

Redstone Dust

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This article is about the [Minecraft item](#). For other uses, see [Redstone](#).

Redstone dust, internally known as **redstone wire** in block form and **redstone** in item form, is a mineral that can transmit **redstone power** as a wire when placed as a [block](#). It is also used in [crafting](#), [brewing](#) and as a [trim material](#).

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Redstone Dust

Inactive Active



[View all renders](#)

Renewable	Yes
Stackable	Yes (64)
Tool	Any tool
Blast resistance	0
Hardness	0
Luminous	No
Transparent	Yes
Flammable	No
Catches fire from lava	No

Data history

Issues

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Gallery

Renders

[Java Edition](#)

[Bedrock Edition](#)

Screenshots

Mojang screenshots

In other media

References

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Obtaining

Breaking

Redstone dust is immediately destroyed when broken.

Redstone dust is removed and drops as an item if:

- its attachment block is moved, removed, or destroyed
- water or lava flows into its space
- a piston tries to push it or moves a block into its space

Block	 Redstone Dust
Hardness	0
Breaking time (secs)	
Default	0.05

Legend

- incorrect tool, drops nothing
- correct tool, drops nothing or something other than the block itself
- correct tool, drops the block itself
- *italicized* can be instant mined

Redstone dust drops itself when destroyed.

Mining

See also: [Redstone Ore § Natural generation](#)

Redstone ore mined using an iron pickaxe or higher drops 4 or 5 redstone dust (or more with Fortune, averaging at 6 redstone dust with Fortune III). If mined with Silk Touch, the block drops itself instead of redstone dust. When the ore itself is clicked on/touched, it emits a light level of 9 and glows.

Natural generation

15 lengths of redstone dust are naturally generated as part of the trap in each jungle pyramid. 5 lengths of redstone dust can be found in one type of a jail cell room in a woodland mansion. In ancient cities, multiple pieces of redstone dust can be found integrated into circuitry. 1 piece of redstone dust can be found in the "Encounter 4" room in trial chambers.

Mob loot

Java Edition:

Decimal Fraction Distribution Expectation

Mob	Quantity / Chance / Average												
	Default				Looting I			Looting II			Looting III		
	Witch	4–8	100.00%	6.00	4–9	100.00%	6.50	4–10	100.00%	7.00	4–11	100.00%	7.50
													

Bedrock Edition:

Decimal Fraction Distribution Expectation

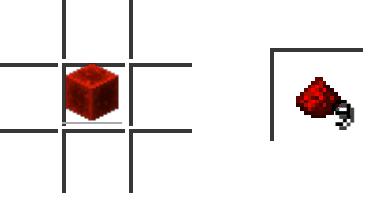
Mob	Quantity / Chance / Average												
	Default				Looting I			Looting II			Looting III		
	Witch	4–8	100.00%	6.00	4–9	100.00%	6.50	4–10	100.00%	7.00	4–11	100.00%	7.50
													

Generated loot

Item	Structure	Container	Quantity	Chance	[hide]
<i>Java Edition</i>					
 Redstone Dust	 Monster Room	Chest	1–4	26.6%	
	 Mineshaft	Chest	4–9	14.5%	
	 Stronghold	Storeroom chest	4–9	18.6%	
		Altar chest	4–9	11.9%	
	 Village	Temple chest	1–4	44.8%	
<i>Bedrock Edition</i>					
 Redstone Dust	 Monster Room	Chest	1–4	26.6%	
	 Mineshaft	Chest	4–9	14.5%	
	 Stronghold	Storeroom chest	4–9	15.2%	
		Altar chest	4–9	11.6%	
	 Village	Temple chest	1–4	44.8%	
	 Woodland Mansion	Chest	1–4	24.9%	

Crafting

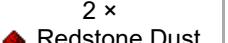
Redstone dust can be crafted from blocks of redstone.

Ingredients	Crafting recipe	[hide]
Block of Redstone		

Smelting

Name	Ingredients	Smelting recipe	[hide]
Redstone Dust	Redstone Ore or Deepslate Redstone Ore + Any fuel	 	 0.7

Trading

Villager		Probability		Villager wants	Player receives	Trades in stock	Villager experience	Price multiplier
		JE	BE					
 Cleric	 Novice	100%	100%	 Emerald	 2 × Redstone Dust	12	1	0.05

Villager gifts

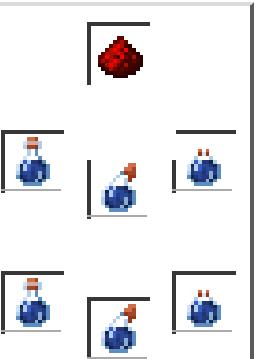
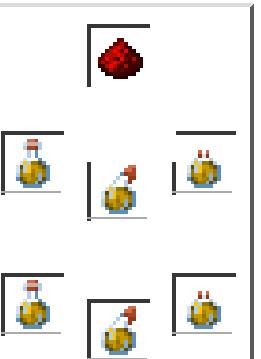
See also: [Tutorial:Raid farming](#)

In [Java Edition](#), when the player has the [Hero of the Village](#) status effect, clerics might throw that player a redstone dust as a gift.

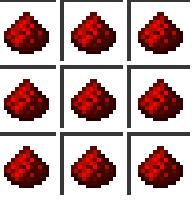
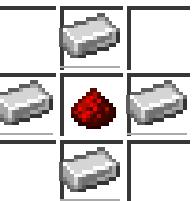
Usage

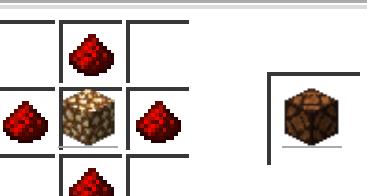
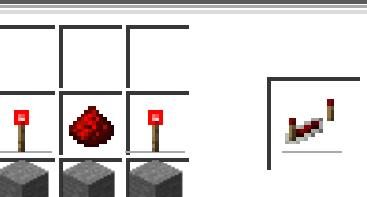
Redstone dust is used for [brewing](#), [crafting](#), and in redstone circuits by placing it on the ground to create [redstone wire](#). It can also be used to power redstone components.

