Modulating Millivolt Valve System

LOST RIVER PRODUCTS

INSTALLATION & OPERATION GUIDE

A&J Remote Valve
Standing Pilot

PART #: AR

PROFESSIONAL INSTALLATION REQUIRED

Installation and service must be performed by a qualified installer, service agency, or gas supplier.

IMPORTANT SAFETY PRECAUTIONS

01 This valve system **MUST** be installed by a qualified, trained gas professional.

02 Turn off the gas supply before installing the valve.

03 All piping must comply with applicable local codes and fuel gas codes.

04 All wiring must comply with applicable electrical codes and ordinances.

05 Check the complete system after installing the valve.

06 Before installation, verify conformance with burner installation instructions.

IF YOU SMELL GAS: Do not operate electrical switches or use flames. Leave the area and contact your gas supplier from a safe location. If you cannot reach them, call the fire department.

Important Information

VERIFY PROPER FUEL GAS

CHECK TO BE SURE THAT THE PROPER FUEL GAS IS BEING USED WITH THIS CONTROL SYSTEM.

The installation, including provisions for combustion and ventilation air, must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code (ANSI Z223.1/NFPA 54).

The control and its individual shutoff valve must be isolated or disconnected from the gas-supply piping system as required for pressure testing. A qualified gas technician must follow applicable testing procedures.

A fireplace screen must be in place when the burner system is operating. Provide required openings for combustion air.

> **WHEN GLASS FIREPLACE ENCLOSURES (DOORS) ARE USED, OPERATE THE BURNER SYSTEM WITH THE GLASS DOORS FULLY OPEN; BOTH SIDES IF THE FIREPLACE IS A SEE-THROUGH TYPE.**

This appliance may be installed in a permanently located manufactured home only where permitted by applicable codes. Follow the relevant manufactured-home installation standards.

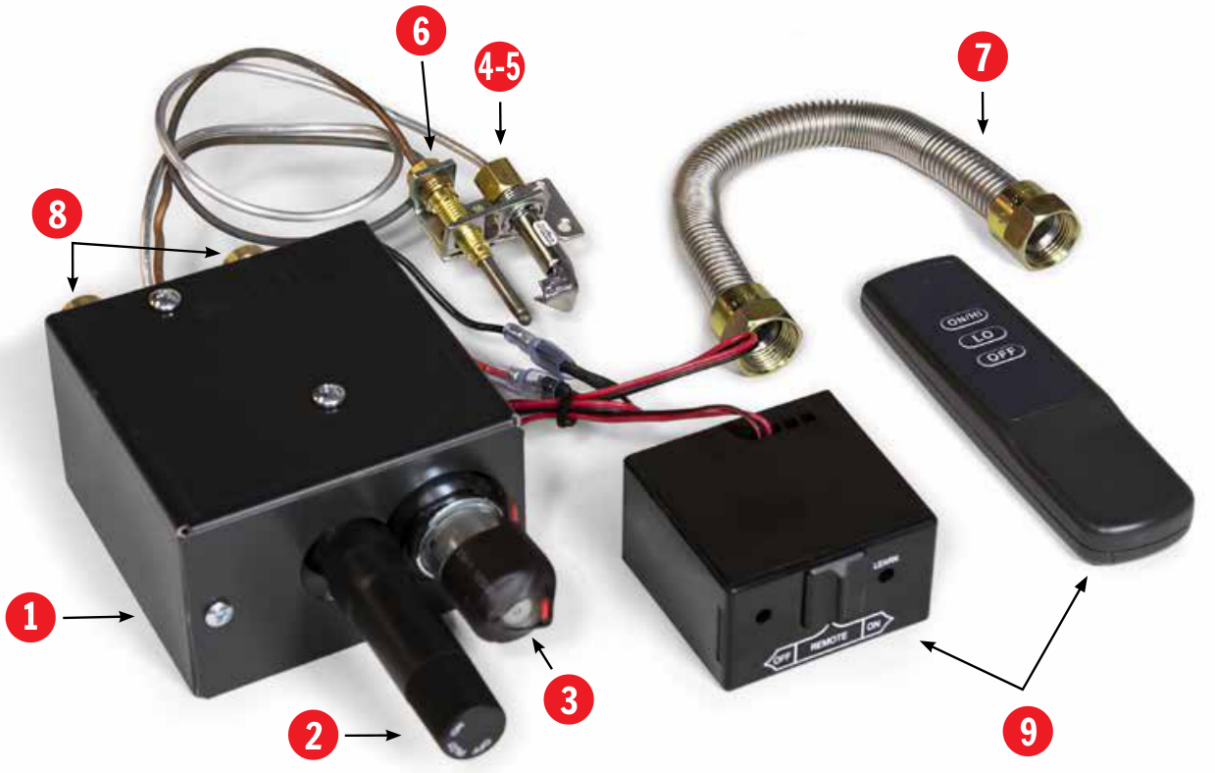
Do not use this appliance if any part has been underwater. Have a qualified service technician inspect it and replace any affected gas controls.

