

# OVR Advanced Settings

## Getting Started Guide

April 13, 2020

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# 1 Introduction

OVR Advanced Settings, or Advanced Settings, or OVRAS is a desktop overlay utility designed for SteamVR/OpenVR.

This Guide Will tell you how to:

- Migrate from a standalone installation
- How to Set-up your Key-Binds
- Explain all the Features

## 2 Migration from Previous Standalone Install

### 2.1 Automatic

- Navigate to the install Directory (by default: C: \Program Files\OpenVR-AdvancedSettings)
- Run "Uninstall.exe"
- Delete the install directory
- (Recommended) delete settings and log file (by default: %appdata% \AdvancedSettings-Team\ )
- install on Steam

### 2.2 Semi-Manual

- Run "AdvancedSettings.exe" with the command "forceremovemanifest"
- Delete the install directory
- (Recommended) delete settings and log file (by default: %appdata% \AdvancedSettings-Team\ )
- install on Steam

### 2.3 Manually

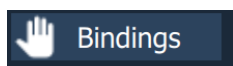
- go to steam install/config directory (by default: C:\Program Files (x86)\Steam\config)
- edit the "appconfig.json" to remove the path pointed to Advanced Settings (by default: "C:\Program Files\OpenVR-AdvancedSettings\manifest.vrmanifest")
- (Recommended) delete install directory
- (Recommended) delete settings/log directory
- install on Steam

## 3 Set Up Your KeyBinds/Actions

### 3.1 Accessing Binding Menu

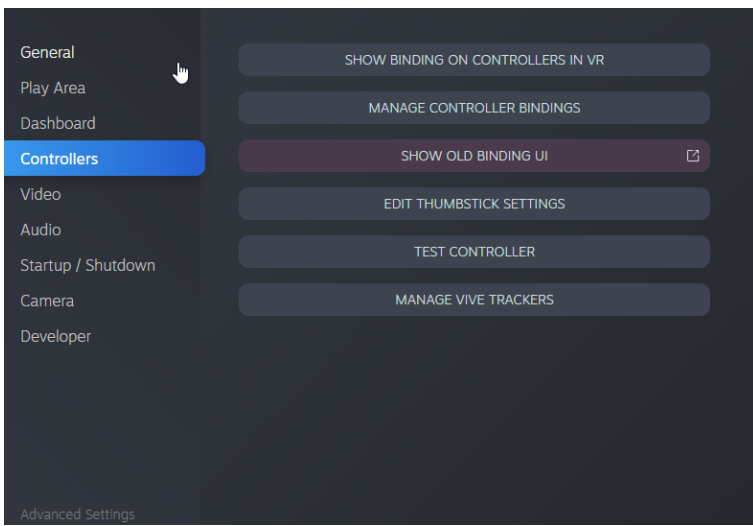
#### 3.1.1 VIA OVRAS

Simply Press the Bindings Button in OVRAS





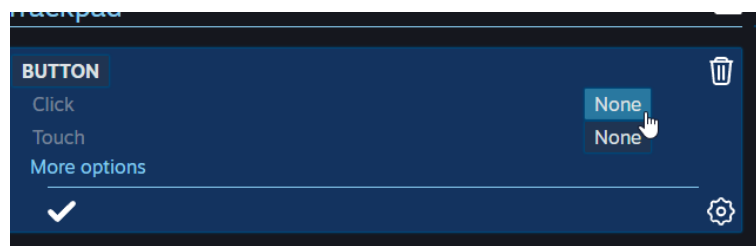
#### 3.1.2 VIA Steam Settings

- In VR or On the widget go to SteamVr's Settings
- go to Controllers And click on "Show Old Binding UI"
- Navigate to "OVR Advanced Settings"



### 3.2 Setting Your Binds

- First you will want to hit the "plus" icon 
- Now you have an empty action, you click the "edit" icon 
- Now all that is left is click on the method you want and select your action.



Alternatively you can use community Bindings that other users have contributed.

**IMPORTANT** please Note the tabs at the top they represent other "action sets" and are where some other options are.



**IMPORTANT** you must have "Enable System Button Binding" set to be able to bind things to it.

## 4 Complete Action List

### Motion

- **Left Hand Space Turn:** Rotates PlaySpace based on left controller rotation while Held. Must also be checked in Rotation Tab
- **Right Hand Space Turn:** Rotates PlaySpace based on right controller rotation while Held. Must also be checked in Rotation Tab
- **Left Hand Space Drag:** Moves PlaySpace based on left controller rotation while Held. Must also be checked in Movement Tab
- **Right Hand Space Drag:** Moves PlaySpace based on right controller rotation while Held. Must also be checked in Movement Tab
- **Optional Override Versions:** Override version: will activate instead of non-override during simultaneous activation
- **Swap Active Space Drag to Left/Right Hand:** Activates space drag on left/right controller only if right/left controller is currently active in space drag. (Useful for climbing motions)
- **Gravity Toggle:** Toggles Gravity state when pressed
- **Gravity Reverse:** Reverses Gravity while held

- **Reset Offsets:** Resets your offset and rotation to 0
- **Height Toggle:** Shifts the gravity floor level by offset configured in motion tab. If gravity is inactive: also shifts the user's current y-axis position by offset configured in motion tab
- **Snap-Turn Left/Right:** Rotates a set value to the left/right based on settings in rotation tab
- **Smooth-Turn Left/Right:** Rotates an amount per frame to the left/right based on settings in rotation tab
- **Auto-Turn Toggle:** Toggles the Auto-Turn Feature on/off.

## 4.1 Music

- **Play Next Track:** The same as using the media keys. Tells a media player to play the next song.
- **Play Previous Track :** The same as using the media keys. Tells a media player to play the previous song.
- **Pause/Play Track:** The same as using the media keys. Tells the media player to press play/pause.
- **Stop Track:** The same as using the media keys. Tells the media player to stop playback.

## 4.2 Misc.

- **X/Y/Z Axis Toggle:** Toggles the lock of the X/Y/Z-Axis for offsets.
- **Chaperone Toggle:** Toggles the chaperone on/off.
- **Keyboard Shortcut One/Two/Three:** Sends the key sequence defined the the settings file.

