White Rodgers

Single Stage, Multi-Stage, Heat Pump
Installation and Operating Instructions

Big Blue Humidity Universal Thermostat with Humidity/Dehumidity Control and Automatic Heat/Cool Changeover Option

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		
1F95-1291	7 Day	5/1/1 Day	Non-Programmable

APPLICATIONS

THERMOSTAT APPLICATION GUIDE

Description	
Heat Pump (No Aux. or Emergency Heat)	Yes
Heat Pump (with Aux. or Emergency Heat)	Yes
Systems with up to 4 Stages Heat, 2 Stages Cool	Yes
Heat Only Systems	Yes
Millivolt Heat Only Systems – Floor or Wall Furnaces	Yes
Cool Only Systems	Yes
Gas or Oil Heat	Yes
Electric Furnace	Yes
Hydronic (Hot Water) Zone Heat – 2 Wires	Yes
Hydronic (Hot Water) Zone Heat – 3 Wires	Yes
Wired Remote Temperature Sensor (Indoor or Outdoor)	Yes
Dual Fuel Feature (Heat Pump Mode)	Yes

1F95-1291 Humidity Control Touchscreen 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)
Differential (Single Stage) . . . . . Heat 0.6°F; Cool 1.2°F
Differential (Multi-Stage) . . . . . Heat 0.6°F; Cool 1.2°F
Differential (Heat Pump) . . . . . Heat 1.2°F; Cool 1.5°F
Operating Ambient . . . . . 32°F to +105°F (0 to +41°C)
Operating Humidity . . . . . 90% non-condensing max.
Shipping Temperature Range . . . . . -4 to +150°F (-20 to +65°C)
Dimensions Thermostat . . . . . 4.6"H x 5.9"W x 1.2"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 and send it to:

White-Rodgers
2895 Harrison Street
Batesville, AR 72501

INSTALLATION

⚠ WARNING

Thermostat installation and all components of the control system shall conform to Class II circuits per the NEC code.

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.
7. Carefully line the thermostat up with the base and snap into place.

Battery Location

2 "AA" alkaline batteries are included in the thermostat at the factory with a battery tag to prevent power drainage. Remove the battery tag to engage the batteries.

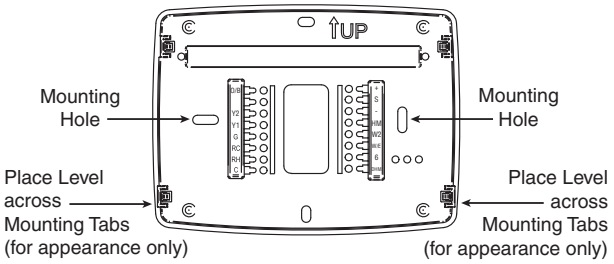
To replace batteries, set system to **OFF**, remove thermostat from wall and install the batteries in the rear along the top of the thermostat (see Figure 1). For best results, use a premium brand "AA" alkaline battery such as Duracell® or Energizer®. If the home is going to be unoccupied for an extended period (over 3 months) and is displayed, the batteries should be replaced before leaving.

Power Stealing Switch

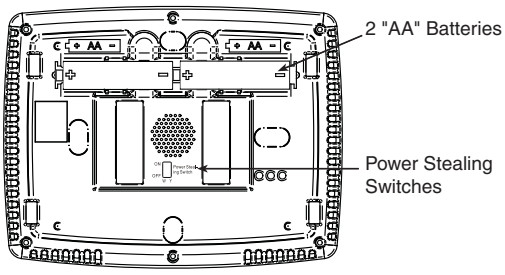
This thermostat is designed for 24 VAC power to be hardwired via a common connection to the C terminal with battery back-up. The thermostat also has the capability to be battery powered with the battery power supplemented by Power Stealing to extend the battery life. Powered only by the two "AA" batteries the expected battery life is about one year. With battery power supplemented by the Power Stealing circuits the battery life can be extended up to five years. The supplemental power is derived from the Heating (W) and/or Cooling (Y) circuits. The thermostat will utilize either one or both of these circuits to supplement the battery power. The thermostat "steals" power from these circuits when the circuit is not active (calling for heating or cooling).

The Power Stealing switches are defaulted to the **ON** position. If the thermostat is hardwired with "C" common connection, both switches should be moved to the **OFF** position. If the thermostat is battery powered and the heating or cooling system does not cycle, indicating the system is not compatible, the switch for the circuit heating or cooling experiencing the incompatibility should be moved to the **OFF** position.

Figure 1 – Thermostat Base Multi-Stage 1F95-1291



Rear view of thermostat



WIRING CONNECTIONS

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

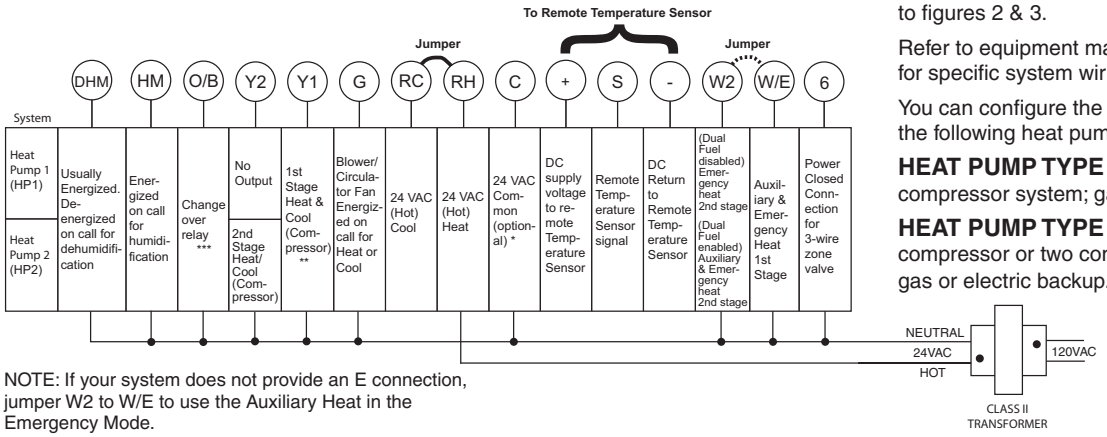
Wiring diagrams shown are for typical systems and describe the thermostat terminal functions.

TERMINAL DESIGNATION DESCRIPTIONS

Terminal Designation	Description	Terminal Designation	Description
O/B	Changeover valve for heat pump energized constantly in cooling and off/heating	6	Powered closed 3rd wire for 3-wire zone valve
Y2	2nd Stage Compressor	W/E	Heat Relay/Emergency Heat Relay (Stage 1) (3rd Stage Heat in HP2)
Y	Compressor Relay	W2	2nd Stage Heat (4th Stage Heat in HP2)
G	Fan Relay	-	Common (DC) for wired remote temperature sensor
RC	Power for Cooling	S	Frequency signal from remote temperature sensor
RH	Power for Heating	+	Power (DC) to remote temperature sensor
C	Common wire from secondary side of cooling (Optional). Required for fault indication, continuous backlight operation or remote temperature sensor operation	HM/A1	Power for Humidifier
		DHM	Power for Run Low Speed Blower for Dehumidification

WIRING DIAGRAMS

Figure 1 – Heat Pump Systems



NOTE: If your system does not provide an E connection, jumper W2 to W/E to use the Auxiliary Heat in the Emergency Mode.

