

SEQUENTIAL BURNER SYSTEM

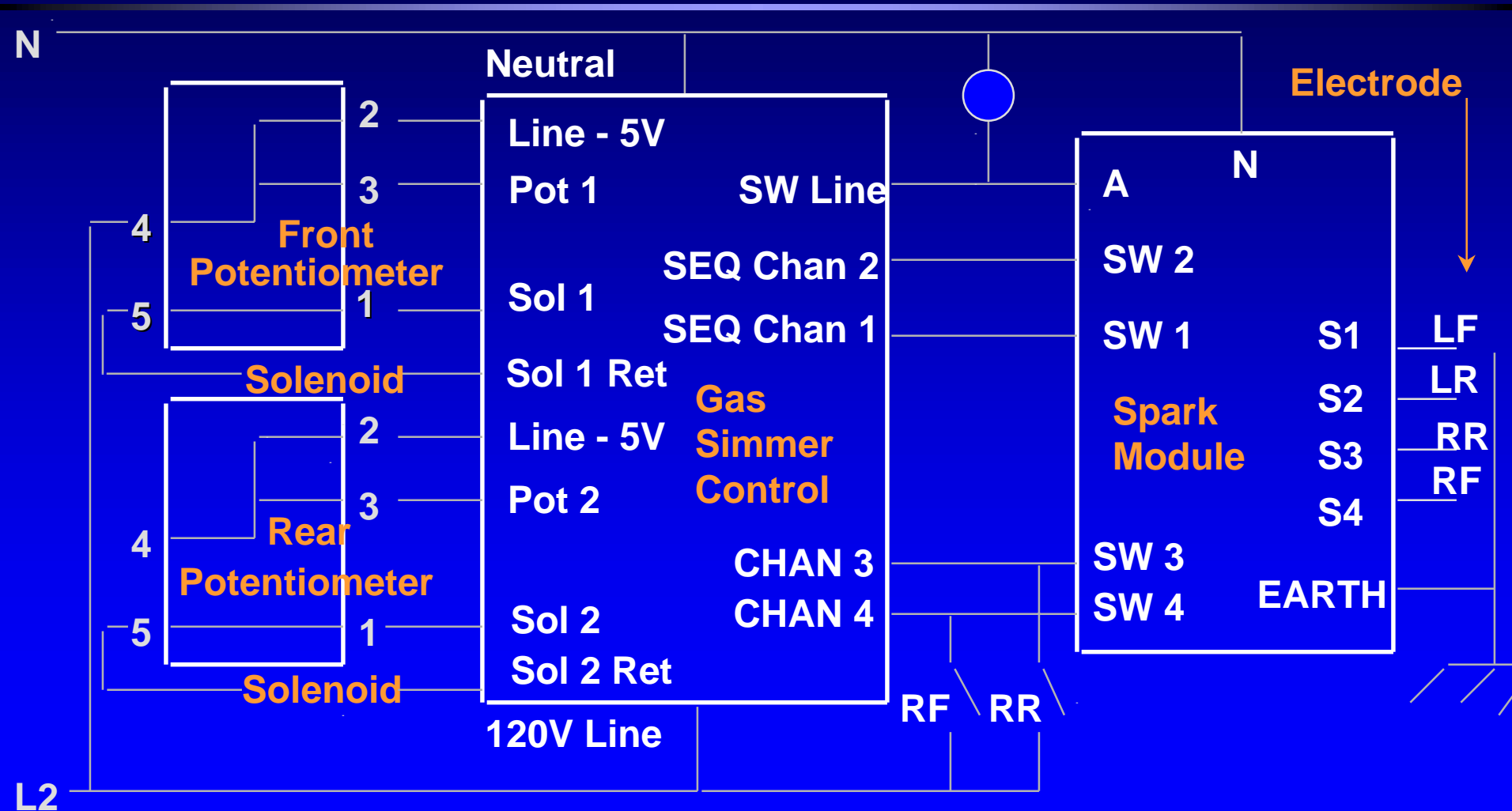
UTILIZED ON:

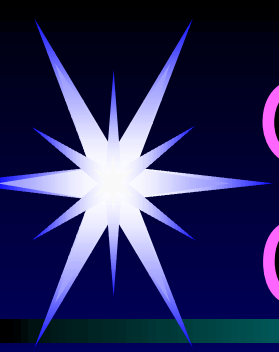
PRO - RANGES

30" RANGES

GAS COOKTOPS

Overview of the Main Components....

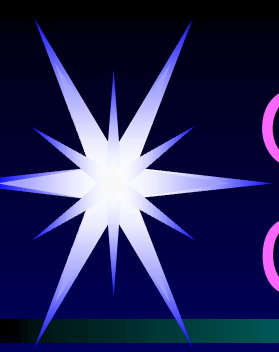




Overview of the Main Components....Potentiometer

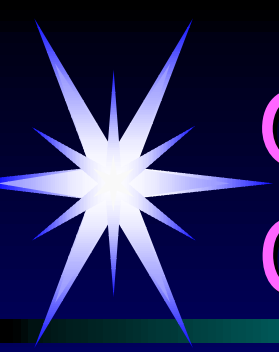
Creates resistance within the circuit

The higher the resistance, the lower the
current flow



Overview of the Main Components....**Simmer Control**

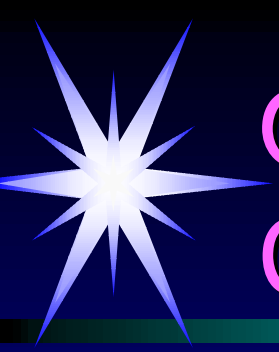
Controls the Solenoid Gas Valve
Controls the Spark Module



Overview of the Main Components....Solenoid Valve

Operates off of 110 VDC from the gas
simmer controller

Coil measures at 1,700 ohms

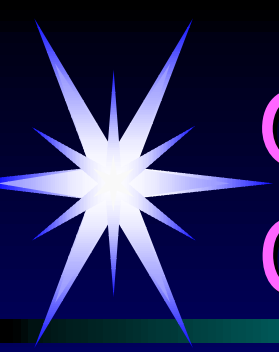


Overview of the Main Components....Spark Module

Equivalent to an electronic transformer

Steps up the 120 VAC to 14,000 VDC

Provides a sensing circuit for flame
rectification



Overview of the Main Components....**Electrode**

Senses the absence or presence of the
flame at the burner

Ignites the gas



CIRCUIT REVIEW

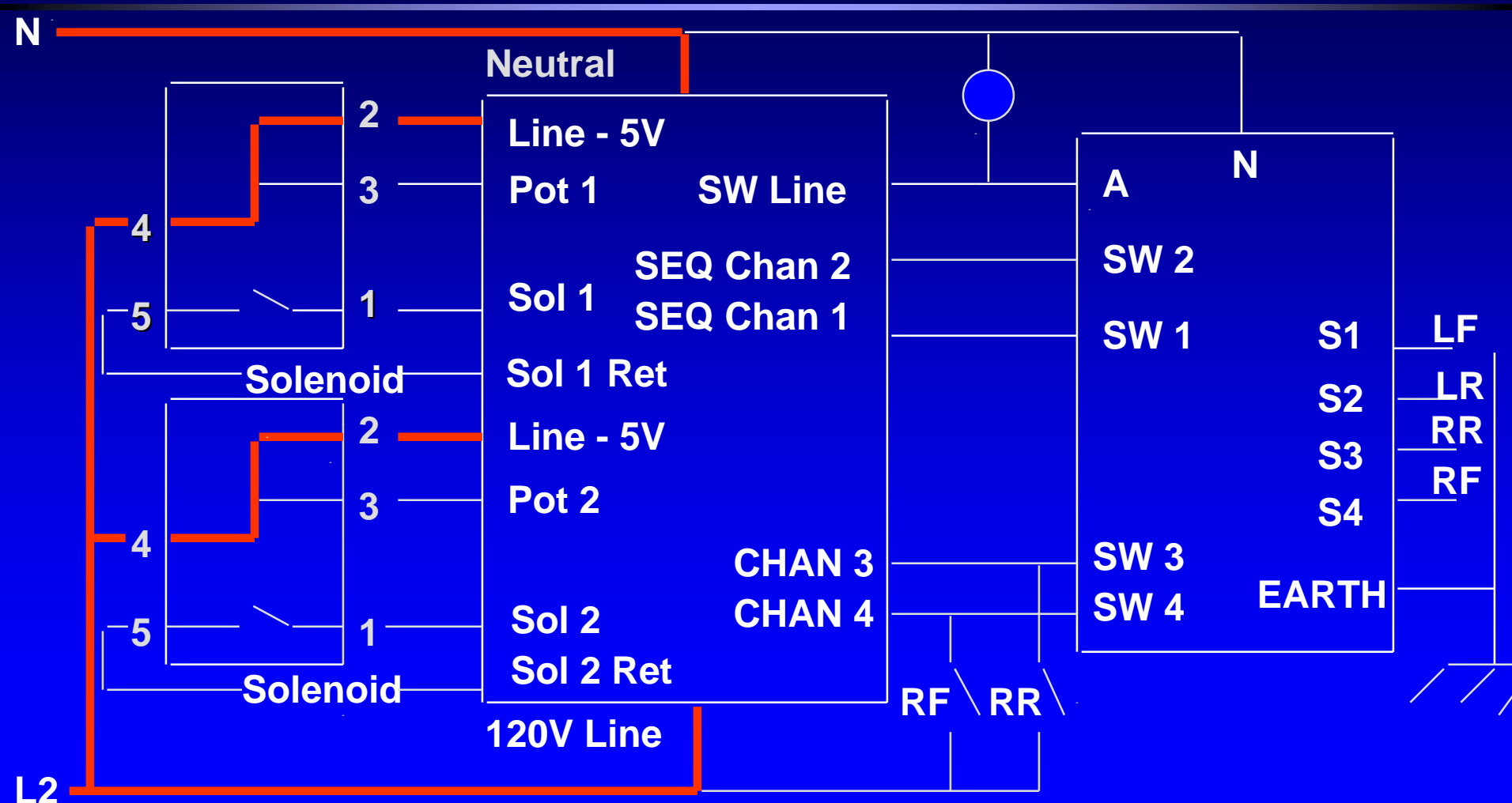
Component by component

Front burner application

Position by position of burner control

XLO Front burner...Off Position

No components activated



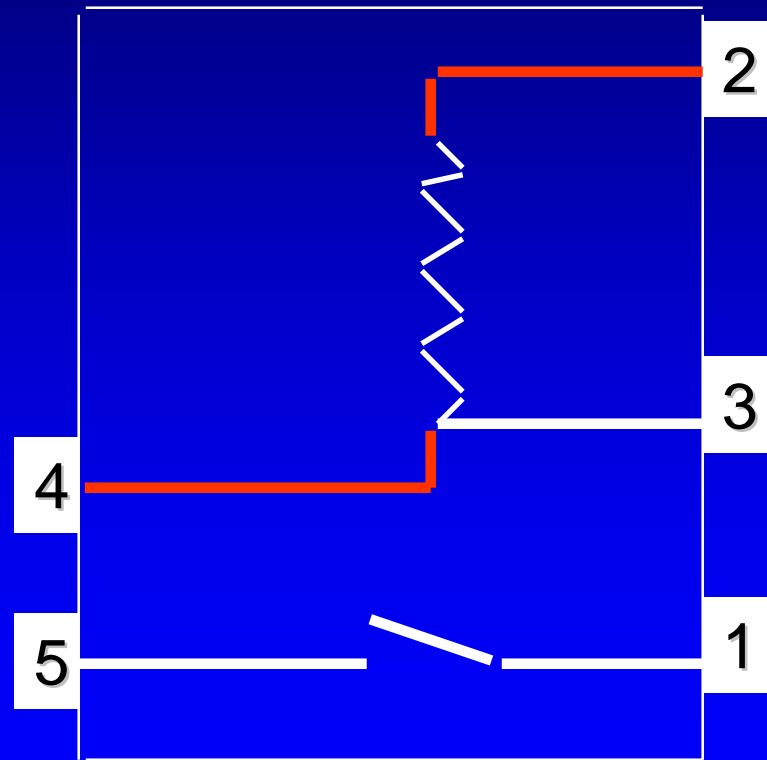


Potentiometer.... Off Position (XLO Front burner)

