Virtual reality headsets are widespread today. They have been created by many companies in unique, creative forms. We will look at some of the most popular virtual reality, or ‘VR’, headsets that have been released to the public today.

Arguably the most popular VR headset would be the ‘Oculus Rift’, designed by a division of Facebook. This headset was shipped on March 28th, 2016. The first model was named ‘CV1’, standing for ‘Consumer Version 1’, and was released on May 21st, 2016. It boasts a 1080x1200 display per-eye, leading to a combined resolution of 1080x2400 overall. ‘CV1’ also has a 90Hz refresh rate, with a 360-degree positional tracking system, 110-degree field of view, and integrated audio output[[1]](#footnote-1). With this model, there was a clear focus on ergonomics and overall beauty of the headset. Shortly after ‘CV1’, the ‘Rift S’ was developed. Shipped on May 21st, 2019, this headset came with a 2560x1440 LCD 80Hz display, a 115-degree field of view, positional tracking, and in-built audio[[2]](#footnote-2). This headset uses ‘Oculus Insight’, which is its method of tracking motion in the real environment using five cameras on the headset. These cameras observe the surrounding area and notice changes, reflecting these changes in the gameplay[[3]](#footnote-3). The ‘Rift S’ also uses ‘Oculus Home’, which is outputted to the headset when there is no other output to be displayed. This displays things such as a VR store, list of applications and more, making it easy to access applications and other things quickly. This headset, compared to the others that will be mentioned, was one of the pioneering products in the VR world.

Sony’s take on VR was nothing short of the quality of the ‘CV1’. Shipped in October 2016, ‘PlayStation VR’ contained a 5.7-inch OLED panel, which had a resolution of 960x1080 per-eye, giving a combined resolution of 1920x1080 overall, with a refresh rate of 90-120Hz[[4]](#footnote-4). One flaw of this headset is that there is no official option to transfer use to another system. ‘PlayStation VR’ is only officially supported to be used on PlayStation 4 or, in the future, PlayStation 5. This headset also boasts 3D audio, a 100-degree field of view, and has 9 positional LEDs to track 360-degree movement of the head[[5]](#footnote-5). With ‘PlayStation VR’ supporting a refresh rate of 120Hz, it is clearly a high-tier headset, and seeing as most PlayStation 4 titles only support up to 60FPS, the headset used “a motion interpolation technique” called asynchronous reprojection (Wikipedia, n.d). This technology is aimed at improving the smoothness of the framerate of video, especially in virtual reality headsets, achieved by “warping” the previous frame into a prediction of how the next frame will look[[6]](#footnote-6). This allowed the ‘PlayStation VR’ headset to view these high framerates, even if the game wasn’t designed to run at this level. Another advantage of this headset would be the compatibility. This headset has one design, and anything designed to be run by the headset only needs to be designed to suit one specification. This leads to less compatibility issues, which can not be said for any of the other headsets that have been/will be mentioned. In terms of quality, however, ‘PlayStation VR’ certainly matches the hardware quality and ergonomics of the other headsets.

1. ‘Oculus Rift’*, Wikipedia*, n.d, <https://en.wikipedia.org/wiki/Oculus_Rift>, retrieved 4th May, 2020. [↑](#footnote-ref-1)
2. Kevin Carbotte, ‘Oculus Rift S Review: First-Gen VR Gets a Reboot’, *TomsHardware*, 2019, <https://www.tomshardware.com/reviews/oculus-rift-s-vr-headset,6148.html>, retrieved 6th May 2020. [↑](#footnote-ref-2)
3. ‘Powered by AI: Oculus Insight’, *Facebook*, 2019, <https://ai.facebook.com/blog/powered-by-ai-oculus-insight/>, retrieved 6th May 2020. [↑](#footnote-ref-3)
4. ‘PlayStation VR’, *Wikipedia*, n.d, <https://en.wikipedia.org/wiki/PlayStation_VR>, retrieved 5th May 2020. [↑](#footnote-ref-4)
5. ‘PlayStation VR Tech Specs’,*PlayStation,* n.d, <https://www.playstation.com/en-ca/explore/playstation-vr/tech-specs/>, retrieved 6th May 2020. [↑](#footnote-ref-5)
6. ‘Asynchronous reprojection’, *Wikipedia,* n.d, <https://en.wikipedia.org/wiki/Asynchronous_reprojection>, retrieved 6th May 2020. [↑](#footnote-ref-6)