Required for fault or malfunction indication, remote temperature sensor, or for continuous backlight operation.

Heat Pump Connections

If you do not have a heat pump system, refer to figures 2 & 3.

Refer to equipment manufacturers' instructions for specific system wiring information.

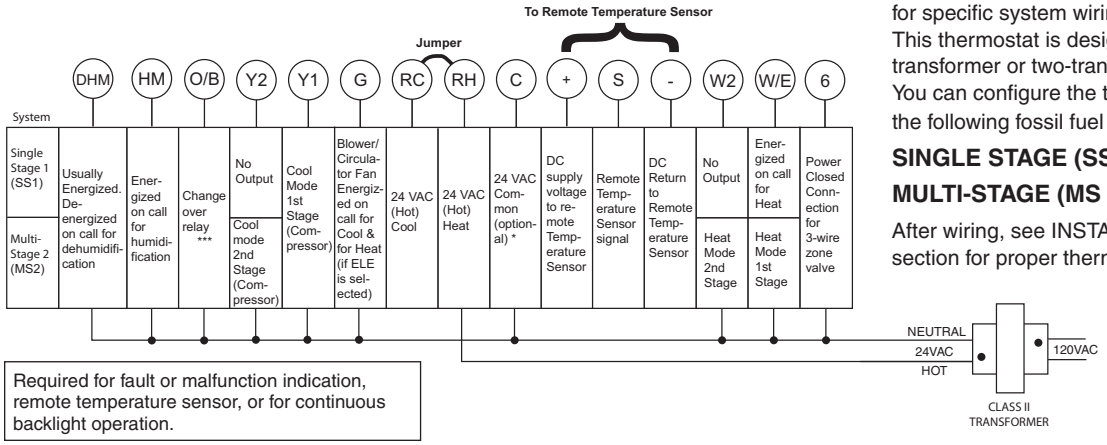
You can configure the thermostat for use with the following heat pump systems.

HEAT PUMP TYPE 1 (HP 1). Single stage compressor system; gas or electric backup.

HEAT PUMP TYPE 2 (HP 2). Multi-stage compressor or two compressor system with gas or electric backup.

After wiring, see INSTALLER CONFIGURATION section for proper thermostat configuration.

Figure 2 – Single Stage or Multi-Stage System (No Heat Pump) with Single Transformer



Required for fault or malfunction indication, remote temperature sensor, or for continuous backlight operation.

Single Stage and Multi-Stage Connections

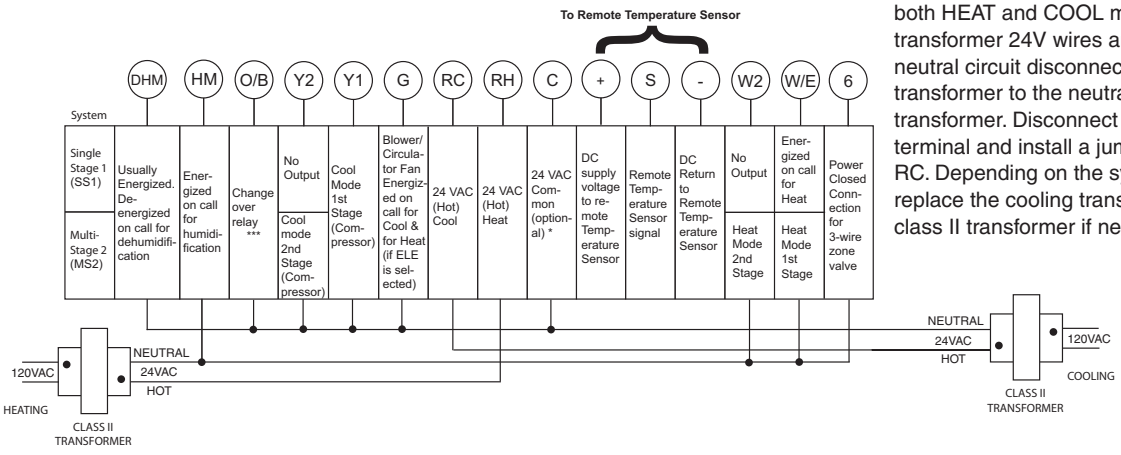
Refer to equipment manufacturers' instructions for specific system wiring information.
This thermostat is designed to operate a single-transformer or two-transformer system.
You can configure the thermostat for use with the following fossil fuel systems:

SINGLE STAGE (SS 1) gas, oil or electric.

MULTI-STAGE (MS 2) gas, oil or electric.

After wiring, see INSTALLER CONFIGURATION section for proper thermostat configuration.

Figure 3 – Single Stage or Multi-Stage System (No Heat Pump) with Two Transformers



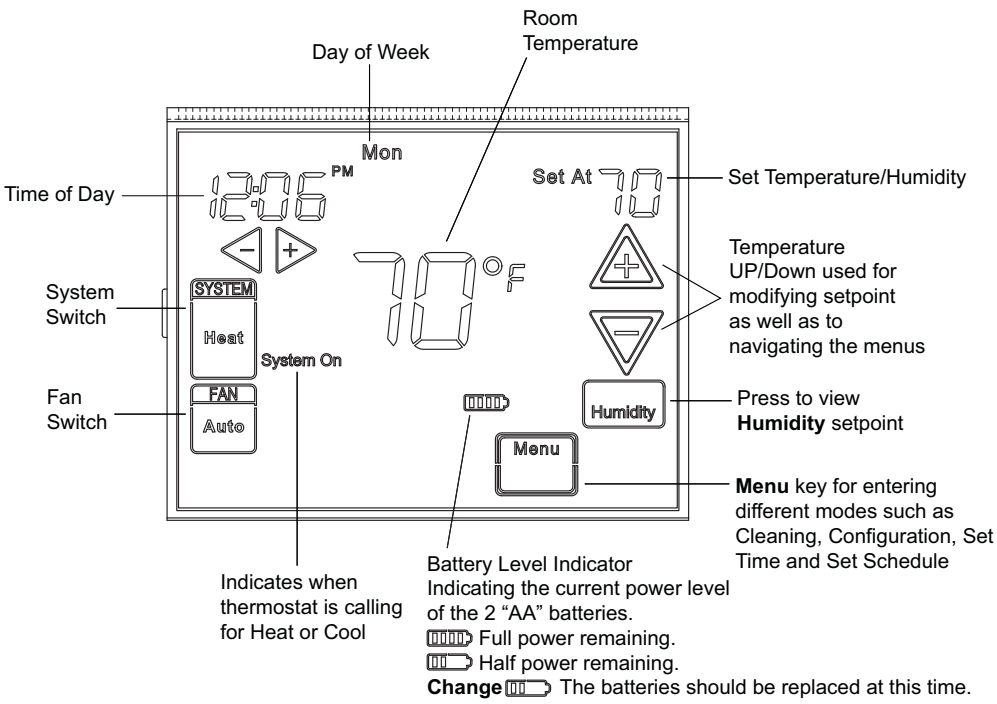
NOTE: If continuous backlight or hardwired power input are desired but do not function in both HEAT and COOL modes, cut the heating transformer 24V wires and tape off. Connect the neutral circuit disconnected from the heating transformer to the neutral circuit of the cooling transformer. Disconnect the wire to the RH terminal and install a jumper between RH and RC. Depending on the system requirements, replace the cooling transformer with a 75VA class II transformer if needed.

