## VR Gear

This is used to refer to the input devices, clothing and equipment worn by people who engage in virtual reality. This includes:

* [Virtual reality glasses](http://www.vrs.org.uk/virtual-reality-gear/glasses/index.html) or goggles
* Data gloves
* Head mounted displays (HMD)
* Data suits
* Workbenches
* Joysticks

This also includes haptic devices which enable the user to feel a sense of touch when they manipulate an object within a [virtual environment](http://www.vrs.org.uk/).

The main difference between virtual reality gear in the past and now is that back then, the trend was towards large, bulky looking gear which was uncomfortable and incomprehensible. Plus it had a futuristic appearance which may have been a turn off for the commercial sector as well as the high price tag.

But like most forms of technology, virtual reality gear has become smaller, lighter and more affordable. The bulky television sized head mounted display (HMD) has been replaced by lighter models which fit neatly over the front of the face.

## Head mounted display

These take the form of a pair of goggles or helmet with a screen in front which displays three dimensional images. Many of these contain headphones and/or speakers so that the wearer receives audio/video output as well.

Most displays are connected to cables although there are several wireless models available. But, there is a problem with time lag (latency) which refers to the period of time between the wearer’s actions and the appropriate response, e.g. shift in perception.

Head mounted displays also contain a tracking device which means that the images displayed to the wearer change as he/she moves their head. This also changes their point of view.

## Virtual Reality glasses

Virtual reality glasses or goggles are a type of eyewear which functions as a display device. They enable the wearer to view a series of computer generated images which they can then interact with.

They take the form of one or two display screens which are worn in front of the face and project graphical images, often accompanied by sound and video. The viewer sees two separate images – one in each eye which the brain combines to form a three dimensional image. They show an illusion of depth which is a characteristic feature of virtual environments.

**3D internet**

And let’s not forget the internet. There are games programmers who like the idea of a three dimensional internet in which you are able to explore websites in a dynamic way. Rather than clicking on a link and scanning the information on a web page you will be able to physically touch that page and manipulate it. Think of a web page as a location which you can explore at your leisure.

This type of interaction is seen in virtual worlds such as Second Life which allows you to socialise with others in a 3D environment. [Second Life](http://www.vrs.org.uk/virtual-reality-games/second-life.html) is discussed in more detail in a separate article.

**What to expect in the future**

//What is the future for virtual reality gaming? Well, it looks exciting that’s for certain with new developments in [virtual reality gear](http://www.vrs.org.uk/virtual-reality-gear/index.html) and games consoles which play [VR games](http://www.vrs.org.uk/virtual-reality-games/index.html).

A big problem with virtual reality is cost: a fully immersive set up such as a CAVE where someone is able to interact with objects in an enclosed space is expensive. In fact it’s that expensive that only university research departments and companies with a research and development (R & D) section are able to afford this type of set up.

Us mere mortals have to make do with a semi-immersive set up such as a pair of [virtual reality glasses](http://www.vrs.org.uk/virtual-reality-gear/glasses/index.html), low cost data glove and games console. But if it is the experience you want then this is a perfectly good way of doing so. But don’t expect the full, head mounted display (HMD), input device and high end graphics experience which usually comes with high end systems only.

But like most forms of technology, the price starts to come down which is usually due to affordable components and products becoming smaller and more accessible. As more of them become available this also drives down the price which places them within the reach of many more people than before.

## Nanotech VR

There is talk about using nanotechnology as a means of allowing us to push beyond the boundaries of the human body and enter into the digital world. You would become one with the virtual environment. Your brain would be uploaded into a computer system or network which would mean immortality but how much of this is science fiction rather than hard facts?

Just to bring things back to the present: the reality at the moment is new advances in gaming technology which makes full use of virtual reality. This will hopefully lead to new types of games which push the boundaries as well as generating new experiences.

So who knows? You might be able to afford that all encompassing [CAVE virtual reality](http://www.vrs.org.uk/virtual-reality-environments/cave.html) system one day but you had better start saving…