

Honeywell

**ADEMCO 4500
Thermostat**

User Guide

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About the 4500 Thermostat

The Ademco 4500 thermostat provides control for both heat and air conditioning. It is intended for use with Ademco security systems that include the enhanced 4286 phone module. You can set the 4500 thermostat using any Touch-tone phone, either on premises or remotely. The 4500 thermostat is not a replacement for the existing thermostat, which remains in the installation, but can be selected to provide a “**set-back**” function whenever the system is in the **ARMED AWAY** mode. The existing thermostat controls premises temperature while the security system is **DISARMED**, or in **ARMED STAY** mode.

Saving Money on Energy Bills

An important benefit of combined climate control and security is potential energy cost savings. During the heating season, you can “**set-back**” the 4500 thermostat for times when you are away from home by putting the security system in the **ARMED AWAY** mode. Our **set-back** feature lets you turn down the thermostat when the house is empty automatically, when you arm the security system in the **ARMED AWAY** mode.

During the cooling season, you can set the 4500 thermostat for a higher temperature than the existing thermostat for times when you are away from home, to save on cooling costs by putting the security system in the **ARMED AWAY** mode.

In both cases you can call home to adjust the set-back temperature that is in effect while the system is in the armed away mode.

The 4500 Thermostat Provides Comfort and Convenience

Heat or air conditioning in vacation homes can be remotely set and monitored by phone. For example, heat can be turned up at a ski cabin before guests arrive. The owner can also call-in to the system to check that the indoor temperature is being maintained while the premises are vacant. Users can set the air conditioning by calling home just before leaving work. Once access to the security system has been established, the ambient temperature will automatically be announced if the installer has programmed this function. The following sections describe how to use the 4500 thermostat.

How the 4500 Thermostat Works With Your Present Thermostat

The 4500 thermostat works in combination with the original thermostat installed on the premises.

While the premises is occupied, the security system is usually armed **STAY** or **DISARMED**, and the 4500 thermostat will be inactive. The original thermostat can be used as usual to set and adjust your premises temperature.

When controlling a heating system, the set-back temperature setting of the 4500 thermostat must always be set to a lower temperature than the original thermostat. This way, the 4500 thermostat will turn down the heat when the security system is **ARMED AWAY**.

Alternately, when controlling an air conditioning system, the set-back temperature setting of the 4500 thermostat must always be set to a higher temperature than the original thermostat. This way, the 4500 thermostat will allow the ambient temperature to rise when the security system is **ARMED AWAY**.

If the pre-existing thermostat has a built-in clock and schedule, the schedule can be used to set the times you “wake,” “leave,” “return,” and “sleep.”

Note: The “leave” time should be set for the *latest* time that you would expect to leave the premises. The “return” time should be set to the *earliest* time you expect to arrive at the premises. If you leave earlier or return later than scheduled times, the 4500 thermostat will adjust the temperatures accordingly.

In summary, the 4500 thermostat allows you to:

- Set back the temperature (to that set in the 4500 thermostat) automatically by arming in the AWAY mode when leaving home.
- Resume normal temperature (as set by the existing thermostat) automatically by DISARMING the system when returning home.
- Check the temperature by phoning in from a remote location.

Front Panel Controls

As you can see from Figure 1 below, there are two controls and one indicator on the front panel of the 4500 thermostat:

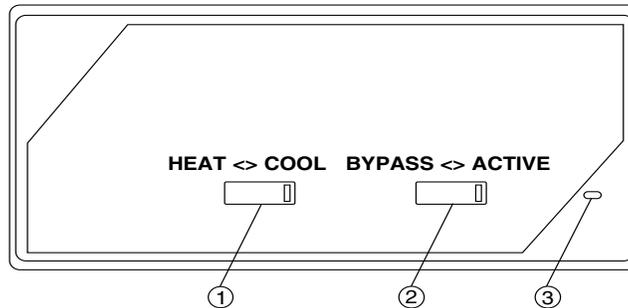


Figure 1. 4500 Thermostat Controls and Indicator

1. HEAT/COOL Switch

This switch is used to set the control mode of the 4500 thermostat. The mode can be set to either **HEAT** or **COOL**. This is the same as found on most thermostats. For premises that only have heat or air conditioning but not both, the proper mode should be selected with this switch, and the setting should not be changed.