5VDC....between 2 & 4

0VDC....between 3 & 4

Open circuit between 1 & 5

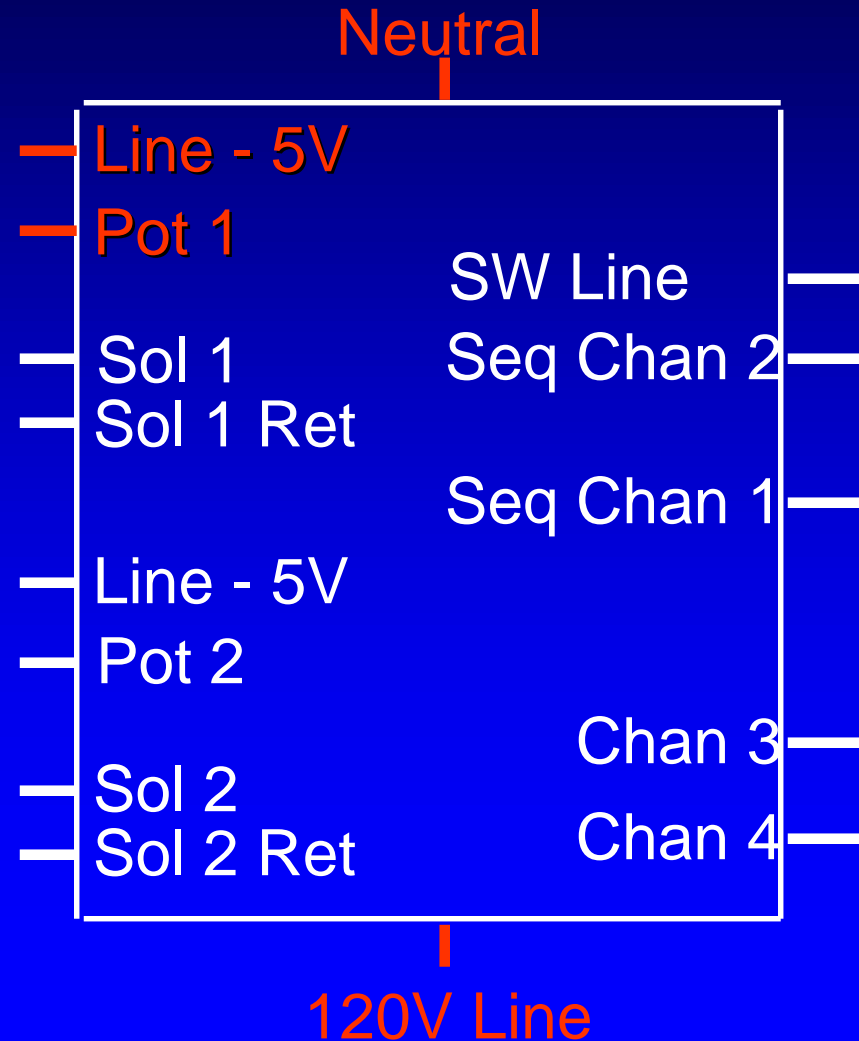


Simmer Control.... Off Position (XLO Front burner)

5VDC at Line 5V measured
From Line 5V - 120V Line

0VDC at Pot 1 measured
From Pot 1 - 120V Line
Interpreted as do nothing

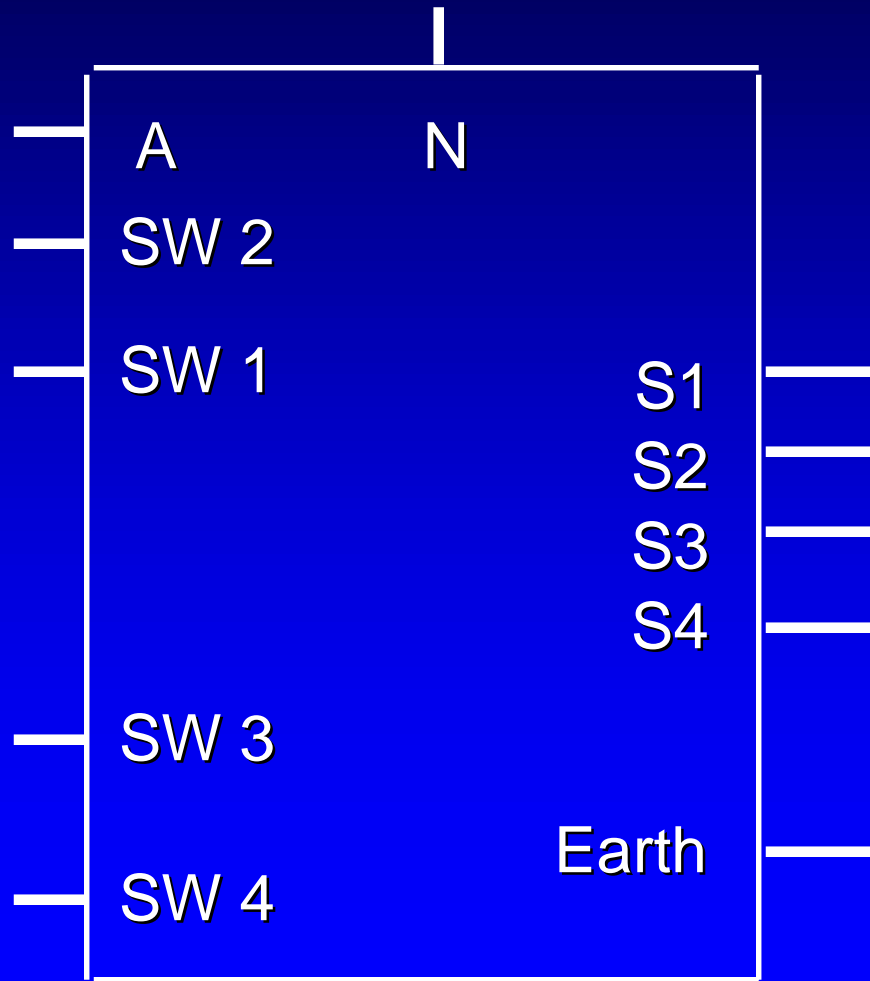
120VAC at 120V Line
From 120VLine - N





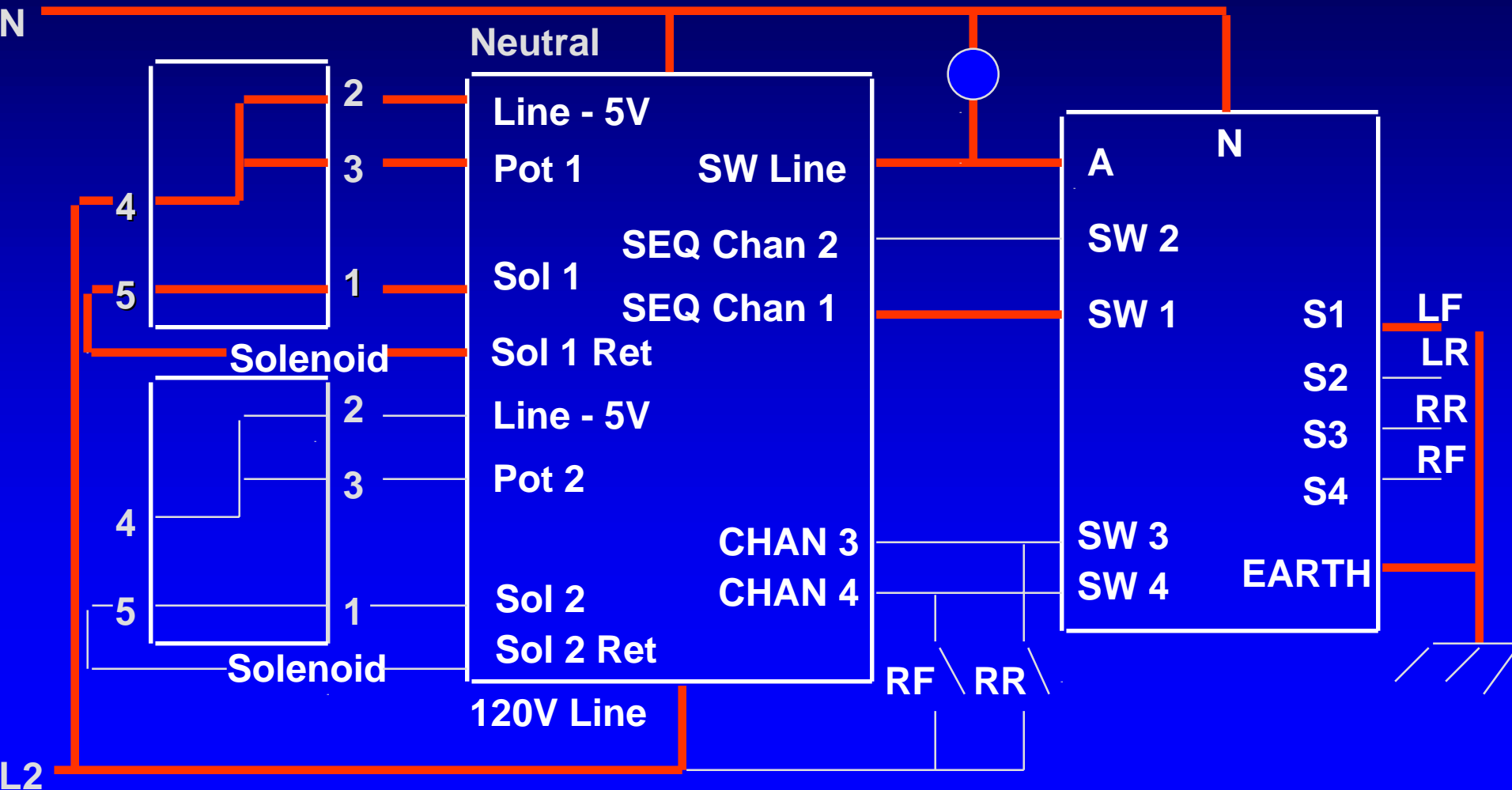
Spark Module.... Off Position (XLO Front burner)

Spark Module has no active circuits when burner is off



XLO burner..... High position

All components activated



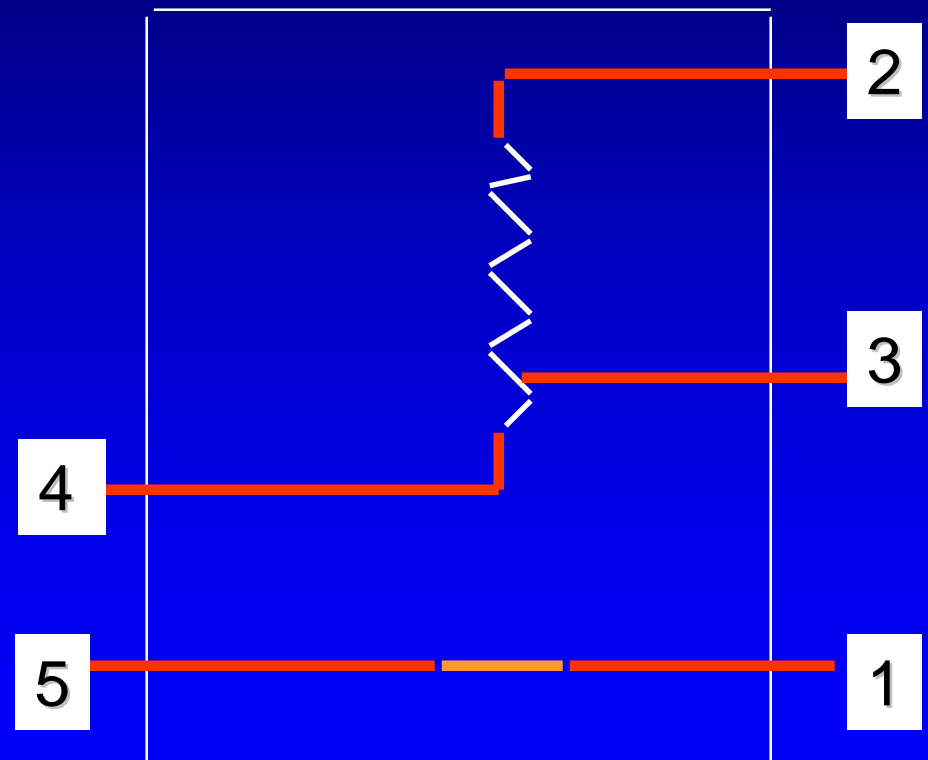
Potentiometer.... High Position (XLO Front burner)

