

PROGRAMMABLE THERMOSTAT

Honeywell Magic Stat[®]

**CT3100
SEVEN-DAY ELECTRONIC
PROGRAMMABLE THERMOSTAT
DESIGNER MODEL**

For Heating or Heating/Cooling

OWNER'S MANUAL

Welcome to the world of comfort and savings with your new Honeywell Magic Stat[®] electronic thermostat. The Magic Stat[®] name is synonymous with innovation and state-of-the-art electronic controls.

Your new thermostat will automatically control the temperature in your home within one degree of your programmed setting, keeping you comfortable while saving energy, when programmed according to the instructions in this manual. **The automatic recovery feature calculates when to start the heat or air conditioning so the home is at the comfort temperature at the time you program.**

Each day can be programmed differently or, if desired, the first day's program may be automatically copied to the rest of the week. Six different heating/cooling temperatures can be entered for each day.

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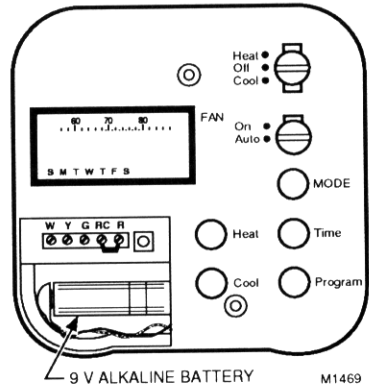
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INSTALLING THE BATTERY

A 9 V alkaline battery (purchase separately) must be installed to save the program in case of a power outage, and if programming the thermostat before installing it.

For best results, replace the battery once every three years to prevent loss of program.

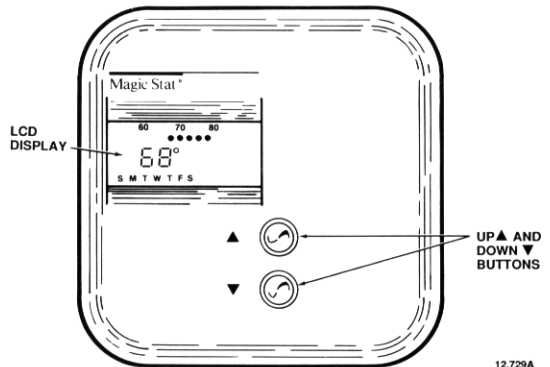


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FEATURES OF YOUR NEW THERMOSTAT

LCD DISPLAY—During operation, shows room temperature and programmed temperature range continuously, or acts as a digital clock. During programming, shows the day of the week, time of day, and programmed temperature range.

UP ▲ and DOWN ▼ BUTTONS—Lets you change the temperature setting without opening the cover.



Outside view of thermostat

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SYSTEM SWITCH—Lets you select heating or cooling operation. In OFF, furnace and air conditioner are both turned off, while the thermostat remembers your program so it can resume control when set back to HEAT or COOL.

FAN SWITCH—Lets you select ON for continuous fan operation, or AUTO for fan operation as needed during heating and cooling.

MODE SELECTION BUTTON—Use to change modes—manual mode, setting the day and the clock modes, temperature display mode, or time display mode.

TIME PROGRAMMING BUTTON—Use to set the correct day, hour, and minute, and to set the desired times when programming temperature changes.

PROGRAM REVIEW BUTTON—Use when starting, reviewing, canceling, or changing the program.

HEAT BUTTON—Use to set the desired temperatures in your heating program; to raise the setting, hold the button; to lower the setting, tap it.

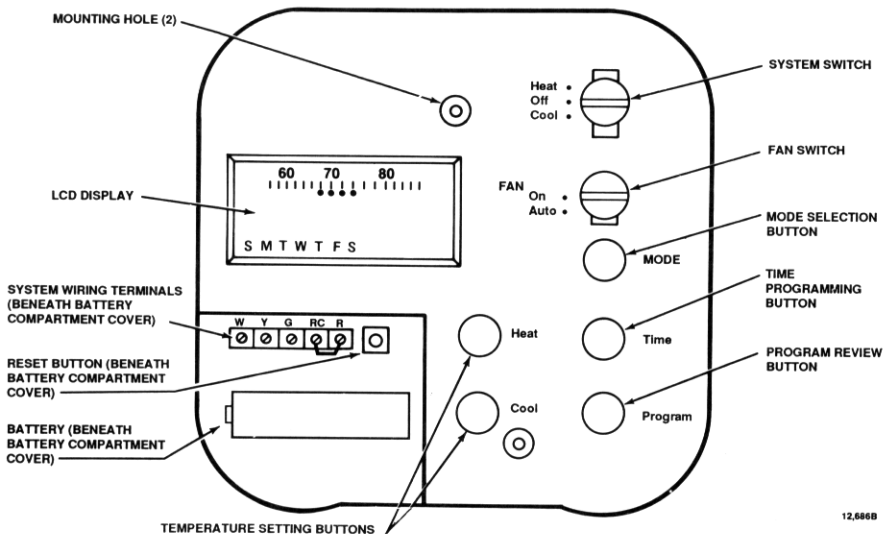
COOL BUTTON—Use to set the desired temperatures in your cooling program; to lower the setting, hold the button; to raise the setting, tap it.

