

# # RVM Rimworld Visual Mod Maker Installation and Usage Guide - Beta 1.0

[Github](#)

## [Foreword]

This project aims to provide a visual, modular, and simple RimWorld mod development tool for people who are unfamiliar with programming.

**Please note: Any installation or download of this project and tutorial is at your own risk. Although the author has personally tested it and believes it works without problems, the author is not a professional and therefore cannot provide any guarantees and is not responsible for any consequences.**

## [Part A. How to install and run the project]

### [1. Installation][Node.js](#)]

Node.js is a necessary module package for this project. Go to the Node.js official website to download and install Node.js.

<https://nodejs.org/en/download>(For mainland China: <https://nodejs.org/zh-cn/download/>)

## Download Node.js®

Get Node.js® v24.16.0 LTS for Windows using Docker with npm

Info Want new features sooner? Get the [latest Node.js version](#) instead and try the latest improvements!

```
1 # Docker has specific installation instructions for each operating system.
2 # Please refer to the official documentation at https://docker.com/get-started/
3
4 # Pull the Node.js Docker image:
5 docker pull node:24-slim
6
7 # Create a Node.js container and start a Shell session:
8 docker run -it --rm --entrypoint sh node:24-slim
9
10 # Verify the Node.js version:
11 node -v # Should print "v24.16.0".
12
13 # Verify npm version:
14 npm -v # Should print "11.13.0".
```

PowerShell

[Copy to clipboard](#)

Docker is a containerization platform. If you encounter any issues please visit [Docker's website](#)

Or get a prebuilt Node.js® for Windows running a x64 architecture.

[Windows Installer \(.msi\)](#)

[Standalone Binary \(.zip\)](#)

Read the [changelog](#) or [blog post](#) for this version.

Learn more about Node.js releases, including the release schedule and LTS status.

After downloading, double-click the installation package and install it to the drive where you want to run the software.

During installation, generally keep clicking Next and then Install. If you see an option like "Add to PATH," please keep it checked; if you don't see it, continue the installation.

After installation, check if the installation was successful.

Press the keyboard Win + R , enter cmd , Press Enter to open the terminal.

In the black terminal window, type and press Enter:

```
node -v
```

If the version number is displayed, then Node.js has been successfully installed.

## [2. Install and run this project]

[Install]

[Github](#)

Download the project's compressed file and extract it to a folder with a structure similar to this.

Name	Date modified	Type	Size
src	2026-06-06 2:37 PM	File folder	
index.html	2026-06-06 3:13 PM	Microsoft Edge H...	1 KB
package.json	2026-06-06 3:13 PM	JSON 源文件	1 KB
tsconfig.json	2026-06-06 2:37 PM	JSON 源文件	1 KB
vite.config.js	2026-06-06 2:37 PM	JavaScript File	3 KB

Press Win+R again, type cmd to open the terminal, and type "cd your folder path" to go to your folder.

Simply type:

```
npm install --registry=https://registry.npmjs.org/ --no-audit --no-fund --ignore-scripts --verbose
```

Or you could try to download it yourself first.[node.js](https://nodejs.org/)The node\_modules folder. After a normal download is complete, the folder will look something like this.

Name	Date modified	Type	Size
node_modules	2026-06-06 3:28 PM	File folder	
src	2026-06-06 2:37 PM	File folder	
index.html	2026-06-06 3:13 PM	Microsoft Edge H...	1 KB
package.json	2026-06-06 3:13 PM	JSON 源文件	1 KB
package-lock.json	2026-06-06 3:28 PM	JSON 源文件	39 KB
tsconfig.json	2026-06-06 2:37 PM	JSON 源文件	1 KB
vite.config.js	2026-06-06 2:37 PM	JavaScript File	3 KB

If the installation completes normally without any errors, then it should be successful.

**To reiterate, I have tested this method and it works, but I am not a professional and make no guarantees or assume any responsibility for the installation and download of resources from third-party websites.**

**[run]**

If all the above steps are performed correctly, then you can run this project.

Open a terminal within the folder, or navigate to the folder using the `cd` command, and type the following in the terminal:

```
npm run web
```

Press Enter to run.

