

# How to use OpenVR advanced settings and driver4VR or freePie&Razer hydra driver to add rotation angle when checking your six

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At first

- Thanks to **Nibbio** and **Wju** to have explain how to use OpenVR advanced settings to use snap views : <https://forum.il2sturmovik.com/topic/45974-exorcist-snap-view-in-vr/> and mostly <https://forum.il2sturmovik.com/topic/45974-exorcist-snap-view-in-vr/?do=findComment&comment=886566>
- Thanks to Kamran Bigdely who explain here how to use FreePie and RazerHydra drivers : <https://kamranbigdely.com/2018/10/28/how-to-play-steamvr-games-with-your-own-custom-made-controller/>

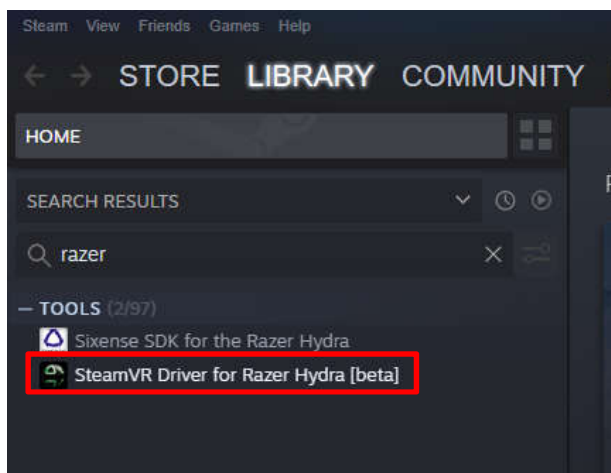
Here is the way I used to map 2 keys of my joystick to turn my point of view of 45° to left or right, and then avoid breaking my neck to check my six hand have things in the sweet spot. It will work if you do not have VR controllers.

## Only for Razer Hydra and FreePie usage (not for Driver4VR)

### Step 0 :

Download and install FreePIE source code from here : <https://github.com/AndersMalmgren/FreePIE>

Install Razer Hydra steamVR drivers (**opt for BETA in properties**) from Steam:



Copy the files sixense\_fake.dll and sixense\_fake\_x64.dll from FreePie install dir to the followings respectively:

sixense\_fake.dll -> **[Steam install Dir]**\steamapps\common\SteamVR Driver for Razer  
Hydra\hydra\bin\Win32\ sixense.dll

sixense\_fake\_x64.dll -> **[Steam install Dir]**\Steam\steamapps\common\SteamVR Driver for Razer  
Hydra\hydra\bin\Win64\ sixense\_x64.dll

You can probably find two files called "sixense.dll" and sixense\_x64.dll inside these directories respectively. Remove or rename them to something else (I would add the prefix "old\_" to their names.)

## For both Driver4VR and FreePie/Razer

### Step 1 :

**Launch steam** and steamVR.

If you used Freepie/Razer you should see a greenbox in your HMD, do not take care yet.

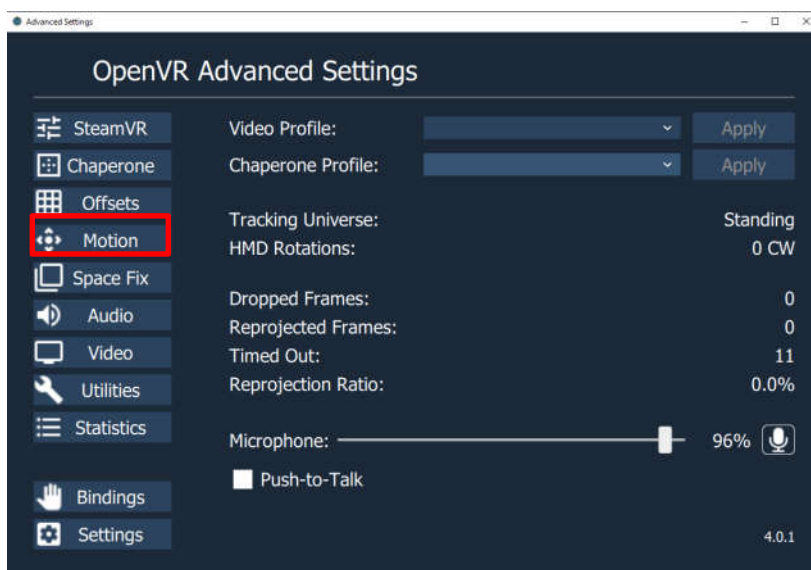
### Step 2 :

Install OpenVR advanced settings : <https://github.com/OpenVR-Advanced-Settings/OpenVR-AdvancedSettings/releases>

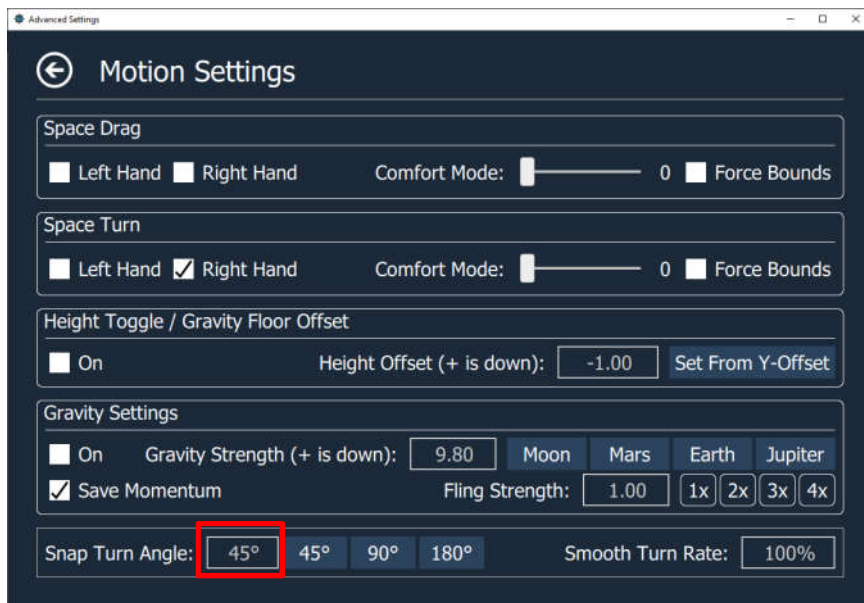
### Step 3 :

