White Rodgers™

Blue Easy Reader Thermostat

**Single Stage, Multi-Stage, Heat Pump
Installation Instructions for Model:**

Save these instructions for future use!

FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PERSONAL INJURY AND/OR PROPERTY DAMAGE.

Model	Programming Choices	
1F95EZ-0671	Non-Programmable	7 Day

APPLICATIONS

THERMOSTAT APPLICATION GUIDE

Thermostat Configuration Options	Thermostat Applications	Maximum Stages Heat/Cool
Single Stage 1 No Heat Pump (SS1)	Gas, Oil, Electric, Heat Only, Cool Only or Heat/Cool Systems, 2 or 3 wire Hydronic Zone (Hot Water or Steam) Systems, 24 Volt or Millivolt	1/1
Multi Stage 2 No Heat Pump (MS2)		2/2
Heat Pump 1 Single Stage Compressor Heat Pump (HP1)	Single Stage Compressor Heat Pump Systems - up to 2 Stages Aux./Emergency Heat	3/1
Heat Pump 2 Two Stage or Two Compressor Heat Pump (HP2)	Two Stage or Two Compressor Heat Pump systems - up to 2 Stages Aux./Emergency Heat	4/2

1F95EZ-0671 Thermostat
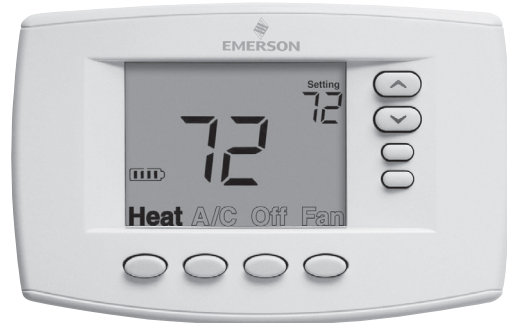
SPECIFICATIONS

Electrical Rating:

Battery Power	mV to 30 VAC, NEC Class II, 50/60 Hz or DC		
Input-Hardwire	20 to 30 VAC		
Terminal Load	1.5A per terminal, 2.5A maximum all terminals combined		
Setpoint Range	45 to 99°F (7 to 32°C)		
Rated Differentials:	Fast	Med.	Slow
Heat (Single Stage/Multi Stage)	0.4 °F	0.6 °F	1.7 °F
Cool (Single Stage/Multi Stage)	0.9 °F	1.2 °F	1.7 °F
Heat Pump	0.9 °F	1.2 °F	1.7 °F
Aux. Heat	0.6 °F	–	1.7 °F
Operating Ambient.	32°F to +105°F (0 to +41°C)		
Operating Humidity	90% non-condensing max.		
Shipping Temperature Range	-40 to +150°F (-40 to +65°C)		
Dimensions Thermostat.	4-3/16"H x 6-1/2"W x 1-5/8"D		

⚠ CAUTION

To prevent electrical shock and/or equipment damage, disconnect electric power to system at main fuse or circuit breaker box until installation is complete.

ATTENTION: MERCURY NOTICE

This product does not contain mercury. However, this product may replace a product that contains mercury.

Mercury and products containing mercury must not be discarded in household trash. Do not touch any spilled mercury. Wearing non-absorbent gloves, clean up any spilled mercury and place in a sealed container. For proper disposal of a product containing mercury or a sealed container of spilled mercury, place it in a suitable shipping container. Refer to **www.white-rodgers.com** for location to send product containing mercury.

INSTALLATION

<table>
<tr><td align="center">⚠ WARNING</td></tr>
<tr><td>Thermostat installation and all components of the control system shall conform to Class II circuits per the NEC code.</td></tr>
</table>

Remove Old Thermostat

Before removing wires from old thermostat, mark wires for terminal identification so the proper connections will be made to the new thermostat.

Installing New Thermostat

1. Pull the thermostat body off the thermostat base. Forcing or prying on the thermostat will cause damage to the unit.
2. Place base over hole in wall and mark mounting hole locations on wall using base as a template.
3. Move base out of the way. Drill mounting holes. If you are using existing mounting holes and the holes drilled are too large and do not allow you to tighten base snugly, use plastic screw anchors to secure the base.
4. Fasten base snugly to wall using mounting holes shown in Figure 1 and two mounting screws. Leveling is for appearance only and will not affect thermostat operation.
5. Connect wires to terminal block on base using appropriate wiring schematic.
6. Push excess wire into wall and plug hole with a fire resistant material (such as fiberglass insulation) to prevent drafts from affecting thermostat operation.
8. Install 2 "AA" alkaline batteries.
7. Carefully line the thermostat up with the base and snap into place.

Battery Location

2 "AA" alkaline batteries are included with the thermostat. Install the batteries before snapping the thermostat on the base. Install the batteries in the rear along the top of the thermostat (see Fig. 1).