## 4.3 System

- **Add Left/Right Haptic Click:** simulates a "click" with controller haptics in left/right hand.
- **Push-To-Talk:** Activates push-to-talk, PTT checkbox on main page/ audio tab must also be checked.

## 4.4 Haptics

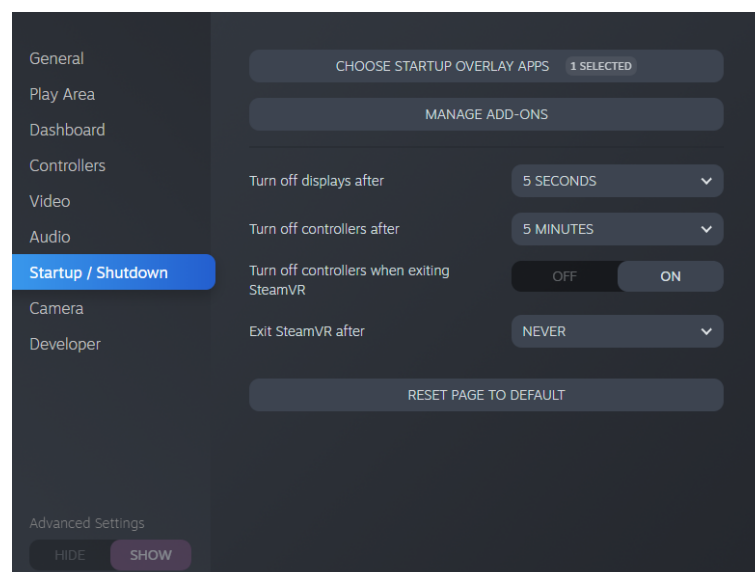
These are bound, and hidden by default, and SHOULD NOT be adjusted.

- **Haptics Left/Right:** Handle for haptic events on the Left/Right Controller.
- **Proximity Sensor:** Connects Automatically to your HMD's proximity sensor

# 5 Auto-Starting

You may need to enable auto-start if you desire:

- Set us as a startup app in steam settings by going to startup/shutdown in SteamVR Settings



- also set us to auto-start in the settings tab in OVR Advanced Settings

## 6 Default Binds

By default we have some key-binds set.

### 6.1 Vive Wands

- Menu Button (both hands)
  - **Single Click:** Space Turn (respective hand)
  - **Double Click:** Space Drag (override) (respective hand)
  - **Single Click:** Swap Active Space Drag (override)(respective hand)
- TrackPad (right hand)
  - **D-pad Down click:** Push-to-Talk

### 6.2 Valve Index Controllers (Knuckles)

- B Button (both hands)
  - **Single Click:** Space Turn (respective hand)
  - **Double Click:** Space Drag (override) (respective hand)
  - **Single Click:** Swap Active Space Drag (override)(respective hand)
- Trigger (left hand)
  - **Click:** Push-to-Talk

### 6.3 WMR Controllers

- Menu Button (both hands)
  - **Single Click:** Space Turn (respective hand)
  - **Double Click:** Space Drag (override) (respective hand)
  - **Single Click:** Swap Active Space Drag (override)(respective hand)
- TrackPad (right hand)
  - **D-pad Down click:** Push-to-Talk

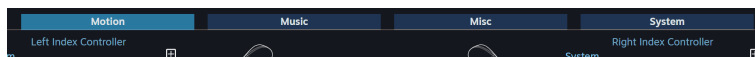
### 6.4 Oculus Touch Controllers

- B/Y Button (respective hands)
  - **Single Click:** Space Turn (respective hand)
  - **Double Click:** Space Drag (override) (respective hand)
  - **Single Click:** Swap Active Space Drag (override)(respective hand)
- Trigger (left hand)
  - **Click:** Push-to-Talk

## 7 Features

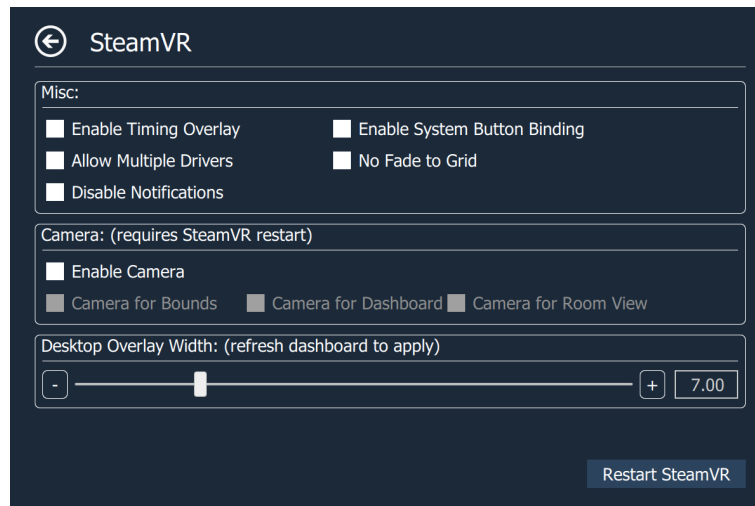
### 7.1 Top Page

Provides Access to Other Pages, as well as some quick access.



- **Video Profile:** Allows to apply Video profiles. Profiles can be created on the Video page
- **Chaperone Profile:** Allows to apply chaperone profiles. Profiles can be created on the Chaperone page
- **Microphone:** Allows to set the microphone volume and to mute/unmute it.
- **Push-to-Talk:** Enable/disable push-to-talk.

## 7.2 SteamVR Page



- **Misc**

- **Enable Timing Overlay:** Enables a simple Timing overlay, locked to HMD currently.
- **Allow Multiple Drivers:** Allows multiple Drivers to be loaded allowing multi-device setups (i.e. rift with vive trackers).
- **Disable Notifications:** Disables Notifications (pop-ups) while in VR.
- **Enable System Button Binding:** Allows System Button to be bound and used in any app. (you will probably want to change the bindings in "VR Compositor")
- **No Fade to Grid:** When app goes non-responsive, you will not fade to grid.

