

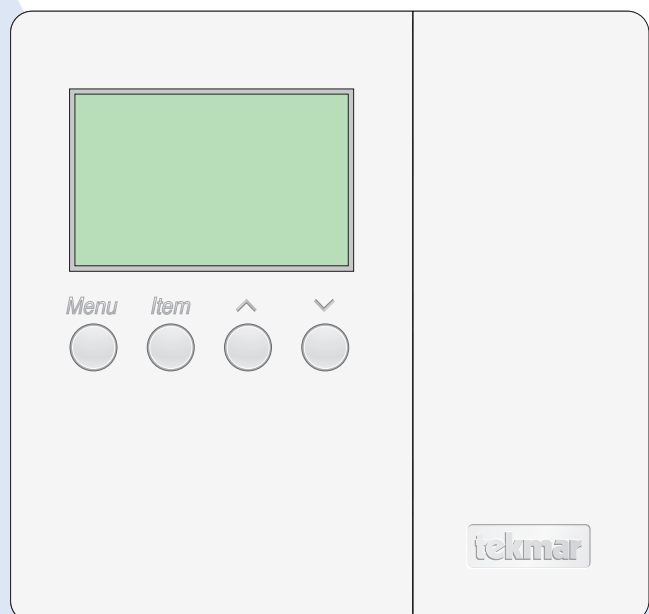
**Congratulations**  
 on the purchase of  
 your tekmar programmable  
 thermostat with communication.  
 This thermostat combines  
 easy-to-use programming with  
 advanced features to increase  
 both comfort and energy  
 efficiency.

Your tekmar thermostat allows  
 you to :

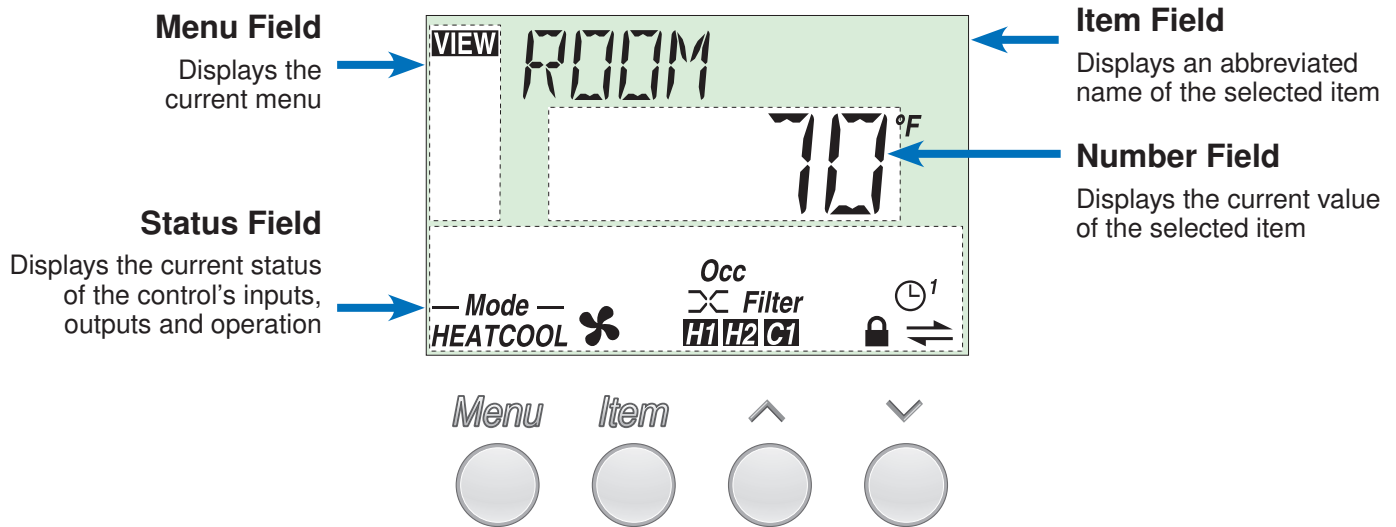
- Set a single schedule for your heating and cooling system that all of your tekmar thermostats can follow.
- Adjust the time and date on all your tekmar thermostats from a single thermostat
- Automatically adjust for Daylight Saving Time
- View the outdoor temperature on all of your tekmar thermostats.
- Easily set up custom “Scenes” to match your home and lifestyle.
- Easily override your tekmar thermostats if you are planning an extended absence.

