Version: 3.0.1 (RTX)

(A Vulkan Driver made by Helifax for Stereo3D in Vulkan API. 2021)
Patreon: https://www.patreon.com/Vk3DVision
PayPal: tavyhomeppal@hotmail.com

```
==========================
Supported Rendering Modes:
==========================
```

1.OpenVR:

- Render in Virtual Reality with maximum performance!
  (Performance metrics show only 14% performance loss! vs regular 3DVision/SBS).
 Includes:
- Curved Screen with Lumma Sharpen Shader FULLY TAILORED for Virtual Reality!
- Ability to modify VR Screen Size, VR Screen Height, VR Screen Distance!
- Ability to Reset VR Screen Orientation to where you HMD is looking at!
  (See in-game overlay for controls)

- Full VR Controller mapping to XBOX Controller (via ViGEm) and configurable from SteamVR:
  - To take advantage of this, you will have to first install *ViGem Bus driver* (bundled
    with Vk3DVision). When you start a game using OpenVR, a virtual XBOX Controller will
    be plugged-in and mapped to the VR controllers. All Controller schemes can be
    customized from SteamVR, per game, or to add new controllers.
  - The following Virtual Reality Controllers are supported:

    1. Valve Index Controllers:
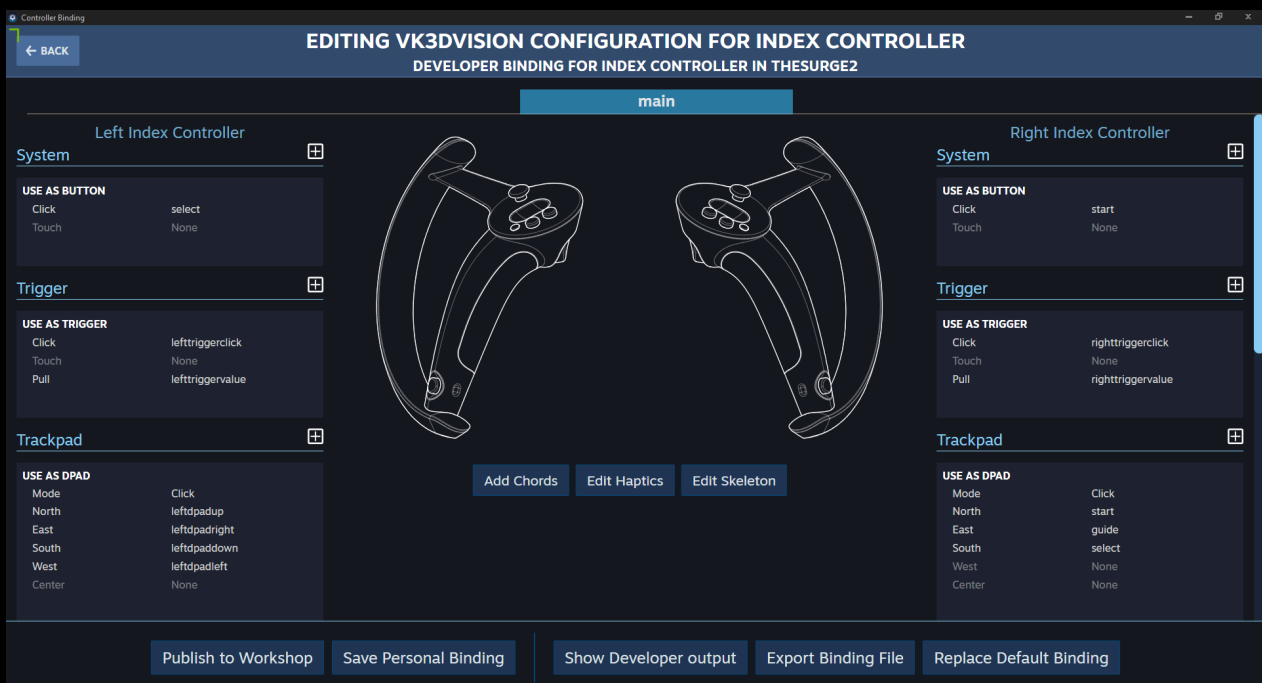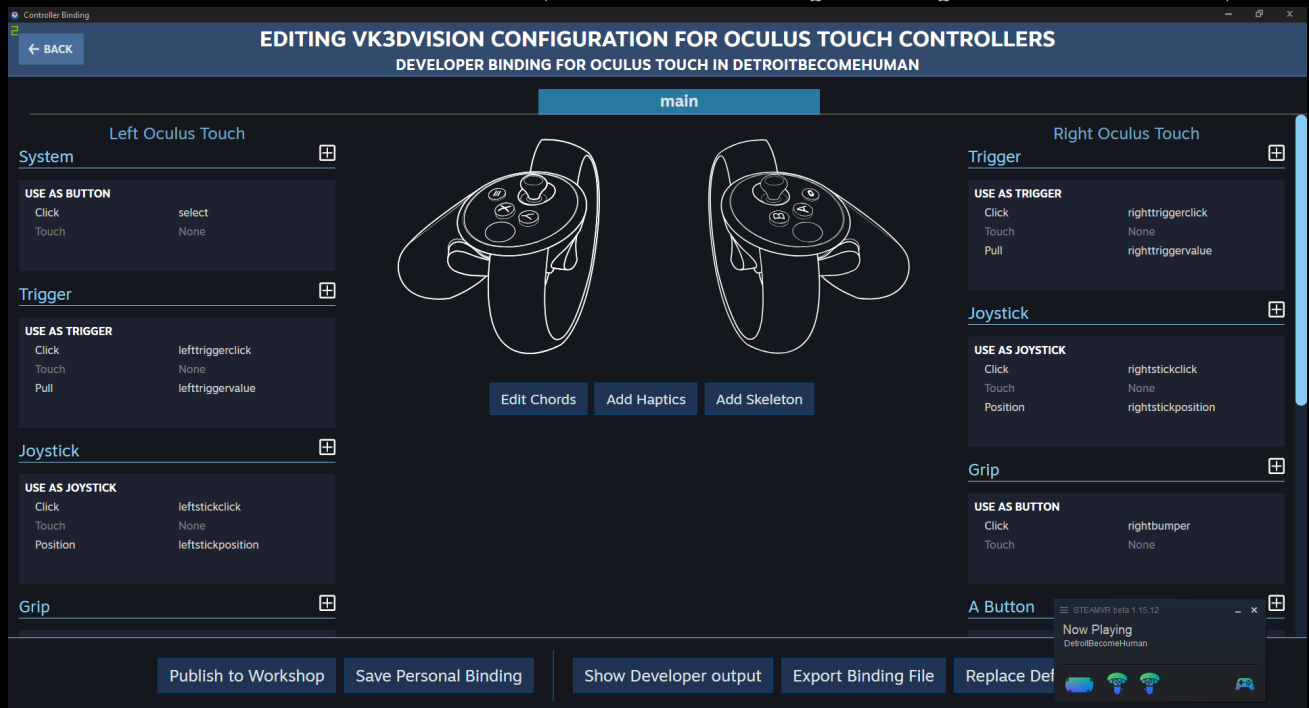
```
|---------------------|------------------|
| Controller Button   | Xbox Button      |
|---------------------|------------------|
| Right B             | B                |
| Right A             | A                |
| Left B              | Y                |
| Left A              | X                |
| Left Trigger        | Left Trigger     |
| Right Trigger       | Right Trigger    |
| Left Middle Finger  | Left Shoulder    |
| Right Middle Finger | Right Shoulder   |
| Left Analog         | Left Analog      |
| Right Analog        | Right Analog     |
| Left Stick          | Left Thumb       |
| Right Stick         | Right Thumb      |
|---------------------|------------------|
| Left Touchpad       | D-PAD            |
|---------------------|------------------|
| Right Touchpad D    | Start            |
| Right Touchpad U    | Back             |
| Right Touchpad R    | Guide            |
|---------------------|------------------|
```

