UH480

Panamorph™

Professional Grade Anamorphic Lens Systems

THE TRUE CINEMA WIDESCREEN EXPERIENCE

Who are we to argue with the greatest film directors of our time? If Spielberg, Lucas, Bay or Scorsese wanted us to watch their work framed by black bars, they would have filmed them that way. Over 70% of all major motion pictures are shot in the wider cinematic aspect ratio of approximately 2.35:1 to 2.40:1, meaning their width is 2.35:1 to 2.40:1 times their height.

The problem is that today's home theater projectors and flat panels show Hollywood blockbusters and HDTV programs in a 16:9 aspect ratio, a width 1.78 times its height. These beautiful, dramatic, and action-packed films are compressed to fit this smaller frame and sandwiched between two very noticeable and highly distracting black "letterbox" bars.

IMMERSE YOURSELF

In commercial cinemas these true widescreen movies are projected onto screens with an aspect ratio of 2.40:1. This is why you never see black letterbox bars at the theaters. When Panamorph's UH480 anamorphic lens systems are paired with a 2.40:1 screen, the full visual impact of what the film director meant for you to experience is now accurately replicated in the home. This is why true cinema widescreen is the fastest growing trend in the home cinema industry. And Panamorph was the first to pioneer this movement by adapting commercial cinema lens technology specifically for the home theater market.

PANAMORPH UH480

PROFESSIONAL GRADE HORIZONTAL EXPANSION LENS

The UH480 is quite simply the most recommended anamorphic lens in the industry from both projector manufacturers and home theater dealers alike. It is the clear industry standard incorporating a patented hybrid cylindrical-prism design that easily installs in front of digital projectors, converting them from the standard 16:9 format to the true widescreen cinematic 2.40:1 screen aspect ratio.

- Corrects chromatic aberration and astigmatism through its five-element, 100% glass, patented, fully-multicoated optical design.
- Accepts large projector beams and produces exceptional image quality up to and beyond 1080 resolution at throw ratios down to 1.6 (image distance divided by pre-lens image width).
- Supports throw ratios down to 1.3 when used with smaller beams and curved projection screens.
- Creates no change in focus when moved in and out of the projection beam.
- Available with a manual or motorized transport system.

EASY INSTALLATION, PERFECT ALIGNMENT AND FULLY COMPATIBLE

Specifically designed to integrate with a Chief RPA mount, the AK-PRO is a proprietary pre-engineered mounting system that simplifies the installation of the UH480 lens and ATH1 or MTH1 transports on most popular projectors.

COMPLETE SYSTEMS

A480SYS
AUTOMATIC TRANSPORT SYSTEM

The automatic transport (ATH1) moves the UH480 lens in and out of the projector's beam via the included IR remote control. Operation via 12 volt trigger is also available on select projector models and image processors.

M480SYS
MANUAL TRANSPORT SYSTEM

The manual transport (MTH1) is a simple, clean, oil-free mount that moves the UH480 lens in and out of the beam with a slight push while maintaining ideal alignment.

F480SYS
FIXED LENS SYSTEM

The F480 system mounts the UH480 lens permanently in front of your projector for use with all content when both Mode I and Mode II* electronic scaling is available.

* Contact Panamorph for more information on Mode II scaling.

THE TRUTH BEHIND 16:9

Today's big screen home theater projectors beautifully display the 16:9 aspect ratio of HD sports, documentaries, games, television programs and many small format movies for a great multimedia experience. It's a great image, but it's not perfect.

A 16:9 screen has a width that is 1.78 times its height. But over 70% of all major motion pictures are filmed in a wider cinematic aspect ratio of at least 2.35:1. In order for these films to fit within the smaller 16:9 screens, the image is sandwiched between two black bars. These black "letterbox" bars sabotage the ultimate performance of your projector and greatly diminish the film's intended immersive and dramatic impact.

Panamorph lenses paired with 2.40:1 screens provide 80% more image area than widescreen movies shown on conventional 16:9 screens of the same height. Yes, you read that right – 80% more immersive, dynamic, and involving.

16:9 Format

Major motion pictures are shown squeezed down with black bars, sacrificing important vertical resolution.

HDTV and smaller format movies use the full performance of the 16:9 projector.