2. ACTIVE/BYPASS Switch

This switch is used to activate and deactivate the 4500 thermostat. When this switch is set to the **ACTIVE** mode, the 4500 thermostat is able to set back the room temperature when the security system is **ARMED AWAY**. **BYPASS** is used to bypass the 4500 thermostat. When bypassed, the 4500 thermostat cannot change the room temperature.



- To use fan alone on your thermostat, put the 4500 in the **BYPASS** position.
- You will not be able to adjust room temperature by phone when the 4500 thermostat front panel switch is in **BYPASS** position.

Front Panel Controls (cont'd)

There are several uses for the **BYPASS** switch function:

- Allows the user to go back to their original thermostat at any time.
- Allows heating/air conditioning service people to bypass the 4500 thermostat during servicing and maintenance work.
- Allows switching back to the original thermostat if the security system is not working or is being serviced.

3. ACTIVE/ BYPASS Controls Indicator

This yellow LED indicator shows the status of the 4500 thermostat.

- When the **ACTIVE/BYPASS** switch is in the **ACTIVE** position, the LED will be steadily on.
- When in **BYPASS**, the LED will be steadily off.



If there is a problem with the wiring to the 4500 thermostat, the LED will flash, and you should call your alarm installation or service company for service.

Product Specifications:

Operating Range: 32° to 122° F., 0° to 50° C.

Temperature Setting Range: 45° to 99° F., 7° to 37° C.

Air Conditioner Compressor Off Cycle: 5 minutes minimum

Physical Dimensions: 6-3/16" by 2-7/8" by 1-1/4"



The 4500 measures the temperature of the surrounding air as well as the wall that it is mounted on. It may provide a slightly different reading than a thermometer or another thermostat mounted nearby.

This can be due to nearby sources of heat or drafts, sunlight, and varying accuracy of existing thermostats. Unless the reading is off by more than 4° F, this should not be a cause for concern.

Controlling the 4500 Thermostat by Phone

The phone access feature of the Honeywell security system provides a number of capabilities to the user:

- To adjust the **ARMED AWAY** set back temperature of the 4500 thermostats over any phone.
- To turn off the set back function for a single **ARMED AWAY** period, or turn it on again if necessary.
- To control two 4500 thermostats in a single installation.

A **Thermostat Mode** voice menu can be activated after accessing the security system by phone.

To Enter the Thermostat Mode Menu By Phone

1. Obtain access to your security system by phone according to the instructions for phone access provided with your security system. You will need to enter the 2-digit phone code provided by your installer, and your 4-digit user code when you are calling from outside, or whenever prompted by the system.
2. You will now hear the announcement of the **security system status** followed by the **ambient room temperature** (if installer has programmed this particular option).
3. Wait until the security system completes the status announcements. When prompted by the system, press:

The security system phone access module will announce all words denoted by quotation marks and italicized as follows:

- ***“THERMOSTAT MODE,”*** followed by whether ***“SET-BACK”*** is ***“ON”*** or ***“OFF”***, and whether the 4500 thermostat is set for ***“HEAT MODE”*** or ***“COOL MODE.”***
- The temperature setting of the 4500 thermostat that is in effect when the security system is **ARMED AWAY**.

A menu of thermostat related end-user commands will be announced. The following sections: **Adjusting the Set-Back Temperature of the 4500 thermostat, Turning the Set-Back On and Off, Using Two 4500 thermostats With Your Security System, and Exiting Thermostat Mode** explain the use of the thermostat mode commands.

Adjusting the Set-Back Temperature of the 4500 Thermostat

Keep in mind that the on-premises existing thermostat is set to the desired temperature for when the building is occupied. The 4500 thermostat is used to set the **set-back** temperature for when the premises is unoccupied and the security system is in **the ARMED AWAY** mode.

The 4500 thermostat is set from any Touch-tone phone, either on-premises, or by calling in when away.

1. Make sure that the front panel switches on the 4500 thermostat are set correctly.
 - The **ACTIVE/BYPASS** switch must be set to **ACTIVE**, and
 - The **HEAT/COOL** switch must be set for the desired mode of operation.
2. Enter thermostat mode as described on page 5. A menu of user commands will be announced.
3. When you hear the prompt, ***“To change temperature, enter 1,”***

Press during a pause in the thermostat mode menu announcement.

