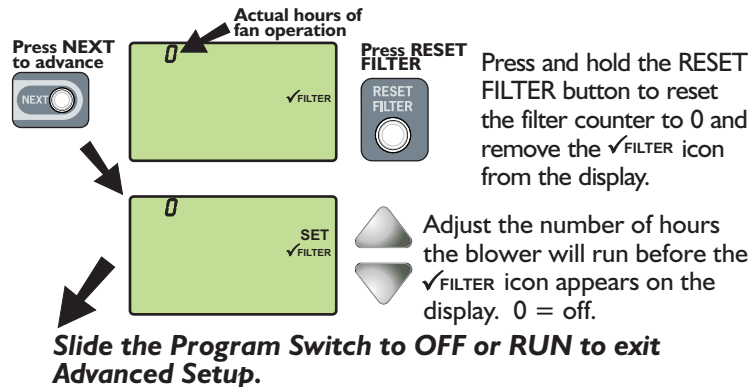
Advanced Setup

This is normally done by the installer at initial installation.

Enter advanced setup by sliding the Program Switch to SET. When the clock is flashing, press the NEXT button for 5 seconds. Do not release the button until this screen appears.



*ON is only available if the thermostat is system powered.



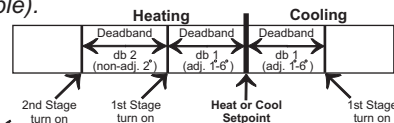
About Advanced Features & Operation



CYCLES PER HOUR - The Cycles Per Hour setting (*page 18*) monitors the number of times per hour your HVAC unit may energize. For example, at a setting of 6 cycles per hour the HVAC unit will only be allowed to energize once every 10 minutes. The Cycles Per Hour limit may be temporarily overridden by pressing the WARMER or COOLER button.



TWO STAGE OPERATION - The 2nd stage of heat (auxiliary heat) is turned on when the room temperature is equal to or less than: *the setpoint minus the 1st stage deadband (one degree, adjustable), minus the 2nd stage deadband (two degrees, non-adjustable).*



✓_{FILTER} ICON - The ✓_{FILTER} icon will appear after a set number of hours for fan run time (see above) has been achieved. This counter keeps track of the number of hours of fan run time whether the fan is energized in the heating or cooling modes, or in stand alone operation.

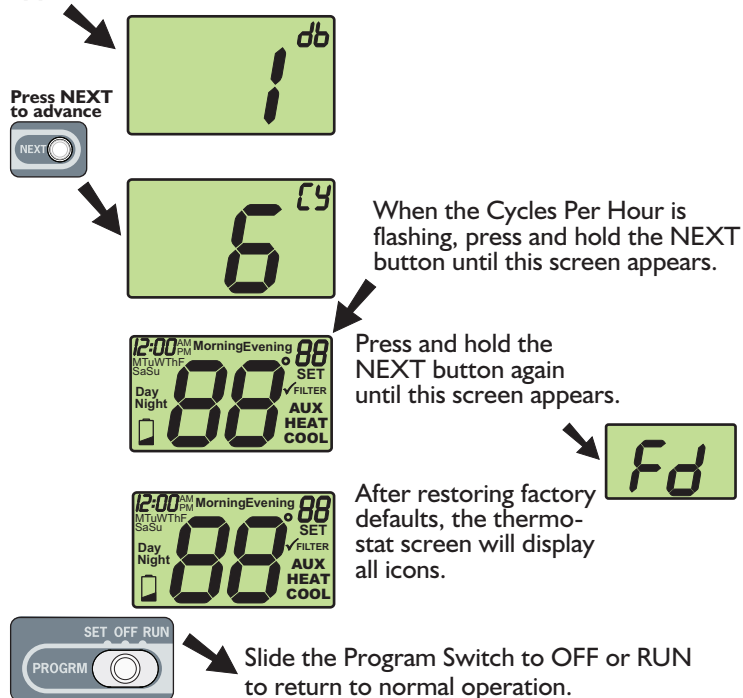
CAUTION



Factory Default

If, for any reason, you desire to return all the stored settings back to the factory default settings, follow the instructions below.

Enter advanced setup by sliding the Program Switch to SET. When the clock is flashing, press the NEXT button for 5 seconds. Do not release the button until this screen appears.