Panamorph Enhanced (A480SYS and M480SYS)

Major motion pictures use the full performance of 16:9 projectors and become far more immersive.

HDTV and smaller format movies still use the full performance of the 16:9 projector.

THINK YOU ALWAYS GET 1080p, "TRUE HD" WITH YOUR 16:9 PROJECTOR OR FLAT PANEL?

THINK AGAIN.

Those black letterbox bars on your screen mean that 25% of the display's claimed "1080p" resolution is literally being tossed away. Rather than taking advantage of the full 1920 x 1080 resolution of your flat panel or 16:9 projector, letterboxed movies are typically encoded at only 1920 x 810, with the unused 270 vertical rows of pixels being wasted on drawing those obtrusive black bars (that's over half a million pixels lost!). With Panamorph lens systems you not only get rid of the annoying black bars you also regain that lost performance in the process.


WHAT YOU'RE ABOUT TO SEE IS GOING TO CHANGE EVERYTHING ...

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This is how major motion pictures look on a standard 16:9 screen or any flat-panel TV. Recognize those annoying black bars?

Turn the page for the same cinema widescreen format using a Panamorph lens system on a wider 2.40:1 screen.

PANAMORPH ENHANCEMENT PROCESS

Moving up to 2.40:1 performance means that electronically stretching the movie in a vertical direction to use all 1080 rows of pixels – increasing the resolution by 33%. We call this stretch Panamorph Mode 1 scaling and it's now available with almost all projectors as an internal mode or as a feature on most high performance external image processors.

The UH480 lens then moves into place to optically stretch the image horizontally to match the vertical stretch, returning the image to its original aspect ratio while retaining the 33% higher resolution and the dramatic increase in brightness and overall impact that goes with it.

BASIC 16:9 SYSTEM

Standard 2.40:1 image from a 16:9 projector showing black bars of unused pixels.

STEP 1

Replace the 16:9 screen with a wider 2.40:1 screen

STEP 2

The 2.40:1 image is first vertically stretched electronically to use all the pixels and the full brightness from a 16:9 projector.

STEP 3

The image is then optically stretched in the horizontal direction using Panamorph's proprietary technology, restoring the original aspect ratio with extreme fidelity.

WHAT YOU'LL NEED

A WIDE FORMAT SCREEN

Due to the vertically stretched aspect ratio of most major motion pictures, we recommend an optimum screen aspect ratio of 2.40:1.

A PANAMORPH LENS SYSTEM

All UH-480 lens systems include the UH-480 Lens and AK-PRO attachment system. Motorized systems include either the ATH1 Automatic or MTH1 Manual transport.

PANAMORPH MODE 1 SCALING

Most projectors manufactured after 2007 already have this correct scaling mode built in.

Mode 1* scaling is required for fixed lens installations.

*Contact Panamorph for more information on Mode 1 scaling.

PANAMORPH QUICK GUIDE

EASY INSTALLATION

Your installer can replace your 16:9 screen with a 2.40:1 screen that's the same height but 35% wider. They will then install the Panamorph Attachment Kit between your current projector and ceiling mount and add either the UH480 lens by itself or with the automated or manual transport depending on your preference. Finally, they will add an external image processor or use your existing processor or projector to engage the various Panamorph scaling modes.

BASIC SETUP GUIDELINES

Throw Distance

Projector lens to screen should be between 14 and 20 feet. Optional lens modifications can be made for optimum performance at longer throw distances.

Throw Ratio

Throw distance divided by native 16:9 image width should be greater than 1.6. Throw ratios down to 1.3 may be possible in combination with a curved projection screen.

ABOUT PANAMORPH

Panamorph is the most recommended anamorphic lens company in the digital projection industry. Our history began when home cinema purists demanded high performance, affordable lens systems that would duplicate the commercial film industry's dramatic imaging process. With thirty years of experience in high-end optical design and manufacturing, we overcame the limitations of older cylindrical lenses using innovation and quality. Today, our patented hybrid cylindrical/prism lens systems are at the forefront of a new age in home cinema that you have to see to believe.

THE EXPERIENCE BEGINS HERE

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Panamorph

1880 Office Club Pointe, Suite 3000
Colorado Springs, CO 80920
719-266-2690
Sales@Panamorph.com
http://www.Panamorph.com