Radio Thermostat Company of America CT80 Wifi

Radio Thermostat CT80 User Manual

Model: CT80 Wifi

Brand: Radio Thermostat Company of America

Introduction

The Radio Thermostat CT80 is a state-of-the-art Wi-Fi enabled programmable thermostat designed to provide precise control over your home's heating, ventilation, and air conditioning (HVAC) system. With its advanced features, the CT80 allows for remote access and control via iOS and Android applications, ensuring comfort and energy efficiency whether you are at home or away.
This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your CT80 thermostat, helping you maximize its capabilities and ensure optimal performance.

Setup

Installation Requirements

- **Power Supply:** The CT80 requires a continuous 24 Volts (AC) power supply. This typically comes from the furnace via a "C" (Common) wire. If a C-wire is not available, an external transformer will be required to power the Wi-Fi module.
- **HVAC System Compatibility:** The CT80 is compatible with nearly every HVAC system, including traditional furnaces and heat pumps. It supports control of up to 3 stages of heat and 2 stages of cool.

Physical Installation

1. **Power Off:** Before beginning any wiring, ensure that the power to your HVAC system is completely turned off at the circuit breaker.
2. **Remove Old Thermostat:** Carefully remove your existing thermostat from the wall. Note the wiring connections, ideally by labeling each wire with the terminal it was connected to.

3. **Mounting the CT80:** Secure the CT80 mounting plate to the wall using the provided screws. Ensure it is level for aesthetic purposes.
4. **Wiring:** Connect the HVAC wires to the corresponding terminals on the CT80. Refer to the wiring diagram specific to your HVAC system type (e.g., conventional, heat pump) in the detailed installation guide provided with your product packaging. Pay special attention to the C-wire connection for Wi-Fi functionality.
5. **Attach Thermostat Body:** Once wiring is complete, carefully attach the CT80 thermostat body to the mounting plate, ensuring all wires are tucked neatly into the wall cavity.
6. **Power On:** Restore power to your HVAC system at the circuit breaker.

Initial Configuration and Wi-Fi Setup

1. **On-Screen Prompts:** Upon first power-up, the CT80 will guide you through initial setup steps on its LCD display. This may include setting the date, time, and HVAC system type.
2. **Wi-Fi Connection:** Access the Wi-Fi setup menu on the thermostat. You will need your Wi-Fi network name (SSID) and password.
3. **App Download:** Download the free Radio Thermostat application from the iOS App Store or Google Play Store on your smartphone or tablet.
4. **App Pairing:** Follow the instructions within the app to pair your CT80 thermostat with your mobile device and connect it to your home Wi-Fi network. This will enable remote control and advanced features.

Operating the CT80

Basic Temperature Control

You can adjust the temperature directly on the thermostat using the physical buttons or through the mobile application. The LCD display shows the current temperature, target temperature, and system status.



Image: The CT80 thermostat's main display showing temperature, time, and system status.

Programming Schedules

The CT80 allows you to program up to 7 independent periods per day, offering flexible scheduling to match your lifestyle and optimize energy usage. Schedules can be set directly on the thermostat or more conveniently through the mobile app.



Image: A tablet displaying the CT80 mobile application, illustrating the interface for setting a 7-day programmable schedule with multiple temperature points per day.

Mobile App Control

The dedicated iOS and Android applications provide full control over your CT80 thermostat from anywhere with an internet connection. Features include:

- **Remote Temperature Adjustment:** Change settings on the go.
- **Schedule Management:** Easily create, modify, and activate schedules.
- **Geo-fencing:** Automatically adjust temperature based on your proximity to home, saving energy when you're away and ensuring comfort upon your return.
- **System Status:** Monitor current indoor temperature, humidity, and system mode.
- **Usage Reports:** Track HVAC runtime and energy consumption.



Image: A smartphone displaying the CT80 mobile application, showing the current indoor temperature, target temperature, and quick access buttons for cool mode, fan, and settings.