5VDC....between 2 & 4

1.5VDC....between 3 & 2

3.5VDC....between 3 & 4

Closed circuit between
1 & 5





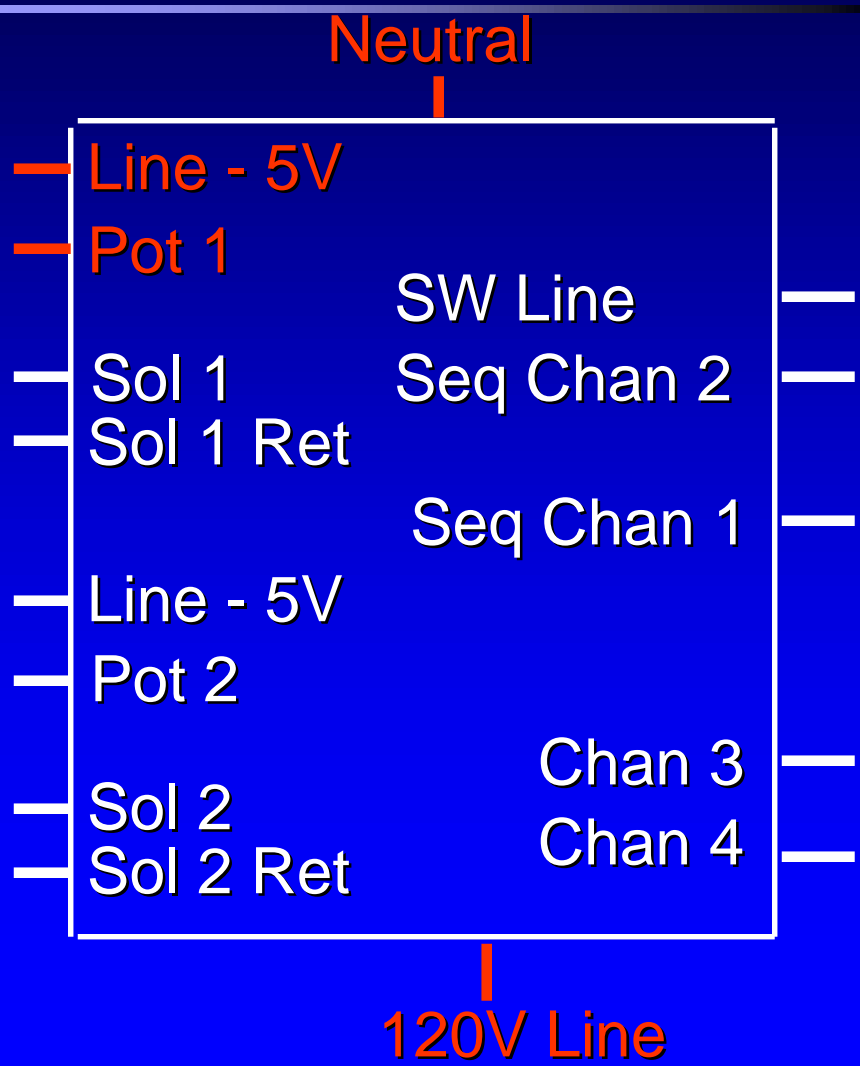
Simmer Control.... High Position (XLO Front burner)

5VDC at Line 5V measured
From Line 5V - 120V Line

3.5VDC at Pot 1 measured
From Pot 1 - 120V Line

Interpreted as:

- Activate spark module constantly*
- Activate gas solenoid constantly*

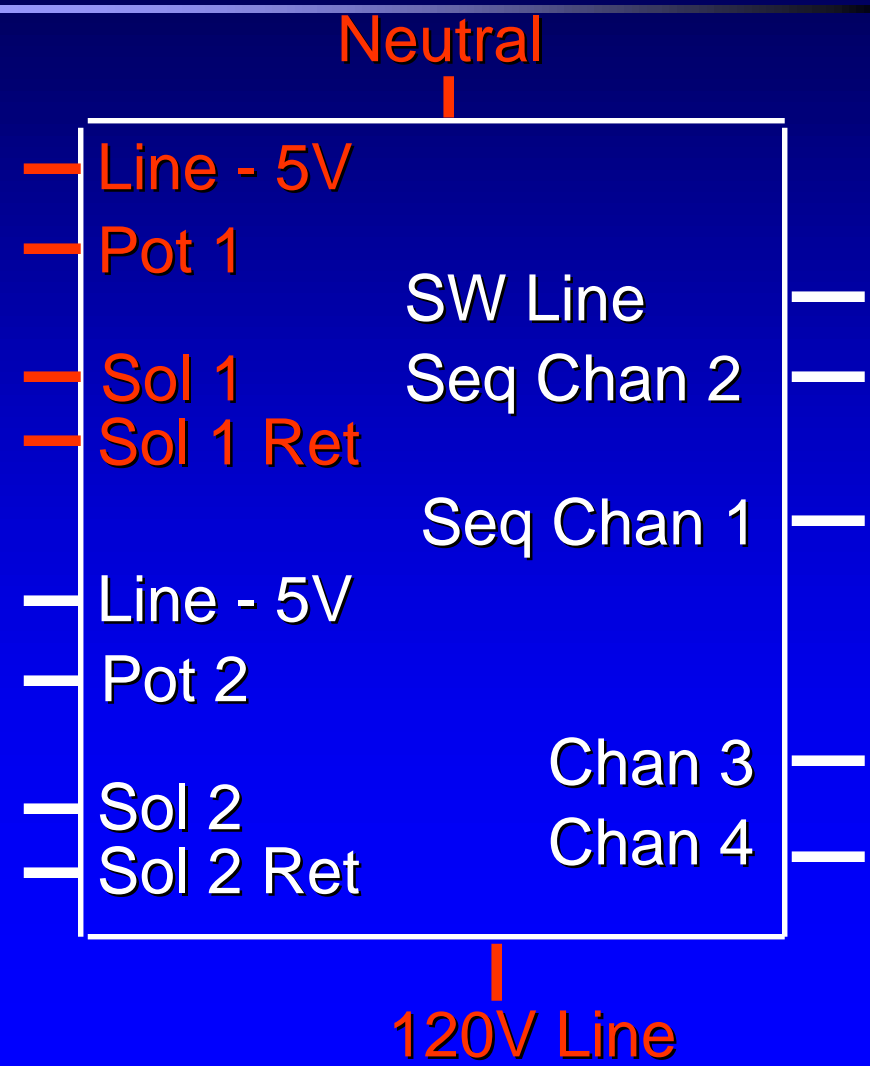




Simmer Control.... High Position (XLO Front burner)

110VDC at SOL 1
From SOL 1 - SOL 1 Ret

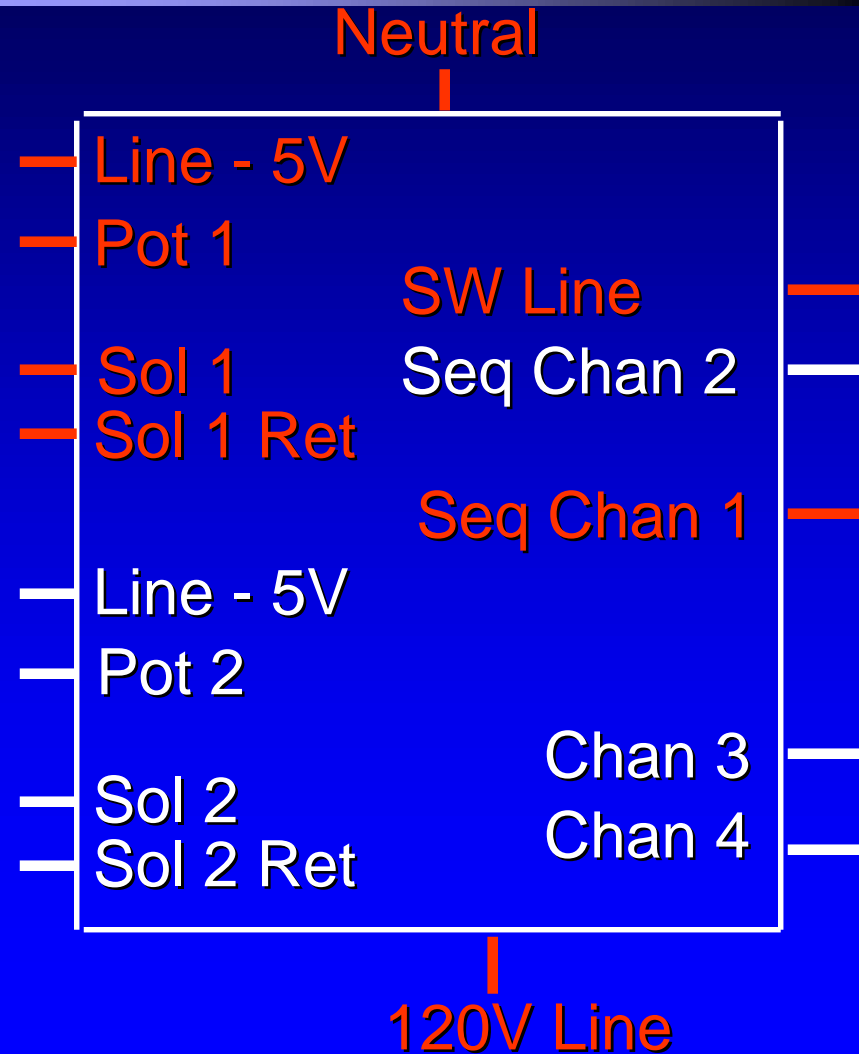
120VAC at 120V Line
measured
From 120V - Neutral



Simmer Control.... High Position (XLO Front burner)

120VAC at SW Line
measured
From SW Line - N

120VAC at Seq Chan 1
measured From
Seq Chan 1 - N



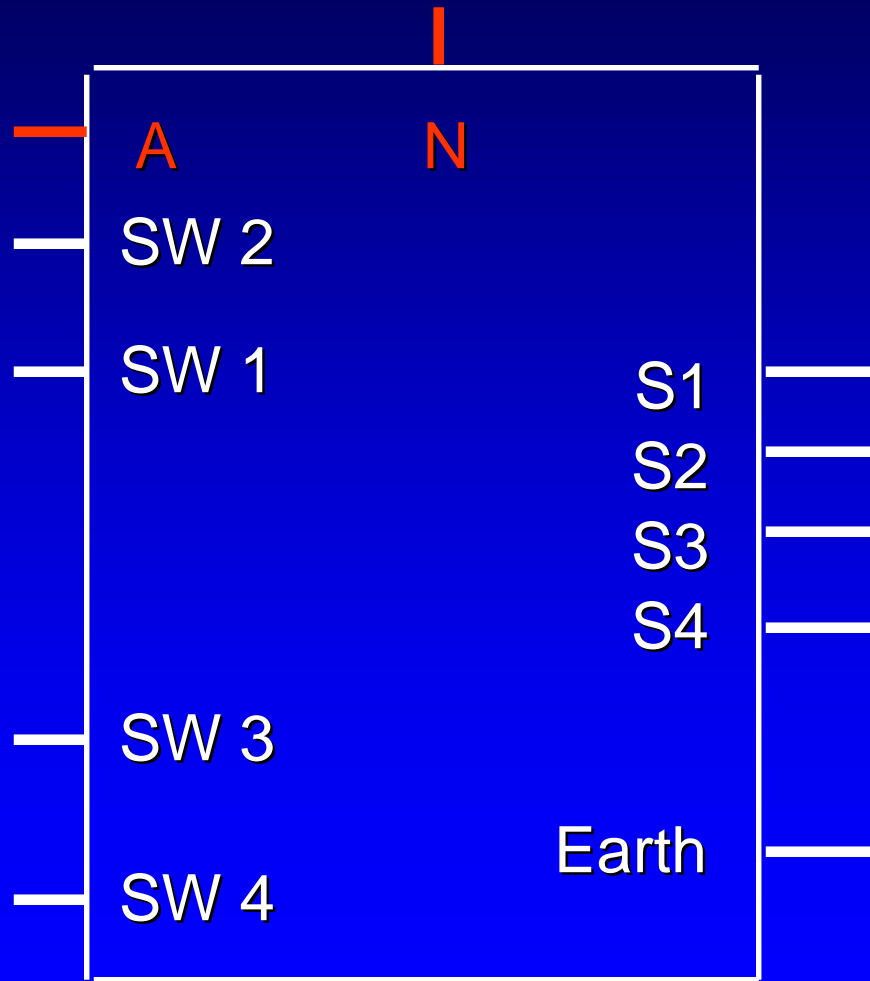


Spark Module.... High Position (XLO Front burner)

