SR Latch - Complete Summary with Circuits

Your Name
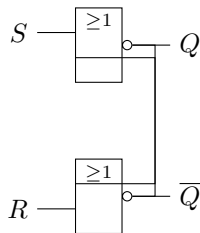
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1 Introduction

An **SR Latch (Set-Reset Latch)** is a basic **bistable** sequential circuit that stores **1 bit** of data.
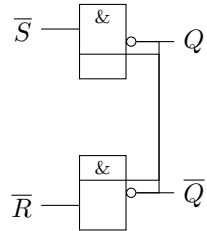
2 NOR-based SR Latch

2.1 Circuit Diagram

2.2 Truth Table

S	R	Q	Q'	State
0	0	Q	Q'	Hold
1	0	1	0	Set
0	1	0	1	Reset
1	1	0	0	Invalid

3 NAND-based SR Latch

3.1 Circuit Diagram

$\overline{S}$ —[&]o— Q

$\overline{R}$ —[&]o— $\overline{Q}$

3.2 Truth Table

$\overline{S}$	$\overline{R}$	Q	Q'	State
1	1	Q	Q'	Hold
0	1	1	0	Set
1	0	0	1	Reset
0	0	1	1	Invalid