Pimax Crystal

Pimax Crystal Setup

Pimax Crystal

PC Requirement

SYSTEM RECOMMENDATION	
OS	Windows 10/ Windows 11
GPU	NVIDIA®GeForce RTX 2070 and above
CPU	intel i5-12500/ AMD R7-3700X and above
RAM	16GB and above
VIDEO OUTPUT	1 x DisplayPort 1.4
USB	1 x USB-A 3.0 / 3.1 1 x USB-A 2.0 and above

Please make sure you are using a desktop PC and meet the above system requirements.

Laptops are Incompatible with the Crystal

Must use a desktop PC

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SPEC

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DISPLAY	QLED + Mini-LED Display 2880*2880 pixels per eye Brightness: 200nit Local dimming: 20000:1 Colors: 100% NTSC Motion-to-Photon (MTP) Latency: 15ms Refresh rate: 72Hz/90Hz/120Hz/ (144Hz/160Hz in testing mode) HDR
OPTICS	Customized replaceable aspheric optical lens, with 35PPD peak fidelity
FIELD OF VIEW	Horizontal：125° Diagonal：140°
INTERPUPILLARY DISTANCE (IPD)	Manual IPD and Automatic IPD Supported IPD range: 58-72mm
AUDIO	Original off-ear speakers (Optional high-fidelity DMAS headphones) 3.5 mm audio jack 1x microphones 3x
DIMENSIONS	280.10mm*108.20mm*135.90mm
CONNECTIVITY	Standard Pimax Custom 4.5m DP cable
POSITIONAL TRACKING	Inside-out (Standard cover/MR cover) Outside-in (Lighthouse cover)
EYE TRACKING	120Hz with sub-degree accuracy; 5-dot calibration for foveated rendering
BATTERY	6000mAh replaceable battery + 120mAh inside battery supports hot swap
INSIDE CHIPS	Qualcomm Snapdragon XR2, Pimax Customized PCVR Engine Dual-processor chips8+256G
VR MODE	PCVR + Standalone VR

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All Items in Box

1. Crystal Headset x1

2. Type-C Cable x2

7. Quick guide card + After-sales service card

3. Controller x2

5. Charging Dock x1 / Battery x2

4. DP Cable x1

6. Screwdriver + Screw x1 + Lens cloth

8. Power&Connection HUB Kit

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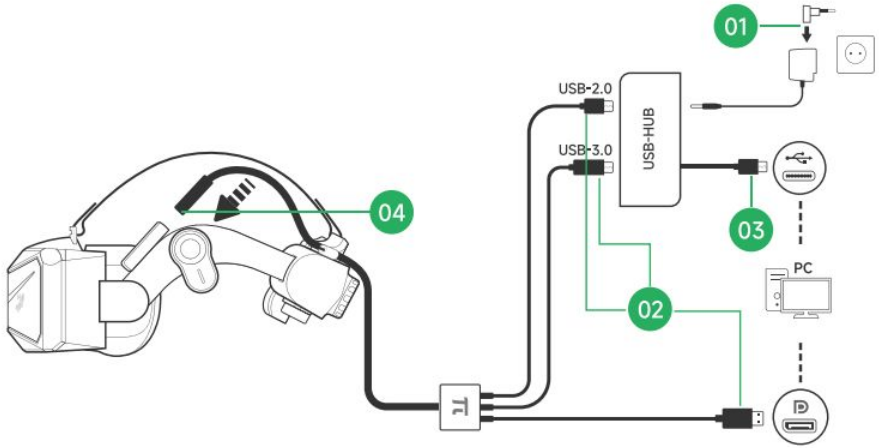
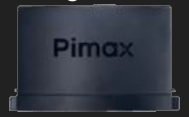
Connect To PC

1. Connect the power adapter to the USB-HUB.
2. Connect the two USB plugs to the USB-HUB, then the DP cable into your PC.
3. Connect the USB-HUB to your PC using the USB cable included with the hub.
4. Connect the DP cable to your headset.

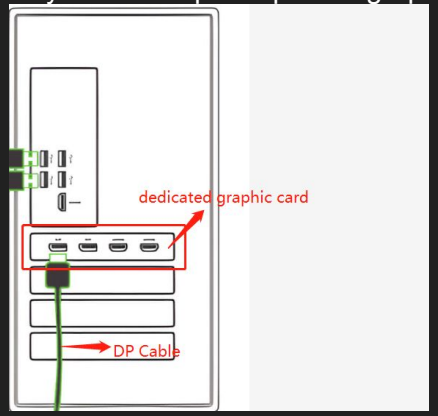


Please Note

1. Before connecting to the PC ensure that both the headset and the controllers have been fully charged.



2. Please ensure you have connected the DP (DisplayPort) cable to the dedicated Display port on your desktop computer's graphics card.



3. When you connect the DP cable to the headset, You should hear a *click* confirming that it has been properly inserted.

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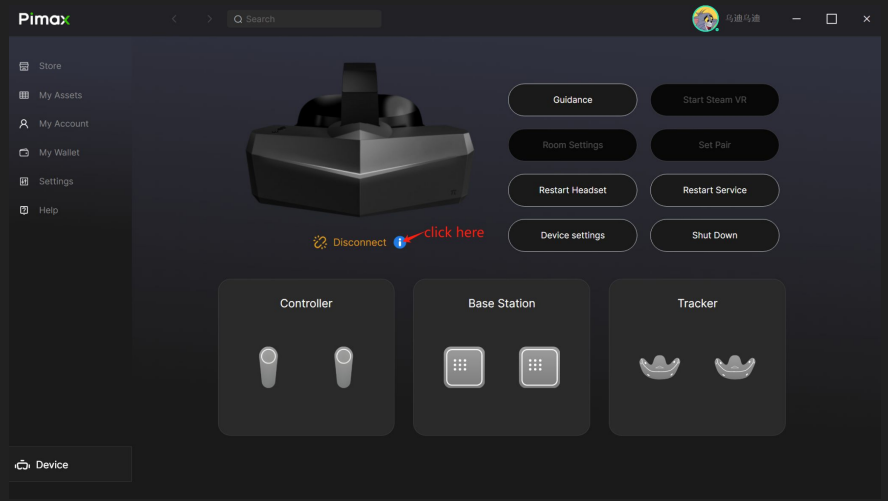
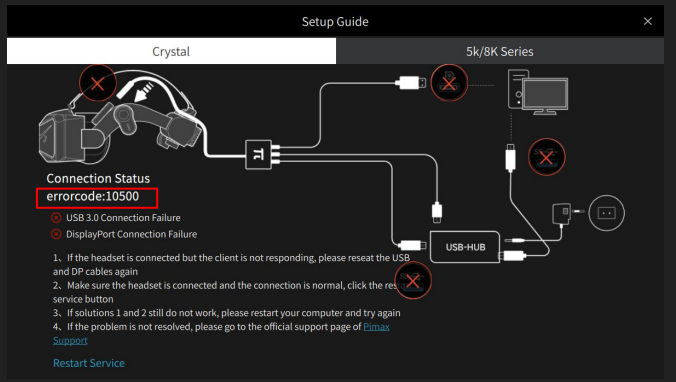
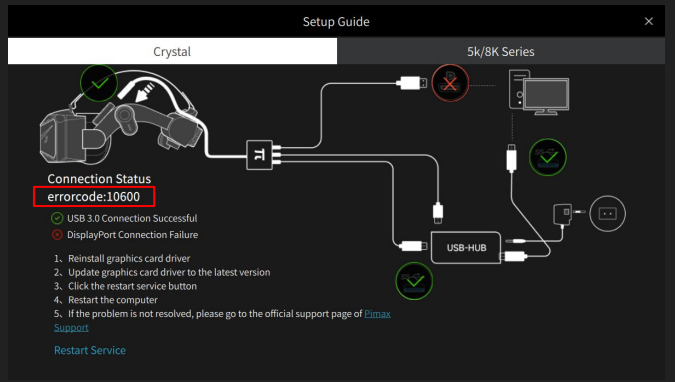
What is your connection error code







