

# VoxelGame User Manual

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# 1 Welcome!

Thank you for downloading VoxelGame. Currently there is some basic information in this manual, but it will be continuously expanded. VoxelGame is a project I sometimes work on to learn new things and have fun programming, so do not expect too much, especially on the performance side.

## 2 Versions

1.0.0 The First Release

1.1.0 The World Update

1.2.0 The Block Update

## 3 Blocks

### 3.1 Air

The air block that fills the world. Could also be interpreted as "no block".

ID: Air  
Solid: ✗  
Interactions: ✗  
Replaceable: ✓

### 3.2 Grass

Dirt with some grass on top. Plants can be placed on top of this. The grass can burn, creating ash.

ID: Grass  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.3 Ash-covered Dirt

Grass that was burned. Water can burn the ash away.

ID: GrassBurned  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.4 Dirt

Simple dirt. Grass next to it can spread over it.

ID: Dirt  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.5 Farmland

Tilled dirt that allows many plants to grow. While plants can also grow on normal grass, this block allows full growth.

ID: Farmland  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.6 Tall Grass

A tall grassy plant. Fluids will destroy it, if the level is too high.

ID: TallGrass  
Solid: ✗  
Interactions: ✗  
Replaceable: ✓

### 3.7 Very Tall Grass

A much larger version of the normal tall grass.

ID: VeryTallGrass  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.8 Flower

A simple flower.

ID: Flower  
Solid: ✗  
Interactions: ✗  
Replaceable: ✓

### 3.9 Tall Flower

A very tall flower.

ID: TallFlower  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.10 Stone

This stone block makes up large parts of the world. Below the dirt layers, the ground is solid stone.

ID: Stone  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.11 Rubble

When stone is destroyed, rubble is what remains.

ID: Rubble  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.12 Mud

Mud is created when water and dirt mix.

ID: Mud  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.13 Pumice

Pumice is created when lava rapidly cools down, while being in contact with a lot of water.

ID: Pumice  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.14 Obsidian

Obsidian is a dark type of stone, that forms from lava.

ID: Obsidian  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.15 Snow

Snow covers the ground, and can have different heights.

ID: Snow  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.16 Leaves

Leaves are transparent parts of the tree. They are flammable.

ID: Leaves  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.17 Log

Log is the unprocessed, wooden part of a tree. As it is made of wood, it is flammable.

ID: Log  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.18 Wood

Processed wood that can be used as construction material. It is flammable.

ID: Wood  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗



### 3.19 Sand

Sand naturally forms and allows water to flow through it.

ID: Sand  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.20 Gravel

Gravel, which is made out of small pebbles, allows water to flow through it.

ID: Gravel  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.21 Coal Ore

Coal ore is stone that contains coal.

ID: OreCoal  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.22 Iron Ore

Iron ore is stone that contains iron.

ID: OreIron  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.23 Gold Ore

Gold ore is stone that contains gold.

ID: OreGold  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.24 Ash

Ash is the remainder of burning processes.

ID: Ash  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.25 Cactus

A cactus slowly grows upwards. It can only be placed on sand.

ID: Cactus  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.26 Pumpkin

Pumpkins are the fruit of the pumpkin plant. They have to be placed on solid ground.

ID: Pumpkin  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.27 Melon

Melons are the fruit of the melon plant. They have to be placed on solid ground.

ID: Melon  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.28 Spider Web

Spiderwebs slow the movement of entities and can be used to trap enemies.

ID: Spiderweb  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.29 Vines

Vines grow downwards, and can hang freely. It is possible to climb them.

ID: Vines  
Solid: ~~X~~  
Interactions: ~~X~~  
Replaceable: ~~X~~

### 3.30 Flax

Flax is a crop plant that grows on farmland. It requires water to fully grow.

ID: Flax  
Solid: ~~X~~  
Interactions: ~~X~~  
Replaceable: ~~X~~

### 3.31 Potatoes

Potatoes are a crop plant that grows on farmland. They requires water to fully grow.

ID: Potatoes  
Solid: ~~X~~  
Interactions: ~~X~~  
Replaceable: ~~X~~

### 3.32 Onions

Onions are a crop plant that grows on farmland. They requires water to fully grow.

ID: Onions  
Solid: ~~X~~  
Interactions: ~~X~~  
Replaceable: ~~X~~

### 3.33 Wheat

Wheat is a crop plant that grows on farmland. It requires water to fully grow.

