A

B

Data
Inputs

C

D

NAND
Gates

Q

b

$\overline{b}$

Select

a

$\overline{a}$

Truth Table

Select		Inputs				Q
b	a	D	C	B	A	Q
0	0	x	x	x	1	1
0	1	x	x	1	x	1
1	0	x	1	x	x	1
1	1	1	x	x	x	1

A

B

C

D

Q

Switch Analogy
(4PST)

a b

A0	A1	D0	D1	D2	D3	S
0	0	0	0	0	0	0
0	0	0	0	0	1	0
0	0	0	0	1	0	0
0	0	0	0	1	1	0
0	0	0	1	0	0	0
0	0	0	1	0	1	0
0	0	0	1	1	0	0
0	0	0	1	1	1	0
0	0	1	0	0	0	1
0	0	1	0	0	1	1
0	0	1	0	1	0	1
0	0	1	0	1	1	1
0	0	1	1	0	0	1
0	0	1	1	0	1	1
0	0	1	1	1	0	1
0	0	1	1	1	1	1

0	1	0	0	0	0	0
0	1	0	0	0	1	0
0	1	0	0	1	0	0
0	1	0	0	1	1	0
0	1	0	1	0	0	1
0	1	0	1	0	1	1
0	1	0	1	1	0	1
0	1	0	1	1	1	1
0	1	1	0	0	0	0
0	1	1	0	0	1	0
0	1	1	0	1	0	0
0	1	1	0	1	1	0
0	1	1	1	0	0	1
0	1	1	1	0	1	1
0	1	1	1	1	0	1
0	1	1	1	1	1	1
1	0	0	0	0	0	0
1	0	0	0	0	1	0
1	0	0	0	1	0	1
1	0	0	0	1	1	1
1	0	0	1	0	0	0
1	0	0	1	0	1	0
1	0	0	1	1	0	1
1	0	0	1	1	1	1
1	0	1	0	0	0	0
1	0	1	0	0	1	0
1	0	1	0	1	0	1
1	0	1	0	1	1	1
1	0	1	1	0	0	0
1	0	1	1	0	1	0
1	0	1	1	1	0	1
1	0	1	1	1	1	1
1	1	0	0	0	0	0

1	1	0	0	0	1	1
1	1	0	0	1	0	0
1	1	0	0	1	1	1
1	1	0	1	0	0	0
1	1	0	1	0	1	1
1	1	0	1	1	0	0
1	1	0	1	1	1	1
1	1	1	0	0	0	0
1	1	1	0	0	1	1
1	1	1	0	1	0	0
1	1	1	0	1	1	1
1	1	1	1	0	0	0
1	1	1	1	0	1	1
1	1	1	1	1	0	0
1	1	1	1	1	1	1