* 24 VAC common connection optional for system operation.
** Dual fuel option de-energizes compressor when auxiliary heat is energized.
*** Changeover relay is energized in cool if O is selected. Changeover relay is energized in heat and emergency if B is selected.

THERMOSTAT QUICK REFERENCE

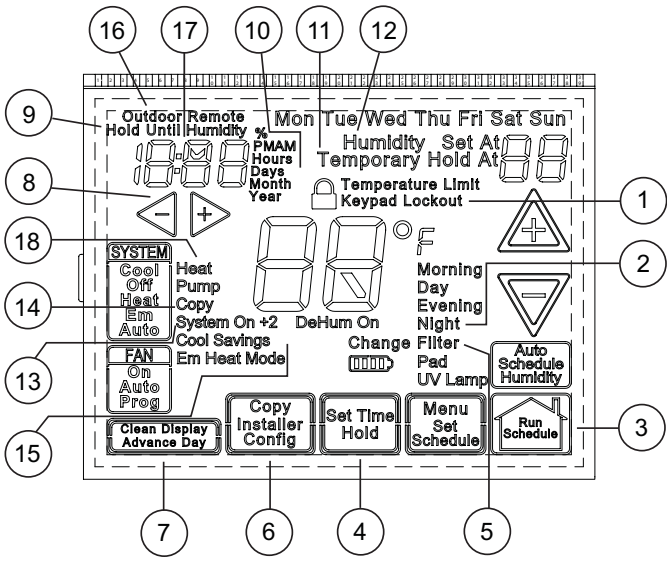
Home Screen Description

Figure 2 – Home Screen Display



Programming and Configuration Items

Figure 3 – Programming & Configuration Items



(1) Displays 🔒 and **"Keypad Lockout"** when in keypad lockout mode.
Displays 🔒 and **"Temperature Limit"** and **"Keypad Lockout"** when limited range is activated and locked.
Displays only **"Temperature Limit"** when limited range is activated.

(2) Indicates period of day being programmed.

(3) RUN SCHEDULE (run program) button.

(4) SET TIME button or HOLD temperature button.

(5) Displays **"Change Filter"/"Change Pad"/"Change UV Lamp"** when the system has run for the programmed filter/humidity pad/UV lamp time period as a reminder to change or clean your filter/humidity pad or to replace UV lamp.

(6) COPY button or INSTALLER CONFIG button.

(7) CLEAN DISPLAY button allows 30 seconds to wipe off the display or ADVANCE DAY button for programming.

(8) Used in programming to set time and in configuration menu to change selections.

(9) **"Hold Until"** indicates the time when a temporary hold period will end.

(10) **"Hours" and "Days"** displays during steps in installer configuration.

(11) The words **"Hold At"** are displayed when the thermostat is in the **HOLD** mode. **"Temporary Hold At"** is displayed when the thermostat is in a temporary **HOLD** mode.

(12) **"Humidity"** indicates that the "**Set At**" display is Humidity setpoint.

(13) **"System On"** indicates when heating or cooling stage is energized. "**+2**" indicates when a second stage is energized.

(14) **"Copy"** indicates the copy program feature is being used during programming.

(15) A steady **"Cool Savings"** display indicates the feature is enabled in the installer menu. A flashing **"Cool Savings"** display indicates the feature is active.

(16) **"Remote"** indicates that the indoor remote temperature sensor, is being accessed. **"Outdoor Remote"** indicates the outdoor remote temperature sensor is being accessed.

(17) Display time, remote temperature or humidity.

(18) **"Heat Pump"** displays when the system configuration is set in HP1/HP2.

INSTALLER/CONFIGURATION MENU

To enter the menu: Press the **Menu** touch key. Press and hold for 5 seconds the **Installer Config** touch key. This displays menu item #1 in the table below. Press ⚠ to advance to the next menu item or ▽ to return to a previous menu item. Press ▷ or ◁ to change a menu item.

CONFIGURATION MENU						
Menu Reference Number	Program-mable	Non-Program-mable	Press Button	Displayed Factory (Default)	Press ▷ or ◁ to select from listed options	Comments
1	1	1		MS 2	HP 1, HP 2, SS 1	Selects Multi-Stage (MS2, No Heat Pump), Heat Pump 1 (HP1, 1 compressor), Heat Pump 2 (HP2, 2 compressor or 2 speed compressor), or Single Stage.
2	2	2	⚠	GAS	(ELE)	GAS setting: furnace controls blower. ELE setting: thermostat controls blower.
3	3	3	⚠	ob (O)	b	Selects Reversing Valve (This item is only to appear if HP1 or HP2 is selected above.)
4	4	3	⚠	Days, **(7) P**	**5** or **0**	Programs per week. (5=5-1-1 or 0 = non-programmable)
5	5	NA	⚠	**PS (4)**	**2**	Programs per day. 4 = Morning, Day, Evening, Night 2 = Day, Night
6	6	4	⚠	Cool-Off-Heat-Auto	Cool-Off-Heat, Heat Off, Heat, Coof-Off, Auto Off	System switch configuration in non heat pump mode.
			⚠	Cool-Off-Heat-Emer-Auto	Cool-Off-Heat-Emer, Off-Emer-Auto	System switch configuration, heat pump mode.
7	7	NA	⚠	**E** (On)	**OFF**	Selects Energy Management Recovery, E (with programming option on)
8	8	5	⚠	Cr, Heat (FA)	SL	Selects Adjustable Anticipation, cycle rate, Heat
9	9	6	⚠	Cr, Cool (FA)	SL	Selects Adjustable Anticipation, cycle rate, Cool
10	10	7	⚠	Cr/AU, Emer (FA)	SL	Selects Adjustable Anticipation, cycle rate auxiliary, (This item is only to appear if HP1 or HP2 is selected above).
11	11	8	⚠	**CL** (OFF)	On	Selects Compressor Lockout.
12	12	9	⚠	**dL** (On)	OFF	Selects Continuous Display backlight.
13	13	10	⚠	**dL** (LO)	HI	Selects Backlight Intensity.
14	14	11	⚠	0 (Temperature)	5, LO to 5, HI	Selects Adjustable Ambient Temperature Display [range -5 (LO) to +5 (HI)].
15	15	12	⚠	**°F**	**°C**	Selects °F/°C Display (temperature units in Fahrenheit or Celsius).
16	16	13	⚠	**b** (On)	OFF	Selects audible Beeper On/Off.
17	17	14	⚠	**dS** (On)	OFF	Selects Daylight Saving Time calculation.
18	18	15	⚠	**AS**, Heat (On)	OFF	Selects Automatic Schedule for comfort temperature Programming, heat mode.
19	19	16	⚠	**AS**, Cool (On)	OFF	Selects Automatic Schedule for comfort temperature Programming, cool mode.
20	20	17	⚠	**CS**, (OFF) Cool Savings	1-2-3-4-5-6	Selects Cool Saving Feature & amount.
21	21	18	⚠	**HL**, Heat (99)	62-98	TEMPERATURE LIMIT, HEAT (max. heat set point).
22	22	19	⚠	**LL**, Cool (45)	46-82	TEMPERATURE LIMIT, COOL (min. cool set point).
23	23	20	⚠	OFF, 🔒 **Keypad Lockout**	**L** (total), **P** (partial), **Temperature Limit** (limited temperature range)	Selects Keypad Lockout.
			⚠	000	001-999	Selects Keypad Lockout Combination (active only if keypad Lockout is selected).
24	24	21	⚠	FS, Heat (On)	OFF	Fast second stage of heat (not available if SS1 is selected above).
25	25	22	⚠	FS, Cool (On)	OFF	Fast second stage of cool (not available if SS1 or HP1 is selected above).
26	26	23	⚠	Remote (OFF)	On	Remote temperature sensor, enable/disable.
			⚠	In, Remote	Outdoor Remote	Remote temperature sensor (Indoor/Outdoor).
			⚠	LS (On)	OFF	Local temp. Sensor enable/disable (only when Indoor Remote is selected On).
27	27	24	⚠	dF (OFF)	On	Selects Dual Fuel feature using software logic On or OFF (This item appears if HP1 or HP2 is selected above and no outdoor sensor.
			⚠	dF (05)	0-09	Selects Dual Fuel setpoint (°F) with no outdoor sensor.
			⚠	Cd (60)	0-99	Selects compressor delay in seconds.
28	28	25	⚠	dF (OFF)	On	Selects Dual Fuel feature using outdoor sensor On or OFF (This item appears if HP1 or HP2 is selected and outdoor sensor is installed and enabled.