120VAC at A measured from A - N

Provides supply voltage for module

Creates circuit for stepping voltage to 14,000VDC



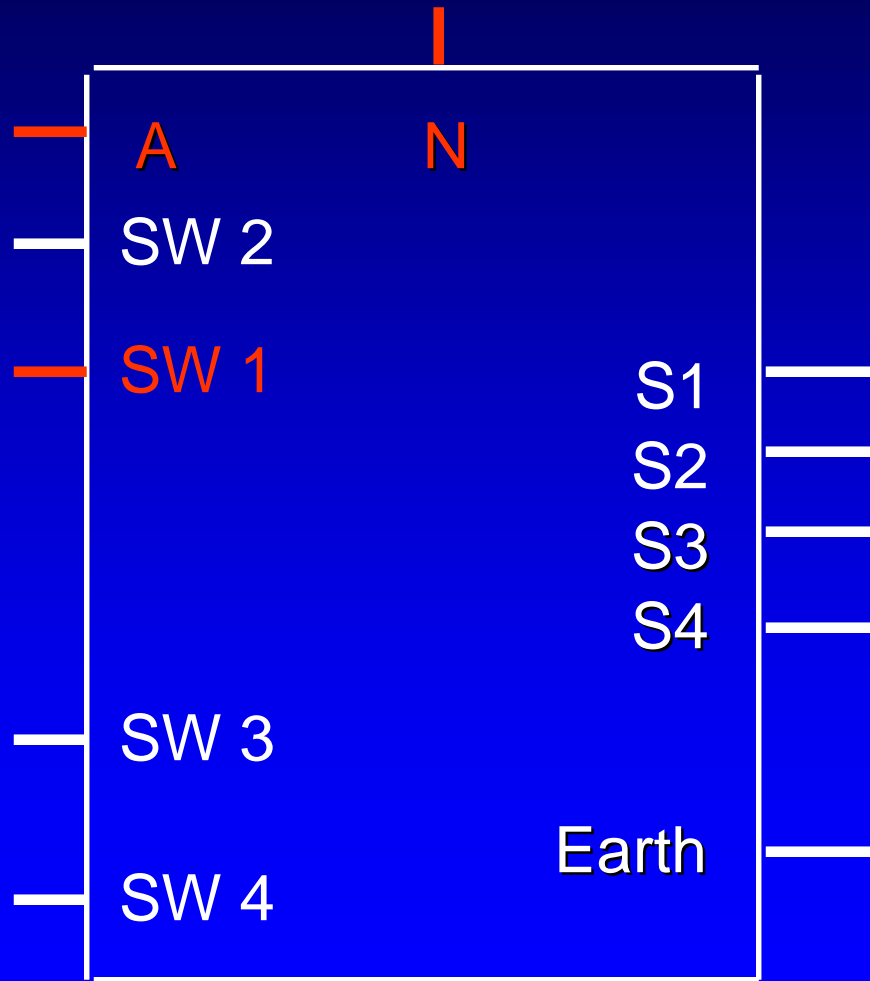


Spark Module.... High Position (XLO Front burner)

120VAC at SW 1 measured
From SW 1 - N

Provides sensing circuit
for flame rectification

Provides circuit for
Electrode

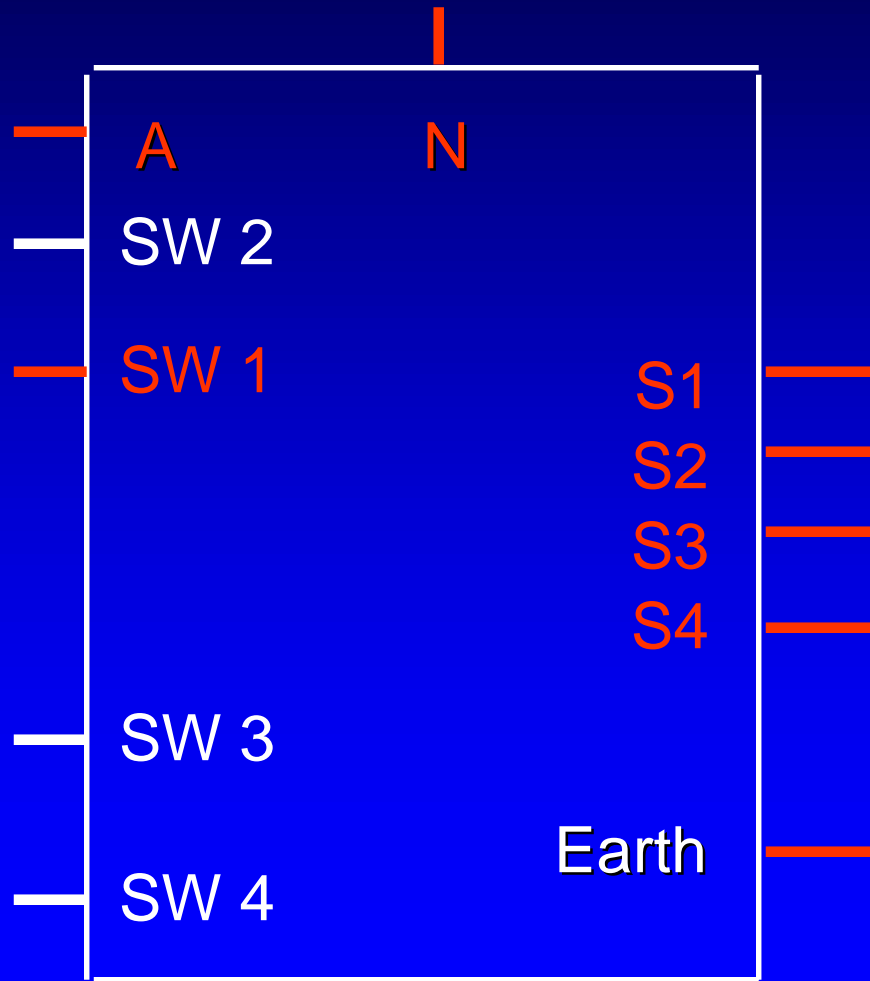




Spark Module.... High Position (XLO Front burner)

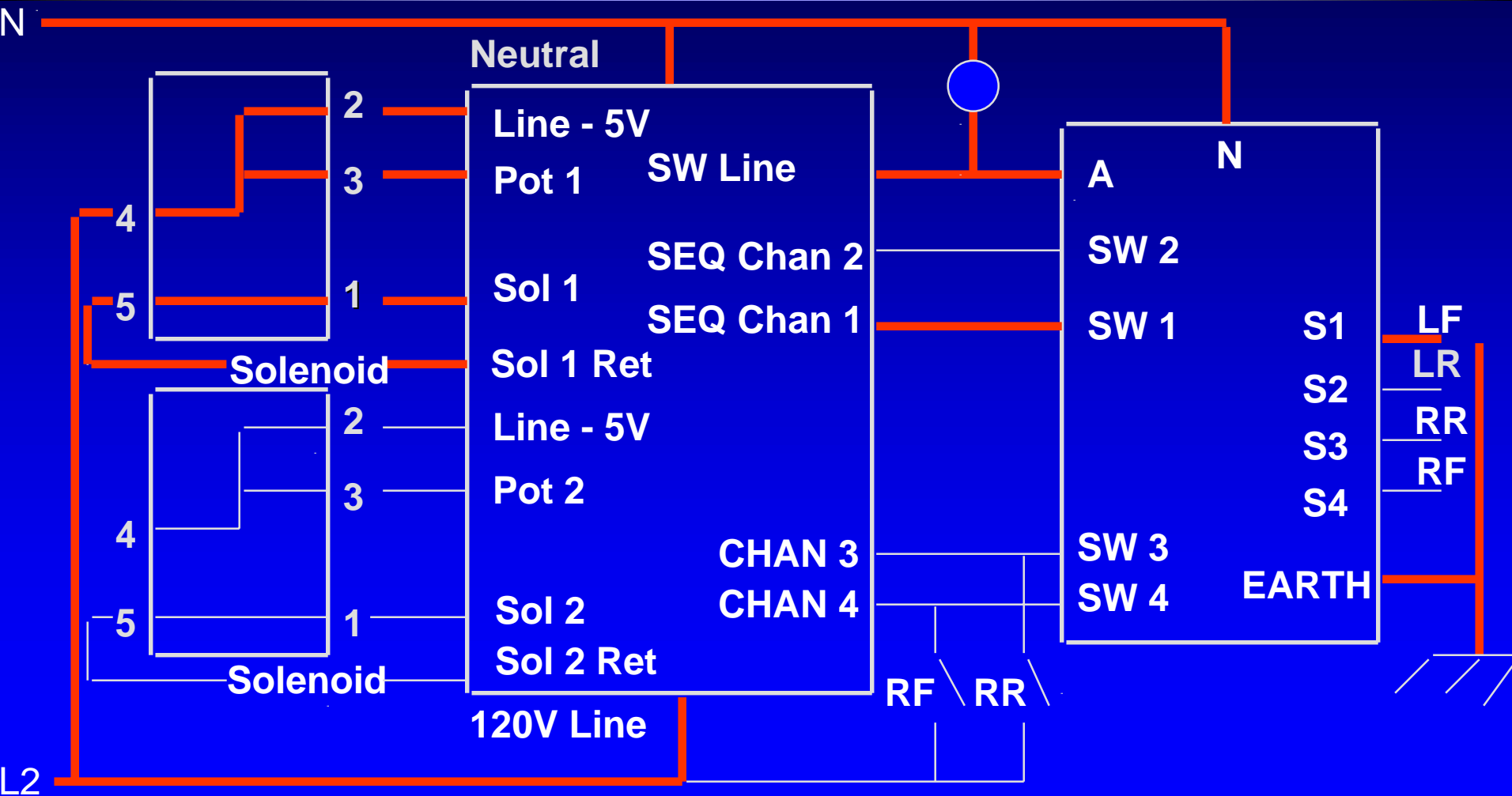
14,000VDC at S1 - S4
Creates spark at
electrode

.02 to 1 Micro-Amp at S1
Sensing circuit for flame
rectification



XLO burner..... Low position

All components activated





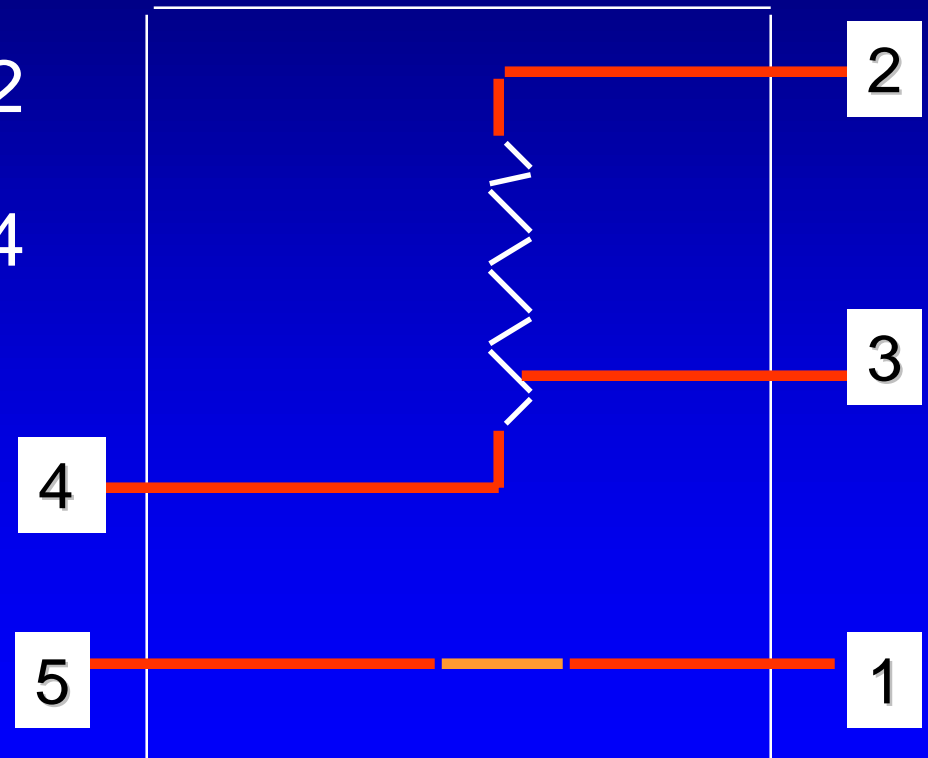
Potentiometer.... Low Position (XLO Front burner)