Launch OpenVR advanced settings either from steamVR desktop if you have controllers or (best ?) in windows desktop (use **startdesktopmode.bat** in install directory of OpenVR advanced settings)

Select Motion



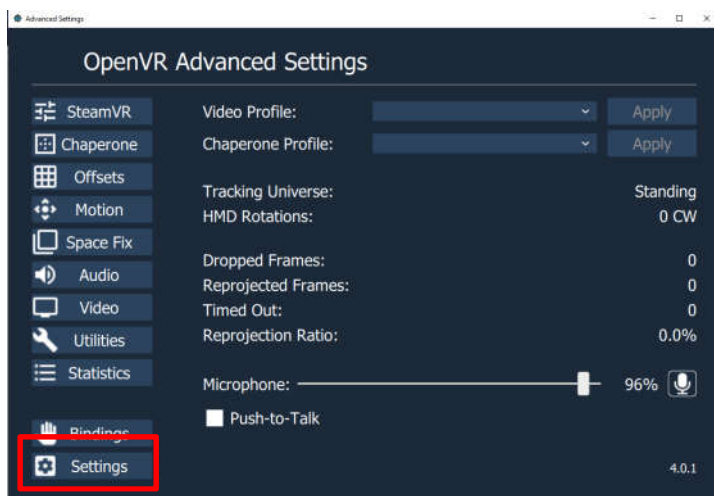
Select the angle you want to have for snap view (45° in my case):

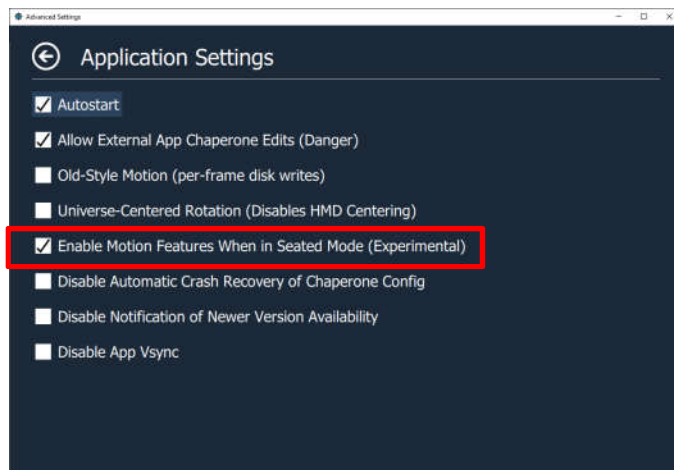


Close OpenVR advanced settings, you will not have to use it for this snap view

### Step 3b :

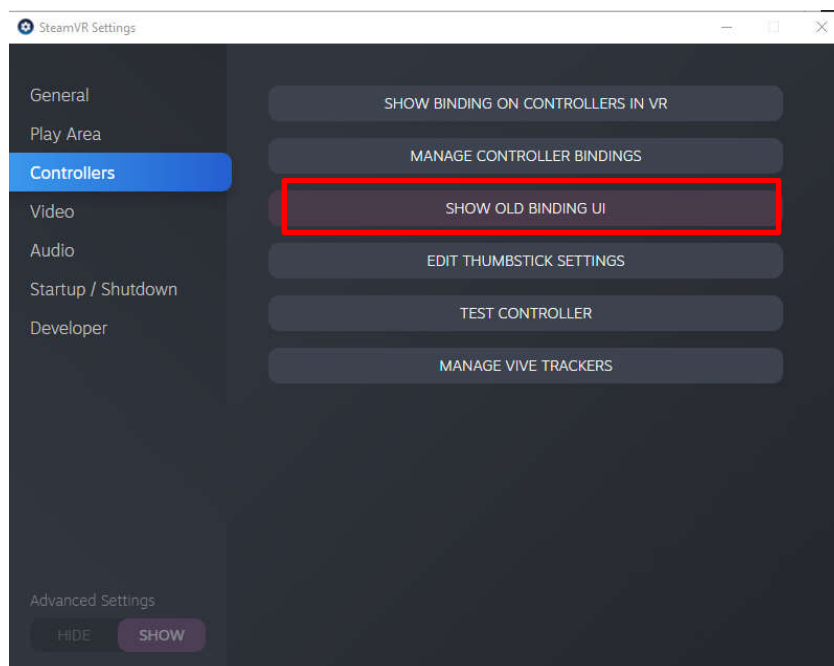
For DCS users, enable motion Features when in Seated mode (experimental)