RESET BUTTON—Small white button beneath battery cover which erases everything to start over.

BATTERY—9 V alkaline battery allows armchair programming before installation and 3-year backup in case of power outage.

PROGRAMMING INSTRUCTIONS (NOT SHOWN)—Inside thermostat cover.

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Thermostat with cover open

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PROGRAMMING AND SETTING

You will program your thermostat once for the entire year, entering your temperatures for both the heating and air conditioning seasons. You may enter heating temperatures between 54° F and 82° F, and cooling temperatures between 62° F and 88° F. A cool setting above 88° F (HI) leaves the cooling off at any temperature.

The first program you set will be automatically copied into all 7 days. You may make changes later to your program for the weekend. This typical weekday schedule suggests setting for a typical week; fill in the blanks with your preferred schedule and use as a guide when programming.

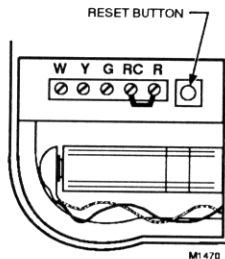
Typical Activity	Suggested Time Schedule	Your Time Schedule	Suggested Program Temperatures (° F)		Your Program Temperatures	
			Heat	Cool	Heat	Cool
Wake up	6:15 AM	_____	68	74	_____	_____
Leave Home	7:30 AM	_____	54	80	_____	_____
Arrive Home	5:00 PM	_____	68	74	_____	_____
After Dinner	8:00 PM	_____	72	74	_____	_____
Retire	10:45 PM	_____	60	80	_____	_____

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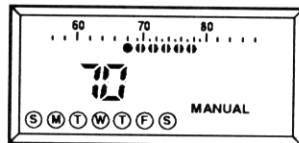
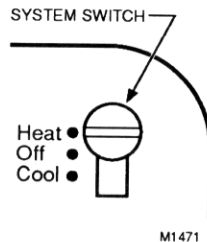
Program A Typical Weekday Schedule

You may program the CT3100 in your hand before installation, or on the wall. If programming before installation, the display will go blank during programming if no buttons are pressed for several seconds. There is no need to start over; proceed where you left off, and the display will reappear. However, if the CT3100 is already wired to the wall when programming, the display will stay on.

Press reset button under battery cover to clear out any program or setting already in the memory.



Move the system switch to HEAT. The display will show current room temperature with MANUAL. MANUAL indicates that even though there is no program in the thermostat, it can be used as a manual thermostat by selecting a temperature using the UP and DOWN buttons when the cover is closed.



Enter Your First Program

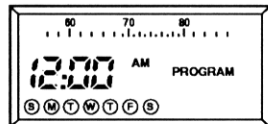
- **Program** Press and release. The display shows PROGRAM with the time 12:00 AM.

Enter a Program Point

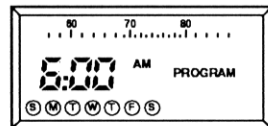
- **Time** Press until the time you want the temperature change to occur is displayed; hold the button down to move time ahead; tap to move back (6:00 AM shown in example).
- **Heat** Press until the desired heating temperature for that time is reached; hold the button down to raise the temperature; tap to lower it (70° F shown).

As you program, you will notice the dots under the temperature scale, which appear or disappear to correspond to the settings you are making.

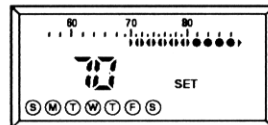
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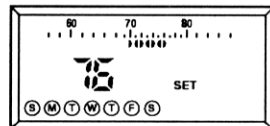


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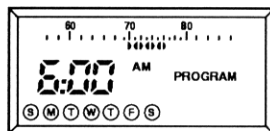
- **Cool** Press until the desired cooling temperature for that time is reached; hold the button down to lower the temperature; tap to raise it (76° F shown).

