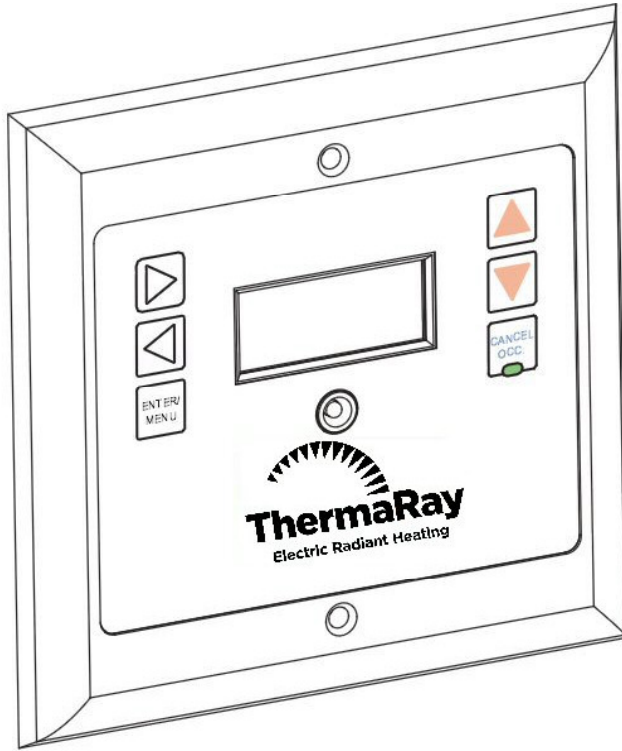


# Getting started with ThermaRay's Comfort Controller is as easy as... 1,2,3.



1

Press CANCEL/OCC to put Comfort Control in manual mode.

2

Verify that the green light is on indicating manual mode.

3

Choose the desired room temperature using the Up or Down arrows. Press ENTER/MENU to save the change. You can change this temperature at any time.

## Notes:



o Your Ceiling System is calling for heat when an **UP** arrow is displayed.



o Your Floor or Earth Storage System is calling for heat when a **Down** arrow is displayed.

o Your System will turn ON when the temperature difference between the comfort settings and the floor or room temperature is more than 2° Fahrenheit (1°C).



APPLIES TO MODELS SR240/120



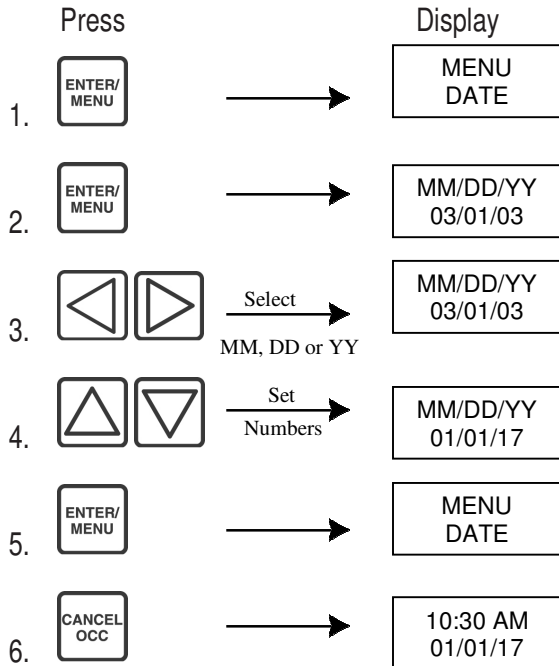


Whether you're a contractor, architect, builder or homeowner, creating the perfect indoor environment has always been a challenge. ThermaRay, the world's #1 name in thermal comfort systems, provides you with the ideal solutions for your comfort. Please take the time to read this operation guide carefully before you begin. A diagram of the menu display system is found at the end of this guide for easy reference.

