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> Heagstat H701 Non-Programmable Thermostat User Manual for Single-Stage Systems

Heagstat H701

Heagstat H701 Non-Programmable Thermostat User Manual

Model: H701 | Brand: Heagstat

INTRODUCTION

This manual provides comprehensive instructions for the installation, setup, and operation of your Heagstat H701 Non-Programmable Thermostat. This thermostat is designed for conventional single-stage heating and cooling systems. Please read these instructions carefully before installation and use to ensure proper function and safety.

PRODUCT OVERVIEW

The Heagstat H701 is a non-programmable thermostat featuring a large, clear LCD display with a white backlight for easy readability. It offers precise temperature control and is designed for simplicity and ease of use.

Key Features:

- Non-programmable operation for straightforward temperature control.
- Large LCD display with white backlight for enhanced visibility.
- Accurate temperature control of +/-1°F.
- Adjustable heating and cooling swing (cycle rate).
- 5-minute compressor delay protection (selectable).
- Dual power options: 24VAC system power or 2 AAA batteries.
- Low battery indicator.

What's in the Box:



Heagstat H701 Thermostat

H701 Single-stage thermostat

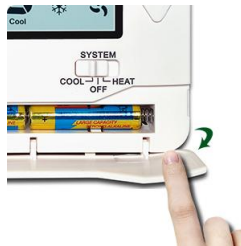
Non-Programmable 1Heat / 1Cool



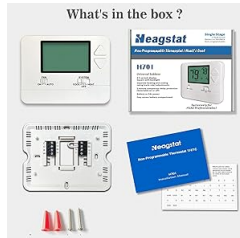
Universal Sub-base (with jumper)



Two screws and anchors



Installation Manual



Cable label sheet

SYSTEM COMPATIBILITY

The Heagstat H701 thermostat is designed for specific HVAC systems. Please verify your system's compatibility before installation.

Compatible Systems (1 Heat / 1 Cool):

- Conventional Single-Stage Heating & Air Conditioning (1 Heat / 1 Cool)
- Gas/Oil/Electric Furnace (1 Heat only)
- Boiler Radiant (1 Heat only)
- Furnace Forced-Air (1 Heat only)
- Gas Fireplace (24 Volts)
- Cooling Only systems
- 1H/1C Heat Pump systems (without auxiliary heat)

Incompatible Systems:

- Multistage systems (e.g., 1H/2C, 2H/2C)
- HVAC heat pump systems with auxiliary heat (e.g., 2H/1C, 4H/2C)
- PTACs (Packaged Terminal Air Conditioners)
- 3-wire hydronic (hot water) systems
- Dual fuel/hybrid heating systems
- Line voltage systems (120-240V electric baseboards heat)
- Mini split heat pump air conditioners
- RV air conditioners (Mach and Roughneck series)

Compatible Systems

Equipment Type	Supported Yes/No	# of Wires	Wires Needed
Single-Stage Heating & Cooling (with C-wire)	✓	5-wires	(RH/RC =R) , C, W, Y, G requires jumpers
Single-Stage Heating & Cooling (No C-wire)	✓	4-wires	(RH/RC =R) , W, Y, G requires jumpers
Gas Fireplace (24 Volts)	✓	3-wires	(RH=R) , C, W,
Boiler Radiant Heating Only	✓	3-wires	(RH=R) , C, W,
Furnace Forced-Air Heating Only	✓	4-wires	(RH/RC =R) , C, W, G requires jumpers
Cooling Only (with C-wire)	✓	4-wires	(RC=R) , C, Y, G
Cooling Only (No C-wire)	✓	3-wires	(RC=R) , Y, G
Multistage Heating & Cooling (with C-wire)	✗	7-wires	R, C, W1,W2, Y1,Y2, G
Multistage Heating & Cooling (No C-wire)	✗	6-wires	R, W1,W2, Y1,Y2, G
Heat Pump with Auxiliary Heat (with C-wire)	✗	8-wires	R, C, W/E, W2, Y1,Y2, G, O/B
Heat Pump w/o Auxiliary Heat (with C-wire)	✗	6-wires	R, C, Y1,Y2, G, O/B
Dual Fuel / Hybrid Heating (with C-wire)	✗	8-wires	R, C, W1, W2, Y1, Y2, G, O/B
Dual Fuel / Hybrid Heating (No C-wire)	✗	7-wires	R, W1, W2, Y1, Y2, G, O/B

Image Description: A table detailing compatible and incompatible HVAC systems for the Heagstat H701 thermostat. It lists equipment types, whether they are supported, the number of wires typically used, and the wires needed for connection. For example, Single-Stage Heating & Cooling (with C-wire) is supported with 5 wires (RH/RC=R, C, W, Y, G). Incompatible systems are clearly marked with an 'X'.