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## Display



## Symbols Description

<b>— Mode —</b> <b>HEATCOOL</b>	<b>MODE OF OPERATION</b> Displays whether in heating or cooling mode.		<b>tN4 COMMUNICATION</b> Indicates when a communication network is detected.
<b>H1</b>	<b>FIRST STAGE OF HEAT</b> Indicates when the first stage of heat is operating.		<b>COOL GROUP MASTER</b> Indicates this thermostat is a cool group master.
<b>H2</b>	<b>SECOND STAGE OF HEAT</b> Indicates when the second stage of heat is operating.		<b>LOCK</b> Indicates that the access levels are locked. Also indicates when an item is visible but not adjustable.
<b>C1</b>	<b>FIRST STAGE OF COOLING</b> Indicates when the first stage of cooling is operating.		<b>OPTIMUM START / STOP</b> Indicates that Optimum Start or Optimum Stop is active.
	<b>FAN 1</b> Indicates when Fan 1 is operating.		<b>WARNING</b> Indicates an error is present.
<b>Filter</b>	<b>FILTER</b> Indicates that the Filter requires replacement.	<b>TMPLY HOLD</b>	<b>TEMPORARY HOLD</b> Indicates that the temperature has been temporarily adjusted from the scheduled event temperature.
12 34	<b>SCHEDULE MASTER</b> Indicates this thermostat is a schedule master. The number indicates the schedule group number.	<b>Wake UnOcc</b> <b>Sleep Away</b>	<b>SCHEDULED EVENT</b> Indicates the current scheduled event.

## User Interface

The control uses a Liquid Crystal Display (LCD) as the method of supplying information on the operation of the thermostat.

### Access Levels

This thermostat has five access levels:

- SEC (Secure)
- LTD (Limited)
- USER (User)
- INST (Installer)
- ADV (Advanced).

This brochure only covers the features available in the SEC, LTD and USER levels. Only qualified service people should adjust the INST and ADV access levels.

### Menu

All of the items displayed by the thermostat are organized into seven menus:

- View
- Adjust
- Time
- Scene
- Schedule
- Monitor
- Miscellaneous

These menus are listed in the Menu Field on the top left hand side of the display.

Use the Menu button to advance to the next menu.

### Item

Each menu has several items. The abbreviated name of the selected item will be displayed in the item field of the display. To view the next available item, press and release the Item button.

### Adjustment

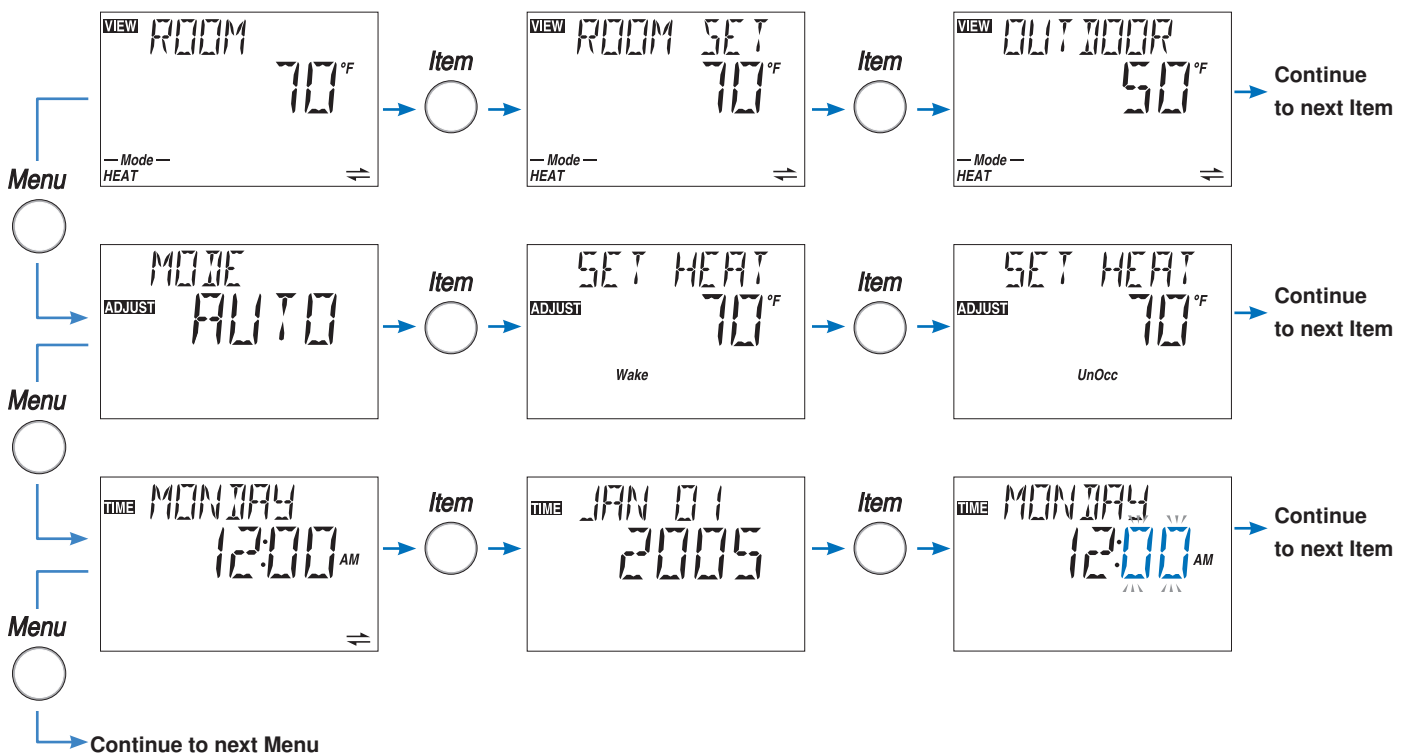
To make an adjustment to a setting in the thermostat:

1. Use the Menu button to select the appropriate menu.
2. Use the Item button to select the desired item.
3. Use the Up or Down button to adjust the setting.