To replace batteries, set system to **OFF** and remove thermostat from wall. For best results, use a premium brand "AA" alkaline battery such as Duracell® or Energizer®. If the home is going to be unoccupied for an extended period (over 3 months) and ▭ is displayed, the batteries should be replaced before leaving.
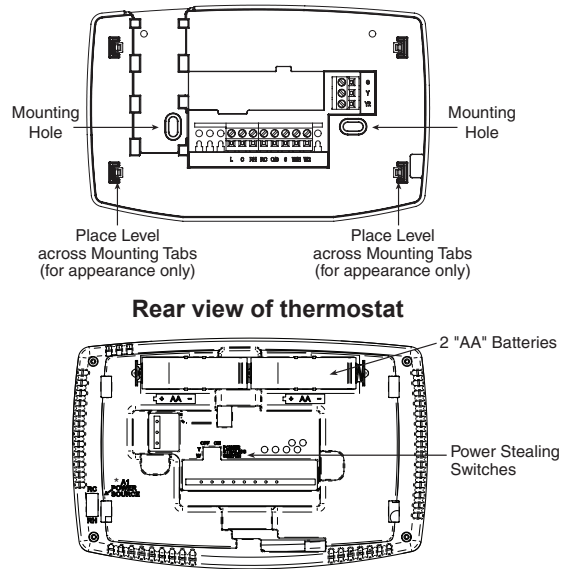
Power Stealing Switch

The Power Stealing Switches (Fig. 1) should be left in the **"On"** position for most systems.

Power Stealing Assist is very reliable to increase battery life, drawing a small amount of power from the HVAC system. But on a small number of heating or cooling systems with high impedance electronic modules you may observe one of the following conditions to indicate that Power Stealing Assist is incompatible:

1. The furnace draft inducer motor may run with no call for heat.
2. The furnace fan may turn on with no call for heat or may not turn off.
3. The furnace may not turn off when the call for heat ends.
4. The air conditioner may not turn off when the call for cool ends.

If the Power Stealing Assist method is not compatible with your system, place the Power Stealing Switches to **"Off"**. This cancels Power Stealing Assist, operates the thermostat on batteries and corrects the condition.

Figure 1 – Thermostat Base Multi-Stage 1F95EZ-0671

Mounting Hole

Mounting Hole

Place Level across Mounting Tabs (for appearance only)

Place Level across Mounting Tabs (for appearance only)

Rear view of thermostat

2 "AA" Batteries

Power Stealing Switches

* A1 For Damper Control Not Applicable To This Model.

WIRING CONNECTIONS

Refer to equipment manufacturers' instructions for specific system wiring information. After wiring, see CONFIGURATION section for proper thermostat configuration.

Wiring diagrams shown are for typical systems and describe the thermostat terminal functions.

Terminal Designation	Single Stage	Multi Stage	Heat Pump 1	Heat Pump 2
O/B	Changeover Terminal Energized in Heat (B) or Cool (O) for Heat Pump or Damper Systems			
Y2	No Output	2nd Stage Compressor	No Output	2nd Stage Compressor
Y	Cool Mode Compressor Relay	Cool Mode 1st Stage - Compressor	Heat and Cool Mode 1st Stage - Compressor	Heat and Cool Mode 1st Stage - Compressor
G	Fan Relay			
RC	Power for Cooling			
RH	Power for Heating			
C	"Common wire from secondary side of cooling (Optional). Required for fault indication, continuous backlight operation or remote temperature sensor operation"			
6	Powered closed 3rd wire for 3-wire zone valve	No Output	No Output	No Output
W/E	Heat Mode	Heat Mode 1st Stage	Heat Mode 2nd Stage, Emergency Mode 1st Stage	Heat Mode 3rd Stage, Emergency Mode 1st Stage
W2	No Output	Heat Mode 2nd Stage	Heat Mode 3rd Stage, Emergency Mode 2nd Stage	Heat Mode 4th Stage, Emergency Mode 2nd stage
L	System Diagnostic Terminal - Displays Call for Service			

WIRING DIAGRAMS

Figure 2 – Single Stage, SS1, or Multi-Stage, MS2, System (No Heat Pump) with Single Transformer (Gas, Oil or Electric)
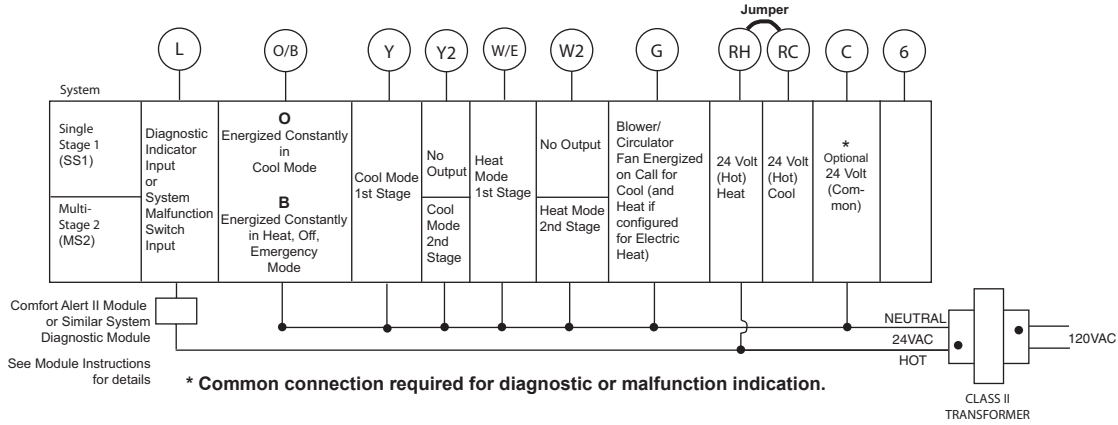
Jumper