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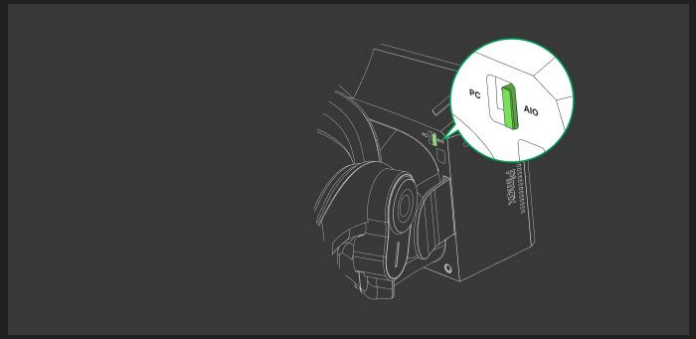
Solution for 10500 code

Error Code: 10500

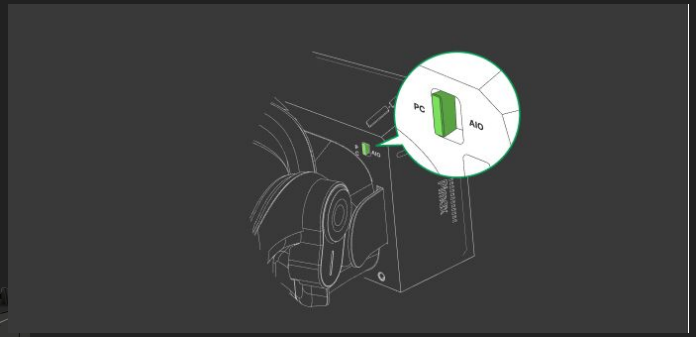
Troubleshooting Steps: DisplayPort Connection

Step 1: Verify Firmware Status

- Switch the headset toggle to AIO mode.
- Check for a solid green LED and Pimax lobby display upon boot.

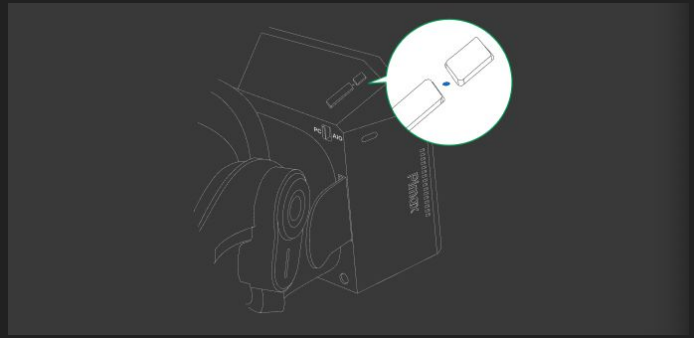


Step 2: Switch the headset toggle back to PCVR Mode.



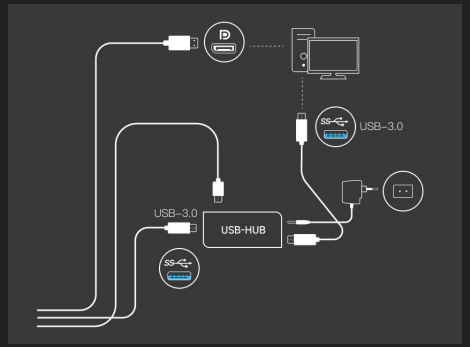
Step 3: Check Headset Indicator Light

- Ensure constant blue light during boot for correct connection.



Step 4: Verify USB Connection

- Secure the USB connection between the headset and the computer.



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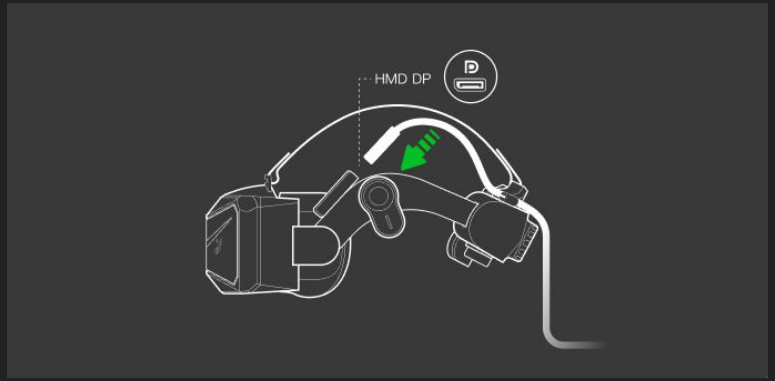
Solution for 10500 code

Step 5: Verify DP Cable Connection

• Insert DP cable until you hear a "click" sound



https://www.youtube.com/watch?v=Z8HIH6AErRM

Step 6: Confirm Connection

• PimaxPlay client should display "connected," and the headset's indicator light should be a constant green.

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Solution for error code

Error Code: 10936 - Failure to Initialize Headset Screen

Step 1: Unstable DP Cable Connection

- Reconnect DP cables at both ends.

Step 2: Computer System or Graphics Card Abnormalities

- Restart the computer for normal functionality.

Error Code: 10938 - Graphics Card Output Reaches Maximum Capacity

Step 1: Using Multiple Displays

- **Connect only one display along with the HMD.**

Step 2: High-Resolution or High-Refresh-Rate Displays

- **Lower display resolution or refresh rate. Try using an HDMI cable if using a DP connection for the display.**

Error Code: 30205 - Timeout in HMD Connection to Computer

Solution: Restart the service or reboot the headset.

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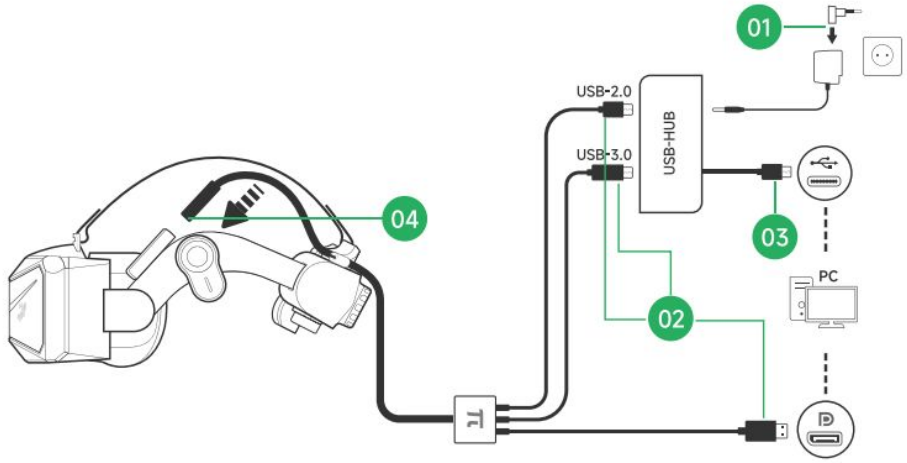
How to connect with USB Hub

Connect To PC

1. Connect the power adapter to the USB-HUB.
2. Connect the two USB plugs to the USB-HUB, then the DP cable into your PC.
3. Connect the USB-HUB to your PC using the USB cable included with the hub.
4. Connect the DP cable to your headset.



https://www.youtube.com/watch?v=AtxmVSYLo5Q

The new Power Hub and how it extends battery life for the Pimax Crystal

Battery Installation/Replacement

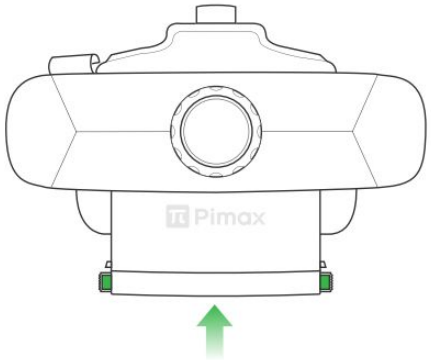
Battery Installation

Hold the buttons on both sides of the battery, and then push the battery upwards into the battery holder.

Battery Replacement

Start by releasing the latch on one side, and then release the latch on the other side while tugging gently one side at a time.