After the first setting is made, the display shows that 7 days a week, starting at 6:00 AM, the thermostat will turn on the heat when the temperature drops below 70° F (when the system switch is set to HEAT), or turn on the air conditioning when the temperature rises above 76° F (when the system switch is set to COOL).

To enter the rest of your programs for the first day, repeat the steps under "Enter a Program Point" (page 8), until up to 6 changes have been entered.



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Review Your Program

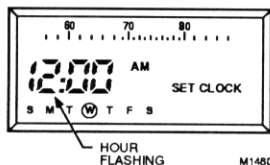
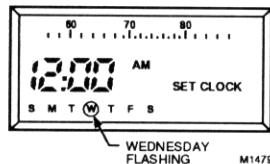
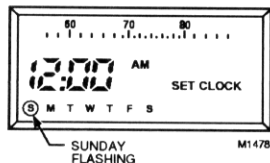
- **Program** Press to review the points you have already set. Hold the button to move forward to the next program; tap to set back.

When you are satisfied that the first day's entries are correct, proceed to setting the day and clock. Setting the clock will automatically copy the program into all 7 days of the week. You will be instructed how to change the programs for weekends when you get to the CHANGING section.

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Set the Day and Clock

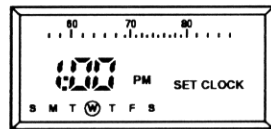
- **MODE** Press. Display will show SET CLOCK, and a flashing circle around Sunday.
- **Time** Press to select today's day (Wednesday shown).
- **MODE** Press. Display will show the hour flashing.



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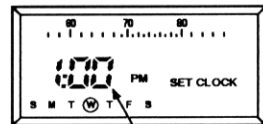
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- Time Press to set the correct hour; note AM or PM (1:00 PM shown).



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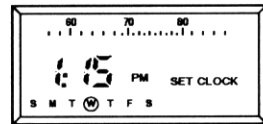
- MODE Press. Display will show the minutes flashing.



MINUTES
FLASHING

M1482

- Time Press to set the correct minutes (1:15 PM shown).



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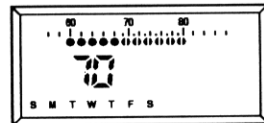
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- MODE Press to return to normal temperature display.

You are done programming, unless you want to make changes for specific days. See CHANGING section. Also see CHANGING section for information on daylight-saving or standard time changes.



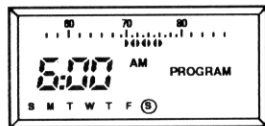
M1484

CHANGING

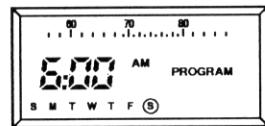
Changing One Day's Program

- **Program** Hold until the program you wish to change is displayed. Be sure you are on the day you wish to change (Saturday at 6:00 AM is shown).
- **Heat or Cool** Hold and watch the dots under the temperature scale disappear. When they are gone, the program has been eliminated. Enter your new program as instructed under "Enter a Program Point" on page 8.
- **MODE** Press to return to normal temperature display.

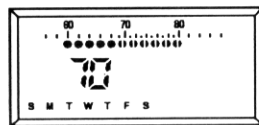
If you were programming your thermostat in your hand, and it is not yet installed, please refer to installation manual form number 69-8024 for installation instructions.



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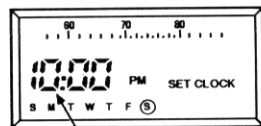
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Changing For Daylight-Saving or Standard Time

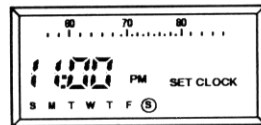
To move clock ahead an hour in the spring...

- **MODE** Tap until SET CLOCK shows and the hour is flashing.
- **Time** Hold until the clock advances one hour.
- **MODE** Tap until normal temperature display returns.

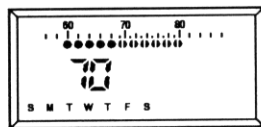


HOUR
FLASHING

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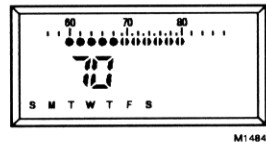
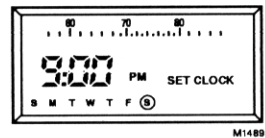
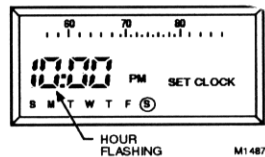
M1484

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To move clock back an hour in the fall...