### Default Item

When you display an item in the View menu for more than 5 seconds it becomes the default item. After you navigate other menus, the display reverts back to the default item after 60 seconds of button inactivity.

The Time is the only exception. It can be displayed indefinitely.

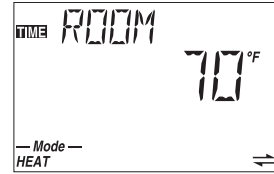


## Viewing Current Temperatures

Use the View menu to view the current temperatures being sensed by the thermostat. To view the available temperatures, use the Menu button to go to the View menu. Use the Item button to view the temperatures.

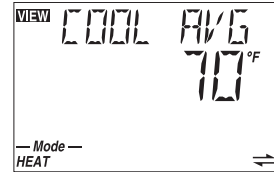
### Room Temperature

This is the current air temperature of the room being controlled.



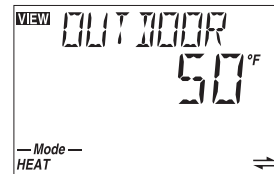
### Cooling Average Temperature

If the cooling feature is being used on this thermostat, this is the average air temperature in the area being cooled by the thermostat.



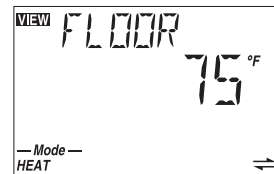
### Outdoor Temperature

If an outdoor sensor is connected, this is the current outdoor air temperature.



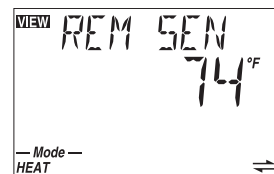
### Floor Temperature

If a floor sensor is connected to the thermostat, this is the current floor temperature.



### Remote Temperature

If a remote sensor is connected to the thermostat, this is the current temperature at the remote sensor.

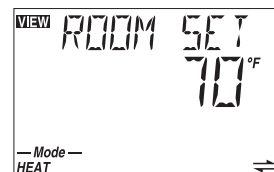


## Viewing the Room Set Temperature

The Room Set temperature is the temperature that the thermostat is currently set to maintain.

To view the Room Set temperature:

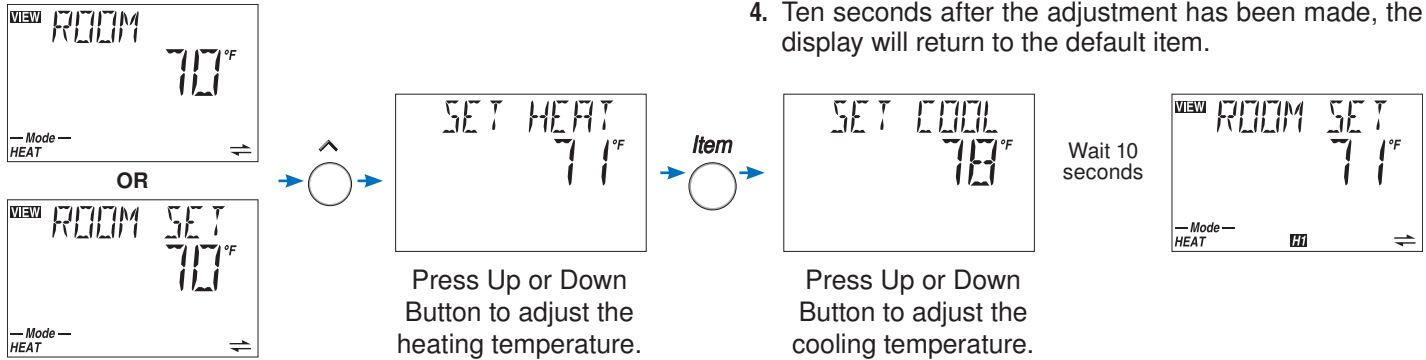
1. Use the Menu button to select the View menu.
2. Use the Item button to select Room Set.



## Adjusting the Room Set Temperature (No Schedule)

To adjust the Room Set temperature when there is no schedule in use:

1. Make sure you are in the VIEW menu. If not, press the Menu button until VIEW displays in the top left corner.



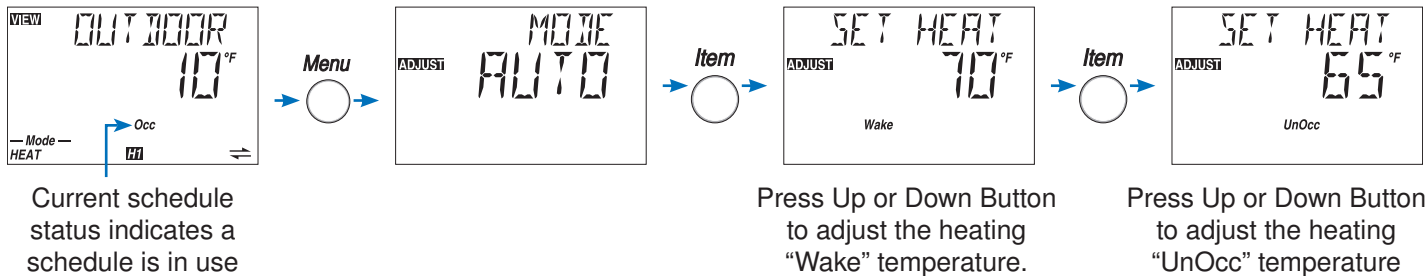
2. Press the Item button to display the 'Room' or 'Room Set' item.
3. Press the Up or Down button to enter the 'Set Heat' mode. Continue pressing the Up or Down button until the desired temperature is displayed
4. Ten seconds after the adjustment has been made, the display will return to the default item.

## Adjusting the Room Set Temperature (Schedule)

If your thermostat is using a schedule, the current event of Wake, UnOcc, Occ, Sleep or Away displays on the screen.

To change the temperature for a schedule event:

1. Use the Menu button to select the Adjust menu.



2. Use the Item button to select the Set Heat item for the event you would like to change (Wake, UnOcc, Occ, Sleep, or Away)
3. Use the Up or Down buttons to change the set temperature for the event.

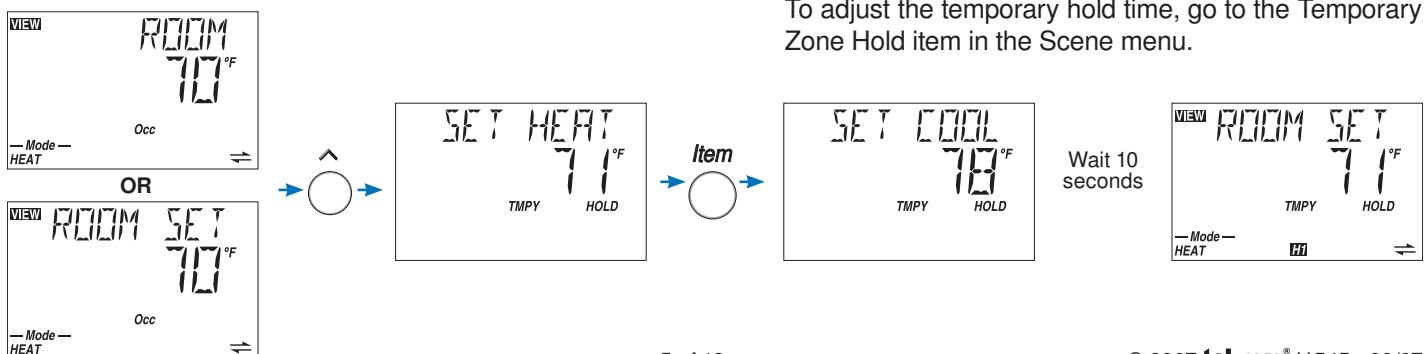
## Temporary Room Set Adjustment (Schedule Only)

If your thermostat is using a schedule and you would like to temporarily change the current heating temperature:

1. Make sure you are in the View menu. If not, press the Menu button until VIEW displays in the top left corner.
2. Press the Item button to select either the 'Room' or 'Room Set' item.
3. Press the Up or Down button to enter the 'Set Heat' mode. The words 'TMPY HOLD' will appear indicating

that you are only making a temporary change. Continue pressing the Up or Down button to adjust the desired temperature.

4. Ten seconds after the adjustment has been made, the display will return to the default item. The words 'TMPY HOLD' will remain on the screen for the duration of the temporary change.
5. To cancel the temporary hold before it expires, press and hold the Up and Down buttons at the same time. To adjust the temporary hold time, go to the Temporary Zone Hold item in the Scene menu.



## Adjusting the Temporary Zone Hold

You can adjust the length of the Temporary Zone Hold.

To adjust the length of the Temporary Zone Hold:

1. Use the Menu button to select the Scene menu.
2. Use the item button to select Tmpy Zone Hold.
3. Use the Up or Down button to set the length of the Tmpy Zone Hold.

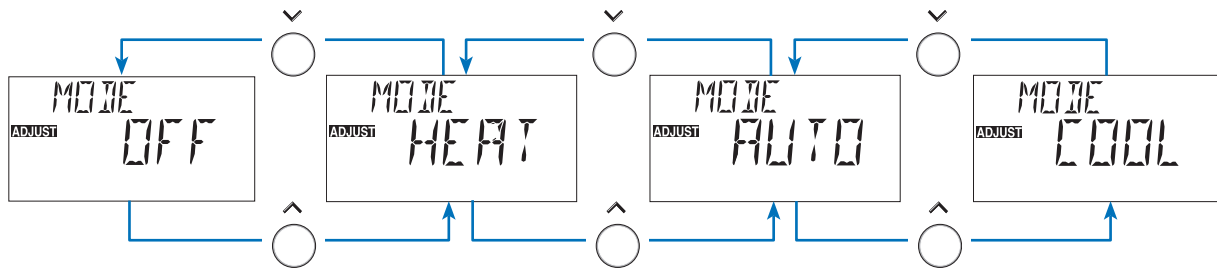
## Choosing the Mode of Operation

The thermostat has four modes of operation:

- Heat: Provides heating only.
- Cool: Provides cooling only.
- Auto: Automatically changes between heating and cooling.
- Off: Does not provide heating or cooling.