> **TO PREVENT VALVE DAMAGE AND FAILURE: The heat shield must be correctly placed over the valve. Keep lava, vermiculite, embers, fire glass and other foreign material away from the pilot assembly, valve assembly and heat shield at all times.**

> **CAUTION: This device must be installed by a qualified service technician. Improper installation could result in a hazardous condition.**

Valve & Parts Reference

MODULATING MILLIVOLT ASSEMBLY



PARTS INCLUDED

01 **AF-1000** — Millivolt Valve
02 **AF-2000PK-2** — Pilot Knob 2-inch Extension
03 **AF-1000MH-L** — Variable Flame Motor Drive
04 **SPK-Pilot-18** — Natural Gas Pilot Assembly
05 **SPK-Pilot-18P** — Propane Pilot Assembly
06 **1900-01H** — 18-inch Thermocouple
07 **T200-9898-10** — Whistle-Free Flex
08 **48-86** — 1/2-inch Flare to 3/8-inch FIP
09 **RCAF-1020-1** — On/Off/Hi/Low Transmitter, Receiver & Batteries

Pre-Installation

STEP-BY-STEP PRE-INSTALLATION

The modulating millivolt control system must be installed by a qualified gas professional. Follow all installation and safety instructions carefully.

These instructions supplement the burner system installation instructions. Use a gas-compatible pipe sealing compound or tape on approved male pipe threads. **Do not apply pipe sealant to flare connections.** All connections must be leak tested by a qualified installer.

The valve system may be shipped preassembled with fittings and heat shields attached. Avoid damaging the valve, pilot assembly, or connections during handling.

BEFORE BEGINNING

Remove burner media and clear dust or debris. Verify the valve system and burner are labeled for the correct gas type (natural gas or propane). Verify supply pressure meets the appliance specifications.

TURN OFF GAS SUPPLY AND ELECTRICAL POWER TO EQUIPMENT BEFORE SERVICING.

PIPING REQUIREMENTS

01 Confirm the fireplace has the required incoming gas piping size.

02 Ensure piping is clean and free of scale and dirt.

03 Pressure-test gas piping before connecting the control; excessive pressure may damage it.

04 Install a drip leg (sediment trap) if required and follow applicable fuel gas codes.

05 Use gas-approved compound or tape on male threads only; leave the first two threads clean.

06 Install the valve with gas flow aligned to inlet/outlet markings.

07 Use a backup wrench only on the wrench boss; avoid overtightening or damaging the valve body.

Gas Piping & Placement

BEFORE SERVICING: Turn off the gas supply and electrical power to the equipment.

PIPING INSTRUCTIONS

01 Check replacement valve for multiple outlets. Plug unused side outlets with approved socket plugs.

02 Pipe or tubing must be clean and free of scale and dirt.

03 Pressure-test piping before connecting the control. Do not subject the control to pressures exceeding its rated inlet limit.

04 Install a drip leg (sediment trap) where required. All piping must comply with applicable codes, including ANSI Z223.1/NFPA 54.

05 Apply a small amount of gas-rated pipe compound or tape to male pipe threads, leaving the first two threads clean. Never apply compound to female threads.

06 Mount the gas valve only in a position permitted by its manufacturer.

07 Install the valve so gas flow follows the marked inlet and outlet.

08 Do not insert unsuitable objects into valve ports. Use a backup wrench on the wrench boss, not the valve body. Do not overtighten connections.

Valve & Pilot Installation

INSTALLATION SEQUENCE

The upper burner/valve photograph from the reference manual has been intentionally omitted. The two lower technical figures are retained below.

01 Remove burner components and valve system parts. Locate the pilot assembly, including pilot hood, bracket, pilot line, and thermocouple.

02 Connect the pilot gas line to the valve, avoiding excessive tightening.

03 Connect the thermocouple by hand first to prevent cross-threading, then tighten only as specified by the component manufacturer.