5VDC....between 2 & 4

3.5VDC....between 3 & 2

1.5VDC....between 3 & 4

Closed circuit between
1 & 5



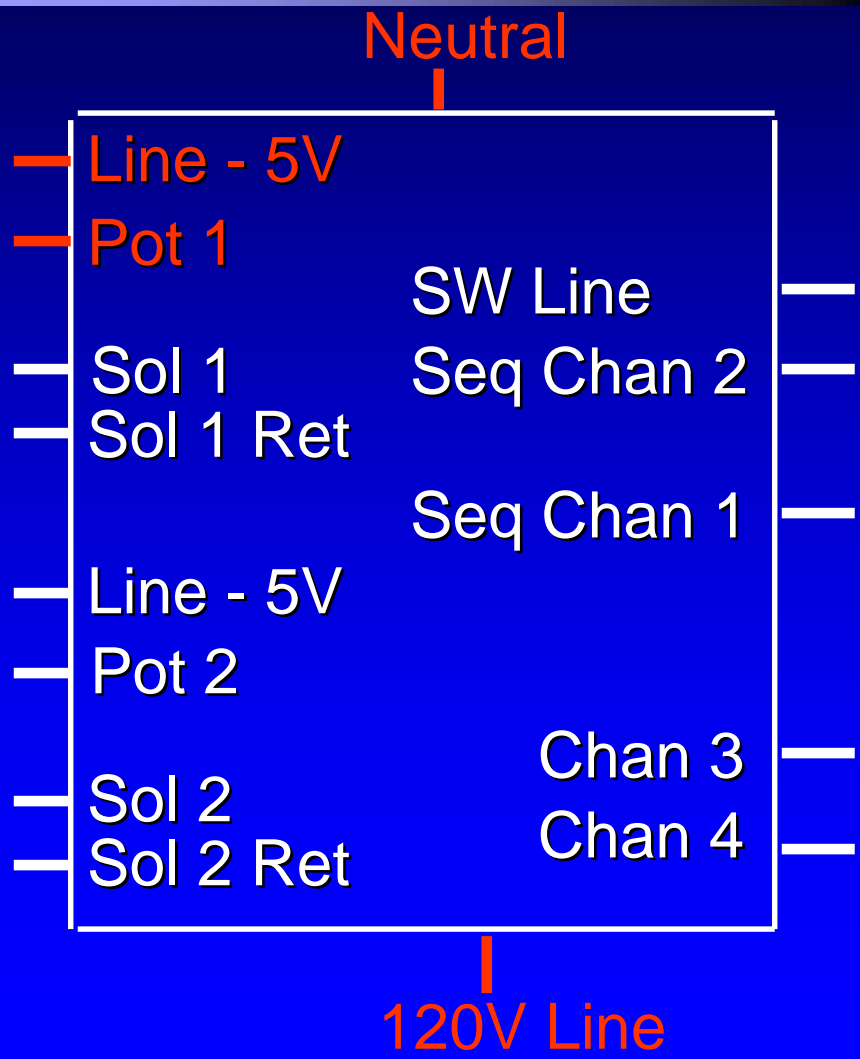


Simmer Control.... Low Position (XLO Front burner)

5VDC at Line 5V measured
From Line 5V - 120V Line

1.5VDC at Pot 1
From Pot 1 - 120V Line
Interpreted as:

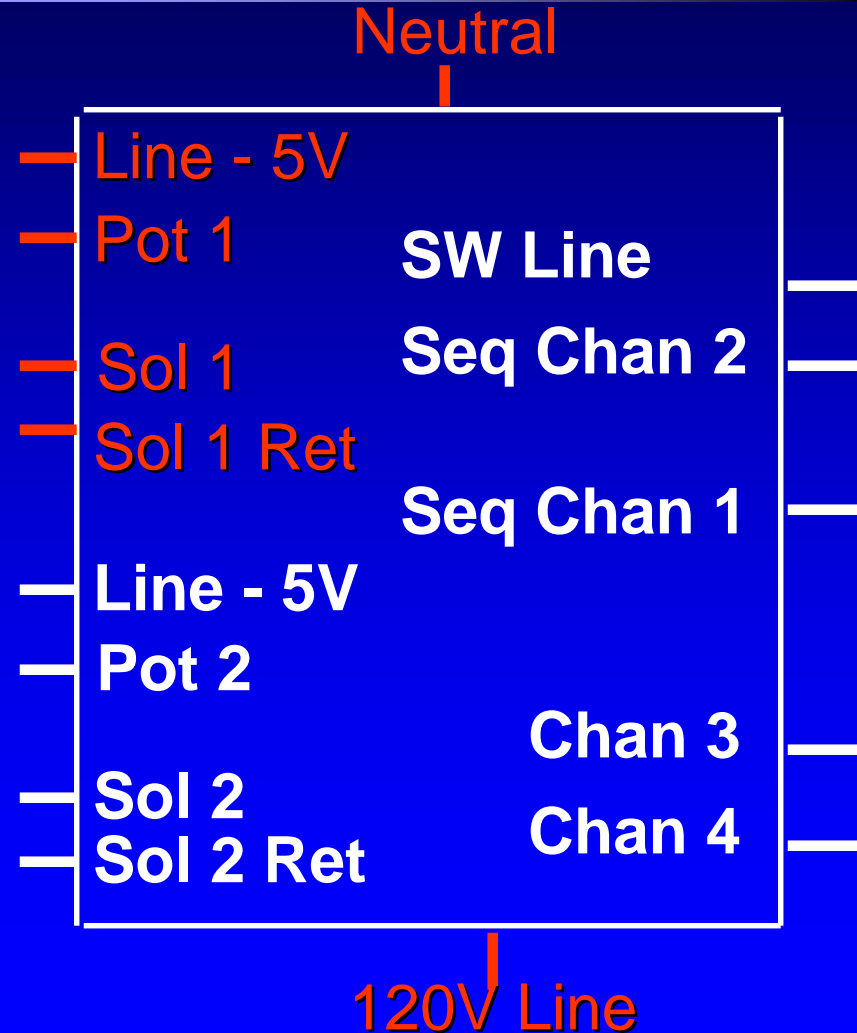
*Activate spark module constantly
Activate gas solenoid constantly*



Simmer Control.... Low Position (XLO Front burner)

110VDC at SOL 1 measured
from SOL 1 - SOL 1 Ret

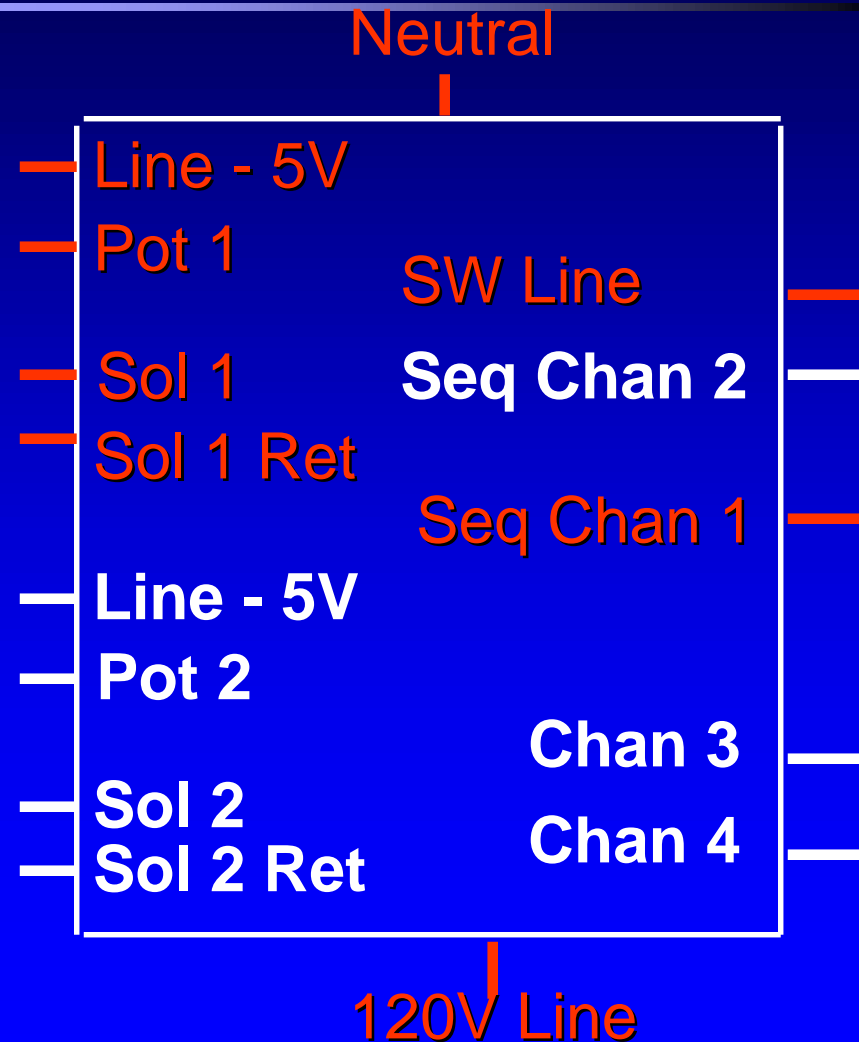
120VAC at 120V Line
measured from
120V - Neutral



Simmer Control.... Low Position (XLO Front burner)

120VAC at SW Line
measured from
SW Line - N

120VAC at Seq Chan 1
measured from
Seq Chan 1 - N

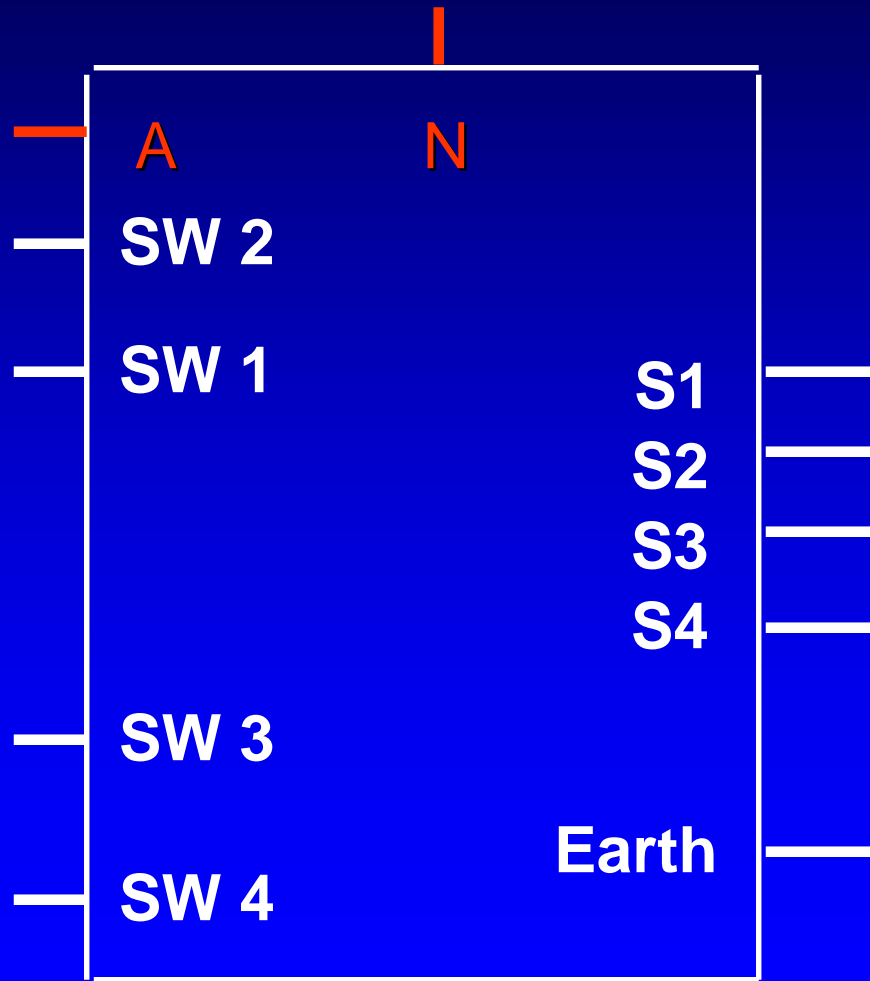




Spark Module.... Low Position (XLO Front burner)

120VAC at A

Provides supply voltage for module
Creates circuit for stepping voltage to 14,000VDC
Measured at "A" from spark module to N