To choose the Mode of Operation:

1. Use the Menu button to select the Adjust menu.
2. Use the Item button to select the Mode item.
3. Use the Up or Down button to select either Off, Heat, Cool or Auto.



## Setting the Floor Warming Temperatures

If a floor sensor is installed, you can set the minimum floor temperature.

**Caution:** Setting a high floor minimum temperature can result in overheating the room.

To set the floor minimum temperature:

1. Use the Menu button to select the Adjust menu.
2. Use the Item button to select FLOORMIN.
3. Use the Up or Down button to adjust the temperature.

**Note:** If your thermostat is using the schedule feature, you will have to set a FLOORMIN temperature for each period.

There are up to four periods:

- Wake
- Occ (Occupied)
- Unocc (Unoccupied)
- Sleep



## Setting the Fan On Time

If a fan is connected to the thermostat, the fan on time can be adjusted:

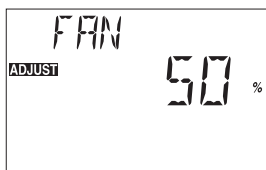
- Auto: The fan operates with the heating or cooling system.
- Off: The fan remains off.
- 10% to 90%: The fan operates for the set percentage of time.
- On: The fan operates continuously.

To set the fan on time:

1. Use the Menu button to select the Adjust menu.
2. Use the Item button to select FAN.
3. Use the Up or Down button to set the fan on time.

**Note:** If your thermostat is using the schedule feature, you will have to set a fan on time for each period. There are up to four periods:

- Wake
- Occ (Occupied)
- Unocc (Unoccupied)
- Sleep

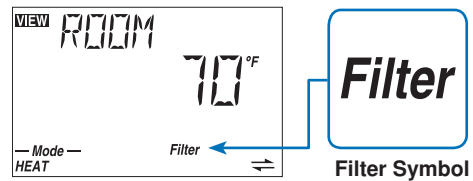


## Resetting the Filter Timer

The thermostat keeps a record of the number of hours the fan runs. Once the number of hours exceeds the Filter time, a Filter symbol is displayed in the thermostat display.

**To reset the Filter timer after you replace the filter:**

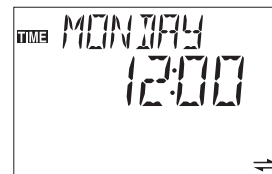
1. Use the Menu button to select the Adjust menu.
2. Use the Item button to select CLR FLTR.
3. Use the Up button to select YES.
4. The Filter timer has now reset.



## Viewing the Current Time

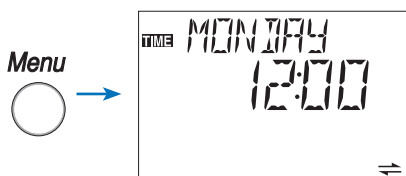
**To view the current time:**

1. Use the Menu button to select the Time menu.

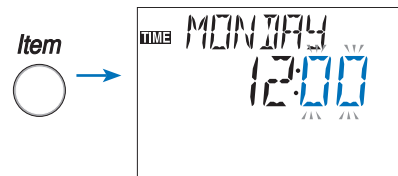


## Setting the Time

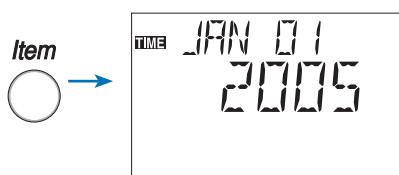
**Step 1:** Use the Menu button to select the Time menu. The current time and day displays. If the clock has not been set, the time will flash.



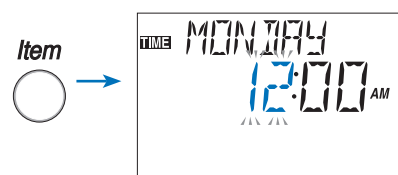
**Step 3:** Use the Item button to advance to the next item. The minutes begins to flash. Use the Up or Down button to set the minutes.



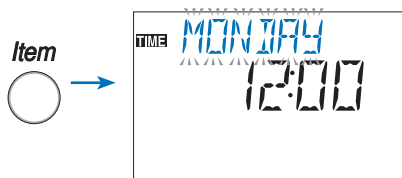
**Step 2:** Use the item button to advance through the Time menu. If your installer has selected Daylight Savings Time, the date is displayed. If the date has not been set, it will flash. If your installer has not selected Daylight Savings Time, the date will not be displayed.



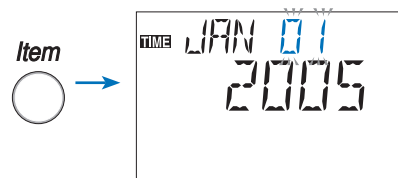
**Step 4:** Use the Item button to advance to the next item. The hours begins to flash. Use the Up or Down button to set the hour.



