

Pentair 42002-0007S

Pentair 42002-0007S Max-E-Therm NAT./LP Control Board Replacement User Manual

For Pentair MasterTemp and Sta-Rite Max-E-Therm Pool and Spa Heaters

1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of the Pentair 42002-0007S PCB, Max-E-Therm NAT./LP Control Board Replacement. This control board is designed for use with Pentair MasterTemp NA and LP Series, and Pentair Sta-Rite Max-E-Therm NA and LP Series pool and spa heater electrical systems. Proper installation and adherence to these guidelines are crucial for the safe and efficient functioning of your heater.

2. SAFETY INFORMATION

- **Professional Installation Recommended:** Installation of this control board should ideally be performed by a qualified service technician to ensure proper function and safety.
- **Disconnect Power:** Always disconnect all electrical power to the heater at the main circuit breaker before attempting any installation, maintenance, or service. Failure to do so can result in serious injury or death.
- **Gas Input Adjustment:** Do not attempt to adjust the gas input by adjusting the regulator setting. The correct gas regulator setting is required to maintain proper combustion and must NOT be altered. Improper adjustment can lead to hazardous conditions.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.
- **Water and Electronics:** Ensure the control board and all electrical connections remain dry. Water exposure can cause electrical shorts and damage.

3. PRODUCT OVERVIEW

The Pentair 42002-0007S control board is a direct replacement for the original control board in compatible Pentair and Sta-Rite pool and spa heaters. It manages the heater's functions, including ignition, temperature regulation, and safety protocols. The board features various connection points for sensors, power, and the user interface.

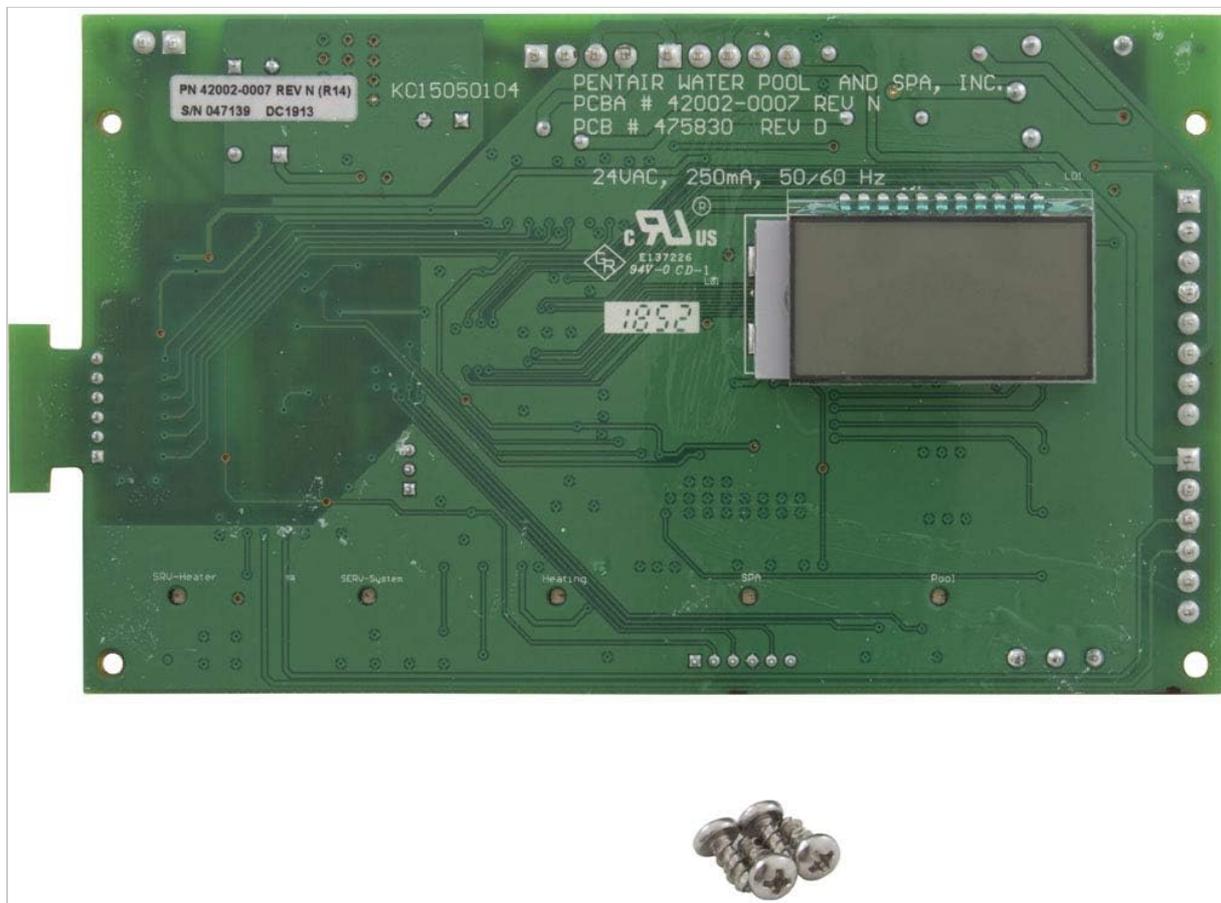


Figure 1: Pentair 42002-0007S Max-E-Therm NAT./LP Control Board. This image displays the green circuit board with various electronic components, connectors, and a central processor. Four mounting screws are visible below the board.

