# EWT-855i Installation Manual

## Installation Tips

### Wall Locations

The thermostat should be installed approximately 4 to 5 feet above the floor. Select an area with average temperature and good air circulation.

### Do not install thermostat in these locations:

- Close to hot or cold air ducts
- That are in direct sunlight
- With an outside wall behind the thermostat
- In areas that do not require conditioning
- Where there are dead spots or drafts (in corners or behind doors)
- Where there might be concealed chimneys or pipes

### Installation Tip

Pick an installation location that is easy for the user to access. The temperature of the location should be representative of the building.

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<td>Yes</td>
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<tr>
<td>Electric Furnace</td>
<td>Yes</td>
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<td>Heat Pump (No Aux. or Emergency Heat)</td>
<td>Yes</td>
</tr>
<tr>
<td>Heat Pump (With Aux. or Emergency Heat)</td>
<td>Yes</td>
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<tr>
<td>Multi-Stage Systems</td>
<td>Yes</td>
</tr>
<tr>
<td>Heat Only Systems</td>
<td>Yes</td>
</tr>
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<td>Cool Only Systems</td>
<td>Yes</td>
</tr>
<tr>
<td>Millivolt</td>
<td>No</td>
</tr>
</tbody>
</table>

### Thermostat Application Guide

#### Power Type

<table>
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<tr>
<th>Description</th>
<th>Power Type</th>
</tr>
</thead>
<tbody>
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<td>Gas or Oil Heat</td>
<td>Hardwire - 24 VAC</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

### Thermistor Application Guide

A trained, experienced technician must install this product. Carefully read these instructions. You could damage this product or cause a hazardous condition if you fail to follow these instructions.

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## Installation Tips

### Subbase Installation

1. **Mount subbase to a flat wall**
2. **Use screws provided**
3. **Drywall anchors should be flush with the wall**
4. **Wires should be pushed into the wall**

### 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.

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### Installation Tip: Electrical Hazard

Failure to disconnect the power before beginning to install this product can cause electrical shock or equipment damage.

### Mercury Notice

All of our products are mercury free. However, if the product you are replacing contains mercury, dispose of it properly. Your local waste management authority can give you instructions on recycling and proper disposal.
Caution: Electrical Hazard
Failure to disconnect the power before beginning to install this product 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.

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 issues.

Max Torque = 6in-lbs.

If you are replacing a thermostat, make note of the terminal connections on the thermostat that is being replaced. In some cases the wiring connections will not be color coded. For example, the green wire may not be connected to the G terminal.

Loosen the terminal block screws. Insert wires then retighten the terminal block screws.

Place nonflammable insulation into the wall opening to prevent drafts.

**Note:**
In many heat pump systems with no emergency heat relay, a jumper can be installed between E and W2 to turn thermostat into a single stage control for Emergency Heat Operation.

Note:
Devices such as a float switch that mechanically break circuits should be installed so that they break the control wire (Y) not the power (R). Interrupting the power circuit will shut off power to the thermostat completely and not allow it to operate.

Wiring

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

Wiring Tips

- **C Terminal:** This thermostat requires a 24V common wire to the C terminal.
- **Wire Specifications:** Use shielded or non-shielded 18-22 gauge thermostat wire.

For all systems, the following terminals are wired according to whether you have a single or dual transformer system as shown:

**Wiring Chart**

<table>
<thead>
<tr>
<th>Single Transformer System</th>
<th>RH</th>
<th>RC</th>
<th>C</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Vac Hot Jumper Should Remain Installed</td>
<td>24 Vac Common</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DUAL TRANSFORMER SYSTEM**

<table>
<thead>
<tr>
<th>24 VAC - Heat Remove Provided Jumper</th>
<th>24 VAC - Cool Remove Provided Jumper</th>
<th>24 VAC Common from Cool Transformer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blower / Fan</td>
<td>Blower / Fan</td>
<td>Blower / Fan</td>
</tr>
</tbody>
</table>

**Failure to Remove Provided Jumper on Dual Transformer Installations Could Cause Sever Damage to HVAC Systems**

The following terminals on the thermostat wallplate are wired according to the type of HVAC system connected to and how the thermostat is configured.

**Thermostat Quick Reference**

- **Indicates the current room temperature**
- **Time and day of the week**
- **WIFI Signal Strength**
- **Button Options**
- **Program Time Periods - Residential:** Uses 4 time periods - AWAKE, RETURN, LEAVE & SLEEP. Commercial uses 2 time periods - OCCUPIED, UNOCCUPIED.
- **Staging Indicators:** Indicates stages of heat or cool running. The compressor delay feature is active if these are flashing.
- **WIFI Connection Indicator**
- **HOLD:** Displayed when the thermostat program is permanently overridden.
- **Setpoint:** Displays the user selectable setpoint temperature.
- **Lockout Indicator**
- **Fan Indicator**
Getting to know your thermostat

Wiring Diagrams

**Power supply**
- Factory-installed jumper. Remove only when installing on 2-transformer systems.

**Typical 2H/2C System: 1 Transformer**

**Typical 2H/2C System: 2 Transformer**

**Typical Cool-Only System**

**Typical Heat-Only System**

**Typical Heat Only System With Fan**

**Typical 3H/2C or 2H/1C Heat Pump System**

Private Label Badge

**About The Badge**

All of our thermostats use the same universal magnetic badge. Visit the company website to learn more about our free private label program.

