

The Shape of Films - They Are Generally A Lot Wider Than A TV Screen

The first thing one has to understand about widescreen transfers is that feature films are almost always wider than standard television screens. That is, the **aspect ratio** of the film (the ratio between the width and the height of the picture) is wider than a standard TV's width.

If you were to measure a TV screen, you'd note that the width of the screen is 1.33 times the height of the screen. In other words, a standard TV's aspect ratio is 1.33:1.

This can also be expressed as an aspect ratio of 4:3, or four units wide by three units high.

Although any aspect ratio you care to imagine can be used in cinematography, there are two aspect ratios which are commonly used in modern films, and that we will discuss in detail here: 1.85:1 and 2.35:1, both of which are significantly wider than the ratio of a standard television set.

So How Do We Squeeze A Wide Image Into A Narrow Television Screen? Panning & Scanning.

Films no longer fit on a television screen easily, a problem that has plagued home video since its very inception. There are two basic methods used to fit a wide image onto a narrow television screen, both of which involve compromises, advantages, and disadvantages. One involves modifying the shape of the image to fit the screen, which usually means a compromise in the content of the image.

This method is typically referred to as Panning & Scanning, and is a process in which an editor, not necessarily the same one who worked on the film, cuts out what they deem to be less important parts of the image in order to fit the resultant image fully onto a narrow television screen. While this method may look aesthetically pleasing to the less-educated eye, the results of this method severely damage the impact of the film, with numerous shots being made confusing or even nonsensical by this alteration. The wider the original aspect ratio of the film, the greater the impact of Panning & Scanning.

Panning & Scanning a 1.85:1 film

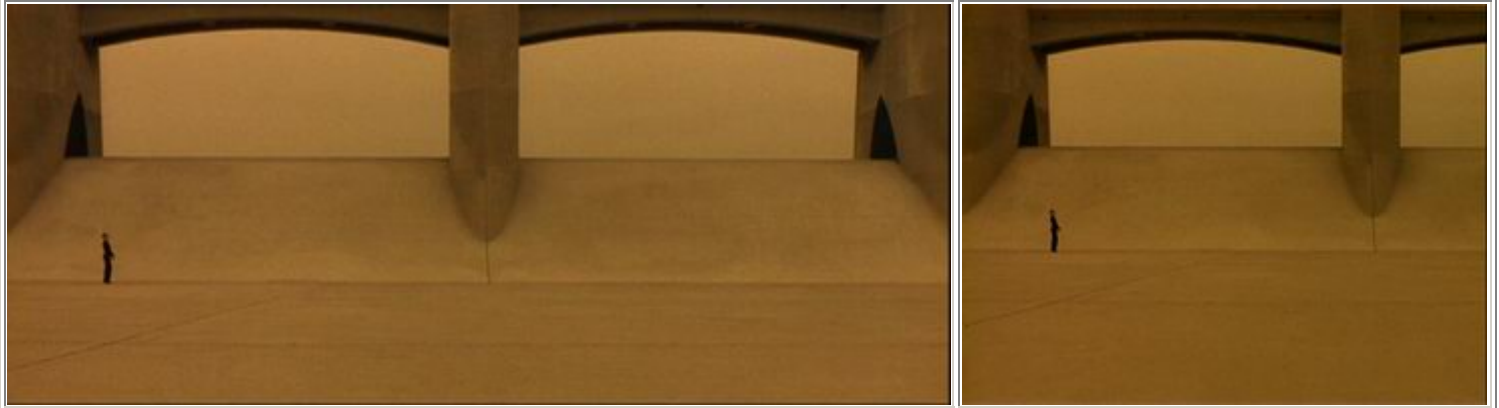


This is a still frame from the 1998 classic ***Lock, Stock, And Two Smoking Barrels***. The film was originally presented in an aspect ratio of 1.85:1. Note the bag of golf clubs on the extreme right of the frame near **Frank Harper**, and the number of trees in the painting in the background.