- **MODE** Tap until SET CLOCK shows and the hour is flashing.
- **Time** Tap until the clock backs up one hour.
- **MODE** Tap until normal temperature display returns.

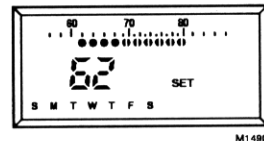


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Temporarily Overriding Your Program

A **short term override** is used to change the temperature for approximately three hours. At the end of this time, the program is resumed.

- Up ▲ With thermostat door closed, press to adjust temperature setting to desired short term override (3-hour) temperature (62° F shown).
- Down ▼

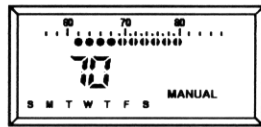


A **manual override** is used to change the temperature indefinitely, such as when you go on vacation. The thermostat will suspend the daily program and hold the temperature you desire until you change it back.

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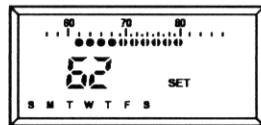
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● **MODE** Tap until **MANUAL** is displayed.



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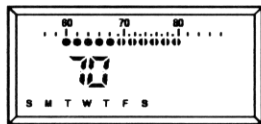
● Up or ● Down ▲ Close thermostat door, press to adjust temperature to desired setting (62° F shown).



M1492

● Down ▼

● **MODE** When you want to cancel manual override, tap repeatedly until normal temperature display shows.



M1484

TROUBLESHOOTING

Your thermostat requires little or no attention. Before you call for service, please check as indicated in the following guide.

PROBLEM	CHECK	ACTION
No display.	—system switch. May be in OFF position.	Move system switch to HEAT or COOL position.
	—fuse or circuit breaker.	If blown or tripped, replace fuse or reset breaker.
	—furnace power switch. May be OFF.	Move switch to ON.
	—thermostat connections.	Turn OFF power to furnace. Check for correct terminal hookups. Repair any frayed or broken wires. Firmly tighten all terminal screws.
	—other.	Contact a qualified service technician for assistance.

Troubleshooting, continued

PROBLEM	CHECK	ACTION
Display goes blank for several minutes during long furnace burn cycle, then recovers.	—air filter and fan belt.	Replace if necessary.
	—possible power interruptions during part of furnace cycle.	May require isolating relay to eliminate power interruptions. See Table I in installation manual form number 69-8024.
No heat.	—pilot flame. May be out.	Relight pilot flame per furnace manufacturer's instructions.
	—fuse or circuit breaker.	If fuse is blown or breaker tripped, replace or reset.
No cooling. Note: The CT3100 is not designed for cooling-only systems.	—system switch. May be in OFF or HEAT position.	Move switch to COOL position.
	—fuse or circuit breaker.	If fuse is blown or breaker tripped, replace or reset.
	—condenser switch position. Located outdoors and may be turned OFF.	Move to ON position.

continued

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Troubleshooting, continued

PROBLEM	CHECK	ACTION
No cooling. (continued)	—thermostat connections.	Turn OFF power to cooling system and furnace. Check for correct terminal hookups. Repair any frayed or broken wires. Firmly tighten all terminal screws.
	—other.	Contact a qualified service technician for assistance.
Time button advances to next program point instead of by 15-minute increments.	—number of temperature settings programmed; thermostat will take up to six.	Erase one setting before adding another.

continued

Troubleshooting, continued

PROBLEM	CHECK	ACTION
Thermostat will not allow you to make a temperature setting.	—number of heating and cooling temperature combinations in your weekly program; thermostat will accept a maximum of eight.	Reset thermostat; re-enter program.

Toll-free Installation and Programming Assistance

For all questions concerning this thermostat, please read and follow the instructions. If additional assistance is needed, call our toll-free Consumer Affairs group number at 1-800-468-1502, Monday-Friday, 7:30 a.m.-4:00 p.m. Central time.

NOTICE

This equipment is a Class B digital apparatus which complies with Canadian Radio Interference Regulations, CRC c. 1374.