INSTALLATION INSTRUCTIONS

Important: Before beginning installation, ensure the power to your HVAC system is turned off at the circuit breaker. If you are

unsure about any steps, consult a qualified HVAC technician.

Step 1: Turn Off Power

Locate your HVAC system's circuit breaker and switch it to the "OFF" position. Verify that the system is powered off before proceeding.

Step 2: Remove Old Thermostat

1. Carefully remove the cover of your old thermostat.
2. Take a picture of the existing wiring connections for reference.
3. Label each wire with the corresponding terminal letter using the provided cable labels.
4. Disconnect the wires and remove the old thermostat's mounting plate from the wall.

Step 3: Mount the New Thermostat Base

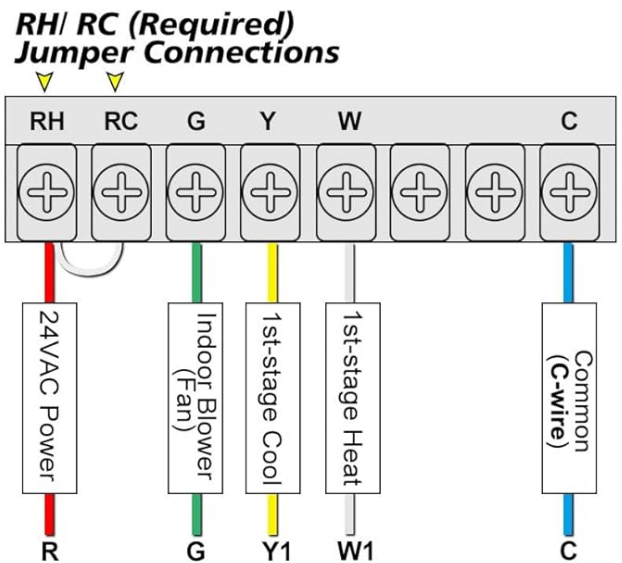
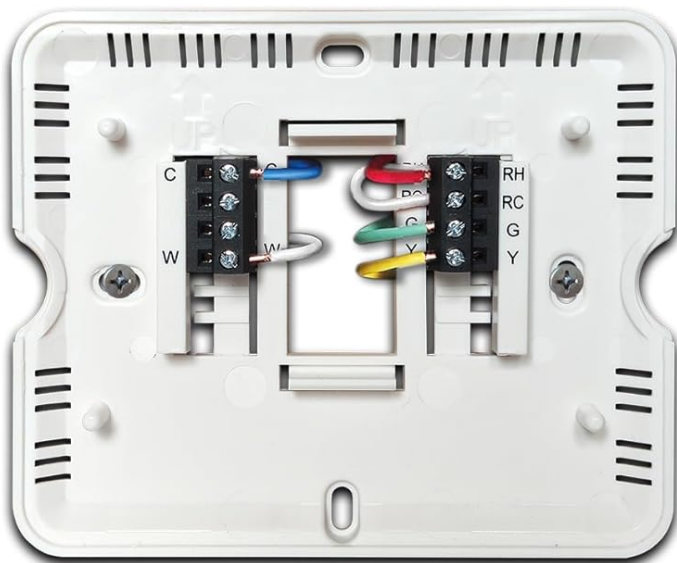
1. Position the Heagstat H701 universal sub-base on the wall where the old thermostat was located.
2. Use the provided screws and anchors to securely mount the sub-base to the wall. Ensure it is level.

Step 4: Wire the Thermostat

Connect the labeled wires to the corresponding terminals on the new thermostat's sub-base. Refer to the wiring diagram below. The base supports 2 to 5 wires. Connections with 6 to 8 wires are not suitable for this model.

Learn How to Install Wires

Check that the base is wired with 2 to 5 wires at most, and 6 to 8 wires are not supported.



Compatible Systems (24v)

- ✓ Single-Stage Heating & Cooling
- ✓ Gas / Oil / Electric Furnace (Heating only)
- ✓ Gas Fireplace (24 Volts)
- ✓ Boiler Radiant Heating Only
- ✓ Furnace Forced-Air Heating Only
- ✓ Cooling Only
- ✓ 750 Millivolt
- ✓ 2-wire Hydronic (Hot Water)

Incompatible Systems:

- ✗ Multistage Heating & Cooling
- ✗ 3-wire Hydronic (Hot Water)
- ✗ Heat Pump with Auxiliary Heating
- ✗ Heat Pump with Emergency Heating
- ✗ Dual Fuel/Hybrid Heating
- ✗ Mini Split Systems
- ✗ Electric Baseboard Heat (120-240 Volts)
- ✗ Convector, Radiant Ceiling Heat
- ✗ RV Thermostat

Image Description: A detailed wiring diagram for the Heagstat H701 thermostat. It shows the terminal block on the thermostat's sub-base with labels (RH, RC, G, Y, W, C) and corresponding wire colors (Red, Green, Yellow, White, Blue/Black for Common). Jumper connections between RH and RC are indicated for systems without separate R wires. This diagram illustrates connections for 24VAC power, indoor blower (fan), 1st-stage cool, 1st-stage heat, and common (C-wire).