This is the same still frame from ***Lock, Stock, And Two Smoking Barrels*** after having been cropped in order to fit onto a 1.33:1 television screen. The golf bag is now missing, as are a noticeable number of trees on both sides of the background painting. The result is a shot that looks and feels much more cramped than in its original form, and is not what director **Guy Ritchie** had intended.









Both of the above examples come from the film **Gattaca**. Note the carefully composed widescreen shots on the left, emphasizing the smallness of the humans in relation to the enormous, carefully framed and symmetrical backgrounds. Both the scale and the symmetry of the backgrounds are destroyed by the panning & scanning process, decreasing the impact of these scenes.

So How Do We Squeeze A Wide Image Onto A Narrow Television Screen? Letter boxing.

The other, much more preferable, method of making a wide image fit a narrow screen is to reduce the vertical height of the image so that it fits on the screen in its entirety. This method is called letterboxing, and its only drawback to the uninitiated is the necessary inclusion of black bars above and below the image. The advantage is that we are seeing the film in the aspect ratio that the director intended, rather than in an arbitrarily pared down version. This is a large part of the reason why televisions are being made wider. For now, here is a comparison table demonstrating what wide images look like when they are reduced in height in order to fit narrower television screens.

<div data-bbox="332 520 662 766" style="border: 1px solid black; padding: 10px; text-align: center;"> <p>1.33:1</p> <p>Academy Standard Frame</p> </div> <p data-bbox="354 779 639 814">Standard TV shape.</p>	<div data-bbox="901 520 1344 766" style="border: 1px solid black; padding: 10px; text-align: center;"> <p>1.78:1</p> <p>Digital Television Standard</p> </div> <p data-bbox="1003 779 1242 814">Digital TV shape.</p>
 <p data-bbox="191 1123 802 1255">A 1.85:1 image, vertically shrunk in order to fit the 1.33:1 television screen. The entire image is preserved, with 28% of the original resolution lost.</p>	 <p data-bbox="829 1123 1425 1255">A 1.85:1 image, vertically shrunk in order to fit a 1.78:1 television screen. The entire image is preserved, and only a miniscule 4% of the original resolution is lost.</p>
 <p data-bbox="191 1558 802 1690">A 2.35:1 image, vertically shrunk in order to fit the 1.33:1 television screen. The entire image is preserved, with 43% of the original resolution lost.</p>	 <p data-bbox="829 1558 1425 1690">A 2.35:1 image, vertically shrunk in order to fit a 1.78:1 television screen. The entire image is preserved, and only 24% of the original resolution is lost.</p>

ANAMORPHIC LENS

Schneider Optics is the U.S. subsidiary of the world-renowned German optical manufacturer, Schneider-Kreuznach. Schneider has been producing the highest quality optics on the market for over 90 years, offering solutions for large-format photography, photo enlarging, motion picture projection, optical filtration, and industrial applications. In 2000, Schneider Optics acquired Century Precision Optics, adding its over 50 years experience manufacturing superior attachments for film and video.