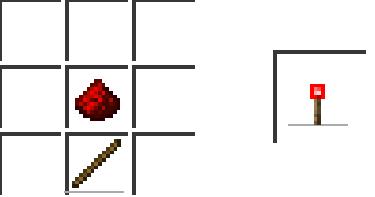
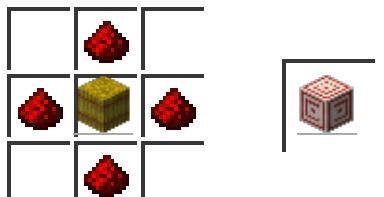
Brewing ingredient

Name	Ingredients	Brewing recipe [hide]
Mundane Potion	Redstone Dust + Water Bottle	
Increased Duration	Redstone Dust + Potion of Night Vision or Potion of Invisibility or Potion of Leaping or Potion of Fire Resistance or Potion of Swiftness or Potion of Slowness or Potion of the Turtle Master or Potion of Water Breathing or Potion of Poison or Potion of Regeneration or Potion of Strength or Potion of Weakness or Potion of Slow Falling	

Crafting ingredient

Name	Ingredients	Crafting recipe	Description
<u>Block of Redstone</u>	<u>Redstone Dust</u>	 	
<u>Clock</u>	<u>Gold Ingot + Redstone Dust</u>	 	
<u>Compass</u>	<u>Iron Ingot + Redstone Dust</u>	 	
<u>Crafter</u>	<u>Iron Ingot + Crafting Table + Redstone Dust + Dropper</u>	 	
<u>Detector Rail</u>	<u>Iron Ingot + Stone Pressure Plate + Redstone Dust</u>	 	
<u>Dispenser</u>	<u>Cobblestone + Bow + Redstone Dust</u>	 	<p>The bow can be of any durability. Enchantments on the bow do not affect the resulting dispenser.</p>
<u>Dropper</u>	<u>Cobblestone + Redstone Dust</u>	 	

Name	Ingredients	Crafting recipe	Description
<u>Unwaxed Copper Bulb or Waxed Copper Bulb</u>	Matching Unwaxed Block of Copper or Matching Waxed Block of Copper + Blaze Rod + Redstone Dust		[hide]
<u>Note Block</u>	Any Planks + Redstone Dust		
<u>Observer</u>	Cobblestone + Redstone Dust + Nether Quartz		
<u>Piston</u>	Any Planks + Cobblestone + Iron Ingot + Redstone Dust		
<u>Powered Rail</u>	Gold Ingot + Stick + Redstone Dust		
<u>Redstone Lamp</u>	Redstone Dust + Glowstone		
<u>Redstone Repeater</u>	Redstone Torch + Redstone Dust + Stone		

Name	Ingredients	Crafting recipe	Description	[hide]
Redstone Torch	Redstone Dust + Stick			
Target	Redstone Dust + Hay Bale			

Smithing ingredient

Ingredients	Smithing recipe	Description	[hide]
Any Armor Trim + Any Armor Piece + Redstone Dust		All armor types can be used in this recipe, a chestplate is shown as an example.	

Trim color palette

The following color palette is shown on the designs on trimmed [armor](#):

Redstone component

When placed in the world, redstone dust becomes a block of redstone wire, which can transmit [redstone signal](#).

Placement

Redstone dust can be placed on [conductive blocks](#) as well as [glowstone](#), [upside-down slabs](#), [glass](#), [upside-down stairs](#), and [hoppers](#). It can also be placed on some non-conductive blocks; see [Opacity/Placement](#) for more information. It cannot be placed suspended in midair, even with commands.^[1]

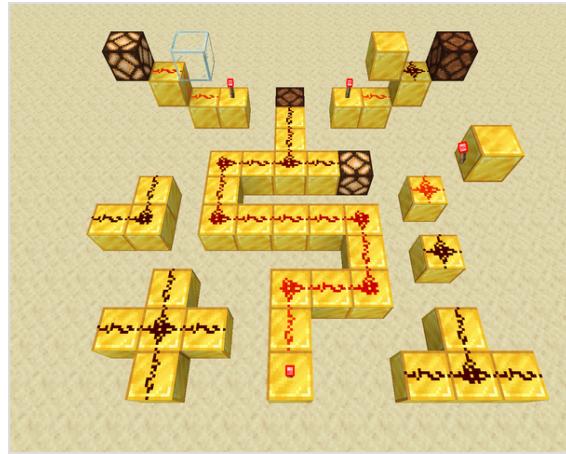
Redstone wire configures itself to point toward adjacent redstone power components and transmission component connection points. Redstone wire also configures itself to point toward adjacent redstone wire one block higher or lower – unless there is a [conductive block](#) above the lower redstone wire.

If there is only one such adjacent redstone component, redstone wire configures itself into a  line pointing both at the neighbor and away from it. If there are two or more such adjacent components, redstone wire connects them in the form of , , or  as needed.

When there are no adjacent components, a single redstone wire configures itself into a  plus sign, which can provide power in all four directions. By right-clicking, it can be changed into a  dot, which does not provide power to any of the four directions.[\[Java Edition only\]](#)

Redstone wire does not automatically configure itself to point toward mechanism components; the only exceptions are the back and side faces of pistons and sticky pistons in *Bedrock Edition*. If such a configuration is desired, the other neighbors of the redstone wire must be arranged to create it, i.e the redstone dust must be placed in a way that it would be pointed at the block's location even if it were not there.

When redstone wire is reconfigured after placement, it does not update other redstone components around it of the change unless that reconfiguration also includes a change in power level or another component provides an update. This can create situations where a mechanism component remains activated when it shouldn't, or vice versa, until it receives an update from something else – a "feature" of redstone wire that can be used to make a block update detector.



Examples of redstone wire configuration. *Top Left:* Redstone wire connects diagonally vertically through non-conductive blocks. *Top Right:* Redstone wire does *not* connect diagonally vertically through conductive blocks. *Center:* Redstone wire gets darker as its power level drops, to a maximum of 15 blocks from a power source.



Examples of redstone wire placements.

Behavior

However, the signal can never go down from slabs. ?

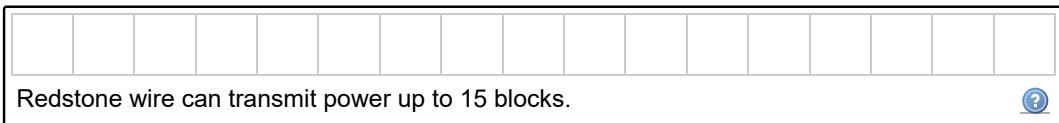
In *Bedrock Edition*, the signal can go down from glass blocks. ?