## Step 4 :

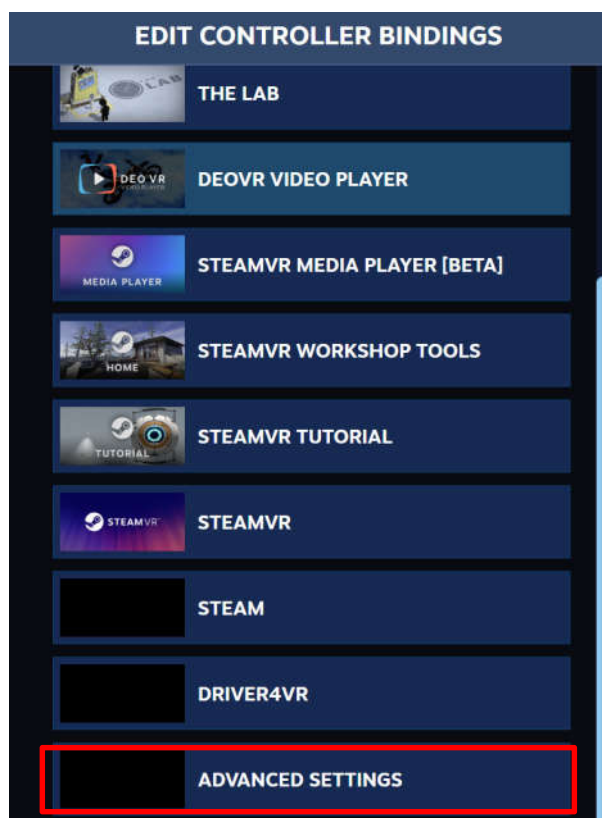
In steamVR, settings , select “controllers” then “show old binding GUI”



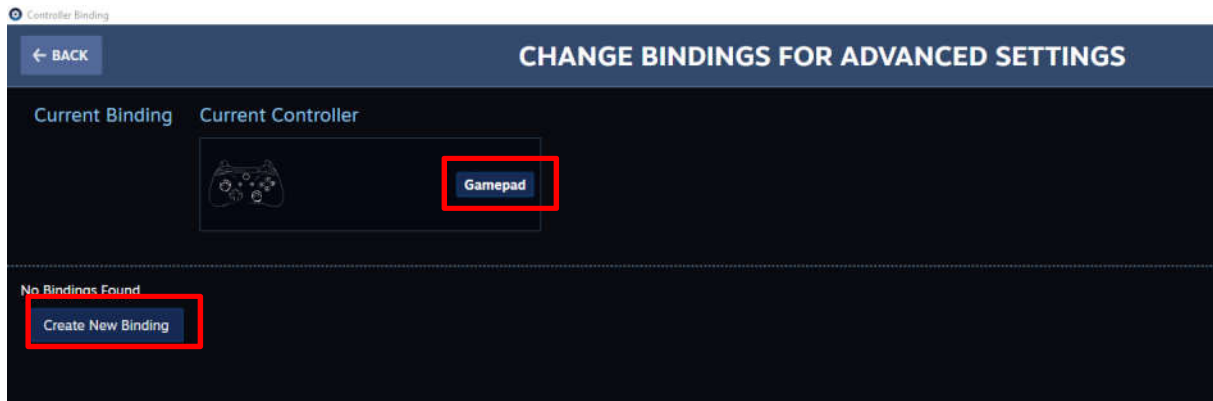
Click on “show more applications”



Then “advanced settings” : the key is here, many thanks to **Wju** to have shared that.



You will have by default no binding and current controller that may not be vive Controller if you use DRIVER4VR, or razer\_hydra if you used Razer hydra driver + FreePie



Click on “gamepad”, select “Vive controller” for DRIVER4VR or click on “razer\_hydra” if you used razer hydra driver.

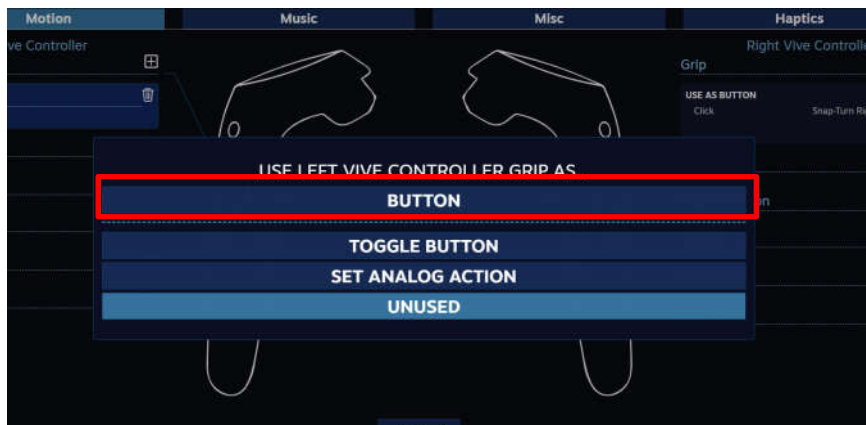
Click on “create new binding” (Steam must be started, otherwise you want be able to save or load your profile)

You will have the mapping screen for mapping button.