CONNECTION DIAGRAMS — FIGURES 2 AND 3

Figure 2

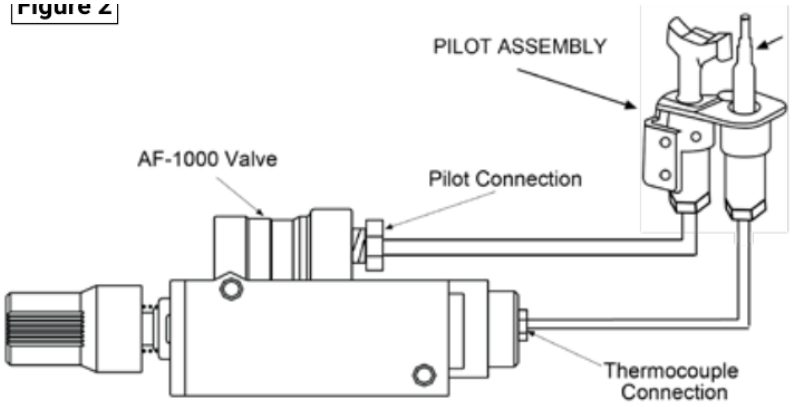


Figure 3



Turn valve right side up and locate the 1/2" gas flex line and 1/2" female to 1/2" flare connector that came with the burner. Then, using pi thread compound and a wrench, connect the 1/2" female connector to the incoming gas line.

Connect one end of the flex line to the 1/2" flare side of the female connector on the incoming gas line and attach the other end of the

01 Connect the approved inlet connector to the incoming gas line using gas-rated thread compound where required.

02 Connect the inlet flex line to the valve IN side and supply connector.

03 Connect the outlet flex line from the valve OUT side to the burner using approved flare fittings. Do not apply pipe thread compound to flare connections.

04 Position the valve a minimum of 2 inches from the burner, as specified in the reference installation instructions.

FINAL SAFETY CHECK: A qualified gas technician must verify component compatibility, heat shielding, clearance, connections, leak tightness and safe operation before use.

Remote Installation

RECEIVER AND TRANSMITTER DIAGRAMS

Figure 1

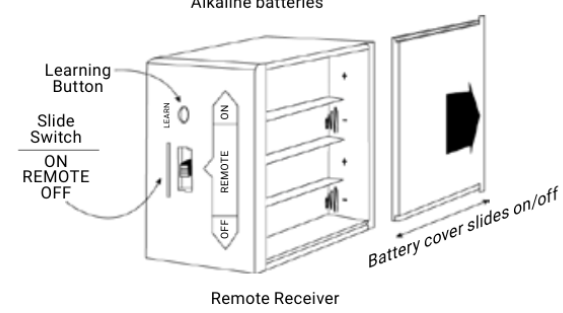


Figure 2

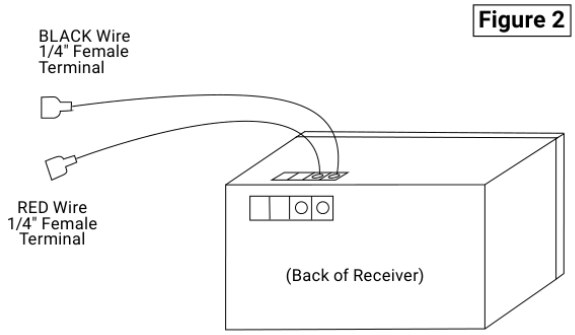
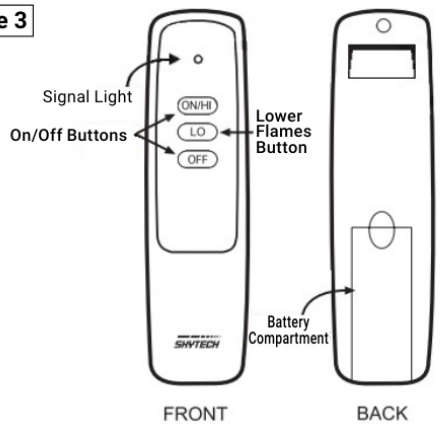


Figure 3



REMOTE INSTALLATION STEPS

01 Locate the remote receiver. It operates on four 1.5V AA alkaline batteries.

02 Install four AA batteries in the receiver with correct polarity.

03 Connect receiver wires to valve motor wires: red to red and black to black.

04 Install the specified A23 12V battery in the handheld remote.

05 If pairing is required, place receiver switch in REMOTE, hold LEARN until it beeps, then press a transmitter button. If unsuccessful, wait 1–2 minutes before trying again.

06 Position receiver forward and near the fireplace side wall, away from excessive heat. If the receiver overheats, reset and allow it to cool before use.

Read Before Lighting

WARNING: Failure to follow the lighting and safety instructions exactly may cause a fire or explosion, resulting in property damage, personal injury, or loss of life.

BEFORE LIGHTING

• This appliance has a pilot that must be lighted by hand.