Redstone wire can transmit power, which can be used to operate mechanism components (doors, pistons, redstone lamps, etc.). Redstone wire can be "powered" by a number of methods:

- from an adjacent power component or a strongly-powered block
- from the output of a redstone repeater or redstone comparator
- from adjacent redstone wire. The powering dust can be a level higher or lower, but with restrictions:

- Redstone dust can be powered by redstone dust that is one level lower, or on a conductive block one level higher. A non-conductive block cannot [*Java Edition only*] pass power downward.
- The block "between" the two dust blocks must be air or non-conductive. A conductive block there "cuts" the connection between the higher and lower dust.

The "power level" of redstone dust can vary from 0 to 15. Most power components power-up adjacent redstone dust to power level 15, but a few (daylight sensors, trapped chests, and weighted pressure plates) may create a lower power level. Redstone repeaters output power level 15 (when turned on), but redstone comparators may output a lower power level.



Redstone wire can transmit power up to 15 blocks.



Power level drops by 1 for every block of redstone wire it crosses. Thus, redstone wire can transmit power for no more than 15 blocks. To go further, the power level must be re-strengthened – typically with a redstone repeater.

Powered redstone wire on top of, or pointing at, a conductive block provides weak power to the block. A weakly-powered block cannot power other adjacent redstone wire, but can still power redstone repeaters and comparators, and activate adjacent mechanism components. Non-conductive blocks cannot be powered.

When redstone wire is unpowered, it appears dark red. When powered, it becomes bright red at power level 15, fading to darker shades with decreasing power. Powered redstone wire also produces "dust" particles of the same color.

While redstone wire always provides power to the directions it points into, it can still point into directions in which it cannot give power. If redstone wire comes in the form of a cross, the player can right-click to toggle it between a cross and dot. A redstone dot does not power anything adjacent to it, but powers the block under it.

Piston interactivity

Redstone dust is destroyed when a piston tries to push it. It can't be pulled by sticky pistons.

Sounds

Java Edition:

 stone sound type [hide]								
Sound	Closed captions	Source	Description	Identifier	Translation key	Volume	Pitch	Attenuation distance
	Block broken	Blocks	Once the block has broken	block.stone.break	subtitles.block.generic.break	1.0	0.8	16
	Block placed	Blocks	When the block is placed	block.stone.place	subtitles.block.generic.place	1.0	0.8	16
	Block breaking	Blocks	While the block is in the process of being broken	block.stone.hit	subtitles.block.generic.hit	0.25	0.5	16
	Something falls on a block	<u>Entity-Dependent</u>	Falling on the block with fall damage	block.stone.fall	subtitles.block.generic.fall	0.5	0.75	16
	Footsteps	<u>Entity-Dependent</u>	Walking on the block	block.stone.step	subtitles.block.generic.footsteps	0.15	1.0	16

Bedrock Edition:

 normal sound type [hide]							
Sound	Closed captions <i>[upcoming: BE 26.0]</i>	Source	Description	Identifier	Translation key <i>[upcoming: BE 26.0]</i>	Volume	Pitch
	Block broken	Blocks	Once the block has broken	dig.stone	subtitles.block.generic.break	1.0	0.8-1.0
	Block broken	Blocks	When the block is placed	dig.stone	subtitles.block.generic.break	1.0	0.8-1.0
	Block breaking	Blocks	While the block is in the process of being broken	hit.stone	subtitles.block.generic.hit	0.27 <i>[sound 1]</i>	0.5
	Footsteps	Players	Falling on the block with fall damage	fall.stone	subtitles.block.generic.footsteps	0.4	1.0
	Footsteps	Players	Walking on the block	step.stone	subtitles.block.generic.footsteps	0.3	1.0
	Footsteps	Blocks	Jumping from the block	jump.stone	subtitles.block.generic.footsteps	0.12	1.0
	Footsteps	Blocks	Falling on the block without fall damage	land.stone	subtitles.block.generic.footsteps	0.22	1.0

1. [MCPE-169612](#) — Many blocks make slightly different sounds to stone

Data values

ID

Java Edition:

Name	Identifier	Form	Translation key [hide]
Redstone Wire	redstone_wire	Block	block.minecraft.redstone_wire
Redstone Dust	redstone	Item	item.minecraft.redstone

Bedrock Edition:

Name	Identifier	Numeric ID	Form	Item ID ^[1]	Item tags	Translation key [hide]
Redstone Wire	redstone_wire	55	Block & Ungiveable Item ^[2]	Identical ^[i 3]	—	tile.redstone_wire.name
Redstone Dust	redstone	373	Item	—	minecraft:trim_materials	item.redstone.name

1. ID of block's direct item form, which is used in savegame files and addons.
2. Unavailable with `/give` command
3. The block's direct item form has the same ID as the block.

Block states

See also: [Block states](#)

Java Edition:

Name	Default value	Allowed values	Description	[hide]
east	none	none side up	The way redstone dust connects to the east, side can also mean down.	
north	none	none side up	The way redstone dust connects to the north, side can also mean down.	
power	0	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	The redstone dust's current power level.	
south	none	none side up	The way redstone dust connects to the south, side can also mean down.	
west	none	none side up	The way redstone dust connects to the west, side can also mean down.	

Bedrock Edition:

Name	Metadata Bits	Default value	Allowed values	Values for Metadata Bits	Description	[hide]
redstone_signal	0x1 0x2 0x4 0x8	0	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	The redstone dust's current power level.	

List of block state combinations

Achievements

[hide]						
Icon		Achievement	In-game description	Actual requirements (if different)	Gamerscore earned	Trophy type (PS)
PS4	Other					
		Dispense With This	Construct a Dispenser.	—	20	Bronze

Videos

Note: These videos do not show all uses for redstone in crafting and all methods of obtaining. This video is from Java Edition 1.13 where redstone is now called Redstone Dust.

History

There is an associated [technical blocks](#) page for the internal item form of this block; see [Technical blocks/Redstone Wire](#).

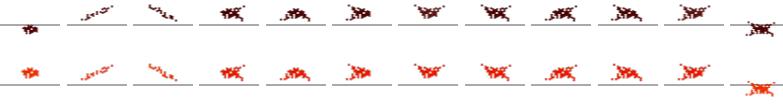
Development

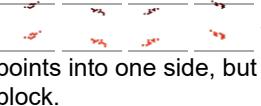
May 21, 2009 (<https://web.archive.org/web/0/http://notch.tumblr.com/post/110762705/my-list-on-tile-types-so-far>)

Notch shows interest in adding wire-type blocks.