Youtube:
https://youtu.be/pQs9TyS3LZE



1. https://youtu.be/pQs9TyS3LZE
   How to install the battery

How to replace the battery on the Pimax Crystal

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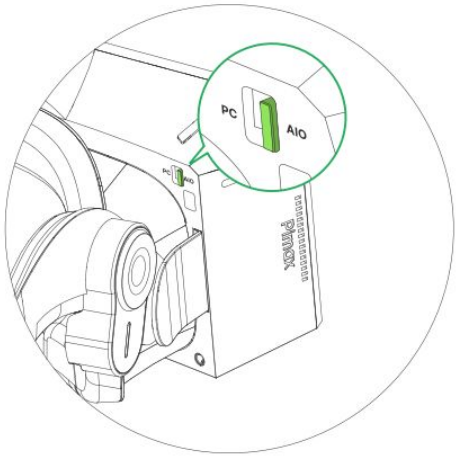
Switch mode between PCVR and android mode

PC / AIO Mode

To switch between 'PC' mode and 'AIO' mode (Standalone), locate the toggle switch and adjust it accordingly..

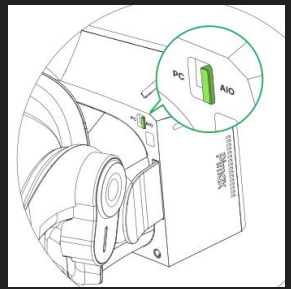


※ **Reminder :** If the device is turned on, the headset will automatically restart if you switch modes.

1. How to switch between PCVR and AIO modes: https://www.youtube.com/watch?v=nIJIFWUnyF8

How to switch from PCVR to Standalone mode on the Pimax Crystal

2. If you want to access PCVR mode, please make sure you have toggled the switch to the PC mode setting.
   If you want to use your device in Standalone mode, please make sure you have toggled the switch to AIO mode



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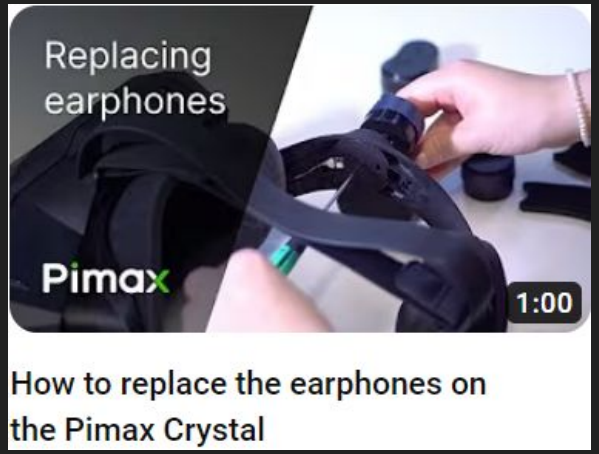
How to replace the earphones on the Pimax Crystal



https://www.youtube.com/watch?v=G223d-_rMj0

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Connect and turn on the headset

3.2.7. How To Connect And Turn On The Headset

Step 1: Connect the DP cable in the package to the corresponding interface of the PC slot, and USB2.0\3.0 to the HUB slots;

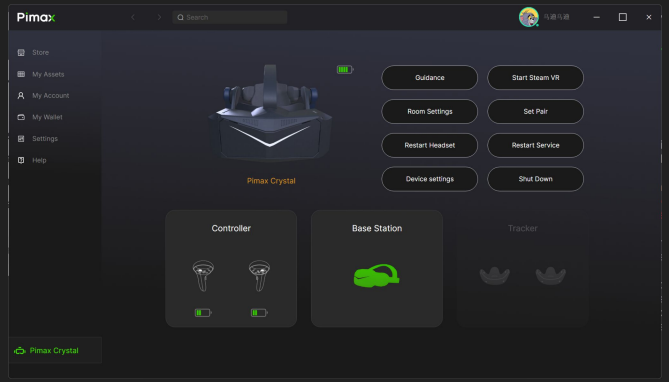
Step 2: Long press the power button on the right side of the headset to power on the headset;

Step 3: The headset turn on with Pimax Logo;

Step 4: Connect the DP port on the other side to the headset;

Step 5: The logo of the headset in the Pimax PC client light up means connection is successful.

※ For a more detailed guide, please refer to the PimaxClient beginners guide.



Headset Initialization Process

1. Connect all cables (pg7) and insert the battery.
2. Long press the power button for several seconds until the Battery indicator turns blue.
4. The headset power led will flash white for 3 seconds
5. At the same time,The computer will play the windows tone signalling that a new usb device has been connected. .
(Unlike other PCVR headsets, the Crystal is actually a Qualcomm android device similar to a smartphone)
6. Open the Pimax Play Client
7. The Pimax Play client will show the headset as “connected” if the device page is selected (accessed by flicking the Device menu in the bottom left corner of the Pimax Client). Connection can take up to 20 seconds to complete.

Function List

No.	Function List
1	Auto IPD/Mannual IPD adjustment
2	Wear detection
3	Eye tracking
4	90Hz/120Hz Refresh rate
5	All in One mode review (2 games are available)
6	Charging and Charging Stability (Usage time: 6 hours)
7	Headset and controller camera tracking performance
8	AMD card compatible test (7900/6700/6950)
9	Local Dimming

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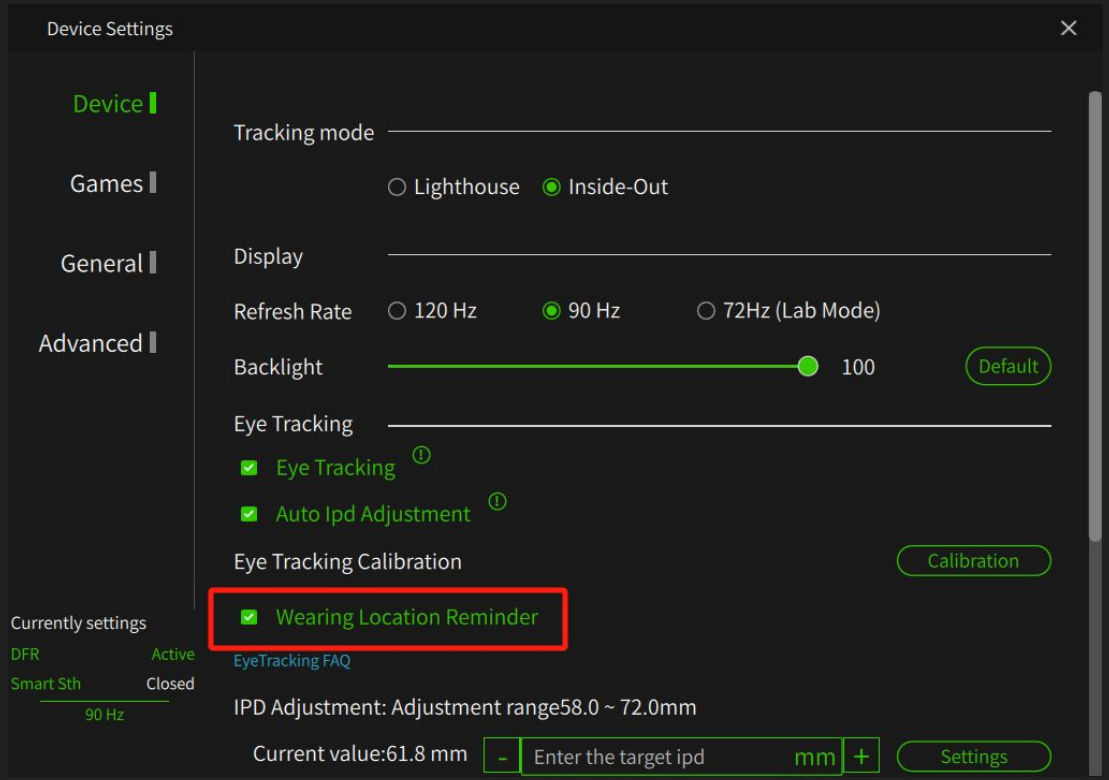
How to wear your VR headset correctly



