

# TROUBLE SHOOTING FOR “RI” MODELS

## WIRED CORRECTLY?

The Automag “RI” series zone valves are normally open (powered closed) and require 24 volts AC power to the center 2-wire connector, labeled “POWER”

**GREEN AND RED LED’S:** The green LED always be lit when proper power is connected to the center 2-wire connector labeled “POWER”. The red LED should only be lit when the appropriate thermostat is turned up calling for heat.

**PROPER CONNECTIONS:** The zone valve head has 3 sets of 2-wire connectors. With the green and red LED’s at the top, the left 2-wire connector, labeled “T’STAT”, should have 2 wires from the heating thermostat. The center 2-wire connector, labeled “POWER”, should have 24 volt AC power connected to it. The right 2-wire connector, labeled “TO TT”, should have wires going to the system boiler/circulator control.

**TEST WIRING:** Turn down all thermostats. Place iron nail at the end of each valve stem (where hairpin clip is secured). Nails should be held in place by magnetism. A weak magnetic pull indicates that the valve is stuck open. Turn thermostats up one at a time. Appropriate nail should fall off the valve stem. The heating system circulator should come on. If the system does not check out OK, recheck wiring very carefully. Make sure that each thermostat is wired to the correct, matching zone valve. Valves should be magnetized only when zone is not calling for heat (thermostat is satisfied).

**NO MAGNETISM:** When checking for magnetic pull if none of the valves show signs of magnetism, check to be sure that the low voltage side of the transformer has 24 volt AC. If no

voltage present, and proper input voltage is present, replace transformer.

## SOME WITH MAGNETISM, SOME

**WITHOUT:** Be sure that all thermostats are turned down. All valves should have green LED lit. If valve does not have green LED lit, check to be sure all wiring is secure. If green LED still not lit, and the valve has magnetism, the green LED has burned out. If there is very weak magnetism, see “OVERHEATING” section below. Remove the 2 wires from thermostat connected to the zone valve with no magnetism. If there is still no magnetism, replace the zone valve head.

## MECHANICAL

**NO HEAT:** Air in line? Zone valve installed backwards (arrow on zone valve body should be in direction of flow from circulator). Manual valve left closed? Frozen pipe? Obstruction in the line? Is circulator operating? Is valve stem damaged, marked or squeezed, locking the internal plunger in a closed position?

**OVERHEATING:** Foreign matter in zone valve? Valve stem damaged, marked or squeezed, preventing the internal plunger from closing? Zone valve plunger locked tight with leak sealer? Circulating pump more powerful than valve rating? Split in loop? Each zone must start as one line and return as one line, or cross-feed can cause overheating.

A light tap on the base can sometimes free a stuck valve. **NEVER** tap the stem or handle it with any tool!