ID: Wheat  
Solid: ~~X~~  
Interactions: ~~X~~  
Replaceable: ~~X~~

### 3.34 Maize

Maize is a crop plant that grows on farmland. Maize grows two blocks high. It requires water to fully grow.

ID: `Maize`  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.35 Pumpkin Plant

The pumpkin plant grows pumpkin fruits.

ID: `PumpkinPlant`  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.36 Melon Plant

The melon plant grows melon fruits.

ID: `MelonPlant`  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.37 Glass

Glass is transparent block.

ID: `Glass`  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.38 Tiled Glass

Tiled glass is like glass, but made out of four tiles.

ID: `GlassTiled`  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.39 Steel

The steel block is a metal construction block.

ID: Steel  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.40 Worked Stone

Worked stone is a processed stone block.

ID: StoneWorked  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.41 Ladder

A ladder allows climbing up and down.

ID: Ladder  
Solid: ✗  
Interactions: ✗  
Replaceable: ✗

### 3.42 Small Tiles

Small tiles for construction of floors and walls.

ID: TilesSmall  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.43 Large Tiles

Large tiles for construction of floors and walls.

ID: TilesLarge  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.44 Black Checkerboard Tiles

Black checkerboard tiles come in different colors.

ID: TilesCheckerboardBlack  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.45 White Checkerboard Tiles

White checkerboard tiles come in different colors.

ID: TilesCheckerboardWhite  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.46 Bricks

Bricks are a simple construction material.

ID: Bricks  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.47 Paving Stone

Paving stone is a simple construction material, ideal for paths.

ID: PavingStone  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.48 Red Plastic

Red plastic is a construction material.

ID: RedPlastic  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.49 Concrete

Concrete is a flexible construction material that can have different heights and colors. It can be build using liquid concrete.

ID: Concrete  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.50 Stone Face

This block is like a processed stone block, but with a decorative face added.

ID: StoneFace  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.51 Vase

The vase is a decorative block that must be placed on solid ground.

ID: Vase  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.52 Bed

The bed can be placed to set a different spawn point. It is possible to change to color of a bed.

ID: Bed  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.53 Wool

Wool is a flammable material, that allows its color to be changed.

ID: Wool  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.54 Decorated Wool

Decorated wool is similar to wool, decorated with golden ornaments.

ID: WoolDecorated

Solid: ✓

Interactions: ✓

Replaceable: ✗

### 3.55 Carpet

Carpets can be used to cover the floor. Their color can be changed.

ID: Carpet

Solid: ✓

Interactions: ✓

Replaceable: ✗

### 3.56 Decorated Carpet

Decorated carpets are similar to carpets, decorated with golden ornaments.

ID: CarpetDecorated

Solid: ✓

Interactions: ✓

Replaceable: ✗

### 3.57 Glass Pane

Glass panes are a thin alternative to glass blocks. They connect to some neighboring blocks.

ID: GlassPane

Solid: ✓

Interactions: ✗

Replaceable: ✗

### 3.58 Bars

Steel bars are a thin, but strong barrier.

ID: Bars

Solid: ✓

Interactions: ✗

Replaceable: ✗



### 3.59 Wooden Fence

The wooden fence can be used as way of marking areas. It does not prevent jumping over it. As this fence is made out of wood, it is flammable. Fences can connect to other blocks.

ID: FenceWood  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.60 Rubble Wall

The rubble wall is a stone barrier that can be used as a way of marking areas. They do not prevent jumping over it, and can connect to other blocks.

ID: WallRubble  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.61 Brick Wall

The brick wall is similar to all other walls, and made out of bricks. They do not prevent jumping over them, and can connect to other blocks.

ID: WallBricks  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.62 Steel Door

The steel door allows closing of a room. It can be opened and closed.

ID: DoorSteel  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.63 Wooden Door

The wooden door allows closing of a room. It can be opened and closed. As this door is made out of wood, it is flammable.

ID: DoorWood  
Solid: ✓

Interactions: ✓  
Replaceable: ✗

### 3.64 Wooden Gate

Fence gates are meant as a passage through fences and walls.

ID: GateWood  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.65 Barrier

The liquid barrier can be used to control liquid flow. It can be opened and closed. It does not prevent gasses from flowing through it.

ID: LiquidBarrier  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.66 Steel Pipe

The industrial steel pipe can be used to control liquid flow. It connects to other pipes.