INSTALLER/CONFIGURATION MENU

CONFIGURATION MENU						
Menu Reference Number	Program-mable	Non-Pro-gram-mable	Press Button	Displayed Factory (Default)	Press ▷ or ◁ to select from listed options	Comments
28 (cont.)	28 (cont.)	25 (cont.)	⚠	dF (35)	5-50	Selects Dual Fuel setpoint (°F) with outdoor sensor available.
			⚠	Cd (60)	0-99	Selects compressor delay in seconds.
29	29	26	⚠	AO (80)	35-74	Selects Auxiliary Heat cut out temperature. This item appears if HP1 or HP2 is selected and outdoor sensor is installed and enabled.
30	30	27	⚠	bP (80)	79-20	Selects Blower balance point. Selection of 80 disables this feature. This item appears if HP1 or HP2 is selected and outdoor sensor is installed and enabled.
31	31	28	⚠	Hd (OFF)	On	Selects Humidity Display alternate with time.
32	32	29	⚠	Humidity H1, OD	-20-20 -18	Selects Humidity Display adjustment.
33	33	30	⚠	HR (OFF)	LO, HI	Selects Auto Humidity reduction.
34	34	31	⚠	AH (OFF)	H, C, A	Selects Automatic Humidification.
35	35	32	⚠	CH (OFF)	On	Selects Cycle Humidifier.
36	36	33	⚠	OC (o)	od, OFF	Selects Optimum Comfort or Optimum Dehumidification.
37	37	34	⚠	Change UV Lamp (OFF)	On	Selects Change UV Lamp feature.
			⚠	350 Days	25-1975	Change UV Lamp duration days.
38	38	35	⚠	Change Pad (OFF)	On	Selects Change Humidifier Pad feature.
			⚠	1000 Hrs	25-1975	Change Humidifier Pad duration hours.
39	39	36	⚠	OFF Change Filter	On	Selects Change Filter feature.
			⚠	200 Hrs	25-1975	Change Filter duration hours.

1) This control can be configured for:
MS2 – Multi-Stage System (2 heat/2 cool)
HP1 – Heat Pump with one stage of compressor (2 heat/1 cool)
HP2 – Heat Pump with two stage compressor or two compressor system, Gas or Electric backup; (Dual Fuel see menu item 27) (4 heat/2 cool)
SS1 – Single Stage System (3 wire zone see wiring diagrams.

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. **Note: Resetting the thermostat switches the option to ELE.**

3) **O/B Terminal selection** – Selects the operation of the reversing valve (when item 1 is set to HP1 or HP2 only). When set to "O" the changeover valve will be energized in COOL to accommodate the majority of heat applications. If the heat pump requires the changeover valve to energize in HEAT, select "B".

4) **Programs per week** – This control can be configured for 7 independent day or 5/1/1 day programming or nonprogrammable modes. Default is 7-day mode. The display indicates **"7 Days"** as default. Other options **"5 Days"** or **"0 Days"** can be selected. If **"0 Days"** is selected for nonprogrammable mode, the step for EMR will be skipped, as this feature will not be available in this mode.

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

6) **System Switch Configuration (MS2/SS1)** – This thermostat is configured for Heat and Cool with Auto changeover default (Cool-Off-Heat-Auto). It can be configured as Heat & Cool (Cool-Off-Heat), or Heat Only (Off-Heat), or Cool Only (Cool-Off).

When the control is in heat pump configuration **(HP1/HP2)**, the system switch configuration will have an additional mode available namely, **Emer** for Emergency Mode.

7) **Energy Management Recovery (EMR)** – (this step is skipped if configured as non-programmable). When set to "On" causes the thermostat to start heating or cooling early to make the building temperature reach the program setpoint at the time you specify.

Example: The heating program is 65°F at night and 70° at 7 AM. If the building temperature is 65°F, the difference is 5°F. Allowing 5 minutes per °F rise, the thermostat setpoint will change to 70° at 6:35 AM. Cooling allows more time per °F, because it takes longer to reach temperature.

8, 9 & 10) **Cycle Rate Selection** – The factory default setting is fast cycle (FA Cr) in all modes (Heat, Cool, Emer). To change to slow cycling (SL, Cr), press touch keys ▷ or ◁ toggle between FA & SL. The cycle rates are below:

Mode	Fast rate	Slow rate
Heat	0.6°F	1.2°F
Cool	1.2°F	1.7°F
Emer	1.2°F	1.7°F

11) **Select Compressor Lockout (CL)** – 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 of the newer compressors have a time delay built in and do not require this feature to be activated in the thermostat. Your compressor manufacturer can tell you if this lockout feature is already present in their system. When the thermostat compressor time delay is activated, it will flash the set point for up to five minutes.

INSTALLER/CONFIGURATION MENU

12) **Select Continuous Backlight** – In low lighting conditions, display backlight improves the display contrast. When **C** terminal is connected, selecting dL On will turn the backlight on continuously. Selecting dL Off will turn the backlight on momentarily after any key is pressed. When **C** terminal is not powered (battery only), dL On enables the momentary backlight whenever a key is pressed.

13) **Select Backlight Intensity** – This thermostat has the ability to provide two selectable intensities of the backlight: HI and LO. You can toggle the selection between HI and LO.