**Step 5:** Use the Item button to advance to the next item. The day begins to flash. Use the Up or Down button to set the day.

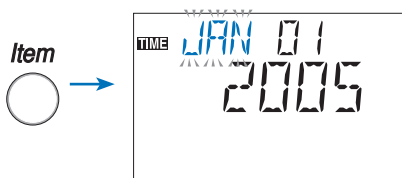


**Step 7:** Use the Item button to advance to the next item. The day of the month begins to flash. Use the Up or Down button to set the date.

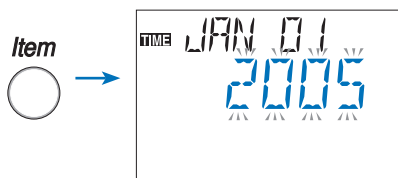


**If your installer has selected Daylight Savings Time, continue with steps 6, 7 and 8.**

**Step 6:** Use the Item button to advance to the next item. The month begins to flash. Use the Up or Down button to set the month.



**Step 8:** Use the Item button to advance to the next item. The year begins to flash. Use the Up or Down button to set the year.



## Selecting a Scene

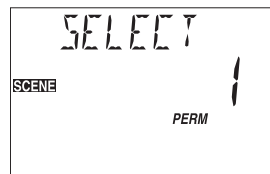
Scenes is a feature that your installer selects when he sets up each thermostat in your system.

Please refer to the Job Record J545 for a record of how your installer made these settings

Scenes allow you to change the temperature of all the thermostats that use the Scene feature from a single thermostat.

Several of the Scenes are preset from the factory. However, your installer can customize several of the scenes based on your needs.

Refer to the Scene table below for a description of each scene.



Scene	Description	Thermostat Operation
1	Permanent 1	Scheduled event, Wake, Unoccupied, Occupied, Sleep, Away
2	Permanent Away 2	Away DHW demands are ignored (applies to reset modules) Setpoint demands operate (applies to reset modules)
3	Permanent Unoccupied 3	Unoccupied
4	Permanent 4	Scheduled event, Wake, Unoccupied, Occupied, Sleep, Away
5	Permanent 5	Scheduled event, Wake, Unoccupied, Occupied, Sleep, Away
6	Temporary Occupied 6	Occupied for 3 hours
7	Temporary 7	Scheduled event, Wake, Unoccupied, Occupied, Sleep, Away for 4 hours
8	Temporary 8	Scheduled event, Wake, Unoccupied, Occupied, Sleep, Away for 8 hours



### To select a scene:

1. Use the Menu button to select the Scene menu.
  2. Use the Item button to select the Select item.
  3. Use the Up or Down button to select the desired scene.
- Default Scene: The default scene is Permanent 1. In a typical installation, the thermostat follows the schedule.
  - Factory set scene: When you select a factory set scene (2, 3, and 6), all of the thermostats using the scene feature use the temperature specified by the scene.
  - Custom scenes: When you select a custom scene, your installer will have preset each thermostat using the scene feature to either follow its regular schedule, or go to the set wake, occupied, unoccupied, sleep or away temperature.

### Example:

A house is normally in scene Permanent 1. There is a master bedroom that operates on a schedule and there is a guest bedroom that is normally set to Unoccupied. When a guest arrives, the scene is to change to Permanent 4. Scene 4 changes the guest room to operate on the setback schedule.

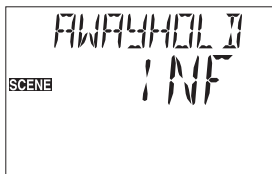
Location	Scene	Temperature
Master Bedroom	1	Schedule
	4	Schedule
Guest Bedroom	1	UnOccupied
	4	Schedule

## Extended Absences

If you are going away for an extended period of time, the AWAYHOLD feature allows you to override the regular schedule of the thermostat for a set number of days.

During the Away Hold, the thermostat operates at the Away temperature set by your installer.

After the Away Hold has expired, the thermostat returns to its normal operation.



If you have multiple tekmar thermostats installed, you need only to do the following on one thermostat.

### To set the number of days you will be away:

1. Use the Menu button to select the Scene menu.
2. Use the Item button to select Away Hold.
3. Use the Up or Down button to set the number of days that you will be away.

### To start the Away Hold:

1. Use the Menu button to select the Scene menu.
2. Use the Item button to select the SELECT item.
3. Use the Up or Down button to select Scene 2 Permanent Away.

## Viewing the Recorded High & Low Temperatures

Use the Monitor Menu to view the high and low temperatures sensed by your thermostat.

### To view the temperatures:

1. Use the Menu button to select the Misc menu.
2. Use the Item button to view the temperatures.
3. Pressing the Up and Down buttons at the same time while viewing the temperature resets the item.

### Outdoor High

Highest recorded outdoor temperature.

