Excellence Without Compromise
EWC® CONTROLS INC.

TECHNICAL BULLETIN

Model EWT-3611

Non-Programmable Digital Thermostat

Installer : Save these instructions for future use!

FAILURE TO READ AND FOLLOW INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THIS CONTROL COULD CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.

DESCRIPTION

The EWT-3611 is a Non-Programmable Digital Solid State Thermostat.

Features:

- The Thermostat shall be powered by 24 vac and with a AA battery as backup.
- Compatible Equipment: ULTRA-ZONE Control Panels: ST-2E/3E, NCM-300, BMPlus3000 & UZC-4. Single Stage Heating and Single Stage Cooling Equipment. Gas, Electric, Oil or Hydronic.
- LCD continuously displays room temperature. Temperature set point is displayed when it is being changed.
- Temperature display can be configured in °F or °C.
- The Thermostat can be set between 45°F and 95°F.
- Backlit display.
- The thermostat terminal block has the following terminals: Y, R, G, W, RC/O, RH/B and C.
- Air Filter Replacement Monitor.

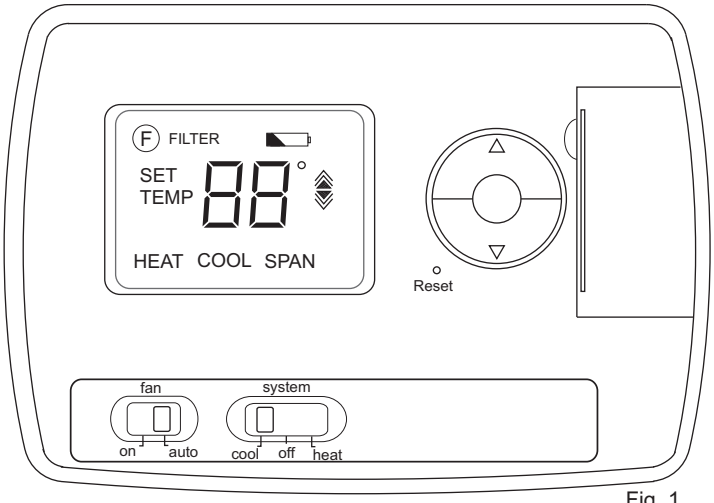


Fig. 1

(Shown with Front Cover Removed)

Contents:

1 EWT-3611 Thermostat
2 Plastic Wall Anchors
2 #8 x 1” Screws
1 TB-234 Technical Bulletin

Electrical Ratings

19-30VAC 60 Hz
1.0 Amp (Max load per terminal)

Thermal Ratings

Set point Temperature Range 45°F to 95°F
Operating Ambient Temperature 30°F to 99°F
Storage Temperature Range 14°F to 140°F

Technical Data

Power	24VAC, 50/60Hz + AA Battery
Working Environment	32°F~120°F
Range	5~95%RH(non-condensing)
Shell	Fire Retardant PC ABS
Dimension	3.5x5.1x1.2 in (HxWxD)
Connection Interface	Each terminal is capable of accepting 2 x 18 AWG solid copper wires.

⚠ WARNING

Do not use circuits exceeding specified voltage. Higher voltage will damage control and could cause shock or fire hazard.

Do not short out terminals on gas valve or primary control to test. Shorted or incorrect wiring will damage thermostat and could cause personal injury and/or property damage.

Thermostat installation and all components of the system shall conform to Class 2 circuits per the NEC code.

⚠ ATTENTION

This product does not contain mercury. However, this product may replace a unit which contains mercury. EWC Controls Inc. would like to advise all technicians and consumers that all mercury thermostats should be recycled. You can take your mercury thermostat to your local HVAC wholesaler for recycling.

INSTALLATION

The installer should be an experienced and trained HVAC contractor. Failure to read and follow instructions carefully before installation or operation could damage this control or cause property damage. Test the finished installation for proper operation.

⚠ 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.

Mount the EWT-3611 Thermostat about 5 feet above the floor in an area with good air circulation at average temperature. DO NOT install the thermostat where it can be affected by:

- drafts or dead spots behind doors and in corners
- hot or cold air from ducts
- radiant heat from sun or appliances
- concealed pipes and chimneys
- on surfaces such as an outside wall, that are a
- different temperature then the room air temperature.

Mount wallplate and Thermostat

Remove the wallplate from your thermostat by pressing the release tab on the bottom of the thermostat. See Figure 2.