https://www.youtube.com/watch?v=SwIKRiLeYx4

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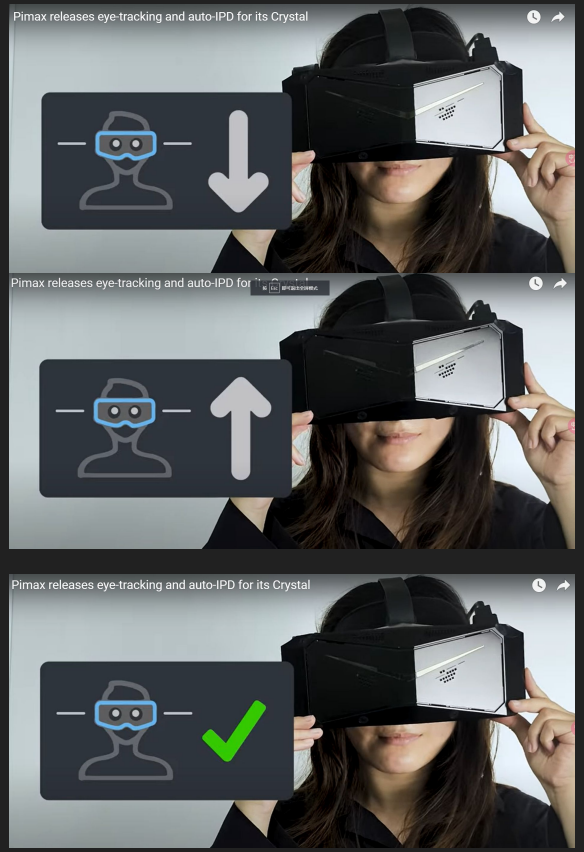
Wearing Location Reminder



https://www.youtube.com/watch?v=SAnQqa7B4k4

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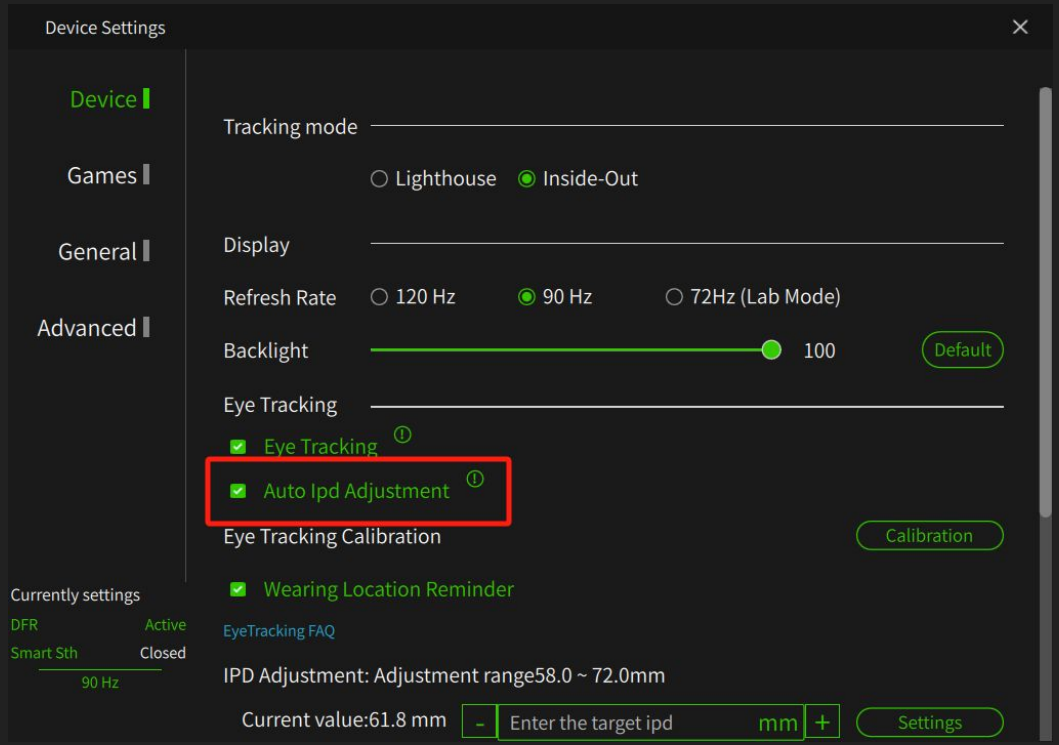
AutoIPD and DFR



https://www.youtube.com/watch?v=EvkG7ioFY1Q

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DFR in Game

Pimax releases eye-tracking and auto-IPD for its Crystal

https://www.youtube.com/watch?v=SAnQqa7B4k4

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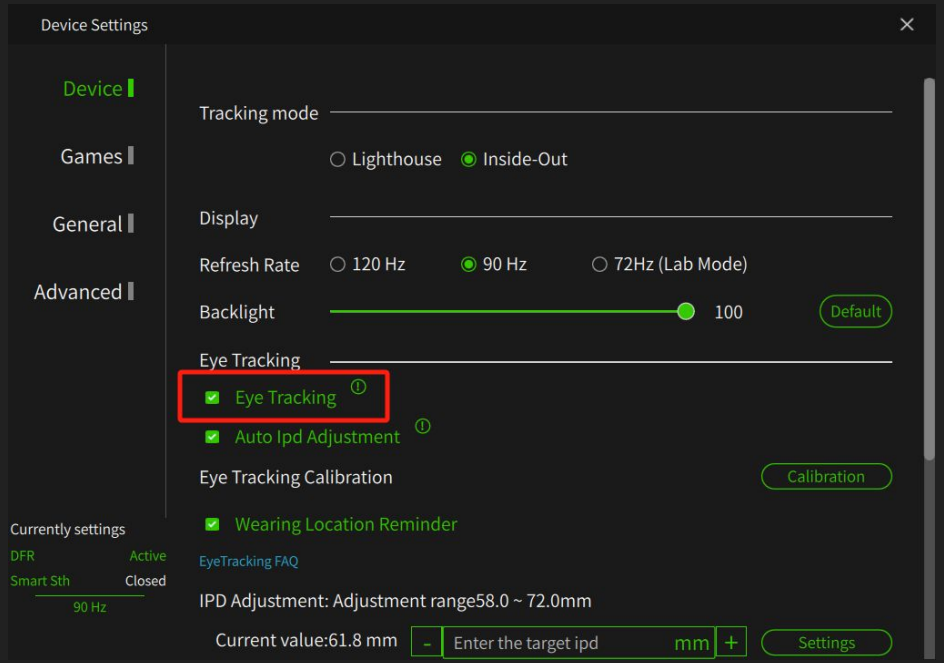
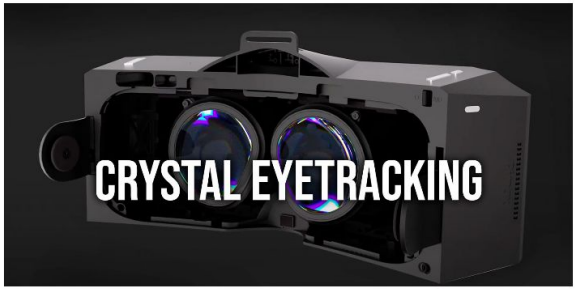
Eyetracking

Launch Pimax Play, click and select “Eye Tracking”.