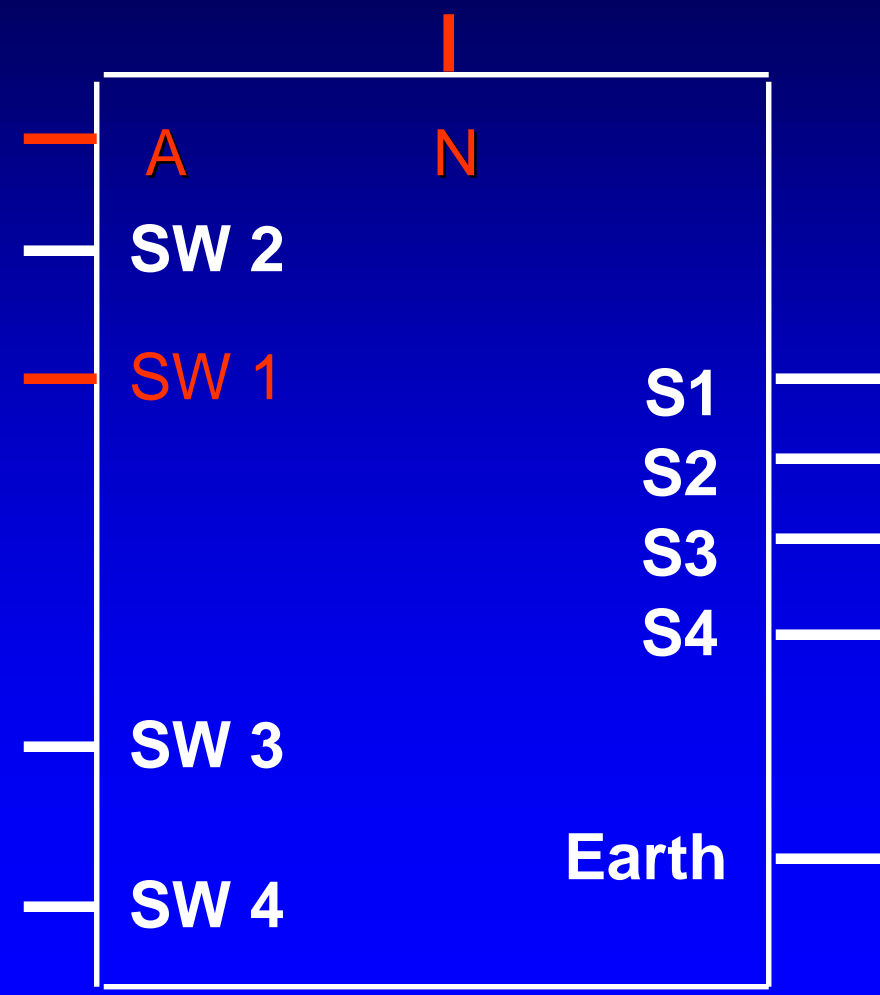




Spark Module.... Low Position (XLO Front burner)

120VAC at SW 1

Provides sensing circuit
for flame rectification
Provides circuit for
Electrode

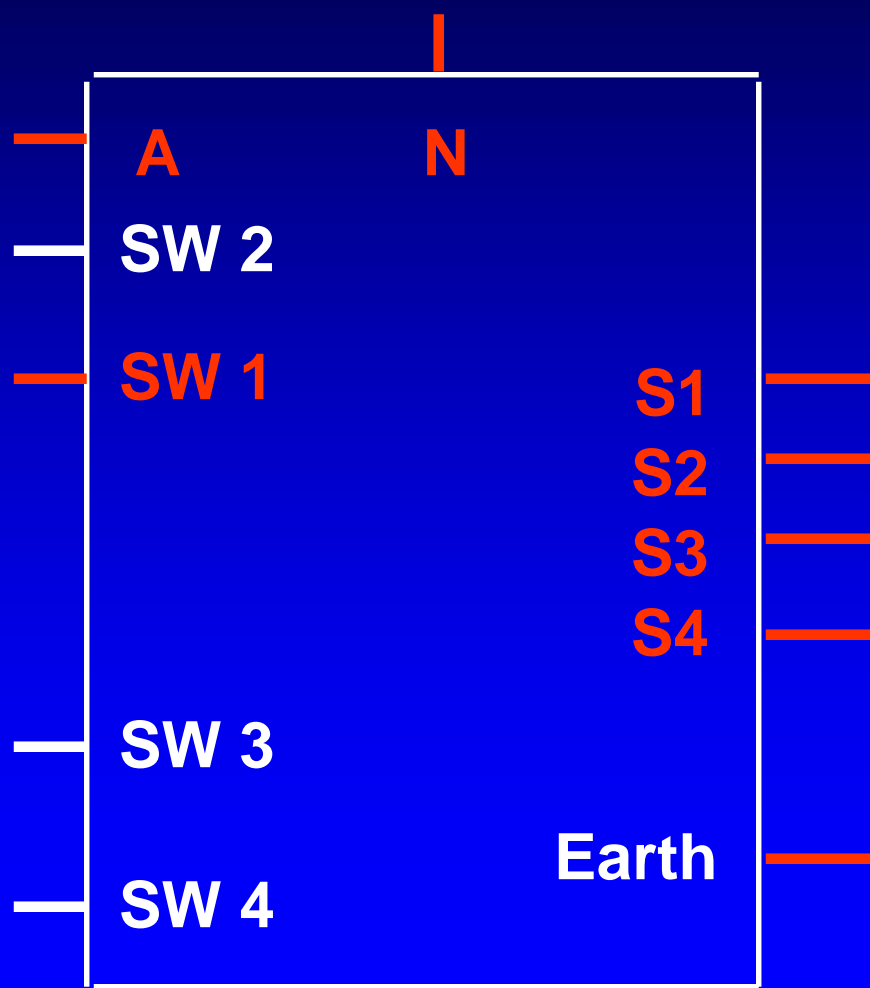




Spark Module.... Low Position (XLO Front burner)

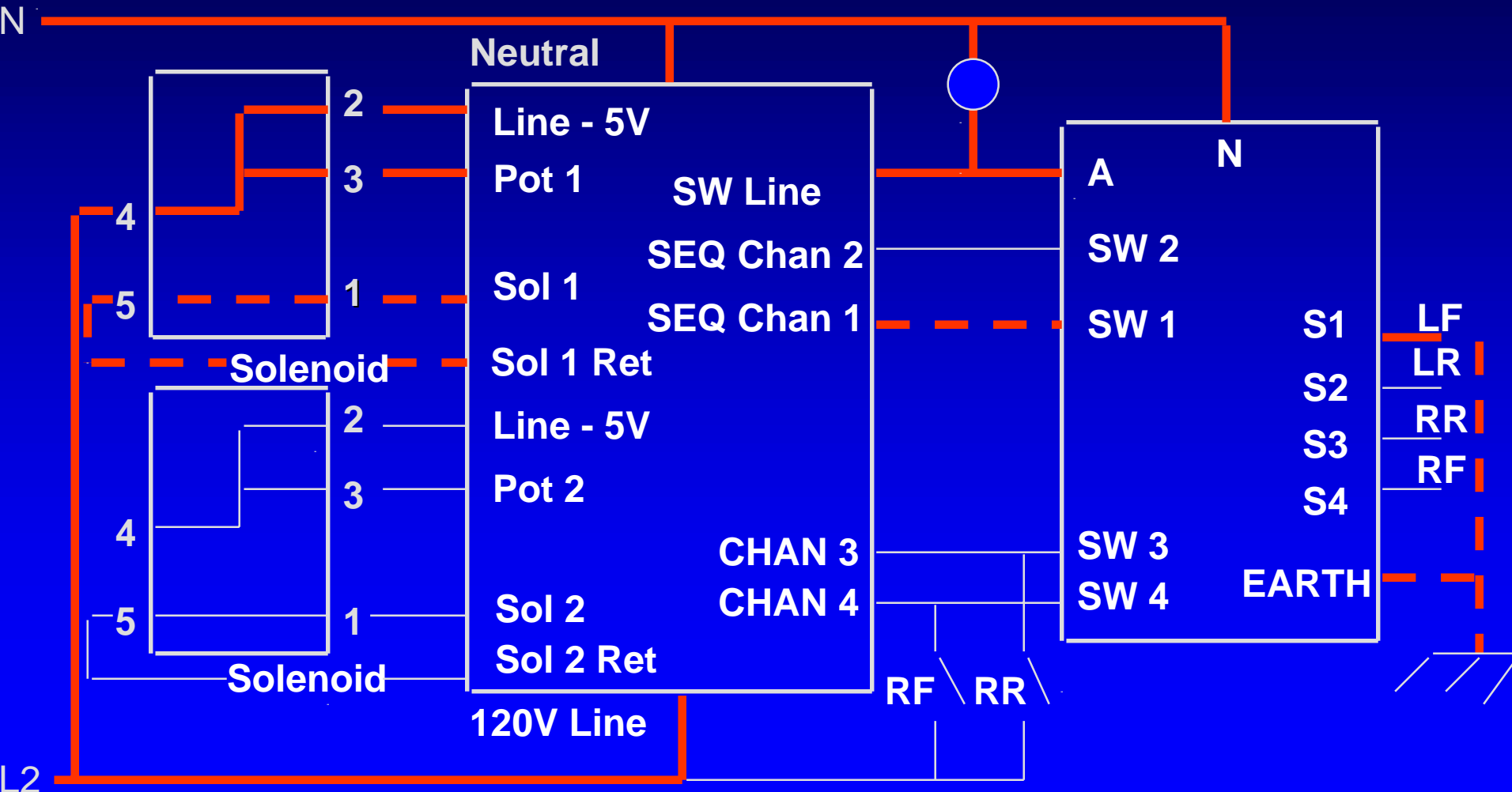
14,000VDC at S1 - S4
Creates spark at
electrode

.02 to 1 Micro-Amp at S1
Sensing circuit for
flame rectification



XLO burner..... XLO position

All components activated





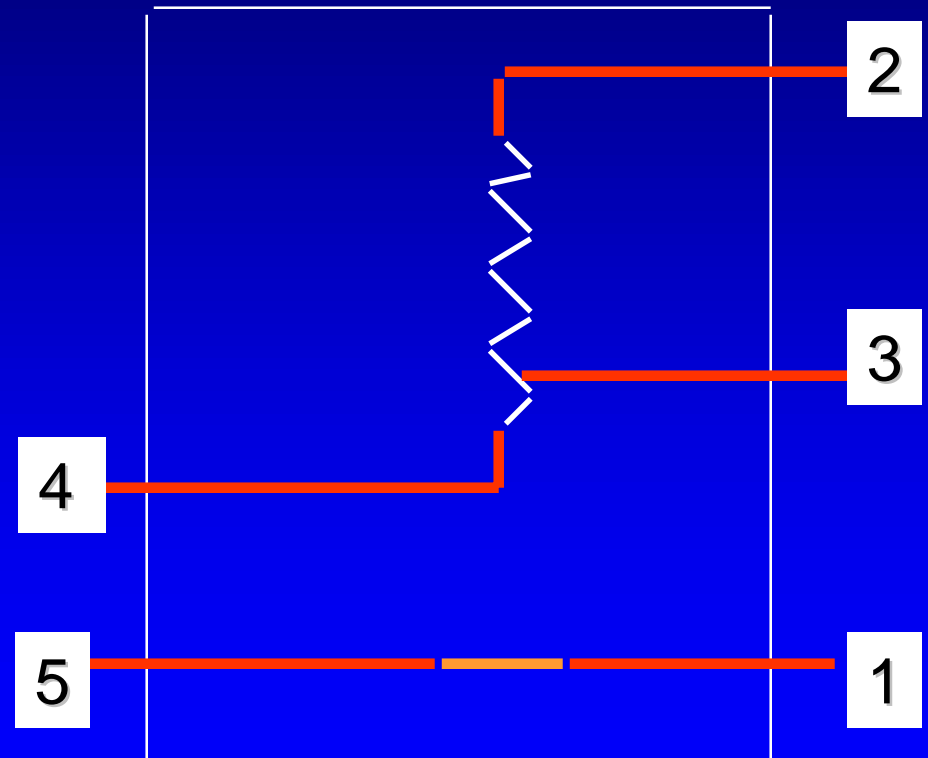
Potentiometer.... XLO Position (XLO Front burner)

5VDC....between 2 & 4

3.5VDC - 5VDC between
3 & 2

1.5VDC - 0VDC between
3 & 4

Closed circuit between
1 & 5



Simmer Control.... XLO Position (XLO Front burner)