Use the bevel on lower ridge

Magnet in door

Gently slide a screwdriver into the bottom edge of the badge. Gently turn the screwdriver counter clockwise. The badge is held on by a magnet in the well of the battery door. The badge should pry off easily. **DO NOT USE FORCE.**
**Technician Setup Menu**

This thermostat has a technician setup menu for easy installer configuration. To set up the thermostat for your particular application:

1. Press the **MENU** button.
2. Press and hold the **TECH** button for 3 seconds. This 3 second delay is designed so that homeowners do not accidentally access the installer settings.
3. Configure the installer options as desired using the table below.

Use the + or - keys to change settings and the NEXT or PREV key to move from one step to another. **Note:** Only press the **DONE** key when you want to exit the Technician Setup options.

4. Press the **DONE** key to exit.

### Tech Setup Steps

<table>
<thead>
<tr>
<th>Tech Setup Steps</th>
<th>LCD Will Show</th>
<th>Adjustment Options</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Change Reminder</td>
<td><strong>OFF</strong></td>
<td><strong>SE FILTER</strong></td>
<td><strong>OFF</strong></td>
</tr>
<tr>
<td>Room Temperature Calibration</td>
<td><strong>CAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Compressor On Time</td>
<td><strong>AN</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Keypad Lockout Note:** The selected keypad lockout functionality must be activated after exiting tech setup. If you do not perform this procedure, all keys will function freely. To lock the keypad hold down the [ ] and [ ] keys for 3 seconds. To unlock the display hold down the [ ] and [ ] keys for 3 seconds.

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**Swing Setting Tip**

The second stage will turn on at 2x the swing setting. The second stage will turn off when 1x the swing is reached. For example, if the swing setting is .5 degrees for heating and the thermostat is set at 70°F, the first stage will turn on at approximately 69.5°F. The second stage will turn on at 69°F. The second stage will turn off at 69.5°F and the first will turn off at 70.5°F. If the third stage is used, it will turn on at 68.5°F and turn off at approximately 69°F.

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**Auto Changeover Note:** When using Auto Changeover you must maintain at least a 3° differential with the Heat and Cool setpoints.
### Technician Setup Menu

<table>
<thead>
<tr>
<th>Tech Setup Steps</th>
<th>LCD Will Show</th>
<th>Adjustment Options</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Temperature Setpoint Limit</td>
<td>90°F</td>
<td>Use the or key to select the maximum heat setpoint.</td>
<td>90°F</td>
</tr>
<tr>
<td>Cooling Temperature Setpoint Limit</td>
<td>44°F</td>
<td>Use the or key to select the minimum cool setpoint.</td>
<td>44°F</td>
</tr>
<tr>
<td>°F or °C</td>
<td>OFF</td>
<td>°F for Fahrenheit °C for Celsius.</td>
<td>OFF</td>
</tr>
<tr>
<td>12 or 24 Hour Clock</td>
<td>OFF</td>
<td>Use the or key to select 12 or 24 hour clock setting.</td>
<td>OFF</td>
</tr>
<tr>
<td>Fan Operation</td>
<td>OFF</td>
<td>Use the or key to select GAS or ELEC.</td>
<td>OFF</td>
</tr>
<tr>
<td>Morning Recovery</td>
<td>OFF</td>
<td>Use the or key to turn on or off.</td>
<td>OFF</td>
</tr>
<tr>
<td>Program Options</td>
<td>5d</td>
<td>Use the or key to select 7d or 5d.</td>
<td>5d</td>
</tr>
<tr>
<td>Time Periods</td>
<td>4</td>
<td>Use the or key to select 4 or 2 time periods per day.</td>
<td>4</td>
</tr>
</tbody>
</table>

### WIFI Technician Setup Menu

These steps/options are only used for trouble shooting, re-setting or restoring to default the WIFI settings of the thermostat. They are not needed for installation or initial setup.

1. Press MENU button.
2. Press WIFI button. This enters the 2 informational steps.
3. At this point press and hold TECH to enter advanced settings.
4. Press NEXT to move from one to the other.
5. Press DONE or EXIT when finished.

