

논리회로 및 설계

Chapter 6

일부 이미지 저작권:
Wikipedia, Creative Commons
Pearson Educations

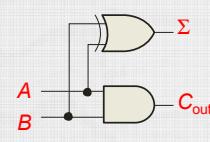
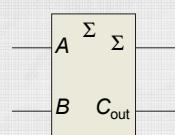
Floyd, Digital Fundamentals, 10th ed.

Basic Combinational Logics

- Half Adder
- Full Adder
- Ripple Carry Adder
- Comparator
- Decoder
- Encoder
- Mux
- Demux

Floyd, Digital Fundamentals, 10th ed.

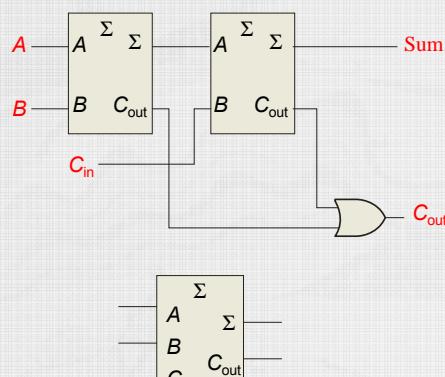
Half Adder



Inputs		Outputs	
A	B	C _{out}	Σ
0	0	0	0
0	1	0	1
1	0	0	1
1	1	1	0

Floyd, Digital Fundamentals, 10th ed

Full Adder

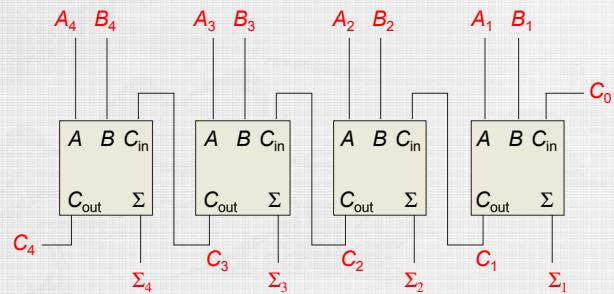


Symbol

Inputs			Outputs	
A	B	C _{in}	C _{out}	Σ
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

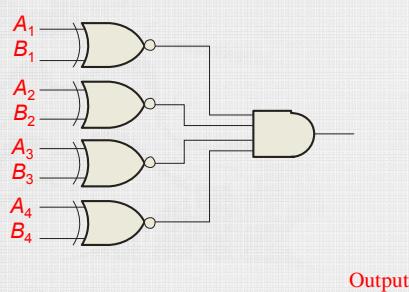
Floyd, Digital Fundamentals, 10th ed

Ripple Carry Adder



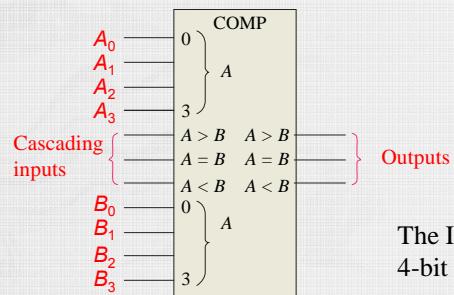
Floyd, Digital Fundamentals, 10th ed

Comparator



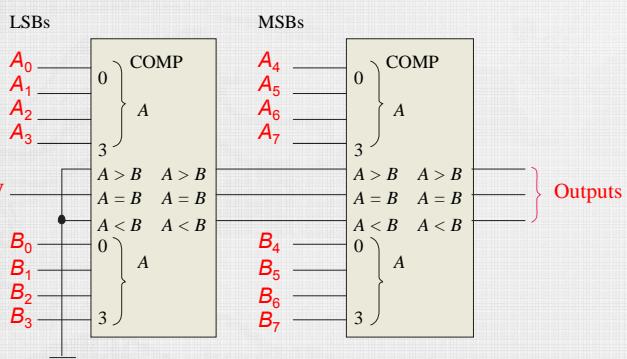
Floyd, Digital Fundamentals, 10th ed

Comparator with cascading



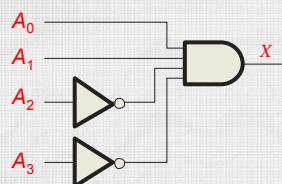
The IC shown is the 4-bit 74LS85.

