

Emerson 1E78-144 YELLOW DISPLAY

Emerson White-Rodgers 1E78-144 Yellow Display Series 70 Digital Thermostat User Manual

Model: 1E78-144 YELLOW DISPLAY

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1. OVERVIEW

The Emerson White-Rodgers 1E78-144 Yellow Display Series 70 Digital Thermostat is a non-programmable thermostat designed for single-stage heating and cooling systems. It operates on 24 Volts AC or millivolt systems and is battery-powered for reliable operation. This thermostat features a clear digital display, simple controls for temperature adjustment, and switches for fan and system mode selection.

Key features include a vertical profile, a white finish, and a temperature range of 45-90°F. It is suitable for controlling air conditioners, boilers, furnaces, and heat pumps.





Figure 1: Front view of the Emerson White-Rodgers 1E78-144 Digital Thermostat, showing the display, temperature adjustment buttons, and fan/system switches.

2. SAFETY INFORMATION

Please read all instructions carefully before installing or operating this thermostat. Failure to follow these instructions could result in property damage, personal injury, or death.

- **Electrical Hazard:** Always disconnect power to the heating/cooling system at the main fuse or circuit breaker box before installing or servicing the thermostat.

- **Voltage Compatibility:** This thermostat is designed for 24 VAC or millivolt systems. Do not use it with line voltage (120/240 VAC) systems.
- **Professional Installation:** If you are unsure about wiring or electrical connections, it is recommended to consult a qualified HVAC technician.
- **Battery Safety:** Use only the specified battery type (AAA). Do not mix old and new batteries, or different types of batteries. Dispose of used batteries properly.
- **Location:** Install the thermostat in a location away from direct sunlight, drafts, and heat sources that could affect its temperature readings.

3. SETUP AND INSTALLATION

This section provides general guidelines for installing the thermostat. For detailed wiring diagrams specific to your HVAC system, refer to the instructions provided with your heating/cooling equipment or consult a professional.

3.1. Tools Required

- Screwdriver (Phillips and/or flathead)
- Drill (if new mounting holes are needed)
- Wire strippers (if needed)

3.2. Mounting the Thermostat

1. **Disconnect Power:** Turn off power to your heating and cooling system at the main fuse or circuit breaker.
2. **Remove Old Thermostat:** Carefully remove your old thermostat from the wall. Note the wiring connections before disconnecting them. It is recommended to label each wire with the terminal designation it was connected to.
3. **Mounting Plate:** Secure the new thermostat's mounting plate to the wall using the provided screws. Ensure it is level.
4. **Wire Connections:** Connect the system wires to the corresponding terminals on the new thermostat. The terminals are typically labeled RC, RH, W, Y, G, O, B. Refer to your system's wiring diagram for correct connections.
5. **Attach Thermostat Body:** Once wiring is complete, carefully attach the thermostat body to the mounting plate.

3.3. Battery Installation

This thermostat requires two (2) AAA alkaline batteries for operation. The battery compartment is typically located on the back of the thermostat body or behind a removable cover.

1. Open the battery compartment.
2. Insert two new AAA alkaline batteries, ensuring correct polarity (+ and -).
3. Close the battery compartment.

The thermostat display should illuminate once batteries are correctly installed.

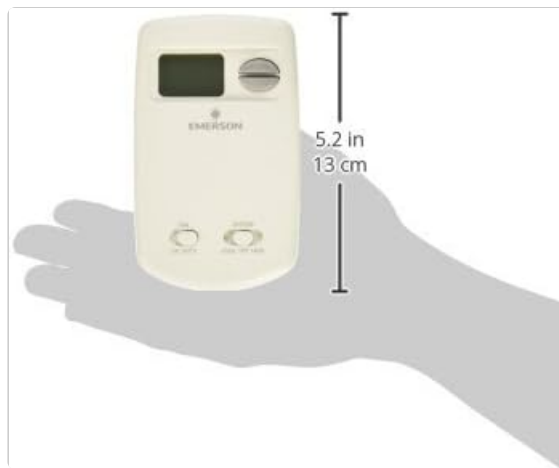


Figure 2: Side view of the Emerson White-Rodgers 1E78-144 Digital Thermostat showing approximate dimensions (5.2 inches / 13 cm height).

4. OPERATION

The Emerson 1E78-144 thermostat is designed for straightforward operation. The main controls are the temperature adjustment buttons, the Fan switch, and the System switch.

4.1. Display

The digital display shows the current room temperature. It may also show a low battery indicator when the batteries need replacement.

