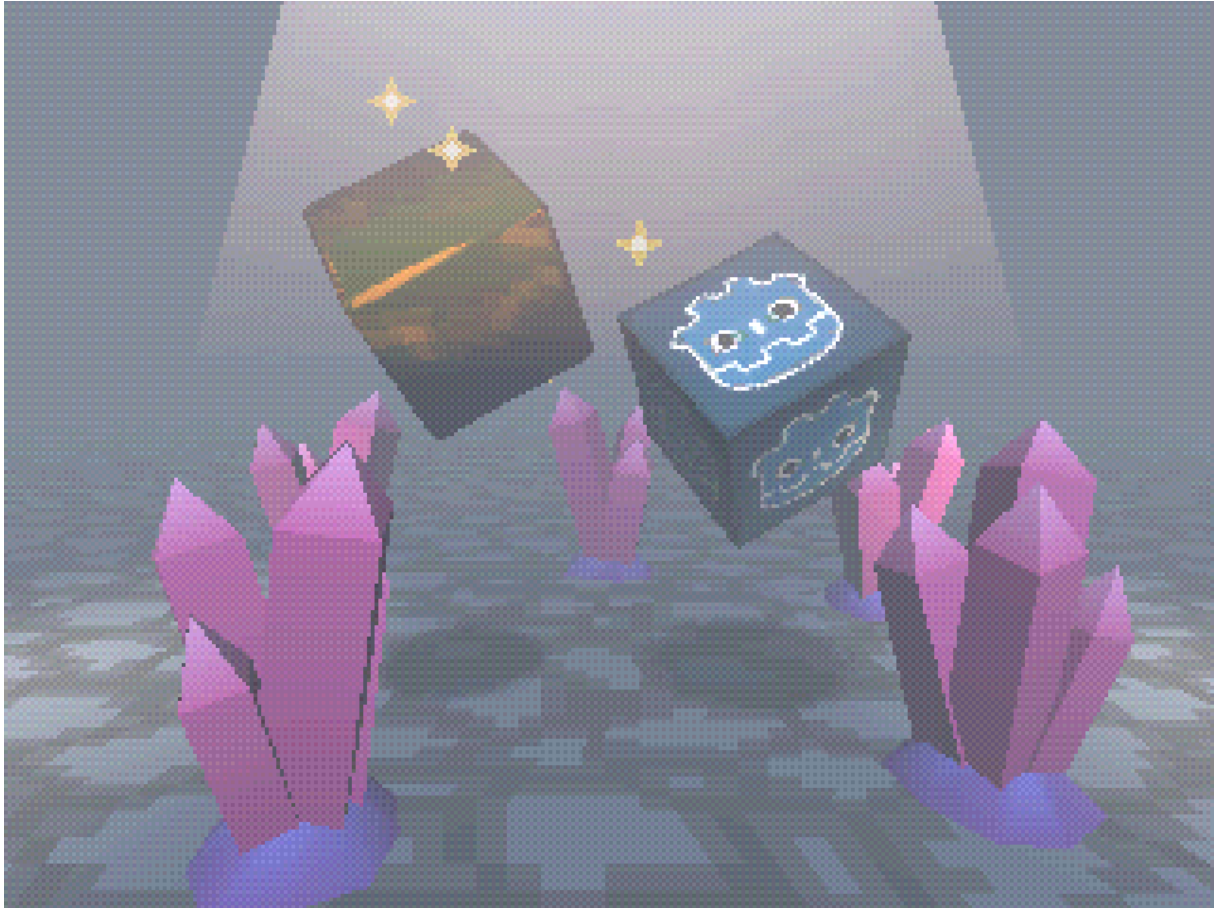

Godot PSX Style Demo

Play demo in browser!



A collection of shaders and materials for Godot engine that aim to recreate the following aspects of the PS1 aesthetic:

- Vertex “snapping”
- “Wobbly” textures through affine texture mapping
- Limited color depth
- Hardware dithering to hide color banding
- Shiny chrome-like metallic surfaces
- Billboard sprites
- Fog to limit draw distance

Originally based on: <https://github.com/marmithTH/godot-psx-shaders>

Floor texture (available under CC-0): <https://stealthix.itch.io/rpg-nature-tileset>

Design Goals

These shaders are focused on having as few parameters as possible to achieve the desired effect of recreating (most of) the PS1's rendering quirks. This is to aid accessibility by way of reducing the amount of things the user has to understand and configure.

However, this is at the cost of customizability; there are fewer parameters to highly tweak how the shaders look versus other projects.

Demo Controls

- Space: Toggle camera and object movement
- R: Reset scene

Usage

Brand new projects

For brand new projects, I would recommend duplicating this project and playing around with things from there.

Existing projects

1. Add the contents of `shaders/` to your project.
2. Add the `precision_multiplier` as a **float** shader global in Project Settings, ensuring it's value is minimum 0 (non-inclusive), and maximum 1 (inclusive).
3. Configure a Dither/Banding viewport shader, using the demo project as reference.

Tips for best results

- Use very low poly models
 - Prefer smooth-shading over flat-shading wherever possible
 - Don't be afraid to include extra edge loops to smooth out texture distortion in your geometry! PS1 levels often had much higher polycounts than you might expect!
- Keep textures as low resolution as you can
 - Make sure filtering and mip-maps are both disabled

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- Rely on a mix of vertex colours and texture maps, instead of higher detailed texture maps wherever possible
 - Posterizing your textures with a depth of 15 or 16 before import goes a long way to making them feel more “PS1”
 - Keep your internal resolution low
 - Common PS1 resolutions were 256×240, 320×240 and 512×240 (Source)
 - That being said, you can easily go widescreen by using a 16:9 resolution with similar height
 - Use as basic of a lighting set up as you can get away with
 - Modern lighting techniques are a very easy way to break the illusion of appearing like early 3D!
 - Where possible, prefer to use white ambient light, with vertex colours on geometry to fake lighting
 - Prefer additive blending to transparent blending

Changes from v1.x

Major version change

This version is for Godot 4.x only. Please refer to the v1.x branch for Godot 3.x support.

Fog

Godot 4.0 changed how environmental fog worked, the key part being the removal of the “start distance” and “end distance” properties. While a manual workaround could be implemented, there is work being done to restore this functionality in a later version.

Runtime options

In order to release working Godot 4 shaders as soon as possible, runtime options for the demo will be re-implemented at a later date.

Games using these shaders (in some form)

- Isle of Dreamers - MenacingMecha
- Inktober 2020 Demo Disc - MenacingMecha

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- Please Don't Feed the Creatures of the Deep - VaporShark
 - Headlines from the Deep - MenacingMecha
 - Beetlebum - MenacingMecha
 - P.O.S.S.U.M. - VaporShark
 - The Deep Ones - bronxtaco

Please submit a PR (or send a message) if you have a title to add!