2. HTC Vive Wands:


```
|--------------------------|------------------|
| Controller Button        | Xbox Button      |
|--------------------------|------------------|
| R. Trackpad Click Right  | B                |
| R. Trackpad Click Down   | A                |
| R. Trackpad Click Up     | Y                |
| R. Trackpad Click Left   | X                |
| Left Trigger             | Left Trigger     |
| Right Trigger            | Right Trigger    |
| Left Grip                | Left Shoulder    |
| Right Grip               | Right Shoulder   |
|--------------------------|------------------|
| Left Trackpad            | Left Analog      |
| Right Trackpad           | Right Analog     |
| L. Trackpad Centre Click | Left Thumb       |
| R. Trackpad Centre Click | Right Thumb      |
|--------------------------|------------------|
| Left Trackpad Click      | D-PAD            |
|--------------------------|------------------|
| Right Menu               | Start            |
| Left Menu                | Back             |
|--------------------------|------------------|
```

3. Oculus Touch Controllers (Oculus Rift S & Quest & Quest 2 — via Link)


```
|----------------------|------------------|
| Controller Button    | Xbox Button      |
|----------------------|------------------|
| Right B              | B                |
| Right A              | A                |
| Left Y               | Y                |
| Left X               | X                |
| Left Trigger         | Left Trigger     |
| Right Trigger        | Right Trigger    |
| Left Grip            | Left Shoulder    |
| Right Grip           | Right Shoulder   |
| Left Analog          | Left Analog      |
| Right Analog         | Right Analog     |
| Left Stick           | Left Thumb       |
| Right Stick          | Right Thumb      |
|----------------------|------------------|
| L Trigger + X        | D-PAD Down       |
| L Trigger + Y        | D-PAD Up         |
| L Trigger + A        | D-PAD Left       |
| L Trigger + B        | D-PAD Right      |
|----------------------|------------------|
| L Grip + L Trigger + X | Back           |
| R Grip + R Trigger + A | Start          |
|----------------------|------------------|
```

2. *HelixVisionVR:*

- Requires HelixVision (https://store.steampowered.com/app/1127310/HelixVision/). Provides a bigger performance impact (approx. 35%) compared to OpenVR mode, but has other features.