4.2. Temperature Adjustment

- Use the **Up Arrow** button to increase the desired temperature setting.
- Use the **Down Arrow** button to decrease the desired temperature setting.

The display will show the set temperature briefly after adjustment, then revert to the current room temperature.

4.3. Fan Switch

The Fan switch controls the operation of your system's fan. It has two positions:

- **AUTO:** The fan runs only when the heating or cooling system is actively operating. This is the most common setting for energy efficiency.
- **ON:** The fan runs continuously, regardless of whether the heating or cooling system is active. This can be used for continuous air circulation.

4.4. System Switch

The System switch selects the operating mode of your heating and cooling system. It has three positions:

- **COOL:** The thermostat will activate the cooling system when the room temperature rises above your set temperature.
- **OFF:** The heating and cooling systems are turned off. The fan can still be operated manually if the Fan switch is set to ON.
- **HEAT:** The thermostat will activate the heating system when the room temperature falls below your set temperature.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and accurate operation of your thermostat.

5.1. Battery Replacement

The thermostat is powered by two (2) AAA alkaline batteries. When the low battery indicator appears on the display, replace the batteries promptly to ensure continuous operation.

1. Remove the thermostat body from the wall mounting plate.
2. Locate the battery compartment.
3. Remove the old batteries and dispose of them according to local regulations.
4. Insert two new AAA alkaline batteries, observing the correct polarity.
5. Reattach the thermostat body to the mounting plate.

Note: Replacing batteries typically does not affect your temperature settings as they are stored in non-volatile memory.

5.2. Cleaning

To clean the thermostat, gently wipe the exterior with a soft, damp cloth. Do not use abrasive cleaners, solvents, or spray cleaners directly onto the thermostat, as this can damage the display or internal components.

6. TROUBLESHOOTING

If you experience issues with your thermostat, refer to the following common problems and solutions. If the problem persists, contact a qualified HVAC technician.

Problem	Possible Cause	Solution
No display or blank screen.	Dead or improperly installed batteries.	Replace batteries with new AAA alkaline batteries, ensuring correct polarity.
System (heating/cooling) does not turn on.	<ul style="list-style-type: none">• Power to HVAC system is off.• System switch is in OFF position.• Incorrect wiring.• Blown fuse or tripped circuit breaker.	<ul style="list-style-type: none">• Check power to HVAC system.• Set System switch to HEAT or COOL.• Verify wiring connections (consult professional if unsure).• Check and reset circuit breaker or replace fuse.
Temperature reading seems inaccurate.	<ul style="list-style-type: none">• Thermostat exposed to direct sunlight or drafts.• Thermostat located near a heat source.	<ul style="list-style-type: none">• Relocate thermostat if possible, or shield it from direct influences.• Ensure proper air circulation around the thermostat.
Low battery indicator is on.	Batteries are low and need replacement.	Replace both AAA batteries immediately.

7. SPECIFICATIONS

Feature	Detail
Model Name	1E78-144 YELLOW DISPLAY

Feature	Detail
Brand	Emerson / White-Rodgers
Product Dimensions (D x W x H)	30"D x 8"W x 6"H (Note: This dimension seems unusually large for a thermostat. The image shows 5.2 inches height. This might be package dimensions. I will use the image dimension for clarity and add a note.) <i>(Note: Product dimensions from specifications may refer to packaging. Actual unit dimensions are approximately 5.2 inches / 13 cm in height.)</i>
Controller Type	Hand Control (Button Control)
Special Features	Lighted Display, Low Battery Indicator, Low Voltage, Temperature Display
Color	White
Specific Uses	Air Conditioner, Boiler, Furnace, Heat Pump
Temperature Control Type	Digital
Connectivity Technology	Wired
Included Components	White-Rodgers 1E78-144 YELLOW DISPLAY Series 70 Digital Thermostat
Power Source	Battery Powered (2 AAA batteries required, included)
Voltage	24 VAC or Millivolt Systems (Thermostat operating voltage)
Material	As shown in the image
Display Type	LCD
Mounting Type	Wall Mount
Backlight	Yes
Item Weight	6.7 ounces
UPC	786710516276

8. WARRANTY AND SUPPORT

Specific warranty terms and conditions for the Emerson White-Rodgers 1E78-144 Digital Thermostat are provided by the manufacturer. Please refer to the documentation included with your product or visit the official Emerson/White-Rodgers website for detailed warranty information and customer support contact details.

For technical assistance, installation questions, or troubleshooting beyond the scope of this manual, it is recommended to contact Emerson customer support or a certified HVAC professional.