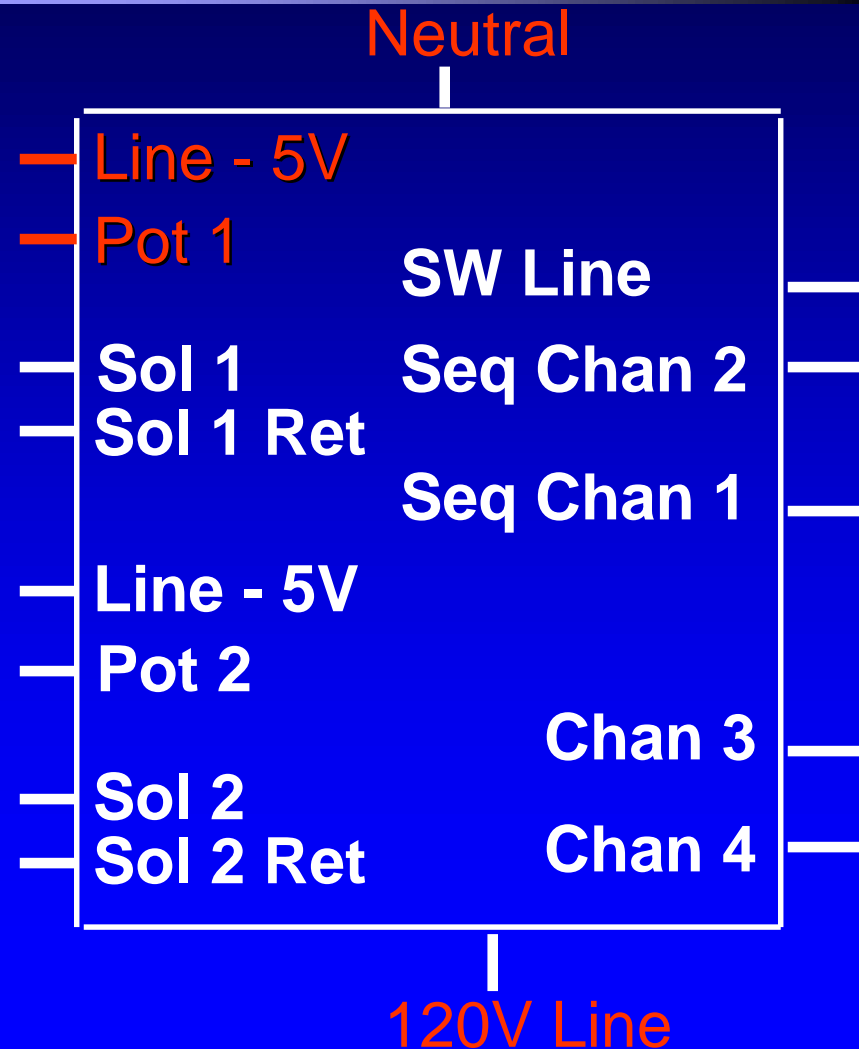
5VDC at Line 5V
measured from
Line 5V - 120V Line

1.5VDC to 0VDC at Pot 1
measured from
Pot 1 - 120V Line

Interpreted as:

Cycle the spark module based upon
the voltage

Cycle the gas solenoid based upon
the voltage

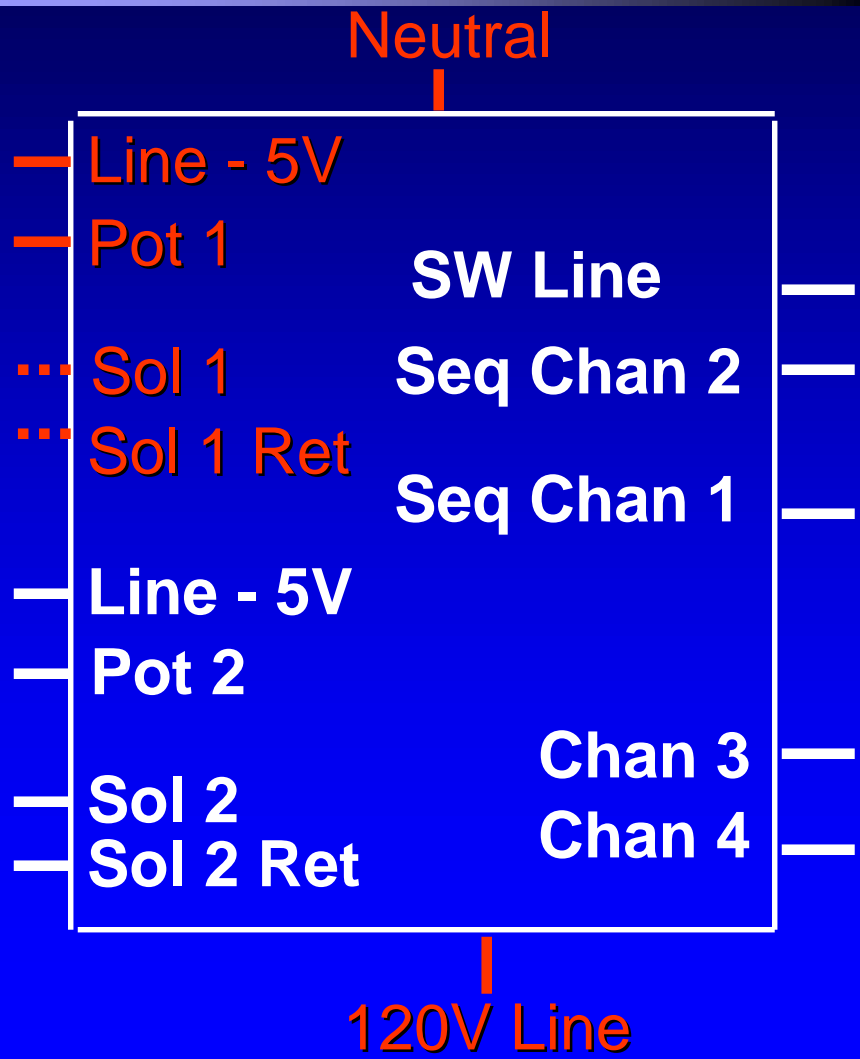




Simmer Control.... XLO Position (XLO Front burner)

Cycling of 110VDC at SOL 1
From SOL 1 - SOL 1 Ret

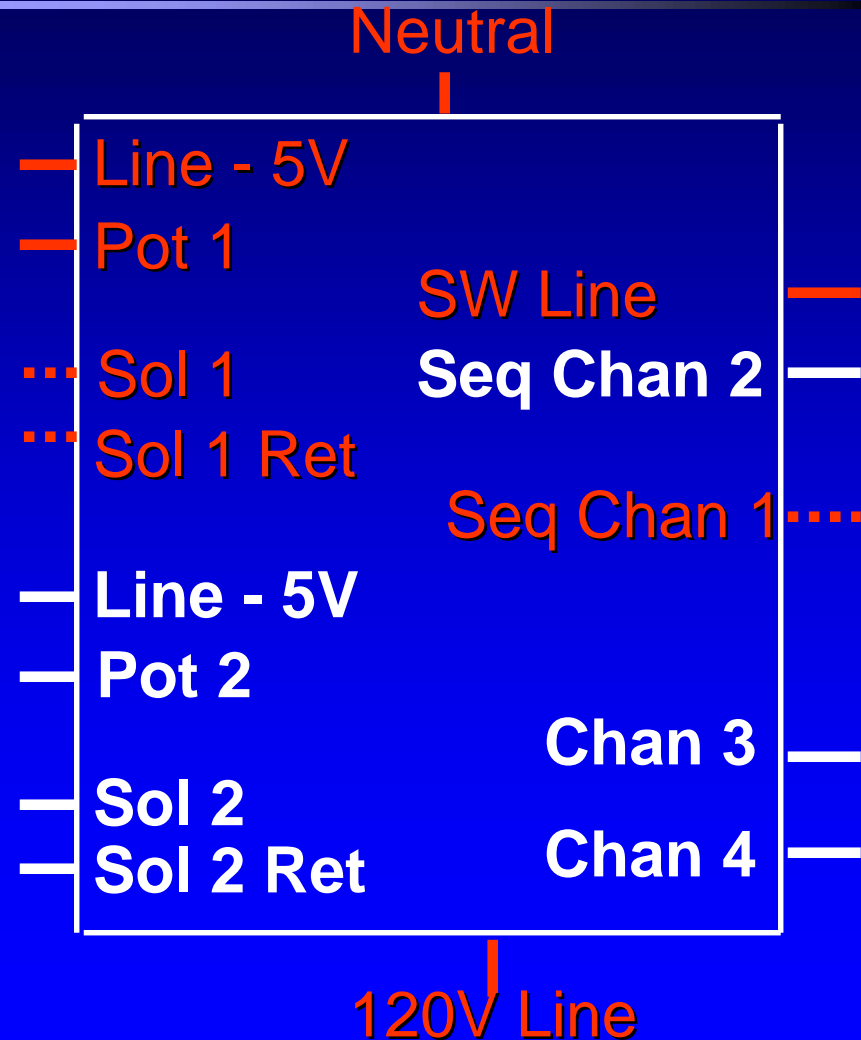
120VAC at 120V Line
From 120V - Neutral



Simmer Control.... XLO Position (XLO Front burner)

120VAC at SW Line
measured from
SW Line - N

Cycling of 120VAC at
Seq Chan 1 measured
from Seq Chan 1 - N

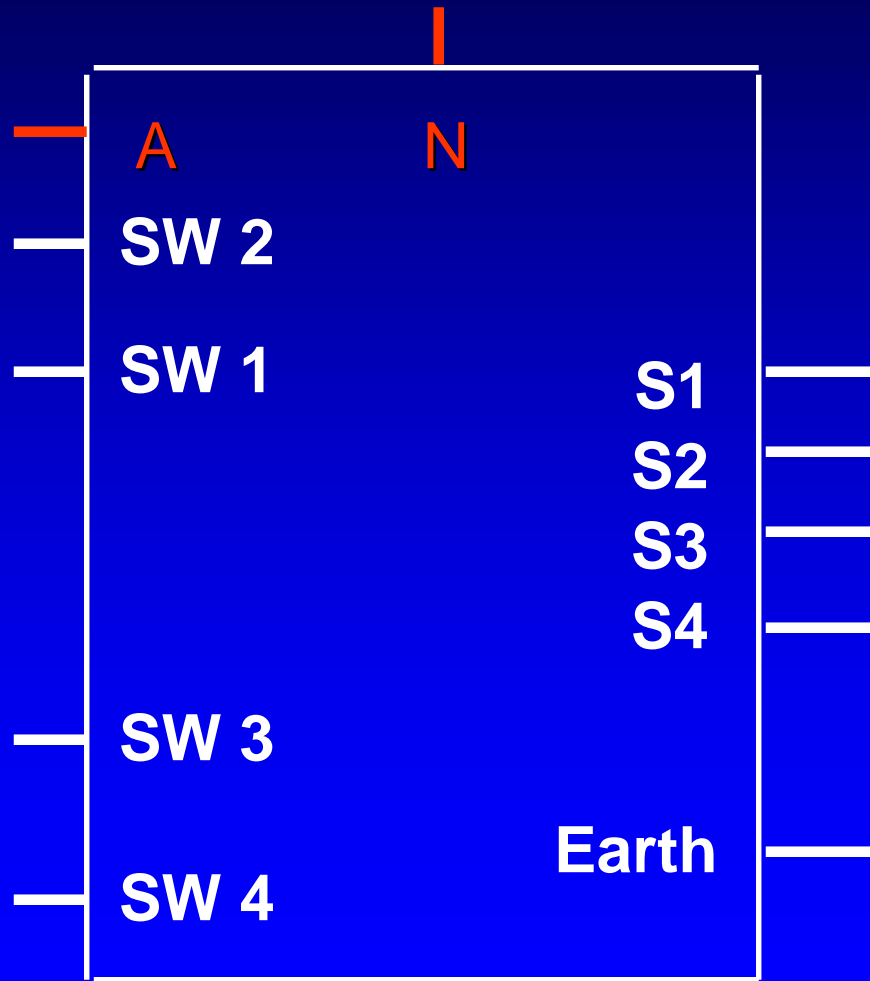




Spark Module.... XLO Position (XLO Front burner)

120VAC at A

Provides supply voltage for module
Creates circuit for stepping voltage to 14,000VDC
Measured at "A" from spark module to N

