

tekmar[®] - User Brochure

Programmable Thermostat 512

U 512

09/09

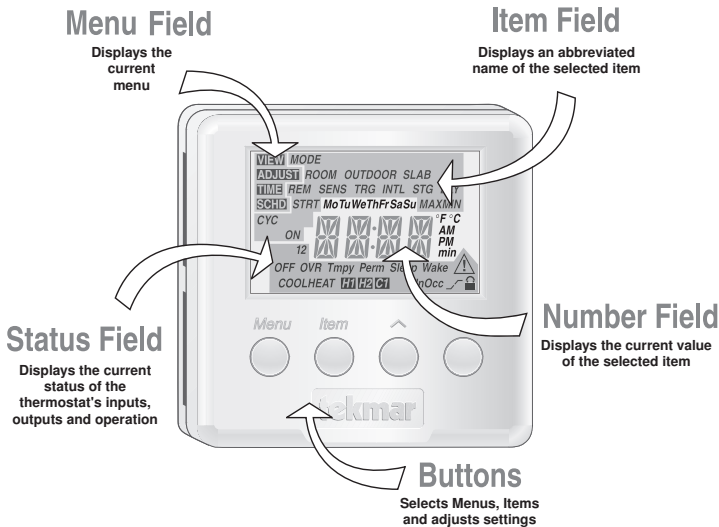
Congratulations on the installation of your tekmar Control Systems programmable thermostat. This thermostat has been designed with state of the art technology and packaged in a compact and attractive enclosure. The large display and easy to use buttons make this thermostat extremely user friendly. This tekmar Control Systems programmable thermostat is designed to increase the comfort level of your home as well as to increase the energy efficiency of your heating system. At the same time these thermostats have been designed to be simple to use.

Table of Contents

Reading the Display	pg 1	Permanent.....	pg 5
Viewing the Current Temperature	pg 2	Away.....	pg 5
Default Display	pg 2	Display Lighting	pg 5
Setting the Temperatures	pg 3	Units of Display.....	pg 6
Setting the Time	pg 3	Setting a Mode of Operation	pg 6
Setting the Schedules	pg 3	Program Schedules.....	pg 7
Overriding the Schedules.....	pg 4	Warranty	pg 8
Temporary	pg 4		

Display / Keypad Operation

The thermostat's display has four distinct fields. These fields are the Menu field, the Item field, the Number field and the Status field. The four buttons on the face of the thermostat are used to navigate through the menus and items to view and / or adjust the desired settings.



Display Symbols



Warning

Displays when an error exists.



Access Level

Displays when in the user access level.



Early Start

Displays when the thermostat is in early start.

Heat One

Displays when the heat one contact is on.

Heat Two

Displays when the heat two contact is on.

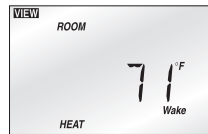
Cool One

Displays when the cool one contact is on.

VIEWING THE CURRENT TEMPERATURE(S)

The View menu allows you to view the current temperature(s) being sensed by the thermostat and its auxiliary sensor(s). To view the various temperatures, begin by selecting the View menu using the **Menu** button. Next use the **Item** button to view the available temperatures.

- Room:** This is the current air temperature of the room that is being controlled. At least one air sensor must be active for this temperature to be displayed.
- Outdoor:** This is the current outdoor air temperature. This item is only available if the auxiliary sensor has been set to sense the outdoor air temperature.
- Slab:** This is the current slab temperature. This item is only available if at least one of the auxiliary sensors has been set to sense the slab temperature.
- Remote:** This is the current temperature at the remote sensor. This item is only available if the auxiliary sensor has been set to sense a remote temperature.

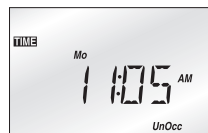


DEFAULT DISPLAY

The default display for the thermostat can be either the time found in the Time menu or any item in the View menu. **To select the default display, use the following procedure.**

Step One: Use the **Menu** button to select either the Time or the View menu.

Step Two: Use the **Item** button to select the desired item.



SETTING THE TEMPERATURE(S)

A separate heating temperature can be set for each event of the schedule. If a slab sensor is connected to the control, a separate minimum slab temperature can be set for each event of the schedule.

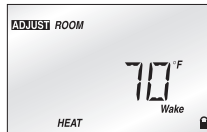
Use the following procedure to set each temperature.

Step One: Press and release the **Menu** button until the Adjust Menu is reached.

Step Two: Press and release the **Item** button until the desired temperature is displayed.

Step Three: Use the **▲** or **▼** button to set the desired temperature. Record this temperature in the schedule table found on page 7.

Repeat steps two and three for each additional temperature.



SETTING THE TIME

Step One: Press and release the **Menu** button until the Time Menu is reached.

Step Two: Press the **Item** button. While the minutes are flashing, use the **▲** or **▼** button to set the proper minutes.

Step Three: Press and release the **Item** button. While the hours are flashing, use the **▲** or **▼** button to set the proper hour.

Step Four: Press and release the **Item** button. While the day is flashing, use the **▲** or **▼** button to set the proper day.



SETTING THE SCHEDULE

A schedule allows the thermostat to automatically change between several preset temperatures based on the time of day. The schedule divides the day into either two or four events. For each event, a different temperature can be set. This allows the room and / or floor to be warm during the day and cooling during the evening and night.

To set the time of day at which each event is to begin, use the following procedure.

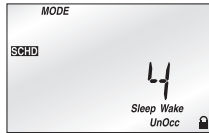
Step One: Press and release the **Menu** button until the Schedule (*SCHD*) Menu is displayed.