- **R/RH:** 24VAC Power (Heating)
- **RC:** 24VAC Power (Cooling) - If only one R wire, connect to RH and use the jumper between RH and RC.
- **G:** Fan
- **Y:** 1st-stage Cooling
- **W:** 1st-stage Heating
- **C:** Common wire (optional for battery-powered operation, but recommended for continuous backlight and system power)

Note: If your system has only one 'R' wire, connect it to the 'RH' terminal and ensure the jumper between 'RH' and 'RC' is in place. If you have separate 'RH' and 'RC' wires, remove the jumper.

Step 5: Install Batteries (Optional/Backup)

If not using a C-wire, or for battery backup, insert two fresh AAA alkaline batteries into the battery compartment located at the

bottom front of the thermostat. Ensure correct polarity.

Step 6: Attach Thermostat to Base

Align the thermostat body with the mounted sub-base and gently push until it snaps securely into place.

Step 7: Restore Power

Return to your circuit breaker and switch the power to your HVAC system back to the "ON" position.

INITIAL SETUP AND CONFIGURATION

Gas or Electric Furnace Setup

On the back of the thermostat, there is a switch for "GAS" or "ELEC" (Electric). This switch determines how the fan operates during a call for heat.

- **GAS:** For gas or oil furnaces, set the switch to "GAS". In this mode, the furnace controls the fan operation during heating cycles.
- **ELEC:** For electric furnaces, set the switch to "ELEC". In this mode, the thermostat operates the fan when the fan relay is connected to the 'G' terminal.



Adjusting Room Temperature Calibration,

This feature allows the installer to change the calibration of the room temperature display.

For example: If the thermostat reads 70° and you would like it to read 72° then select +2.

You can adjust the room temperature display to ready -4°F to +4°F above or below the factory calibrated reading.

Gas or Electric Setup

If you have either a gas or oil furnace, set the switch to GAS. (For systems that control the fan during a call for heat, put the fan operation switch to the GAS position).

If you have an electric furnace, set the switch to ELEC. (The thermostat operation switch should be put in the ELEC position, This setting allows the thermostat to operate the fan when the fan relay is connected to the G terminal).



Image Description: An image showing the back of the Heagstat H701 thermostat with a small switch labeled "GAS" and "ELEC". This switch is used to configure the thermostat for either gas/oil furnace systems or electric furnace systems, affecting how the fan operates during heating.

Room Temperature Calibration Adjustment

This feature allows you to adjust the displayed room temperature to match another thermometer in your home, if desired. The adjustment range is typically -4°F to +4°F from the factory calibrated reading.

1. Access the calibration setting (refer to the full installation manual for specific button presses, usually involving holding down certain buttons).
2. Use the Up/Down buttons to adjust the displayed temperature.
3. Confirm the setting (usually by waiting a few seconds or pressing a specific button).



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If you have an electric furnace, set the switch to ELEC. (The thermostat operation switch should be put in the ELEC position, This setting allows the thermostat to operate the fan when the fan relay is connected to the G terminal).



Image Description: The thermostat display showing "Calibration" and a numerical value, indicating the screen for adjusting the room temperature calibration. This allows users to fine-tune the thermostat's temperature reading.

Separate Heating and Cooling Swing (Cycle Rate)

The temperature swing, also known as differential or cycle rate, determines how much the temperature can deviate from the setpoint before the system turns on or off. A smaller swing results in more frequent, shorter cycles, while a larger swing results in fewer, longer cycles. The factory default for heating or cooling is typically 0.5°F, and it is adjustable from 0.2°F to 2°F.

1. Access the swing setting (refer to the full installation manual for specific button presses).
2. Use the Up/Down buttons to adjust the swing value.
3. Confirm the setting.

Separate Heating Swing and Cooling Swing (Cycle Rate)

The **swing setting**, often called cyclerate, differential or anticipation is adjustable, a smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles.

The swing is adjustable from 0.2°F to 2°F, factory default for heating or cooling is 0.5°F.



