

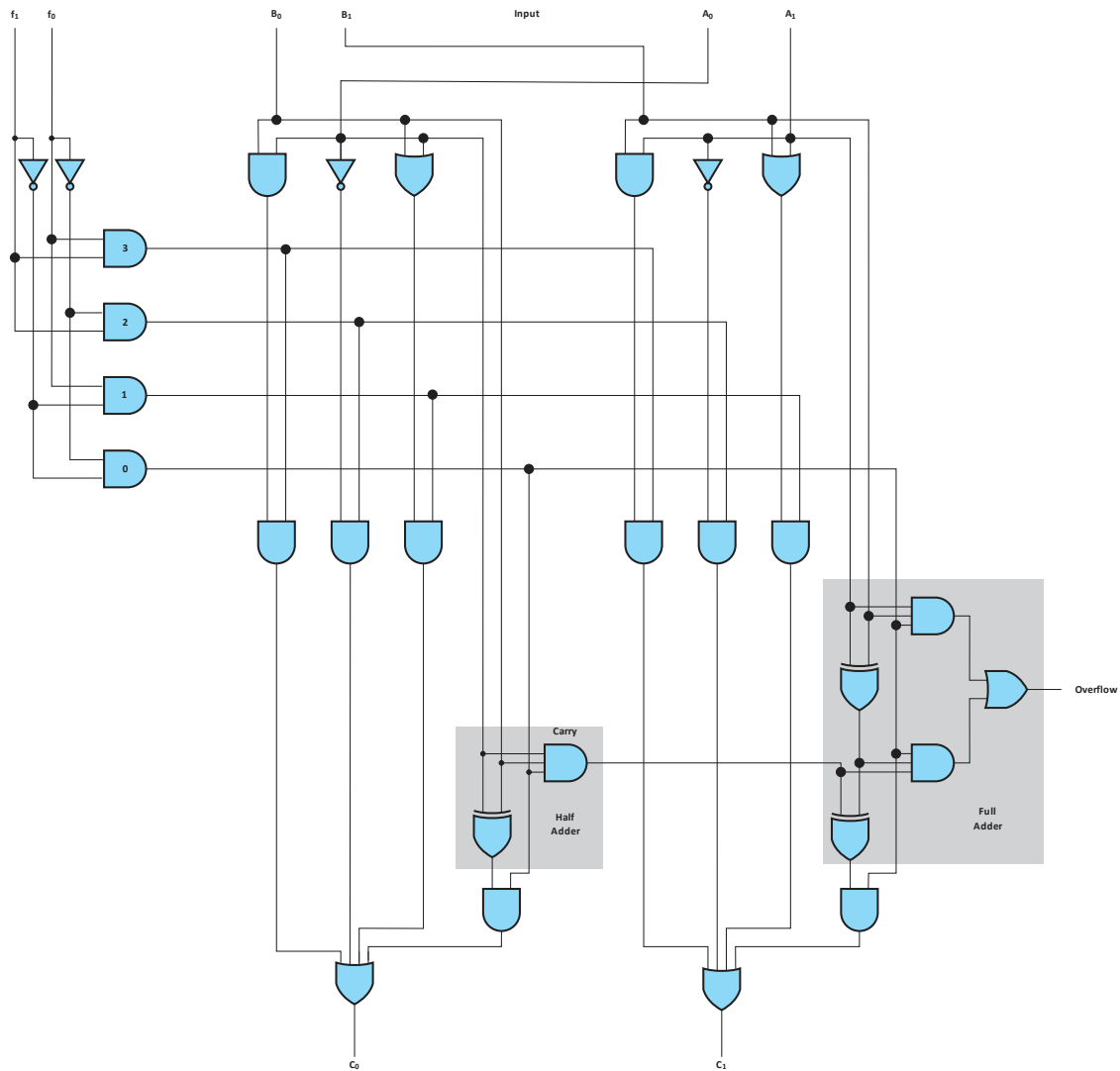


FIGURE 3.26 A Simple Two-Bit ALU

Control Lines		Action
f_1	f_0	
0	0	$A + B$
0	1	$A \text{ OR } B$
1	0	NOT A
1	1	$A \text{ AND } B$