WARNING: This will reset all Time Period and Advanced Programming to the default settings. Any information entered prior to this reset may be permanently lost.

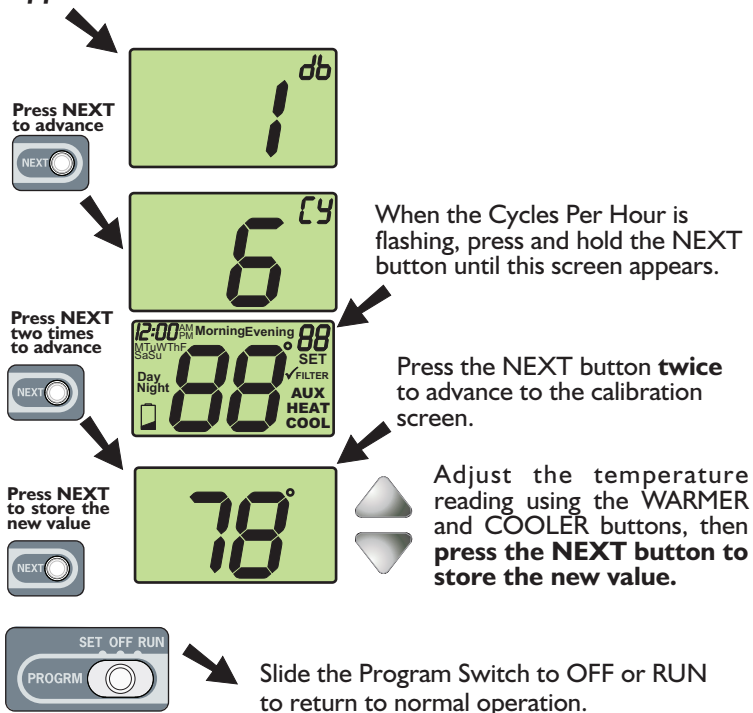
CAUTION



Calibration

Under normal circumstances it will not be necessary to adjust the calibration of the temperature sensor. If calibration is required, please contact a trained HVAC technician to correctly perform the following procedure.

Enter advanced setup by sliding the Program Switch to SET. When the clock is flashing, press the NEXT button for 5 seconds. Do not release the button until this screen appears.



Battery Replacement

- 1 The batteries are easily accessible from the battery slot located on the front of the thermostat (fig. 1). To open the battery slot, press down on the battery cover (fig. 1) and pull out (fig. 2).

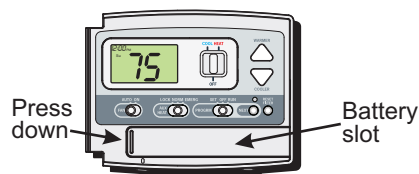


FIG. 1

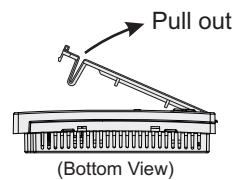
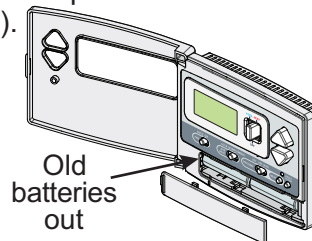


FIG. 2

- 2 Remove the old batteries and replace with the new AA alkaline batteries (fig. 3).



- 3 Place the bottom hook of the battery cover into the slot and snap closed (fig. 4).

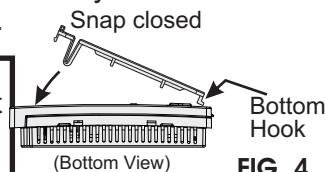


FIG. 4

The batteries must be replaced immediately when the thermostat displays the low battery icon (fig. 1). If the thermostat is connected to 24v power, the batteries should still be installed. Installing the batteries when system powered (24VAC) will keep the clock running in the event of line power interruption.



FIG. 1

Warranty

One-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer's sole option to replace any defective part, will be provided without charge for the part itself provided the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES - ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

Programming Worksheet*see page 10*

DAY	PERIOD	START TIME	COOL	HEAT
Monday Tuesday Wednesday Thursday Friday	Morning			
	Day			
	Evening			
	Night			
Saturday Sunday	Morning			
	Day			
	Evening			
	Night			



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P/N 88-636 Rev. 3