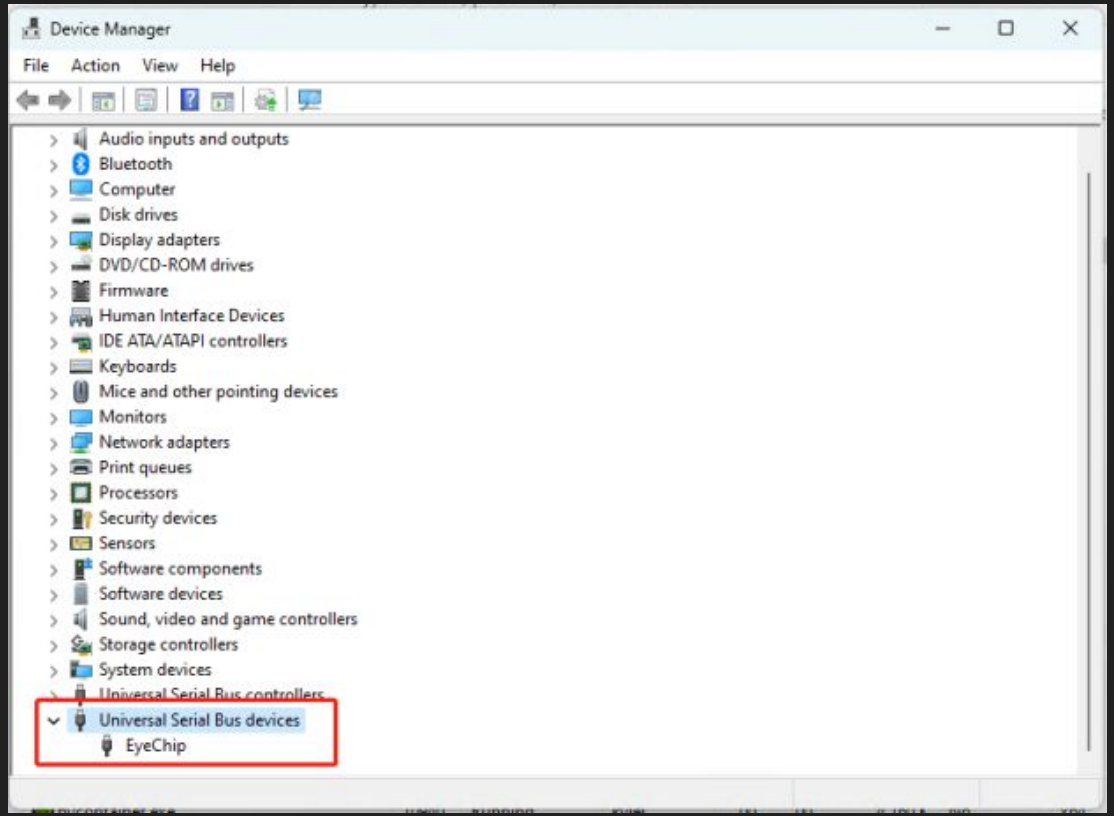
2023-08-25 10:22:39

How to use eye-tracking on the Pimax Crystal

https://pimax.com/how-to-use-eye-tracking-on-the-pimax-crystal/

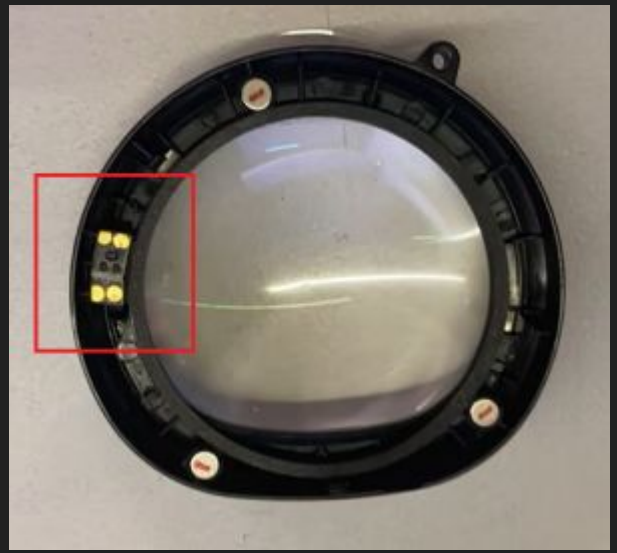
Troubleshooting for Eye tracking

1.“EyeChip” should be in the “Device Manager”.



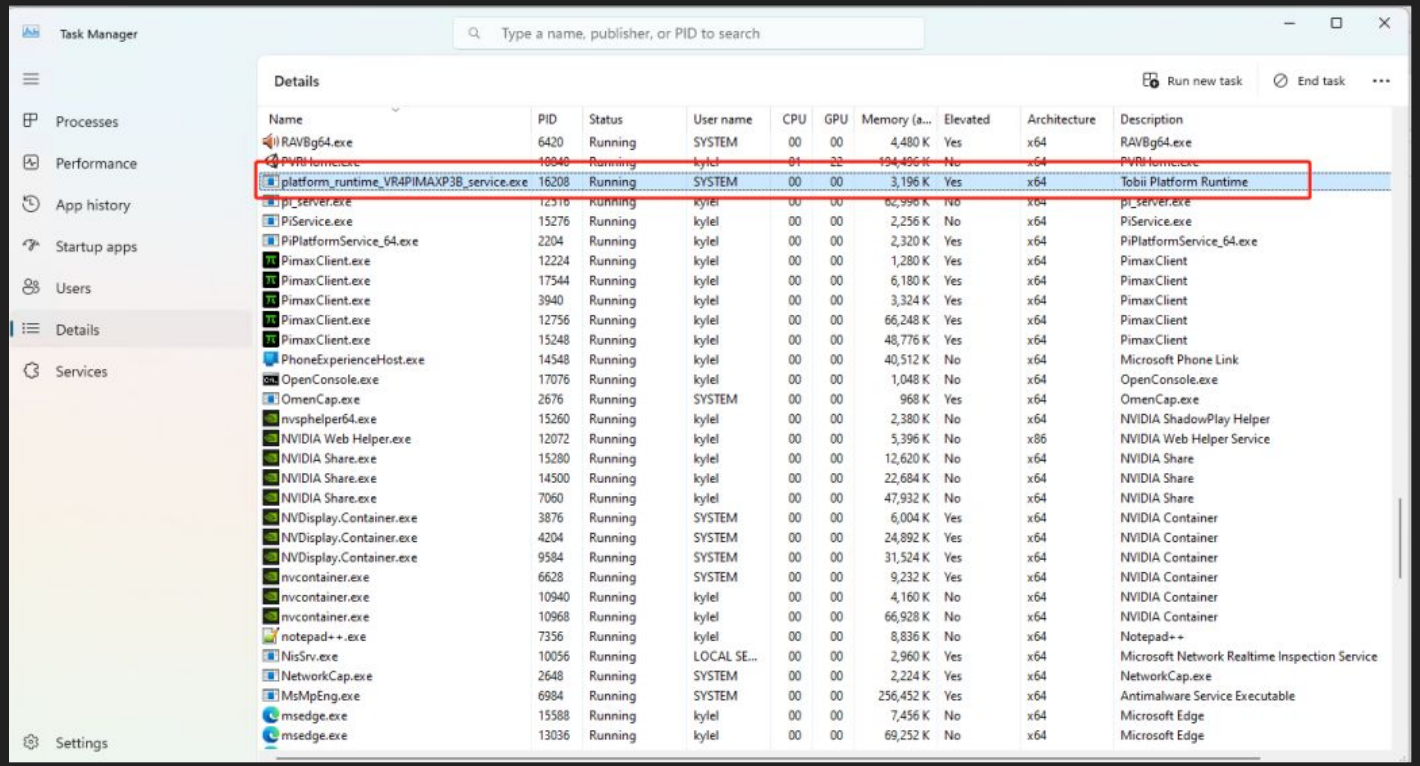
Troubleshooting for Eye tracking

2. Look on the backside of the lenses and confirm the presence of electrical contact points such as those pictured in the image below. These contacts are necessary for the eye tracking functionality.