ID: SteelPipe  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.67 Wooden Pipe

The wooden pipe offers a primitive way of controlling liquid flow. It connects to other pipes.

ID: WoodenPipe  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.68 Straight Steelpipe

This pipe is a special steel pipe that can only form straight connections. It is ideal for parallel pipes.

ID: StraightSteelPipe  
Solid: ✓  
Interactions: ✗  
Replaceable: ✗

### 3.69 Valve Pipe

This is a special steel pipe that can be closed. It prevents all fluid flow.

ID: PipeValve  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.70 Pump

The pump can lift liquids up when interacted with. It can only lift up to a threshold of 16 blocks.

ID: Pump  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.71 Fire

Fire is a dangerous block that spreads onto nearby flammable blocks. When spreading, fire burns blocks which can destroy them.

ID: Fire  
Solid: ✗  
Interactions: ✗  
Replaceable: ✓

### 3.72 Pulsating Block

This is a magical pulsating block.

ID: Pulsating  
Solid: ✓  
Interactions: ✓  
Replaceable: ✗

### 3.73 Eternal Flame

The eternal flame, once lit, will never go out naturally.

ID: `EternalFlame`

Solid: ✓

Interactions: ✗

Replaceable: ✗

### 3.74 Path

The path is a dirt block with its top layer trampled.

ID: `Path`

Solid: ✓

Interactions: ✗

Replaceable: ✗

## 4 Liquids

### 4.1 No Liquid

The absence of a liquid.

ID: `None`

Viscosity: 1

Density: 1.2

### 4.2 Water

Water is a basic fluid, that allows the player to swim relatively easily.

ID: `Water`

Viscosity: 15

Density: 997

### 4.3 Milk

Milk is a white liquid that is obtained from animals.

ID: `Milk`

Viscosity: 30

Density: 1033

#### 4.4 Steam

Steam is a gas created when water is heated.

ID: **Steam**

Viscosity: 3

Density: 0.5

#### 4.5 Lava

Lava is a hot liquid, made out of molten stone. It burns flammable objects.

ID: **Lava**

Viscosity: 225

Density: 3100

#### 4.6 Crude Oil

Crude oil is a flammable liquid with a high viscosity. It is lighter than water.

ID: **CrudeOil**

Viscosity: 120

Density: 870

#### 4.7 Natural Gas

Natural gas is a flammable gas.

ID: **NaturalGas**

Viscosity: 7

Density: 0.8

#### 4.8 Concrete

Concrete is a liquid that hardens when staying still for some time, forming concrete blocks.

ID: **Concrete**

Viscosity: 150

Density: 2400

#### 4.9 Honey

Honey is a thick liquid.

ID: **Honey**

Viscosity: 300

Density: 1450

## 4.10 Petrol

Petrol is a flammable liquid.

ID: `Petrol`

Viscosity: 13

Density: 740

## 4.11 Wine

Wine is a reddish liquid.

ID: `Wine`

Viscosity: 21

Density: 1090

## 4.12 Beer

Beer is a brown liquid.

ID: `Beer`

Viscosity: 22

Density: 1030

# 5 Controls

## 5.1 Fullscreen

The key is bound to `F11` per default.

## 5.2 Toggle UI

The key is bound to `F10` per default.

## 5.3 Screenshot

The key is bound to `F12` per default.

## 5.4 Console

The key is bound to `F1` per default.

## 5.5 Debug View

The key is bound to `F2` per default.

## 5.6 Escape

The key is bound to `Escape` per default.

## 5.7 Forwards

The key is bound to `W` per default.

## 5.8 Backwards

The key is bound to `S` per default.

## 5.9 Strafe Right

The key is bound to `D` per default.

## 5.10 Strafe Left

The key is bound to `A` per default.

## 5.11 Sprint

The key is bound to `ShiftLeft` per default.

## 5.12 Jump

The key is bound to `Space` per default.

## 5.13 Interact / Place

The key is bound to `Right` per default.

## 5.14 Destroy

The key is bound to `Button1` per default.

## 5.15 Force Interaction

The key is bound to `ControlLeft` per default.

## 5.16 Placement Mode

The key is bound to `R` per default.

## 5.17 Next Placement

The key is bound to `KeypadPlus` per default.

## 5.18 Previous Placement

The key is bound to `KeypadMinus` per default.