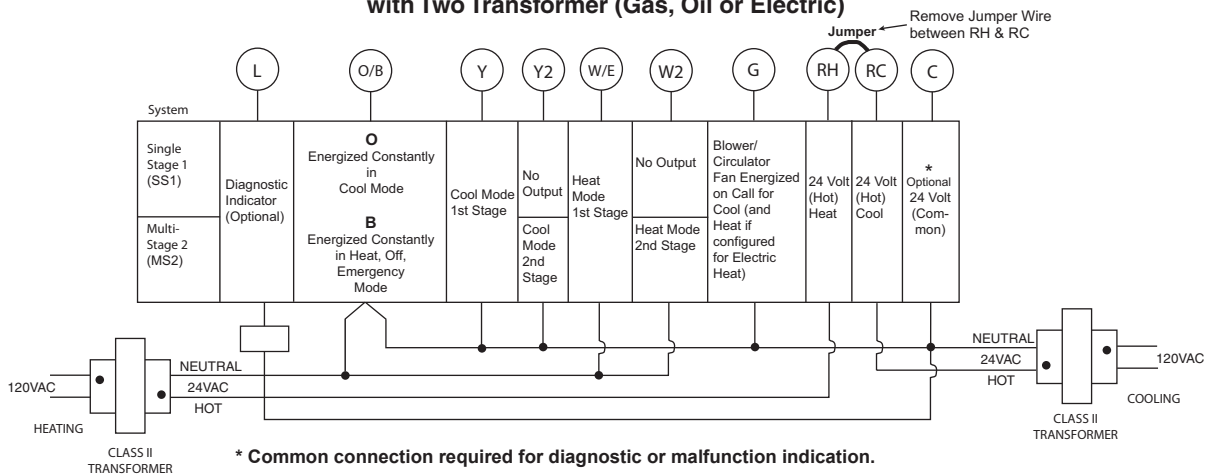| System	L	O/B	Y	Y2	W/E	W2	G	RH	RC	C	6
Single Stage 1 (SS1) / Multi-Stage 2 (MS2)	Diagnostic Indicator Input or System Malfunction Switch Input	**O** Energized Constantly in Cool Mode / **B** Energized Constantly in Heat, Off, Emergency Mode	Cool Mode 1st Stage	No Output / Cool Mode 2nd Stage	Heat Mode 1st Stage	No Output / Heat Mode 2nd Stage	Blower/ Circulator Fan Energized on Call for Cool (and Heat if configured for Electric Heat)	24 Volt (Hot) Heat	24 Volt (Hot) Cool	* Optional 24 Volt (Common)	

Comfort Alert II Module or Similar System Diagnostic Module
See Module Instructions for details

NEUTRAL / 24VAC / HOT — 120VAC — CLASS II TRANSFORMER

* Common connection required for diagnostic or malfunction indication.

Figure 3 – Single Stage, SS1, or Multi-Stage, MS2, System (No Heat Pump) with Two Transformer (Gas, Oil or Electric)

Jumper — Remove Jumper Wire between RH & RC

System	L	O/B	Y	Y2	W/E	W2	G	RH	RC	C
Single Stage 1 (SS1) / Multi-Stage 2 (MS2)	Diagnostic Indicator (Optional)	**O** Energized Constantly in Cool Mode / **B** Energized Constantly in Heat, Off, Emergency Mode	Cool Mode 1st Stage	No Output / Cool Mode 2nd Stage	Heat Mode 1st Stage	No Output / Heat Mode 2nd Stage	Blower/ Circulator Fan Energized on Call for Cool (and Heat if configured for Electric Heat)	24 Volt (Hot) Heat	24 Volt (Hot) Cool	* Optional 24 Volt (Common)

120VAC — HEATING — NEUTRAL / 24VAC / HOT — CLASS II TRANSFORMER

NEUTRAL / 24VAC / HOT — 120VAC — COOLING — CLASS II TRANSFORMER

* Common connection required for diagnostic or malfunction indication.