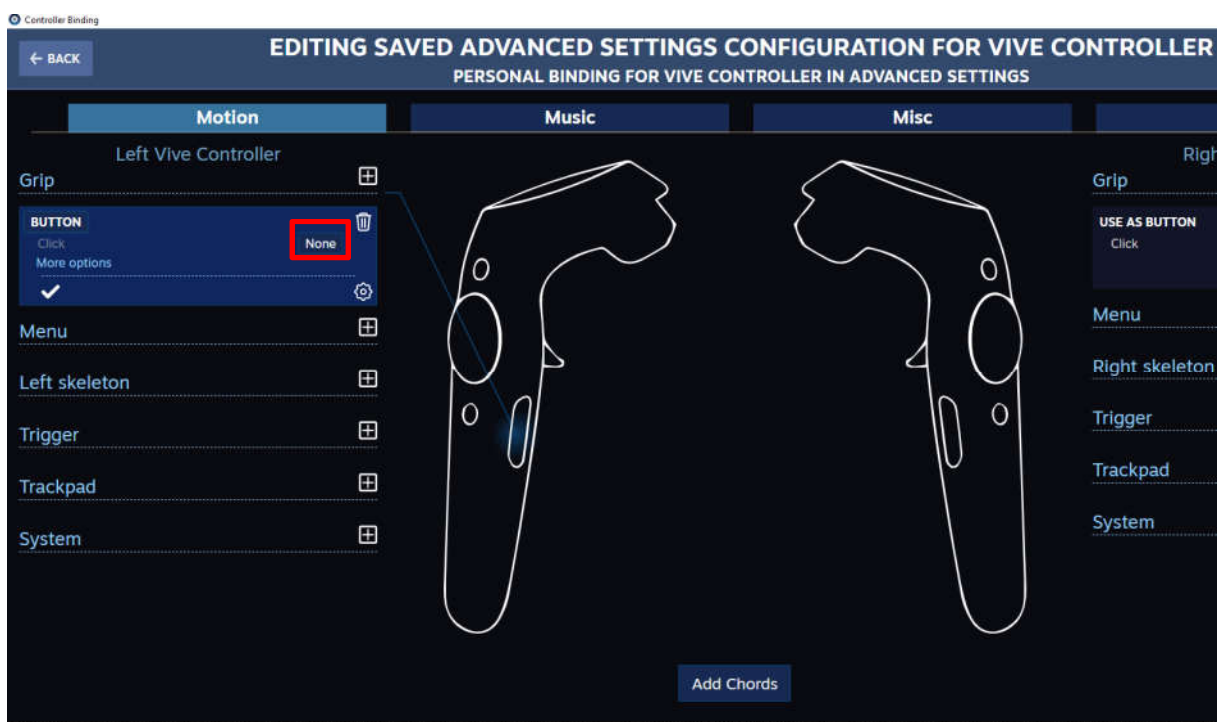
To map the left snap view click on “+” sign on left vive controller grip



Select “button”



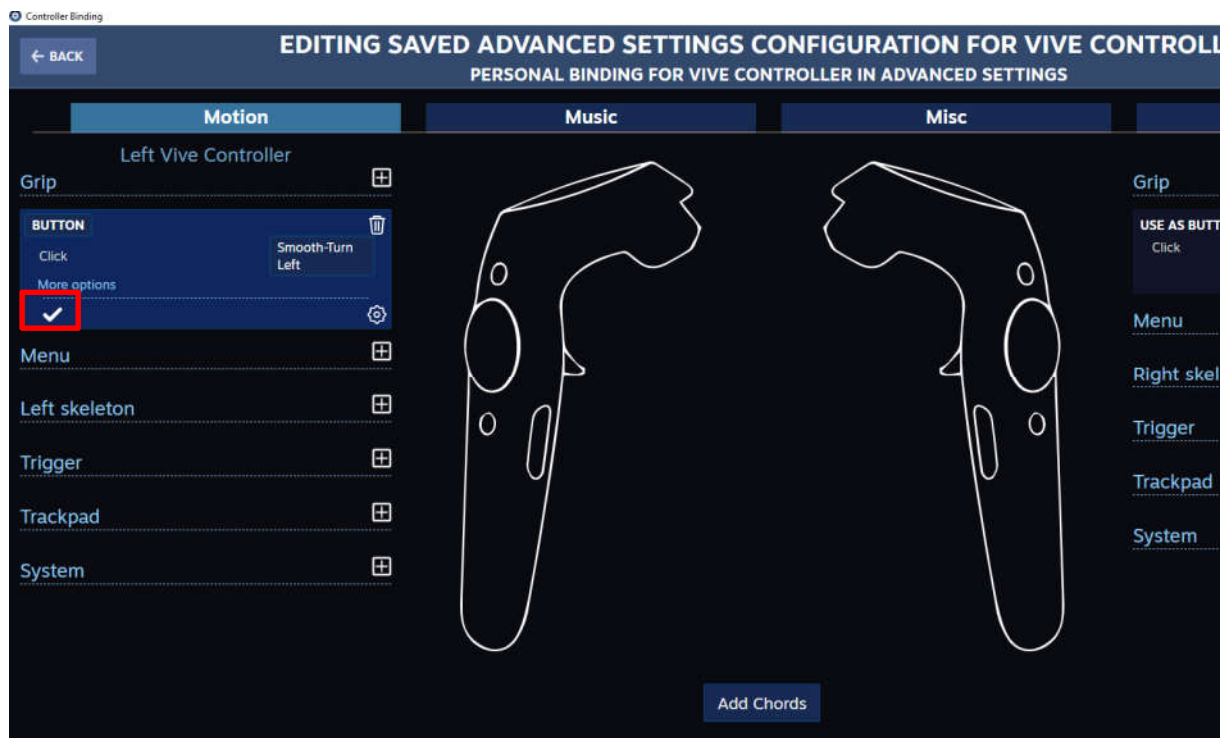
Then “none”



Then “snap-turn left”



