# VoxelGame User Manual

pershingthesecond January 19, 2023

# Contents

1	Wel	come!	5
2	Vers	sions	5
3	Bloc	cks	5
	3.1	Air	5
	3.2	Grass	5
	3.3	Ash-covered Dirt	5
	3.4	Dirt	6
	3.5	Farmland	6
	3.6	Tall Grass	6
	3.7	Very Tall Grass	6
	3.8	Flower	6
	3.9	Tall Flower	7
	3.10	Stone	7
	3.11	Rubble	7
		Mud	7
		Pumice	7
	3.14	Obsidian	8
	3.15	Snow	8
		Leaves	8
		Log	8
		Wood	8
	3.19	Sand	9
		Gravel	9
	3.21	Coal Ore	9
		Iron Ore	9
		Gold Ore	9
		Ash	10
	3.25	Cactus	10
		Pumpkin	10
		Melon	10
		Spider Web	10
		Vines	11
		Flax	11
		Potatoes	11
		Onions	11
		Wheat	11
		Maize	12
		Pumpkin Plant	12
		Melon Plant	12
		Glass	12
		Tiled Glass	12
		Steel	12

	3.40	Worked Stone	13
	3.41	Ladder	13
	3.42	Small Tiles	13
			13
		9	14
			$^{-4}$
			$\frac{14}{14}$
			$\frac{11}{14}$
			$\frac{14}{14}$
			$15^{14}$
			$15 \\ 15$
			$\frac{15}{15}$
			15
			15
			16
		T · ·	16
	3.56	· · · · · · · · · · · · · · · · · · ·	16
			16
	3.58	Bars	16
	3.59	Wooden Fence	17
	3.60	Rubble Wall	17
			17
			17
			17
			18
			$\frac{18}{18}$
			18
			18
			$\frac{18}{18}$
			$\frac{10}{19}$
			19 19
			19 19
			-
		8	19
			$\frac{20}{20}$
	3.74	Path	20
4	Liqu	nide .	20
4	-		20
		1	
	4.2		$\frac{20}{20}$
	4.3		$\frac{20}{21}$
	4.4		21
	4.5		21
	4.6		21
	4.7		21
	4.8	Concrete	21
	4.9	Honey	21

	4.10	Petrol													22
	4.11	Wine													22
		Beer													22
5	Con	${ m trols}$													22
	5.1	Fullscreen													22
	5.2	Toggle UI													22
	5.3	Screenshot													22
	5.4	$Console \ \dots \ \dots$													22
	5.5	Debug View													22
	5.6	Escape													23
	5.7	Forwards													23
	5.8	Backwards													23
	5.9	Strafe Right													23
	5.10	_													23
	5.11	Sprint													23
	5.12	Jump													23
	5.13	Interact / Place													23
	5.14	Destroy													23
		Force Interaction .													23
		Placement Mode .													23
		Next Placement													23
		Previous Placement													24

# 1 Welcome!

Thank you for downloading VoxelGame. This manual gives you a (limited) overview of the game's features and how to use them. Do not expect much from the game, playability is not the main focus of this project.

# 2 Versions

- 1.0.0 The First Release
- 1.1.0 The World Update
- 1.2.0 The Block Update
- 1.3.0 The Water Update

# 3 Blocks

### 3.1 Air

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

ID: Air Solid:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\checkmark$ 

### 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:  $\checkmark$  Interactions:  $\cancel{\times}$  Replaceable:  $\cancel{\times}$ 

# 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:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\checkmark$ 

# 3.7 Very Tall Grass

A much larger version of the normal tall grass.

ID: VeryTallGrass Solid:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\boldsymbol{X}$ 

### 3.8 Flower

A simple flower.

ID: Flower Solid:  $\boldsymbol{\mathsf{X}}$  Interactions:  $\boldsymbol{\mathsf{X}}$  Replaceable:  $\boldsymbol{\checkmark}$ 

#### Tall Flower 3.9

A very tall flower.

ID: TallFlower

Solid:  $\boldsymbol{X}$ Interactions:  $\boldsymbol{X}$ Replaceable:  $\boldsymbol{X}$ 

#### 3.10 Rubble

When stone is destroyed, rubble is what remains.

ID: Rubble

Solid:  $\checkmark$  Interactions:  $\checkmark$ 

Replaceable:  $\boldsymbol{X}$ 

#### Mud 3.11

Mud is created when water and dirt mix.

