SimpleComfort® 2010 Thermostat
Non-Programmable, Manual Changeover

Simple control for year-round comfort and energy savings. This easy-to-operate deluxe comfort command center allows you to match temperature to your family’s lifestyle. Attractive, extra-rugged, highly reliable and accurate, this thermostat’s elegant design will look and perform like new for years to come.

- Hardwired or battery operated
- Large backlit LCD display
- Adjustable maximum heat setpoint
- Adjustable minimum cool setpoint
- Field temperature calibration
- Check filter indicator
- Freeze protection feature
- High temperature protection
- Low battery indicator
- Compatible with gas, oil and electric systems
- Single-stage heat pump
- Single operation
**SC2010**

Non-Programmable

Heat/Cool Hardwired

or Battery Operated

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### Specifications

#### Electrical Rating:
- 24 VAC (18-30 VAC)
- 3 VDC, 2 “AA” batteries included
- 1 amp maximum per terminal
- 3 amp maximum total load
- Easy access terminal block

#### Temperature Control Ranges:
- 45°F to 90°F, Accuracy: ±1°F

#### System Configurations:
- Single-stage heat, single-stage cool or single-stage heat pump, gas, oil, electric

#### Terminations:
SC 2010
Non-Programmable Electronic Thermostat

• Configurable
• Single Stage Heat/Cool Systems
• Single Stage Heat Pump Systems
• Backlit Display
• Compatible with Gas, Oil, or Electric
• Filter Check
• Status Indicator Light
• Relay Outputs (minimum voltage drop in thermostat)

Ideally Suited for:
- Residential (New Construction/Replacement)
- Light Commercial

Installation, Operation & Application Guide
For more information on our complete range of American-made products – plus wiring diagrams, troubleshooting tips and more, visit us at www.icmcontrols.com
# Table of Contents

- Parts Diagram ................................................................. 1
- Specifications ................................................................. 2
- Important Safety Information .................................................. 2
- Package Contents/Tools Required ......................................... 2
- To Remove Existing Thermostat ............................................. 3
- To Install Thermostat ......................................................... 3
- Wiring Diagrams .............................................................. 5
- Configuration Mode ........................................................... 10
- Testing the Thermostat ...................................................... 13
- Mode of Operation ............................................................ 14
- Troubleshooting ............................................................... 15
Parts Diagram

- Backlit Display
- High Temperature Protection
- Freeze Protection
- Battery Compartment
- Electric/Gas Switch
- Configuration Switches
- Reset Switch
- Mode Switch
- Fan Switch
Specifications

Electrical rating: • 24 VAC (18-30 VAC) • DC Power: 3.0 VDC (2 “AA” batteries included) 
• 1 amp maximum per terminal • 3 amp maximum total load

Temperature control range: 45°F to 90°F (7°C to 32°C) Accuracy: ± 1°F (± 0.5°C)

System configurations: 1-stage heat, 1-stage cool, heat pump, gas, oil, electric

Timing: Anti-short Cycle: 5 minutes  
Backlight Operation: Battery for 5 seconds, hardwired for 10 seconds

Terminations: RC, RH, W, Y, B, O, G, C

Important Safety Information

WARNING!: Always turn off power at the main power supply before installing, cleaning, or removing thermostat.

• This thermostat is for 24 VAC applications only; do not use on voltages over 30 VAC
• Do not short across terminals of gas valve or system control to test operation; this will damage your thermostat and void your warranty
• All wiring must conform to local and national electrical and building codes
• Do not use air conditioning when the outdoor temperature is below 50 degrees; this can damage your A/C system and cause personal injuries
• Use this thermostat only as described in this manual

Package Contents/Tools Required

Package includes: SimpleComfort® 2010 thermostat on base, thermostat cover, wiring labels, screws and wall anchors, Installation, Operation and Application Guide

Tools required for installation: Drill with 3/16” bit, hammer, screwdriver
To Remove Existing Thermostat

**ELECTRICAL SHOCK HAZARD** – *Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.*

1. Turn off power to the heating and cooling system by removing the fuse or switching the appropriate circuit breaker off.
2. Remove cover of old thermostat. This should expose the wires.
3. Label the existing wires with the enclosed wire labels before removing wires.
4. After labeling wires, remove wires from wire terminals.
5. Remove existing thermostat base from wall.
6. Refer to the following section for instructions on how to install this thermostat.