Signal	Description
A_1A_0	2-Bit Operand 1
B_1B_0	2-Bit Operand 2
C_1C_0	2-Bit Output Result
Overflow	$A + B > 3$

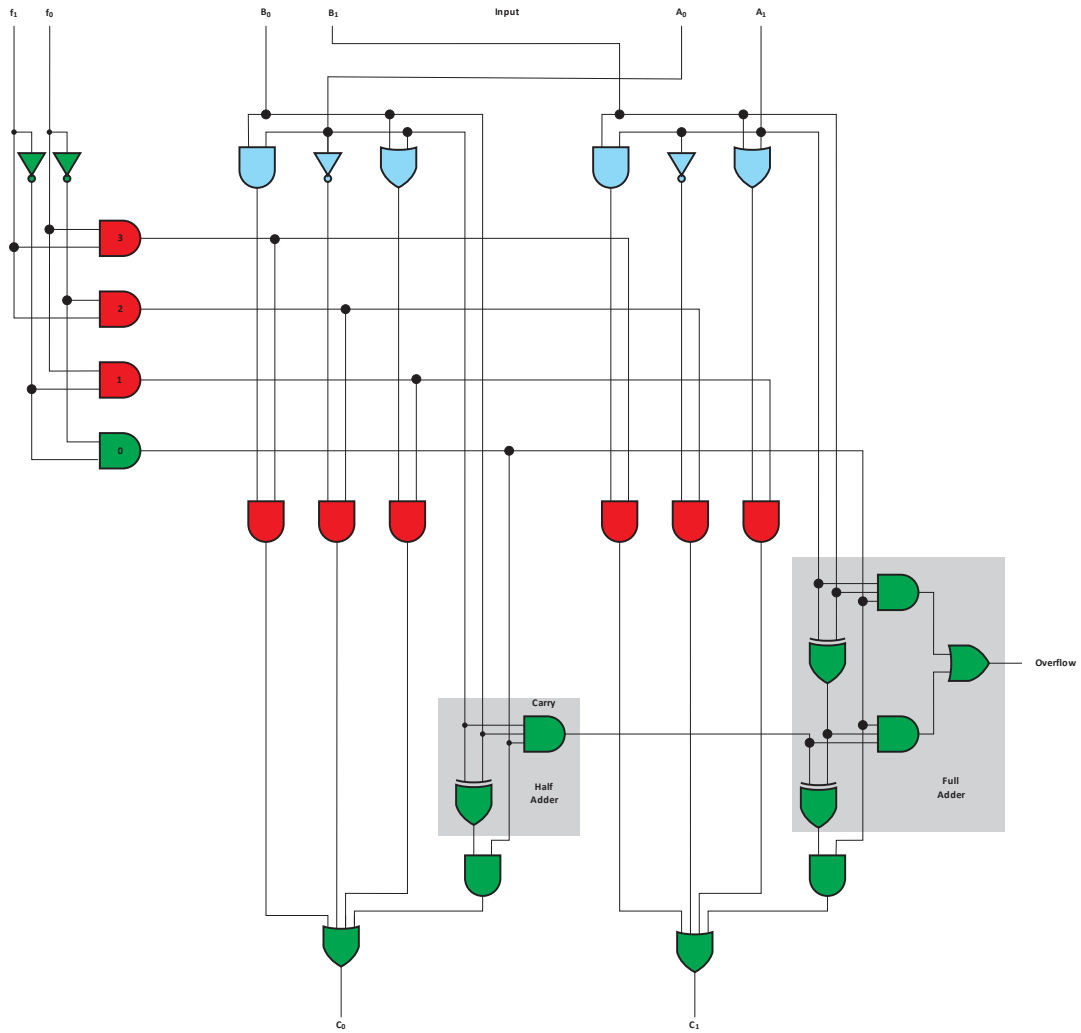