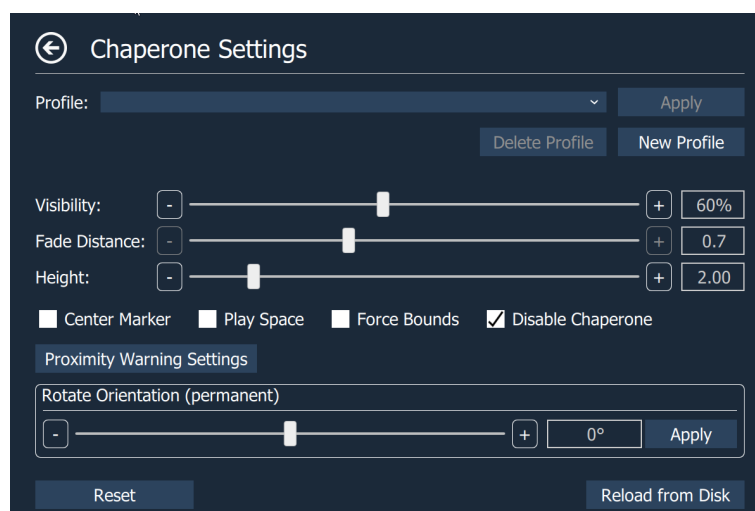
- **Camera** (all check boxes require restart)

- **Enable Camera:** Enables Camera Features
- **Camera for Bounds:** Your camera view will replace your vr view as you near/exit chaperone
- **Camera for Dashboard:** You will have a small camera view attached to your controller when you have the dashboard active.
- **Camera for Room View:** You will have a Tron/Shadow version of the room when double-clicking system button.

- **Desktop Overlay Width:** Adjusts the width of Steam's desktop overlay.

- **Restart SteamVR:** Restart SteamVR (May crash the Steam overlay when SteamVR Home is running when you restart. Therefore I advice that you close SteamVR Home before restarting).

## 7.3 Chaperone Page

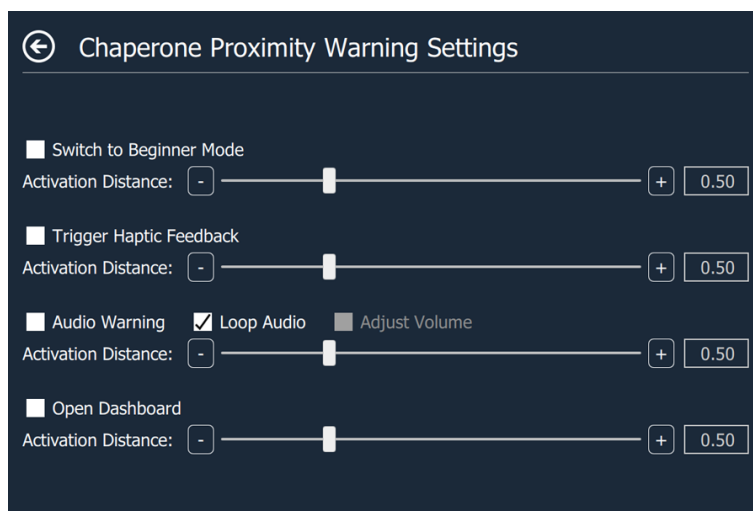


- **Profile:** Allows to apply/define/delete chaperone profiles that save geometry info, style info or other chaperone settings.

- **Visibility:** Allows to configure the visibility of the chaperone bounds. 30

- **Fade Distance:** Allows to configure the distance at which the chaperone bounds are shown. (When set to 0 chaperone bounds are completely invisible.)
- **Height:** Allows to configure the height of the chaperone bounds.
- **Center Marker:** Displays a marker that represents the center of the playspace.
- **Play Space Maker:** Displays the outlines of the rectangle representing the playspace.
- **Force Bounds:** Force chaperone bounds always on.
- **Disable Chaperone:** Disables Chaperone by setting fade distance to 0.0.
- **Proximity Warning Settings:** Opens a page that allows to configure several warning methods for when the user comes too close to the chaperone bounds.
- **Rotate Orientation:** Rotates the orientation by a set amount.
- **Reload from Disk:** Reloads the chaperone bounds geometry from disk.

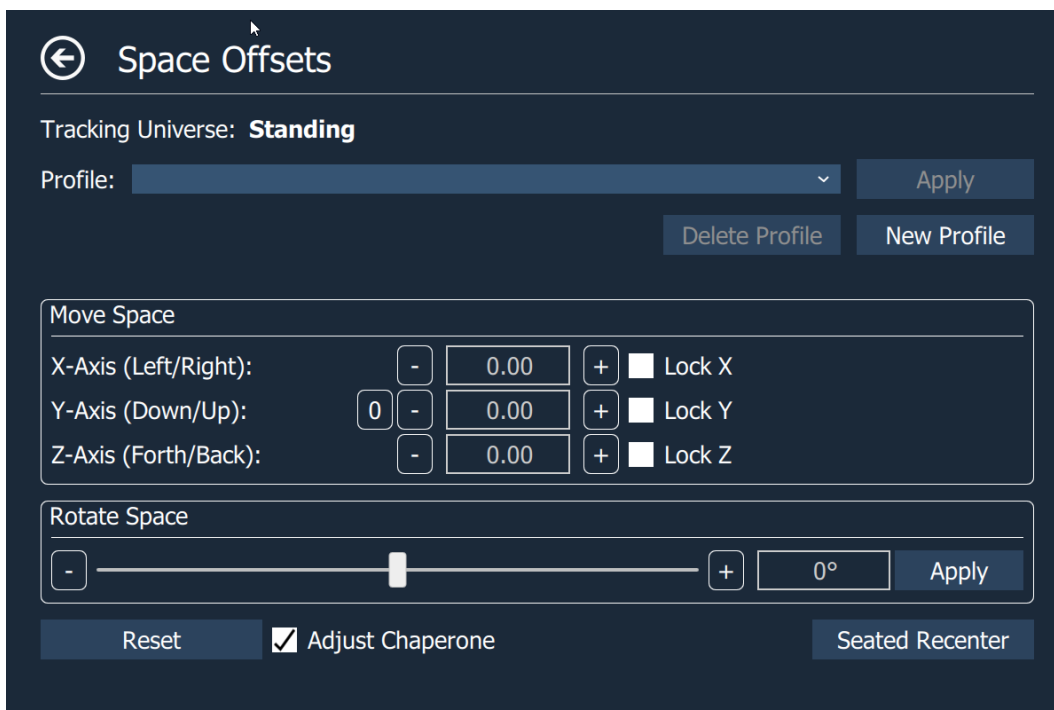
### 7.3.1 Chaperone Proximity Warning Settings Page