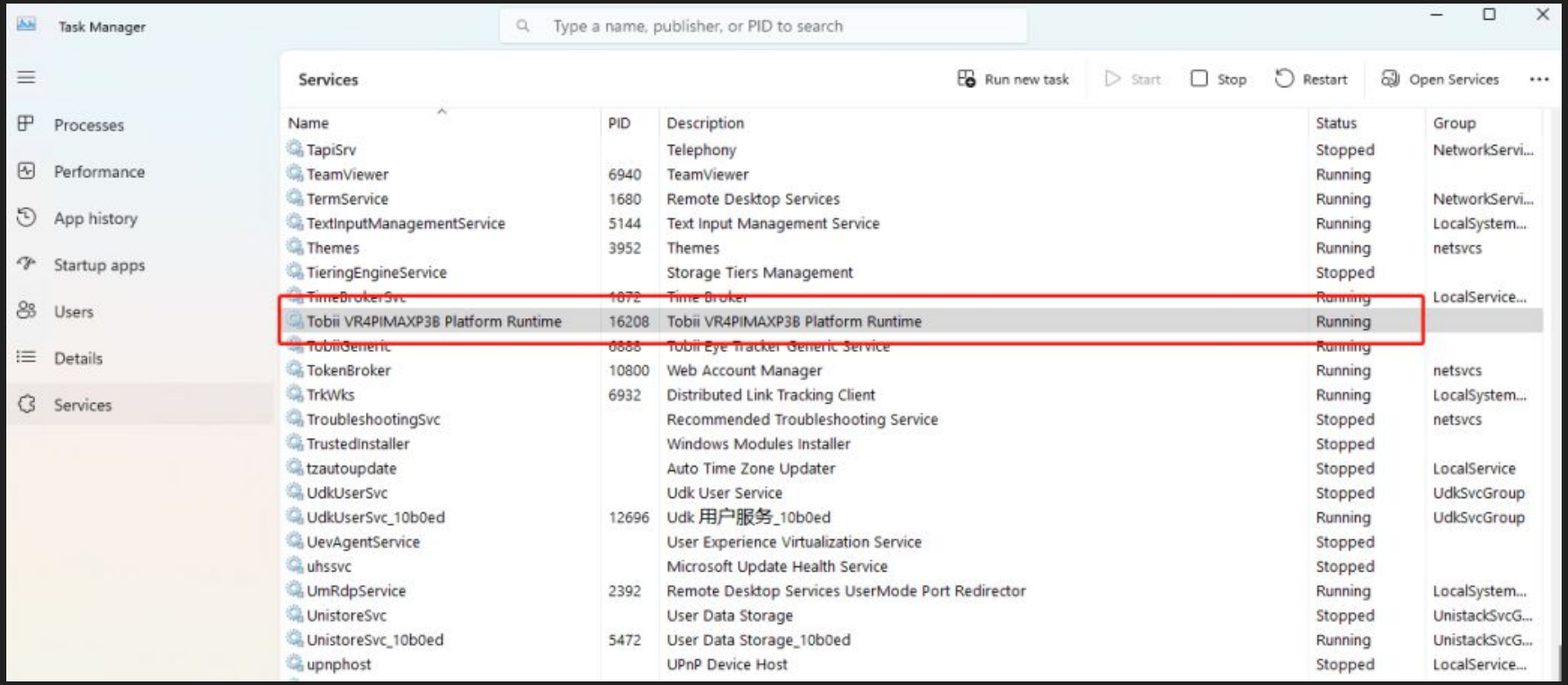
3. Confirm the presence and activation of the eye tracking sensors by taking a photo of the lenses with your smartphone. These sensors are invisible to the human eye but can be seen in photos and videos if photographed while the headset is ON and connected to the PC.

4. Look for the Tobii eye tracking process in the Task Manager pictured below



Troubleshooting for Eye tracking

5. In Task Manager → Services, check to see whether or not the Tobii service is running. If not, start it manually.



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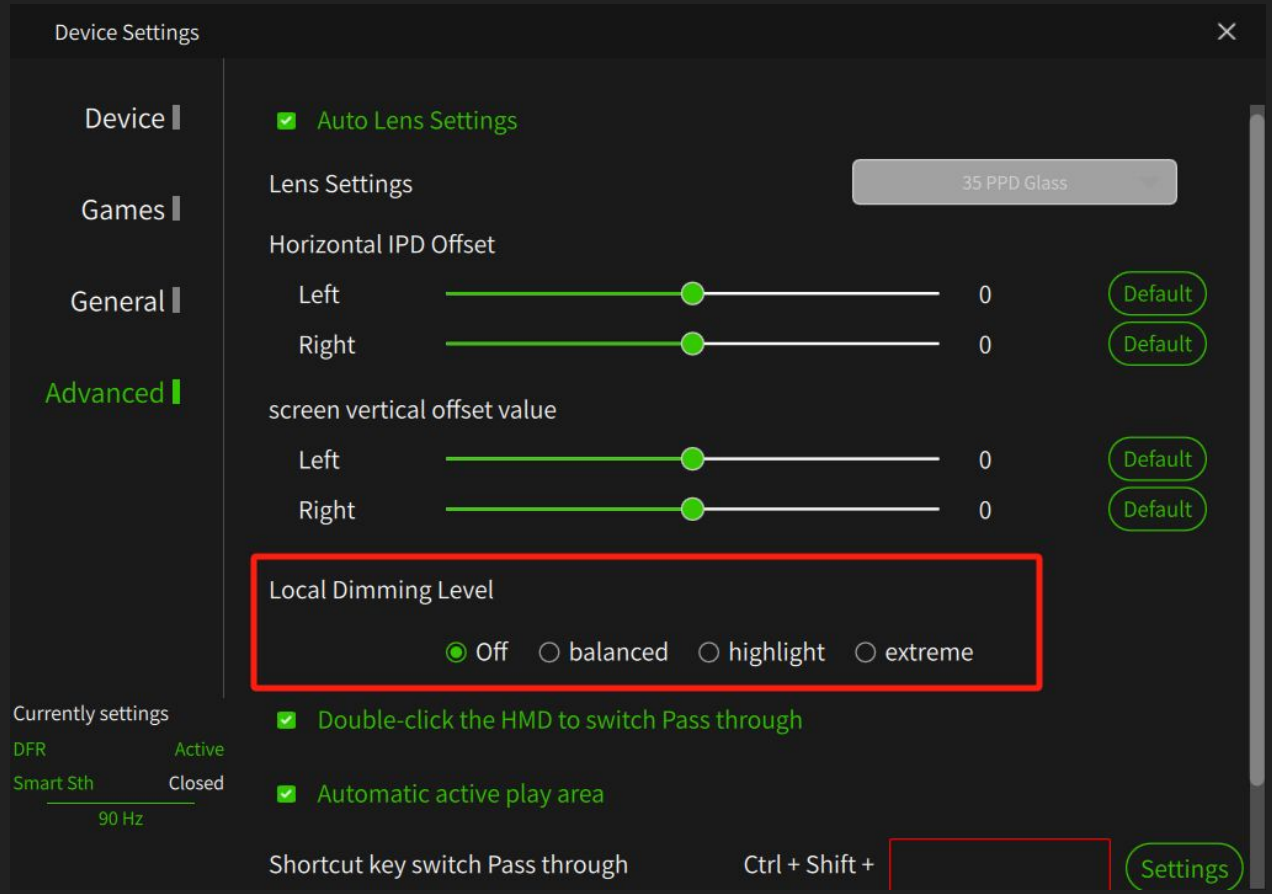
Local Dimming



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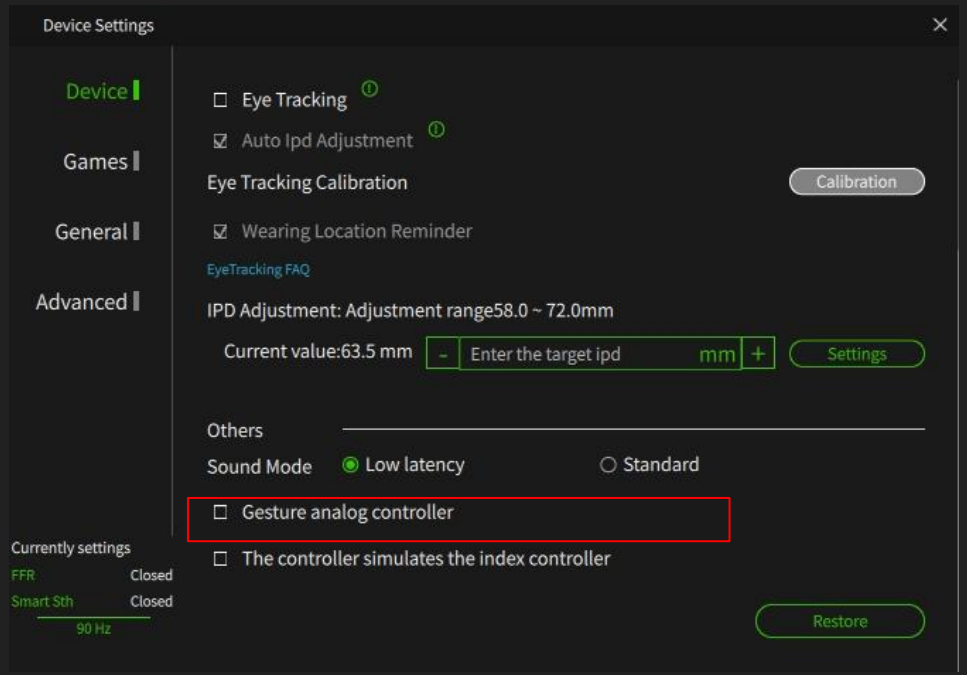
All-in-One mode

https://www.youtube.com/watch?v=wgAv3N7AdSw

Sound Mode

You can choose the sound mode between “Low latency” and “Standard” to improve audio latency issue.