If the pop-up does not appear automatically, copy the link and paste it into your browser (Chrome is preferred).

```
8943 File(s) copied
> rimworld-visual-mod-maker-v24@0.24.0 web
> vite --host 127.0.0.1

10:56:01 p.m. [vite] (client) Re-optimizing dependencies because vite confi

VITE v6.4.3  ready in 360 ms

- Local:   http://127.0.0.1:5173/
- press h + enter to show help
```

## [Part B. How to use the project]

If you encounter any errors during mod creation or importing into RimWorld, feel free to upload your bug log to GitHub.

Strongly recommend you read 1-4,15-17, the rest you can read as your need

The goal of this editor is:**Create RimWorld Mods through a user interface without writing code or XML by hand.**

All you need to do is fill in the name, values, upload an image, and then export the Mod.

## 1. Basic Usage Procedure

They are usually used in this order:

1. Fill in the basic information for the Mod.
2. Choose the content you want to create: race / item / technology / scenario / narrator, etc.
3. Upload stickers
4. Check the exported page for any errors.
5. Export Mod
6. Place the exported Mod into the RimWorld Mods folder.
7. Enter the game for testing.

If this is your first time making a mod, it is recommended to start with a simple item or a simple race, and not to enable all features at the beginning.

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## 2. Interface Language

There is in the upper right corner:

Interface Language / UI Language

You can switch:

Chinese

English

Note: Even if the interface is in Chinese, some fields must still be in English, for example:

defName  
packageld  
ThingDef  
ScenarioDef  
StorytellerDef  
FactionDef  
GeneDef

These are names used for internal identification within RimWorld and cannot be translated into Chinese.

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## 3. Mod Basic Information

This is a section that must be filled in for every mod.

### Mod Name

These are the names displayed in the game's mod list.

For example:

My First Mod

### Package ID

This is a unique identifier used by RimWorld to determine whether two Mods are the same Mod.

Suggested format:

Author's name. Mod name. Function name

For example:

authorName.myfirstmod

Notice:**Each Mod must have a different packageld.**

If two mods have the same packageld, RimWorld will consider them duplicate mods and may hide one of them.

## Author, Description, Supported Versions

These will be written `About/About.xml` This displays a list of mods used in RimWorld.

Version information is recommended:

1.6

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## 4. Dependencies

If your mod requires other mods to function, add the dependencies here.

For example, custom races typically require:

Humanoid Alien Races

If you use content from a particular DLC, you also need to ensure that the corresponding DLC is enabled. For example:

Biotech  
Ideology  
Anomaly  
Odyssey

Beginners can avoid manually modifying dependencies at first.

When you enable "Custom Race", the editor will automatically handle HAR-related dependencies.

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## 5. Custom Race

This feature is used to create a new available race.

Note: Custom race dependencies **Humanoid Alien Races**。

## Enable custom race

Check the box:

Enable Custom Race / HAR RaceDef

Do not select any race.

## Basic fields

Common fields:

defName: The race's internal name; only English characters are allowed.

label: The name displayed in the game

description: racial description

health scale: life multiplier

move speed: movement speed

melee damage:

For example:

defName: Stonekin

label: stonekin

description: A stone-skinned humanoid race.

## Texture mode

Custom races require uploading body and head textures.

Optional modes:

Shared one set

The same set of stickers is used for both men and women.

Male / Female

Men and women upload stickers separately.

Body type

Upload by body type, such as Thin / Fat / Hulk, etc.

Each body or head set generally requires three images:

Front

Side

Back

The editor will automatically process the direction files required by RimWorld.

## Preserve original texture colors

v50 New Features:

Preserve original texture colors

If you check this option, the game will try to avoid randomly coloring your body texture based on skin tone and instead use colors closer to the original PNG you uploaded.

If you want the game to automatically generate different skin tones, you can leave this option unchecked.

---

## 6. Genes / GeneDef

If you have Biotech installed, you can add genes to your custom races.

It can be added in two ways:

1. Select common genes in the list.
2. Manually enter GeneDef

For example:

MeleeDamage\_Strong  
MoveSpeed\_Quick  
Robust

Note: GeneDef must actually exist.

If you misspell it, the game will report an error.



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## 7. Factions

Factions are used to make your race appear as a force on the world map.