⚠ Temperature swing, sometimes called differential or cycle rate, can be customized for this individual application. For most applications choose a swing setting that is as long as possible without making the occupants uncomfortable.



Image Description: The thermostat display showing "Cool Swing" and a value of "0.5", indicating the setting for the cooling cycle rate. This feature allows users to customize the temperature differential before the cooling system activates or deactivates.

OPERATING INSTRUCTIONS

Basic Controls:



Image Description: Front view of the Heagstat H701 thermostat, showing the LCD display, Up/Down temperature adjustment buttons,

- **Up/Down Buttons:** Used to adjust the desired set temperature. Pressing any button will activate the white backlight for 10 seconds.
- **FAN Switch (ON/AUTO):**
 - **ON:** The fan runs continuously.
 - **AUTO:** The fan runs only when the heating or cooling system is actively operating.
- **SYSTEM Switch (COOL/OFF/HEAT):**
 - **COOL:** The thermostat will activate the cooling system when the room temperature rises above the setpoint.
 - **OFF:** The heating and cooling systems are turned off.
 - **HEAT:** The thermostat will activate the heating system when the room temperature falls below the setpoint.

Adjusting Temperature:

To change the desired temperature, simply use the **Up** (▲) or **Down** (▼) buttons on the right side of the thermostat. The display will show the current room temperature and the set temperature. The temperature control range is 44°F to 90°F, and the room temperature display range is 41°F to 95°F.

MAINTENANCE

Battery Replacement:

The thermostat uses two AAA alkaline batteries for power (if not connected to a C-wire) or as a backup. When the low battery indicator appears on the screen, it is time to replace the batteries.

1. Locate the battery compartment door at the bottom front of the thermostat.
2. Gently pull the door open.
3. Remove the old AAA batteries.
4. Insert two new AAA alkaline batteries, ensuring correct polarity (+/-).
5. Close the battery compartment door securely.

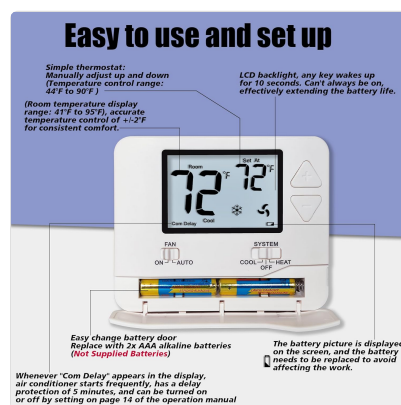


Image Description: A close-up image showing the battery compartment of the Heagstat H701 thermostat, located at the bottom front. The compartment is open, revealing two AAA batteries inside, illustrating the ease of battery replacement.

Cleaning:

Wipe the thermostat's exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents.

TROUBLESHOOTING

"Com Delay" Message / Compressor Delay Protection:

The thermostat includes a 5-minute compressor delay protection feature. If the compressor frequently starts and stops, this delay helps prevent damage to the HVAC system. When active, "Com Delay" will appear on the display.

- This feature can be turned on or off. Refer to the full installation manual for instructions on how to adjust this setting.
- If "Com Delay" appears, the system will wait for 5 minutes before restarting the compressor. This is normal operation.

Thermostat Not Responding:

- Check if the system power is on at the circuit breaker.
- Ensure batteries are fresh and correctly installed.
- Verify all wiring connections are secure and correct according to the installation diagram.

Inaccurate Temperature Reading:

- Ensure the thermostat is not exposed to direct sunlight, drafts, or heat sources that could affect its reading.
- Adjust the room temperature calibration as described in the "Initial Setup and Configuration" section.

SPECIFICATIONS

Feature	Detail
Model	H701
Brand	Heagstat
Dimensions (D x W x H)	0.98" x 4.72" x 3.86"
Weight	6.4 ounces (0.4 lbs)
Controller Type	Conventional Single-Stage Systems (1 Heat / 1 Cool)
Temperature Control Range	44°F to 90°F
Room Temperature Display Range	41°F to 95°F
Temperature Accuracy	+/-1°F
Power Source	24 Volts (AC) or 2 AAA Batteries
Display Type	LCD with White Backlight
Control Method	Button Control
Material	Plastic
Special Features	Adjustable Heating/Cooling Swing, 5-minute Compressor Delay Protection, Low Battery Indicator
UPC	602430103056

WARRANTY AND SUPPORT

Heagstat products come with a 2-year Worry-Free Warranty. For any issues or support inquiries, please contact Heagstat customer service. You can typically find contact information on the manufacturer's website or through your purchase platform.

Additionally, the product includes a 30-day free return policy.