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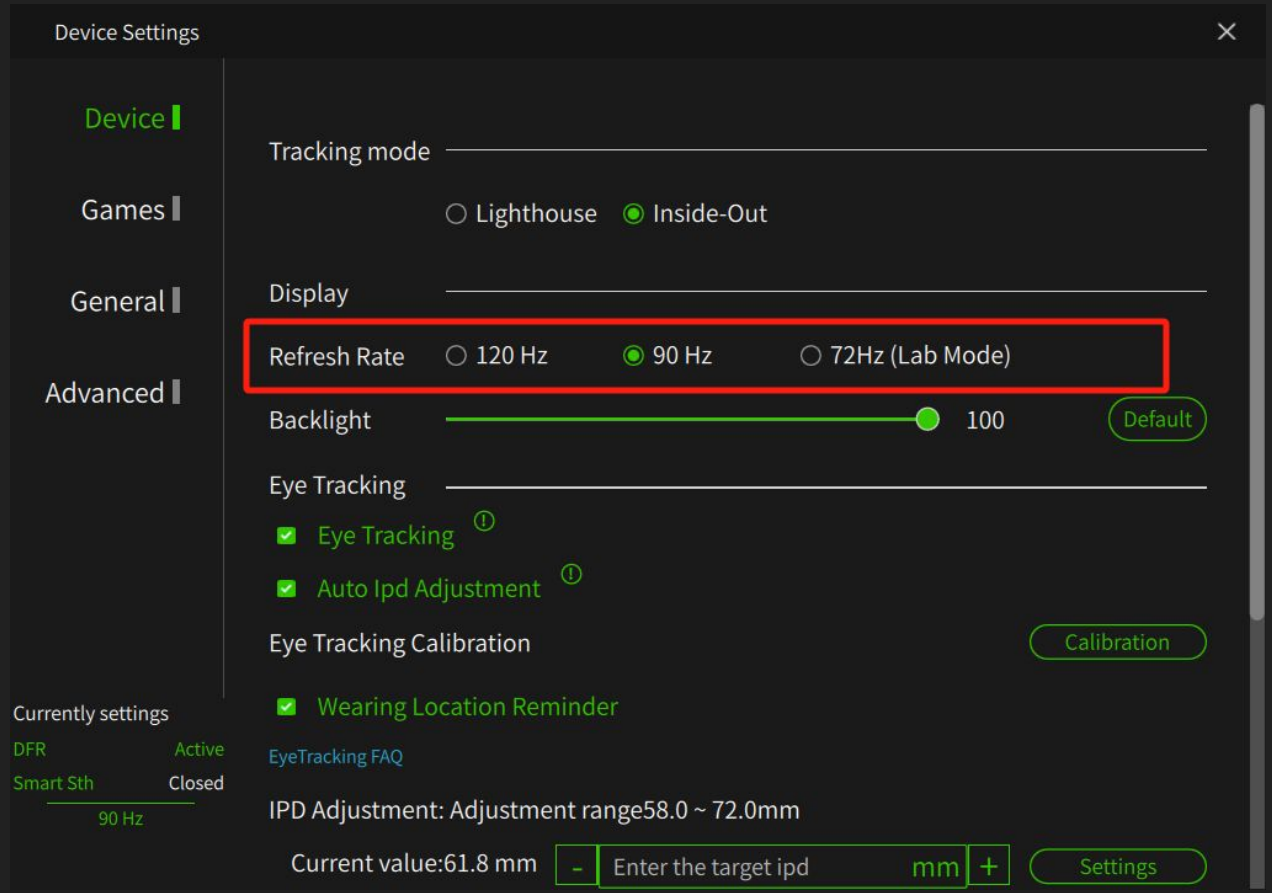
72Hz 90Hz & 120Hz Refresh rate



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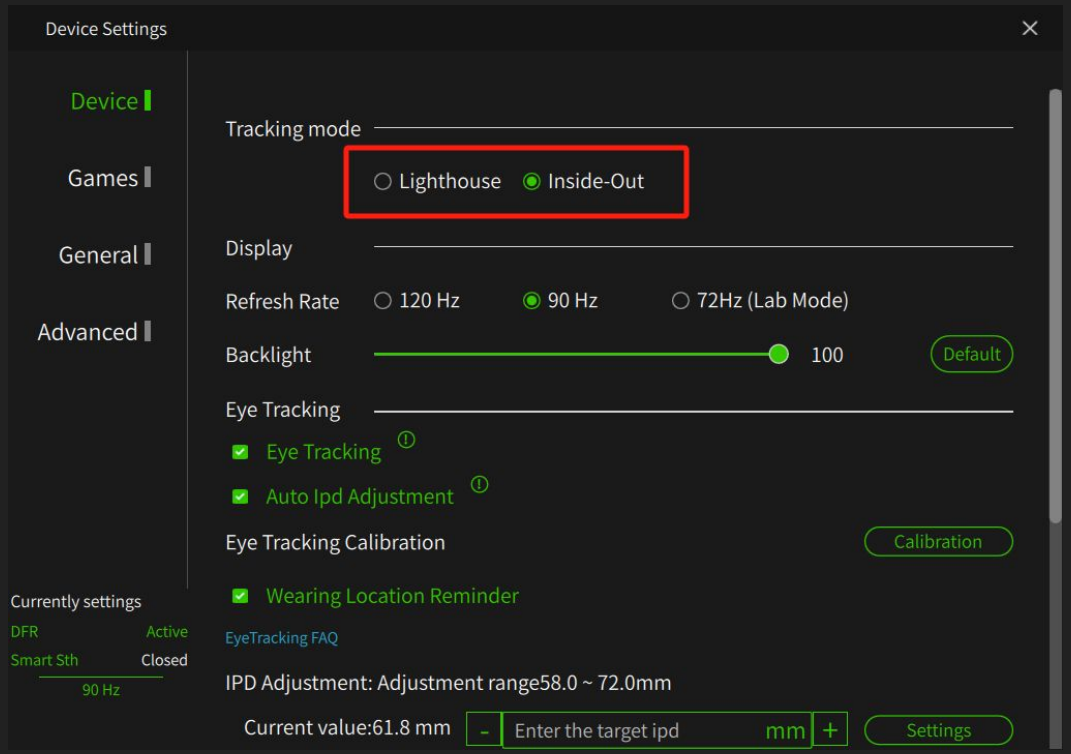
Lighthouse Cover

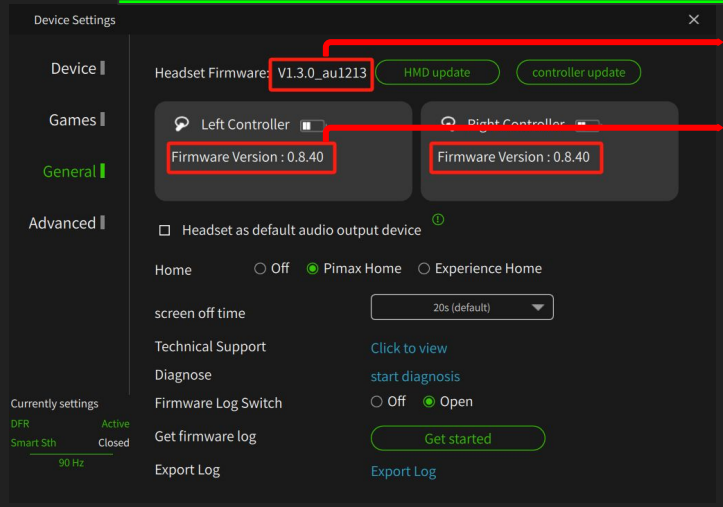


Pimax Crystal - Lighthouse cover (prototype)

https://www.youtube.com/watch?v=RCmuR7g2-HE

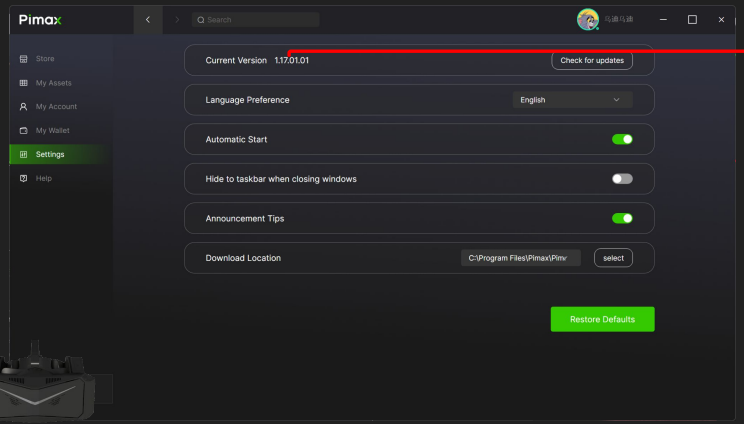
Pimax Crystal

What is your Crystal Firmware version?