- **Switch to Beginner Mode:** Switches the chaperone bound's style to beginner mode when the user's distance to the chaperone falls below the configured activation distance.
- **Trigger Haptic Feedback:** The left and right controller start vibrating when the user's distance to the chaperone falls below the configured activation distance. (HMD or controllers can trigger)
- **Audio Warning:** Plays an alarm sound when the user's distance to the chaperone falls below the configured activation distance.
  - **Loop Audio:** Whether the audio alarm should only be played once or in a loop.
  - **Adjust Volume:** Modify audio volume as a function of the user's distance to the chaperone.
- **Open dashboard:** Opens the dashboard when the user's distance to the chaperone falls below the configured activation distance. The idea is to pause the game (most single-player games auto-pause when the dashboard is shown) to give the user time for reorientation.

## 7.4 Space Offset Page

Allows users to temporarily move and rotate the center of the playspace. This allows reaching interaction elements that are just outside our real-world walls or otherwise inaccessible (e.g. when your playspace is smaller than the recommended one). Can also be used to discover the terrors that lie outside of the intended playspace (ever wondered what's behind the door in The Lab?).



- **Adjust Chaperone:** When enabled, the chaperone bounds stay accurate even when the playspace is moved or rotated (so noone gets hurt). Depending on chaperone mode this may or may not adjust with height.
- **Seated Recenter:** When clicked, applies the current location and angle of the headset to the offsets such that the user is brought to a centered position. Also applies the current headset height to the default seated height (not visible in offsets). This action will also be activated automatically when a seated application sends a reset center command.

## 7.5 Motion Page

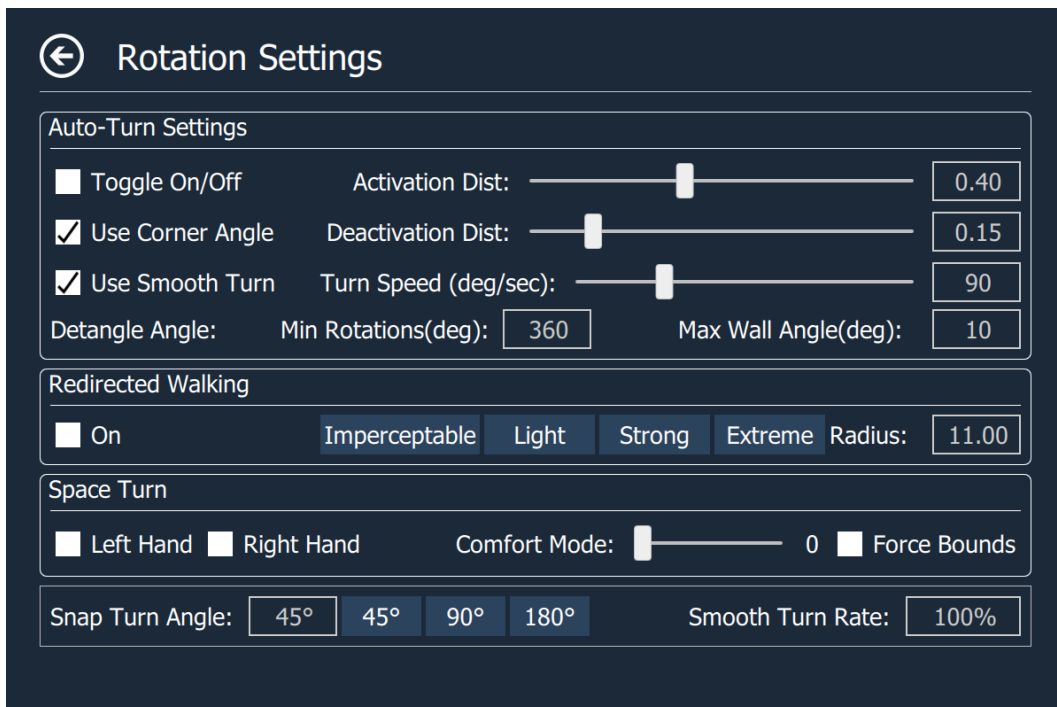


- **Space Drag:** Allows shifting your playspace by dragging your controller, Binds must be set via SteamVR Input system.
  - **Left/Right Hand:** Toggles functionality (must be active in addition to binding via input system to work.)
  - **Comfort Mode:** Limits the rate at which your movement updates, reducing smoothness so that perceived motion starts to feel more like mini-teleports. Higher values reduce smoothness more.
  - **Force Bounds:** Forces the display of the chaperone bounds during Space Drag.
- **Height Toggle:** Toggle between zero and an offset for gravity floor height. If gravity is inactive the user is also moved to this offset. (Example: allows for quick switching between a seated and standing height.) Can be bound via SteamVr Input System.



- **On:** Current toggle state, Binds directly modify this.
- **Height Offset:** The amount of the offset (+ is down.)
- **Set From Y-Offset:** grabs the Y-Offset value from Offset Page.
- **Gravity Settings:** Provides a gravity and momentum simulation to dynamically move your space offset.
- **On:** Current toggle state, Binds directly modify this.
- **Gravity Strength:** Gravity simulation's downward acceleration in meters per second squared. Planet buttons provide quick settings for well known gravity strengths. Values can also be typed in directly.
- **Friction:** Slows down motion over time.
- **Save Momentum:** whether your momentum is saved between on/off toggles of gravity.
- **fling Strength:** adjusts the strength at which you "throw" yourself with space drag feature.

