

Robertshaw®

RS8210

Operation Manual

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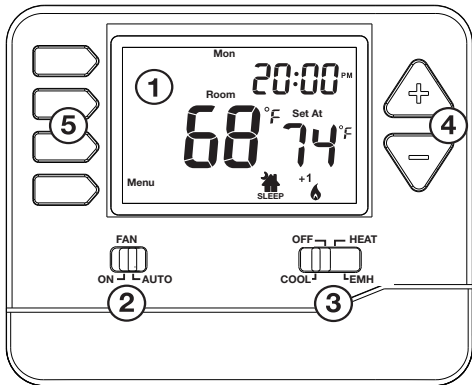
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Caution

DO NOT SWITCH SYSTEM TO COOL IF THE TEMPERATURE IS BELOW 50°F (10°C). THIS CAN DAMAGE THE AIR CONDITIONING SYSTEM AND CAUSE PERSONAL INJURY.

THERMOSTAT OPERATION



- 1** LCD Screen
- 2** Fan Switch
- 3** System Switch
- 4** Temperature Set-Point Buttons
- 5** User Buttons

1 LCD Screen

See page 4 for details about this display read out.

2 Fan Switch

Select ON or AUTO. ON will run the fan continuously. AUTO will cycle the fan on only when the heating or cooling system is running.

3 System Switch

Selects the **HEAT** or **COOL** for your HVAC system. Selecting HEAT turns on the heat mode. Selecting COOL turns on the cool mode. Selecting OFF turns both heating and cooling off.

Selecting EMH (for heat pumps with auxiliary heat) will lockout the compressor and control emergency/auxiliary heat.

4 Temperature Set-Point Buttons

Press the  or  to select the desired temperature.

5 User Buttons

Use these buttons to set up programming options.

THERMOSTAT QUICK REFERENCE

Days of the week and time.

Displays the user selectable set-point temperature.

Hold: Is displayed when thermostat program is overridden.

Low Battery Indicator: Replace batteries when indicator is shown.

System Operation Indicators: The ❄️, 🔥 or 🌀 icon will display when the **COOL**, **HEAT**, or **FAN** is on.

NOTE: If these icons are flashing, there is a 5-minute delay for compressor protection.

Button Options

Programmable Time Periods: This thermostat has 4 programmable time periods per day.

Indicates the current room temperature.


The thermostat display includes the following elements:

- Tech Set Next Step** (top left)
- Days of the week and time** (Sun Mon Tue Wed Thu Fri Sat, 88:88 AM PM)
- Min Com On Com Delay Heat Cool Swing** (top middle)
- Room 72** (large central display)
- Hold Filter Set At 72°F** (right side)
- Menu Done** (bottom left)
- WAKE LEAVE RETURN SLEEP** (bottom middle icons)
- +1 +2** (bottom right)
- System Operation Indicators** (❄️, 🔥, 🌀)
- Battery Indicator** (bottom right)

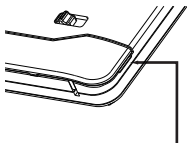
THERMOSTAT QUICK REFERENCE



Caution:

When the battery icon  appears, replace the alkaline AAA batteries immediately to avoid damage to your HVAC system. Freezing or overheating could occur

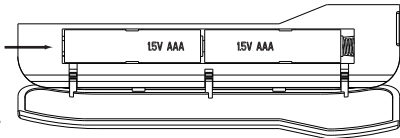
Battery Door Information



Press the lower portion of the thermostat to open the easy access battery door.

Install two AAA Alkaline batteries into battery compartment. Be sure to

match positive (+) ends of batteries with positive (+) battery terminals in the battery compartment.



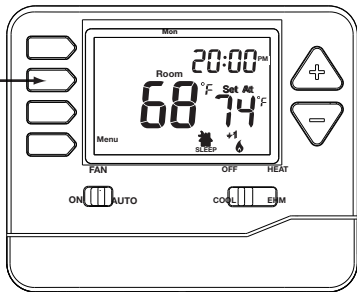
THERMOSTAT QUICK REFERENCE

Filter Change Reminder







The thermostat can be configured to remind you when the air filter needs to be changed. The filter change reminder can be adjusted to up to 2000 hours in 50 hour increments.

If the installer configured the thermostat to issue this reminder, **FILTER** will be displayed when it is time to change the air filter. When **FILTER** is displayed, you should change the air filter and reset the Filter Change Reminder by holding down the second button from the top left side of the thermostat for 3 seconds.



Hold down button for
3 seconds to reset
filter reminder.