ID: Mud

Solid:  $\checkmark$  Interactions:  $\checkmark$ 

Replaceable: X

#### 3.12 **Pumice**

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

ID: Pumice

Solid: ✓

Interactions:  $\boldsymbol{X}$ 

Replaceable:  $\boldsymbol{X}$ 

#### 3.13 Obsidian

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

 ${\rm ID}\colon {\tt Obsidian}$ 

Solid: ✓

Interactions: X

Replaceable: X

# 3.14 Snow

Snow covers the ground, and can have different heights.

```
ID: Snow Solid: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

### 3.15 Leaves

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

```
ID: Leaves Solid: \checkmark Interactions: \nearrow Replaceable: \nearrow
```

# 3.16 Log

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

```
ID: Log Solid: \checkmark Interactions: X Replaceable: X
```

# 3.17 Wood

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

```
ID: Wood Solid: \checkmark Interactions: X Replaceable: X
```

## 3.18 Sand

Sand naturally forms and allows water to flow through it.

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

# 3.19 Gravel

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

ID: Gravel Solid:  $\checkmark$  Interactions:  $\nearrow$  Replaceable:  $\nearrow$ 

# 3.20 Coal Ore

Coal ore is stone that contains coal.

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

# 3.21 Iron Ore

Iron ore is stone that contains iron.

ID: OreIron
Solid: 

✓
Interactions: 

Replaceable: 

✓

# 3.22 Gold Ore

Gold ore is stone that contains gold.

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

# 3.23 Ash

Ahs is the remainder of burning processes.

ID: Ash Solid:  $\checkmark$  Interactions: X Replaceable: X

# 3.24 Cactus

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

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

# 3.25 Pumpkin

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

ID: Pumpkin
Solid: 

✓
Interactions: 

Replaceable: 

✓

### **3.26** Melon

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

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

# 3.27 Spider Web

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

ID: Spiderweb Solid:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\boldsymbol{X}$ 

### **3.28** Vines

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

ID: Vines Solid:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\boldsymbol{X}$ 

# 3.29 Flax

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

ID: Flax Solid:  $\boldsymbol{X}$  Interactions:  $\boldsymbol{X}$  Replaceable:  $\boldsymbol{X}$ 

# 3.30 Potatoes

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

ID: Potatoes Solid: **X** Interactions: **X** Replaceable: **X** 

### 3.31 Onions

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

 $\begin{array}{c} \text{ID: Onions} \\ \text{Solid: } \pmb{\times} \\ \text{Interactions: } \pmb{\times} \\ \text{Replaceable: } \pmb{\times} \end{array}$ 

# 3.32 Wheat

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

ID: Wheat Solid: **X**Interactions: **X**Replaceable: **X** 

# 3.33 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: 

X

#### **Pumpkin Plant** 3.34

The pumpkin plant grows pumpkin fruits.

ID: PumpkinPlant

Solid: X Interactions:  $\boldsymbol{X}$ 

Replaceable:  $\boldsymbol{X}$ 

#### Melon Plant 3.35

The melon plant grows melon fruits.

ID: MelonPlant

Solid: X

Interactions: X Replaceable:  $\boldsymbol{X}$ 

#### 3.36 Glass

Glass is transparent block.

ID: Glass

Solid: 🗸

Interactions: X Replaceable: X

#### 3.37 Tiled Glass

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

 ${\rm ID}\colon {\tt GlassTiled}$ 

Solid: 🗸

Interactions:  $\boldsymbol{X}$ Replaceable: X

#### 3.38 Steel

The steel block is a metal construction block.

ID: Steel

Solid: ✓

Interactions: X

Replaceable:  $\boldsymbol{X}$ 

# 3.39 Worked Stone

Worked stone is a processed stone block.

ID: StoneWorked

Solid:  $\checkmark$  Interactions: X Replaceable: X

### 3.40 Ladder

A ladder allows climbing up and down.

ID: Ladder

Solid: X

Interactions:  $\boldsymbol{\chi}$ 

Replaceable: X

# 3.41 Small Tiles

Small tiles for construction of floors and walls.

ID: TilesSmall

Solid: 🗸

Interactions: X

Replaceable: X

# 3.42 Large Tiles

Large tiles for construction of floors and walls.

ID: TilesLarge

Solid: 🗸

Interactions: X Replaceable: X

# 3.43 Black Checkerboard Tiles

Black checkerboard tiles come in different colors.

ID: TilesCheckerboardBlack

Solid: ✓

Interactions:  $\checkmark$ 

Replaceable: X

# 3.44 White Checkerboard Tiles

White checkerboard tiles come in different colors.

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

### 3.45 Bricks

Bricks are a simple construction material.

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

# 3.46 Paving Stone

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

# 3.47 Red Plastic

Red plastic is a construction material.

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

### 3.48 Concrete

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

ID: Concrete Solid:  $\checkmark$  Interactions:  $\checkmark$  Replaceable:  $\checkmark$ 

# 3.49 Stone Face

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

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

### 3.50 Vase

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

```
ID: Vase Solid: \checkmark Interactions: \cancel{\times} Replaceable: \cancel{\times}
```

### 3.51 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: \checkmark Interactions: \checkmark Replaceable: X
```

### 3.52 Wool

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

```
ID: Wool Solid: \checkmark Interactions: \checkmark Replaceable: \nearrow
```

### 3.53 Decorated Wool

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

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

# 3.54 Carpet

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

ID: Carpet Solid:  $\checkmark$  Interactions:  $\checkmark$  Replaceable:  $\nearrow$ 

# 3.55 Decorated Carpet

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

ID: CarpetDecorated
Solid: ✓
Interactions: ✓
Replaceable: ✗

### 3.56 Glass Pane

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

ID: GlassPane Solid: ✓ Interactions: ✗ Replaceable: ✗

### 3.57 Bars

Steel bars are a thin, but strong barrier.