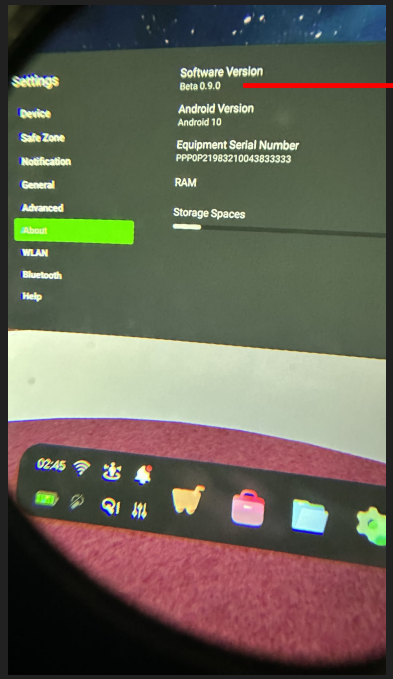


Headset Firmware

Controller Firmware



Pimax Client Version



AIO Firmware

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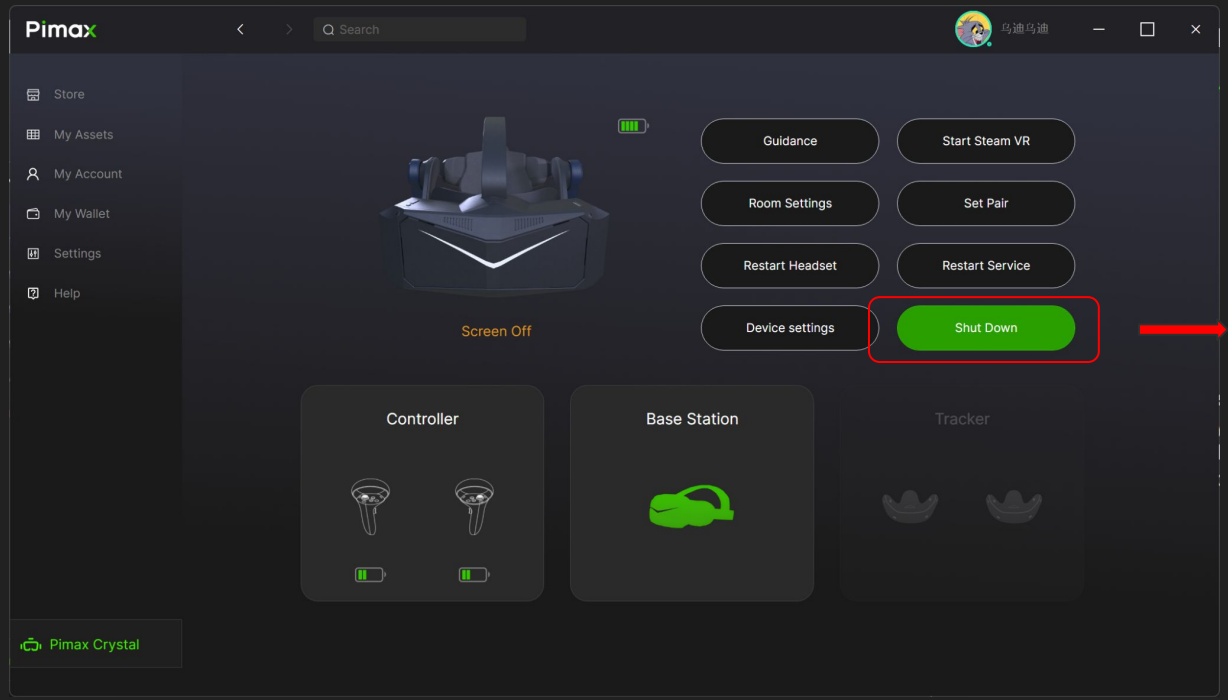
How to upgrade your Crystal Firmware version?

https://www.youtube.com/watch?v=IK7vvulmzjg

Pimax Crystal

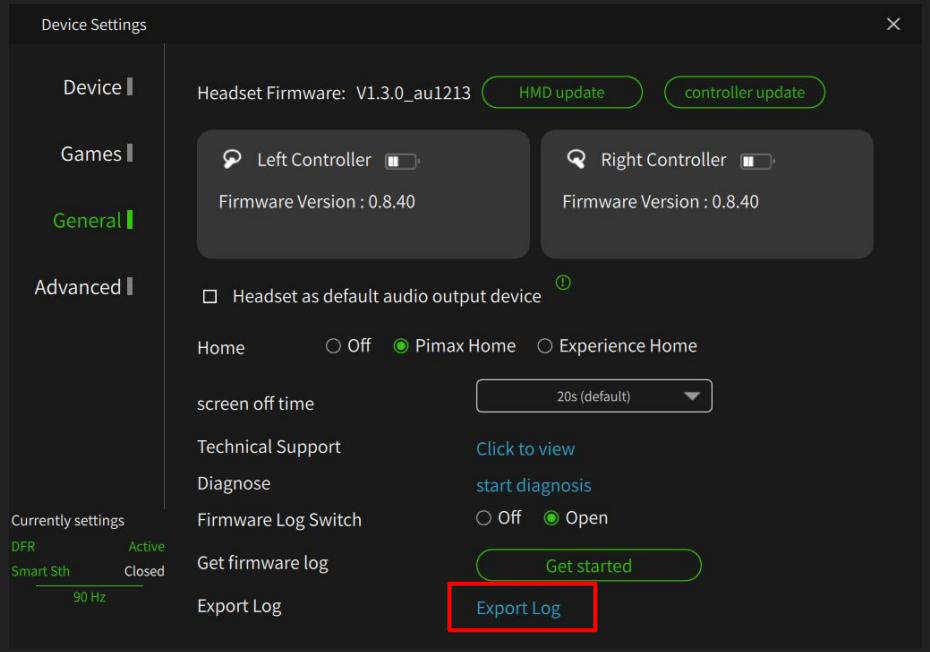
How to shut down Crystal on Pimax Play?



When you are done using your Crystal, it is best to shut it down by clicking on "Shutdown" Instead of simply unplugging the USB data cable from PC.

Pimax Crystal

How to export the Log



[How To Run MSFS2020 On A 3080 With The Pimax Crystal | Pimax]

Pimax Crystal

Online Video and Document

Quick Start Quide：https://drive.google.com/file/d/1lSkOGp2xOXzkHDccinAJxaJkE9qHcxwE/view?usp=sharing

Crystal User Guide: https://drive.google.com/file/d/1KicX7Z6-oHjCSG9Jg8hn5ZfvsI0HUf8v/view?usp=sharing

Video Unbox and installation guide：https://www.youtube.com/watch?v=SiTwBVA0SD0&t=204s

Eye Tracking Troubleshooting Steps **https://pimax.com/eye-tracking-troubleshooting-steps/**

How to set up the Pimax Crystal - 8 easy steps **https://www.youtube.com/watch?v=Z8HIH6AErRM&t=6s**

Crystal FAQ Crystal FAQ : Pimax Support