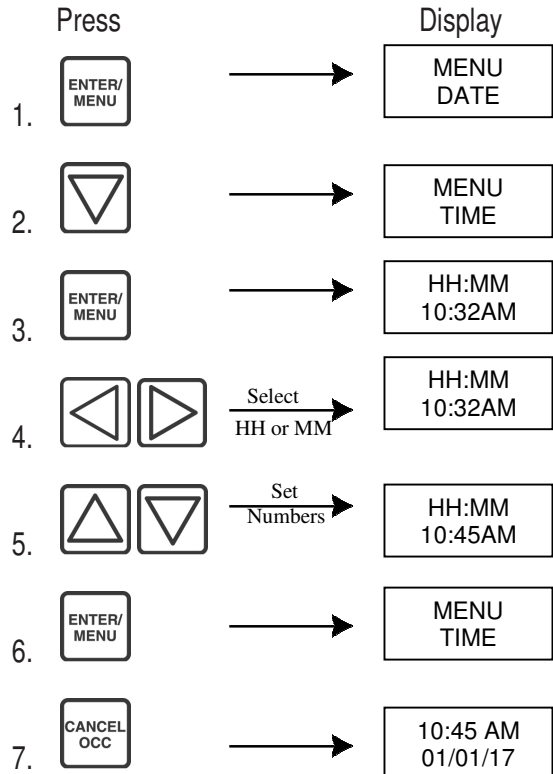
## COMFORT CONTROLLER LINE VOLTAGE (SR-240/120) OWNERS MANUAL

ThermaRay's Comfort Controller displays the current time and room date. It also displays the room/floor temperature and the given temperature set point. It is programmable and operational in both English and French. See the Secondary Features section on page 4/7 to set language preference.

### SET DATE



### SET TIME



## SET MODE

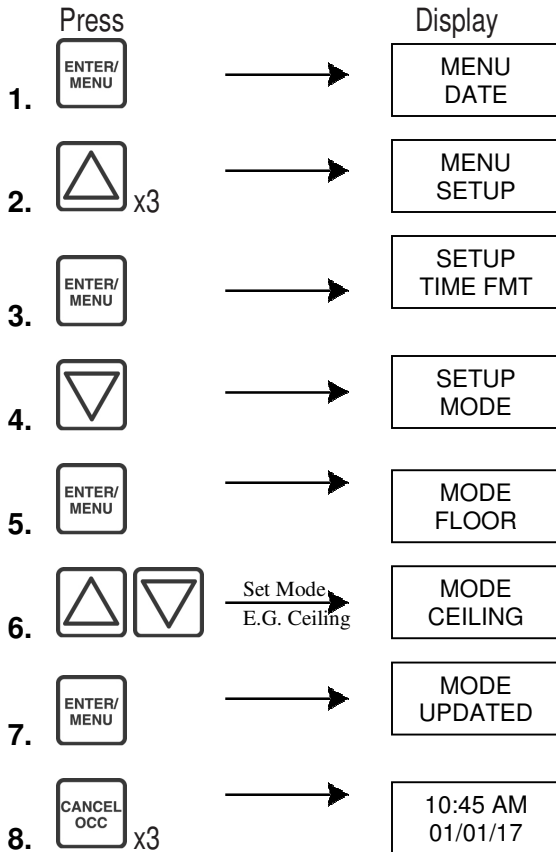
This option needs to be set as it allows you to input which system (s) (Floor, Ceiling or ETS) are being controlled by this particular controller.

**BOTH** - Does not apply with a line voltage control.

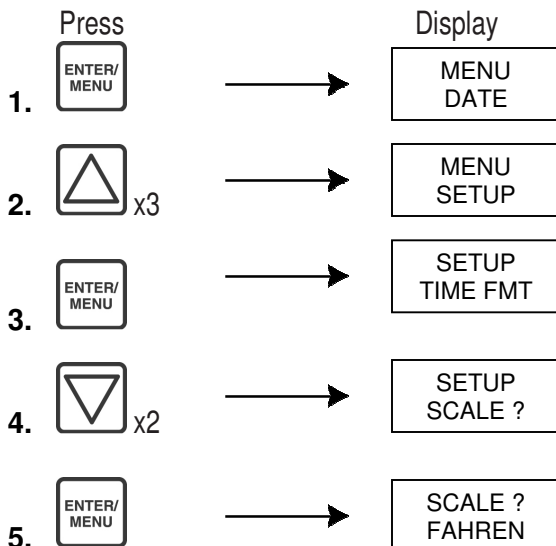
**ETS + DHW** - Earth Thermal Storage and Domestic Hot Water

