

*Robertshaw®*

# **RS9220**

Operation Manual



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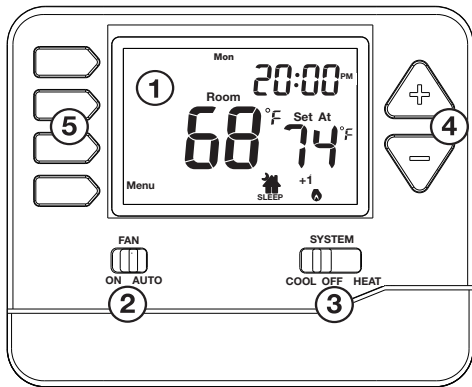
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### Caution

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

**4** Temperature Set-Point Buttons

**2** Fan Switch

**5** User Buttons

**3** System Switch

### 1 LCD Screen

See page 4 for detailed information.

### 2 Fan Switch

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

### 3 System Switch

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

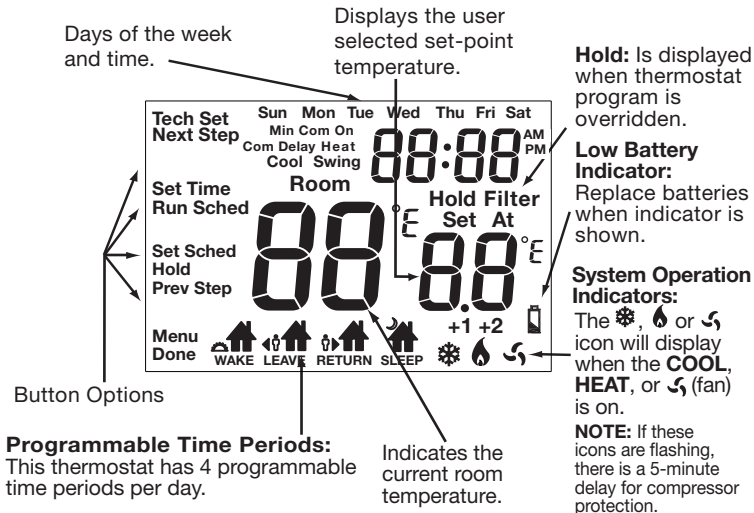
### 4 Temperature Set-Point Buttons

Press  or  to select the desired temperature.

### 5 User Buttons

Use these buttons to set up programming options.


# THERMOSTAT QUICK REFERENCE



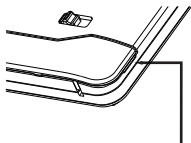
## THERMOSTAT QUICK REFERENCE



### Caution:

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

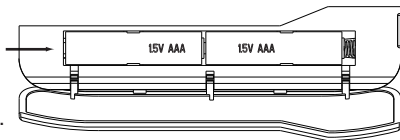
## Battery Door Information



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

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### Temperature Adjustment (if Using a Program Schedule)

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**Temporary Adjustment:** You may temporarily change the desired temperature set-point by pressing either  or . The temperature will remain at this set-point until the next programmed **WAKE, LEAVE, RETURN, or SLEEP** event. The program schedule will then resume.

**Program Schedule Hold:** The thermostat will display **HOLD** and **RUN SCHED** on the left of the screen when you press either  or . You may hold the temperature at a fixed temperature set-point and override the program schedule by pressing **HOLD**. The thermostat will display **HOLD** below the temperature set-point to notify you that the program schedule hold is in effect.

**To Return to Programming:** Press **RUN SCHED** to return to the program schedule.

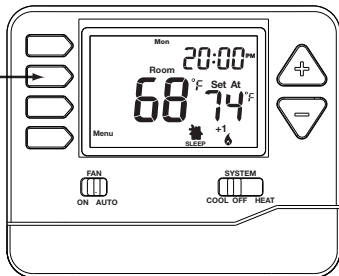


### Filter Change Reminder

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.









## PROGRAMMING

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### Set Time of Day and Day of Week

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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 current minutes.
8. Press **DONE** when completed.

## Custom Programming

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This thermostat can be configured to have 7 Day or 5+1+1 programming. If 7 Day is selected, all seven days will need to be programmed individually. If 5+1+1 programming is selected, Monday–Friday will be programmed together and Saturday and Sunday will need to be programmed individually. There are four time periods for each day (**WAKE, LEAVE, RETURN, SLEEP**).



Follow the steps below to customize your program schedule:

1. Select **HEAT** or **COOL**. Note: Heat and cool need to be programmed separately.
2. Press **MENU** (If menu does not appear first, press **RUN SCHED**).
3. Press **SET SCHED**. Note: Monday–Friday (or Monday if in 7 Day mode) will be displayed and the **WAKE** icon is shown.
4. Time will be flashing. Use  or  to make your time selection for the **WAKE** time period for Monday–Friday (or Monday if in 7 Day mode).