3. *3DVision:*

- Uses *DX9* to render.
- *Works on Nvidia driver ABOVE 452.06.*
- Requires Nvidia 3D Vision Driver!
  (DO NOT USE ANY OVERLAYS or Performance will be severely affected!)
- Note: Separation and Convergence are used from "Vk3DVision.ini" and not from the 3DVision driver!
- *"Fullscreen Optimizations" MUST be disabled! (From the Exe properties page).*

4. 3DVision11:
- Uses **DX11** to render.
- ***Works on Nvidia driver BELOW 452.06 ONLY!***
- Requires Nvidia 3D Vision Driver!
- Note: Separation and Convergence are used from "Vk3DVision.ini" and not from the 3DVision driver!
- *"Fullscreen Optimizations" MUST be disabled! (From the Exe properties page).*

5. SBS_LEFT:
- Side-by-side, left image first.
- No Nvidia 3D Vision Driver is required!

6. SBS_RIGHT:
- Side-by-side, right image first.
- No Nvidia 3D Vision Driver is required!

7. TB_LEFT:
- Top-Bottom, left image at top.
- No Nvidia 3D Vision Driver is required!

8. TB_RIGHT:
- Top-Bottom, right image at top.
- No Nvidia 3D Vision Driver is required!

9. MONO:
- Standard 2D rendering. (Obviously - Default rendering)

=========================
File & Folder Structure:
=========================
- "Vk3DVision" is the working folder where all files & directories used by VK3DVision exist. Files that are outside of this location will not be read:
  - "Vk3DVision.ini" – configuration file. If this file is missing, VK3DVision will act as a passthrough.
  - "ShaderSwap" – folder containing the stereo shaders that are going to be swapped at runtime. (This folder and its content are generated normally from the in-game UI).
  - "ShaderFail" – folder containing the shaders that failed to compile. (If a shader fails to compile, VK3DVision will use the original, unmodified, shader instead and will output the modified source code in this folder, so it can be debugged and fixed for later usage.)
  - "Logo.bmp" – Custom logo that will be displayed when a Vulkan application starts and "VK3DVision" is loading. If this file doesn't exist, the default "Vk3DVision Logo" will be displayed. Recommended image size: 1280x720.
  - "Vk3DFrameSync.dll" – Frame synchronisation module. This is per game and is not supplied with "Vk3DVision". A C++ template will be provided later, to make your own module.

=========================
Getting 3DVision to run:
=========================

- Before using **Vk3DVision**, set your Vulkan game/app to run in Borderless Mode! (Never run it in EXCLUSIVE FULLSCREEN!)
- Make sure the in-game resolution matches your Windows Desktop Resolution *(THIS IS MANDATORY FOR 3D VISION. For other modes, this is not mandatory.)*
- Copy "Vk3DVision" folder (containing "Vk3DVision.ini" + other files) next to the game executable (or working directory of the application).
- In "Vk3DVision.ini" add the name of the application exe you want to render. See **ProcessName** under [General] section. Vk3DVision will only run if the exe name will match, otherwise it will act as a passthrough mode.
- In "Vk3DVision.ini" select your rendering mode.

- Start "Vk3DVision.exe":
    o "Vk3DVision.exe" can reside in any place. It doesn't need to be in the game folder (it can be on your desktop).
    o This will install a Global Vulkan Layer, meaning any Vulkan application that starts after "Vk3DVision" will now be routed through "Vk3DVision". On start of an application, "Vk3DVision"" will search for "Vk3DVision\Vk3DVision.ini" file in the current working directory of the application. If this file is not found, "Vk3DVision" will act as a passthrough.

```
===================
```
Video Documentation:
```
===================
```

- All supported options are documented in "Vk3DVision.ini". They should provide a clear understanding on what each option does.
- Please watch the video documentation here, on how to get running and start fixing your game: http://3dsurroundgaming.com/Vk3DVisionDocs.html

```
=====================
```
Other Recommendations:
```
=====================
```

- To get the best performance, it is recommended to use the latest Nvidia/AMD drivers.
- For Nvidia 3D Vision, the latest driver still works fine, but only rendering in DirectX 9. DirectX 11 support was removed after driver **452.06**.
- It is recommended to use Windows 10 20H2 (2004) version and enable the GPU HW accelerated scheduling: https://www.windowslatest.com/2020/07/07/enable-windows-10-hardware-accelerated-gpu-scheduling/
- (In Vulkan games the performance can go up by 22.5% based on the tests done in Detroit: Become Human on Turning GPUs.)