Figure 4 – Heat Pump Systems, HP1 (Single Stage Compressor System with Gas or Electric backup), HP2 (Multi-Stage Compressor or Two Compressor System with Gas or Electric backup)
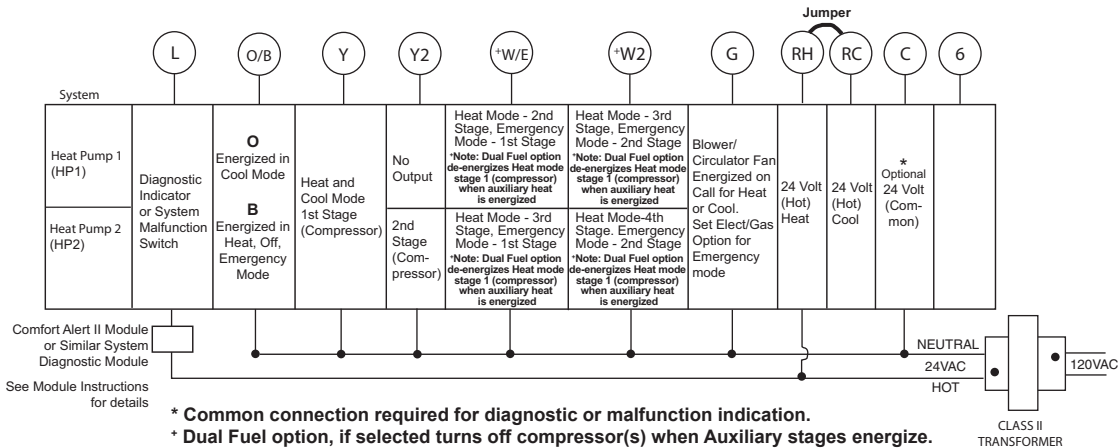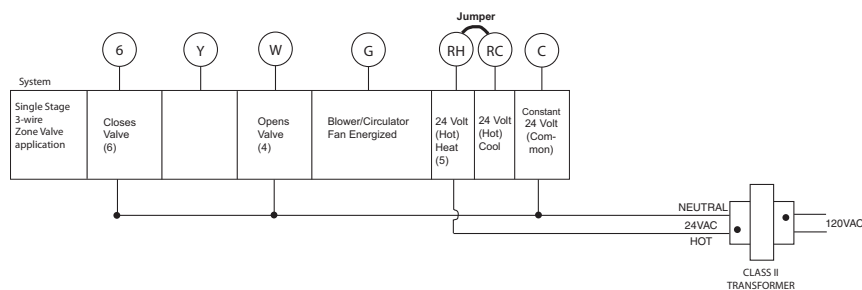
Jumper

System	L	O/B	Y	Y2	+W/E	+W2	G	RH	RC	C	6
Heat Pump 1 (HP1) / Heat Pump 2 (HP2)	Diagnostic Indicator or System Malfunction Switch	**O** Energized in Cool Mode / **B** Energized in Heat, Off, Emergency Mode	Heat and Cool Mode 1st Stage (Compressor) / 2nd Stage (Compressor)	No Output / 2nd Stage (Compressor)	Heat Mode - 2nd Stage, Emergency Mode - 1st Stage *Note: Dual Fuel option de-energizes Heat mode stage 1 (compressor) when auxiliary heat is energized / Heat Mode - 3rd Stage, Emergency Mode - 1st Stage *Note: Dual Fuel option de-energizes Heat mode stage 1 (compressor) when auxiliary heat is energized	Heat Mode - 3rd Stage, Emergency Mode - 2nd Stage *Note: Dual Fuel option de-energizes Heat mode stage 1 (compressor) when auxiliary heat is energized / Heat Mode-4th Stage, Emergency Mode - 2nd Stage *Note: Dual Fuel option de-energizes Heat mode stage 1 (compressor) when auxiliary heat is energized	Blower/ Circulator Fan Energized on Call for Heat or Cool. Set Elect/Gas Option for Emergency mode	24 Volt (Hot) Heat	24 Volt (Hot) Cool	* Optional 24 Volt (Common)	

Comfort Alert II Module or Similar System Diagnostic Module
See Module Instructions for details

NEUTRAL / 24VAC / HOT — 120VAC — CLASS II TRANSFORMER

* Common connection required for diagnostic or malfunction indication.
+ Dual Fuel option, if selected turns off compressor(s) when Auxiliary stages energize.

Figure 5 – 3-Wire (SPDT) Heat Only Zone Valve Wiring

Jumper

System	6	Y	W	G	RH	RC	C
Single Stage 3-wire Zone Valve application	Closes Valve (6)		Opens Valve (4)	Blower/Circulator Fan Energized	24 Volt (Hot) Heat (5)	24 Volt (Hot) Cool	Constant 24 Volt (Common)

NEUTRAL / 24VAC / HOT — 120VAC — CLASS II TRANSFORMER

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THERMOSTAT QUICK REFERENCE

Home Screen Description

Figure 6 – Home Screen Display

Room Temperature

Setting Temperature

Battery Level Indicator
Indicating the current power level of the 2 "AA" batteries.
▭▭▭▭▷ Full power remaining.
▭▭▷ Half power remaining.
Change ▭▷ The batteries should be replaced at this time with 2 new premium brand "AA" Alkaline batteries. (See page 2 for more details).

