

## Robertshaw 712-008

# Robertshaw Universal Intermittent Pilot Ignition Kit Instruction Manual

MODEL: 712-008

Comprehensive guide for installation, operation, and maintenance.

### Important Safety Information

**WARNING: HIGH VOLTAGE IS PRESENT. DISCONNECT POWER BEFORE SERVICING. THIS UNIT IS NOT FIELD REPAIRABLE. Replacement should be performed by a qualified service technician.**

Always read and understand all instructions before installing, operating, or servicing this product. Failure to follow these instructions could result in property damage, personal injury, or death. Ensure all local codes and regulations are followed.

### Product Overview

The Robertshaw 712 Series Universal Intermittent Pilot Ignition Kit is designed to provide automatic sequencing for proper operation of an intermittent pilot ignition device. This system utilizes flame rectification with solid-state logic and flame sensing technology. The kit is intended for use in various heating applications requiring reliable ignition control.



**Figure 1:** Components of the Robertshaw Universal Intermittent Pilot Ignition Kit. Shown are the main control module with terminal block, a gas valve, and an igniter/sensor assembly with an orange lead wire.

## Setup and Installation

Installation of this ignition kit requires technical expertise and should only be performed by a qualified service technician. Refer to the detailed instructions included with the physical product for specific wiring diagrams and mounting procedures.

1. **Power Disconnection:** Ensure all electrical power to the appliance is disconnected at the main service panel before beginning any installation.
2. **Component Identification:** Identify all components of the kit: the control module (780-845), the gas valve, and the igniter/sensor assembly.
3. **Mounting the Control Module:** Mount the control module in a location protected from heat, moisture, and vibration, ensuring proper ventilation.
4. **Wiring Connections:** Connect the control module to the appliance's electrical system, gas valve, and igniter/sensor according to the provided wiring diagram. Pay close attention to the terminal markings (e.g., 24V, GND, T, H, V, M, P, LED).
5. **Gas Valve Installation:** Install the gas valve in the gas supply line, ensuring proper orientation and leak-free connections.
6. **Igniter/Sensor Placement:** Position the igniter/sensor assembly correctly in relation to the pilot burner for optimal spark and flame sensing. Ensure the spark gap is set to 7/64 inches.
7. **System Check:** After installation, perform a thorough system check for gas leaks and proper electrical connections before restoring power.

## Operating Instructions

The Robertshaw 712 Series operates automatically once installed and powered.

1. **Call for Heat:** When the thermostat calls for heat, the control module initiates the ignition sequence.
2. **Pilot Ignition:** A spark is generated at the igniter, igniting the pilot flame.
3. **Flame Sensing:** The flame sensor detects the presence of the pilot flame.
4. **Main Burner Ignition:** Upon successful pilot ignition and sensing, the main gas valve opens, allowing the pilot flame to

ignite the main burner.

5. **Flame Monitoring:** The system continuously monitors the main burner flame. If the flame is lost, the system will attempt re-ignition or shut down for safety.
6. **Heat Cycle Completion:** When the thermostat is satisfied, the main burner and pilot flame are extinguished.

To reset the thermostat to its lowest setting, refer to the specific instructions for your thermostat model.

## Maintenance

Regular maintenance by a qualified service technician is recommended to ensure the safe and efficient operation of your heating appliance and the ignition system.

- **Annual Inspection:** Have the entire heating system, including the ignition kit, inspected annually by a professional.
- **Cleanliness:** Ensure the igniter/sensor and pilot burner area are free from dust, debris, and corrosion.
- **Wiring Check:** Periodically check all wiring connections for tightness and signs of wear or damage.
- **Pilot Flame Observation:** Observe the pilot flame during operation to ensure it is strong and stable.

**Do not attempt to repair the control module.** If a malfunction is suspected, the unit should be replaced by a qualified technician.

## Troubleshooting

This section provides basic troubleshooting steps. For complex issues, contact a qualified service technician.

Problem	Possible Cause	Solution
No Ignition/No Spark	No power to control, faulty igniter, incorrect wiring, gas supply off.	Check power supply. Verify wiring connections. Ensure gas valve is open. Inspect igniter for damage.
Pilot Lights, Main Burner Does Not	Faulty flame sensor, main gas valve issue, incorrect pilot flame.	Clean or replace flame sensor. Check main gas valve operation. Adjust pilot flame if necessary.
Intermittent Operation	Loose connections, weak pilot flame, draft issues, faulty control module.	Check all electrical and gas connections. Ensure proper ventilation. Consult a technician for module diagnosis.
LED Indicator Status	The control module may have an LED indicator for diagnostic purposes.	Refer to the specific diagnostic codes or flash patterns provided in the full product manual for interpretation.

## Specifications

- **Model Number:** 712-008
- **Input Voltage:** 24 VAC, 50/60 Hz
- **Input Current:** 250 mA (PV or MV Load Max 1.5 A)
- **Spark Gap:** 7/64 inches
- **Pilot Valve (PV) Output:** 24 VAC at 0.5 PF
- **Main Valve (MV) Output:** 24 VAC at 0.5 PF
- **Product Dimensions:** 13.2 x 11 x 10.4 inches
- **Item Weight:** 4 pounds
- **Manufacturer:** Robertshaw
- **Origin:** Made in USA

## Warranty and Support

For specific warranty information, please refer to the documentation included with your purchase or contact Robertshaw customer support directly. Robertshaw provides technical support for its products.

**Manufacturer:** Robertshaw

For further assistance, please visit the official Robertshaw website or contact their authorized service centers.