**FLOOR** - Floor System only

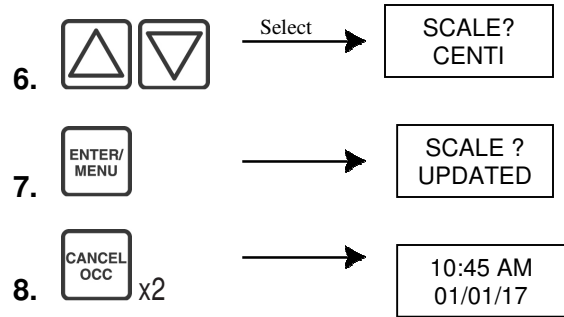
**CEILING** - Ceiling System only



## SET TEMP SCALE

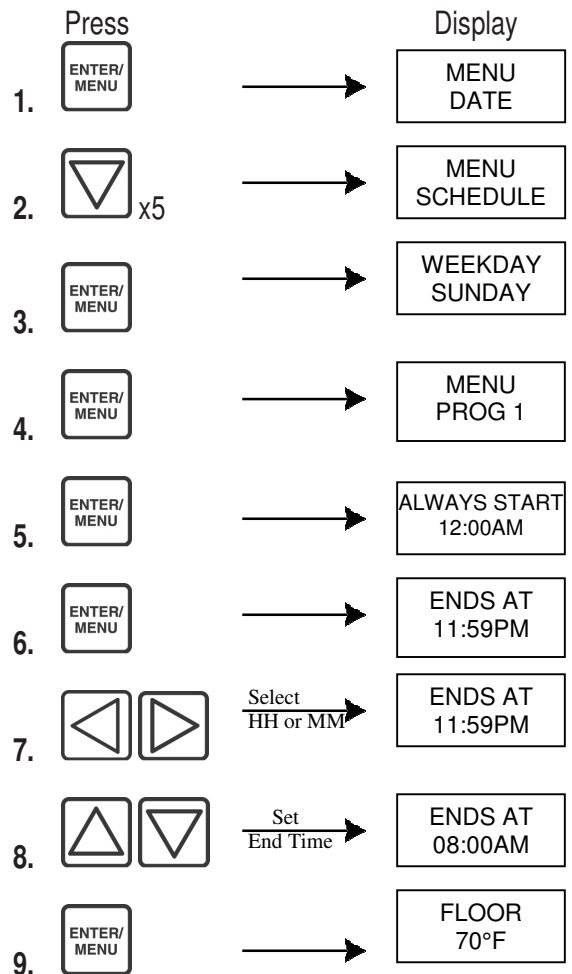


## SET TEMP SCALE Continued

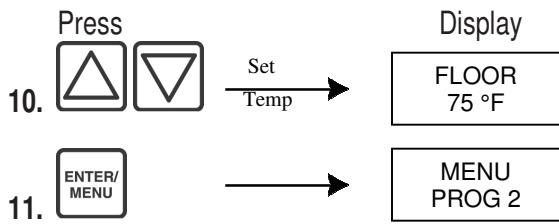


## SET DAILY PROGRAMMING

Use this function to program your heating schedule for each day of the week. The controller accepts up to five set points per day with the first starting at 12:00AM and the last ending at 11:59PM. For Earth Storage - if your utility does not have the capability of remotely turning off the power to your ETS system, we suggest that you set your programs to turn off 10 minutes before peak rates come into effect. This should avoid peak rate charges due to clock misalignment.