### WIFI Tech Setup Steps

<table>
<thead>
<tr>
<th>Firmware Version</th>
<th>LCD Will Show</th>
<th>Adjustment Options</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>This step shows the version of firmware that is installed on the thermostat.</td>
<td>Wi-Fi, VER</td>
<td>Press NEXT button to move to next step. Press DONE button to exit. Press and hold TECH button to enter ADVANCED TECH STEPS.</td>
<td></td>
</tr>
<tr>
<td>SSID Number</td>
<td>LCD Will Show</td>
<td>Adjustment Options</td>
<td>Default</td>
</tr>
<tr>
<td>This step shows the SSID number of the thermostat. (Network it is connected to)</td>
<td>Wi-Fi, SSID</td>
<td>Press NEXT button to move to next step. Press DONE button to exit. Press and hold TECH button to enter ADVANCED TECH STEPS.</td>
<td></td>
</tr>
</tbody>
</table>

### WIFI Advanced Tech Steps

<table>
<thead>
<tr>
<th>Provisioning Reset</th>
<th>LCD Will Show</th>
<th>Adjustment Options</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>This step allows you to reset the thermostat to connect to a different WIFI network.</td>
<td>Wi-Fi, PROOF 5, DEN</td>
<td>Press YES to reset.</td>
<td></td>
</tr>
<tr>
<td>WIFI Module Reset</td>
<td>LCD Will Show</td>
<td>Adjustment Options</td>
<td>Default</td>
</tr>
<tr>
<td>This step resets the communication of the WIFI module.</td>
<td>Wi-Fi, MODULE</td>
<td>Press YES to reset.</td>
<td></td>
</tr>
<tr>
<td>Factory Default Reset</td>
<td>LCD Will Show</td>
<td>Adjustment Options</td>
<td>Default</td>
</tr>
<tr>
<td>This step resets all WIFI settings to factory default.</td>
<td>Wi-Fi, FACT DEFAULT</td>
<td>Press YES to reset.</td>
<td></td>
</tr>
</tbody>
</table>

### Adjustments

- **Humidity Pad Reminder**: Enables a reminder for the user to change the humidity pad.
- **UV Lamp Reminder**: Enables a reminder for the user to change the UV light bulb.
- **IAQ Cell Reminder**: Enables a reminder for the user to change the PHI Cell after 25,000 hrs.

### A Note about IAQ Mode

This programmable/selectable mode will operate the fan 1-4 cycles per hour, 1-45 minutes per cycle. Once programmed in tech setup, to enable this mode select “IAQ” with the fan key. Disable this mode by selecting “ON” or “AUTO” with the fan key.

### Reminders

Once a reminder has been turned on and set, the elapsed time can be checked by navigating to its tech setup step. The elapsed time will then appear in the text field. It can also be reset at that time by holding down the Set Time/Next Step button for 3 seconds. Reseting an expired reminder can be done without entering tech setup, by holding down the Set Time/Next Step button for 3 seconds from the home screen.
Set Time

Follow the steps below to set the day of the week and current time:

1. Press the MENU button.
2. Press TIME.
3. Day of the week is flashing. Use the + or - key to select the current day of the week.
4. Press NEXT.
5. The current hour is flashing. Use the + or - key to select the correct a.m. or p.m. choice is selected.
6. Press NEXT.
7. Minutes are now flashing. Use the + or - key to select current minutes.
8. Press DONE when completed.

Programming

All our programmable thermostats are shipped with an energy saving default program. You can customize this default program by following the instructions in the set program schedule section starting on page 24. Your thermostat can be programmed to have each day of the week programmed uniquely (7 days), all the weekdays the same with a separate set program schedule section.

To customize your 5+1+1 Program schedule, follow these steps:

1. Select HEAT or COOL with the system switch. Note: You have to program heat and cool each separately.
2. Press the MENU button (if menu does not appear first press RUN).
3. Press SCHED. Note: Monday-Friday is displayed and the WAKE icon is shown. You are now programming the WAKE time period for that day.
4. Time is flashing. Use the + or - key to make your time selection for the weekday WAKE time period. Note: If you want the fan to run continuously during this time period, select ON with the FAN key. If you want to use IAQ mode during this time period, select IAQ with the FAN key.
5. Press NEXT.
6. The setpoint temperature is flashing. Use the + or - key to make your setpoint selection for the weekday WAKE period.
7. Press NEXT.
8. Repeat steps 4 through 7 for the weekday LEAVE time period, for the weekday RETURN time period, and for the weekday SLEEP time period.

Saturday:
Repeat steps 4 through 7 for the Saturday WAKE time period, for the Saturday LEAVE time period, for the Saturday RETURN time period, and for the Saturday SLEEP time period.

Sunday:
Repeat steps 4 through 7 for the Sunday WAKE time period, for the Sunday LEAVE time period, for the Sunday RETURN time period, and for the Sunday SLEEP time period.