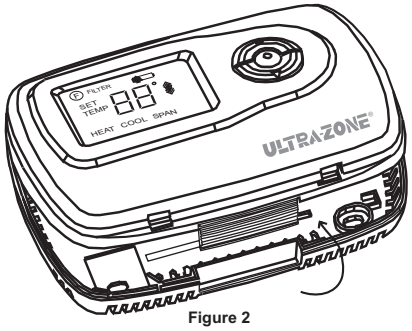


Figure 2

Position wallplate on the wall and pull the wires through the large opening. Level the unit for appearance. Mark the mounting holes for the provided wall anchors.
Drill holes with a 3/16" bit and gently tap anchors into holes until flush with the wall.
Reposition wallplate to wall, pulling wires through the large opening. Insert mounting screws provided into the wall anchors and tighten. See figure 3.

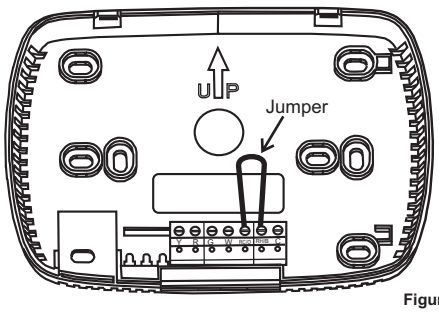


Figure 3

In order for this thermostat to control your system, the system type must be specified by the selector switch on the circuit board inside the thermostat. There is also a selector switch for your choice of Fahrenheit or Celsius display. See figure 4.

Fan Mode Selector (HG-HE switch)

The factory position is in the "HG" position. Leave it in this position if you have a gas furnace or an oil burner. If you have an electric furnace or hot water coil change the position to "HE".

System Selector (STANDARD - HEAT PUMP switch)

The factory position for this switch is in the STD position. Leave it in this position if you have ANY system that uses gas, oil, electric or hot water heating.
If you have a single stage Heat Pump, the thermostat can be configured to the Heat Pump mode by moving the switch to the "HP" position. This thermostat model ***does not*** have auxiliary or emergency heat features, therefore it cannot be used on heat pump systems that require these functions.

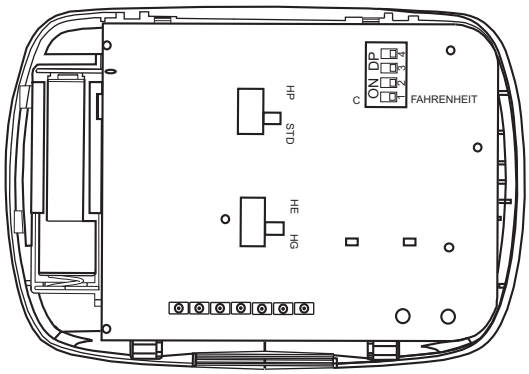


Figure 4

Changing the battery:

One fresh AA alkaline battery should provide about one year of service. However, when the battery becomes drained, the thermostat will not function. At your earliest convenience, you need to replace the battery with one new AA alkaline battery.
NOTE: If you remove or replace the battery, the temperature set point and Span settings will reset back to the factory default settings.
NOTE: If you plan to be away from the premises over 30 days, we recommend that you replace the old battery with a new alkaline battery prior to leaving.

Span Setting

Your thermostat is set at the factory to cycle at 2°F (1°C) above and below the set temperature. (Span = 2) This setting has been designed to provide a comfortable room temperature under most conditions. However, if you find your system cycling too fast or too slow, the Span can be adjusted to modify the cycle time.
Press and hold BOTH ▲ and ▼ keys for three seconds. SPAN will be displayed on the LCD.
Press ▲ to raise the Span to 3. This setting increases cycle time by allowing your system to run longer cycles.
Press ▼ to lower the Span to 1. This setting decreases the cycle time by causing your system to run shorter cycles.
The Span settings remain the same for both HEAT and COOL, and can be changed in any System Switch position. Any loss of 24vac and/or battery power will default the Span back to the factory default setting of 2.