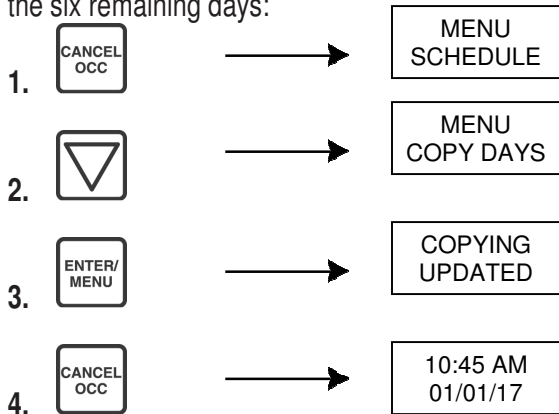


## SET DAILY PROGRAMMING *Continued*



Repeat steps 5-10 until you reach PROG 5 or until your end time reaches 11:59PM.

To copy all the programs from Sunday to the rest of the six remaining days:



**Note:** "Copy Days" saves you programming time. If you prefer your weekdays to be programmed differently than the weekend days, program Sunday as if it were Monday. Use "Copy Days" to make all days the same and then return to step 4 and modify Saturday and Sunday.

### Ready to Operate

After setting all of your days programs, your ThermaRay Comfort Controller is ready to start operating on its own. If at any time you wish to override your heating schedule, you can easily press the CANCEL/OCC button to activate the Occupied Temperature Override. The light below the CANCEL/OCC button turn on when the override is activated. Pressing the CANCEL/OCC button again will reactivate the regular heating schedule. Should you forget to cancel the override, the ThermaRay Comfort Control will remain in the manual override mode - the program schedule will not be activated. The occupied temperature setting can also easily be changed by pressing the **UP** or **DOWN** arrows when your time, date and temperature are being displayed. Just make sure you press the ENTER/MENU button after you have made a change in temperature or the change may not take effect.

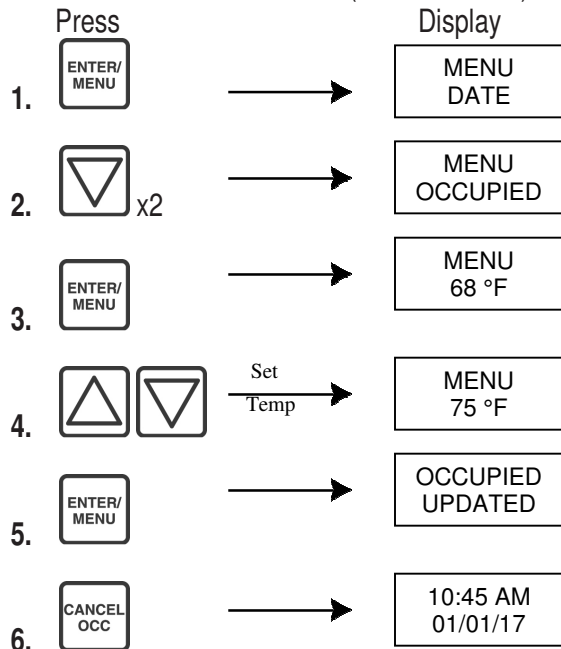
Use this chart to keep track of your preferred program schedules.  
Enter the program end-time and desired temperature in each of the given boxes

Day	Prog1 time	Prog1 temp	Prog2 time	Prog2 temp	Prog3 time	Prog3 temp	Prog4 time	Prog4 temp	Prog5 time	Prog5 temp
Sun										
Mon										
Tue										
Wed										
Thu										
Fri										
Sat										

