

Robertshaw®
RS8210

Operation Manual



RS8210

Table of Contents

Page

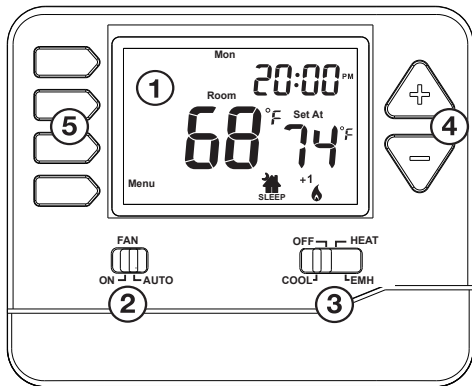
Table of Contents	1
Thermostat Operation	2-3
Thermostat Quick Reference	4-6
Programming	7
Technician Setup Menu	8-10
Terminal Designations	11



Caution

Equipment damage hazard. Do not operate the cooling system if the outdoor temperature is below 50°F (10°C) to prevent possible compressor damage.

THERMOSTAT OPERATION



① LCD Screen

② Fan Switch

③ System Switch

④ Temperature Setpoint Buttons

⑤ User Buttons

THERMOSTAT OPERATION

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 operation mode on 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 Setpoint Buttons


Press the + or - buttons to select the desired room temperature.

⑤ User Buttons

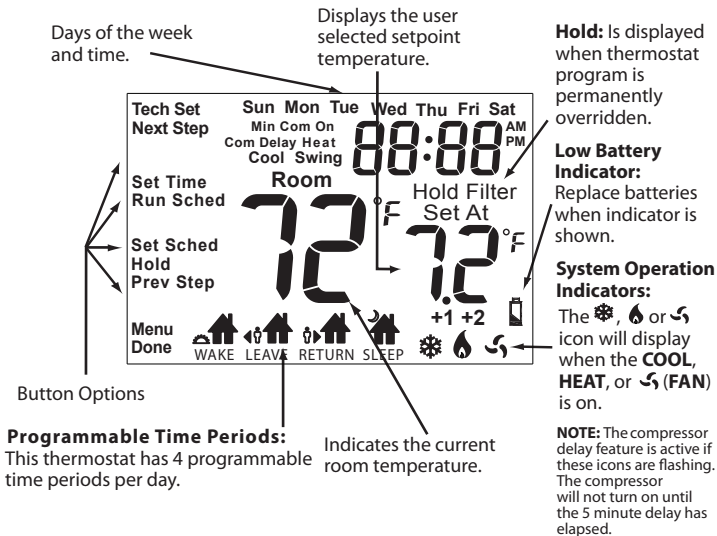
Use these buttons to set up your programming options. Refer to the next page for detail.



Caution:

When the battery icon  appears replace your AAA batteries immediately. Failure to do so may result in your heating and cooling system becoming inoperable. Freezing or overheating can occur.

THERMOSTAT QUICK REFERENCE



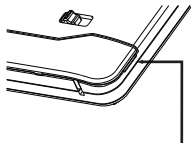
THERMOSTAT QUICK REFERENCE



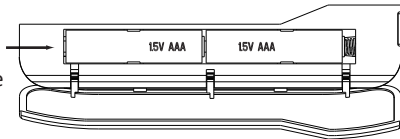
Important:

The low battery indicator is displayed when the 2x AAA batteries need to be replaced.

Battery Door Information



Replace with 2xAAA Alkaline Batteries. High quality Alkaline batteries are recommended.



Use the finger bevel on the lower portion of the thermostat to open the easy access battery door.

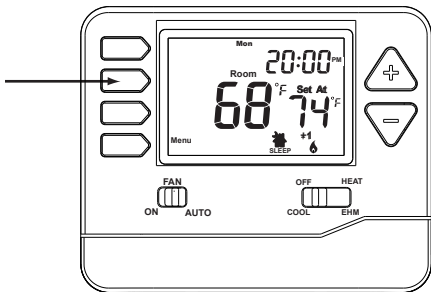
THERMOSTAT QUICK REFERENCE

Filter Change Reminder







If your HVAC contractor has configured the thermostat to remind you when the air filter needs to be changed, you will see **FILTER** in the display when your air filter needs to be changed.

Resetting the filter change reminder: When **FILTER** reminder is displayed, you should change your air filter and reset the reminder by holding down the second button from the top left side of the thermostat for 3 seconds.