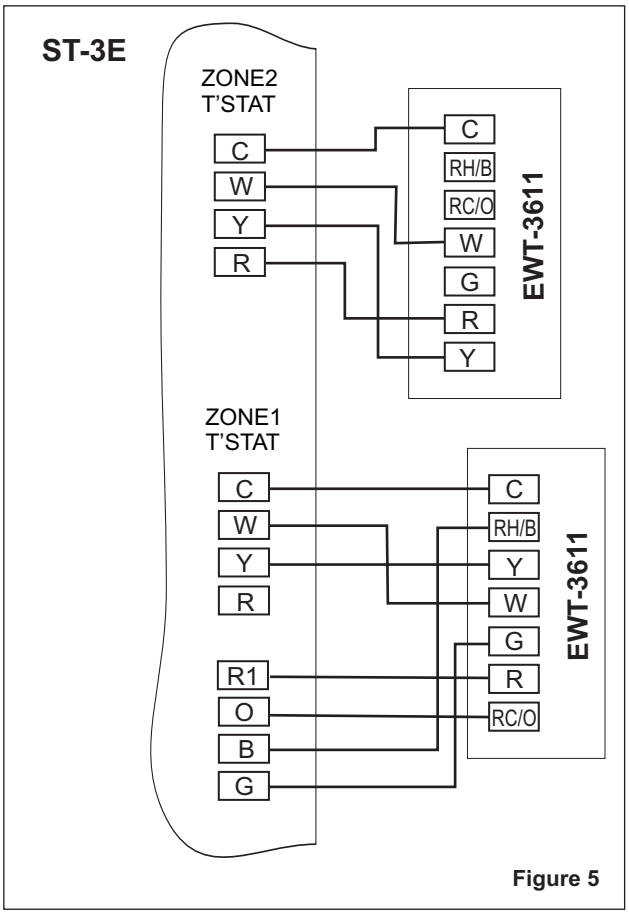


Figure 5

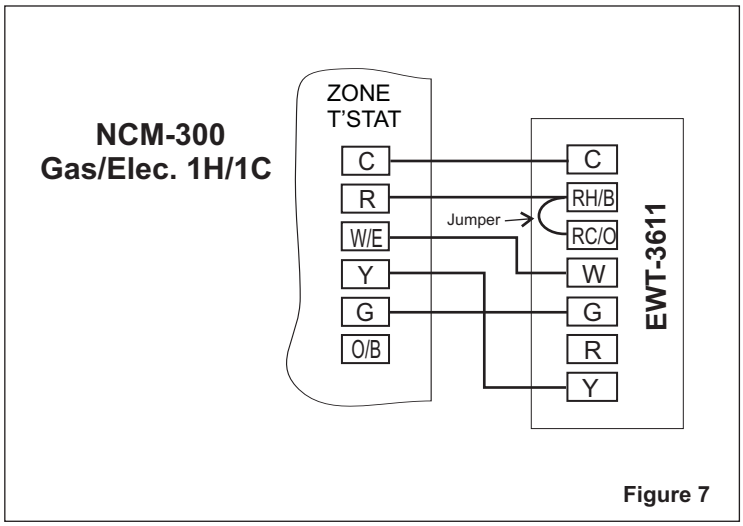


Figure 7

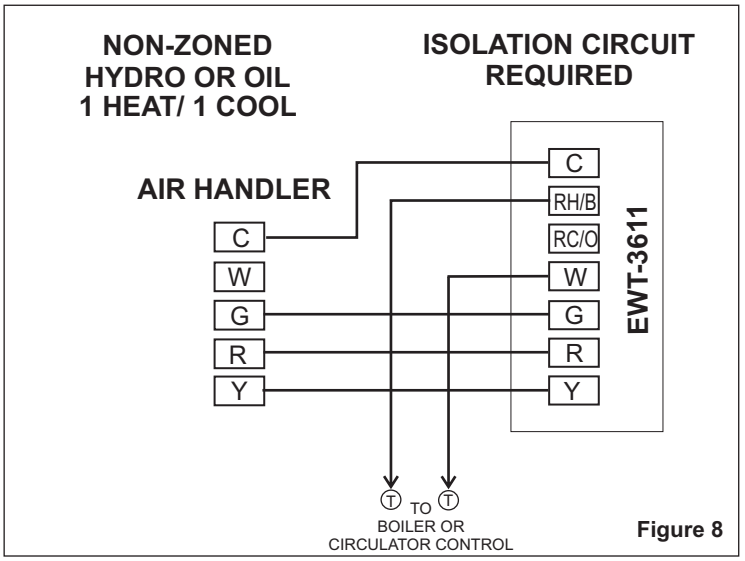
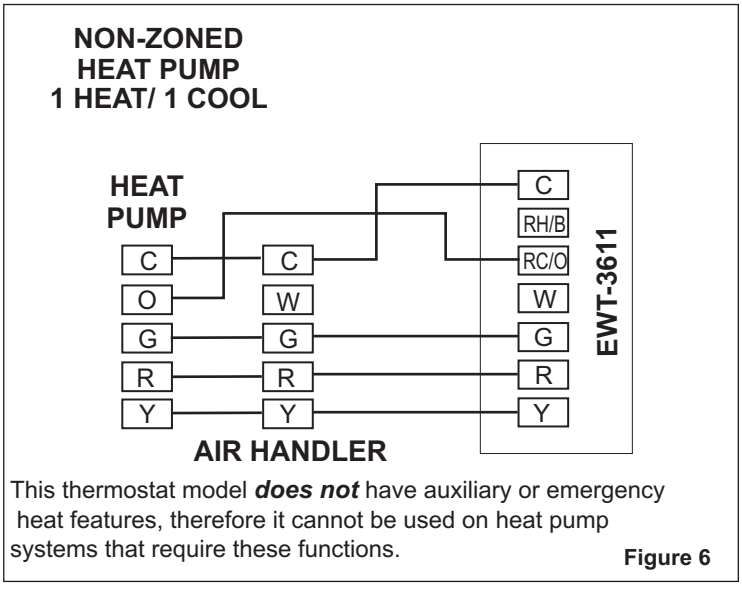


Figure 8



This thermostat model ***does not*** have auxiliary or emergency heat features, therefore it cannot be used on heat pump systems that require these functions.