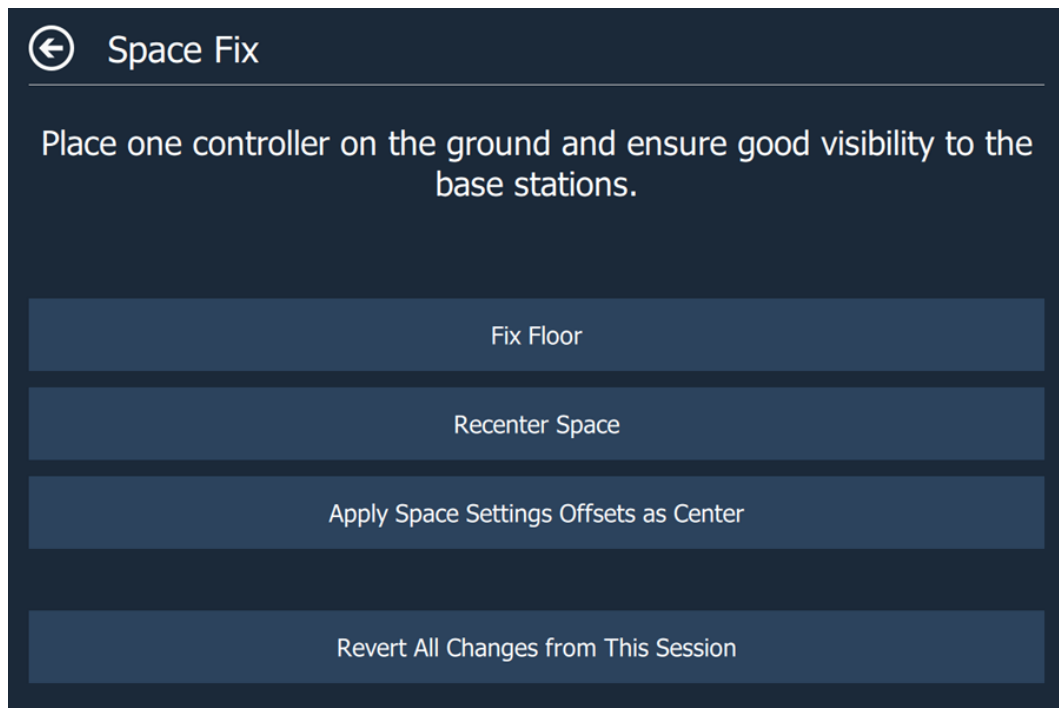
## 7.6 Rotation Page



- **Auto Turn:** Automatically rotates your playspace when you get near a wall, by rotating the direction you're looking to be inside your playspace, parallel to a wall.
  - **Toggle On/Off:** current state, bind directly modifies this.
  - **Activation Distance:** How far from the wall before Autoturn activates.
  - **DeActivation Distance:** The minimum distance (activation + deactivation) you must be from the wall before autoturn will activate again.
  - **Use Corner Angle:** When already against a wall and reaching a corner, turn the angle of that corner rather than the angle of your headset to the wall (reccomended)
  - **Use Smooth Turn:** Toggles between a smooth turn and a snap turn.
  - **Turn Speed:** How fast you rotate in Degrees per second.
  - **Detangle Angle:** Settings attempting to keep your cord untangled while using the Auto-Turn feature.
    - \* **Min Rotations(deg):** The amount of rotation before Auto-Turn starts to try and un-tangle your cord.
    - \* **Max Wall Angle(deg):** When the angle of your headset to the wall is less than Max Wall Angle, it will turn you whichever way will start to untangle your cord. Otherwise it will turn you whichever way is closest. Set to '0' if you have a cordless setup
- **Redirected Walking:** Adds rotation as you walk to turn you away from the nearest wall you're moving towards. At 'Imperceptable' and 'Slight' angles should be subtle enough to feel as if you're walking in a straight line, effectively making your playspace feel bigger.
  - **On:**Toggles Feature on/off
  - **Radius:** Radius in meters of how big a circle would be drawn to keep you walking in a straight line inside a game.

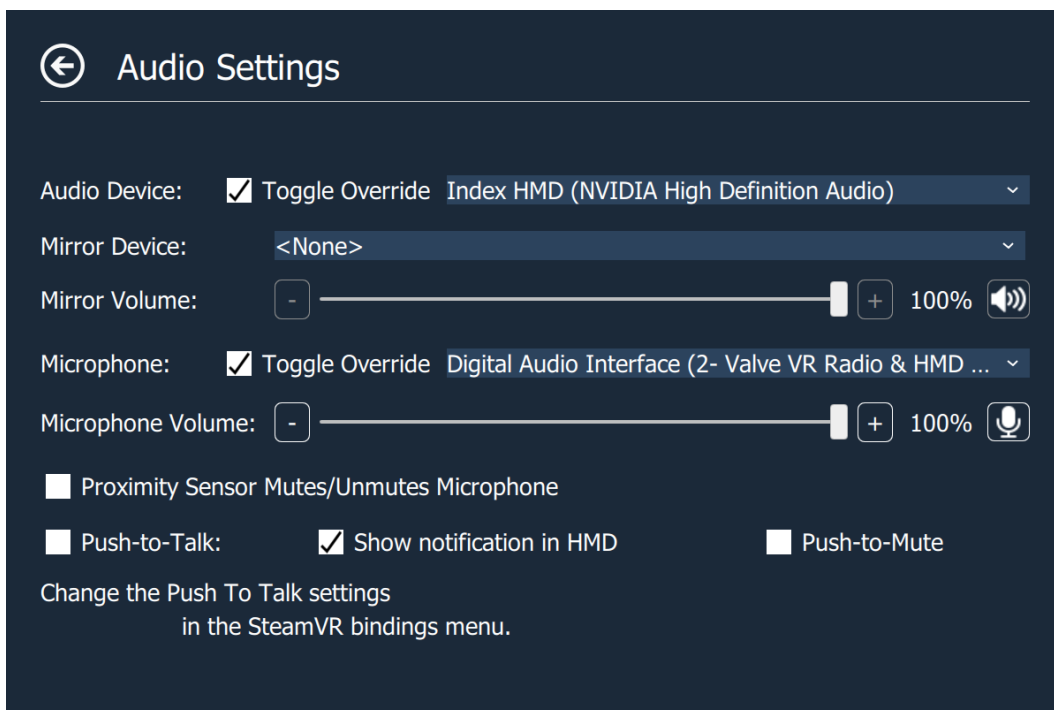
- **Space Turn:** Allows rotating your playspace by rotating your controller. Binds must be set via SteamVR Input system.
  - **Left/Right Hand:** Toggles functionality (must be active in addition to binding via input system to work.)
  - **Comfort Mode:** Limits the rate at which your rotation updates, reducing smoothness so that perceived rotation starts to feel more like mini-snap-turns. Higher values reduce smoothness more.
  - **Force Bounds:** Forces the display of the chaperone bounds during Space Turn.
- **Snap Turn Angle:** Allows snap (instant) turning by the specified angle. Can type in values or use the preset buttons for angles that neatly divide 360 degrees. Must bind actions via SteamVR Input interface.
- **Smooth Turn Rate:** Allows smooth turning by a percentage of a degree per frame. (i.e. 100% at 90fps is 90 degrees/sec or 15 RPM)