Set Time

1. Press the **MENU** button.
2. Press **SET TIME**.
3. Day of the week will be flashing. Use  or  to select the current day of the week.
4. Press **NEXT STEP**.
5. The current hour will be flashing. Use  or  to select the current hour. Note the correct a.m. or p.m. indicator is selected.
6. Press **NEXT STEP**.
7. The minutes will be flashing. Use  or  to select the current minutes.
8. Press **DONE** when completed.

Set temperature

1. Use  or  to select set temperature.

INSTALLER SETUP MENU

1. Press **MENU**.
2. Press and hold **TECH SET** for 3 seconds.
3. Configure the installer options as desired using the table below.
4. Use  and  to change settings and the **NEW STEP** or **PREV STEP** to move from one option to another.

Note: Only press **DONE** when you want to exit the Installer Setup Options.

Feature	Filter Change Reminder	Room Temperature Calibration	Minimum Compressor On Time	Compressor Short Cycle Delay	Cooling Differential	Heating Differential
Adjustment Options	The filter change reminder can be adjusted from OFF to 2000 hours in 50 hour increments.	The room temperature display can be adjusted to read 3° above or below the factory calibrated temperature.	The minimum compressor run time can be adjusted from OFF to 3, 4, or 5 minutes. If 3, 4, or 5 is selected, the compressor will run for at least the selected time before turning off (although the fan may continue to run for a short time).	The compressor short cycle delay setting can be removed by selecting OFF .	The cooling differential setting is adjustable from 0.2°F to 2°F	The heating differential setting is adjustable from 0.2°F to 2°F.

INSTALLER SETUP MENU

Feature	Filter Change Reminder	Room Temperature Calibration	Minimum Compressor On-Time	Compressor Short Cycle Delay	Cooling Differential	Heating Differential
Factory default settings	OFF	0°F	OFF	On	0.5°F	0.4°F
Feature Description	This setting will flash FILT in the display after the elapsed run time to remind the user to change the filter. The OFF setting will disable this feature.	This setting allows the installer to change the calibration of the room temperature display so that, for example, the thermostat would read 72°F instead of 70°F.	The installer can select the minimum run time for the compressor to help protect the compressor from short-cycling.	The compressor short cycle delay setting will not allow the compressor to be turned on for 5 minutes after it was last turned off in order to protect the compressor.	The cooling differential is factory preset at 0.5°. This means that whenever the room temperature heats by 0.5° full degree from the temperature setting, the cooling system will turn on. If the cooling system turns on too often, increase the temperature differential.	The heating differential is factory preset at 0.4°. This means that whenever the room temperature cools by 0.4° from the temperature setting, the heating system will turn on. If the heating system turns on too often, increase the temperature differential.
LCD will show	<small>Next Step</small> OFF <small>Prev Step</small> F I S E <small>Done</small>	<small>Next Step</small> CAL <small>Prev Step</small> 0° <small>Done</small>	<small>Next Step</small> OFF <small>Prev Step</small> ON ON <small>Done</small>	<small>Next Step</small> ON <small>Prev Step</small> CO OF <small>Done</small>	<small>Next Step</small> dF CO <small>Prev Step</small> 0.5 <small>Done</small>	<small>Next Step</small> dF HE <small>Prev Step</small> 0.4 <small>Done</small>

INSTALLER SETUP MENU

FILTER Setting: Display SE FI, flashing 1000 (the default value 1000 hours), select from 50-2000 hours.

Temperature Calibration: Display CAL and flashing 0°F (the default value 0), select from -3-3°F.

Minimum compressor on time: Display AN ON and flashing OFF (default setting), select from OFF, 3, 4 or 5 minutes.

Compressor Delay Time Setting: Display CO OF and flashing ON (default setting), select from ON or OFF.

Cooling Differential Setting: Display df CO and flashing 0.6, choose from 0.2-2.0 (factory default setting: 0.6°F).

Heating Differential Setting: Display df HE and flashing 0.5, choose from 0.2-2.0 (factory default setting: 0.5°F).

°F/°C Selection: Setting F (Fahrenheit) or C (Celsius).

24H/12H Selection: Setting the 24 hour or 12 hour time format.

ELEC/GAS Selection: Select the ELEC or GAS.

W2	Auxiliary heat relay
Y	Compressor relay
G.....	Fan relay
O.....	Heat pump reversing valve energized in cooling
RH	24VAC Power
C.....	Common wire (if applicable)
B.....	Heat pump reversing valve energized in heating
E	Emergency heat relay

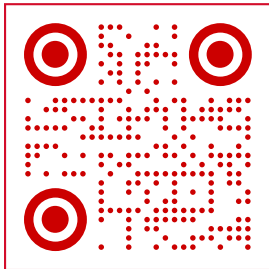
Note:

In many systems with no emergency heat relay, a jumper can be installed between E and W2.



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