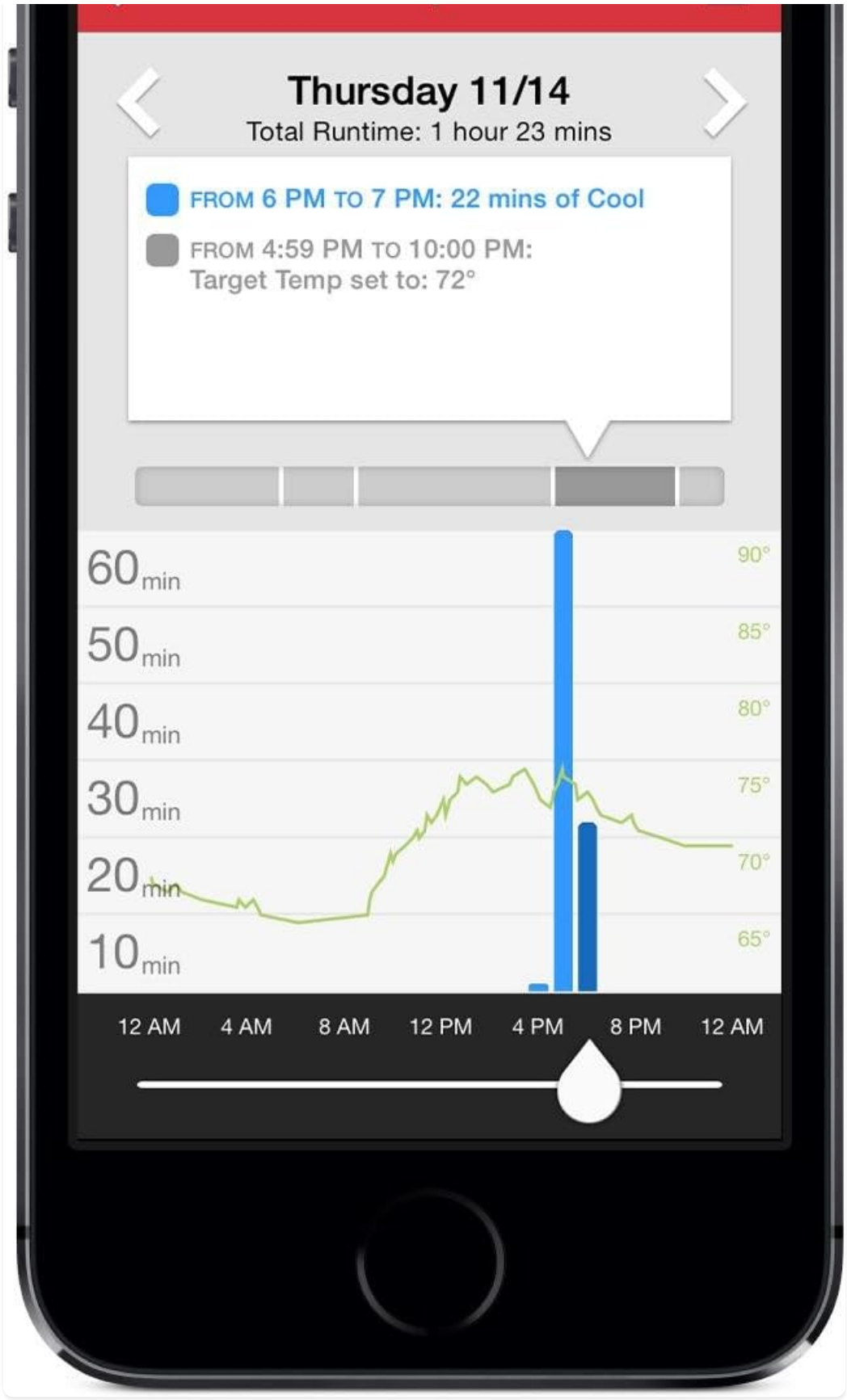


Image: A smartphone displaying the CT80 mobile application's 'Runtime per Hour' feature, showing a graph of HVAC usage throughout the day.