Java Edition

Java Edition Alpha			[hide]
 Added redstone.   Added redstone dust as a placed block.			
v1.0.1 Replaces existing gears in a world as they share the same numeric ID of 55. Redstone dust as a placed block has two power appearances; either completely on, or completely off. Redstone dust is used to craft redstone torches. At this time, redstone has not been given an official name.			
v1.0.2_01 Redstone dust now doesn't connect through solid blocks diagonally down. Walking on redstone dust no longer breaks it. [needs testing] Active redstone dust now gives off particles. [needs testing]			
v1.1.0 Redstone is now used to craft compasses.			
v1.2.0	?	Redstone is now used to craft clocks.	
Java Edition Beta			[hide]
1.0 With the addition of inventory tooltips, the item form of redstone dust has been named "Redstone", and the usually unobtainable block form has been named "Redstone Dust".			
1.2 Redstone is now used to craft dispensers and note blocks.			
1.3   Redstone wire gets darker the farther away it is from a source of power, using a dedicated tint system. Previously, it was fully on until it reached its limit. Its particles now appear gray due to not being tinted. Redstone is now used to craft redstone repeaters.			
1.5   Fully off redstone wire is no longer black. Redstone dust can now be placed on snow. Redstone is now used to craft powered rails and detector rails.			
1.6.6 Redstone dust now checks if the block below has a solid top face or glowstone, allowing it to be placed on it.			
1.7 Redstone dust now connects to a repeater without the dust being explicitly pointed at it. Redstone can now be used to craft pistons.			
1.8	Pre-release	Redstone can now be found in the new stronghold storeroom chests, and in the new mineshaft chests.	
Java Edition			[hide]
1.0.0	Beta 1.9	Redstone can now be brewed in a water bottle to create a mundane potion.	

	Prerelease 3	Redstone can now be found in the new <u>stronghold altar chests</u> .
		Redstone now extends the potions of <u>Fire Resistance</u> , <u>Slowness</u> , <u>Swiftness</u> , <u>Poison</u> , <u>Weakness</u> and <u>Strength</u> .
	Beta 1.9 Prerelease 4	Redstone now extends the new <u>potion of Regeneration</u> .
	RC1	 Redstone dust placement on one <u>block</u> has been changed from a "+" to a "•" shape.
	?	Redstone wire block particles are now correctly colored.
<u>1.1</u>	<u>11w49a</u>	Fixed redstone update bug. <small>[more information needed]</small>
<u>1.2.1</u>	<u>12w06a</u>	Redstone can now be placed on <u>glowstone</u> .
	<u>12w07a</u>	Redstone is now used to craft <u>redstone lamps</u> .
<u>1.3.1</u>	<u>12w21a</u>	Redstone can now be <u>bought</u> from <u>priest villagers</u> , at 2–4 redstone for 1 <u>emerald</u> , making them <u>renewable</u> .
	<u>12w22a</u>	Redstone dust now generates in <u>jungle temples</u> .
	<u>12w25a</u>	Redstone dust can now be placed on top of upside-down <u>slabs</u> and <u>stairs</u> .
<u>1.4.2</u>	<u>12w34a</u>	Redstone now extends the new <u>potions of Night Vision</u> and <u>Invisibility</u> .
	<u>12w38a</u>	Witches have been added, which sometimes <u>drop</u> redstone when killed.
<u>1.5</u>	<u>13w01a</u>	Redstone can now be used to craft <u>blocks of redstone</u> , <u>redstone comparators</u> and <u>droppers</u> .
<u>1.7.2</u>	<u>13w36a</u>	Redstone now extends the new <u>potion of Water Breathing</u> .
<u>1.8</u>	<u>14w02a</u>	Trading has been changed: cleric <u>villagers</u> now sell 1–4 redstone for 1 <u>emerald</u> .
	<u>14w25a</u>	Redstone dust no longer changes to <u>obsidian</u> next to water when <u>lava</u> flows into it.
	<u>14w27a</u>	Redstone now extends the new <u>potion of Leaping</u> .
<u>1.9</u>	<u>15w31a</u>	 Some slight changes have been made to redstone wire's appearance - the dot now extends outward with two more pixels, and the south-facing section of bends, T shapes and crosses now has one fewer pixel. It also appears straighter and more continuous in straight wire form.
		Redstone can no longer be added to extended potions or tier-II potions.
	<u>15w44a</u>	The average yield of redstone from <u>dungeon chests</u> has been cut by more than half.
		The average yield of redstone in <u>mineshaft chests</u> has been increased.
	<u>15w46a</u>	The hitbox of redstone now covers only part of the surface of the <u>block</u> below, based on the orientation of the redstone.
		Mobs no longer spawn on redstone dust.
<u>1.11</u>	<u>16w39a</u>	Redstone dust can now be found in chests in <u>woodland mansions</u> .
		Redstone dust now generates in <u>woodland mansions</u> .
		Redstone can now used to craft <u>observers</u> .
<u>1.13</u>	<u>17w47a</u>	The <u>item</u> form of "Redstone" has been renamed to "Redstone Wire".

		Redstone wire now plays a sound when placed.
	17w48a	"Redstone Wire" has been renamed to "Redstone Dust".
	18w07a	Redstone now extends the new potion of the Turtle Master.
	18w14a	Redstone now extends the new potion of Slow Falling.
1.14	18w43a	 The texture of redstone dust has been changed.
	18w50a	Redstone dust can now be found in chests in <u>village</u> temples.
	19w11a	Cleric villagers now sell 2 redstone dust for 1 emerald.
	19w12b	Redstone dust can now be placed on <u>glass</u> , <u>ice</u> and <u>sea lanterns</u> .
	19w13a	Cleric villagers now give redstone dust to players under the <u>Hero of the Village</u> effect.
1.16	20w06a	Redstone dust now has a bottom texture.
	20w09a	Redstone can now be used to craft <u>targets</u> .
	20w18a	Redstone dust placement on one <u>block</u> has been changed from a "*" back to a "+" shape.
		Redstone dust's hitbox is no longer strictly a cuboid, and more closely matches the shape of the wiring. ^[2]
		Upward going redstone dust now has a hitbox on the side of the <u>block</u> too, rather than only on the floor. ^[3]
		Unconnected redstone dust now has all direction block states set to "side".
		The direction block states of redstone dust are now properly set to "side" at the end of a redstone wire on both ends, rather than only the one with other redstone besides it.
	20w19a	 While not accessible in normal gameplay, redstone dust that points into one side, but not the opposite, now visually reaches halfway across the block.
		Redstone dust now visually connects when going up <u>soul sand</u> , 8-layer <u>snow</u> stacks and the back side of upside-down <u>stairs</u> .
		Particles are now generated across the length of the redstone wire rather than the center of the block.
1.17	20w21a	Redstone dust placement on one <u>block</u> is now toggleable between a "+" and a "*" shape, by interacting with it.
	21w08a	Redstone dust can now drop and be smelted from <u>deepslate redstone ore</u> .
1.19	22w13a	Redstone wire now generates in <u>ancient cities</u> .
1.19.4 Experiment Update 1.20	23w04a	Redstone dust can now be used as an armor trim material.
1.20.3 Experiment Update 1.21	23w42a	Redstone dust can now be used to craft <u>crafters</u> .
	23w43a	Redstone dust can now be used to craft <u>copper bulbs</u> .
1.21	24w20a	Witches now always drop 4-8 redstone dust.
1.21.2	24w33a	Redstone dust can now generate in trial chambers.

