

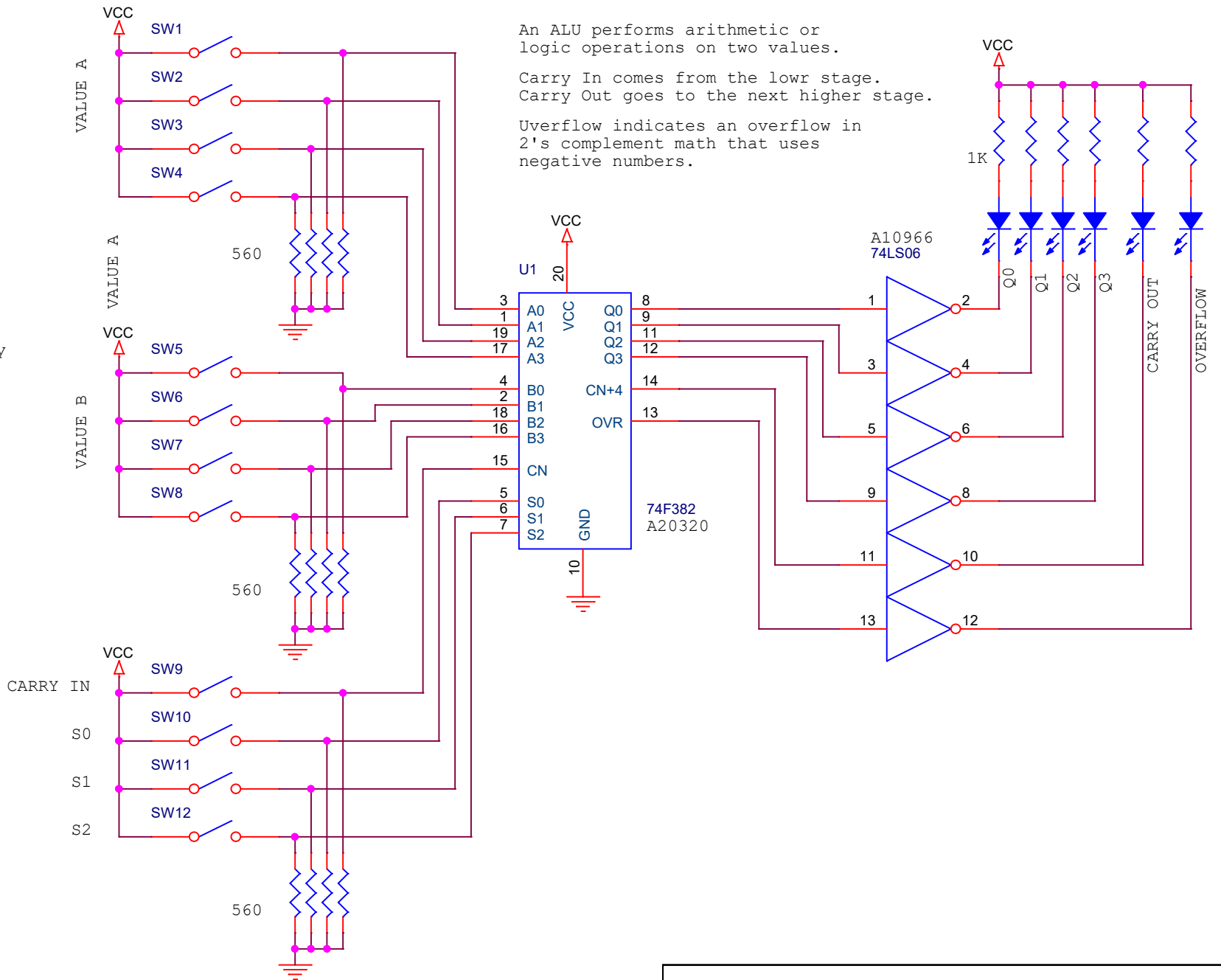
2's complement math

Q3	Q2	Q1	Q0	
0	0	0	0	= 0
0	0	0	1	= 1
0	0	1	0	= 2
0	0	1	1	= 3
0	1	0	0	= 4
0	1	0	1	= 5
0	1	1	0	= 6
0	1	1	1	= 7
1	0	0	0	= -8
1	0	0	1	= -7
1	0	1	0	= -6
1	0	1	1	= -5
1	1	0	0	= -4
1	1	0	1	= -3
1	1	1	0	= -2
1	1	1	1	= -1

Normally math is binary

Q3	Q2	Q1	Q0	
0	0	0	0	= 0
0	0	0	1	= 1
0	0	1	0	= 2
0	0	1	1	= 3
0	1	0	0	= 4
0	1	0	1	= 5
0	1	1	0	= 6
0	1	1	1	= 7
1	0	0	0	= 8
1	0	0	1	= 9
1	0	1	0	= A
1	0	1	1	= B
1	1	0	0	= C
1	1	0	1	= D
1	1	1	0	= E
1	1	1	1	= F

S2	S1	S0	
0	0	0	= CLEAR
0	0	1	= B MINUS A
0	1	0	= A MINUS B
0	1	1	= A PLUS B
1	0	0	= A EX-OR B
1	0	1	= A OR B
1	1	0	= A AND B
1	1	1	= PRESET (ALL HIGH)



Title		
A20320 SN74F382N 4-bit arithmetic and logic unit		
Size	Document Number	Rev
A	Design 1846	1
Date:	Monday, May 10, 2021	Sheet 1 of 1