

**Applications**

| Description | |
|---|-----|
| Heat Pump (No Aux. or Emergency Heat) | Yes |
| Heat Pump (With Aux. or Emergency Heat) | No |
| Electric Furnace | Yes |
| Gas or Oil Heat | Yes |
| Multi-stage | Yes |
| Heat Only Systems | Yes |
| Cool Only Systems | Yes |
| Millivolt Conventional Systems | Yes |
| Two Transformer Systems | Yes |

Power Type

- ❖ Battery Power
- ❖ Hardwire (Common Wire)
- ❖ Hardwire (Common Wire) with Battery Backup

Must be installed by a trained, experienced Technician. Carefully read these instructions before installation. If you fail to follow these instruction, you could damage this product or cause a hazzedous condition.

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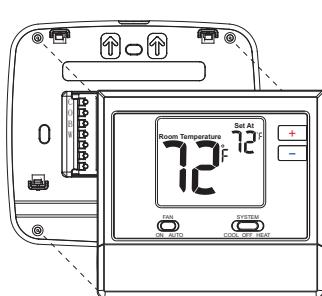
Specifications

The display range of temperature ... 41°F to 95°F (5°C to 35°C)
 The control range of temperature.... 44°F to 90°F (7°C to 32°C)
 Swing (cycle rate or differential) Heating is adjustable from 0.2° to 2.0° Cooling is adjustable from 0.2° to 2.0°
 Power source 18 to 30 VAC, NEC Class II, 50/60 Hz
 Battery power..... 2 AA Alkaline batteries
 Operating ambient Temperature 32°F to +105°F (0°C to +41°C)
 Maximum Operating humidity..... 90% non-condensing
 Dimensions of thermostat 4.7"W x 4.4"H x 0.8"D

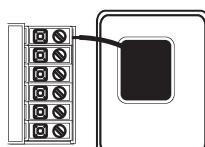
SA-LAB1100009 Rev.A

Installation Instructions**Mount Thermostat**

Align the 4 tabs on the subbase with corresponding slots on the back of the thermostat, then push gently until the thermostat snaps in place completely.

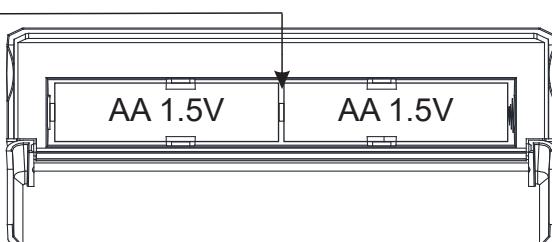
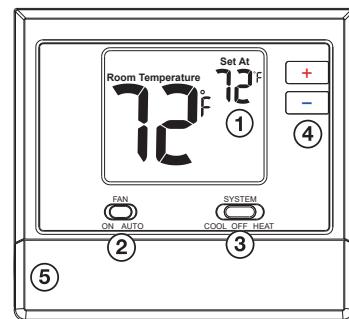
**Battery Installation**

Battery is recommended even thermostat is hardwired (C terminal connected). When thermostat is hardwired and batteries are installed, the thermostat will activate a compressor delay of 5 minutes when the thermostat detects a power outage from the hardwired power supply.

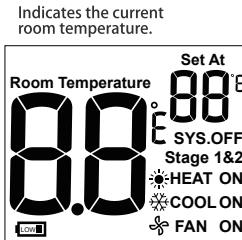
**Important:**

High quality alkaline batteries are recommended. The batteries will last for one year under normal usage.

Remove the tab between the batteries to activate the thermostat. High alkaline batteries are recommended.

**Getting to know your thermostat**

- 1 LCD
- 2 Fan switch
- 3 System switch
- 4 Temperature setpoint buttons
- 5 Battery door



Indicates the current room temperature.

Displays the setpoint temperature.

System operation indicators: The COOL, HEAT or FAN icon will display when the COOL, HEAT or FAN is on.

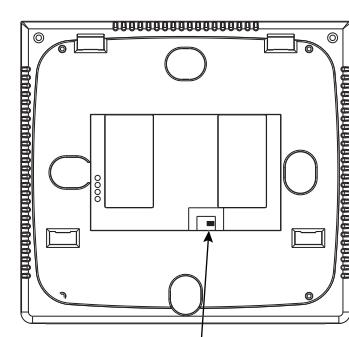
Low Battery Indicator: Replace batteries when indicator is displayed.

NOTE: The compressor delay feature is active if these icons are flashing. The compressor will turn on when the 5 minute delay has elapsed.

Gas or Electric Setup

Gas: For systems that control the fan during a call for heat, put the fan operation switch to the GAS position.

Electric: For systems that do not control the fan during a call for heat, put the fan operation switch to the ELECTRIC position.

**Fan Operation Switch**

**Caution:
Electrical Hazard**

Disconnected the power before installation. Fail to do so, it can cause electrical shock or equipment damage.

**Warning:**

All components of the control system and the thermostat installation must conform to Class II circuits per the NEC Code.

Wiring

1. If you are replacing a thermostat, make note of the terminal wires connections on the thermostat that is being replaced. In some cases the wiring connections will not be color coded. For example, the red wire may not be connected to the R terminal.
2. Loosen the terminal block screws. Insert wires then retighten.
3. Insert nonflammable insulation into wall opening to prevent drafts.

**Installation Tip**

Do not overtighten terminal block screws, as this can damage the terminal block. A damaged terminal block can keep the thermostat from fitting on the subbase correctly or cause system operation problem.