## 7.7 Space Fix Page



- **Fix Floor** Allows you to fix the height of your floor. Just place one controller on your floor and press the button.
- **Recenter Playspace** Besides fixing the floor height, also recenters the place space around the controller on the floor.
- **Apply Space Settings Offsets as Center** Takes current values from Offsets page and re-caliberates center/rotation. Caution The reset function will then refer to this location as the new zero location, overriding the old zero location.
- **Revert All Changes from This Session** Reverts the chaperone config back to the state it was in when launching vr. (This applies the Autosaved Profile from the Chaperone Tab).

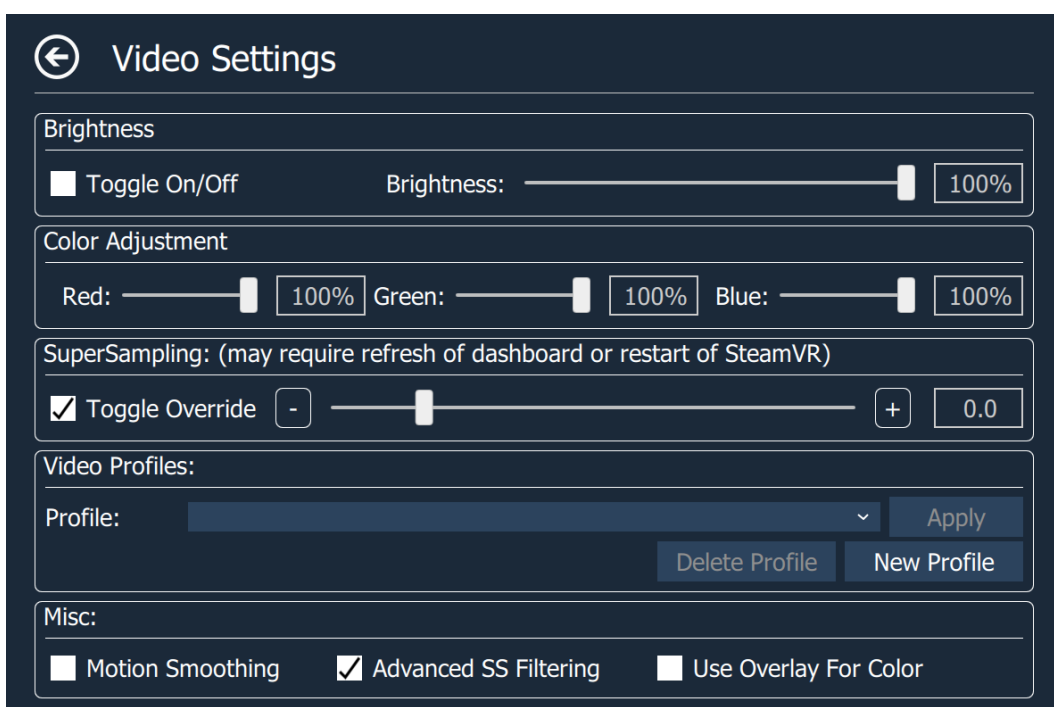
## 7.8 Audio Page



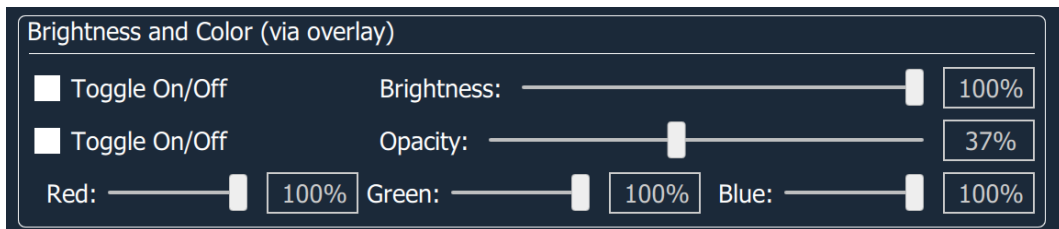
- **Playback Device:** Allows to select the playback device.
- **Mirror Device:** Allows to select the mirror device, set its volume and to mute/unmute it.
- **Microphone:** Allows to select the microphone device, set its volume and to mute/unmute it.
- **Proximity Sensor Mutes/Unmutes Microphone:** Uses the HMD's proximity Sensor to mute the mic when it is removed from your head, PTT works with this feature, But you will be un-able to manually mute/un-mute your mic via icon.
- **Push-to-Talk:** Enable/disable push-to-talk. When push-to-talk is activated the microphone gets muted unless the Push To Talk action is activated.
- **Show Notification:** Shows a notification icon in the headset when the Push To Talk action is activated.
- **Push-to-Mute:** Inverse push-to-talk. The Microphone is unmuted by default and muted when the keybind is pressed.
  - **NOTE:** The Push-to-talk box must be enabled for this feature to work.

## 7.9 Video Page

Contains Settings Related to the display.



