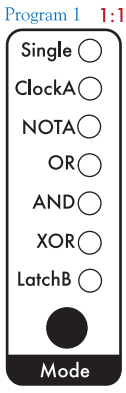
HINTON INSTRUMENTS

Gate Logic Modes

Version 1.1 March 2024

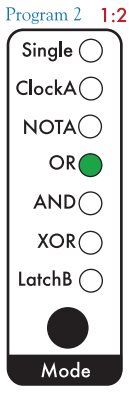
Gate + Logic

Program 1 1:1



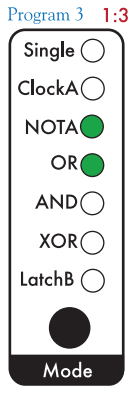
Q = B

Program 2 1:2



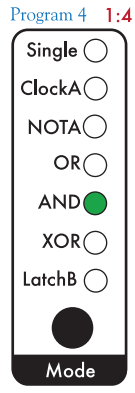
Q = A + B

Program 3 1:3



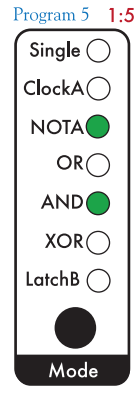
Q = $\overline{A}$ + B

Program 4 1:4



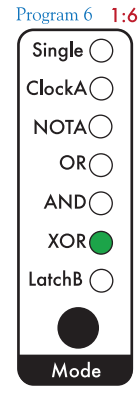
Q = A . B

Program 5 1:5



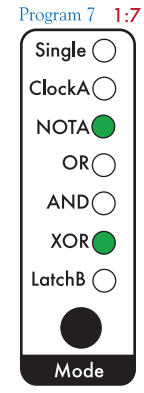
Q = $\overline{A}$. B

Program 6 1:6



Q = A ⊕ B

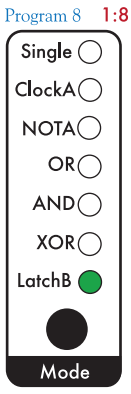
Program 7 1:7



Q = $\overline{A}$ ⊕ B

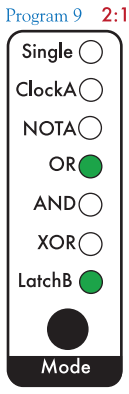
Latched Gate + Logic ..... B′ toggles on B↑

