

# NOR Gate

## Data

IDs:

- 204 [block]
- 460 [item]

Name:

- NOR Gate [block]
- NOR Gate [item]

Texture:

- MoareAI/Blocks/LGNOROn.png [block, on] 
- MoareAI/Blocks/LGNOROff.png [block, off] 

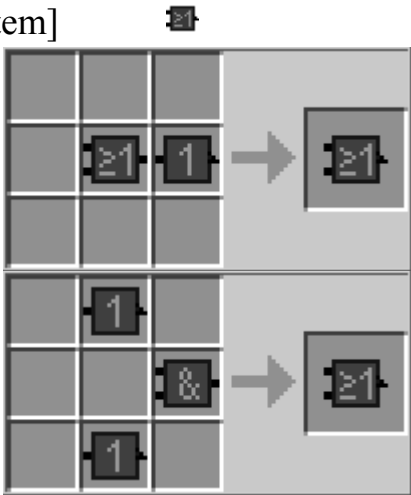
Icon:

- MoareAI/Items/LGNOR.png [item] 

## Recipes

|                |                 |    |                 |
|----------------|-----------------|----|-----------------|
| OR Gate (Item) | NOT Gate (Item) | => | NOR Gate (Item) |
|----------------|-----------------|----|-----------------|

|                 |                 |    |                 |
|-----------------|-----------------|----|-----------------|
| NOT Gate (Item) |                 | => | NOR Gate (Item) |
|                 | AND Gate (Item) |    |                 |
| NOT Gate (Item) |                 |    |                 |



## Interacting

After crafting the item “NOR Gate” you can place it on the ground as the block “NOR Gate (Off)”, which will automatically power the output if the requirements are met (see function).

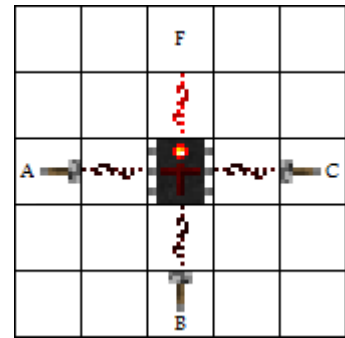
To pick it up again, destroy it by hitting it (one hit is enough) or by destroying the block underneath. This will yield the item “NOR Gate”. This will also happen if the gate comes in contact with water.

In contact with lava, both the item and the block is completely destroyed.

## How to wire the gate

Wire as seen on the image, where “A”, “B” and “C” are the inputs and “F” is the output.

The connection for the output and the inputs may be in form of a direct signal or indirect signal through [Redstone Wires](#).



## The function of the gate

### As description

The output gives a signal when none of the inputs, “A”, “B” or “C”, gets a signal.

- If there is no signal on either of the inputs, there is a signal on the output
- If there is a signal on the “A”, “B” OR “C” input, there is no signal on the output

### As Boolean algebra

$$F = \overline{A+B+C}$$

“Output F” equals NOT “input A” NOR “input B” NOR “input C”

### As truth table

| C | B | A | F |
|---|---|---|---|
| 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 |