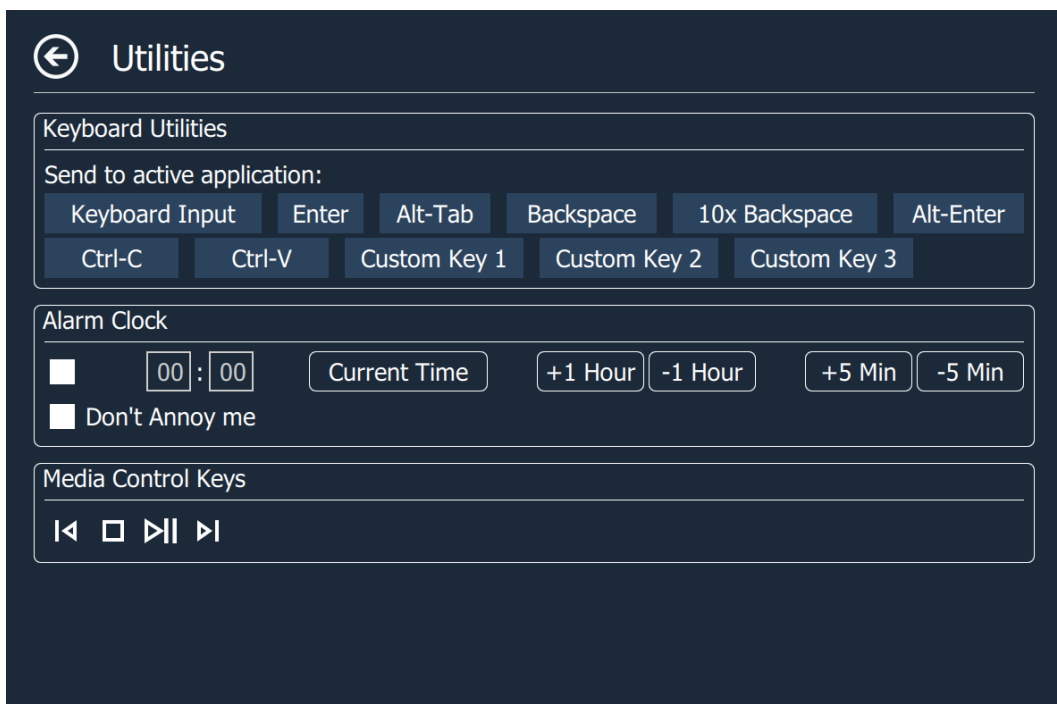
- **Brightness:** Allows Dimming of your view
  - **On/Off:** Toggles The Dimming on/off.
  - **Brightness:** The amount of dimming.
  - **Note:** Does not necessarily reduce light output of HMD will vary based on panel type etc.
- **Color Adjustment:**
  - Adjusts the Gain to adjust color. (This works for Valve Index, Vive, and Vive Pro) If your headset does not support gain adjustment please see Use **Overlay For Color**.
- **SuperSampling:** Adjusts application super sampling values (requires refresh of dashboard, and/or restart of SteamVR/OpenVR)
  - **Toggle Override:** allows user configurable amount different than recommended value.
- **Video Profiles:** allows Users to save their settings and apply quickly via a drop down menu.
- **Misc:**
  - **Motion Smoothing:** Enables/Disables Motion Smoothing.
  - **Advanced SS Filtering:** Enables/Disables Texture filtering to allow better textures at long distances. (default is on)
  - **Use Overlay for Color:** Use an Overlay for Color Adjustment rather than Gain (works with all HMD's, replaces Brightness and Color Adjustment)



- **Brightness:** Same as regular.
- **Opacity:** Adjusts opacity of color overlay.
- **Colors:** Adjusts the overlay to adjust the color.

## 7.10 Utilities Page

Contains Misc. Utilities



- **Keyboard Utilities:** Some applications (mostly 2D-monitor applications with tackled-on/modded-in VR support) do not support the VR keyboard but require an actual physical keyboard for text input. This utilities allow to send emulated key strokes from VR keyboard input to such application to overcome this limitation. Does not work in desktop mode. Adding `vrCDebug=true` to `[utilitiesSettings]` in the `OpenVRAdvancedSettings.ini` will display some buttons for VRChat debug overlay keybinds.
- **Alarm Clock:** Just a simple alarm clock so you don't miss important appointments. VR can sure mess up perception of time. Does not work in desktop mode.
- **Media Control Keys:** Allows controlling a media player through the media keys. This is the same as having a keyboard with media keys and then pressing them. Should support most common media players.

