

Boolean Algebra to Digital Logic

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Computers use the binary number system

Only two numbers - A Zero & A One

A Voltage represents a number

+5 Volts = 1 0 Volts = 0

Digital logic is basically nothing more than a set of switches we use to control the flow of electricity.

Digital Logic Gates -

Sets of switches with different ways of turning them on and off. These switches are called “**Gates**”.

Four Basic Types -

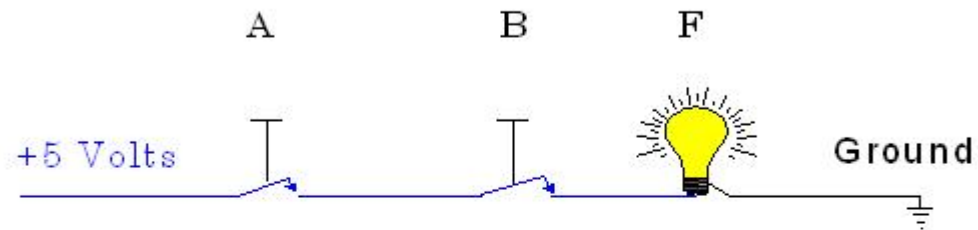
AND Gate

OR Gate

NOT Gate

TRISTATE Buffer

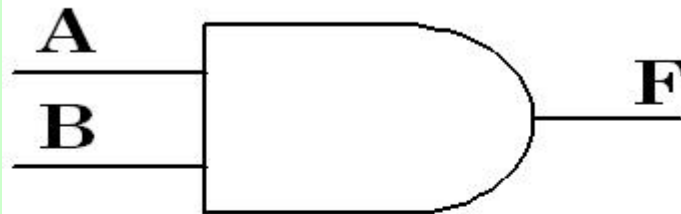
AND Gate



Truth Table

A	B	F
0	0	0
0	1	0
1	0	0
1	1	1

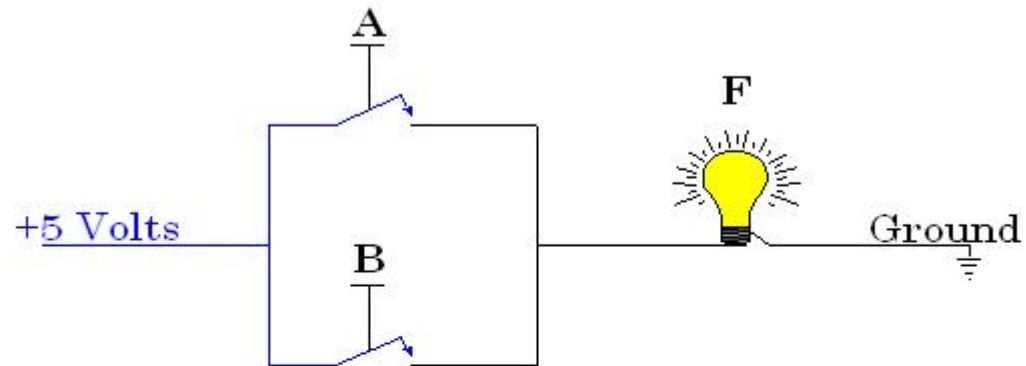
AND Gate



Truth Table

A	B	F
0	0	0
0	1	0
1	0	0
1	1	1

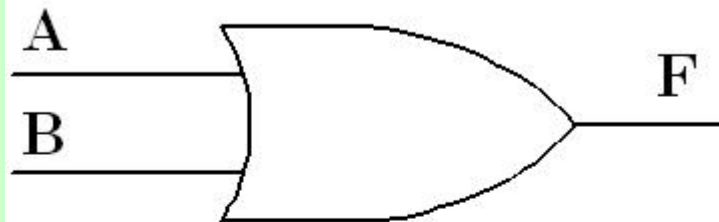
OR Gate



Truth Table

A	B	F
0	0	
0	1	
1	0	
1	1	

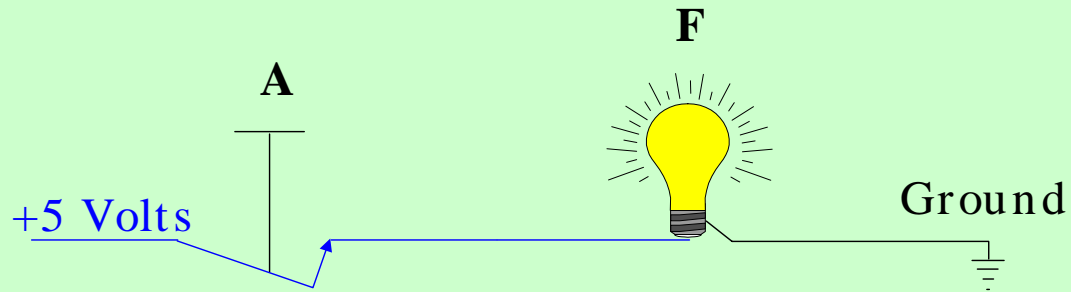
O R G a t e



T r u t h T a b l e

A	B	F
0	0	0
0	1	1
1	0	1
1	1	1

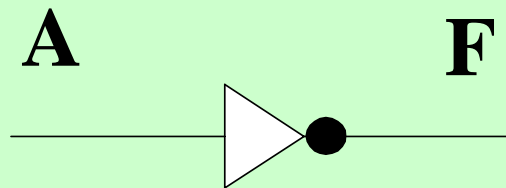
NOT Gate



Truth Table

A	F
0	
1	

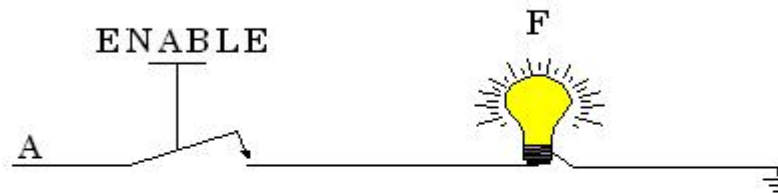
NOT Gate



Truth Table

A	F
0	1
1	0

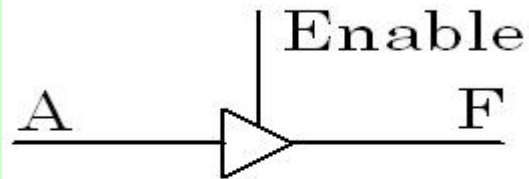
Tristate Buffer



Truth Table

A	E	F
0	0	
1	0	
0	1	
1	1	

Tristate Buffer



Truth Table

A	E	F
0	0	HZ
1	0	HZ
0	1	0
1	1	1

Other Logic Gates

All other Digital Logic Gates are a combination of the basic four gates.