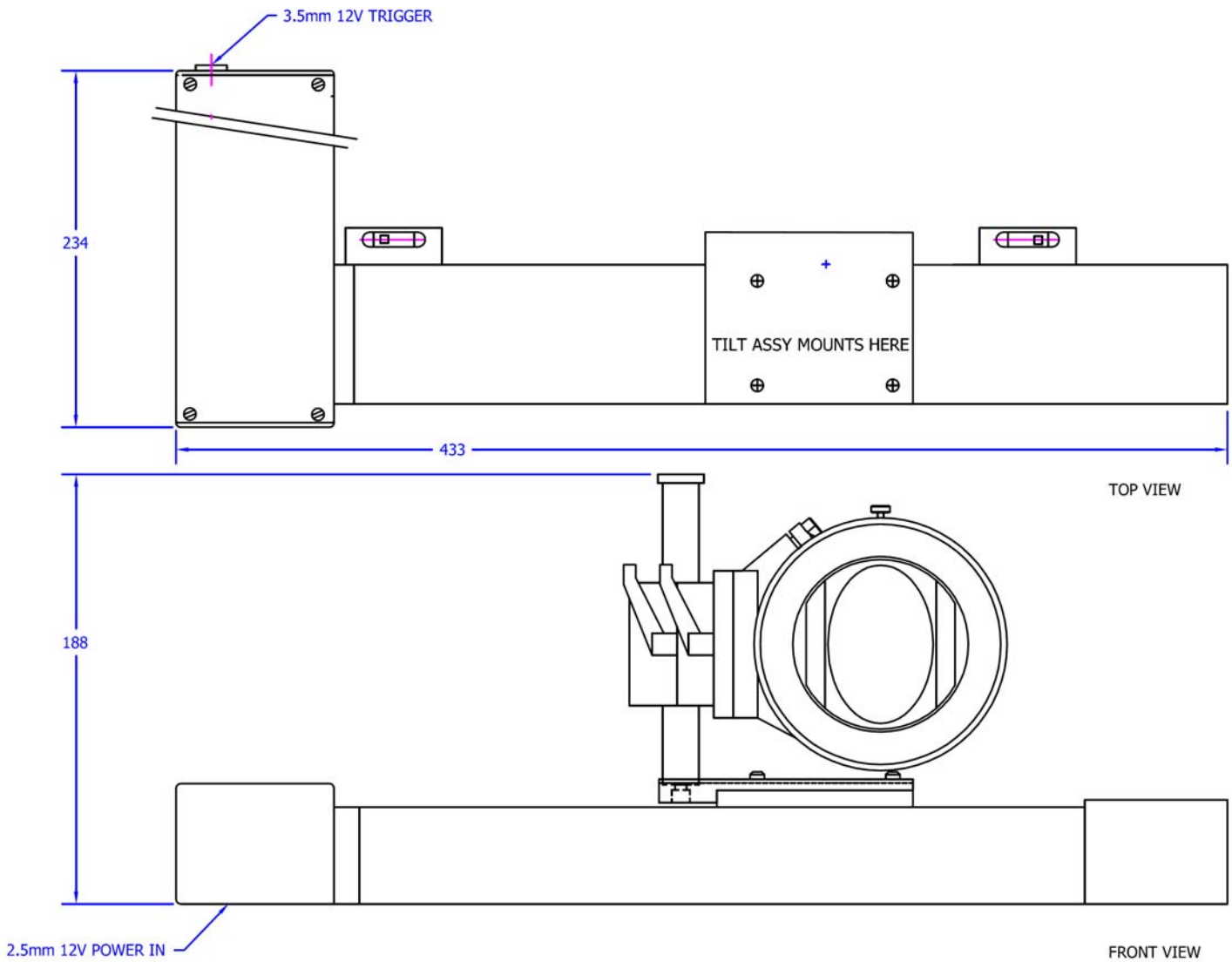
Detail of Lens Adjustments

KINO-LINEAR

The Kino-Linear™ is a motorized mechanism that moves a lens into and out of the light path of a digital projector. Lens deployment can be automated with a 12 volt trigger or contact closure, when used in connection with an appropriate projector, scaler or control system. This is the ideal device for the deployment of anamorphic lenses to create true 2.35 aspect ratio (Cinemascope®) images, without those annoying black bars. The Kino-Linear™ mechanism is ruggedly constructed to satisfy the most demanding home theater or corporate screening room applications.

The Kino-Linear™ has adjustments for displacement, pitch, yaw, and roll so ideal lens alignment can be achieved. It is designed to be used with Schneider Optics' [Cine Digital anamorphic](#) lenses for the best combination of mechanical reliability and optical quality. Mounting plates for most popular projectors are available.

SPECIFICATION:



For any enquiries you can reach The Soundsmiths at: info@thesoundsmiths.com or call

Mob.: + 91-9 8925SOUND(76863) – Veeru

Mob.: + 91-9820513978 – Aditya