Figure 6

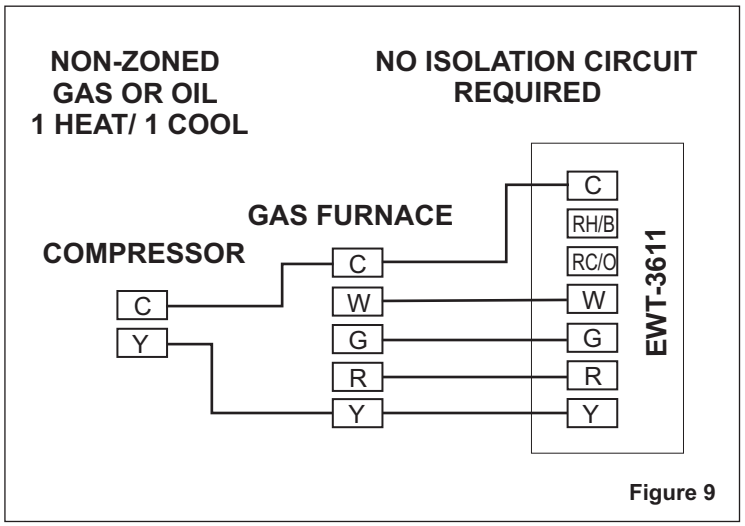


Figure 9

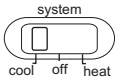
OPERATION

This thermostat will operate on a full 24vac (R&C) power supply. If desired, one battery (AA) may be used as a backup power supply in the event of a power failure. If a full 24vac is not available, then use one AA battery as the primary power supply.

Start-up

The LCD will show the factory default display of 70°F (21°C) when the battery is first installed. The temperature will update after a few seconds.

System Selector Switch



The System Selector Switch on the front of the thermostat determines the operating mode of the thermostat. You may select COOL, OFF or HEAT. NOTE: Anytime you install or remove the thermostat from the wallplate, slide the System Selector to the OFF position.

Fan Switch

The Fan Switch should normally be located in the AUTO position. The fan will be turned on along with normal operation of your system. In a normal gas or oil furnace, the fan will be turned on by the furnace after its warm-up delay. For electric heat, air conditioning, and heat pump operation, the fan will turn on with the system. To run the fan continuously, slide the fan switch to the ON position.

Review Current Set-Point Temperature

Press either the up or down key once to see the set-point temperature. The factory default is 68°F (20°C) with the System Switch in HEAT, and 78°F (26°C) with the System Switch in COOL.

Setting New Set-Point Temperature

Press either or once and display the set-point temperature.

Press either or again to change your desired set-point temperature. Hold the key down for over 2 seconds to fast advance the set-point temperature.

Auto Shut Off

Your thermostat will automatically shut off in HEAT mode if the room temperature rises above 95°F (35°C). It will shut off in COOL mode if the room temperature drops below 45°F (7°C).

Note that if your system has malfunctioned and no longer responds to thermostat controls, the Auto shut off will have no effect.

Filter Monitor

Your thermostat also keeps a record of the number of hours your filter has been in use. To maximize your system performance and energy efficiency, change or clean your filter regularly.

When the total fan time reaches 400 hours, you need to clean or change your system filter, “FILTER” will flash continuously until the counter is reset to zero.

Press the center button to review filter usage. “FILTER” displays with the total number usage in hours.

To reset the Filter Monitor counter, press and **hold** the center button for 3 seconds when the filter monitor day shows.

Backlighting

Your thermostat has an electro-luminescent lamp that backlights the display for easy viewing in the dark.

When any key is pressed, the display is illuminated.

The display will remain illuminated for **5** seconds after the last key is pressed.

NOTE: If the thermostat is in a Low battery warning condition, the backlight will not operate. Replace with 1 new AA alkaline battery to restore the backlight function.

Troubleshooting

PROBLEM	SOLUTION
No display or Dim Display	Check power to thermostat 24vac and/or battery
Fan does not operate properly	Check HG/HE Switch for correct position
Heating or Cooling does not operate properly	Wait and see if 4 min. time dalay is activated Check “System Switch” for correct position Check Wiring
Thermostat permanently reads HI, LO, E1 or E2.	Thermostat is faulty Replace Thermostat