Bedrock Edition

Pocket Edition Alpha [hide]		
<u>v0.8.0</u>	<u>build 1</u>	 Added redstone as an item. They are currently unobtainable in the Creative inventory and cannot be placed.
		Redstone is now dropped when mined from redstone ore.
	<u>build 2</u>	Redstone can be used to craft compasses and clocks.
		Redstone can now be used to craft powered rails.
<u>v0.11.0</u>	<u>build 1</u>	Redstone is now used to craft redstone blocks.
<u>v0.12.1</u>	<u>build 1</u>	Redstone has been added to the Creative inventory, but it still cannot be placed.
<u>v0.13.0</u>	<u>build 1</u>	Redstone can now be placed.
		Redstone is now used to craft redstone lamps, note blocks, detector rails and redstone torches.
<u>v0.14.0</u>	<u>build 1</u>	Redstone is now used to craft dispensers and droppers.
<u>v0.15.0</u>	<u>build 1</u>	Redstone is now used to craft pistons and observers.
Pocket Edition [hide]		
<u>1.0.4</u>	<u>alpha 1.0.4.0</u>	Cleric villagers now sell 1–4 redstone for an emerald.
<u>1.1.0</u>	<u>alpha 1.1.0.0</u>	Redstone can now be found in woodland mansions.
Bedrock Edition [hide]		
?		
		Placed redstone now assumes its current appearance with a more solid center. Its linear state appearances are unknown.
<u>1.10.0</u>	<u>beta 1.10.0.3</u>	 The texture of redstone has been changed.
<u>1.11.0</u>	<u>beta 1.11.0.1</u>	Redstone can now be found in desert village temple chests.
	<u>beta 1.11.0.4</u>	Cleric villagers now sell 4 redstone as part of their first tier trade.
<u>1.16.210</u>	<u>beta 1.16.210.57</u>	"Redstone" has been renamed to "Redstone Dust".
<u>1.17.0</u>	<u>beta 1.16.230.52</u>	Redstone dust can now drop and be smelted from deepslate redstone ore.
<u>1.19.0</u>	<u>beta 1.19.0.26</u>	Redstone wire now generates in ancient cities.
<u>1.19.80</u> Experiment Next Major Update	<u>Preview 1.19.80.21</u>	Redstone dust can now be used as an armor trim material.
<u>1.20.50</u> Experiment Update 1.21	<u>Preview 1.20.50.21</u>	Redstone dust can now be used to craft crafters.
	<u>Preview 1.20.50.22</u>	Redstone dust can now be used to craft copper bulbs.

Legacy Console Edition

Legacy Console Edition							[hide]
Xbox 360	Xbox One	PS3	PS4	PS Vita	Wii U	Switch	
TU1	CU1	1.00	1.00	1.00	Patch 1	1.0.1	 Added redstone.
TU3							Redstone now connects to a repeater without the dust being explicitly pointed at it.
TU12							Redstone can now be used to craft pistons.
TU14							Redstone is now used to craft redstone lamps .
TU19							Redstone now extends the new potion of Night Vision and Invisibility .
TU31							Redstone can now be bought from priest villagers , at 2–4 redstone for 1 emerald , making them renewable .
TU46							Witches have been added, which sometimes drop redstone when killed.
TU54	CU44	1.22	1.22	1.22	Patch 3	1.0.4	Redstone can now be used to craft blocks of redstone , redstone comparators and droppers .
TU69							Redstone now extends the new potion of Leaping and Water Breathing .
							Trading has been changed: cleric villagers now sell 1–4 redstone for 1 emerald .
							The hitbox of redstone now covers only part of the surface of the block below, based on the orientation of the redstone.
							Redstone dust can now be found in chests in woodland mansions .
							Redstone dust now generates in woodland mansions.
							Redstone can now be used to craft observers .
		1.76	1.76	1.76	Patch 38		Redstone now extends the new potion of the Turtle Master and potion of Slow Falling .
							 The texture of redstone has been changed.
							Cleric villagers now sell 4 redstone as part of their first tier trade.
							Redstone can now be placed on glass.

New Nintendo 3DS Edition

New Nintendo 3DS Edition		[hide]
0.1.0	 Added redstone dust.	
1.9.19	Redstone dust now generates in woodland mansions.	

Data history

		Java Edition	[hide]
1.13	17w47a	Prior to <i>The Flattening</i> , this block's numeral ID was 55, and the item's 331.	

Issues

Issues relating to "Redstone", "Redstone dust", or "Redstone wire" are maintained on the bug tracker. Issues should be reported and viewed [there](https://bugs.mojang.com/issues/?jql=project%20in%2028MC%2C%20MCPE%29%20AND%20%28resolution%20is%20EMPTY%20OR%20resolution%20in%20%281%2C%202%2C%206%29%29%20AND%20%28summary%20~%20%22redstone%22%20OR%20summary%20~%20%22redstone%20wire%22%29%20ORDER%20BY%20resolution%20DESC) (<https://bugs.mojang.com/issues/?jql=project%20in%2028MC%2C%20MCPE%29%20AND%20%28resolution%20is%20EMPTY%20OR%20resolution%20in%20%281%2C%202%2C%206%29%29%20AND%20%28summary%20~%20%22redstone%22%20OR%20summary%20~%20%22redstone%20wire%22%29%20ORDER%20BY%20resolution%20DESC>).