FIGURE 3.26 (a) A Simple Two-Bit ALU
 $f_1f_0 = 00, A + B$

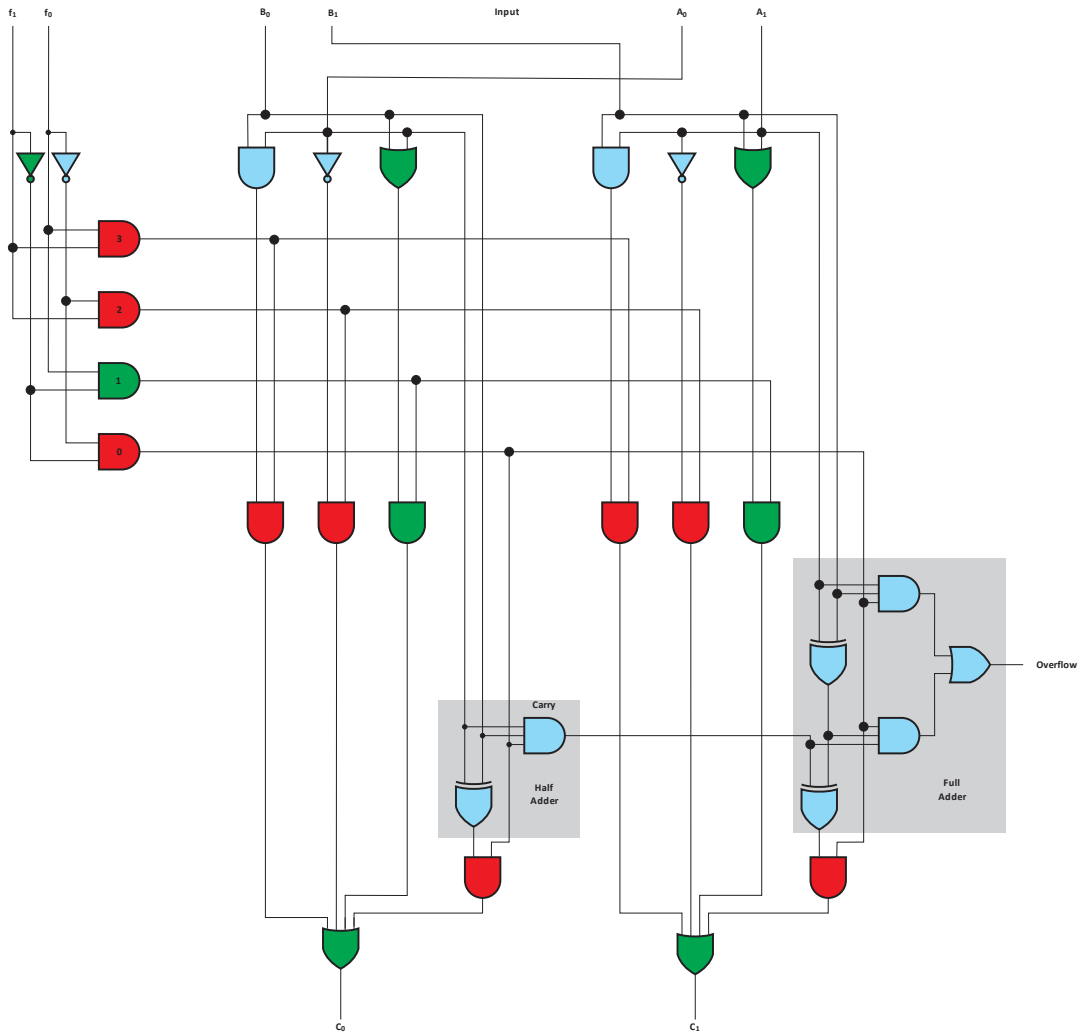


