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Basic Operation of Electronic Control System (EIS)

The following is the basic operation of the Electronic Ignition Control System. This is not any type of "voodoo" special only to gas log sets. The components we use are used in every day home heating systems and adapted for use with gas log sets in the fireplace.

The system requires gas piped to the inlet of the gas control valve and 115V electricity wired to the transformer.

When you have the call for heat (switch turned to ON or push the remote ON button), the control module starts the igniter sparking and allows the gas control valve to send gas to the pilot burner. The sparking will continue until a pilot flame is established (justified). Once pilot flame is justified, the control module will allow gas to flow through the gas control valve to the main burner.

Should the pilot flame extinguish (due to an interruption in gas supply, a power failure, or other factors, some environmental (such as the pilot flame pulling off of the igniter/sensor from air currents), some installation related), the control module loses the pilot justification and stops the flow of gas to the main burner. The igniter will commence an automatic recycling of the pilot until the switch is turned to OFF.

In propane models, a "lockout" control module is used. The lockout feature shuts off all gas at the valve should pilot ignition fail to occur after a period of 60 seconds. After 60 seconds, there is a 5 minute delay, before the next ignition period commences (purge time). After three unsuccessful tries, the system goes into lockout and must be manually reset before commencing another ignition cycle.

In all cases, when the switch is turned to OFF, all gas will cease flowing to both the main and pilot burners.

Whether a safety pilot system is required is a matter of code and/or local custom. A safety pilot kit (SPK) shuts off the flow of gas to the burner in the event the pilot light blows out or if there is a flame-out of the burner. An SPK is required for all propane installations, due to the nature of propane. Propane is heavier than air. In its raw state, propane sinks and pools at the floor. It will continue pooling until it reaches a spark or flame, such as your water heater, furnace pilot light or static electricity. Once it reaches this ignition source...BOOM!!!

Natural gas is lighter than air. In its raw state (such as occurs in a leak or flame-out), natural gas safely vents up the chimney into the atmosphere. Although not necessary, many jurisdictions require the installation of an SPK on natural gas sets. In any case, a safety pilot kit makes for a convenient means of lighting and enjoying your gas log set.