4. SETUP AND INSTALLATION

This section outlines the general steps for replacing the control board. Always refer to your specific heater's original service manual for detailed, model-specific instructions and wiring diagrams.

1. **Power Disconnection:** Ensure the heater is completely powered off and disconnected from the electrical supply at the main circuit breaker.
2. **Access the Control Board:** Carefully remove the heater's outer casing and any protective covers to gain access to the existing control board. This typically involves removing screws and possibly cotter pins.
3. **Document Connections:** Before disconnecting any wires, take clear photographs or make detailed diagrams of all wire connections to the old board. This will serve as a reference for connecting the new board.
4. **Remove Old Board:** Disconnect all wires from the old control board, typically one at a time to avoid confusion. Then, unmount the old board by removing its securing screws.
5. **Install New Board:** Position the new Pentair 42002-0007S control board in place and secure it with the provided screws (refer to Figure 1 for an example of included screws).
6. **Connect Wiring:** Reconnect all wires to the new board, carefully matching them to your documented connections. Ensure all connections are secure and properly seated.
7. **Jumper Settings:** Verify the jumper settings on the new board. If your heater uses a keypad for control, ensure the jumper is set to the correct position for keypad operation. If operating remotely, adjust accordingly. Incorrect jumper settings may prevent the board from functioning.
8. **Reassemble Heater:** Once all connections are verified, carefully reassemble the heater's protective covers and outer casing.

9. **Restore Power:** Restore electrical power to the heater at the main circuit breaker.
10. **Initial Test:** Power on the heater and observe its operation. Check the display for any error codes or unusual behavior.

5. OPERATING INSTRUCTIONS

The Pentair 42002-0007S control board facilitates the operation of your pool or spa heater. Once installed, the heater's functionality is controlled via its integrated display and keypad, or through a remote system if configured. This replacement board may offer an upgraded LED display with enhanced menu options compared to older models.

- **Heater Manual:** For detailed operating instructions, including setting temperatures, programming cycles, and understanding specific menu options, refer to the original user manual for your Pentair MasterTemp or Sta-Rite Max-E-Therm heater.
- **Display and Navigation:** Use the heater's control panel buttons to navigate through menus and adjust settings. The new board's display may offer clearer visibility and more intuitive navigation.
- **Remote Operation:** If your heater is configured for remote operation, ensure the control board's jumper settings are correctly configured for this mode.

6. MAINTENANCE

The control board itself requires minimal maintenance. Regular inspection of the heater unit is recommended to ensure optimal performance and longevity.

- **Keep Dry:** Ensure the heater's enclosure remains sealed and dry to protect the control board from moisture.
- **Cleanliness:** Periodically inspect the control board area for dust, debris, or insect intrusion. Gently clean with a soft, dry brush if necessary, ensuring power is disconnected.
- **Wiring Integrity:** Annually check all wiring connections to the control board for tightness and signs of corrosion.

7. TROUBLESHOOTING

If your heater is not functioning correctly after control board replacement, consider the following troubleshooting steps:

- **No Power/Display:** Verify that the heater is receiving power from the main circuit breaker. Check all power connections to the control board.
- **Error Codes:** If the heater display shows an error code (e.g., HLS codes), consult your heater's original user manual for the meaning of the code and recommended corrective actions. Common issues may include sensor malfunctions.
- **Incorrect Jumper Setting:** Re-check the jumper setting on the control board to ensure it matches your heater's control method (keypad or remote).
- **Loose Connections:** Power off the heater and re-check all wire connections to the control board to ensure they are secure.
- **Sensor Issues:** Malfunctioning sensors (e.g., High Limit Switch - HLS, Air Flow Switch - AFS, Water Pressure Switch - PS) can prevent the heater from operating. If error codes persist, these components may need inspection or replacement.
- **Professional Assistance:** If troubleshooting steps do not resolve the issue, contact a qualified pool heater technician for diagnosis and repair.

8. SPECIFICATIONS

Model Number	42002-0007S
Compatibility	Pentair MasterTemp NA/LP Series, Sta-Rite Max-E-Therm NA/LP Series Pool and Spa Heaters
Product Dimensions	6 x 6 x 6 inches (approximate packaging dimensions)
Item Weight	1.6 ounces
Manufacturer	Pentair

9. WARRANTY AND SUPPORT

This Pentair control board typically comes with a manufacturer's warranty. While specific terms may vary, a common warranty period for such components is one year from the date of purchase.

- **Warranty Claims:** For warranty-related inquiries or claims, retain your proof of purchase and contact Pentair customer support directly.
- **Technical Support:** If you require technical assistance beyond the scope of this manual, please visit the official Pentair website or contact their customer service department for expert guidance.