14) **Select Temperature Display Adjustment 5 LO to 5 HI** This allows you to adjust the room temperature display by -5°F to +5°F in 1° steps. Your thermostat was accurately calibrated at the factory, however you have the option to change the display temperature value to match the previous thermostat, if you so prefer.

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

16) **Select Audio Prompting (Beeper) On or Off** – Factory default setting is **b, On**. If you wish to turn off the beeper select OFF.

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 is On.

18 & 19) **Select Automatic Schedule** – This feature allows programming a “Comfort Temperature” into all program periods with the **Auto Schedule** key. When **Heat AS** (for Heat mode) or **Cool AS** (for Cool mode) is selected **On**, the Auto Schedule feature is ready to be set. **Off** indicates that the feature is not ready to be used or a “Comfort Temperature" is already set. See Auto Schedule in Programming section.

20) **Select Cool Savings™**: With Cool Savings™ enabled, the thermostat will make small adjustments to the setpoint temperature during periods of high demand to reduce AC system running time and save energy. When the cooling system has been running for more than 20 minutes, humidity in the home will be lower and a higher temperature will feel comfortable. After 20 minutes of run time, the thermostat will start increasing the setpoint temperature in steps of less than one degree as the system continues to run. These adjustments will eventually cause the system to satisfy the thermostat to turn the system off and reduce the energy consumption. When the Cool Savings™ feature is active and making adjustments, the display will flash **“Cool Savings”**. The amount of the adjustments to the setpoint temperature is dependent on the Cool Savings™ value that is set, 1 being the least adjustment and 6 being the most adjustment. With this feature set to OFF, no change will occur when the AC system is continuously running during the periods of high demand. Periods of high demand will normally occur during the late afternoon and early evening on the hottest days of the summer. As demand lessens the adjustments to setpoint temperature are reversed until setpoint temperature returns to normal and **“Cool Savings”** no longer flashes.

21) **Heat Temperature Limit Range** – This feature adjusts the highest setpoint temperature for heat. The default setting is 99°F. It can be changed to a setting between 62°F and 98°F. The **"temperature limit"** icon will be displayed to the left of your setpoint temperature when using this feature. The **"temperature limit"** icon will flash if an attempt is made to adjust the temperature beyond the range selected.

22) **Cool Temperature Limit Range** – This feature adjusts the lowest setpoint temperature for cool. The default setting is 45°F. It can be changed to a setting between 46°F and 82°F. The **"temperature limit"** icon will be displayed to the left of your setpoint temperature when using this feature. The **"temperature limit"** icon will flash if an attempt is made to adjust the temperature beyond the range selected.

23) **Keypad Lockout** – This step allows you to select the type of lockout or limited range security required. If no lockout or limited range security is required, press ⚠ to advance the menu.

Three security settings are available in this menu item. Use the ▷ or ◁ keys to select the lockout desired. Lockout selections are:

"Keypad Lockout and **L"** = Total Lockout. Total Lockout locks all keys.

"Keypad Lockout and **P"** = Partial Lockout. Partial Lockout allows only the keys to operate within your set temperature limits.

"Temperature Limit/Keypad Lockout" prevents changing the temperature limits in the Configuration Menu.

Keypad Lockout Combination Number Selection
Display will read **"OFF" "Keypad Lockout"**.

Skip this step and continue through the remainder of the configuration menu if you require an Air Filter Change out indicator or Humidifier Pad Change out indicator by pressing the ⚠ button to advance.

Return to this point when you are ready to start your selected lock-out and continue by:

Pressing ▷ or ◁ keys to select ON.

Press ⚠. Display will read **"000"**.

Pressing ▷ or ◁ keys to select your keypad lockout combination number. Note: **"000"** is not a valid combination choice.

Record the number you select for future use.

Press ⚠ to exit the menu. The security feature you select will start in 10 seconds. The system button will remain active for 10 seconds to allow setting Heat, Off, Cool or Auto.

24 & 25) **Select Fast Second Stage ON or OFF** – In the run mode, with the fast Heat feature enabled (FA Heat On), 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.

26) **Select Remote Temperature Sensor** – Allows one wired remote temperature sensor (indoor, F145-1328, or outdoor, F145-1378) be connected to it and indicates the measured temperature in clock digits. This item allows you to select the remote sensor and also configure it as indoor or outdoor temperature sensor. Factory default is off. Select **Remote On** and **Remote in** (for indoor) or **Outdoor Remote**.

Local Temperature Sensor disable – This is applicable only when indoor remote temperature sensor is enabled. Factory default is **On LS**. You can make it **Off LS** if desired by using ▷ or ◁ touch keys. Then, only the indoor remote temperature reading will be used for control.

27) **Select Dual Fuel Feature With No Outdoor Sensor (dF)** – This feature is applicable only in heat pump modes and with no outdoor sensor. When selected ON, the thermostat will use software logic to determine when to switch to gas heat and shut down the compressor.

Select DF setting (dF) – With DF selected ON, select the setting when the gas heat will begin. Default is 05 and can be set from 00 to 09. A higher setting turns on the fossil fuel sooner and a lower setting delays turning on the fossil fuel. A higher setting is recommended for greater use of fossil fuel to maintain setpoint comfort and the lower setting is recommended for greater use of the heat pump to maintain setpoint comfort.

Select Compressor Delay (Cd) – 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.

28) **Select Dual Fuel Feature Using Outdoor Sensor (dF)** – This feature is applicable only in heat pump modes and with an outdoor sensor installed and enabled. When selected ON, the thermostat will use the outdoor sensor temperature to determine when to switch to gas heat and shut down the compressor.

Select DF setting (dF) – With DF selected ON, select the setting for outdoor temperature. When the outdoor temperature goes below the selected temperature, the gas heat will begin. Default is 35, but can be set in the range of 5 to 50.

Select Compressor Delay (Cd) – 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.

29) **Select Auxiliary Off (AO)** – Select the temperature that will inhibit the auxiliary heating stage. As long as the outdoor temperature is above the selected temperature, the auxiliary heat will not turn on. The default setting is 60, but can be set in the range of 35 to 80.

30) **Select Programmable Blower Balance Point (bP)** – With the thermostat set in heat pump mode operating in HEAT, the indoor blower will operate at slow speed when there is a call for first stage compressor heat and the outdoor temperature is below the temperature selected. This will allow the blower to circulate warmer air. Default is 80 (disabled), but can be selected in the range of 79 to 20.

31) **Humidity Display (Hd)** – Selecting **HD On** enables the display to alternately show the current time and the humidity. If **HD** is selected **OFF**, the display will not show the humidity.

32) **Adjustable Humidity Display** – The display will show the ambient humidity and 00 (default). The setting can be changed from -20 and LO to 20 and HI. The displayed humidity will change as the offset is changed. In Run mode, the displayed humidity will be the ambient humidity adjusted by the setting selected.

33) **Auto Humidity Reduction (HR)** – This feature automatically lowers humidity setting when the outside temperature drops to prevent the interior windows/walls from reaching the dew point where water condenses on surfaces. This feature default is **OFF**. It can be changed to select **LO** (low humidity reduction) or **HI.** To achieve automatic humidity reduction, the thermostat lowers the humidity when furnace cycles are long. When the outside temperature rises, it increases humidity. "**LO**" indicates a low amount of humidity reduction.