Default Programming

<table>
<thead>
<tr>
<th>Day</th>
<th>Events</th>
<th>Time</th>
<th>Setpoint Temperature (HEAT)</th>
<th>Setpoint Temperature (COOL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday</td>
<td>Wake</td>
<td>6 AM</td>
<td>70°F (21°C)</td>
<td>75°F (24°C)</td>
</tr>
<tr>
<td></td>
<td>Leave</td>
<td>8 AM</td>
<td>62°F (17°C)</td>
<td>83°F (28°C)</td>
</tr>
<tr>
<td></td>
<td>Return</td>
<td>6 PM</td>
<td>70°F (21°C)</td>
<td>75°F (24°C)</td>
</tr>
<tr>
<td></td>
<td>Sleep</td>
<td>10 PM</td>
<td>62°F (17°C)</td>
<td>78°F (26°C)</td>
</tr>
<tr>
<td>Saturday</td>
<td>Wake</td>
<td>6 AM</td>
<td>70°F (21°C)</td>
<td>75°F (24°C)</td>
</tr>
<tr>
<td></td>
<td>Leave</td>
<td>8 AM</td>
<td>62°F (17°C)</td>
<td>83°F (28°C)</td>
</tr>
<tr>
<td></td>
<td>Return</td>
<td>6 PM</td>
<td>70°F (21°C)</td>
<td>75°F (24°C)</td>
</tr>
<tr>
<td></td>
<td>Sleep</td>
<td>10 PM</td>
<td>62°F (17°C)</td>
<td>78°F (26°C)</td>
</tr>
</tbody>
</table>

A Note About Auto Changeover:
In Auto you have the ability to switch between Auto Heat or Auto Cool by pressing the system key. This can be done once the current mode has reached its setpoint. For example: if in Auto Heat, the heat setpoint must be satisfied before the thermostat will allow you to switch to Auto Cool. You can switch out of Auto by holding down the system key. To get back into Auto, you must toggle the system key to Auto.
To customize your 5+1+1 Program schedule, follow these steps:

**Weekday:**
1. Select HEAT or COOL with the SYSTEM key.  
   **Note:** You have to program heat and cool each separately.
2. Press the MENU button (if menu does not appear first, press RUN).
3. Press SCHED.  
   **Note:** Monday-Friday is displayed and the OCCUPIED text is shown. You are now programming the OCCUPIED time period for that day.
4. Time is flashing.  Use the + or - key to make your time selection for the weekday OCCUPIED time period.  
   **Note:** If you want the fan to run continuously during this time period, select ON with the FAN key. If you want to use IAQ mode during this time period, select IAQ with the fan key.
5. Press NEXT.
6. The setpoint temperature is flashing. Use the + or - key to make your setpoint selection for the weekday OCCUPIED period.
7. Press NEXT.
8. Repeat steps 4 through 7 for the weekday UNOCCUPIED time period.

**Saturday:**
Repeat steps 4 through 7 for the Saturday OCCUPIED time period and for the Saturday UNOCCUPIED time period.

**Sunday:**
Repeat steps 4 through 7 for the Sunday OCCUPIED time period, and for the Sunday UNOCCUPIED time period.

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You can use the table on the next page to plan your customized program schedule if using 5+1+1.
Features

Temporary & Permanent Hold Feature

Temporary Hold: The thermostat will display HOLD and RUN on the bottom of the screen when you press the + or - key. If you do nothing, the temperature will remain at this setpoint temporarily for 4 hours. The program setpoint will then replace the temporary setpoint.

Permanent Hold: With a temporary hold set, if you press the HOLD key at the bottom of your screen, you will see HOLD appear below the setpoint temperature in the display. The thermostat will now permanently stay at this setpoint and can be adjusted using the + or - keys.

To Return To Program: Press the RUN key at the bottom of the screen to exit temporary and permanent holds.

Filter Change & Other Reminders

If the filter change reminder is enabled, you will see a reminder in the display when your air filter needs changed. The reminder will be shown in the display after your system has run long enough to require an air filter change.

Resetting The Filter Change Reminder: When the reminder is displayed, you should change your air filter and reset the reminder by holding down the 2nd button from the left side of the thermostat for 3 seconds.

This thermostat also has other maintenance reminders (Humidity Pad, UV lamp, and IAQ Cell), that are reset with the same procedure.

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)
Load Rating................................................. 1 amp per terminal, 1.5 amp maximum all terminals combined
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 for hardwire
Operating ambient ............................... 32˚F to +105˚F (0˚C to +41˚C)
Operating humidity ......................... 90% non-condensing maximum
Dimensions of thermostat .................. 4.7”W x 4.3”H x 0.9”D

WIFI

Frequency Range......................... 2.4 GHz ISM radio band
WIFI ................................................ Supporting 802.11 B/G/N Standards