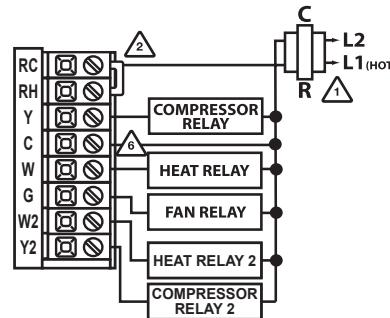
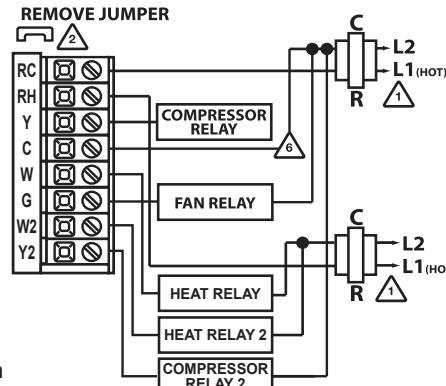
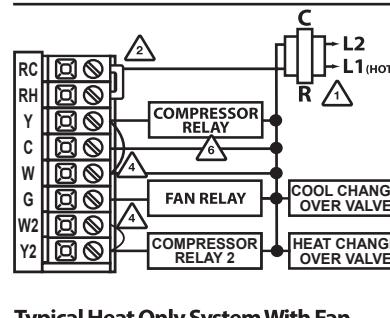
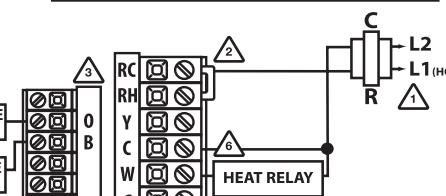
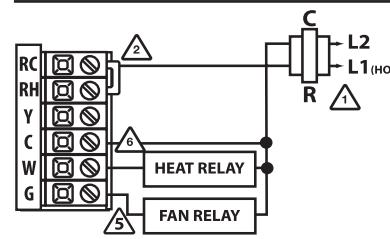
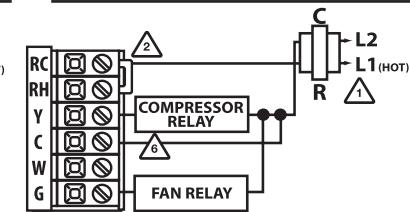
Max Torque = 6in-lbs.

Terminal Designations

C Common wire from secondary side of cooling system transformer
RH Transformer power for heating
O Heat pump changeover valve energized in cooling
B Heat pump changeover valve energized in heating
W Heat relay
W2 Heat relay 2

RH Transformer power for cooling
RC Transformer power for cooling
G Fan relay
Y Compressor relay
Y2 Compressor relay 2

- 1 Power supply
- 2 Factory-installed jumper. Remove only when installing on 2-transformer systems
- 3 Use either O or B terminals for changeover valve
- 4 Use a small piece of wire(not supplied) to connect W and Y terminals
- 5 Set fan operation switch to Electric
- 6 Optional 24VAC common connection when thermostat is used in battery power mode

Typical 2H/2C System: 1 Transformer**Typical 2H/2C System: 2 Transformer****5 Typical 2H/2C Heat Pump System****Typical Heat-Only System****Typical Heat Only System With Fan****Typical Cool-Only System****Technician Setup****Technician Setup**

1. Select the System Switch on OFF position to start the Technician setup
2. Press and hold the + and - buttons together for 3 seconds to get into the setup menu
3. Use the + buttons to change the setting for that step, and then press the - button to move to next step.

To exit setup mode, slide the system switch to different position or wait approximately 20 seconds.

| Tech Settings | LCD Will Show | Adjustment Options | Default |
|------------------------------|-----------------------------|--|---------|
| Room Temperature Calibration | Setting Calibration 00°F 01 | You can adjust the room temperature display to read 4° above or below the factory calibrated reading. | 0 |
| Compressor Short Cycle Delay | Setting Com Delay 01 02 | Selecting "ON" will not allow the compressor to be turned on for 5 minutes after the last time the compressor was switched off. Select "OFF" to remove this delay. | ON |
| F or C | Setting 0F 03 | F for Fahrenheit C for Celsius | F |

Swing & Limit Settings

1. Select the System Switch on COOL or HEAT position to start the Swing & Limit Settings.
2. Press and hold the + and - buttons together for 3 seconds to get into the setup menu
3. Use the + buttons to change the setting for that step, and then press the - button to move to next step.

To exit setup mode, slide the system switch to different position or wait approximately 20 seconds.

| Tech Settings | LCD Will Show | Adjustment Options | Default |
|------------------------|---|--|---------|
| Cooling Swing | The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles. Setting Heat Swing 0.5°F 01 | The cooling swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the cooling on at approximately 0.5° above the setpoint and turn the cooling off at approximately 0.5° below the setpoint. | 0.5 |
| Cooling Setpoint Limit | This feature allows you to set a minimum cool setpoint value. The setpoint temperature can't be lowered below this value. Setting 44°F 02 | Use the + and - key to select the minimum cool setpoint. | 44 |
| Heating Swing | The swing setting often called "cycle rate", "differential" or "anticipation" is adjustable. A smaller swing setting will cause more frequent cycles and a larger swing setting will cause fewer cycles. Setting Heat Swing 0.4°F 01 | The heating swing setting is adjustable from 0.2° to 2°. For example: A swing setting of 0.5° will turn the heating on at approximately 0.5° below the setpoint and turn the heating off at approximately 0.5° above the setpoint. | 0.4 |
| Heating Setpoint Limit | This feature allows you to set a maximum heat setpoint value. The setpoint temperature can't be raised above this value. Setting 90°F 02 | Use the + and - key to select the maximum heat setpoint. | 90 |