Trivia

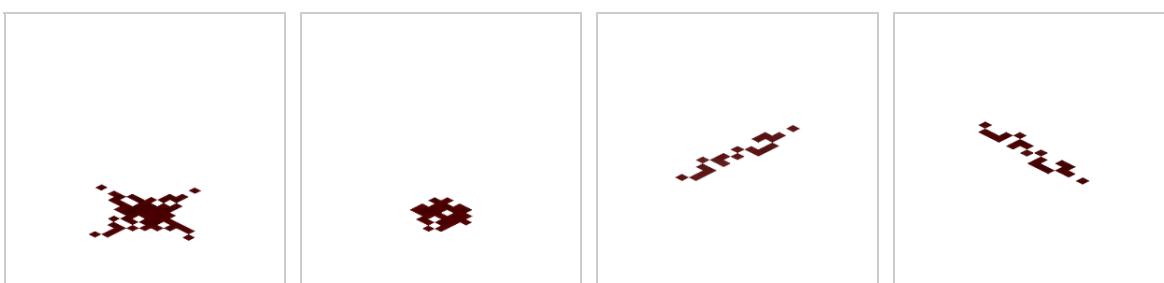
- Five updates for [Windows 10](#) released from 2016 to 2018 were codenamed "Redstone", referencing [Minecraft](#).^[4]
- The block has 1,296 possible block state combinations in *Java Edition*, the highest of all blocks, exceeding [fire](#)'s 512 and [note block](#)'s 1150.
- According to the [Material Reducer](#) in [Minecraft Education](#), redstone dust is 31% [carbon](#), 31% [uranium](#), and 38% some unknown element.
- In the trailer for the [Village and Pillage](#) update, a blue piece of redstone dust (dubbed by the community as "[bluestone](#)") can be seen among the gifts the villagers throw into the air.

Gallery

Renders

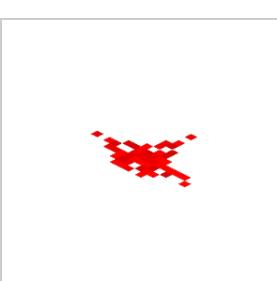
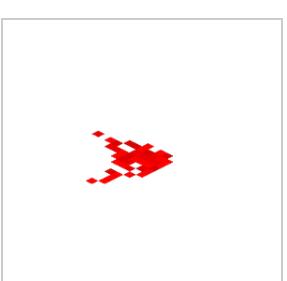
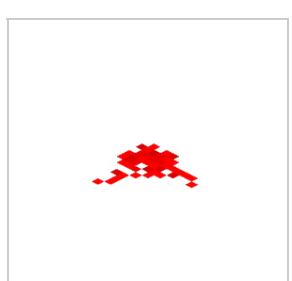
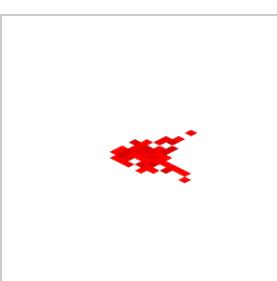
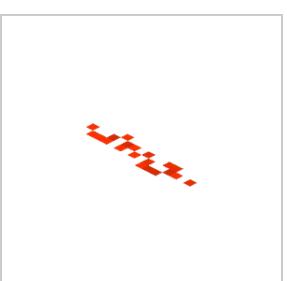
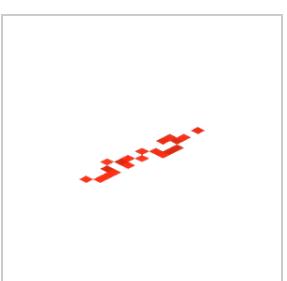
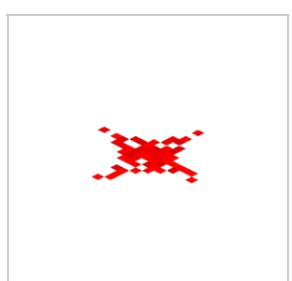
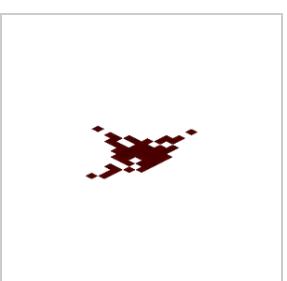
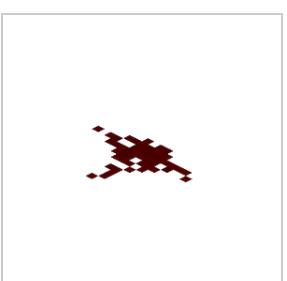
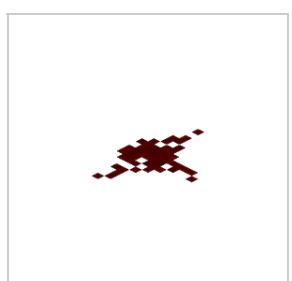
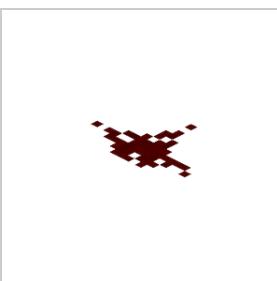
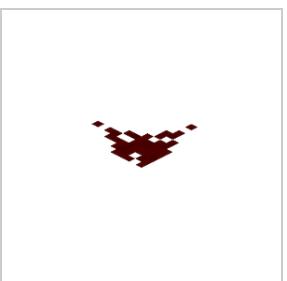
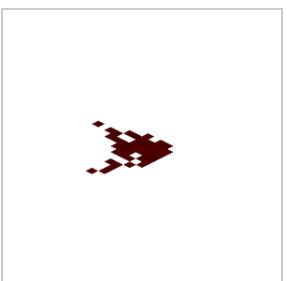
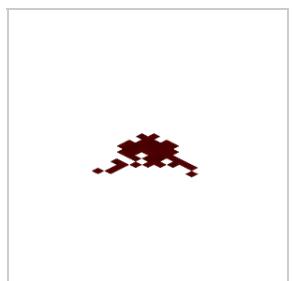
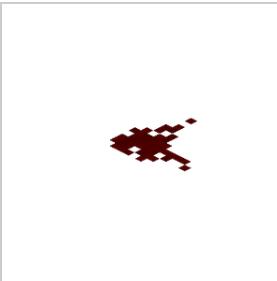
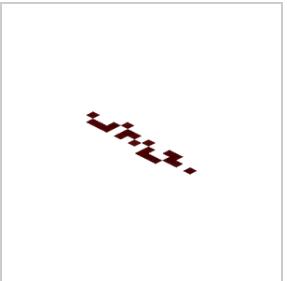
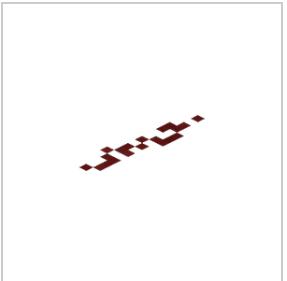
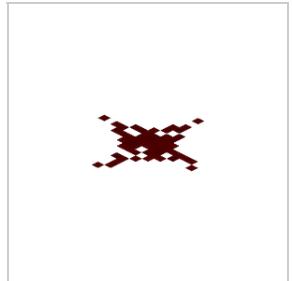
All renders can be viewed in-game in the [debug world](#).