FIGURE 3.26 (b) A Simple Two-Bit ALU
 $f_1f_0 = 01, A \text{ OR } B$

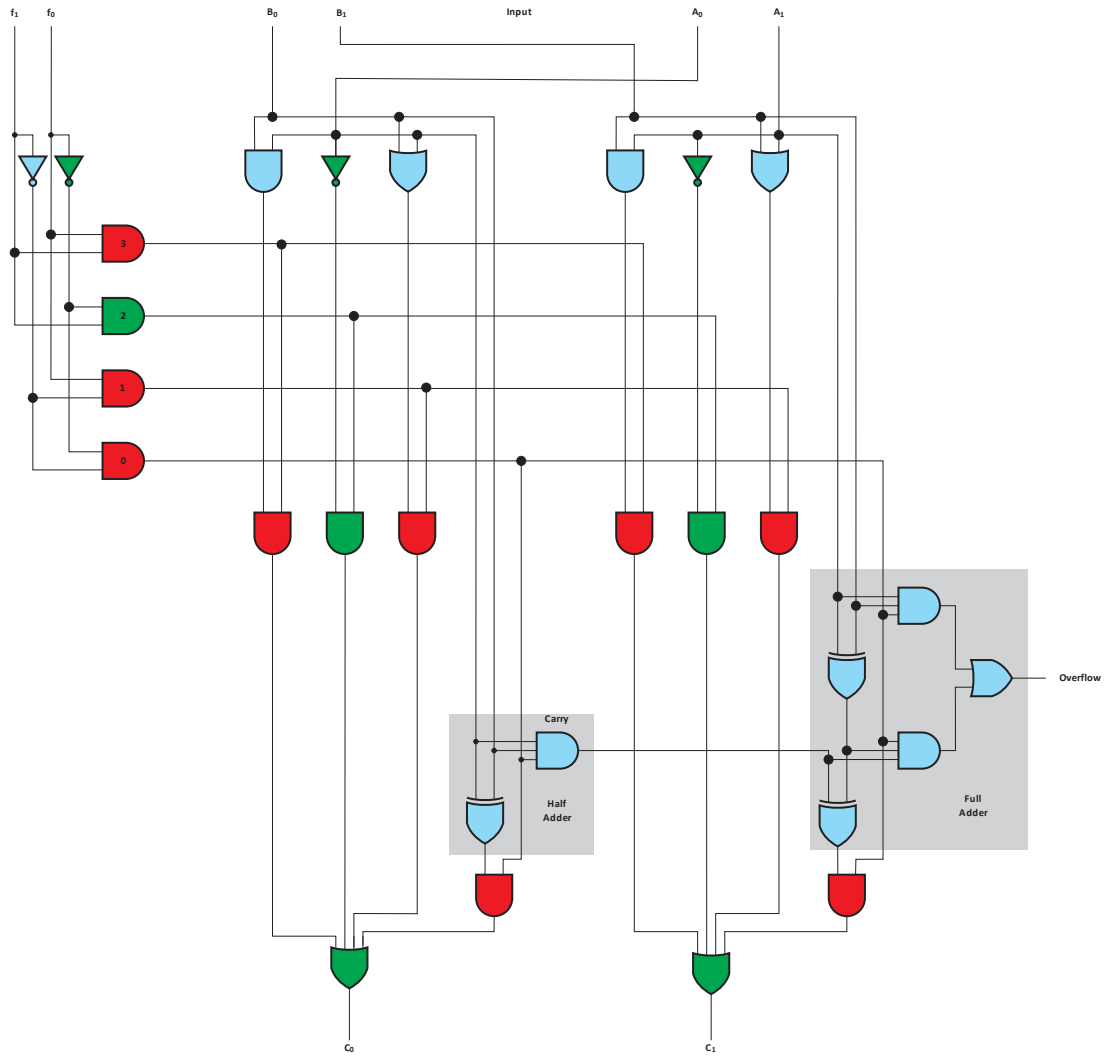


FIGURE 3.26 (c) A Simple Two-Bit ALU