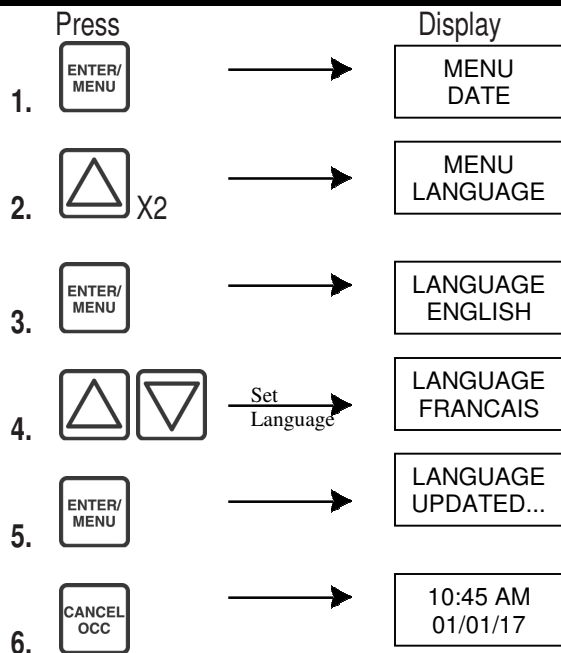
## SECONDARY FEATURES

### SET OCCUPIED TEMPERATURE

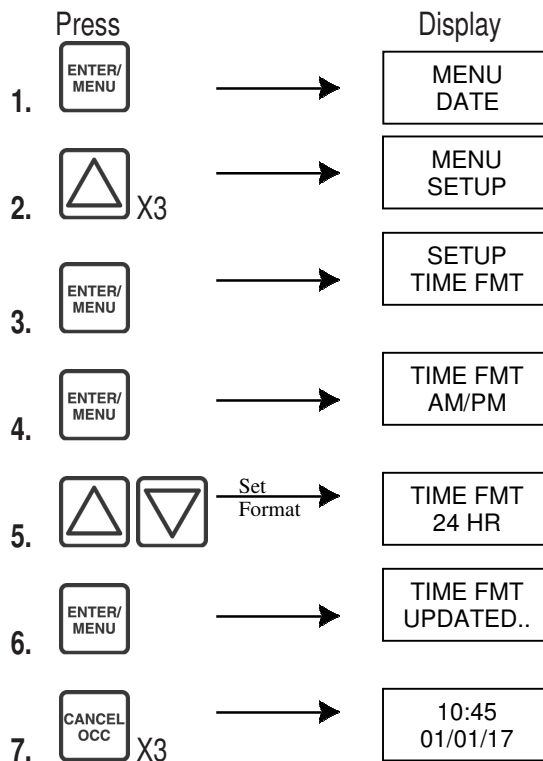
Use this function to set the default room temperature when you choose to override your daily programs. To override the daily programs, press CANCEL/OCC to set the control in manual mode (Green LED on).