Program 8 1:8



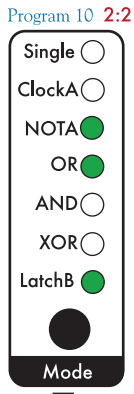
Q = B′

Program 9 2:1



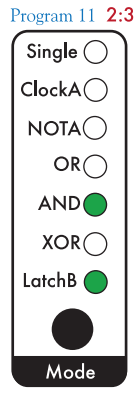
Q = A + B′

Program 10 2:2



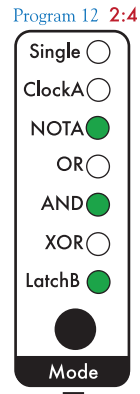
Q = $\overline{A}$ + B′

Program 11 2:3



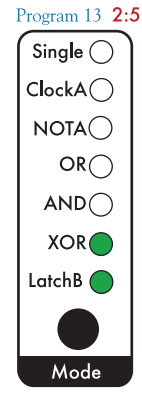
Q = A . B′

Program 12 2:4



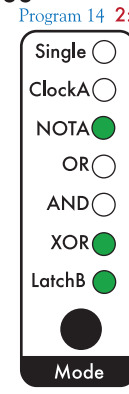
Q = $\overline{A}$. B′

Program 13 2:5



Q = A ⊕ B′

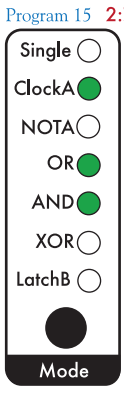
Program 14 2:6



Q = $\overline{A}$ ⊕ B′

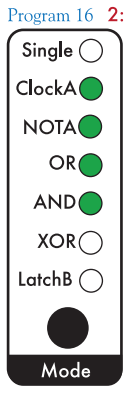
Toggle

Program 15 2:7



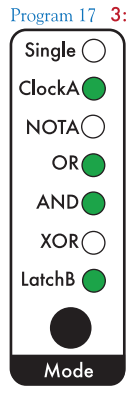
Q = $\overline{Q}$ ↑A
B enable

Program 16 2:8



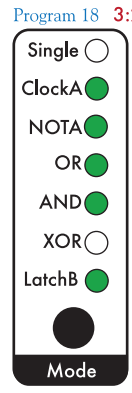
Q = $\overline{Q}$ ↓A
B enable

Program 17 3:1



Q = $\overline{Q}$ ↑A
B′ enable

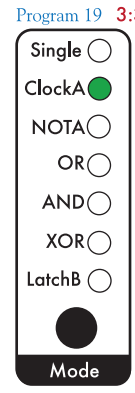
Program 18 3:2



Q = $\overline{Q}$ ↓A
B′ enable

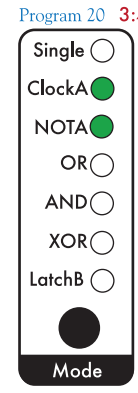
D-Latch

Program 19 3:3



Q = B ↑A

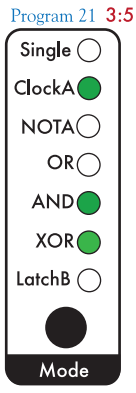
Program 20 3:4



Q = B ↓A

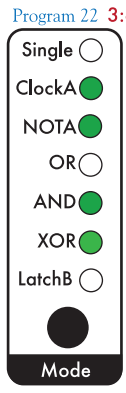
SR-Latch

Program 21 3:5



Q = ↑A set
B reset

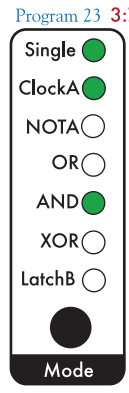
Program 22 3:6



Q = ↓A set
B reset

Monostable

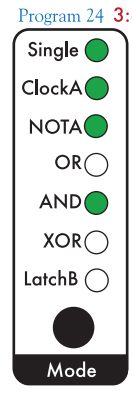
Program 23 3:7



Q = A hold.A

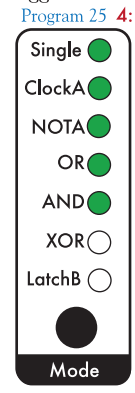
A Triggered Delay

Program 24 3:8



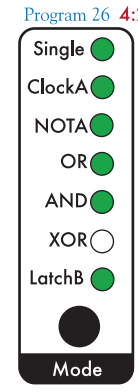
Q = $\overline{A \text{ hold}}$.A
(delay)

Program 25 4:1



Q = $\overline{A \text{ hold}}$.A.B
+ A.$\overline{B}$

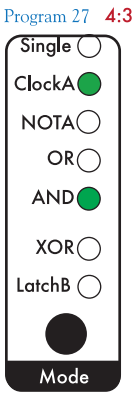
Program 26 4:2



Q = $\overline{A \text{ hold}}$.A.B′
+ A.$\overline{B'}$

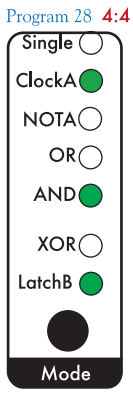
Divide

Program 27 4:3



Q = A÷n
B enable

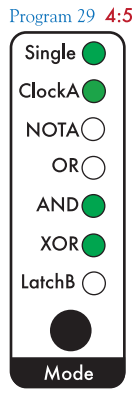
Program 28 4:4



Q = A÷n
B′ enable

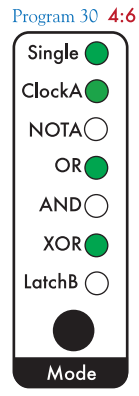
Counter

Program 29 4:5



Q = n x A
B enable

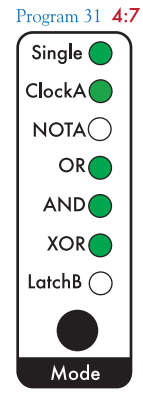
Program 30 4:6



Q = n x A
B reset

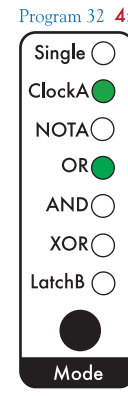
Gate & Trigger

Program 31 4:7



Q = n x A
B Gate

Program 32 4:8

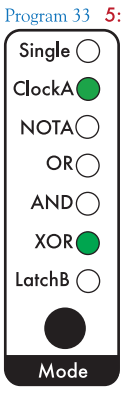


Q = A U B

Gate = B
Trigger = A

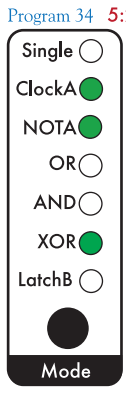
Edge Detect

Program 33 5:1



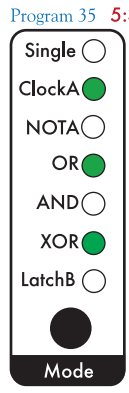
Q = ↑B ↑A
A width

Program 34 5:2



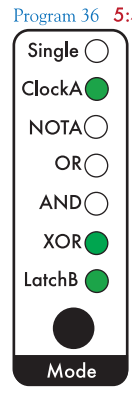
Q = ↓B ↑A
A width

Program 35 5:3



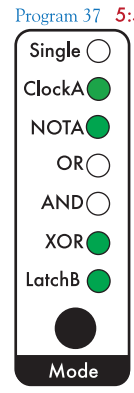
Q = ↑↓B ↑A
A width

Program 36 5:4



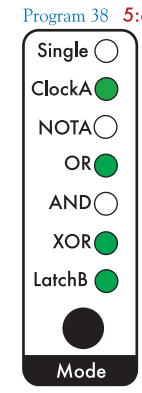
Q = ↑B′ ↑A
A width

Program 37 5:5



Q = ↓B′ ↑A
A width

Program 38 5:6



Q = ↑↓B′ ↑A
A width