Then click on the tick



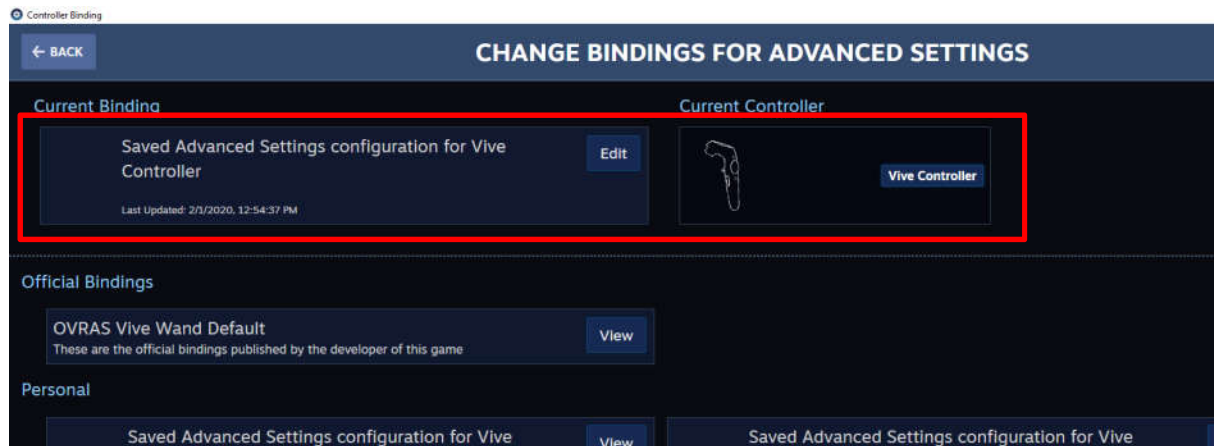
Do the same for right snap view, and then save your profile



Go back

You should see your profile: (it will be for razer\_hydra rather than for Vive if you used Razer drivers)





You can now test the profile if you have vive controllers, when pressing left or right grip view should rotate 45° left or right. Otherwise, wait next steps.

## Only for DRIVER4VR

### Step 5 :

Install driver4VR from <https://www.driver4vr.com/>

You may have to create an account. There is a demo version that allows during 10 min gameplay sessions for 7 days, it will allow you to test.

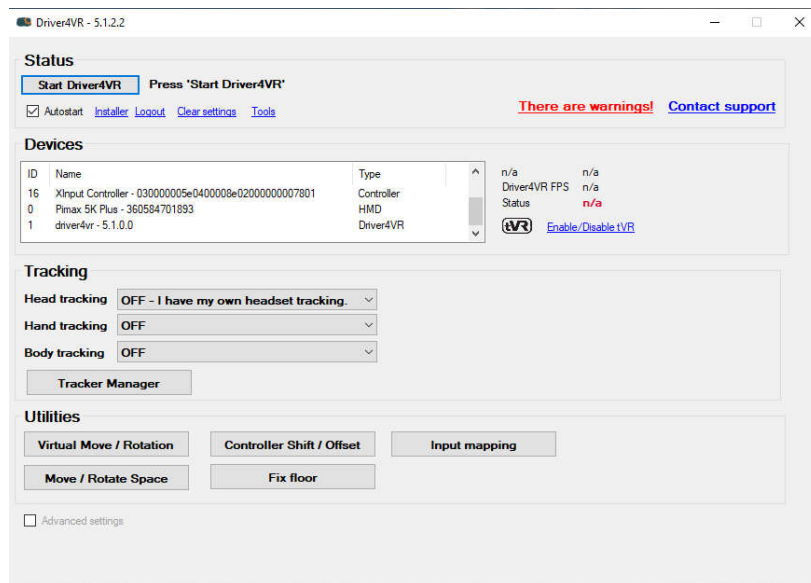
Driver4VR will be launched with SteamVR until you uninstall it or at least deactivate its steamVR driver.

### Step 6 :

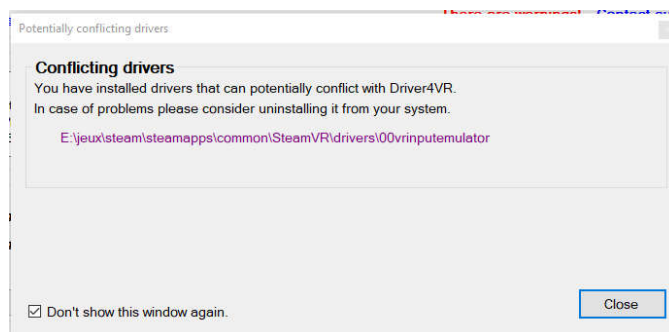
At first, ensure that your Vive Controllers are off, if you have them. Otherwise, they will interfere with the key mapping.

Launch driver4VR.

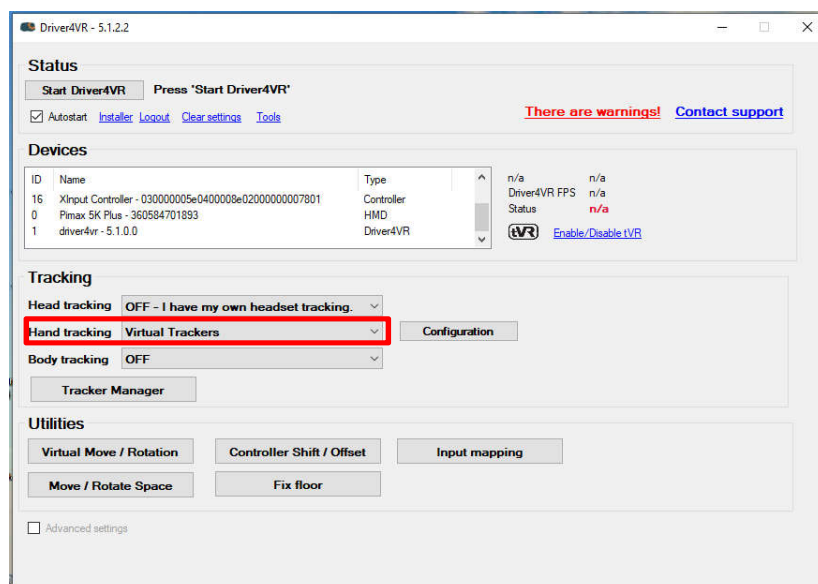
You should have this window:



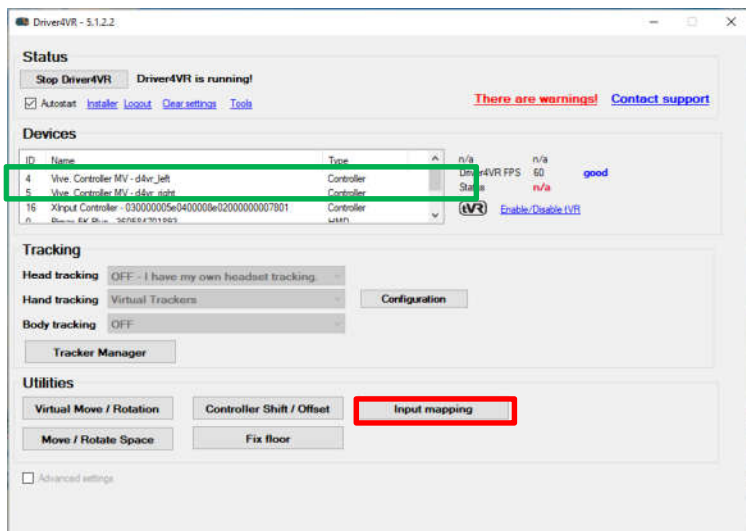
If you have a warning regarding conflicting driver, just ignore it.



Set up virtual controllers and close / relaunch Driver4VR



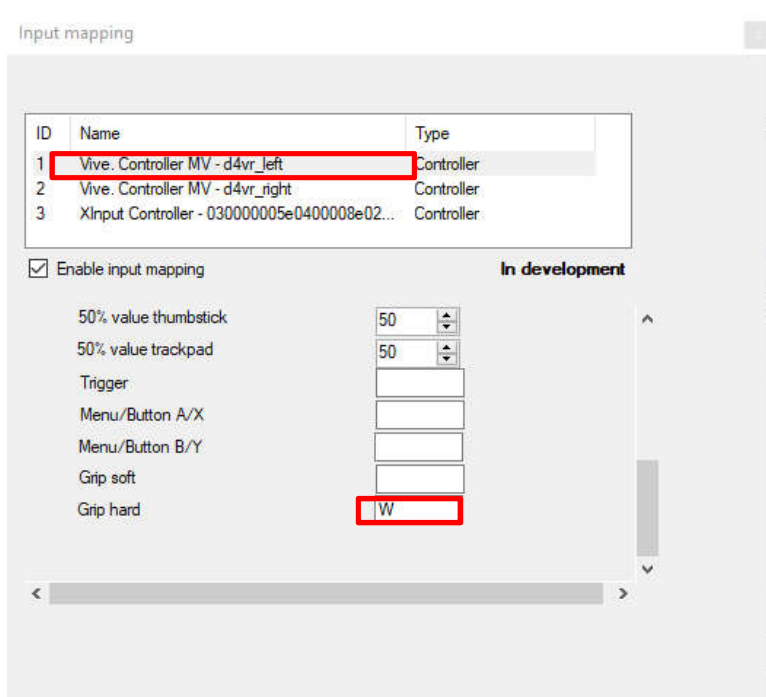
You should have now 2 vive controller "d4rv\_left" and "d4rv\_right". They also should appear in SteamVR (if opened). Press « input mapping »



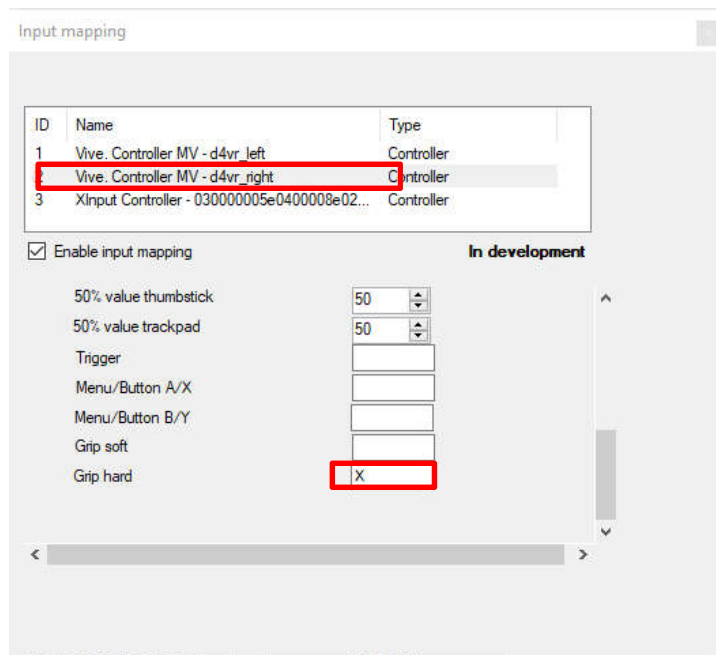
You can only use standard key for input mapping, so I used key for rudder, because I have one. You must unmap these keys in IL2BOS, otherwise you will introduce rudder movement when using snap view function. If you are using rudder keys, it's up to you to find other keys...

The idea is to map key for the two previous mapping we made : left Vive controller grip button for left snap view and right Vive controller grip button for right snap view. So let's do that:

Select Vive controller MV d4vr\_left, scroll down to "Grip Hard" and put W (azerty keyboard) or Z (qwerty keyboard)



Do the same for right controller and X key



Restart driver4VR, check that your settings are still here.

## Step 6:

Steam must be launched, otherwise your “OpenVR advanced settings” mapping will not be loaded.