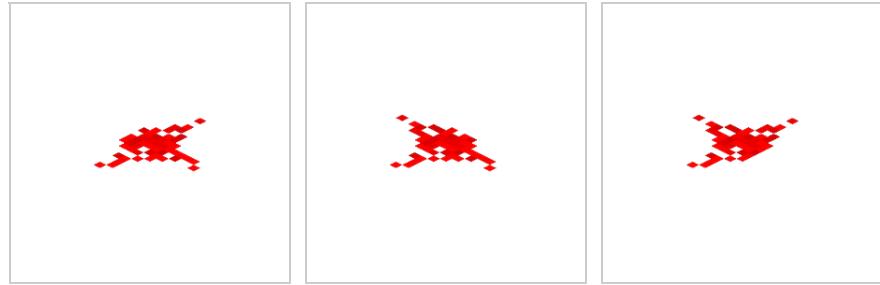
Java Edition





Bedrock Edition



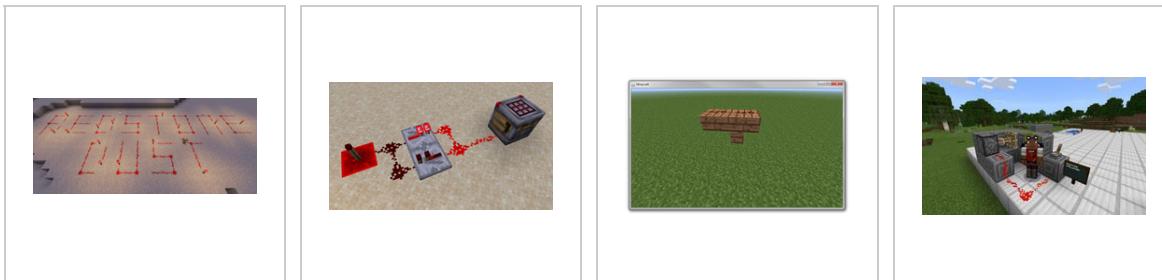


Screenshots



Giant Redstone Dust
past 1,073,741,824
on both axes, it is
actually 128 blocks
big because of
floating point
precision loss.

Mojang screenshots

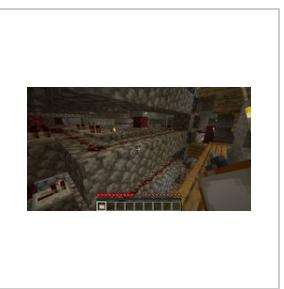


First image of
redstone dust on top
of slabs and stairs.

Olivia using a scarce
amount of redstone
dust.

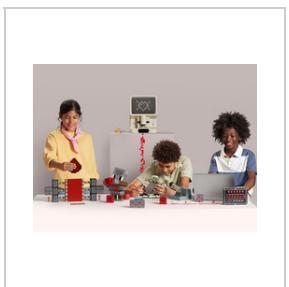


Sunny using a very long strip of redstone dust.

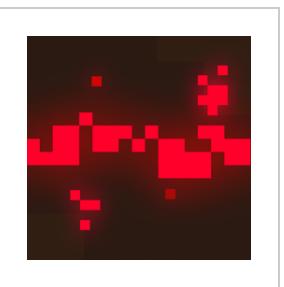


The inside of a redstone elevator.

In other media



Real children building with redstone.



Pixel art of redstone dust.



Redstone dust in *A Minecraft Movie*.



Official T-shirt artwork "Powered by Redstone" made by JINX (<https://www.jinx.com>).

References

1. MC-182709 — Fire, soul fire, redstone wire and powered, detector and activator rails cannot be placed suspended without a supporting block via /setblock — resolved as "Invalid".
2. MC-137336 — resolved as "Fixed".
3. MC-153508 — resolved as "Fixed".
4. "Microsoft plans 'Redstone' updates for Windows 10 in 2016" (<https://www.theverge.com/2015/4/7/8364355/microsoft-redstone-windows-updates>) by Tom Warren – The Verge, April 7, 2015.

External links

- "Taking Inventory: Redstone Dust" (<https://www.minecraft.net/en-us/article/redstone-dust>) by Duncan Geere – [Minecraft.net](https://www.minecraft.net), April 26, 2025.

Navigation

Redstone components			[hide]
	Block of Redstone		Buttons (Wooden Stone)
	Polished Blackstone		Daylight Detector
	Jukebox		Lectern
	Pressure Plates (Wooden Stone)		
	Polished Blackstone		Light Weighted
	Redstone Comparator (Calibrated)		Redstone Torch
	Target		Trapped Chest
	(Tripwire)		
	Redstone Wire		Redstone Repeater
	Conductive and non-conductive blocks		
	Allay		Boat with Chest (Bamboo Raft)
	Crafter		Dispenser
	(with Chest with Furnace with Hopper)		Hopper
	(Activator Powered)		Water (Bubble Column)
	Barrel		Bee Nest (Hive)
	Cauldron		Chest (Copper)
	Composter		Copper Golem Statue
	End Portal Frame		Furnace (Blast Smoker)
	Item Frame (Glow)		Respawn Anchor
	Redstone Ore (Deepslate)		Scaffolding
	Sculk Shrieker		Wall
	Piston (Sticky)		Honey Block
	Movable and immovable blocks		
	Block of Amethyst		Wool (Carpet)
	Armor Stand		Bell
	Creaking Heart		Big Dripleaf (Copper Iron Wooden)
	Fence Gate		Doors (Copper Iron Wooden)
	Shelf		Head (Minecart)
	TNT (Minecart)		Trapdoors (Copper Iron)
	Command Block (Minecart)		
	Minecart with Monster Spawner		Structure Block
	Test Block		