The system will announce ***“Temperature set to 65,”*** for example.

4. Next, it will announce ***“Enter new temperature.”***

If you want to keep the present set-back temperature, 65 degrees in this example, just press .

5. If you want to change the **set-back** temperature point, you can then enter a new temperature:

for example.

You have now set your unoccupied premises temperature to 61 degrees. The system will then announce the change of set point.

Setting the Set-Back Temperature of the 4500 Thermostat (cont'd)

6. The new **ARMED AWAY** (**set-back** temperature) point will be announced. This is the temperature the 4500 thermostat will maintain when you are away from the premises. The **set-back** is turned on only when the security system is **ARMED AWAY**.

The system will announce ***“Armed away temperature set to 61.”***

7. Next, it will repeat ***“Enter new temperature.”***

If you want to keep the present set point, 61 degrees in this example, just press .

If you make an out-of-range temperature setting, a buzzer sound will indicate to you that you made a mistake, and you will be prompted again to enter the desired set point.

You have now set your **ARMED AWAY** temperature to **61** in this case, and the phone module will echo back the change to verify.

8. If you are all done with the settings, and now want to arm or disarm the security system, wait for the ***“To exit enter zero”*** menu announcement and press .
9. At this point, you have adjusted the **set-back** temperature and the new setting has been echoed back. Your options now are:
 - to wait for the menu to be announced again in case you want to review or change the thermostat settings.
 - to just hang up the phone.

Turning the Set-Back On and Off

The set-back feature of the 4500 thermostat works automatically when you leave the premises and the security system is **ARMED AWAY**. However, sometimes you may want to override this feature. You can turn off the set-back at any time, while still on the premises or off.

For example, on a very hot day, you may want the premises temperature to be restored to the more comfortable normal settings by the time you return home from work instead of remaining at the more economical set-back temperature until you arrive. You would do the following:

1. Call the security system before returning home.
2. Enter your 2-digit phone code and 4-digit user code as requested by the system.
3. Press to enter the Thermostat Mode Menu.
4. At the ***“To Turn Set-Back Off, Enter 3”*** prompt, press .
This command temporarily deactivates the set-back function until you return home.
5. You can exit the Thermostat Mode at this point by pressing at the exit prompt.
6. The premises cooling system will now be under the original thermostat’s control with the premises temperature being lowered to the more comfortable setting.

When you turn off the set-back, you are only doing so temporarily. When you return home the thermostat mode menu resets itself automatically so that when you again exit the premises with the security system in the **ARMED AWAY** state, the premises temperature will go to the programmed 4500 thermostat setting.

In the example above, if you change your mind and decide not to return home early, you can turn the thermostat set-back to on again by phone.

Using Two 4500 Thermostats with Your Security System

If your security system includes two 4500 thermostats and you have a multi-zone heating or air conditioning system, you can set the heat and air conditioning at different temperatures in different parts of the house.

In order to program the thermostats, you must obtain access to the security system and then the Thermostat Menu Mode.

Refer to the section “**To Enter the Thermostat Menu Mode**” on page 5 or perform the first three steps of the abbreviated step-by-step procedure on page 8 and continue with this procedure.

The two thermostats in your system are named **Thermostat 1** and **Thermostat 2** for programming purposes. When you first enter Thermostat menu mode, you are hearing status for “**Thermostat 1**”, and you can adjust the set point for Thermostat 1 without having to “**LOG ON.**”

If, however, you want to review or set **Thermostat 2**, you must first choose the **Log On** menu selection.

At the “**To log on, enter 2**” prompt, press . The System will announce

“Enter thermostat number”.

Press to select Thermostat 2.

You will hear the operating mode and set-back temperature for Thermostat 2. Next, you can change its settings by waiting for the thermostat menu, and

pressing after the “To change temperature, enter 1” prompt.

You can then review and change the set-back temperature in effective in the ARMED AWAY mode as described earlier in “Setting the 4500 thermostat” on page 5 of this manual.