Ensure that driver4vR is launched and started.

Launch IL2 or DCS, once in cockpit press “w” (azerty keyboard) or “z” (qwerty keyboard), then “z” : your view should rotate 45° left and then go back.

## Only for Freepie and RazerHydra

## Step 5 :

Launch freePie and copy paste the script below. You should save it somewhere, because you will have to load it in freePie each time you will want to use the rotation mapping.

The script contain mapping for different keys in first lines :

- For starting the driver : key to use to remove the green box at lauch of SteamVR.  
By default **RSHIFT+P**
- For activating/de activating steamVR menu  
By default **RSHIFT+Backspace**
- For rotating left or right views  
By default ‘z’ for left and ‘x’ for right

```

# PUT HERE THE KEYS YOU WANT TO USE
# FOR STARTING THE DRIVER
CALIB_KEY_MOD=Key.RightShift
CALIB_KEY=Key.P
#FOR ENTER/EXIT VR MENU
MENU_KEY_MOD=Key.RightShift
MENU_KEY=Key.Backspace
# FOR LEFT AND RIGHT MENU
LEFT_KEY=Key.Z
RIGHT_KEY=Key.X

global pressed, LeftPressed, RightPressed
def handleStartButton():
    global pressed, LeftPressed, RightPressed
    if keyboard.getKeyDown(LEFT_KEY) and LeftPressed == 0:
        hydra[1].bumper = True
        #diagnostics.debug("W+")
        LeftPressed = 1
    if keyboard.getKeyUp(LEFT_KEY) and LeftPressed :
        hydra[1].bumper = False
        #diagnostics.debug("W-")
        LeftPressed = 0
    if keyboard.getKeyDown(RIGHT_KEY) and RightPressed == 0:
        #diagnostics.debug("X")
        hydra[0].bumper = True
        RightPressed = 1

    if keyboard.getKeyUp(RIGHT_KEY) and RightPressed :
        hydra[0].bumper = False
        #diagnostics.debug("X-")
        RightPressed = 0

    if pressed == 0:
        #if keyboard.getKeyDown(Key.P) and keyboard.getKeyDown(Key.RightShift):
        if keyboard.getKeyDown(CALIB_KEY) and keyboard.getKeyDown(CALIB_KEY_MOD): # For holding two system buttons (start buttons) at
the same time.
            # holding two system buttons causes the controllers to be set at the HMD position.
            hydra[0].start = True
            hydra[1].start = True
            pressed = 1
            elif keyboard.getKeyDown(MENU_KEY) and keyboard.getKeyDown(MENU_KEY_MOD): # For clicking the start button (system button) to
bring up the steam menu.
                hydra[0].start = True

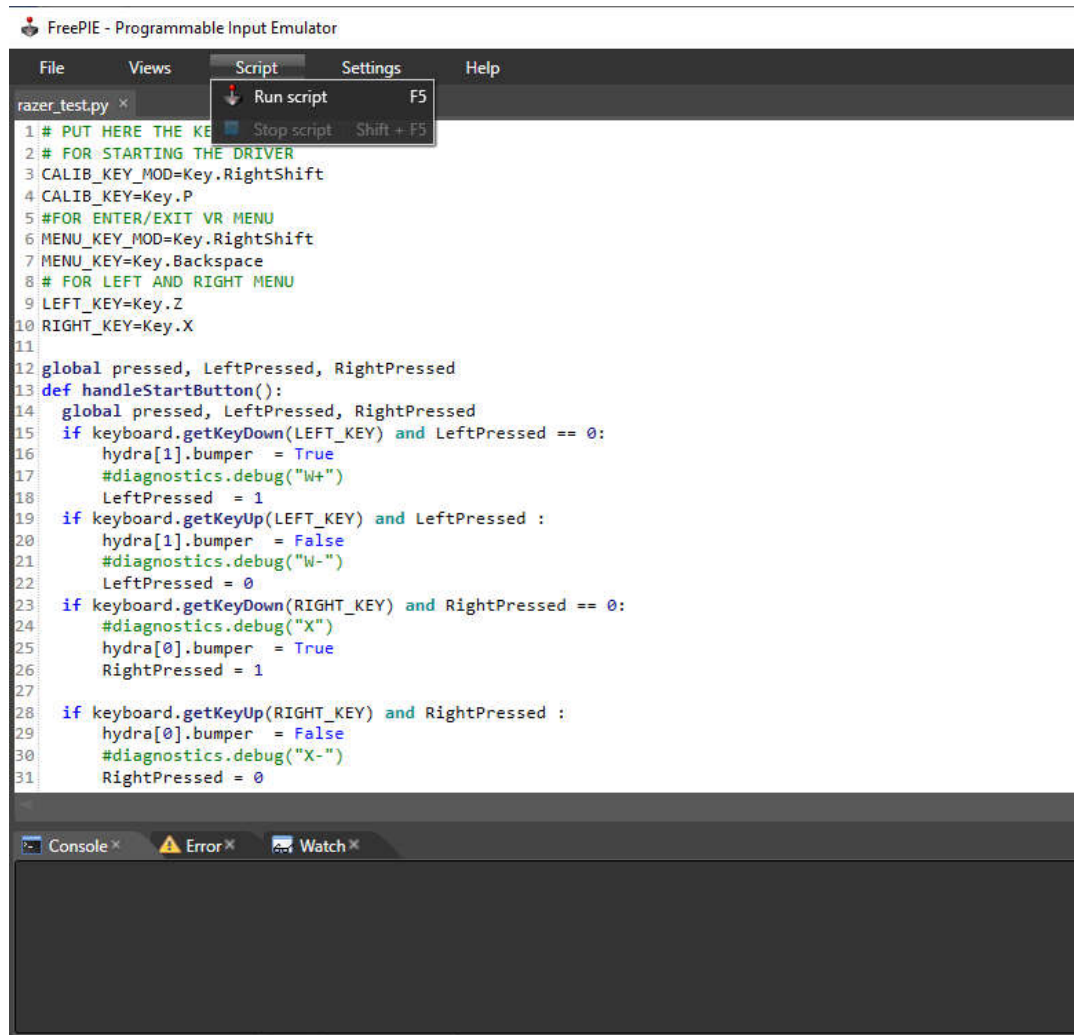
            pressed = 1
            elif keyboard.getKeyDown(MENU_KEY) and keyboard.getKeyDown(MENU_KEY_MOD): # For situations in which the start button (system
button) is
                # hold down to bring the turn off menu).

                pressed = 1

    else:
        hydra[0].start = False
        hydra[1].start = False
        hydra[0].bumper = False
        hydra[0].bumper = False
        pressed = 0

