

Essex Films

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WIDESCREEN, ANAMORPHIC WIDESCREEN AND DVD EXPLAINED

In the past few years the shape of television has changed dramatically. Since it's conception, TV pictures have been 'box shaped', with a 4:3 ratio (that means the picture is four units wide by three high). Our 625 colour PAL television system has been around since 1967, so it's no wonder that a lot of people are unsure about the current changes and what they really mean. We try to explain it here...

So, what exactly is Widescreen? Basically, it's a whole new television system for the 21st century, and in a few years time pictures filmed in the more traditional 4:3 box mode will look very old fashioned. The next big revolution in television planned in the next twenty years is High Definition Television, and this will also use the Widescreen ratio, so it looks like Widescreen is here to stay! Therefore, by having your wedding filmed in Widescreen, you'll be future proofing your memories. Conventional television only has a few more years of life before the government turns off the old analogue transmitter stations and everyone will be watching television digitally, which means everyone will be watching Widescreen.

Widescreen television uses a 16:9 aspect, that is the picture is 16 units wide by nine units high, as opposed to the standard '4 x 3' of old conventional televisions. This allows for far more creative composition to shots in your video, and more of a true 'film look', as shown in Figure 1.

Figure 1



True Widescreen Picture on 16:9 Television

As you'll immediately notice, we were able to tightly frame the bride, groom and their two witnesses into a lovely composition. Don't worry if you don't have a widescreen television, because widescreen films can also be shown on conventional televisions, but to fit the picture perfectly, black bars are placed at the top and bottom of the picture to maintain the correct aspect ratio.

Figure 2



True Widescreen Picture on 4:3 Television

All television programmes are now shot in widescreen, and you've probably noticed that most feature films are now shown on conventional television in widescreen, with the bars as here. This means you can get the full impact of widescreen filming until such times (when inevitably) you will get a widescreen television, because the old 4:3 TV's won't be made any more!

Looking at Figure 3, you'll notice how the composition changes dramatically using the old standard 4:3 camera, and a witness is totally missing from the composition!

Figure 3



Standard 4:3 Picture on 4:3 Television

Some people believe they can use their widescreen televisions to successfully manipulate a standard picture. Unfortunately that's not entirely true. There are various things people try. Firstly, in Figure 4, they 'zoom' the picture so that the sides match the sides of the widescreen, which results in the top and bottom of the picture being cut off, and usually means a lot of heads get 'cropped off' - and the second witness is still missing!

Figure 4



Standard Picture zoomed to fit a 16:9 Television

Another way people try and get round the problem is by 'stretching' the picture, as in Figure 5, which all widescreen televisions will do. Unfortunately, in doing so, everyone becomes a bit wider, and no bride wants to look fat on her special day - and the second witness is still missing!

Figure 5



Standard Picture stretched to fit 16:9 TV

You can choose the proper 4:3 aspect on a widescreen TV, and this is achieved by placing black bars at either side, as in Figure 6. More acceptable, but that second

mum is still missing, and as the years go by the whole shape of the picture will look more and more dated!

Figure 6



Standard Picture with side bars to fit 16:9 TV

WHAT IS ANAMORPHIC WIDESCREEN?

There are a couple of ways to achieve a widescreen picture, but the proper way is to create an 'anamorphic' picture. Standard television is made up of 'pixels', square dots that blend together to make up a picture. Anamorphic widescreen uses a rectangular pixel, which is then 'stretched' to fill the whole of the widescreen television, ensuring maximum picture quality. Square pixels are for the old analogue TV system, rectangular pixels are for the new Digital televisions. A true anamorphic camera uses rectangular shaped chips, the same size as the widescreen TV ratio, to capture the widescreen picture at the full resolution. Some cheaper camcorders may also claim to record widescreen pictures, but they use one of two compromises:

One way is to add black bars onto a standard 4:3 picture, and only record the picture in the middle of the frame. This then means you are required to 'zoom' the whole picture up to fit into the widescreen TV, resulting in a sharp drop in quality, as a third of the total signal information (the black bar part) isn't being used.

The other way is they use a mock anamorphic technique, whereby the camera electronically stretches the picture on recording. Unfortunately, this again results in significant picture loss, because if the original camera chip is in the old 4:3 format, it will effectively ignore a third of the information available, resulting in a quality drop.

The only way to get a true Widescreen picture is to use a true Widescreen camera, and that is what we at Essex Films can now offer to our clients. True widescreen DVD's that maintain the absolute maximum in picture and sound quality throughout thanks to a fully digital recording, editing & authoring process, ensuring that your wedding video will be as future proof as possible.



WHAT MAKES DVD SO MUCH BETTER THAN VHS?



DVD is another revolution, which has dramatically changed the way we've viewed pre-recorded material. VHS is good, but it's a technology that is over twenty years old, and because it is analogue, it is now time to be replaced with a better digital medium - DVD. The main difference is the resolution, that is the amount of information that the picture holds. Let me explain: A television picture is made up of 'lines'. These lines are made up of small dots, or 'pixels'. The more lines of information a picture has, the sharper it looks to us. Television has an average pixel line ratio of around 550 lines. VHS can only record an average of 240 lines. That's why when you watch a TV programme that you've taped, it never quite looks as good as if you were watching it live. DVD on the other hand, has a line resolution of 500 lines, nearly twice the quality of VHS and almost as good as the television signal. To achieve this increase in picture quality and squeeze it all onto a CD sized disc, DVD uses a special process known as MPEG2 compression. The DVD cleverly looks at each frame of video to see which bits are changing (usually the foreground action, the people, etc), and which bits are the same (usually the background). It then only updates the moving bits, which means it usually only needs to update part of the picture, therefore saving space on the disc, which results in a better overall quality of picture for the whole film. And because most of the time the viewer is watching the main action, the picture looks perfect. Being totally digital means no more colour bleeding that VHS used to give, no more 'grainy' images, and no 'fizzy' edges. used to give, no more 'grainy' images, and no 'fizzy' edges.

However, as with any new technology, there are certain things you should be aware of. DVD-R is the term for the new DVD recordable general discs, which is a new agreed DVD format standard. However, because this addition to the DVD standard is recent, these DVD-R discs may not play on some older or budget DVD players. This is not a failing of the DVD-R disc, rather the type of laser used in the specific player. Just like when recordable CD's were introduced, some CD players would not read them, but nowadays, just about every CD player plays them fine. This is the same with the DVD-R discs, and in a couple of years this won't be a problem at all. Most of the quality established company's players will play the discs fine, but there are exceptions. We can provide you with a demonstration disc to check the compatibility of your player if required.

Also, because the DVD-R has a maximum capacity of 4.7 gigs, the longer the final film, the more overall compression (and therefore quality drop) needs to be used to make it all fit onto the disc. However, top rate encoded films can be produced up to an hour and a half, and a film still significantly better than VHS can be produced up to 2 hours. What is usually the longest single element of a wedding film? The speeches. Our best advise is to keep your speeches down to around five minutes each and everything will fit lovely.

If you have any further questions, please don't hesitate to contact us on Freephone 0800 389 8730, or email us essexfilms@actionvideo.co.uk.