To Install Thermostat

**ELECTRICAL SHOCK HAZARD** – *Turn off power at the main service panel by removing the fuse or switching the appropriate circuit breaker to the OFF position before removing the existing thermostat.*

**IMPORTANT**: Thermostat installation must conform to local and national building and electrical codes and ordinances.

**Note**: Mount the thermostat about five feet above the floor. Do not mount the thermostat on an outside wall, in direct sunlight, behind a door, or in an area affected by a vent or duct.

1. Turn off power to the heating and cooling system by removing the fuse or switching the appropriate circuit breaker off.
To Install Thermostat (continued)

2. To remove cover, insert and twist a coin or screwdriver in the slots on the sides of the thermostat.

3. Put thermostat base against the wall where you plan to mount it (Be sure wires will feed through the wire opening in the base of the thermostat).

4. Mark the placement of the mounting holes.

5. Set thermostat base and cover away from working area.

6. Using a 3/16” drill bit, drill holes in the places you have marked for mounting.

7. Use a hammer to tap supplied anchors in mounting holes.

8. Align thermostat base with mounting holes and feed the control wires through wire opening.

9. Use supplied screws to mount thermostat base to wall.

10. Insert stripped, labeled wires in matching wire terminals. See “Wiring Diagrams” section of this manual (Page 5).

   **CAUTION!** Be sure exposed portion of wires does not touch other wires.

11. Tighten screws on terminal block. Gently tug wire to be sure of proper connection. Double check that each wire is connected to the proper terminal.

12. Seal hole for wires behind thermostat with non-flammable insulation or putty, or use an ICM insulated wall plate (ACC-WP01).

13. Set the **Gas/Electric** switch to **electric** or **gas/oil**.

14. Install two “AA” alkaline batteries (if required per wiring diagrams on Pages 5-9) in the thermostat oriented in the direction shown on the battery holder.

15. Replace cover on thermostat by snapping it in place.

16. Turn on power to the system at the main service panel.

17. Test thermostat operation as described in “Testing the Thermostat” (Page 13).
Battery Powered 3-Wire, Single Transformer

- Remove Pre-Installed Jumper
- Transformer
  - HOT: 120 VAC
  - 24 VAC
- C
- RH
- RC
- T
- TH
- E
- R
- M
- O
- S
- T
- A
- G
- W
- Y
- B
- O
- Fan Control
- Heating Control

**Note:** Batteries required.

Battery Powered 2-Wire, Single Transformer

- Remove Pre-Installed Jumper
- Transformer
  - HOT: 120 VAC
  - 24 VAC
- C
- RH
- RC
- T
- TH
- E
- R
- M
- O
- S
- T
- A
- G
- W
- Y
- B
- O
- Fan Control
- Heating Control

**Note:** Batteries required.
Hardwired 4-Wire, Single Transformer

Remove Pre-Installed Jumper

Transformer

HOT

120 VAC

24 VAC

C

RH

T

RC

ER

W

HY

MO

Y

B

ST

OG

Heating Control

Fan Control

Note: Batteries (optional) will work as a backup during power outages.

Hardwired 3-Wire, Single Transformer

Remove Pre-Installed Jumper

Transformer

HOT

120 VAC

24 VAC

C

RH

T

RC

ER

W

HY

MO

Y

B

ST

OG

Heating Control

Note: Batteries (optional) will work as a backup during power outages.
Hardwired
4 or 5-Wire, Single Transformer

Pre-Installed Jumper

Transformer
120 VAC
24 VAC
Optional

Heating Control

Cooling Control

Fan Control

C
RH
RC
W
Y
B
O
G

Note: Batteries (optional) will work as a backup during power outages.

Hardwired
5-Wire*, Two Transformer

Remove Pre-Installed Jumper

(Heating) Transformer

120 VAC
24 VAC

Heating Control

Cooling Control

Fan Control

C
RH
RC
W
Y
B
O
G

* Both transformers must be in phase.

Note: Batteries (optional) will work as a backup during power outages.
Hardwired Cool Active Reversing Valve

Note: Batteries (optional) will work as a backup during power outages.

Pre-Installed Jumper

Transformer

HOT 120 VAC

24 VAC

Compressor Contactor

Reversing Valve

Fan Control

C

RH

RC

W

Y

B

O

G

Heat Active Reversing Valve

Note: Batteries (optional) will work as a backup during power outages.

Pre-Installed Jumper

Transformer

HOT 120 VAC

24 VAC

Compressor Contactor

Reversing Valve

Fan Control

C

RH

RC

W

Y

B

O

G

Place jumper between “W” and “Y” terminals
Hardwired 4-Wire, Single Transformer

Remove Pre-Installed Jumper

Transformer

C
RH
RC
W
Y
B
O
G

Fan Control

24 VAC

120 VAC

HOT

C
RH
RC
W
Y
B
O
G

Fan Control

24 VAC

120 VAC

HOT

Battery Powered 3-Wire, Single Transformer

Remove Pre-Installed Jumper

Transformer

Note: Batteries (optional) will work as a backup during power outages.