When Leaving Protected Premises for Extended Periods

We recommend that the 4500 thermostat, the original thermostat, and the entire heating/cooling system be tested weekly, and always before leaving the premises for extended periods of time such as during vacation time.



We recommend that your alarm system is monitored by a central station for system low battery and AC loss. Be sure to give your central station contact information of someone who can access the premises in the event the system loses AC power while you are away for an extended period of time, since a power outage may cause the heating/cooling system to become inoperable.

If you live in an area where temperatures can be extreme, it is important to dial into your security system periodically, as described earlier while away, to monitor premises temperatures. Follow procedures detailed on page 5 to hear ambient temperature status and on page 6 for making changes to the set-back settings in the thermostat program mode. If the heating, air conditioning, control system, electric power, or security system fails, you can call for service before any problems occur.

If any one of those systems fails it could result in failure of the heating/cooling system to maintain room temperature. Failure of the heating or cooling system could result in property damage or injury.

It is important to maintain your security and heating/cooling systems, and to periodically test your security system and heating/cooling system to insure proper operation.

Testing the Heating/Cooling System

To be sure the heating/cooling system is maintaining the room temperature at the **set-back** point you have programmed by phone, test the system as follows:

1. Be sure that the 4500 thermostat is in the **ACTIVE** mode using its front panel slide switch. Refer to page 3 if in doubt.
2. Be sure that the **ACTIVE** LED turns on, and is not flashing.
 - A flashing LED indicates a problem with the wiring to the 4500 thermostat).
 - A **“Check Thermostat”** announcement on the phone is also an indication to call for servicing of the 4500 thermostat.
3. Arm the security system in the **ARMED AWAY** mode and leave the premises.

When you return home or by calling home while away, verify that the temperature inside the premises closely matches the **set-back** point initially programmed. Be sure that **sufficient** time has been allowed for the premises ambient temperature to stabilize. If the 4500 thermostat is not maintaining temperature as was programmed, first review the **“ARMED AWAY” set-back** point using the phone, and then check if the pre-existing thermostat is working as described in the next section.

If both thermostats are not working, call your heating/air conditioning service company for servicing of your system. If only the 4500 thermostat is not working properly, immediately set its front panel switch to **BYPASS**, thereby using the pre-existing thermostat to control your heating and cooling system, **and call your alarm installation or service company for service.**

Testing the Pre-Existing Thermostat

Switch the front panel **ACTIVE/BYPASS** switch to **BYPASS**, and check that the pre-existing thermostat (**not the 4500 thermostat**) is working and able to control the heating/cooling system. If the pre-existing thermostat does not function, have it replaced, or call your heating or air conditioning service company.

If you need service for your security system or heating/air conditioning system:

If your security system or heating/air conditioning systems are in need of service, set the 4500 thermostat to the **BYPASS** mode using the front panel **ACTIVE/BYPASS** switch.

When bypassed, the 4500 thermostat is **totally** removed from control of the heating and/or air conditioning systems. The pre-existing (original) thermostat will then maintain total control of the heating and/or air conditioning systems.

When the 4500 thermostat is bypassed, it will be easier for heating/air conditioning service personnel to service those systems including their respective control systems. The switch may be restored to the **ACTIVE** position when the servicing is completed.

FEDERAL COMMUNICATIONS COMMISSION (FCC) PART 15 STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the receiver away from the security control.
- Move the antenna leads away from any wire runs to the security control.
- Plug the security control into a different outlet so that it and the receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user or installer may find the following booklet prepared by the Federal Communications Commission helpful:

“Interference Handbook.”

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402.

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

ONE YEAR LIMITED WARRANTY

Honeywell International Inc., acting through its Security & Custom Electronics business ("Seller"), 165 Eileen Way, Syosset, New York 11791, warrants its security equipment (the "product") to be free from defects in materials and workmanship for one year from date of original purchase, under normal use and service. Seller's obligation is limited to repairing or replacing, at its option, free of charge for parts, labor, or transportation, any product proven to be defective in materials or workmanship under normal use and service. Seller shall have no obligation under this warranty or otherwise if the product is altered or improperly repaired or serviced by anyone other than the Seller. In case of defect, contact the security professional who installed and maintains your security equipment or the Seller for product repair.

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