For example:

Stonekin Enclave  
Machine Clan  
Foxkin Tribe

Common fields:

Faction defName: Faction internal name

label: Display name

description: Description

techLevel: Technological Level

leaderTitle: Leader Title

requiredCountAtGameStart: The number of instances that must be generated at the start of the game.

`maxConfigurableAtWorldCreation`: The maximum number of worlds that can be added in the world creation interface.

If you just want to create a race for players, you don't necessarily need to unlock factions.

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## 8. Adding Items

This is one of the most frequently used functions in the editor.

Click:

New item

Then select the item type.

Currently supported:

Generic (common items)

Food

Hair

Apparel Clothing and Equipment  
Weapon  
Buildings

Each item card can be expanded/collapsed, making it easy to manage many items.

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## 9. Weapons

Weapon types currently supported:

Melee weapon  
Single-shot ranged weapon  
Automatic ranged weapon  
Laser/beam weapon

### melee weapons

Main settings:

damage: harm  
cooldown: attack interval  
melee armor penetration: melee armor penetration  
market value: value  
mass: weight  
Work to make: production time  
cost: Material cost

Melee weapons do not display long-range parameters such as range, projectile velocity, and blast radius.

### ordinary ranged weapons

You can set:

damage: harm  
range: firing range  
warmup time: aiming time  
cooldown: cooling  
burst shots: number of shots fired in quick succession  
ticks between burst shots: intervals between consecutive shots  
Ranged armor penetration: Ranged armor penetration

Projectile speed:  
accuracy: accuracy at different distances  
sound preset: Original sound template

Ranged weapons will automatically generate their own projectiles and will no longer directly apply the damage of the original assault rifles.

## Explosive projectiles

If you want to make explosive weapons:

Damage type damageDef: Bomb  
Explosion radius: greater than 0

For example:

damageDef = Bomb  
explosionRadius = 6

This will generate explosive projectiles.

## Laser/beam weapons

The laser weapon uses the original Beam Repeater class logic as a reference.

You can set:

beam width: beam width  
beam full-width range: the distance the beam maintains its width  
beam visual preset: Beam visual effect  
beam sound preset: beam sound  
damageDef: Damage type, usually represented by Beam.

If you can't see a clear beam, try different Beam visual presets.

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# 10. Buildings

Version 38 and later versions support adding buildable objects.

Item type selection:

## Building

Can be done:

furniture  
decorations  
Simple facilities  
Static architecture  
Commonly buildable ornaments

Common settings:

Size X / Size Y: Area Size  
Max hit points: Durability  
Fill percent: degree of fill  
Passability: Whether it can be passed  
Designation category: Which category does it appear in the architecture menu?  
Work to build: Construction time  
Steel cost: the cost of steel production  
Component cost: cost of spare parts  
Made from stuff: Whether a material system is used  
Research prerequisite: Pre-existing technology

Recommendations for testing:

designationCategory = Furniture  
researchPrerequisite (Leave blank)  
Close madeFromStuff first

This is the easiest way to find it in the game's building menu.

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## 11. Technology Tree

The technology tree feature is used to add new research projects.

After clicking "Add Technology," you can fill in:

Research defName  
label  
description  
baseCost  
techLevel

prerequisites  
research view X  
research view Y

## Tech tree ownership

Supported after v34:

Merge into the original tech tree  
Create a new independent technology tree

If you select "Merge to original tech tree", the technology will be added to the main tech tree.

If you select "Create a new independent technology tree", the editor will generate a new ResearchTab, allowing your technology to appear in a separate tab.

## Front-end technology

Please separate multiple front-facing technologies with commas:

Microelectronics,Smithing

Do not use Chinese commas:

Microelectronics, Smithing

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## 12. The Narrator

This feature is used to add new AI Storytellers, rather than overwriting the original Cassandra/Phoebe/Randy.

You can set:

defName  
label  
description  
baseProfile  
portraitLarge  
portraitTiny  
population targets  
event rhythm

## baseProfile

Simply put:

Cassandra: Classic Rhythm

Phoebe: Relatively flat

Randy: Highly random

If you are unfamiliar with these parameters, it is recommended to use the Cassandra template first.

## avatar

You can upload:

portraitLarge: Large Headshot

portraitTiny: Small portrait

If the profile picture is too large, it is recommended to compress it into PNG format first; otherwise, the browser may slow down.

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# 13. Script

The script determines the player's starting conditions.