### SET LANGUAGE

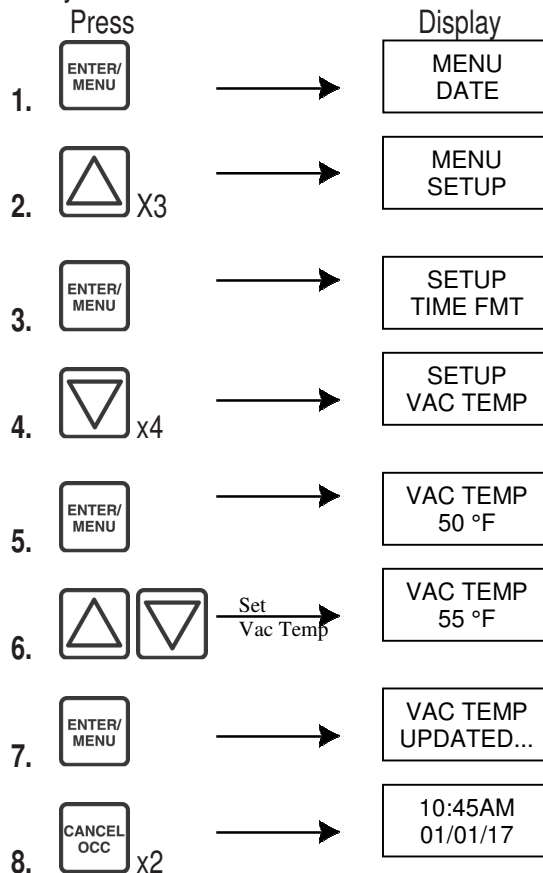


### SET TIME FORMAT



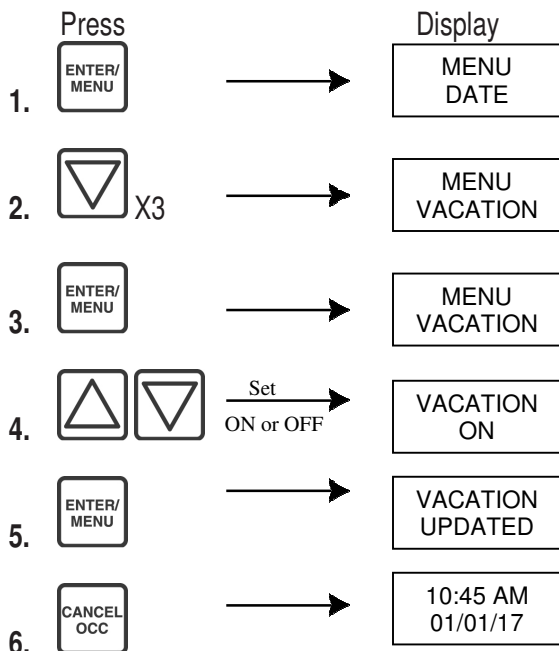
### SET VACATION TEMP

Use this function to program the temperature set point used by the vacation function.

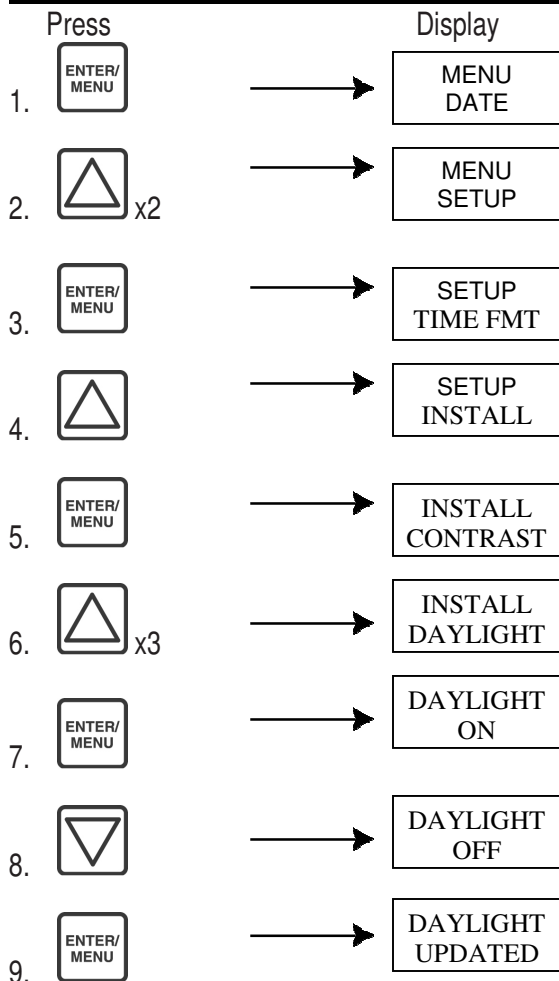


## SECONDARY FEATURES CONTINUED

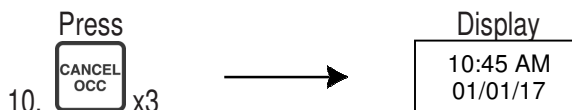
### ACTIVATE VACATION TEMP



### SET DAYLIGHT SAVINGS TIME



### DAYLIGHT SAVINGS TIME Continued



### LOCKOUT OPTION

For Future Release

### MULTIPLE SOURCES OPTION

**Testing/Viewing Current Temperature Readings from Available Sources** - To test/ view the currently read sensors from both the ceiling and floor sensors, go to the MENU screen, select MENU SETUP from the options, press MENU/ENTER and then scroll to INSTALL SENSORS and hit ENTER/MENU again. Use the UP and DOWN arrows to select the sensor you want to read and then press MENU/ENTER. Once you are done, press the CANCEL/OCC button until you have returned to the rotating display screen.