Step Two: Press and release the **Item** button. Use the **▲** or **▼** button to select the desired schedule Mode. None = one temperature per day. 2 = two temperatures per day. 4 = four temperatures per day.

Step Three: Press and release the **Item** button. Use the **▲** or **▼** button to select the schedule Cycle, either 7 day or 24 hour.

Step Four: Press and release the **Item** button. Use the **▲** or **▼** button to set the event's beginning time. If the event does not have a time, select the "-- : --" time. This time is found between 11:50 PM and 12:00 AM. Record the event time in the schedule table found on page 7 for future reference.

Repeat step four until all events have been programmed.



OVERRIDING THE SCHEDULE

Temporary Override

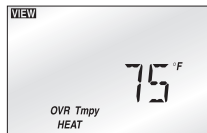
NOTE: A temporary override lasts for three hours and does not permanently change the existing schedule.

Step One: Press and release the **Menu** button until the View Menu is displayed.

Step Two: Press and release the **Item** button until the Room temperature is displayed.

Step Three: Press the **▲** button to increase the temperature to the desired setting or the **▼** button to decrease the temperature to the desired setting.

A three-hour temporary override is now in effect.



Temporary Override for the 512 in the Heat / Cool mode.

NOTE: A temporary override lasts for three hours and does not permanently change the existing schedule.

Step One: Press and release the **Menu** button until the View Menu is displayed.

Step Two: Press and release the **Item** button until the Room temperature is displayed.

Step Three: Press and release either the **▲** or **▼** button once.

Step Four: Use the **Item** button to select between the Heating temperature and the Cooling temperature.

Step Five: Press the **▲** button to increase the temperature to the desired setting or the **▼** button to decrease the temperature to the desired setting.

A three-hour temporary override is now in effect.

Canceling a Temporary Override

To cancel a temporary override, press the **Menu** button once or twice if back light is not lit.

Permanent Override

NOTE: A permanent override stays in effect until a new override is selected. A permanent override does not change the existing schedule.

Step One: Press and release the **Menu** button until the Schedule (*SCHD*) Menu is displayed.

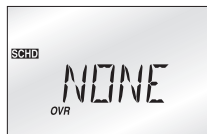
Step Two: Use the **▲** or **▼** button to select the desired permanent override.

Canceling a Permanent Override

To cancel a permanent override, use the following procedure.

Step One: Press and release the **Menu** button until the Schedule (*SCHD*) is displayed.

Step Two: Use the **▲** or **▼** button to select the None setting.



Away Override

An Away override is a quick override that does not change your existing schedule. This is to be used during long periods of absence. When the Away override is selected, the heating temperature is set to 62°F (16.5°C). If a slab sensor is being used with the thermostat, the minimum slab temperature is also ignored. This operation continues as long as the Away override is selected.

To select the Away override, use the following procedure.

Step One: Press and release the **Menu** button until the Schedule (*SCHD*) Menu is displayed.

Step Two: Use the **▲** or **▼** button to select the Away override.

Canceling the Away Override

To cancel the Away override, use the following procedure.

Step One: Press and release the Menu button until the Schedule (*SCHD*) Menu is displayed.

Step Two: Use the **▲** or **▼** button to select the None setting.

DISPLAY LIGHTING

The display of the thermostat has a back light setting. The back lighting can be turned off, turned on or set to operate temporarily for 60 seconds after any button is pressed.

To set the operation of the back lighting of the display, use the following procedure.

Step One: Press and release the **Menu** button until the Adjust Menu is reached.

Step Two: Press and release the **Item** button until the word LITE is displayed.

Step Three: Use the **▲** or **▼** button to select the desired back light operation.

NOTE: If the back light setting is temporary, the first press of a button turns on the back light.



UNITS OF DISPLAY

To select between Fahrenheit and Celsius, use the following procedure.

Step One: Press and release the **Menu** button until the Adjust Menu is reached.

Step Two: Press and release the **Item** button until the current temperature unit begins to flash.

Step Three: Use the **▲** or **▼** button to select between Fahrenheit and Celsius.



SETTING THE MODE OF OPERATION

Off: In the off mode, the thermostat does not operate the heating for the room.

Heat: In the heat mode, the thermostat operates to maintain the room at the required heating temperature.

Cool: In the cool mode, the thermostat operates to maintain the room at the required cooling temperature and ensures that the heating does not turn on.

Auto: This mode allows the thermostat to automatically switch between heating and cooling the room as the air temperature requires. If a slab sensor is installed, the floor maintains the minimum slab temperature even during cooling.



FOUR EVENT DEFAULT PROGRAM

Event	Heat	Slab Min	24 Hour Schedule	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Wake	70°F (21.0°C)	70°F (21.0°C)	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM
UnOcc	62°F (16.5°C)	OFF	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM
Occ	70°F (21.0°C)	70°F (21.0°C)	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	62°F (16.5°C)	OFF	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM

FOUR EVENT USER PROGRAM

Event	Heat	Slab Min	24 Hour Schedule	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Wake										
UnOcc										
Occ										
Sleep										

TWO EVENT DEFAULT PROGRAM

Event	Heat	Slab Min	24 Hour Schedule	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Occ	70°F (21.0°C)	70°F (21.0°C)	6:00 PM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM
UnOcc	62°F (16.5°C)	OFF	8:00 AM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM	10:00 PM

TWO EVENT USER PROGRAM

Event	Heat	Slab Min	24 Hour Schedule	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Occ										
UnOcc										

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



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