 $f_1f_0 = 10, NOT A$

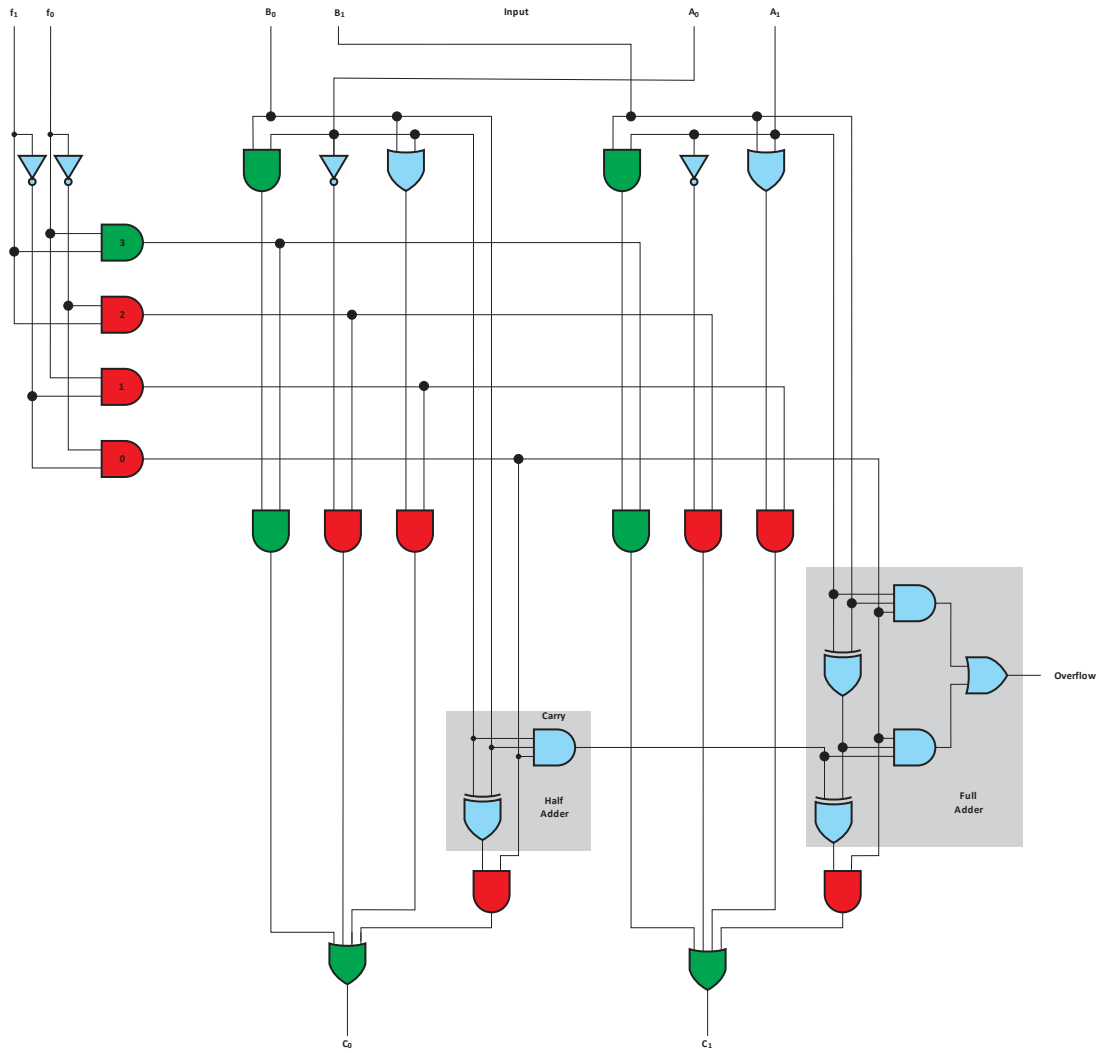


FIGURE 3.26 (d) A Simple Two-Bit ALU
 $f_1f_0 = 11, A \text{ AND } B$