	Blocks	[hide]			
	Structural	[show]			
	Ornamental	[show]			
	Natural	[show]			
	Utility	[hide]			
	Anvil (Chipped Damaged)		Barrel	Beacon	
	Cartography Table		Ender	Crafting Table	
	Enchanting Table		(Blast Smoker)		
	Loom		(Dyed)		(Hanging)
	Stonecutter				
	Utilizable				
	Banners (Ominous)		Beds	Bookshelf	
	(with Candle)		(Soul)		Bookshelf
	Composter				
	End Gateway		End Portal Frame		
	Fletching Table		Frosted Ice		(Skeleton)
	Wither Skeleton		Creeper	Dragon)	Heavy Core
	Jukebox		Lodestone	Shelf	
	Respawn Anchor				(Wet)

**Redstone/
Mechanical**

Suspicious Gravel	Suspicious Sand	TNT	Trial Spawner
(Ominous)	Vault (Ominous)		
Buttons (Wooden)	Stone	Polished Blackstone	Copper Bulb
Crafter	Daylight Detector	Dispenser	Dropper
Iron	Wooden)	Honey Block	Hopper
Note Block	Observer	Piston (Sticky)	Pressure Plates (Wooden)
Stone	Polished Blackstone	Heavy Weighted	Light Weighted)
Rail (Activator)	Detector	Powered)	Redstone Lamp
Redstone Wire (Comparato	Repeater	Torch)	Slime Block
Target	Trapped Chest	Trapdoors (Copper	Iron
Fence Gates	Tripwire Hook (Tripwire)	Wooden)	
Allow	Border	Chalkboard	Compound Creator
Element Constructor	Heat Block	Item Frame (Glow)	Lab Table
Material Reducer	Underwater TNT	Underwater Torch	

BE & edu only**Creative or commands only**[\[show\]](#)**Removed**[\[show\]](#)**Unused**[\[show\]](#)**Unimplemented**[\[show\]](#)**Joke**[\[show\]](#)**Extreme metadata variants**[\[show\]](#)**Items**[\[hide\]](#)**Equipment**[\[show\]](#)**Utilities**[\[show\]](#)**Food**[\[show\]](#)**Ingredients**[\[hide\]](#)**Seeds**

Beetroot Seeds	Cocoa Beans	Melon Seeds	Nether Wart
Pitcher Pod	Pumpkin Seeds	Torchflower Seeds	Wheat Seeds
Amethyst Shard	Armadillo Scute	Blaze Rod	Bone
Breeze Rod	Clay Ball	Coal	Diamond
Dragon's Breath	Echo Shard	Egg (Blue	Brown)
Feather	Flint	Ghast Tear	Glowstone Dust
Heart of the Sea	Honeycomb	Ink Sac (Glow)	Kelp
Lapis Lazuli	Leather	Magma Cream	Nautilus Shell
Nether Quartz	Nether Star	Phantom Membrane	
Prismarine Shard	Prismarine Crystals	Rabbit Hide	
Rabbit's Foot	Raw Copper	Raw Gold	Raw Iron
Redstone Dust	Resin Clump	Shulker Shell	Slimeball
Snowball	Stick	String	Turtle Scute
Blaze Powder	Book	Brick (Nether	Resin)
Copper Ingot (Nugget)	Fermented Spider Eye	Charcoal	Firework Star
Glistening Melon Slice	Gold Ingot (Nugget)	Iron Ingot	
(Nugget)	Netherite Ingot (Scrap)	Paper	Popped Chorus Fruit
Sugar			

Raw materials

Beetroot Seeds	Cocoa Beans	Melon Seeds	Nether Wart
Pitcher Pod	Pumpkin Seeds	Torchflower Seeds	Wheat Seeds
Amethyst Shard	Armadillo Scute	Blaze Rod	Bone
Breeze Rod	Clay Ball	Coal	Diamond
Dragon's Breath	Echo Shard	Egg (Blue	Brown)
Feather	Flint	Ghast Tear	Glowstone Dust
Heart of the Sea	Honeycomb	Ink Sac (Glow)	Kelp
Lapis Lazuli	Leather	Magma Cream	Nautilus Shell
Nether Quartz	Nether Star	Phantom Membrane	
Prismarine Shard	Prismarine Crystals	Rabbit Hide	
Rabbit's Foot	Raw Copper	Raw Gold	Raw Iron
Redstone Dust	Resin Clump	Shulker Shell	Slimeball
Snowball	Stick	String	Turtle Scute
Blaze Powder	Book	Brick (Nether	Resin)
Copper Ingot (Nugget)	Fermented Spider Eye	Charcoal	Firework Star
Glistening Melon Slice	Gold Ingot (Nugget)	Iron Ingot	
(Nugget)	Netherite Ingot (Scrap)	Paper	Popped Chorus Fruit
Sugar			

Processed

Edu only	Bleach	Compounds
White	Light Gray	Gray
Yellow	Lime	Green
Magenta	Pink	
Flower Charge	Globe	Guster

Dyes

Black	Brown	Red	Orange
Light Blue		Blue	Purple
Skull Charge	Snout	Thing	
Field Masoned	Flow		
Creeper Charge			
Bordure Indented			
Guster			
Flower Charge			
Globe			
Snout			
Thing			

Banner patterns

Pottery sherds

	Angler		Archer		Arms Up		Blade		Brewer		Burn		Danger
	Explorer		Flow		Friend		Guster		Heart		Heartbreak		
	Howl		Miner		Mourner		Plenty		Prize		Scrape		Sheaf
	Shelter		Skull		Snort								

Smithing templates

	Armor Trim		Bolt		Coast		Dune		Eye		Flow		Host
	Raiser		Rib		Sentry		Shaper		Silence		Snout		Spire
	Tide		Vex		Ward		Wayfinder		Wild)		Netherite		Upgrade

Creative or commands only[\[show\]](#) **Removed**[\[show\]](#) **Unused**[\[show\]](#) **Unimplemented**[\[show\]](#) **Joke**[\[show\]](#)Retrieved from "https://minecraft.wiki/w/Redstone_Dust?oldid=3333523#Redstone_component"**This page was last edited on 25 December 2025, at 00:41.**

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