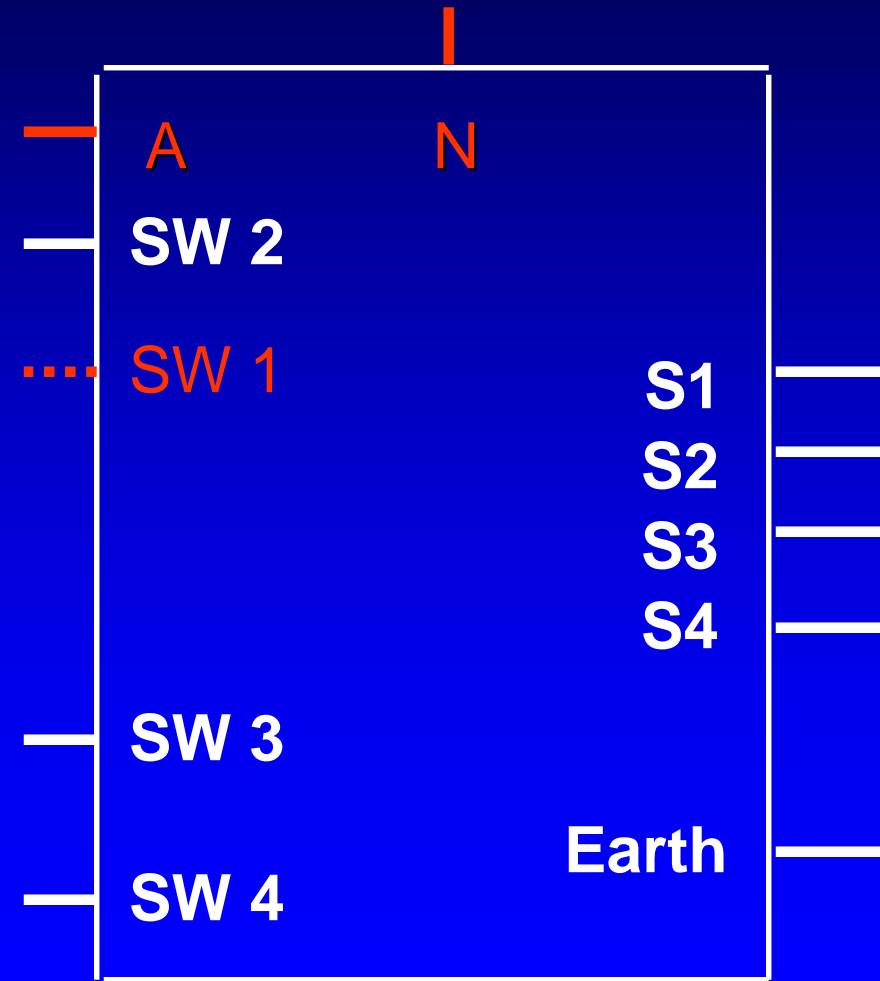




Spark Module.... XLO Position (XLO Front burner)

Cycling of 120VAC at SW 1

Provides sensing circuit
for flame rectification
Provides circuit for
Electrode



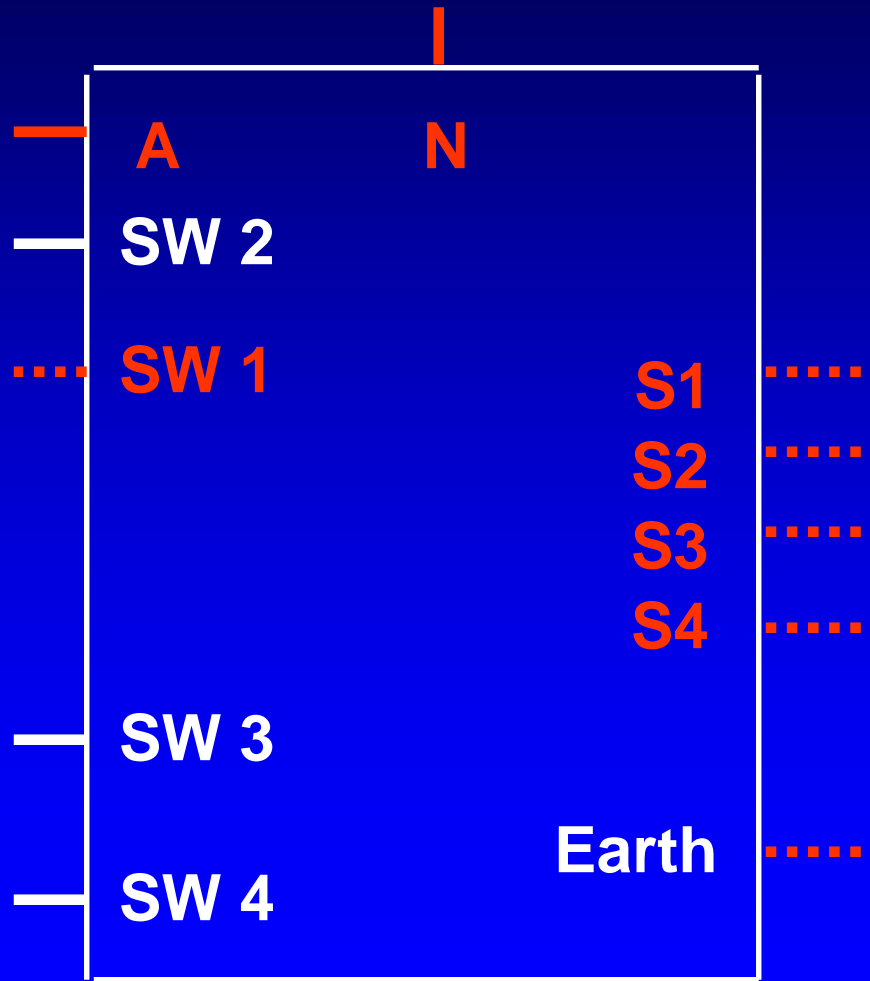


Spark Module.... XLO Position (XLO Front burner)

Cycling of 14,000VDC
at S1 - S4

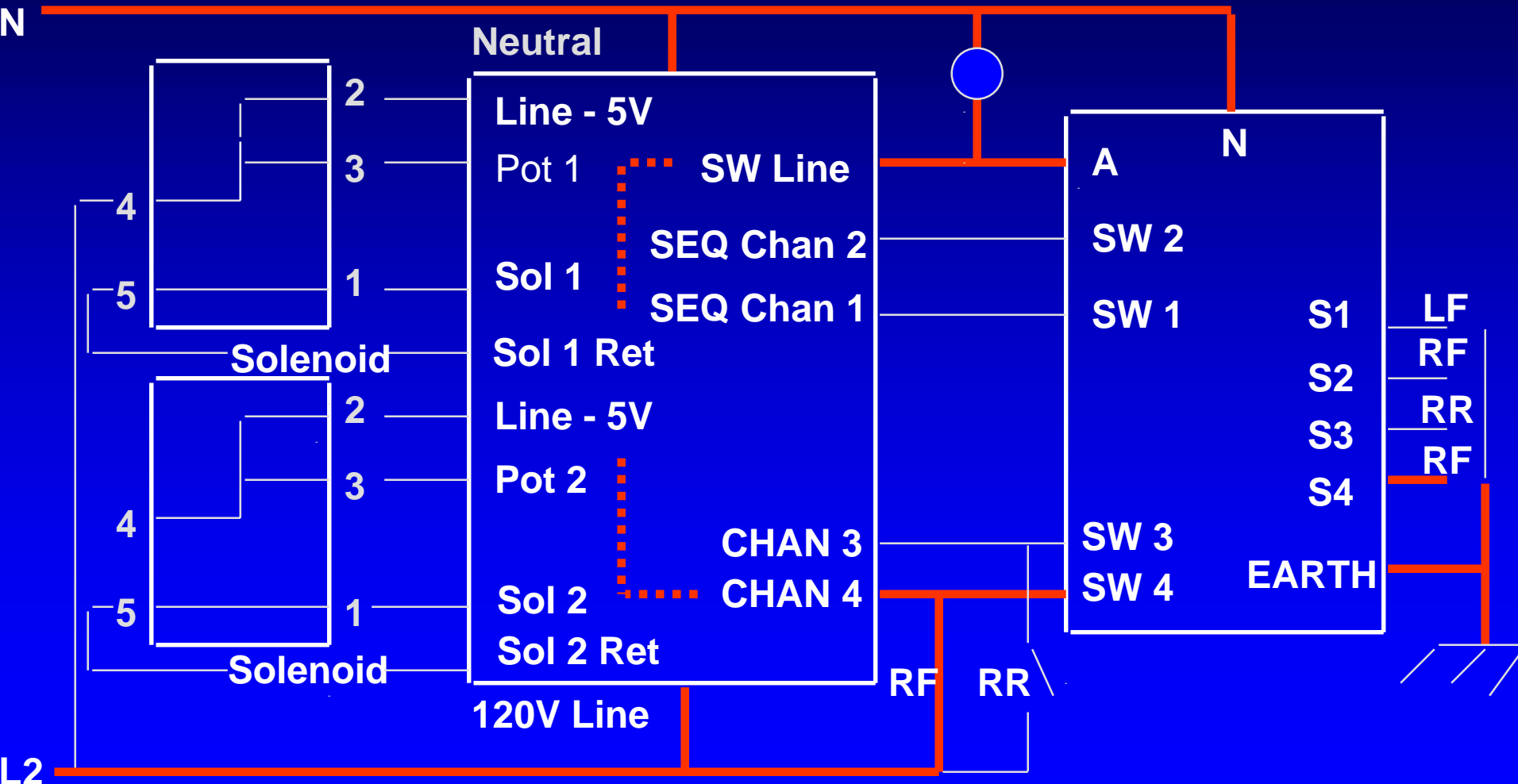
Creates spark at
electrode

.02 to 1 Micro-Amp at S1
Sensing circuit for
flame rectification



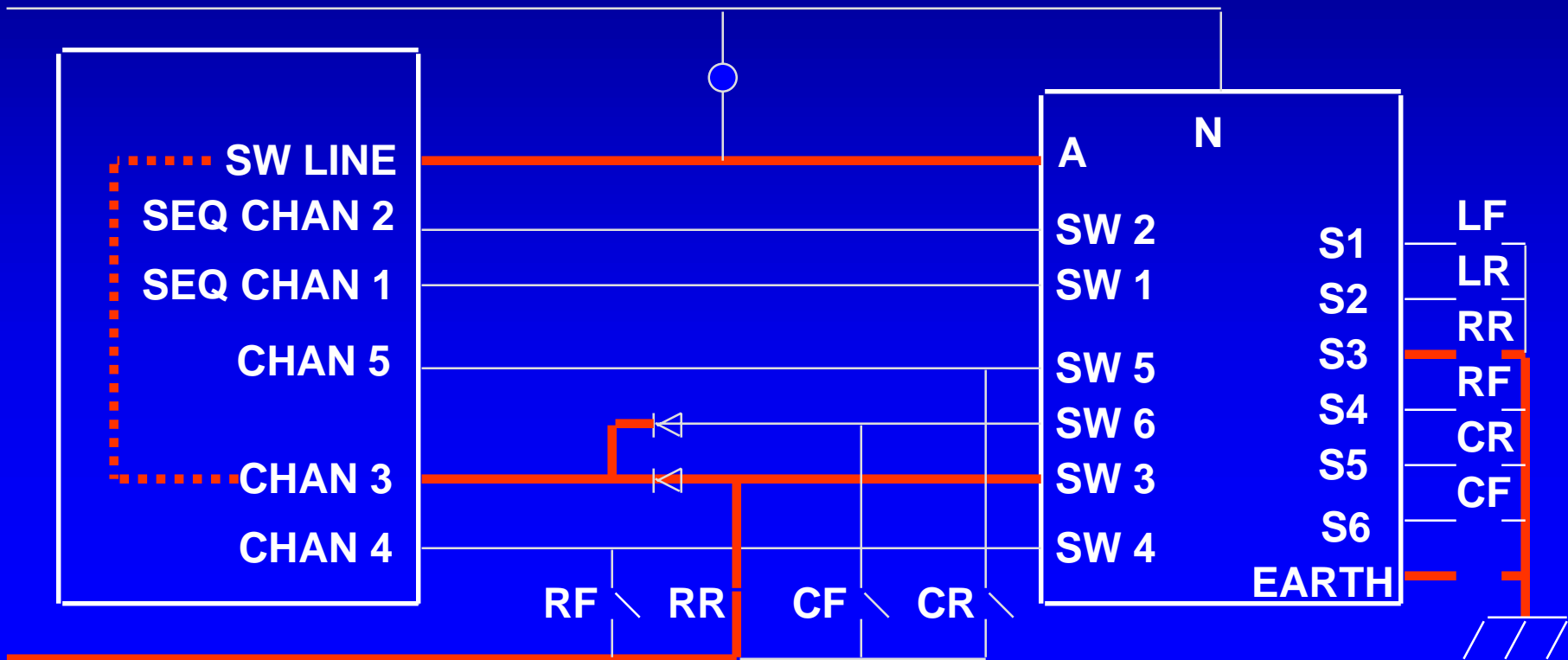
Non - XLO Front burner

All Components Activated



Pro Unit...RR burner on High All Components Activated

Simmer control has five channels to support five surface burners
Options on the Pro equipment may call for six surface burners
To accomplish these options, diodes are employed





SEQUENTIAL BURNER SYSTEM

THATS ALL FOLKS!