### Outdoor Low

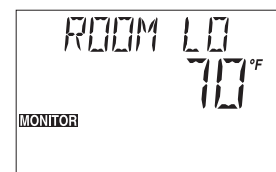
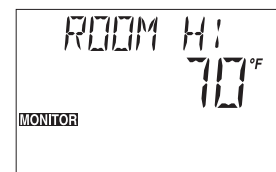
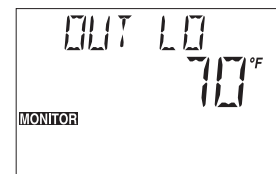
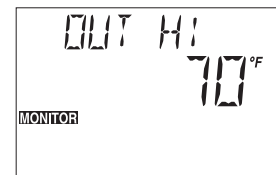
Lowest recorded outdoor temperature.

### Room High

Highest recorded indoor temperature.

### Room Low

Lowest recorded room temperature

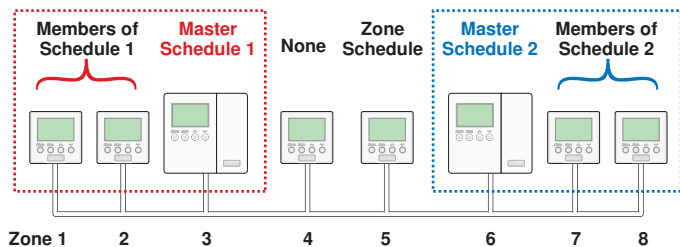


## Selecting a Schedule

During installation, your installer will have selected a schedule for your thermostat.

To view the schedule your installer has selected:

1. Use the Menu button to select the Schedule Menu
2. Use the Item button to select the Heat Schd or the Cool Schd. You will see one of the following:
  - None: This thermostat is not using a schedule and operates at a single temperature.
  - Zone: This thermostat is using its own schedule.



- MST1 to MST4: This thermostat is a schedule master. The schedule on this thermostat is being used by this thermostat as well as several other thermostats. Changing the schedule will affect other thermostats.
- MBR1 to MBR4: This thermostat is a member of a master schedule that has been set on a separate thermostat. If the master schedule is changed, it affects this thermostat.

Schedule	Description
None	No schedule is used.
Zone	The schedule only applies to this thermostat.
MST1, MST2, MST3, MST4	This thermostat is a system schedule master. There are four possible system schedules.
MBR1, MBR2, MBR3, MBR4	This thermostat is a system schedule member. The number indicates which of the four system schedules the thermostat is following.

## Selecting the Schedule Type

The schedule type determines how frequently the schedule repeats itself. This thermostat includes four schedule types:

1. Use the Menu button to select the Schedule menu.
2. Use the Item button to select SCH TYPE.
3. Use the Up or Down button to select one of the following four schedule types:
  - 24 Hour: All days have the same schedule.
  - 5-2: Monday to Friday follow the same schedule. Saturday and Sunday follow the same schedule.
  - \* 5-11: Monday to Friday follow the same schedule. Saturday and Sunday have their own schedules
  - 7 Day: All seven days of the week have their own schedule.

Schedule Type				
Day	24 Hour	5-2	5-11	7 day
Sa		•	•	•
Su		•	•	•
Mo				•
Tu	•			•
We		•	•	•
Th				•
Fr				•

## Selecting the Schedule Mode

The schedule allows for either 4 or 2 temperatures per day.

To select the schedule mode:

1. Use the Menu button to select the Schedule menu.
2. Use the Item button to select SCH MODE.
3. Use the Up or Down button to select one of the following two schedule modes:
  - 4: Wake, Unoccupied, Occupied, Sleep
  - 2: Occupied, Unoccupied

## Setting the Schedule

The installer of this thermostat may have already entered a schedule. Please refer to Job Record J545.

### To set the schedule:

1. Use the Menu button to select the Schedule menu.
2. Use the Item button to select the first event of the schedule.
3. Use the Up or Down button to set the start time of the event.
  - If you wish to skip the event, select “--:--” as the time. “--:--” is found between 11:50 PM and 12:00 AM.
4. Use the Item button to advance to the next available event.
5. Repeat steps 3 and 4 for all of the available events.

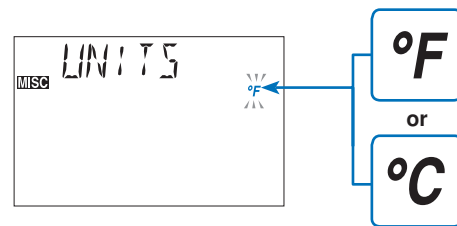
Schedule Mode	Event	24Hr	Sat	Sun	Mon	Tue	Wed	Thu	Fri
4 events per day	Wake	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM
	Unoccupied	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM
	Occupied	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM	6:00 PM
	Sleep	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM
or									
2 events per day	Occupied	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM
	Unoccupied	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM

## Units of Temperature

You can display temperatures in either Fahrenheit (°F) or in Celsius (°C).

### To change the units of temperature:

1. Use the Menu button to select the Misc menu.
2. Use the Item button to select UNITS.
3. Use the Up or Down button to select Fahrenheit (°F) or Celsius (°C):



## Backlight

The thermostat's display has a backlight. By default the backlight is temporarily On. You can also set the backlight to be either permanently On or permanently Off.