Note: Batteries required.
The configuration mode is used to set the SC2010 to match your heating/cooling system. The SC2010 functions with heat pump, air conditioning, gas, oil or electric heat systems.

To configure the SC2010, perform the following steps:
1. Remove the cover of the thermostat by gently pulling on one of the corners.
2. Simultaneously hold the **SW5** and **SW6** buttons in for 5 seconds while the SC2010 is in **OFF** mode.
3. Press the ▼ or ▲ button to change settings within each screen.
4. Press the **SW6** button to advance to the next screen.
   *Note: The **SW5** button will return you to the previous screen.*
5. To exit configuration mode, slide the **Mode** switch to **Heat** or **Cool**.

**Configuration Mode Settings**

The nine (9) setup screens for Configuration Mode are as follows:

1. **Heat pump** and **Non Heat Pump** – Press the ▼ or ▲ button to configure as heat pump, or non-heat pump system. For heat pumps, there will be an anti-short cycle delay for heating and cooling
   • 1 = Heat pump system
   • 0 = Non-heat pump system
   Press the **SW6** button to advance to the next screen.

2. **Temperature Scale (F or C)** – Choose Fahrenheit or Celsius.
   Press the ▼ or ▲ button to select.
   Press the **SW6** button to advance to the next screen.

3. **Temperature Differential (1°F to 3°F) (0.5°C to 1.5°C)** – Set the number of degrees between your “setpoint” temperature and your “turn on” temperature.
   Press the ▼ or ▲ button to set differential value.
   Press the **SW6** button to advance to the next screen.
Configuration Mode Settings (continued)

4. **Minimum Cool Setpoint** (45°F to 75°F) (7°C to 24.0°C)
   Adjust to control the minimum Cool set temperature allowed.
   Press the \( \lor \) or \( \land \) button to select.
   Press the **SW6** button to advance to the next screen.

5. **Maximum Heat Setpoint** (55°F to 90°F) (13°C to 32°C)
   Adjust to control the maximum Heat set temperature allowed.
   Press the \( \lor \) or \( \land \) button to select.
   Press the **SW6** button to advance to the next screen.
6. **Room temperature offset** (+9°F to -9°F) (+4.5°C to -4.5°C)
   Adjust to calibrate displayed room temperature to match actual room temperature.
   
   ✳ Note: When not set to 0, **ROOM** will display
   Press the  or  button to select.
   Press the **SW6** button to advance to the next screen.

7. **Maximum heating or cooling cycles allowed per hour** (-, 2-6)
   - = as many as needed, 2-6 = maximum cycles/hour
   Press the  or  button to select.
   Press the **SW6** button to advance to the next screen.

8. **Filter Check time** (300-800, – – –)
   Set **Fan Run Time** (in hours) when **Check Filter** is displayed or set to – – – to disable.
   Press the  or  button to select.
   ✳ Note: To reset filter counter to zero and clear ✔ filter warning, press the  and  buttons simultaneously for 5 seconds.
   Press the **SW6** button to advance to the next screen.

9. **Status Indicator Light** (Lt 0 or 1)
   0 = Status indicator never on
   1 = Status indicator on with first stage
   Press the  or  button to select.
   ✳ Note: Red light indicates heating cycle and green light indicates cooling cycle
   Slide the **Mode** switch to **Heat** or **Cool** to exit configuration.
Once the thermostat is installed, it should be thoroughly tested.

**CAUTION!:** Do not energize the air conditioning system when the outdoor temperature is below 50 degrees. It can result in equipment damage or personal injury.

**Cool Test**
1. Slide **Mode** switch to **Cool** mode.
2. Adjust set temperature so it is 5 degrees below room temperature.
3. Air conditioning should come on within a few seconds. Status indicator may come on.
4. Adjust the set temperature 2 degrees above the room temperature and the A/C should turn off. There may be a fan delay on your system.
   **Note:** There is a five minute time delay to protect the compressor after it turns off. To temporarily bypass the five minute delay, slide the **Mode** switch to **OFF** for 2 seconds and then back to **Cool**.