**Selecting the Appropriate Sensor** - You can set the ThermaRay controller to measure from either the floor sensor or the face (onboard) sensor. The default sensor for modes are:

**CEILING MODE** - Face sensor

**FLOOR MODE** - Floor sensor

**BOTH MODE** - Does not apply with a line voltage control.

**ETS/DHW MODE** - Floor sensor for the slab and High Limit for the heaters to ensure overheating does not occur.

You can change the default sensor for CEILING MODE to use a remote sensor for areas where a thermostat can not be placed close enough to the heat target, or for Under Floor Warming. The SR Sensor must be plugged into the High Limit port on the controller. To have the controller talk to the remote sensor. Press MENU/ENTER and then scroll to MENU SETUP. Press MENU/ENTER again and scroll to SETUP INSTALL. Press MENU/ENTER again and scroll to INSTALL DEF SENS. Hit MENU/ENTER again and then scroll to the LIMIT and hit ENTER/MENU again. Press CANCEL/OCC x4 to return to the scrolling display.

To change the default floor sensor for ETS/DHW repeat the step above and change the sensor to the FACE T.

If your floor sensor fails in any mode, you can simply unplug it from the back of the controller. Your temperature will report as ROOM T and there will be an "" beside it to indicate the sensor is unplugged.



## SECONDARY FEATURES CONTINUED

### TROUBLESHOOTING

Use the following information to troubleshoot your comfort controller.

**Room T ""** - Indicates the floor sensor is not working or is unplugged. No need to worry, your ThermaRay controller defaults to the Face Sensor. Your floor warming or ETS system will continue to function normally. You may want to do one of the following:

- A. Remove the controller from the wall by removing the two white screws. Check to see if the floor sensor is properly connected in the floor sensor receptacle.
- B. Leave everything as is.
- C. Replace the floor sensor. You can embed a sensor in a grout line, taking care not to damage the cable. You may have to adjust your set point as the sensor will be in a different location with relation to the floor cable

**Garbled Screen** - Press  and . If this does not work, remove the controller from the wall by removing the two white screws. Unplug the power module plug and wait one minute. Plug the controller back in and remount to the wall. Garbled screens are due to voltage fluctuations caused by surges or brown outs. If this happens often permanent damage may be done to the controller. To prevent this, you may want to have a surge suppressor installed for the breaker that powers your heating system.