### To change the backlight setting:

1. Use the Menu button to select the Misc menu.
2. Use the Item button to select Backlite.
3. Use the Up or Down button to select a setting:
  - ON: Backlight stays on.
  - TMPY (Temporary): Backlight stays on for 30 seconds.
  - OFF: Backlight is off.

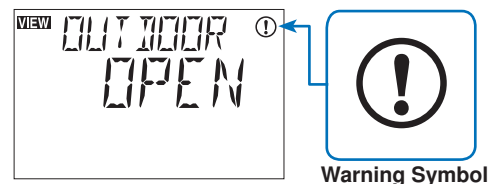
## Cleaning the Thermostat

Clean the thermostat's exterior using a damp cloth. Moisten the cloth with water and wring out prior to wiping the thermostat. Do not use solvents or cleaning solutions.

## Error Messages

When the thermostat encounters a problem, a Warning Symbol appears and a description of the error message is displayed. To troubleshoot how to correct the error, please refer to the Data Brochure or contact a qualified installer.

An electronic version of the Data Brochure D 545 is available on the tekmar website: [www.tekmarcontrols.com](http://www.tekmarcontrols.com).



## Limited Warranty and Product Return Procedure

**Limited Warranty** *The liability of tekmar under this warranty is limited. The Purchaser, by taking receipt of any tekmar product ("Product"), acknowledges the terms of the Limited Warranty in effect at the time of such Product sale and acknowledges that it has read and understands same.*

The tekmar Limited Warranty to the Purchaser on the Products sold hereunder is a manufacturer's pass-through warranty which the Purchaser is authorized to pass through to its customers. Under the Limited Warranty, each tekmar Product is warranted against defects in workmanship and materials if the Product is installed and used in compliance with tekmar's instructions, ordinary wear and tear excepted. The pass-through warranty period is for a period of twenty-four (24) months from the production date if the Product is not installed during that period, or twelve (12) months from the documented date of installation if installed within twenty-four (24) months from the production date.

The liability of tekmar under the Limited Warranty shall be limited to, at tekmar's sole discretion: the cost of parts and labor provided by tekmar to repair defects in materials and / or workmanship of the defective product; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit limited to the original cost of the defective product, and such repair, exchange or credit shall be the sole remedy available from tekmar, and, without limiting the foregoing in any way, tekmar is not responsible, in contract, tort or strict product liability, for any other losses, costs, expenses, inconveniences, or damages, whether direct, indirect, special, secondary, incidental or consequential, arising from ownership or use of the product, or from defects in workmanship or materials, including any liability for fundamental breach of contract.

The pass-through Limited Warranty applies only to those defective Products returned to tekmar during the warranty period. This Limited Warranty does not cover the cost of the parts or labor to remove or transport the defective Product, or to reinstall the repaired or replacement Product, all such costs and expenses being subject to Purchaser's agreement and warranty with its customers.

Any representations or warranties about the Products made by Purchaser to its customers which are different from or in excess of the tekmar Limited Warranty are the Purchaser's sole responsibility and obligation. Purchaser shall indemnify and hold tekmar harmless from and against any and all claims, liabilities and damages of any kind or nature which arise out of or are related to any such representations or warranties by Purchaser to its customers.

The pass-through Limited Warranty does not apply if the returned Product has been damaged by negligence by persons other than tekmar, accident, fire, Act of God, abuse or misuse; or has been damaged by modifications, alterations or attachments made subsequent to purchase which have not been authorized by tekmar; or if the Product was not installed in compliance with tekmar's instructions and / or the local codes and ordinances; or if due to defective installation of the Product; or if the Product was not used in compliance with tekmar's instructions.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH THE GOVERNING LAW ALLOWS PARTIES TO CONTRACTUALLY EXCLUDE, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, DURABILITY OR DESCRIPTION OF THE PRODUCT, ITS NON-INFRINGEMENT OF ANY RELEVANT PATENTS OR TRADEMARKS, AND ITS COMPLIANCE WITH OR NON-VIOLATION OF ANY APPLICABLE ENVIRONMENTAL, HEALTH OR SAFETY LEGISLATION; THE TERM OF ANY OTHER WARRANTY NOT HEREBY CONTRACTUALLY EXCLUDED IS LIMITED SUCH THAT IT SHALL NOT EXTEND BEYOND TWENTY-FOUR (24) MONTHS FROM THE PRODUCTION DATE, TO THE EXTENT THAT SUCH LIMITATION IS ALLOWED BY THE GOVERNING LAW.

**Product Warranty Return Procedure** All Products that are believed to have defects in workmanship or materials must be returned, together with a written description of the defect, to the tekmar Representative assigned to the territory in which such Product is located. If tekmar receives an inquiry from someone other than a tekmar Representative, including an inquiry from Purchaser (if not a tekmar Representative) or Purchaser's customers, regarding a potential warranty claim, tekmar's sole obligation shall be to provide the address and other contact information regarding the appropriate Representative.



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