Menu, Copy, or Hold Button

Sched or RunSched Button

Fan Indicator

System Indicators

Heat Button

A/C or Advance Day Button

OFF or Time Button

Fan or Run Button

Figure 7 – Programming & Configuration Items
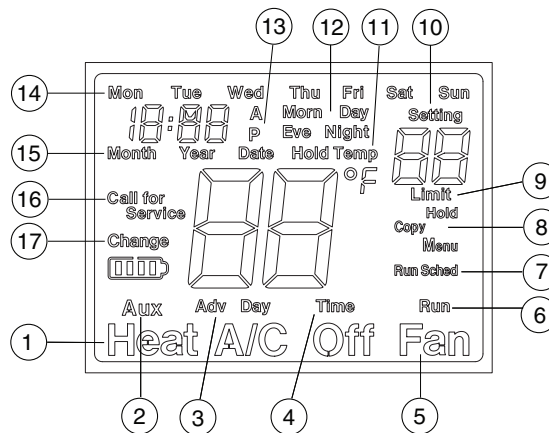
Programming and Configuration Items

① **"Heat" "A/C" "Off"** identifies button. When filled indicates system mode selected.

② "Aux" indicates thermostat configured for Heat Pump. **"Aux"** indicates Auxiliary (Emergency) stage is selected.

③ **"Adv Day"** identifies button when in schedule mode.

④ **"Time"** identifies button when in schedule mode.

⑤ **"Fan"** identifies button. When filled indicates Fan is on.

⑥ **"Run"** identifies button to begin normal operation.

⑦ **"Sched"** identifies button to be used during programming or **"Run Sched"** identifies button to return to normal operation.

⑧ **"Hold"** "**Copy" "Menu"** identifies button.

⑨ **"Limit"** indicates temperature is adjusted to the limit set in the configuration menu.

⑩ **"Setting"** indicates the setpoint temperature.

⑪ **"Hold Temp"** indicates temporary hold or **"Hold"** indicates hold mode.

⑫ **"Morn" "Day" "Eve" "Night"** indicates period being programmed or current program in Run mode.

⑬ **"A" "P"** indicates time as Morning (A) or Evening (P).

⑭ **"Mon - Sun"** indicates day of week.

⑮ **"Month" "Year" "Date"** indicates the Month Year or Date when setting time.

⑯ **"Call For Service"** indicates a diagnostic fault in the heating/cooling system. It does not indicate a fault in the thermostat.

⑰ **"Change"** indicates when batteries are low and should be replaced.

INSTALLER/CONFIGURATION MENU

With Heat or A/C selected, **press and hold the Menu button for at least 5 seconds**. The display will show item #1 in the table below. Press Menu to advance to the next menu item. Press ⏶ or ⏷ to change a menu item options.

| Menu Ref.	HP	SS	Press Button	Displayed (Factory Default)	Press ⏶ or ⏷ to select from listed options	Comments
1	1	1	MENU	(MS 2)	HP 1, HP 2, SS 1	Selects Multi-Stage (MS 2 No Heat Pump), Heat Pump 1 (HP 1, 1 compressor), Heat Pump 2 (HP 2, 2 compressor or 2 speed compressor), or Single Stage (SS 1)
2	2	2	MENU	(GAS) for SS or MS (ELE) for HP1, HP2	ELE or GAS	GAS setting: furnace controls the blower ELE setting: thermostat controls the blower
3	3	3	MENU	(On) E	OFF	Selects Energy Management Recovery (EMR) On or OFF. (Not available in -non-programmable mode)
4	–	4	MENU	(ME) Cr Heat	SL, FA	Selects Adjustable Anticipation, cycle rate, Heat (This item only appears when MS 2 or SS 1 is selected above)
5	4	–	MENU	(ME) Cr Heat A/C	SL, FA	Selects Adjustable Compressor Anticipation (Heat Pump) this item only appears when HP 1, HP 2 is selected above
6	5	5	MENU	(ME) Cr A/C or (FA) Cr Aux Heat	SL, FA SL	Selects Adjustable Anticipation, cycle rate, cool (when MS 2 or SS 1 is selected above) or Selects the cycle rate for Auxiliary stage (when HP 1 or HP 2 is selected above)
7	6	6	MENU	(OFF) CL	On	Selects Compressor Lockout Off or On
8	7	7	MENU	Heat A/C Off or Aux Heat A/C Off	Heat A/C Off, Heat Off with Fan icon, Heat Off without Fan icon A/C Off	System Mode Configuration
9	8	8	MENU	(OFF) CO	On	Selects Compressor Optimization
10	9	9	MENU	(On) dL	OFF	Selects Display Light On or OFF
11	10	10	MENU	0 HI (current temperature)	1 HI, 2 HI, 3HI, 4 HI, 1 LO, 2 LO, 3 LO, 4 LO	Adjustable Ambient Temperature Display
12	11	11	MENU	°F (current temperature)	°C	Selects Fahrenheit/Celsius Temperature Display
13	12	12	MENU	(0) P	7	Defaults to P (0) non-programmable P (7) is 7-day programming
14	13	13	MENU	PS (2) Day, Night	4 Morn, Day, Eve, Night	Selects Program periods per day: 4 = Morn, Day, Eve, Night 2 = Day, Night (Skipped if non-programmable)
15	14	–	MENU	(On) Heat FA	OFF	Fast Heat option may be disabled by selecting OFF. NA to SS or HP1 config.
16	15	14	MENU	(On) FA A/C	OFF	Fast Cool option may be disabled by selecting OFF. NA to SS or HP1 config.
17	16	15	MENU	(On) dS	Off	Selects Automatic Daylight Saving Time option
18	17	16	MENU	(99) HL Heat	62 to 98	Select's Limited HEAT Range
19	18	17	MENU	(45) LL A/C	46 to 82	Select's Limited A/C Range
20	19	–	MENU	(0) dF	1 to 9	Selects dF (Dual Fuel) setting. 0 is Off (If Dual Fuel option is required, a selection of 5 is recommended)
			MENU	(60) Cd	0 to 99	Selects compressor delay in seconds when dF is greater than 0
21	20	18	MENU	(o) A/C On	Heat (b)	Selects operation of the reversing valve terminal (O/B) output as an O or B terminal
22	21	19	MENU			Returns to Normal Operation

