

Half ticks (C-Tick & P-Tick)

Consumer and Producer ticks

In Bedrock edition each Redstone tick contains two Game ticks. However, unlike Java edition, the tick in the first and second half of the Redstone tick behave differently and serve different functions. The first half-tick in the Redstone tick is the Consumer tick (C-tick) and the second half is the Producer tick (P-tick). Outside of redstone components, both of these ticks function/serve the same purpose and have no difference.

C-tick and Consumers

C-ticks are the tick in the first half of the redstone tick. C-ticks affect only consumers (A list of all consumers is below). The C-tick travels and functions just like a normal redstone signal. However, C-ticks are limited to a single line of redstone dust as any method of extending the signal will require a producer, which can not be activated by a C-tick. C-ticks only function within the simulation distance of the world.

Consumers are defined by any redstone-related block that can interact with redstone but have no method of outputting a redstone signal (The exception is the target block see below). It is usually better to think of Consumers as any block that is not a Producer block. Or, Any block that can not output a redstone signal. Consumer block can either redirect or ignore redstone dust.

List of Consumer blocks

hopper_thumbnail.png	Hopper
tnt_side.png	TNT
trapdoor.png	Trapdoor / Door
fence_gate_3d.png	Fence Gate
rail_golden.png	Powered rail
rail_activator.png	Activator rail
command_block_front_mipmap.png	Command block
dragon_head.png	Dragon head / Piglin head
target_top.png	Target block (See more info below)

P-tick and Producers

P-ticks are the ticks that occur in the second half of a redstone tick. P-ticks only affect producers (A list of all producers is below). P-ticks can travel along redstone dust anywhere within the render distance. This means the area of effect for a P-tick is dependent on the client, not the server. A single P-tick traveling along redstone dust will not update the dust visually, the dust will look unpowered.

Producers are any redstone blocks that has the ability to output a redstone signal. A producer can not conduct a redstone signal, or in other words, they can not be solid (The exception is the target block see below). Most producers redirect dust and hard-power blocks on their "output" sides, however, some producers can soft power on other sides (lever, redstone torch, redstone block, etc.).

A block will never be both a Consumer and a Producer. Even if the block can take a redstone input such as a repeater, it will always be a Producer and only take a P-tick as input.

List of Producer blocks

redstone_torch_on.png	Redstone torch
lever.png	Lever
image.png	Button
image.png	Pressure plate
image.png	Repeater
image.png	Comparator
observer_front.png	Observer
rail_detector.png	Detector rail
image.png	Sculk sensor
jukebox_top.png	Jukebox
trapped_chest_front.png	Trapped chest
daylight_detector_top.png	Daylight sensor
target_top.png	Target block (See more info below)

Target Block

WIP

Revision #10

Created 2023-08-28 12:07:21 UTC by kai.ryu

Updated 2023-10-13 12:08:50 UTC by kai.ryu