## PROGRAMMING




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5. Press **NEXT STEP**.
6. The set-point temperature will be flashing. Use  or  to make your set-point selection for the **WAKE** time period for Monday–Friday (or Monday if in 7 Day mode).
7. Press **NEXT STEP**.
8. Repeat steps 4 through 7 for the **LEAVE** time period, for the **RETURN** time period, and for the **SLEEP** time period for Monday–Friday (or Monday if in 7 Day mode).
9. Repeat steps 4 through 8 for the Saturday **WAKE, LEAVE, RETURN,** and **SLEEP** time periods, and then again for the Sunday **WAKE, LEAVE, RETURN,** and **SLEEP** time periods for the 5+1+1 program schedule, and for each day for the 7-day program schedule.

1. Press **MENU**.
2. Press and hold **TECH SET** button for 3 seconds.
3. Configure the installer options as desired using the table.
4. Use  or  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.






## INSTALLER SETUP MENU

Settings		Display	Adjustment Options	Default
Filter Change Reminder	This setting will flash <b>FILT</b> in the display after the elapsed run time to remind the user to change the filter. The <b>OFF</b> setting will disable this feature.	Next step <b>OFF</b>  Prev step	The filter change reminder can be adjusted from <b>OFF</b> to 2000 hours in 50 hour increments. Press the second button from the top left side of the thermostat to display the current filter elapsed run time.	OFF
Room Temperature Calibration	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.	Next step <b>CL</b>  Prev step	The room temperature display can be adjusted to read up to 3° above or below the factory calibrated temperature.	0
Minimum Compressor On-Time	The installer can select the minimum run time for the compressor to help protect the compressor from short-cycling.	Next step <b>OFF</b>  Prev step	The minimum compressor run time can be adjusted from <b>OFF</b> 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).	OFF



## INSTALLER SETUP MENU

Settings		Display	Adjustment Options	Default
Compressor Short Cycle Delay	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.	Next step <b>00</b> <b>00</b> <b>0F</b> Prev step	The compressor short cycle delay setting can be removed by selecting <b>OFF</b> .	<b>ON</b>
Cooling Differential	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.	Next step <b>0F 00</b> <b>0.5</b> °F Prev step	The cooling differential setting is adjustable from 0.2°F to 2°F.	<b>0.5</b>
Heating 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.	Next step <b>0F HE</b> <b>0.4</b> °F Prev step	The heating differential setting is adjustable from 0.2°F to 2°F.	<b>0.4</b>

# INSTALLER SETUP MENU

Settings		Display	Adjustment Options	Default
For C	Select F for Fahrenheit temperature display or select C for Celsius display.	Next step  Prev step	F for Fahrenheit C for Celsius	F
12 or 24 Hour Clock	Select a 12 or 24 hour clock setting.	Next step  Prev step	Use  and  to select 12 or 24 hour clock.	12
Fan Operation	Select <b>GAS</b> or <b>ELEC</b> depending on the type of furnace.	Next step  Prev step	GAS - GS or ELEC - EL	GAS



Settings	Display	Adjustment Options	Default
<b>Program Options</b> <p>This thermostat can be configured to have 7 Day, 5+1+1 programming or be non-programmable.</p> <p>If 7 Day is selected, in Set Time all seven days will need to be programmed individually.</p> <p>If 5+1+1 programming is selected, in Set Time Monday–Friday will be programmed together and Saturday and Sunday will need to be programmed individually.</p> <p>If 0d is selected, the thermostat becomes non-programmable.</p>	<p>Next step</p> <p>Pr 00</p> <p><b>5d</b></p> <p>Prev step</p>	<p>Use  and  to select <b>7d</b> for 7 Day, <b>5d</b> for 5+1 +1, or <b>0d</b> for non-programmable.</p>	<p><b>5d</b></p>

## TERMINAL DESIGNATIONS

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RH .....24VAC HEAT

RC .....24VAC COOL

C .....24VAC COMMON if applicable

W .....FIRST STAGE HEAT

W2 .....SECOND STAGE HEAT

Y .....FIRST STAGE COOL

Y2 .....SECOND STAGE COOL

G .....FAN

B .....HEAT ACTIVATED REVERSING VALVE

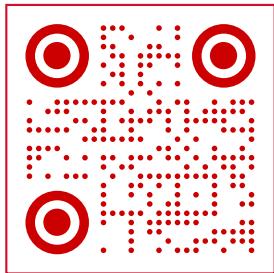
O .....COOL ACTIVATED REVERSING VALVE





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