34) **Automatic Humidification (AH)** – This feature if enabled allows for humidification independent of a call for heating – useful in arid climates where addition humidification in heating and/or cooling is desired. If enabled, will energize the humidifier and circulator blower (**"G"** terminal and the **"HM"** terminal) if the actual humidity is below the humidity set point. The display indicates **AH**. Pressing the ▷ key will cycle the display from **OFF** to **H** (feature enabled in Heat mode) to **C** (feature enabled in Cool mode) to **A** (feature enabled to Auto mode) and back to **OFF**.

35) **Cycle Humidifier (CH)** – This feature provides an option that reduces the water usage by up to 50% when a flow-through humidifier is controlled by the thermostat. It is recommended for use on flow-through humidifiers only. The display indicates **CH** (**C**ycle **H**umidifier) with the default indicating OFF. Pressing the ▷ or ◁ keys will toggle the display from **OFF** to **On** and back to **OFF**. When CH is enabled, the humidifier will cycle to turn off for 10 minutes after it has run for 10 minutes. The blower and/or furnace will continue to run during the humidifier off period.

36) **Programmable Dehumidification Optimal Comfort Mode (OC) or Optimal Dehumidification (Od)** – This item can be selected to **OC** (Optimal Comfort mode), **Od** (Optimal Dehumidification), or OFF. When Optimal Comfort **(OC)** is enabled, this feature automatically reduces indoor humidity with a call for **Cooling** if humidity is 2% above humidity setpoint. Humidity is set by pressing the **Humidity** button when in the appropriate mode, in this case **Cooling**, and pressing the △ or ▽ buttons to set desired humidity (range 40% to 95%) level followed by pressing **Humidity** button again. This dehumidification feature uses less energy by maintaining temperature and dehumidifying only when a call for Cooling is required. Optimal Dehumidification **(Od)** when enabled, this feature automatically reduces indoor humidity with a call for **Cooling** if humidity is 2% above setting. Humidity is set by pressing the **HUMIDITY** button when in the appropriate mode, in this case **Cooling**, and pressing the △ or ▽ buttons to set desired humidity level followed by pressing **Humidity** button again. This dehumidification feature may use more energy by making dehumidification a priority initiating a call for cooling if humidity is 2% above desired setting. This feature may also over-cool the condition space by up to 3 degrees to achieve the desired humidity level. (Note: Both dehumidification modes operate in Cooling mode only with a call for cooling)

INSTALLER/CONFIGURATION MENU

37) **Change UV Lamp** – This feature allows the thermostat to display the words **Change UV Lamp** (Call for Service of UV bulb) after a set time of UV bulb operation. This is a reminder to maintain your UV system at optimum level of operation. When enabled, the factory set interval for **Change UV Lamp** to be displayed is 350 days of UV bulb operation and can be adjusted in 25 day increments. This should be adjusted with respect to the bulb's recommended maintenance schedule.

When **Change UV Lamp** is displayed, you can clear it by pressing Clean Display.

38) **Change Humidifier Pad** – This feature allows the thermostat to display the words **Change Pad** after a set time of humidifier operation. This is a reminder to maintain or clean your humidifier. The factory set interval for **Change Pad** to be displayed is 200 hours of humidifier operation. This should be adjusted with respect to the humidifier's recommended maintenance schedule.

When **Change Pad** is displayed, you can clear it by pressing Clean Display.

39) **Select Change Filter Run Time** – This feature allows thermostat to display **"Change Filter"** after a set time of blower operation. This is a reminder to change or clean your air filter. This time can be set from 25 to 1975 hours in 25 hour increments. A selection of OFF will cancel this feature. When **"Change Filter"** is displayed, you can clear it by pressing Clean Display. In a typical application, 200 hours of run time is approximately 30 days.

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. Move FAN switch to **ON** position. The blower should begin to operate.
3. Move FAN switch to **AUTO** position. 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 SYSTEM 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. The heat pump system should begin to operate. The display should show **"System On"**. However, 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 11).
3. Adjust temperature setting to 3° above room temperature. If your system configuration is set at MS2, HP2 or HP1, the auxiliary heat system should begin to operate and the display will show **"System On +2"**.
4. Press ▽ to adjust the thermostat below room temperature. The heating system should stop operating.

Emergency System

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

1. Press SYSTEM button to select **EMER**. **"EMER"** will flash on the display.
2. Press ⚠ to adjust thermostat setting above room temperature. The Emergency heating system will begin to operate. The display will show **"System On"** flashing **"EMER"** and **"HEAT"** to indicate that the Emergency system is operating.
3. Press ▽ to adjust the thermostat below room temperature. The Emergency heating system should stop operating.

⚠ 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 SYSTEM button to select **COOL.**
2. Press ▽ to adjust thermostat setting below room temperature. The blower should come on immediately on high speed, followed by cold air circulation. The display should show **"System On"**. If the setpoint temperature display is flashing, the compressor lockout feature is operating (see Configuration menu, item 5).
3. Adjust temperature setting to 3° below room temperature. The second stage cooling should begin to operate and the display should show **"System On +2"**.
4. Press ⚠ to adjust the temperature setting above room temperature. The cooling system should stop operating.

Choose the Fan Setting (Auto or On or Prog)

Fan **Auto** is the most commonly selected setting and runs the fan only when the heating or cooling system is on.
Fan **On** selection runs the fan continuously for increased air circulation or to allow additional air cleaning.
Fan **Prog** will run the fan when the heating or cooling system is on. In addition, when the thermostat has not called for heat or cool for more than 60 minutes, it will begin to cycle the fan for 10 minutes on and 20 minutes off to improve indoor air quality. This is the Comfort Circulating Fan Feature.

Choose the System Setting (Cool, Off, Heat, Emer, Auto)

Press the SYSTEM button to select:
Heat: Thermostat controls only the heating system.
Off: Heating and Cooling systems are off.
Cool: Thermostat controls only the cooling system.
Auto: Auto Changeover is used in areas where both heating and cooling may be required on the same day. **AUTO** allows the thermostat to automatically select heating or cooling depending on the indoor temperature and the selected heat and cool temperatures. When using **AUTO**, be sure to set the Cooling temperatures more than 1° Fahrenheit higher than the heating temperature.

Emer: Setting is available only when the thermostat is configured in HP1 or HP2 mode.

Manual Operation for Non-Programmable Mode

Press the SYSTEM button to select Heat or Cool and use the buttons to adjust the temperature to your desired setting. After selecting your desired settings you can also press the SYSTEM button to select **AUTO** to allow the thermostat to automatically change between Heat and Cool.

Manual Operation (Bypassing the Program) Programmable Mode

Press the HOLD button and adjust the temperature wherever you like. This will override the program. The **HOLD** feature bypasses the program and allows you to adjust the temperature manually, as needed. Whatever temperature you set in **HOLD** will be maintained 24 hours a day, until you manually change the temperature or press **Run Schedule** to cancel **HOLD** and resume the programmed schedule.

