American Motion Picture Society
home of the world's longest-running non-commercial film festival

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The Perfect Public Show is on 16:9 by Dave Watterson

At some point most of us will be asked to put on a show of films for a wider audience than our families or the video club. It may be a public event or a large competition/festival screening. The present mix of video formats and picture sizes can cause chaos. One non-commercial film festival in 2009 had 40% of the entries in "widescreen". That proportion will grow rapidly as we move to HD video which is all 16:9. But it's not quite that simple …

What shape is that?

We are used to videos made and shown in the 4:3 aspect ratio. Videos made in the 16:9 aspect ratio are starting to arrive. Unless you can change your projector's output shape **and** change your screen masking you will have to choose one shape or the other:

4:3 on a 4:3 screen
Celeste

letterboxed 16:9 on a 4:3 screen
Life's Little Gaps

pillarboxed 4:3 on a 16:9 screen
Company's Coming

If a widescreen video is in anamorphic (squeezed) 16:9 it will look wrong shown 4:3 - all the people will be taller and thinner than in life. The answer is to show it 16:9 ... but a widescreen anamorphic video need not be 16:9. Some film makers are imitating the commercial cinema format of 2.35:1.

With a 16:9 original the image is either wrong
at 4:3 or right at 16:9
but
a video made 2.35:1 needs special treatment
and has to be shown 16:9 but letterboxed

❌anamorphic 16:9 shown 4:3
Will Ye Go To Flanders

✅anamorphic 16:9 shown 16:9
Will Ye Go To Flanders

❌anamorphic 2.35:1 shown 4:3

❌anamorphic 2.35:1 shown 16:9

✅anamorphic 2.35:1 shown 16:9

Dentophobia   *Dentophobia*   *Dentophobia*

For the Ideal Show

- Use a video projector designed for 16:9
- Use a 16:9 screen
- Digitally copy all films onto tape in 16:9 video ("pillarboxing" 4:3 movies and "letterboxing" 2.35:1 movies)

16:9 Projector

16:9 makes more demand on the light output, so choose one optimized for that aspect ratio.

[Only ever use the 16:9 or 4:3 projector menu options. Ignore all other sizes. Those options distort an image to fill the screen. Don't do that to someone's precious movie. Never trust an "automatic" setting.]

16:9 Screen

Use one as wide as you can, bearing in mind the light-output of the projector. If the audience is not on raked seating, put the screen as high as possible so everyone can see. Set the equipment up so that the 16:9 projected image fills the screen. When a 4:3 image appears it will be the same height but there will be black bands at the sides (known as pillarboxing.)

Copying

In analog days copying reduced image quality. Digital copying is near-perfect. Whenever possible get the films in advance, copy them all onto one or more projection-master-tape/s. That allows you to resolve any problems in private and simplifies the public show.

Start a widescreen project in your video editor. Load all the films into it, carefully maintaining their original format. That may mean selecting each one on the timeline and using a menu option. Some editing systems try to resize images to fit the frame - stop them! You may have to adjust image sizes manually. Load tapes in the usual way via firewire through a tape-deck or camcorder.

For films on DVD - copy the large files marked nnn.VOB onto your editor's hard drive. A few edit systems can handle VOB files directly in the timeline. Others require you to change the file name to nnn.MPG and then import them and render them before use. If all else fails record from a separate DVD player using S-Video and stereo sound cables.

Some film makers use commercial movie shapes like 2.35:1. Ideally they will have supplied them in a 16:9 form with thin black bars top and bottom. If such works have been copied previously by people who did not recognise the format, you may have to do some manual resizing of that film in your editor. (That was the case for the film illustrated above, *Dentophobia*, when it reached the British BIAFF Festival.)

Take the opportunity of assembling the programme on the timeline, removing any menus, countdowns and other unwanted sections. Between each film leave 3 seconds of black, three black frames with a white dot near the top right and three more seconds of black. During projection that allows plenty of time for the operator to pause between films if necessary. You may also choose to add titles announcing the award the next film has received.

Less than ideal conditions

Tapes and DVDs are cheap and easy to make, so in most situations you **can** ask for movies in advance. If you really must cope with films handed to you at the show:

- 📽 Try to set up two projectors - one for 4:3 and the other for 16:9. Projectors are cheaper and more common now so this is not impossible to organize. Each will need a dedicated tape player and DVD player.
- 📽 Ask the maker how they think it should be projected. If they say "widescreen" or "16:9" ask if they have letterboxed it. Assume everything will be 4:3 aspect ratio unless it is "unletterboxed 16:9" … often called "anamorphic" or "full widescreen".
- 📽 While a film is running try to preview the next one to check its aspect ratio.
- 📽 Avoid on-screen menus if possible. Study your projector's manual to see how to switch between 4:3 and 16:9 projection - some let you save "pre-sets" which you can change with one button push. Use the remote control - point it at the screen and the signal bounces back to the projector. *Do NOT trust any "automatic" setting*.

If your screen is 16:9, a 16:9 film that someone has "helpfully" letterboxed onto 4:3 video, should be projected 4:3. The picture will appear as an oblong with black bars on all four sides. You can use the projector's zoom lens to expand the picture so that it fills the screen - but that makes the image dimmer and may require re-focusing.

before the zoom
The Trap

after the zoom
The Trap

- Dave Watterson, May 2009.