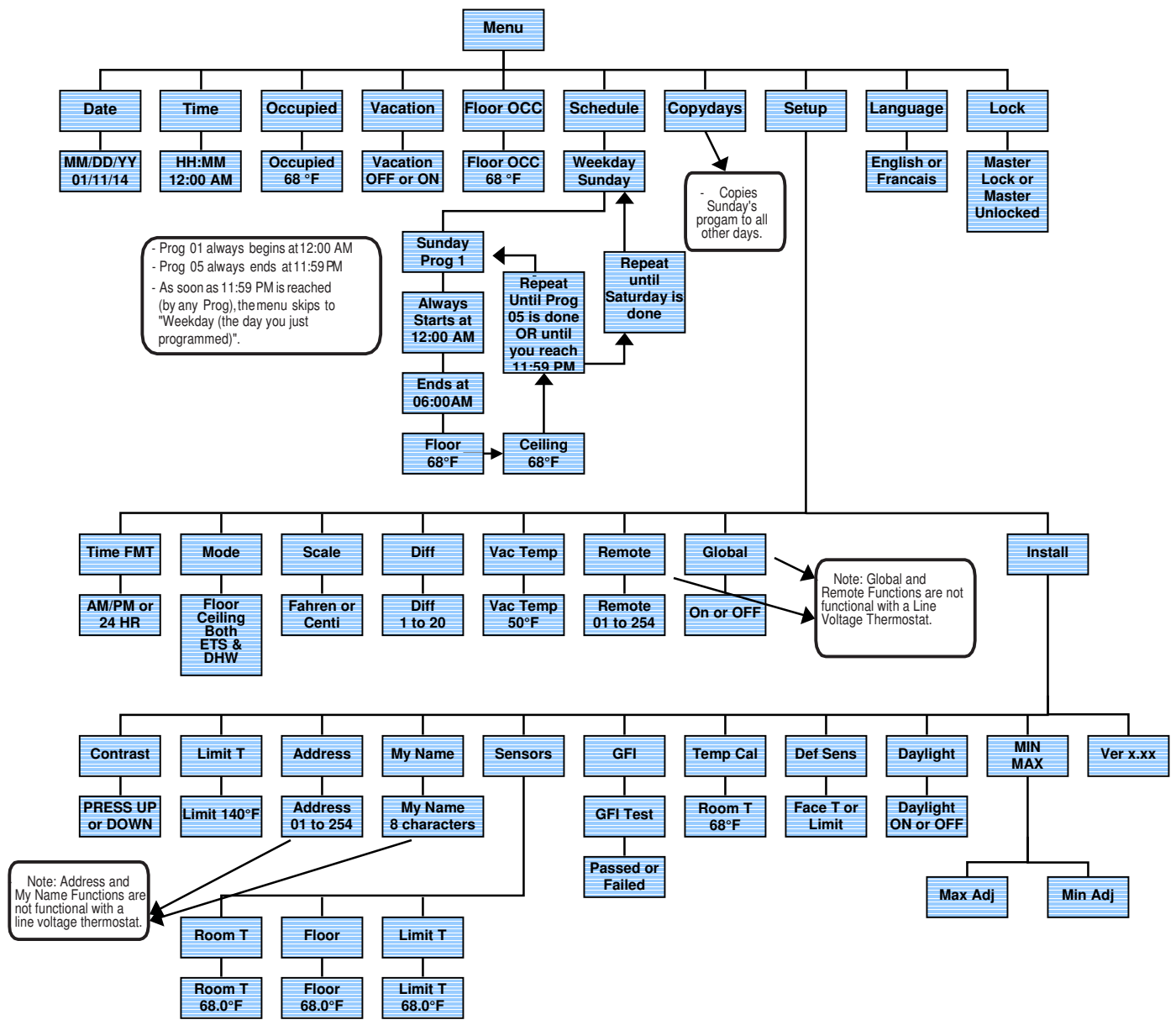
**No Answer**- This is a remote function error. Check that the thermostat is firmly plugged in.

**Room T - 50 (°F or °C)** - The face sensor is broken and a new controller must be installed.

**Heat Continuously On** - Check to see if the arrow is on the screen. If it is not, check to see if the power module is putting out power to the heating circuit. If it is, a new power module is needed.



# System Diagram



## Warranty

ThermaRay Inc., One (1) Year Limited Warranty. ThermaRay Inc. warrants the controller free of defect in material and workmanship after proper installation for a period of one (1) year from the date of installation. During this period, ThermaRay Inc will replace or repair the controller without charge if it has been used under normal conditions. The warranty does not cover delivery costs. The warranty does not apply if poorly installed or damaged after installation. ThermaRay will not compensate for subsequent damage, direct or indirect, resulting from the failure of the controller. All other representation, warranties and conditions, whether oral or written, express or implied, statutory or otherwise are expressly excluded. The defective controller must be returned to the place of purchase or sent prepaid to ThermaRay Inc.

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