Program Override (Temporary Override)

Press buttons to adjust the temperature. This will override the temperature setting for a (default) four hour override period. The override period can be shortened by pressing ◁ or lengthened by pressing ▷. Program Override period can range from 15 minutes to 7 days.
Example: If you turn up the heat during the morning program, it will be automatically lowered later, when the temporary hold period ends. To cancel the temporary setting at any time and return to the program, press **Run Schedule**.
If the SYSTEM button is pressed to select **AUTO** the thermostat will change to Heat or Cool, whichever ran last. If it switches to heat, but you want cool, or it changes to cool, but you want heat, press both buttons simultaneously to change to the other mode.

PROGRAMMING

Set Current Time and Day

1) Press Menu key to enter installer menu. Then press Set Time once to indicate hour & AM or PM designation in clock display.
2) Press and hold either the ▷ or ◁ touch key until you reach the correct hour and AM or PM designation.
3) Press Set Time again to display minutes only in clock display.
4) Press and hold either the ▷ or ◁ touch keys until you reach the correct minutes.
5) Press Set Time once again to display year.
6) Press and hold either the ▷ or ◁ touch key until you reach the correct year.
7) Press Set Time once again to display month.
8) Press and hold either the ▷ or ◁ touch key until you reach the correct month.
9) Press Set Time once again to display date of the month along with day of the week at top row (which is automatic).
10) Press and hold either the ▷ or ◁ touch key until you reach the correct day of the month and day of the week is automatically calculated and displayed at the top row.
11) Press Run Schedule once; now the display will show the correct time and room temperature.

Automatic Daylight Saving Calculation

The Real Time Clock will adjust automatically for daylight savings time, in the following manner:
Increment one hour at 2 AM on the second Sunday of March and decrement one hour at 2 AM on the first Sunday of November. (New DST effective 2007).

The daylight saving feature can be enabled or disabled in installer configuration menu. Default is **DS ON** (enabled). After entering installer configuration mode, momentarily press touch key until the display indicates dS (in actual temperature digits) and on (default – in clock digits). ▷ and ◁ keys will toggle display and operation from on to OFF.

Programming Tip: Copy Program

When programming your thermostat, you may copy the program from one day to another day or group of days using the **Copy** key. In 7 day programming mode, a day can be copied to another day or all six other days. In 5/1/1 day programming mode the weekday (Mon – Fri) program can be copied into Sat and Sun or either Sat or Sun.

To copy a program from one day to another:
1) In Set Schedule mode, enter the program for the day or select the day you wish to copy by pressing **Advance Day**.
2) Press **Copy**. The display will show **"Copy"** next to the **SYSTEM** key and the day of the week that will be copied.
3) Press **Advance Day**. The day being copied will be indicated and the other days will be flashing.

4) If you wish to copy to all days skip to next step or press **Advance Day** until the day you wish to copy to is flashing.
5) Press **Copy**. **"Copy"** will disappear, the day you copied from will disappear and the day(s) you copied to will be on.
6) If you wish to copy this same program into other days, press **Copy** and repeat steps 3, 4 and 5.
7) Press **Run Schedule** to return to normal operation.

Fill in the blank schedule on the next page then:

Enter the Heating Program

1) Press the Menu button and then press Set Schedule. Press SYSTEM button to select either **"Heat"** or **"Cool"** in the system switch area indicating the active mode being programmed. You can switch to the other mode by pressing the system switch at any time.
2) The top of the display will show the day(s) being programmed. The time and set at temperature are also displayed. **"Morning"** will also be displayed to indicate the period.
3) Press the key to change the temperature to your selected temperature for the 1st heating period (Morning).
4) Press ▷ or ◁ key to adjust the start time for period. The time will change in 15 minute increments.
5) Press **FAN** to select **Auto** or **Prog**.
6) After you have set the time and the temperature for the period to begin, press Set Schedule to advance to the next program period.
7) Repeat steps 2 through 6 until all of the program times and temperatures are set for all program periods on that day.
8) Press "Advance Day" to change to the next day and repeat steps 2 through 8.
9) When programming is complete and all of the times and temperatures match your desired heating schedule, press Run Schedule. The thermostat will now run your program.

Enter the Cooling Program

1) Press the SYSTEM button until the Cool icon appears.
2) Follow **Enter Heating Program** instructions for entering cooling times and temperatures.

Automatic Schedule

This feature provides a method to program every day with the most popular time and temperature settings using one key. For this feature to be available, the Auto Schedule options (Installer/Configuration menu item 17, **AS Heat**, or item 18, **AS Cool**) must be selected **On**.

To use Auto Schedule, press **Run Schedule** to be sure you are in normal operating mode. In SYSTEM Heat mode, use the keys to select your "Comfort Temperature". When your "Comfort Temperature" is selected, press **Auto Schedule** key. The key will begin to flash indicating that the feature is ready to store your selected temperature. Press Auto Schedule a second time to complete the process. The **Auto Schedule** key will disappear to indicate that the Auto Schedule command has been accepted.

In Heat mode the thermostat will maintain your "Comfort Temperature" during the Morning, Day and Evening periods and setback 6° for the Night. Morning period will begin at 6:30 AM and Night period will begin at 10:30 PM.

To set the Auto Schedule temperature for Cool mode, press SYSTEM to change the mode to Cool and repeat setting the temperature. In Cool mode, the thermostat will maintain your selected "Comfort Temperature" continuously.

The "Comfort Temperature" can be temporarily overridden by changing the setpoint temperature using the △ or ▽ keys. Once Auto Schedule has been set and the key has disappeared, it can be reset in the Installer/ Configuration menu.

Entering Fan Program

In the Set Schedule mode, the **FAN** key is used to select the fan operation during a program period. The default state of the **Fan** key is **FAN Auto** (fan runs during a call for cool, but not on a call for heat). It can be changed to **FAN Prog** (fan runs during a program period). Each press of the **FAN** key will change the mode of the fan between **Auto** and **Prog**. In the Run mode, when a program period that has **FAN Prog** begins, the fan will turn on and stay on during the complete period. The display will show **FAN On Prog**.

In the Run mode, pressing the **FAN** key will change the fan from **Auto** (default setting) to On (fan running continuously) or **Prog**. When **FAN Prog** is displayed, the fan will run when the system cycles. If the system does not cycle for more than 60 minutes, the thermostat will turn the fan on for 10 minutes and off for 20 minutes to improve indoor air quality. If the display shows **FAN On Prog** to indicate the program period has the fan programmed to run, **FAN Prog** will override the programmed setting until **Run Schedule** is pressed or the next schedule period begins.

Energy Saving Factory Pre-Program

The 1F95-1291 thermostats are programmed with the energy saving settings shown in the table below for all days of the week. If this program suits your needs, simply set the thermostat clock and press the RUN button.
The table below shows the factory set heating and cooling schedule for all days of the week.