Floyd, Digital Fundamentals, 10th ed

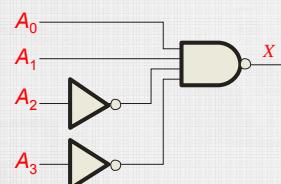


Floyd, Digital Fundamentals, 10th ed

Decoder

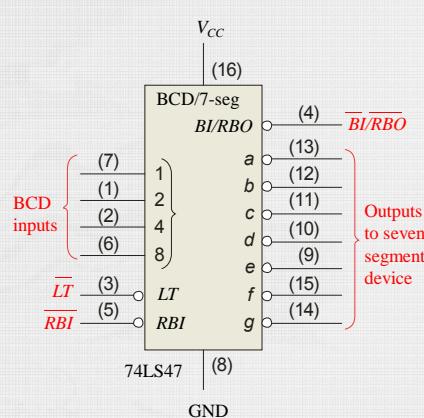


Active HIGH decoder for 0011

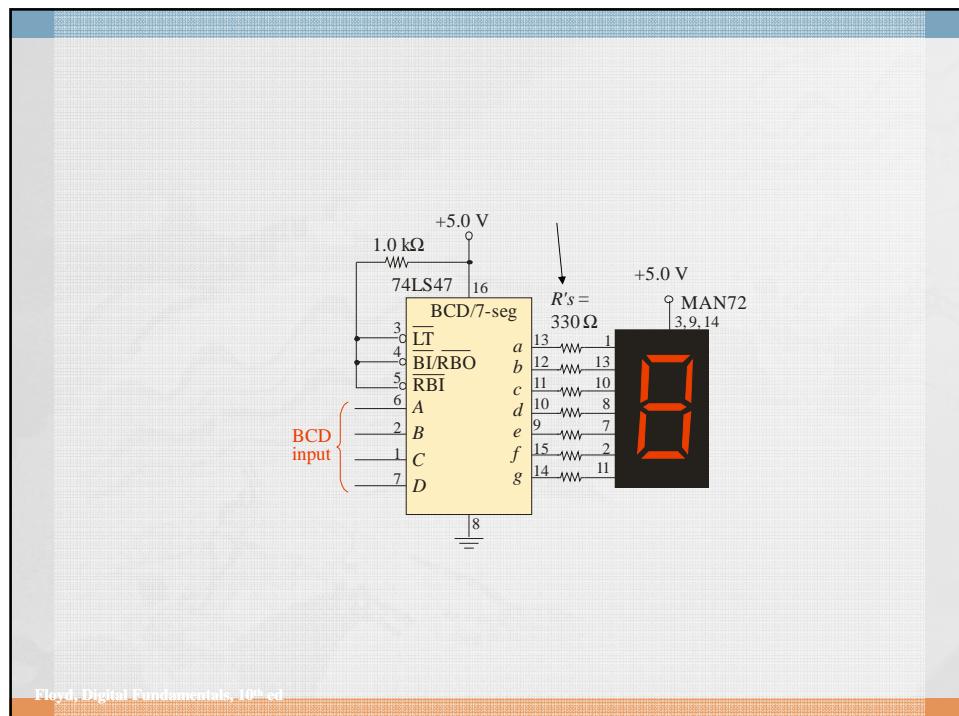


Active LOW decoder for 0011

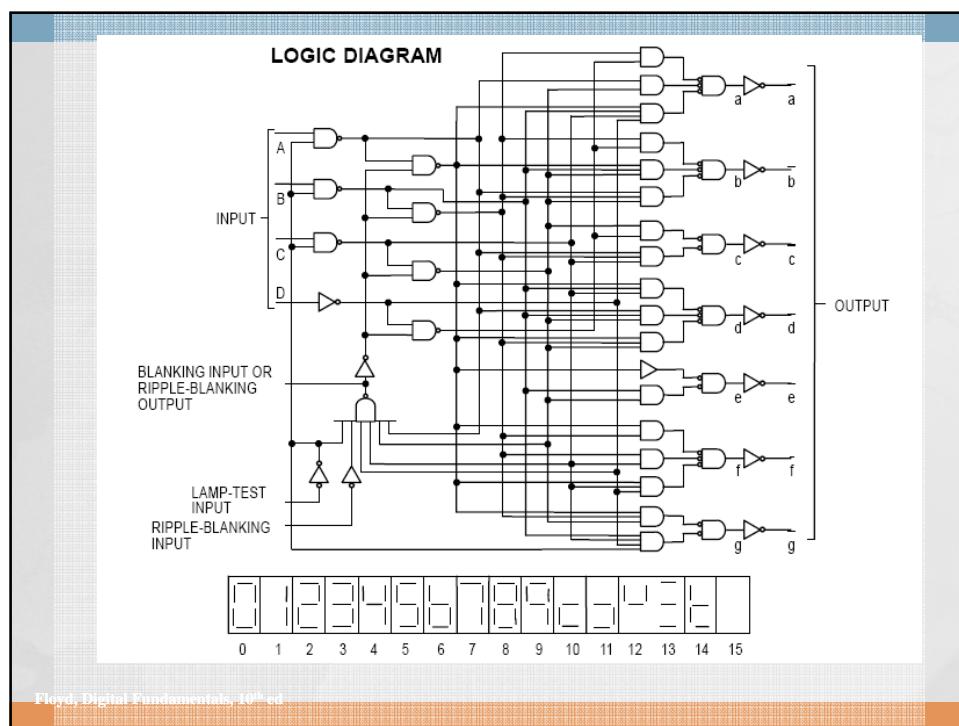
Floyd, Digital Fundamentals, 10th ed



Floyd, Digital Fundamentals, 10th ed

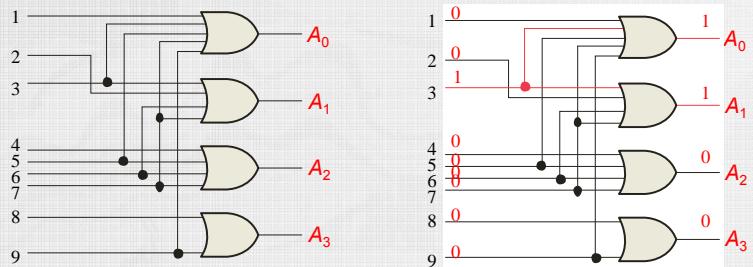


Floyd, Digital Fundamentals, 10th ed