ID: Bars Solid:  $\checkmark$  Interactions:  $\cancel{\times}$  Replaceable:  $\cancel{\times}$ 

### 3.58 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: X

#### 3.59 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: \checkmark Interactions: \cancel{\times} Replaceable: \cancel{\times}
```

# 3.60 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: ✗
```

### 3.61 Steel Door

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

```
ID: DoorSteel Solid: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

### 3.62 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: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

### 3.63 Wooden Gate

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

ID: GateWood

```
Solid: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

### 3.64 Barrier

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

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

# 3.65 Steel Pipe

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

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

# 3.66 Wooden Pipe

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

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

# 3.67 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: ✗
```

# 3.68 Valve Pipe

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

```
ID: PipeValve Solid: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

# 3.69 Pump

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

```
ID: Pump Solid: \checkmark Interactions: \checkmark Replaceable: \checkmark
```

# 3.70 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: ✓
```

# 3.71 Pulsating Block

This is a magical pulsating block.

```
ID: Pulsating
Solid: 

✓
Interactions: 
✓
Replaceable: 

✓
```

### 3.72 Eternal Flame

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

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

# 3.73 Path

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

ID: Path Solid:  $\checkmark$  Interactions:  $\nearrow$  Replaceable:  $\nearrow$ 

# 3.74 Granite

Granite is found next to volcanic activity.

ID: Granite
Solid: 

✓
Interactions: 

Replaceable: 

✓

### 3.75 Sandstone

Sandstone is found all over the world and especially in the desert.

ID: Sandstone
Solid: 

✓
Interactions: 

Replaceable: 

✓

### 3.76 Limestone

Limestone is found all over the world and especially in oceans.

ID: Limestone
Solid: 

✓
Interactions: 

Replaceable: 

✓

# 3.77 Marble

Marble is a rarer stone type.

ID: Marble Solid: ✓
Interactions: ✗
Replaceable: ✗

# 3.78 Clay

Clay is found beneath the ground and blocks ground water flow.

ID: Clay Solid: ✓ Interactions: ✗ Replaceable: ✗

# 3.79 Permafrost

Permafrost is a type of soil that is frozen solid.

ID: Permafrost
Solid: 

✓
Interactions: 

\*\*Replaceable: 

\*\*Replaceable:

### 3.80 Core

The core of the world, which is found at the lowest level.

ID: Core Solid: ✓ Interactions: ✗ Replaceable: ✗

# 3.81 Ice

A block made out of frozen water.

ID: Ice Solid:  $\checkmark$  Interactions:  $\checkmark$  Replaceable:  $\checkmark$ 

# 3.82 Error

An error block, used as fallback when structure operations fail.

ID: Error Solid: ✓
Interactions: ✗
Replaceable: ✗

#### Roots 3.83

Roots grow at the bottom of trees.

ID: Roots

Solid:  $\checkmark$  Interactions:  $\checkmark$ 

Replaceable:  $\pmb{\varkappa}$ 

#### **Fluids** 4

#### No Fluid 4.1

The absence of a fluid.

ID: None

Viscosity: 1

Density: 1.2000000476837158

#### 4.2 Water

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

ID: Water

Viscosity: 15

Density: 997

#### Milk 4.3

Milk is a white fluid 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 fluid, made out of molten stone. It burns flammable objects.

ID: Lava Viscosity: 225 Density: 3100

### 4.6 Crude Oil

Crude oil is a flammable fluid 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: 0.800000011920929

# 4.8 Concrete

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

ID: Concrete Viscosity: 150

Density: 2400

# 4.9 Honey

Honey is a thick fluid.

ID: Honey Viscosity: 300 Density: 1450

### 4.10 Petrol

Petrol is a flammable fluid.

ID: Petrol

Viscosity: 13

Density: 740

### 4.11 Wine

Wine is a reddish fluid.

ID: Wine Viscosity: 21 Density: 1090

# 4.12 Beer

Beer is a brown fluid.

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 LeftShift per default.

### 5.12 Jump

The key is bound to Space per default.

### 5.13 Crouch

The key is bound to  $\bigcirc$  per default.

# 5.14 Interact / Place

The key is bound to Button2 per default.

### 5.15 Destroy

The key is bound to Button1 per default.

### 5.16 Force Interaction

The key is bound to LeftControl per default.

# 5.17 Placement Mode

The key is bound to R per default.

# 5.18 Next Placement

The key is bound to KeyPadAdd per default.

### 5.19 Previous Placement

The key is bound to KeyPadSubtract per default.

# 5.20 Select Targeted

The key is bound to Middle per default.