## 7.11 Statistics Page

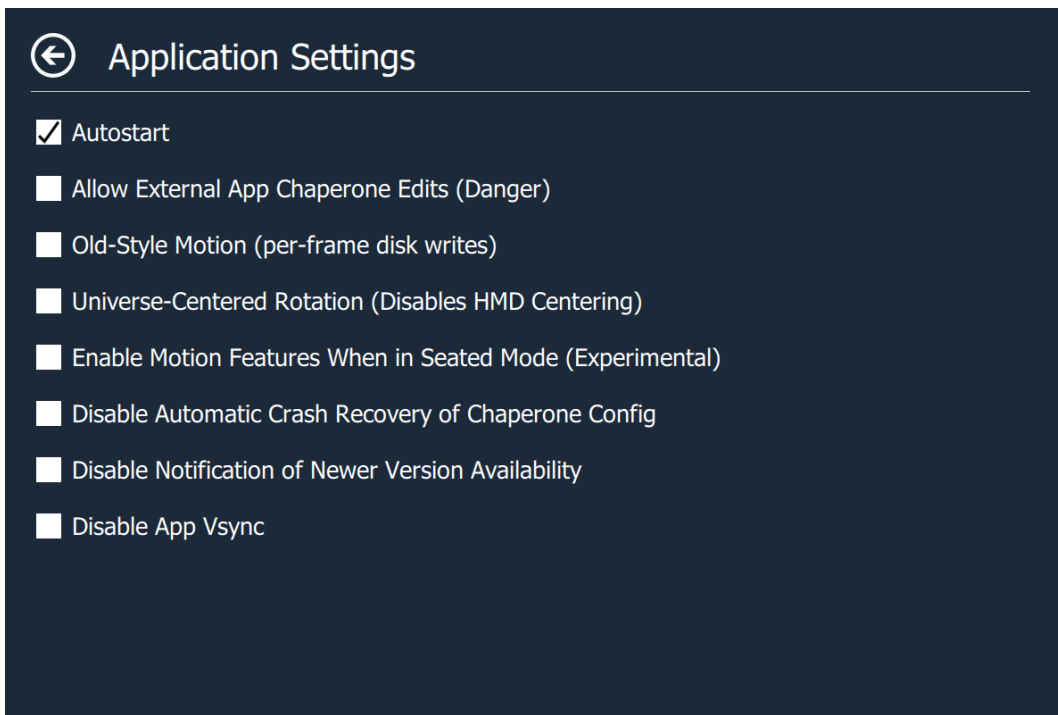
Shows Various Useful Statistics

Statistic	Value	Action
HMD Distance Moved:	0.0 m	Reset
HMD Rotations:	0 CW	Reset
Left Controller Max Speed:	2.5 m/s	Reset
Right Controller Max Speed:	1.6 m/s	Reset
Presented Frames:	10492	Reset
Dropped Frames:	0	Reset
Reprojected Frames:	503	Reset
Timed Out:	0	Reset
Reprojection Ratio:	4.8%	Reset

- **HMD Distance Moved:** Shows the distance the headset has moved on the xz-plane.
- **HMD Rotations:** Shows the number of rotations around the y-axis (Useful for untangling the cord).
- **Left/Right Controller Max Speed:** Shows the max speed of the left/right controller.
- **Presented Frames:** Number of frames presented to the hmd in the currently running application.
- **Dropped Frames:** Number of frames dropped in the currently running application.
- **Reprojected Frames:** Number of frames reprojected in the currently running application.
- **Timed Out:** Number of times the currently running application timed out.
- **Reprojection Ratio:** Ratio of presented frames to reprojected frames.

## 7.12 Settings Page

Internal Settings for OVR Advanced Settings



- **Autostart:** Allows you to enable/disable auto start. Must also set in regular Steam Settings
- **Allow External App Chaperone Edits:** Incorporates changes to the chaperone and universe center made by other applications. These changes could come from anywhere, including apps with unpredictable interactions with Advanced Settings. Therefore, this option opens the potential for chaperone misalignment or corruption. However it also allows other chaperone tweaking tools to function in tandem with Advanced Settings. **This option should only be checked if required for compatibility with other apps.** Note: Changes will only take effect when offsets and rotation are all zero.
- **Old-Style Motion:** Uses the old system of writing the chaperone universe center and bounds to disk every frame. Use this option only if you experience issues with playspace motion such as snapping back to reset position after releasing a space-drag. This old mode is smooth on most systems but is in theory less performant than the normal method.
- **Universe-Centered Rotation:** Causes Rotation to be applied to Universe Center Rather than HMD (Disables offsets automatically compensating to pivot at the HMD).
- **Enable Motion Features When in Seated Mode:** Uncheck this if Advanced Settings causes strange positioning in a seated application. (Different apps handle seated mode in different ways, some are less compatible with Advanced Settings). Note: if unchecked, all Space Offsets and Motion tab features will be disabled.
- **Disable Automatic Crash Recovery of Chaperone Config:** This prevents applying of the last good autosaved chaperone profile when starting up after not shutting down properly.
- **Disable Notification of Newer Version Availability:** This turns off the on start-up check for a new version. (You can refresh this to do a manual check.)
- **Disable App Vsync:** Allows setting a custom base update rate for Advanced Settings. (Might be useful on HMDs with very high or very low refresh rates).

## 8 Advanced Settings

### 8.1 Setting Up Custom KeyBinds

This Section tells you how to properly use the Custom Keybinds Actions/Utility

#### 8.1.1 How to Set

- First Navigate to and open settings (by default: %appdata% \AdvancedSettings-Team\OVR Advanced Settings.ini)
- now edit **keyboardOne**= Or your respective one you would like to change.

### 8.1.2 Specifications

### 8.1.3 Examples

Sequence	String	Key Representation
Ctrl + H	^h	Ctrl+, h+, h-, Ctrl-
Ctrl + H + H	^hh	Ctrl+, h+, h-, h+, h-, Ctrl-
Ctrl + H twice	^h ^h	Ctrl+, h+, h-, Ctrl-, Ctrl+, h+, h-, Ctrl-
Ctrl + Alt + Delete	^*DEL	Ctrl+, Alt+, DEL+, DEL-, Ctrl-, Alt-
Alt + Enter	*ENTER	Alt+, ENTER+, ENTER-, Alt-
H + E + L + P	help	h+, h-, e+, e-, l+, l-, p+, p-
E + N + D	end	e+, e-, n+, n-, d+, d-
END Button	END	END+, END-
Alt + Shift + ENTER	*>ENTER	Alt+, Shift+, ENTER+, ENTER-, Alt-, Shift-
Alt + Tab + G + G + ENTER + Alt + Tab	*TAB gg ENTER *TAB	Alt+, Tab+, Tab-, Alt-, g+, g-, g+, g-, ENTER+, EN

### 8.1.4 Modifier symbols

Modifier	Symbol
Ctrl	^
Alt	*
Shift	>
Super (Windows)	#

### 8.1.5 Literal Symbols

Key	Symbol
A to Z	The letter in lowercase. a, b, c, ...
Number Row 0-9	The number. 0, 1, 2, ...
Function keys F1-F9	Capital F followed by number. F1, F2, F3, ...
Backspace	BACKSPACE
Space	SPACE
Tab	TAB
Escape	ESC
Insert	INS
Delete	DEL
End	END
Page Down	PGDN
Page Up	PGUP
Caps Lock	CAPS
Print Screen	PRNSCRN
Pause/Break	PAUSE
Scroll Lock	SCRLOCK
Left Arrow	LEFTARROW
Right Arrow	RIGHTARROW
Up Arrow	UPARROW
Down Arrow	DOWNARROW
Keypad Slash	KPSLASH
Keypad Asterisk	KPSTAR
Keypad Minus	KPMINUS
Keypad Plus	KPPLUS
Enter	ENTER

### 8.1.6 Misc

Action	Symbol
Release Held Keys	(literal space or end of string)