**Heat Test**
1. Slide **Mode** switch to **Heat** mode.
2. Adjust the set temperature so it is 5 degrees above the room temperature.
3. Heat should come on within a few seconds. Status indicator may come on.
4. Adjust the set temperature so it is 2 degrees below the room temperature and the heat should turn off. There may be a fan delay on your system.
   **Note:** For heat pumps, there is a five minute time delay to protect the compressor after it turns off. To temporarily bypass the five minute delay, slide the **Mode** switch to **OFF** for 2 seconds and then back to **Heat**.

**Fan Test**
1. Slide **Fan** switch to **On** position.
2. Indoor fan turns on.
3. Slide **Fan** switch to **Auto** position.
4. Indoor fan turns off.
The SC2010 is a single-stage heat, single-stage cool thermostat. It functions with air conditioning, heat pumps, gas, oil or electric heat.

The SC2010 can use 24 VAC or batteries as a power supply. The SC2010 can be hardwired and have no batteries installed in the battery compartment. It can also run on battery power only. When batteries are installed and the thermostat is hardwired, the batteries will run the thermostat during a power outage.

When operating on battery power, the backlight will be on for 5 second intervals. When hardwired, the backlight will be on for 10 second intervals.

The thermostat activates a heating appliance when the room temperature is below the heat set temperature (by the differential temperature). It will turn off when the room temperature is one degree above the heat set temperature. With heat pumps, the thermostat will not let the compressor come on for five minutes after it turns off. This protects your compressor.

When the room temperature is greater than the cool set temperature (by the differential temperature), the cooling device is activated. It will turn off when the room temperature is one degree below the cool set temperature. The thermostat will not let the compressor come on for five minutes after it turns off. This protects your compressor.

The SC2010 has the following operating modes: **OFF, Heat** and **Cool**. In **OFF** mode, the thermostat will not turn on heating or cooling devices. In the **Heat** mode, the thermostat controls the heating system. In the **Cool** mode, the thermostat controls the cooling system. The indoor fan can be turned on in all operating modes using the **Fan** switch.
**Troubleshooting**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Remedy</th>
</tr>
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</table>
| **No display**                               | **For Hardwired Installation**  
Check for 24 VAC at thermostat; display is blank when 24 VAC is not present  
**For Battery Installation**  
Display is blank when batteries are drained or installed incorrectly |
| **System fan does not come on properly**    | Verify wiring is correct  
Check position of gas/electric switch                                                                                                                                 |
| **Thermostat turns on and off too frequently** | Adjust temperature differential (see “Temperature Differential,” Step 3, Page 10)                                                  |
| **Fan runs continuously**                    | Check fan On/Auto switch, ON position runs indoor fan continuously                                                                 |
| **Room temperature is not correct**         | Verify wall hole is plugged with putty or insulation; calibrate thermostat (see “Configuration,” Step 6, Page 12)                     |
| **ROOM displays**                            | Room temperature offset is not zero (see “Configuration,” Step 6, Page 12)                                                           |
| **Status indicator**                         | Green light – Cooling operation  
Red light – Heating operating  
Status indicator option ON (see “Configuration,” Step 9, Page 12)                      |
| **✓ filter displays**                        | Fan run time has exceeded filter check time set in configuration (see “Configuration,” Step 8, Page 12)  
To reset counter to zero and clear ✓ filter warning, press the ✓ and ▲ button simultaneously for 5 seconds |
| **🔋 displays**                               | Low battery indicator displays when batteries need to be replaced. Use only fresh “AA” alkaline batteries                             |
| **Problem not listed above**                | Press the Reset button once; display will be refreshed and anti-short cycle timing will be reset to zero                            |
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ONE-YEAR LIMITED WARRANTY

The Seller warrants its products against defects in material or workmanship for a period of one (1) year from the date of manufacture. The liability of the Seller is limited, at its option, to repair, replace or issue a non-case credit for the purchase prices of the goods which are provided to be defective. The warranty and remedies set forth herein do not apply to any goods or parts thereof which have been subjected to misuse including any use or application in violation of the Seller’s instructions, neglect, tampering, improper storage, incorrect installation or servicing not performed by the Seller. In order to permit the Seller to properly administer the warranty, the Buyer shall: 1) Notify the Seller promptly of any claim, submitting date code information or any other pertinent data as requested by the Seller. 2) Permit the Seller to inspect and test the product claimed to be defective. Items claimed to be defective and are determined by Seller to be non-defective are subject to a $30.00 per hour inspection fee. This warranty constitutes the Seller’s sole liability hereunder and is in lieu of any other warranty expressed, implied or statutory. Unless otherwise stated in writing, Seller makes no warranty that the goods depicted or described herein are fit for any particular purpose.

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