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INSTALLER/CONFIGURATION MENU

1) This control can be configured for:

   MS 2 – Multi-Stage System (no heat pump)
   HP 1 – Heat Pump with one stage of compressor, Gas or Electric backup
   HP 2 – Heat Pump with two stage compressor or two compressor system, Gas or Electric backup
   SS 1 – Single Stage System

2) **GAS or Electric (ELE)** fan operation. If the heating system requires the thermostat to energize the fan, select ELE. Select GAS if the heating system energizes the fan on a call for heat.

3) **Energy Management Recovery:** (this step is skipped if configured to be non-programmable).

   Energy Management Recovery (E) On enables the thermostat to start heating or cooling early to make the building temperature reach the program setpoint at the time you specify. Heating will start 5 minutes early for every 1° of temperature required to reach setpoint.

   Example: E On is selected and your heating is programmed to 65° at night and 70° at 7 AM. If the building temperature is 65°, the difference between 65° and 70° is 5°. Allowing 5 minutes per degree, the thermostat setpoint will change to 70° at 6:35 AM. Cooling and Heat Pump systems allow more time per degree, because it takes longer to reach set temperature.

4, 5 & 6) **Cycle Rate Selection** – The factory default setting for Heat and Cool modes, SS1, MS2, is medium cycle (ME). For Heat Pump, HP1, HP2, the default setting is medium (ME). For Aux, the default setting is fast cycle (FA). To change cycle rate, press the ⌃ or ⌄ button.

   Cycle rate differentials for different settings are:

MODE	Fast FA	Medium ME	Slow SL
Heat (SS1, MS2)	0.4°F	0.6°F	1.7°F
Cool (SS1, MS2)	0.9°F	1.2°F	1.7°F
Heat Pump (HP1, HP2)	0.9°F	1.2°F	1.7°F
AUX (HP1, HP2)	0.6°F	-	1.7°F

7) **Select Compressor Lockout CL OFF or ON** – Selecting CL ON will cause the thermostat to wait 5 minutes between cooling cycles. This is intended to help protect the compressor from short cycling. Some newer compressors already have a time delay built in and do not require this feature. Your compressor manufacturer can tell you if the lockout feature is already present in their system. When the thermostat compressor time delay occurs, it will flash the setpoint for up to five minutes.

8) **System Mode Configuration** – This thermostat is configured for Heat and Cool (SYSTEM switch with Heat A/C Off) default. It can also be configured for Heat only with fan (Heat Off fan), Heat only without fan (Heat Off) or Cool only (Cool Off).

9) **Compressor Optimization** – CO provides a delay in circulator fan operation after the compressor turns on or off. With CO selected ON, when the compressor turns on (for a call for heat in heat pump or a call for cool) the fan will be delayed for five seconds before turning on to allow the air to be heated or cooled. After the compressor turns off for call for cool, the fan will continue to run for 20 seconds to circulate all of the cooled air. If CO is set to OFF, there will be no delay in fan operation.

10) **Select Backlight Display** – The display backlight improves display contrast in low lighting conditions. When the "C" terminal is powered, selecting backlight dL ON will keep the light on continuously. Select backlight OFF will turn the light on momentarily after any button is pressed. When the "C" terminal is not powered, the light will be on momentarily after any button is pressed no matter whether the backlight is selected ON or OFF.

11) **Select Temperature Display Adjustment 4 LO to 4 HI** – Allows you to adjust the room temperature display up to 4° higher or lower. Your thermostat was accurately calibrated at the factory, but you have the option to change the display temperature to match your previous thermostat. The current or adjusted room temperature will be displayed.

12) **Select F° or C° Readout** – Changes the display readout to Celsius or Fahrenheit as required.

13) **Program Options:** Selects configuration for 7 day (7) or non-programming (0) mode. The default setting is 0, indicating non-programming. The programs per week can be changed by pressing the ⌃ or ⌄ buttons. A selection of 0 days for non-programmable will eliminate the need for EMR, and that step in the menu will be skipped.