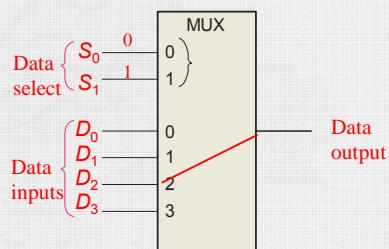
Floyd, Digital Fundamentals, 10th ed

Encoder



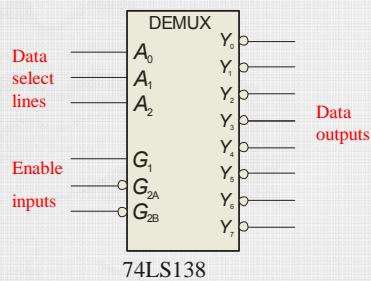
Floyd, Digital Fundamentals, 10th ed

Multiplexer



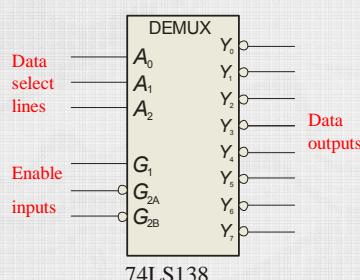
Floyd, Digital Fundamentals, 10th ed

Demultiplexer

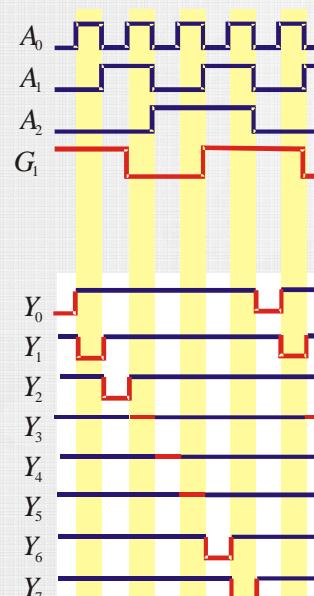


74LS138

Floyd, Digital Fundamentals, 10th ed



74LS138



Floyd, Digital Fundamentals, 10th ed

Check point

- Adder... : Combinational Logic