Building gates with normally-closed switches

(opens when control is "on")

control

signal in — *signal out*

switch (closed)

control

Control is "on" "pulls" switch open

signal in — *signal out*

switch (open)

A	NOT
0	1
1	0

A

¬A

negation

A	B	NOR
0	0	1
0	1	0
1	0	0
1	1	0

A   B

NOR gate

A	B	AND
0	0	0
0	1	0
1	0	0
1	1	1

A

B — A & B

AND gate

A	B	OR
0	0	0
0	1	1
1	0	1
1	1	1

B   A

A ∨ B

OR gate