

# Wiring Hayward Gas Pool Heaters For Parallel Operation

## Summary

On some field applications, it may be necessary to use more than a single pool heater to heat a single body of water (a large or commercial pool, for example). The heaters can be chained together such that only one heater's water temperature sensor and thermostat will activate all attached heaters. The heater which will perform the thermostatic functions is referred to as "primary or master", and the heater(s) which will be controlled by the "primary/master" heater are referred to as "secondary or slave."

## Warning

Before wiring multiple heaters for parallel use, ensure that they are all heating the same body of water.

## Components Needed

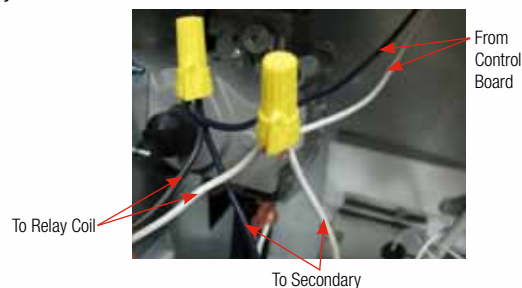
- Length of 20 AWG minimum, 2 (or more) conductor cable suitable for outdoor use (such as thermostat cable) to run between the primary heater and the secondary heater(s).
- A relay with a 24VAC coil for each secondary heater which will be attached.
- Wire nuts, and/or other suitable electrical connectors which may be used to attach to the heater's wire harness and attach to the relay(s).

## Procedure

1. Install relay(s) inside the primary heater. These should be installed in a part of the heater which is not susceptible to water entry (not on the bottom of the heater), and should be secured appropriately (screws, wire ties, DIN rail, etc.)



2. Cut and strip the wires going to the gas valve. Next, wire nut the two ends together with remote wires. Run remote wires from the primary heater to each secondary heater to be controlled.



3. Connect each remote thermostat wire to each secondary heater to be controlled using the terminals labeled "orange" and "white."

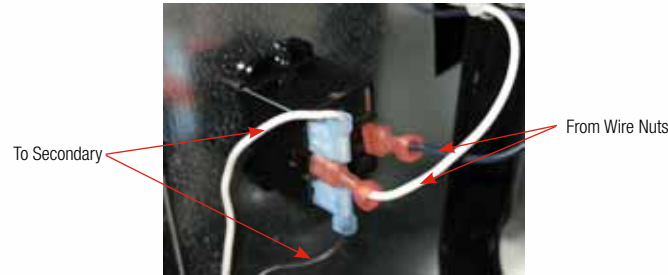
(Thru August 2008)



(Beginning September 2008)



- Connect the other end of the remote thermostat wires for each secondary heater to the normally-open relay contacts on a relay installed in the primary heater.
- Wire the coil(s) for the relays in the primary heater parallel with the wires in the wire harness that connect to the gas valve.



- Place each secondary heater in "bypass mode" following the appropriate procedure for configuring a heater for a 2-wire remote thermostat operation. See heater manual for details on how to configure a heater to run in bypass mode for a remote 2-wire thermostat.
- Adjust the thermostat on the primary heater to the desired temperature and test the system to verify that the secondary heater(s) fire when the primary fires.

## Notes

- If using fan-assisted heaters, there will be a delay from when the primary heater fires and the secondary heater(s) fire due to the blower pre-purge.
- This procedure works with any type of heater which has provision for a 2-wire remote thermostat (H-Series and IDL), and will work even if different types of heaters are mixed (IDL primary and H-Series secondary, for example).
- There is a limit to how many relays can be driven by a single primary heater. This limit will depend on the specific relay used and may vary. If this limit is exceeded (fuse blown in primary heater), the configuration can be re-wired with multiple primary heaters, each containing relays, but all in "bypass mode" and being controlled by a single heater (primary-primary heater).

Figure 1

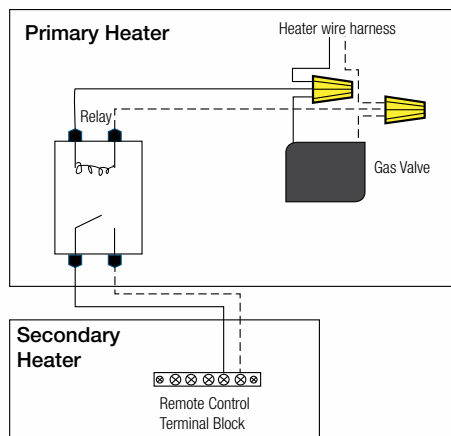


Figure 2

