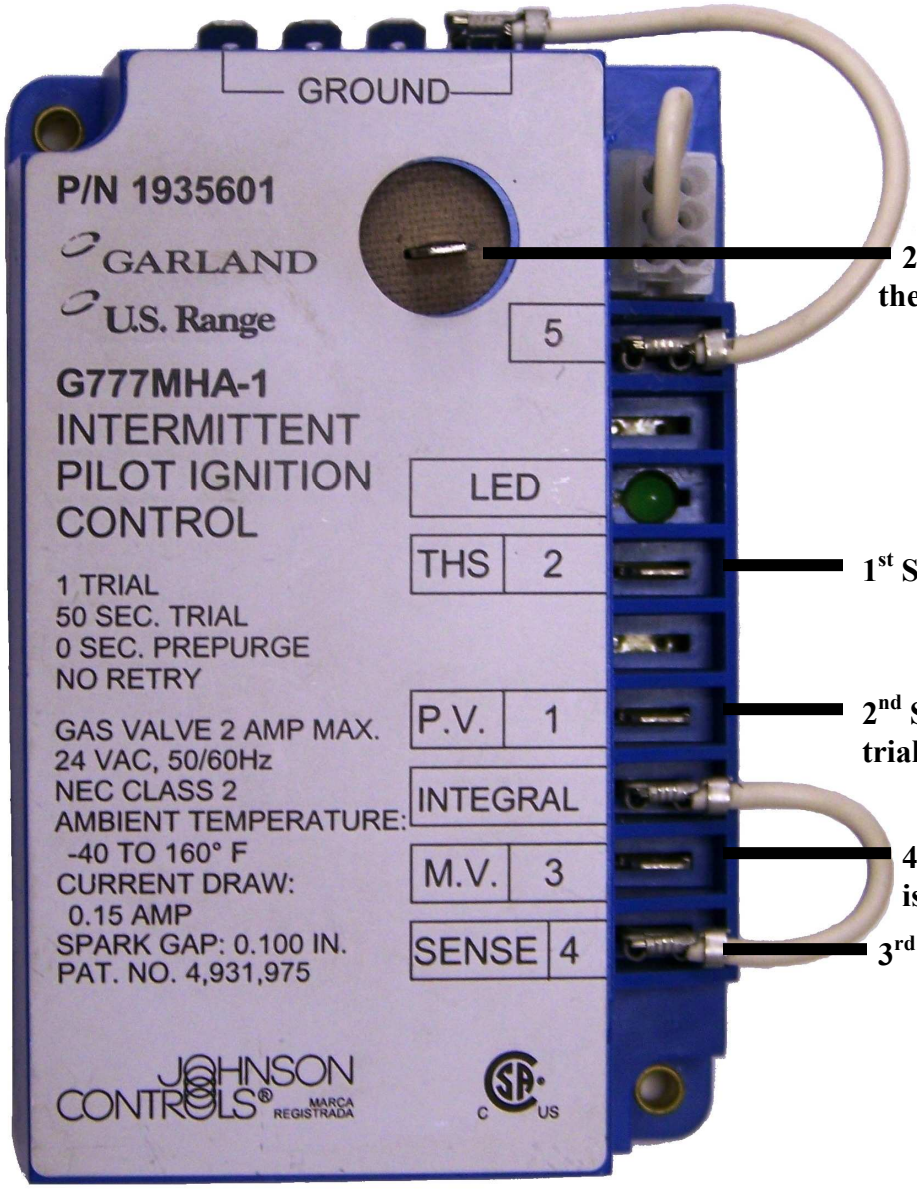
Ignition Module Sequence Guide
Intermittent Pilot Modules:



2nd Stage A: Spark sent to Pilot during the trial period

1st Stage: 24 Volts enters Module at THS

2nd Stage B: 24V out to Pilot Valve during trial period

4th Stage: 24V to Main Valve until 24V is removed from THS

3rd Stage: Flame rectification for 0.15 µA

Overview: 24 Volts enters the Module (**Stage 1**) at THS and immediately for the trial period, the module should send spark to the Pilot and 24 Volts to the Pilot Valve (**Stage 2**). As soon as the trial period starts the Module is checking at the Sense terminal for Rectification (**Stage 3**). Rectification occurs as the pilot or a flame sensor is heated, the heat creates a small electrical signal expressed as Micro Amps (**µA)** that is returned to the Sense terminal. To test for flame rectification, disconnect the wire at the sense terminal and set your multimeter to **µ**A. Then place one lead of your meter on the wire and the other on the terminal. Generally Honeywell modules require 1.5**µ**A and Johnson modules require 0.15**µ**A Minimum, but refer to the module manufacturer for exact specifications. With the pilot lit, your meter will show the **µ**A reading returning from the pilot and you can then see what the module is reading. Once the module reads a current greater than it's minimum, it will open MV (**Stage 4**) and send 24 Volts to the Main Gas Valve for the burner ignition. Also the Trial period will end and PV will stay open while MV is open. They will continue to send 24 Volts until the thermostat (not shown) interrupts the voltage to the THS terminal.

Direct Spark (Pilotless) Modules:

2nd Stage A: Spark sent to Burner during trial period

1st Stage: 24 Volts Enters Module

2nd Stage B: 24V out to Main (and Pilot Valve on some units) during trial period of 4 Seconds

4th Stage : Trial period ends when flame rectifies and 24V out to Main (and Pilot Valve on some units) continues until 24V At THS is removed

3rd Stage: Flame rectification for 0.15 µA

Overview: 24 Volts enters the Module (**Stage 1**) at THS and immediately for the trial period, the module should send spark to the pilot and 24 Volts Out on MV (**Stage 2**) to the Main Valve (and pilot valve on some units). As soon as the trial period starts the Module is checking at the Sense terminal for Rectification (**Stage 3**). Rectification occurs as the pilot or a flame sensor is heated, the heat creates a small electrical signal expressed as Micro Amps (**µA)** that is returned to the Sense terminal. To test for flame rectification, disconnect the wire at the sense terminal and set your multimeter to **µ**A. Then place one lead of your meter on the wire and the other on the terminal. Generally Honeywell modules require 1.5**µ**A and Johnson modules require 0.15**µ**A Minimum, but refer to the module manufacturer for exact specifications. With the pilot lit, your meter will show the **µ**A reading returning from the pilot and you can then see what the module is reading. Once the module reads a current greater than it's minimum, it will end the trial period and continue to send 24V out on MV (**Stage 4**). It will continue to send 24 Volts until the thermostat (not shown) interrupts the voltage to the THS terminal.