Hold down 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 the  or  key to select the current day of the week.
4. Press **NEXT STEP**.
5. The current hour is flashing. Use the  or  key to select the current hour. When using 12-hour time, make sure the correct a.m. or p.m. choice is selected.
6. Press **NEXT STEP**.
7. Minutes are now flashing. Use the  or  key to select current minutes.
8. Press **DONE** when completed.

Set temperature

1. Use  or  key to select set temperature.

TECHNICIAN SETUP MENU

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

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

Feature	Filter Change Reminder	Room Temperature Calibration	Minimum Compressor On Time	Compressor Short Cycle Delay	Cooling Differential or Swing	Heating Differential or Swing
Adjustment Options	You can adjust the filter change reminder from OFF to 2000 hours of runtime in 50 hour increments.	You can adjust the room temperature display to read - 4°F to 4°F above or below the factory calibrated reading.	You can select the minimum compressor run time from OFF , 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.	Selecting ON will not allow the compressor to be turned on for 5 minutes after the last time the compressor was on. Select OFF to remove this delay.	The cooling differential (also called swing) setting is adjustable from $\pm 0.2^{\circ}\text{F}$ to $\pm 2^{\circ}\text{F}$. For example: A differential setting of 0.5°F will turn the cooling on at approximately 0.5°F above the setpoint and turn the cooling off at approximately 0.5°F below the setpoint.	The heating differential (also called swing) setting is adjustable from $\pm 0.2^{\circ}\text{F}$ to $\pm 2^{\circ}\text{F}$. For example: A differential setting of 0.5°F will turn the heating on at approximately 0.5°F below the setpoint and turn the heating off at approximately 0.5°F above the setpoint.

TECHNICIAN SETUP MENU

Feature	Filter Change Reminder	Room Temperature Calibration	Minimum Compressor On Time	Compressor Short Cycle Delay	Cooling Differential or Swing	Heating Differential or Swing
Factory default settings	OFF	0°F	OFF	On	0.5°F	0.4°F
Feature Description	This feature will flash FILT in the display after the elapsed run time to remind the user to change the filter. A setting of OFF will disable this feature.	This feature allows the installer to change the calibration of the room temperature display. For example, if the thermostat reads 70°F and you would like it to read 72°F then select +2.	This feature allows the installer to select the minimum run time for the compressor. For example: A setting of 4 will force the compressor to run for at least 4 minutes every time the compressor turns on, regardless of the room temperature.	The compressor short cycle delay protects the compressor from short cycling. This feature will not allow the compressor to be turned on for 5 minutes after it was last turned off.	The differential setting often called cycle rate or anticipation is adjustable. A smaller differential setting will cause more frequent cycles and a larger differential setting will cause fewer cycles.	The differential setting, often called cycle rate or anticipation is adjustable. A smaller differential setting will cause more frequent cycles and a larger differential setting will cause fewer cycles.
LCD will show	<div>Next Step</div> <div>OFF</div> <div>Press Step</div> <div>Done</div>	<div>Next Step</div> <div>CAL</div> <div>Press Step</div> <div>Done</div>	<div>Next Step</div> <div>OFF</div> <div>Press Step</div> <div>Done</div>	<div>Next Step</div> <div>ON</div> <div>Press Step</div> <div>Done</div>	<div>Next Step</div> <div>dF CO</div> <div>Press Step</div> <div>Done</div>	<div>Next Step</div> <div>dF HE</div> <div>Press Step</div> <div>Done</div>

TECHNICIAN 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 (also called Swing) Setting: Display df CO and flashing 0.6, choose from 0.2-2.0 (factory default setting: 0.6°F).

Heating Differential (also called Swing) 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.

TERMINAL DESIGNATIONS

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:

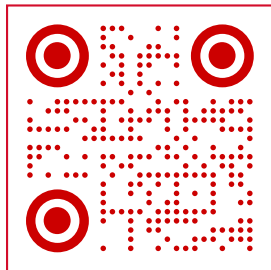
In many systems with no emergency heat relay, a jumper can be installed between E and W2.







Customer Service +1.800.304.6563
Technical Service +1.800.445.8299
HVACCustomerService@robertshaw.com
www.robertshaw.com • 352-00310-001



6 Year
Limited
Warranty

Use Phone
to Scan for
Warranty Info