14) **Program Steps per day** – This control can be configured for 4 or 2 program steps per day. Default is **"2 PS"** and can be toggled between 4 PS and 2 PS.

15 & 16) **Select Fast Second Stage ON or OFF** – Heat pump or Multi-stage only, in the run mode, with the fast Heat feature enabled (On FA Heat), if the Heat setpoint temperature is manually raised by 3°F (2°C) or more above the actual temperature using ⌃ the second stage will energize immediately. With FA OFF, second stage will not energize until the setpoint temperature is 1°F or more above actual temperature for more than ten minutes. The Fast Cool feature (FA Cool) provides the same controls when the setpoint temperature is lowered.

17) **Select Daylight Saving Time Calculation** – This feature will allow the thermostat to calculate the DST automatically and apply it to the Real Time Clock display. Default On. Use ⌃ or ⌄ touch keys to select the feature OFF.

18) **Limited Heat Range –** This feature provides a maximum setpoint temperature for heat. The default setting is 99°F. It can be changed between 62°F and 98°F by pressing the ⌃ or ⌄ button.

19) **Limited Cool Range** – This feature provide a minimum setpoint temperature for cool. The default setting is 45°F. It can be changed between 46°F and 82°F by pressing the ⌃ or ⌄ button.

20) **Select Dual Fuel Setting (dF)** – HP1 or HP2 systems. 0 is default OFF for Elect. Aux. If your system has a fossil fuel (gas or oil) Auxiliary heat, select 1 to 9. See Dual Fuel setting and compressor delay on the following page.

    Select Compressor Delay (Cd) – Available only if dF 1 to 9 is selected above. After the auxiliary heat is turned on, the compressor(s) shut down is delayed for the time selected (in seconds). This delay is factory set to 60, but can be set in the range of 0 to 99 using ⌃ or ⌄ buttons.

21) **Select Reversing Valve Output** – The O/B option is factory set at "O" position. This will accommodate the majority of heat pump applications, which require the changeover relay to be energized in COOL. If the thermostat you are replacing or the heat pump being installed with this thermostat requires a "B" terminal, to energize the changeover relay in HEAT, the O/B option should be set at "B" position.

OPERATING YOUR THERMOSTAT

Check Thermostat Operation

> ### NOTE
>
> **To prevent static discharge problems, touch side of thermostat to release static build-up before touching any keys.**

If at any time during testing your system does not operate properly, contact a qualified service person.

Fan Operation

If your system does not have a G terminal connection, skip to **Heating System.**

1. Turn on power to system.
2. Press FAN button. The display will change from "Ⓕⓐⓝ" to **"Fan"** and the blower should begin to operate.
3. Press FAN button again. The display will change from **"Fan"** to "Ⓕⓐⓝ" outlined and the blower should stop immediately.

> ### ⚠ CAUTION
>
> **Do not allow the compressor to run unless the compressor oil heaters have been operational for 6 hours and the system has not been operational for at least 5 minutes.**

Heating System

1. Press the HEAT button to select **HEAT**. If the auxiliary heating system has a standing pilot, be sure to light it.
2. Press ⌃ to adjust thermostat setting to 1° above room temperature. A click will be heard from the thermostat and the heat system should begin to operate. If the system configuration is set to HP1 or HP2 and setpoint temperature display is flashing, the 5 minute compressor lockout feature is operating (see Configuration menu, item 7).
3. If your system configuration is set at MS2, HP2 or HP1, adjust temperature setting to 3° above room temperature. The thermostat will click and the second stage will begin to operate.
4. Press ⌄ to adjust the thermostat below room temperature. The thermostat will click several times as stages de-energize. The heating system should stop operating.

Second Stage Time Delay

Your thermostat is designed to determine the optimum time to activate the second stage. Simply raising the temperature in heating or lowering it in cooling will not always force the thermostat to bring the second stage on quickly. There is a time delay from 0-30 minutes depending on the performance of the first stage of the system.

EXAMPLE: For the last 2 hours the thermostat is set on 70° and the room temperature is 70° with the equipment using only the first stage of heat. Since the equipment is keeping the temperature within 1° of setpoint, the thermostat will delay second stage for a longer time if you manually raise the temperature or if the room temperature quickly changes. Once the second stage comes on, it will come on sooner the next time there is a difference between the setpoint and the room temperature. The net effect of the staging program is that when the first stage is capable of making temperature the second stage will delay longer. When the thermostat calculates that first stage cannot make temperature in a reasonable time, the second stage will come on sooner. This built in function automatically optimizes the use of additional stages of heat or cool.

Auxiliary (Emergency) System

AUX bypasses the Heat Pump to use the heat source wired to terminal **W/E** on the thermostat. **AUX** is typically used when compressor operation is not desired, or you prefer back-up heat only.

