

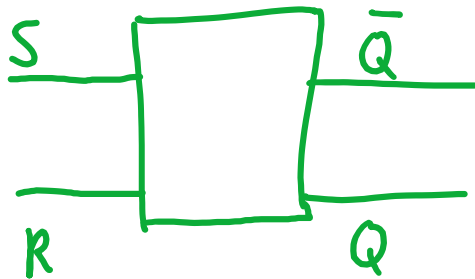
Unit 13: Set-Reset (S-R) Latches

Thursday, 15 May 2025

13:43

Set - Reset Latch

- Stores a logic state
- Diagram



- Truth Table

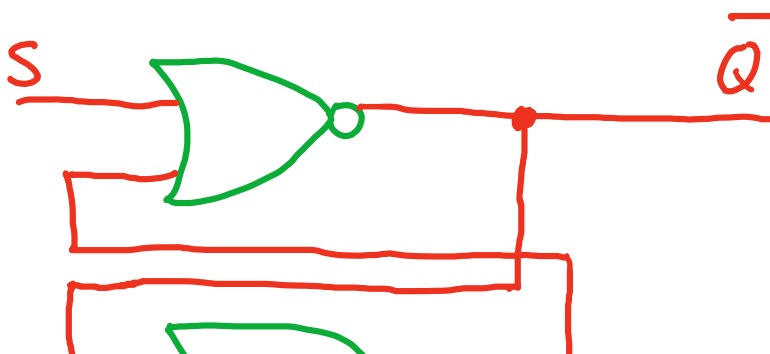
Inputs		Outputs	
S	R	Q	$\bar{Q}$
0	0	no change	
0	1	0	1
1	0	1	0
1	1	invalid	

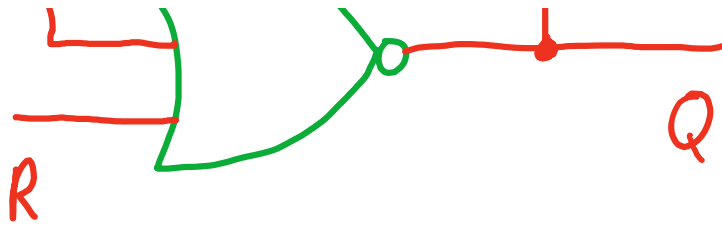
← Retain Previous State

← Reset State

← Set State

- Can be formed using 2 NOR Gates



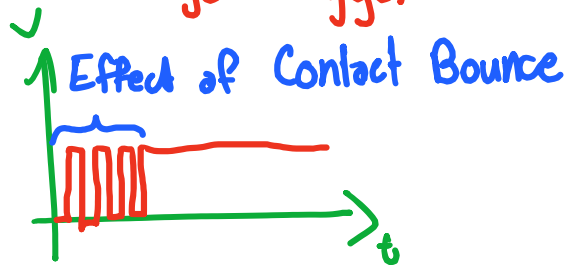
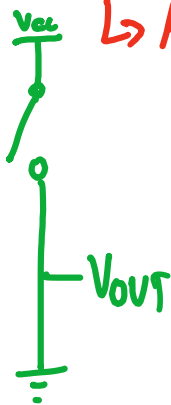


Contact Bounce

→ When metals contact, they bounce a few times before settling permanently

→ Causes multiple signals (unwanted)

→ Affects Edge-Trigger Circuits



→ Debouncing removes effect **BUT not the bounce**

→ Use SR Latch to 'Lock In' first edge, immediately outputting permanent signal