• Before lighting, smell all around the appliance for gas, including near the floor, because some gas is heavier than air and can settle there.

• Use only your hand to push in or turn the gas control knob. Never use tools. If the knob does not move by hand, call a qualified service technician.

• Do not use this appliance if any part has been underwater. Have a qualified service technician inspect it and replace affected controls.

WHAT TO DO IF YOU SMELL GAS

01 Do not try to light any appliance.

02 Do not touch any electrical switch or use a phone in the building.

03 Immediately call your gas supplier from a neighbor’s phone. Follow the supplier’s instructions.

04 If you cannot reach your gas supplier, call the fire department.

SAFETY NOTICE: This manual is intended for qualified installation and service personnel. Review current applicable codes and the exact appliance instructions.

Remote Control & Pilot Lighting

REMOTE CONTROL INSTRUCTIONS

01 The remote control operates the gas valve servomotor, turning the valve from OFF to full ON.

02 Pressing ON sends a continuous RF signal to the receiver, which powers the servomotor to open the gas valve.

03 Pressing OFF sends an RF signal to the receiver, which powers the servomotor to close the gas flow.

04 The remote controls valve on/off and flame modulation. The receiver slider switch provides OFF and REMOTE positions.



PILOT LIGHTING INSTRUCTIONS

NOTE: It may be necessary for a qualified technician to purge air from the gas line before the pilot will light.

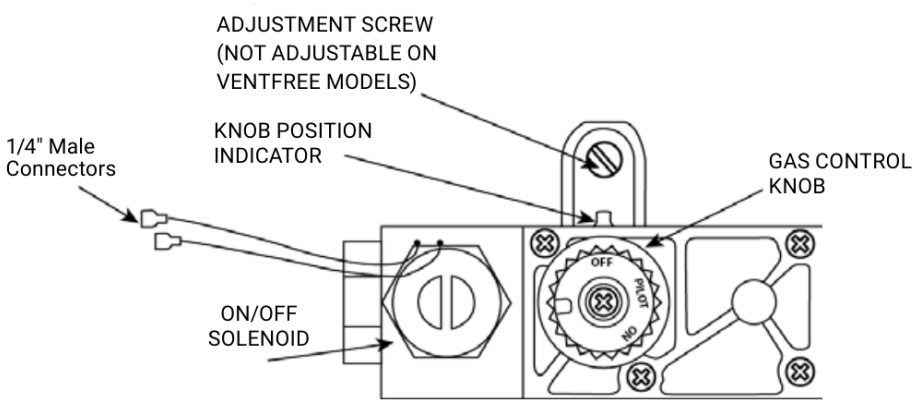
01 Slightly depress the OFF/PILOT/ON knob and rotate it to PILOT.

02 Press the control knob inward and light the pilot using the approved appliance lighting procedure.

03 Once lit, continue holding the control knob for approximately 45–60 seconds.

04 Release the control knob. If the pilot does not remain lit, turn OFF and follow the manufacturer's relighting instructions.

05 Once the pilot is lit and stable, turn the control knob to ON.



FACE VIEW OF GAS CONTROL WITH SOLENOID

CAUTION: When the control knob is turned to ON, the burner flame may turn on.

Troubleshooting

PROBLEM / POSSIBLE CAUSE / RECOMMENDED CHECK

01 PILOT FLAME WILL NOT STAY LIT

Possible causes: Pilot not touching thermocouple; pilot too small; insufficient thermocouple output

Recommended checks: Check pilot contact and pressure; qualified technician to test thermocouple output.

02 PILOT FLAME TOO LARGE, SMALL, OR NOISY

Possible causes: Incorrect gas type; gas pressure high/low; pilot hood blockage

Recommended checks: Verify fuel type; have gas pressure and pilot assembly checked.

03 BURNER FLAME WILL NOT MODULATE

Possible causes: Weak batteries; reversed receiver motor wiring

Recommended checks: Replace batteries; verify black-to-black and red-to-red connections.

04 FLAME HEIGHT SEEMS HIGH OR LOW

Possible causes: Incorrect fuel type; incorrect gas pressure

Recommended checks: Verify correct burner gas type and gas pressure.

05 RECEIVER DOES NOT BEEP

Possible causes: Dead receiver batteries; transmitter not paired

Recommended checks: Replace receiver batteries; perform receiver pairing procedure.

06 BURNER SHUTS DOWN OR RECEIVER BEEPS REPEATEDLY

Possible causes: Receiver overheated; inadequate thermocouple output

Recommended checks: Allow receiver to cool and relocate appropriately; have thermocouple tested.

> **Gas pressure checks, electrical testing and gas-control repairs must be performed by qualified service personnel.**