1. Press and hold **HEAT** button for at least 5 seconds. "Ⓐⓤⓧ" will change to **"Aux"**.
2. Press ⌃ to adjust thermostat setting above room temperature. The Auxiliary heating system will begin to operate.
3. Press ⌄ to adjust the thermostat below room temperature. The Auxiliary heating system should stop operating.
4. To return to Heat Pump mode press **"HEAT"** button. **"Aux"** will change to "Ⓐⓤⓧ"

> ### ⚠ CAUTION
>
> **To prevent compressor and/or property damage, if the outdoor temperature is below 50°F, DO NOT operate the cooling system.**

Cooling System

1. Press A/C button to select **A/C**.
2. Press ⌄ to adjust thermostat setting below room temperature. The blower should come on immediately at high speed, followed by cold air circulation. If the setpoint temperature display is flashing, the compressor lockout feature is operating (see Configuration menu, item 7).
3. Adjust temperature setting to 3° below room temperature. A click from the thermostat will be heard and the second stage cooling should begin to operate.
4. Press ⌃ to adjust the temperature setting above room temperature. The thermostat will click several times and the cooling system should stop operating.

Dual Fuel Setting
(Configuration Menu item 20)

Heat Pumps with gas or oil furnace Auxiliary heat are called Dual Fuel systems. Step 20 in the configuration menu is a Dual Fuel (dF) option that uses software logic to determine when to switch to gas heat and shut down the compressor. This eliminates the need for a separate fossil fuel kit.

To configure the thermostat for Dual Fuel, select a setting from 1-9. An initial selection of 5 is recommended. A higher number will provide a smaller stage separation so the Auxiliary heat will start sooner providing more comfort. A lower number will provide a larger stage separation delaying the start of the Auxiliary heat providing more economy. A selection of -0- cancels the dual fuel option and is used for heat pump systems with electric heat auxiliary (non-dual fuel systems).

TROUBLESHOOTING

Reset Operation

Note: When thermostat is reset, installer configuration menu settings and programming will reset to factory settings.
If a voltage spike or static discharge blanks out the display or causes erratic thermostat operation, you can reset the thermostat by removing the wires from terminals **RH** and **RC** (do not short them together) and removing batteries for 2 minutes. After resetting the thermostat, replace the wires and batteries. If the thermostat has been reset and still does not function correctly contact your heating/cooling service person or place of purchase.

Note: Be sure to review the installer configuration menu settings.
To reset the programming, clock and configuration settings, press the ⌃, ⌄ and FAN button simultaneously. The thermostat should go blank and then all segments will be displayed momentarily.

Symptom	Possible Cause	Corrective Action
No Heat/No Cool/No Fan (common problems)	1. Blown fuse or tripped circuit breaker. 2. Furnace power switch to OFF. 3. Furnace blower compartment door or panel loose or not properly installed. 4. Loose connection to thermostat or system.	Replace fuse or reset breaker. Turn switch to ON. Replace door panel in proper position to engage safety interlock or door switch. Tighten connections.
No Heat	1. Pilot light not lit. 2. Furnace Lock-Out Condition. Heat may also be intermittent. 3. Heating system requires service or thermostat requires replacement.	Re-light pilot. Many furnaces have safety devices that shut down when a lock-out condition occurs. If the heat works intermittently contact the furnace manufacturer or local HVAC service person for assistance. **Diagnostic:** Set System to **HEAT** and raise the setpoint above room temperature. Within a few seconds the thermostat should make a soft click sound. This sound usually indicates the thermostat is operating properly. If the thermostat does not click, try the reset operation listed above. If the thermostat does not click after being reset contact your heating and cooling service person or place of purchase for a replacement. If the thermostat clicks, contact the furnace manufacturer or a HVAC service person to verify the heating is operating correctly.
No Cool	1. Cooling system requires service or thermostat requires replacement.	Same as diagnostic for No Heat condition except set the thermostat to **COOL** and lower the setpoint below the room temperature. There may be up to a five minute delay before the thermostat clicks in Cooling.
Heat, Cool or Fan Runs Constantly	1. Possible short in wiring. 2. Possible short in thermostat. 3. Possible short in heat/cool/fan system. 4. FAN Switch set to Fan **ON**.	Check each wire connection to verify they are not shorted or touching together. No bare wire should stick out from under terminal block. Try resetting the thermostat as described above. If the condition persists the manufacturer of your system or service person can instruct you on how to test the Heat/Cool system for correct operation. If the system operates correctly, replace the thermostat.
Thermostat Setting & Thermostat Thermometer Disagree	1. Thermostat thermometer setting requires adjustment.	The thermometer can be adjusted +/- 4 degrees. See Temperature Display Adjustment in the Configuration Menu section.
Furnace (Air Conditioner) Cycles Too Fast or Too Slow (narrow or wide temperature swing)	1. The location of the thermostat and/or the size of the Heating System may be influencing the cycle rate.	Digital thermostats provide precise control and cycle faster than older mechanical models. The system turns on and off more frequently but runs for a shorter time so there is no increase in energy use. If you would like an increased cycle time, choose **SL** for slow cycle in the Configuration menu reference, steps 4 through 6. If an acceptable cycle rate is not achieved, contact a local HVAC service person for additional suggestions.

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