	* Wake Up (Morning)		Leave For Work (Day)		* Return Home (Evening)		Go To Bed (Night)	
Heating Program	6:00 AM	70°F	8:00 AM	62°F	5:00 PM	70°F	10:00 PM	62°F
Cooling Program	6:00 AM	75°F	8:00 AM	83°F	5:00 PM	75°F	10:00 PM	78°F

* You can eliminate these two program periods in the configuration menu (reference #5) if the building is occupied all day. Day period will change to 6:00 AM and 70° and can be programmed as required.

PROGRAMMING

Planning Your Program – Important

The Heating and Cooling Program schedules below allow you to pencil in your own program times and temperatures.
The 1F95-1291 comes configured for 7 day programming and can also be configured for 5+1+1 programming (see configuration section).

Factory settings are listed on Monday, Saturday and Sunday. If you are re-programming a 5+1+1 day schedule, pencil in your own times and temperatures directly below the factory times and temperatures.

If you are re-programming a 7 day schedule, fill in all lines with the times and temperatures you want.

Keep the following guidelines in mind when planning your program.
- In Heating, lower temperatures will save energy.
- In Cooling, higher temperatures will save energy.
- **If you plan on using Auto Changeover, do not program the heating temperature higher than the cooling temperature.**

Worksheet for Re-Programming 5+1+1 and 7 Day Program

Heating Program	Wake Up (Morning)		Fan	Leave For Work (Day)		Fan	Return Home (Evening)		Fan	Go To Bed (Night)		Fan
MON	6:00 AM	70°F	Auto	8:00 AM	62°F	Auto	5:00 PM	70°F	Auto	10:00 PM	62°F	Auto
TUE												
WED												
THU												
FRI												
SAT	6:00 AM	70°F	Auto	8:00 AM	62°F	Auto	5:00 PM	70°F	Auto	10:00 PM	62°F	Auto
SUN	6:00 AM	70°F	Auto	8:00 AM	62°F	Auto	5:00 PM	70°F	Auto	10:00 PM	62°F	Auto

Cooling Program	Wake Up (Morning)		Fan	Leave For Work (Day)		Fan	Return Home (Evening)		Fan	Go To Bed (Night)		Fan
MON	6:00 AM	75°F	Auto	8:00 AM	83°F	Auto	5:00 PM	75°F	Auto	10:00 PM	78°F	Auto
TUE												
WED												
THU												
FRI												
SAT	6:00 AM	75°F	Auto	8:00 AM	83°F	Auto	5:00 PM	75°F	Auto	10:00 PM	78°F	Auto
SUN	6:00 AM	75°F	Auto	8:00 AM	83°F	Auto	5:00 PM	75°F	Auto	10:00 PM	78°F	Auto

Wired Remote Temperature Sensing

One remote temperature sensor can be installed indoor or outdoor and connected to the thermostat by a maximum cable length of 100 meters (300 feet). Terminals +, S and - on the terminal block allow connection of the remote sensor. The thermostat must have 24 VAC Common connection to terminal C for the remote sensor to operate. The remote sensor can be enabled or disabled in the Installer/Configuration menu, item 26.

When remote sensor, **Remote**, is selected **Off** (factory default), no remote sensor is enabled. When remote sensor is selected **On**, the next step is to select the remote as indoor, **Remote In**, or outdoor, **Remote Outdoor**. If the remote is selected as Remote In, an additional step will be to select if the temperature shown on the display will be from the thermostat, **LS On**, or the remote sensor **LS Off**.

In normal operation, when a remote sensor is enabled the time digits of the display will alternate between the time and the remote temperature for three seconds each. Above the remote temperature will be Remote, for indoor sensor or **Outdoor Remote**, for outdoor sensor. If the remote sensor is an indoor sensor and the local display has been disabled, the temperature displayed as the room temperature will be the remote sensor temperature.

Sensing Range:
Outdoor temperature range is -40°F to 140°F
Indoor temperature range is 32°F to 99 °F

Weighing of Remote Reading:

The thermostat will weight or average the temperature of the indoor remote sensor with the local sensor in the thermostat for each program period. The averaging will be active only when the local sensor and the indoor remote sensor are both functional and enabled in the Installer/Configuration menu.

When the thermostat is in the Set Schedule mode, the weight of the indoor sensor will be shown in the current temperature digits of the display. The weight will show as **A2** (average and default), **H4** (high) or **L1** (low). Pressing the ▷ and ◁ keys at the same time will change the weight for the program period. The weight of the thermostat sensor is fixed.

In normal operation of the thermostat, the current temperature displayed will be the weighted average of the local sensor and the remote sensor using the formula (local sensor weight x local sensor temperature) + (remote sensor weight x remote sensor temperature) / (local sensor weight + remote sensor weight).

Example: Local sensor temperature is 80° and the remote sensor is 70°.
If weight is selected **H4**, the averaged temperature of 72° will be displayed.
(1 x 80) + (4 x 70) / 5 = 72°

If weight is selected **A2**, the average temperature of 73° will be displayed.
(1 x 80) + (2 x 70) / 3 = 73.3°

If weight is selected **L1**, the average temperature of 75° will be displayed.
(1 x 80) + (1 x 70) / 2 = 75°

The example shows that the weight selected would prioritize the overall averaged temperature between the two sensors. The high weight selection caused the remote sensor to have a higher influence in the calculated temperature average than the local sensor and the low weight selection caused the remote sensor to have less influence.

Dual Fuel Temperature Setpoint

When the thermostat is configured for Heat Pump mode and the Dual Fuel feature is selected on, the thermostat can monitor the outside temperature or use software logic to determine when to switch to gas heat and shut down the compressor. This eliminates the need for a fossil fuel kit.

The user selectable temperature is called the dual fuel temperature setpoint, **dF** and is set in the Installer/Configuration menu, items 27 or 28. With outdoor remote sensor available, the dual fuel temperature setpoint can be set to a temperature of 5° through 50°. When outdoor remote sensor is not available, a software logic based dual fuel number from 01 to 09 can be selected. Cd will not be available if dF is selected OFF.

After the dual fuel temperature setpoint is set and ⚠ is pressed, a delay, **Cd**, can be set for compressor shutdown after the auxiliary stage is energized. This delay can be set from 0 seconds to 99 seconds to minimize the time that the system may blow cooler air until the alternate source of heat comes on. Default setting for delay is 60. When setting the delay, if the ▷ or ◁ keys are held depressed, the setpoint will increase or decrease at the rate of one degree every half second for the first three seconds and double the speed after three seconds.

Blower Balance Point

With an air to air heat pump system, the indoor circulator blower discharge air temperature from the register is dependent on outdoor temperature. When the outdoor temperature is, for example, above 35 degrees, the discharge air is warm. But, when the outdoor temperature drops, the discharge air temperature also drops and is cooler. If the circulator blower speed is reduced, the air temperature will increase and the resident will feel warmer. The outdoor temperature compared to the blower balance point temperature determines the blower speed.

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 **R** and **C** (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 SYSTEM 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 Switch 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, step 7 (heat) or 8 (cool). If an acceptable cycle rate is not achieved, contact a local HVAC service person for additional suggestions.
Forgot Keypad Lockout Code		Press the menu button (button will disappear) and hold in for 20 seconds. This unlocks the thermostat.

NOTES

HOMEOWNER HELP LINE: 1-800-284-2925

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