```

Once the script is copied into FreePie, select the Script / run Script menu



Ensure that there is no error in the tab “error”

Put your helmet, you should see a green box. Press RSHIFT+P : it will disappears and 2 vive controller should be in front of your eyes.

If you are in steamVR config screen, press RSHIFT+Backspace to remove it.

Test by pressing ‘z’ and ‘x’ that you are rotating the view.

## For both Driver4VR and FreePie/Razer

### Step 7:

Update your joystick profile in the tool you use in order to map two buttons for left and right snap view.

For the left snap view button, the left snap view key should be activated when the button is pressed and the right snap view key should be activated when the button is released.

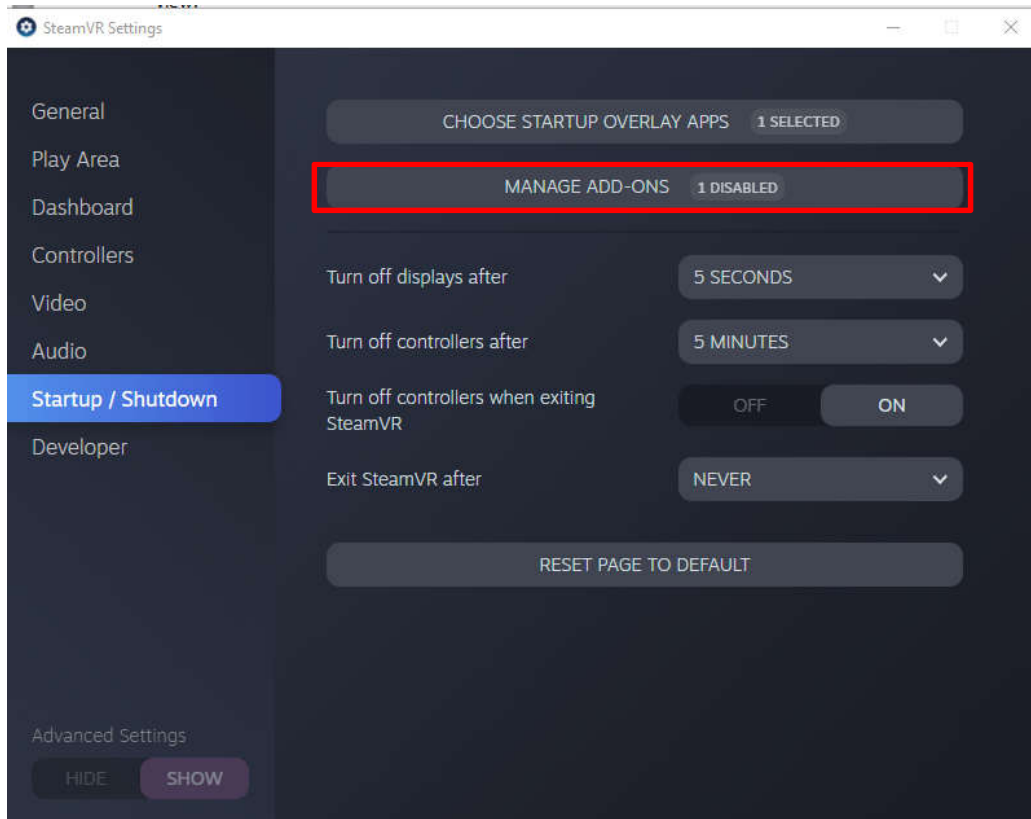
For the right snap view button, the right snap view key should be activated when the button is pressed and the left snap view key should be activated when the button is released.

You can use your joystick software suite or joy2key to do that.

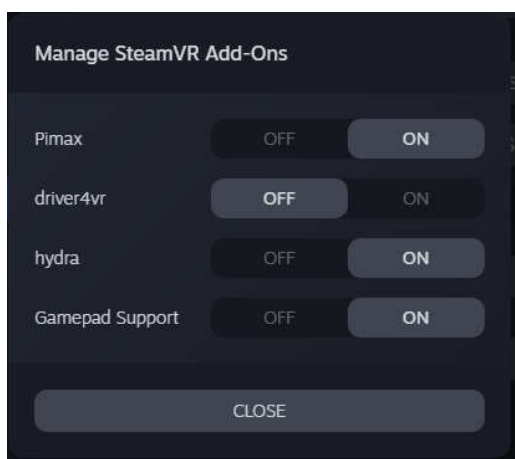
## Step 8:

You can activate / deactivate either Driver4VR or Razer usage.

Go to steamVR settings, select startup/shutdown, then “Manage add-ons”



You can now toggle on or off the add on you want to use



Of course, do not use hydra and driver4Vr at the same time...

Lefuneste