You can set:

startingPawnCount: The number of characters selected at the start.

chooseFromPawnCount: Number of candidates in the pool

startWithSilver: Starting Silver

startWithPackagedMeals: Packaged Survival Meals

startWithMedicine: Medicine

startWithComponents: Components

startWithSteel: Steel

Player faction: Players begin forming factions

## Players start factions

You can choose:

New arrivals / PlayerColony

New tribe / PlayerTribe

## Force starting character to use custom race

If you have enabled custom races, you can check the following box:

Force starting pawns to use custom race

This feature in v50 offers two modes:

Stable custom race start

Experimental candidate pool

Recommended for regular users:

Stable custom race start

It is more stable, but the candidate pool may still be limited by the RimWorld/HAR mechanism.

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## 14. Material Management

The materials page is used to view which PNGs you have uploaded.

You can check:

Which textures have been uploaded?

Which textures are missing?

Is the texture path correct?

It is recommended that all textures use:

.png

Do not use:

.jpg

.webp  
.bmp

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## 15. Export

Exporting the page will generate a Mod ZIP file that can be placed into RimWorld.

Exported playable mods typically only contain:

About/  
Defs/  
Textures/

Starting with v41:

log  
source project json

It will no longer be included in the Mod archive, but will instead be placed in the editor folder.

For example:

rimworld-visual-mod-maker-v50/logs/  
rimworld-visual-mod-maker-v50/source/

This makes the game's mod packs cleaner.

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## 16. Save and Continue Editing

The editor will automatically save a portion of the project state.

However, for safety reasons, it is recommended to manually export frequently:

Export project JSON

Next time you can:

Import project JSON



Continue editing.

If you plan to create a mod long-term, don't rely solely on browser caching.

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## 17. Methods for testing Mods

### Testing common items/weapons

After entering the game, enable developer mode:

Options -> Development mode

Then use:

Spawn thing

Search your items `defName`.

### Test buildable

Access the building menu:

Architect -> Furniture / Production / Misc / Structure

Find your building's display name.

If you can't find it, search for it in developer mode `defName`.

### Test race

If a custom race is used:

Harmony  
Core / DLC  
Humanoid Alien Races  
Your Mod

The loading order must be correct.

Developer mode can be used:

Spawn pawn

Search your PawnKindDef.

## Test script

When creating a new game, select your custom Scenario.

If forced custom race is enabled, it is recommended to check if the starting character texture is correct.

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# 18. Recommended methods for beginners

For first-time users, it is recommended to learn in this order:

1. Make a regular item.
2. Make a weapon
3. Create a buildable structure.
4. Be a technology
5. Make a script
6. Be a storyteller
7. Finally, try customizing races and factions.

Don't turn on all the features the first time.

This way, if the game throws an error, you'll more easily know which part is causing the problem.

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# 19. Several Important Reminders

1. **defName** Use only English letters, numbers, and underscores as much as possible.
2. **packageId** Each Mod must be unique.
3. Multiple items are separated by English commas.
4. Before testing the new version, delete the old exported Mod folder.
5. Custom races must have Humanoid Alien Races enabled.
6. To use Biotech Genetics or Xenotype, Biotech DLC needs to be enabled.
7. When using Anomaly/Odyssey effects or weapon logic, ensure that the corresponding DLC is enabled.

8. When you encounter red text, first check if your entry is in the log.`packageId`、`defName`Or Mod name.

## [Part C. Known Defects/Bugs]

1. [Defect]: Editing events is not currently supported.
2. [Defect]: Editing animals, plants, mechanical beings, and alien creatures is not currently supported.
3. [Bug]: In the new scenario's character selection interface, only the initially selected race is a custom race; the alternatives are all ordinary humans. Furthermore, clicking "Random" will revert the character's race back to ordinary humans.
4. [Defect]: Animated emoticons for creating races are not currently supported.
5. [Bug]: Even if the option to preserve the original texture colors is checked, the skin tone will still be randomly modified after entering the game.
6. [Deficiency]: Currently does not support editing culture and ideology.
7. [Defect]: Currently does not support importing existing mods not created by this mod maker.
8. [Defect]: The starting character's hair, tattoos, name, beard, etc., are still inherited from ordinary humans and cannot be modified at this time.