RELAY ORDERING INFORMATION

Send orders to: Honeywell Inc., Consumer Affairs MN10-1462, 1885 Douglas Dr. N., Golden Valley, MN 55422-3992.

Part No.	Description	Price Ea.	Shipping/ Handling	Quantity	Total Price
MS100Q	Isolating Relay Kit	\$10	\$3.00		
MS101Q	Isolating Relay & 24 V Transformer Kit	\$20	\$3.00		
Subtotal					
Your local sales tax					
Total					

Check enclosed Money order enclosed

Charge to my Visa card # _____

exp. date _____ signature _____

Charge to my MasterCard # _____

exp. date _____ signature _____

Charge to my Discover Card # _____

exp. date _____ signature _____

NOTE: Credit card orders may also be made by calling 1-800-468-1502 Monday-Friday 7:30 a.m.-4:00 p.m., Central time.

Send to: Name _____

Address _____

City _____ State _____ Zip _____

Your daytime phone number _____

LIMITED ONE-YEAR WARRANTY

Honeywell warrants all products listed in this book to be free from defects in workmanship or materials, under normal use and service, for a period of one (1) year from the date of purchase by the consumer. If, at any time during the warranty period, the product is defective or malfunctions, Honeywell shall repair or replace it (at Honeywell's option) within a reasonable period of time.

If the product is defective:

- a). return it, with a bill of sale, receipt, or other dated proof of purchases to the retailer from which you purchased it, or
- b). package it carefully, along with a bill of sale, receipt or other dated proof of purchase and a short description of the malfunction, and mail it, postage prepaid, to the following address:

Honeywell Inc.
Returned Goods
1050 Berkshire Lane
Plymouth, MN 55441-4437

This warranty does not cover removal or reinstallation costs. This warranty shall not apply if it is shown by Honeywell that the defect or malfunction was caused by damage which occurred while the product was in the possession of a consumer.

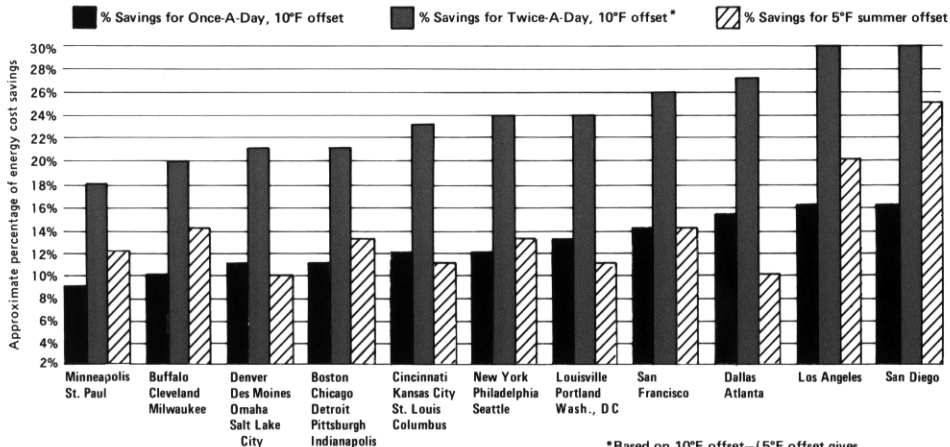
Honeywell's responsibility shall be to repair or replace the product within the terms stated above. HONEYWELL SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

THIS WARRANTY IS THE ONLY EXPRESS WARRANTY HONEYWELL MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE ONE YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations of how long an implied warranty lasts, so the above limitation may not apply to you.

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

If you have any questions concerning this warranty, please write our Consumer Affairs Department, Honeywell Inc., 1885 Douglas Drive North, Golden Valley, MN 55422-3992 or call 1-800-468-1502, Monday-Friday, 7:30-4:00 Central time.

TYPICAL ENERGY SAVINGS FOR REPRESENTATIVE CITIES IN THE U.S.



*Based on 10°F offset—(5°F offset gives approx. 55 percent of these savings.)

10,850B

This thermostat is manufactured under one or more of the following patents: U.S. Patent No. 4,172,555; RE32,960; 4,314,665; 4,335,847; 4,356,962; 4,408,711; 4,410,132; 4,469,274; 4,531,064; 4,606,401; 4,627,245; 4,635,708; 4,669,654; 4,683,939; 4,685,614; 4,695,942. Other Patents Pending.

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S.M.
Rev. 8-90

Form Number 69-8023—2
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