Advanced Features

- **True Auto Mode:** The thermostat can automatically switch between heating and cooling modes based on environmental factors and your set temperature preferences.
- **Humidity Control:** Monitor and control your HVAC system based on humidity levels, and manage external humidifiers and de-humidifiers.

- **External Air Baffle Control:** The CT80 can control an external air baffle for enhanced air management.

Maintenance

The CT80 thermostat is designed for low maintenance. Follow these guidelines to ensure its longevity and optimal performance:

- **Cleaning:** Gently wipe the thermostat's exterior with a soft, damp cloth. Avoid using abrasive cleaners, solvents, or harsh chemicals, as these can damage the display or casing.
- **Power Source:** The CT80 does not use batteries for its primary operation or Wi-Fi module. It relies on a continuous 24V AC power supply from your HVAC system. Ensure this connection remains stable.
- **Firmware Updates:** Periodically check the mobile application or the manufacturer's website for any available firmware updates for your thermostat. Updates can improve performance, add features, or address issues.

Troubleshooting

If you encounter issues with your CT80 thermostat, try the following troubleshooting steps:

No Power / Blank Display

- **Check Circuit Breaker:** Ensure the circuit breaker for your HVAC system is in the ON position.
- **Verify C-Wire Connection:** Confirm that the C-wire (Common wire) is properly connected to both the thermostat and your HVAC system. This wire is essential for powering the Wi-Fi module.
- **External Transformer:** If you are using an external transformer, ensure it is properly connected and receiving power.

Wi-Fi Disconnection

- **Router Check:** Ensure your home Wi-Fi router is powered on and functioning correctly.
- **Signal Strength:** The thermostat may be too far from your Wi-Fi router or experiencing interference. Consider relocating the router or adding a Wi-Fi extender.
- **Reboot Thermostat:** Turn off power to the thermostat at the circuit breaker for 30 seconds, then restore power. This can often resolve minor connectivity issues.
- **Re-enter Wi-Fi Credentials:** Access the Wi-Fi setup menu on the thermostat and re-enter your network credentials to ensure they are correct.

Incorrect Temperature Readings

- **Obstructions:** Ensure there are no heat sources (e.g., direct sunlight, lamps) or drafts near the thermostat that could affect its temperature sensor.
- **Clean Vents:** Dust or debris inside the thermostat's vents can affect readings. Gently clean the exterior as described in the Maintenance section.

HVAC System Not Responding

- **System Mode:** Verify that the thermostat is set to the correct system mode (Heat, Cool, Auto, Off).
- **Fan Setting:** Check the fan setting (Auto, On).
- **Wiring:** Re-check all wiring connections to ensure they are secure and correctly matched to the HVAC terminals.
- **Temperature Differential:** Ensure the set temperature is sufficiently different from the ambient temperature to trigger the HVAC system (e.g., if set to cool at 75°F, the room must be above 75°F for cooling to activate).

If these steps do not resolve the issue, please contact customer support.

Specifications

Feature	Detail
Brand	Radio Thermostat Company of America
Model Name	FBA_CT80 Wifi
Item Model Number	CT80 Wifi
Controller Type	Iris
Special Features	Auto Changeover, Programmable
Color	White
Specific Uses	Furnace
Temperature Control Type	Cooling, Heating
Connectivity Technology	Wi-Fi
Connectivity Protocol	Wi-Fi
Item Weight	0.54 Pounds (8.6 ounces)
Voltage	24 Volts (AC)
Shape	Rectangular
Display Type	LCD
Control Type	Button Control
Control Method	App
Backlight	Yes
UPC	084615000983

Product Dimensions	4.5 x 1.25 x 4.5 inches
Batteries Included?	No
Batteries Required?	No

Warranty and Support

The Radio Thermostat CT80 is backed by a dedicated 365-day a year call center to assist you with any installation or operational issues. For technical support, troubleshooting assistance, or warranty inquiries, please refer to the contact information provided in your product packaging or visit the official Radio Thermostat Company of America website.
Please retain your proof of purchase for warranty claims.

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