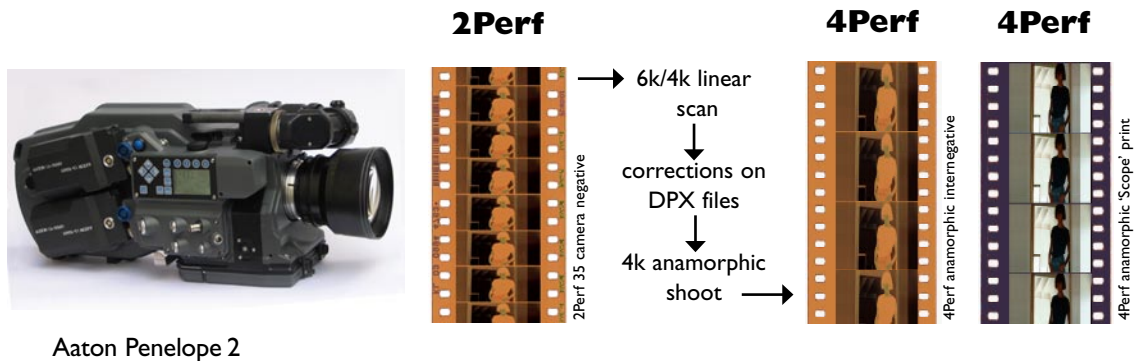


Aaton cinema: 2Perf 35mm

2Perf, the film format for the digital chain



Aaton Penelope 2

2Perf for Scope

Recording 1:2.35 ratio images on two perforation pull-down standard 35mm film negative, cuts the rawstock consumption and processing costs in exact half.

This is the revival of the Techniscope format that Sergio Leone used for 'Once upon a time in the West' among many others.

The 4Perf internegative used to print the distribution copies is done through digital scan at 6K and shoot at 4K or 2K.

Since there is no contact printing between the 2Perf camera negative and the 4Perf internegative, there is no reason to preserve the sound track area in the camera, as anamorphic photography must do.



4Perf 1:1.85 Academy
11.9x22mm 262mm²



2Perf 1:2.35 Scope
9.3x22mm 205mm²

A gift to camera operators...

The operational duration of the film-magazines is dramatically increased: a 400 foot mag offers some nine minute shooting instead of four and a half in 4Perf.

This makes the backbone-breaking 1,000 foot mags redundant for mobile shooting.

Note that the 24mm image diagonal perfectly fits the 27.2 mm field coverage of standard spherical lenses; no extra weight when shooting 1:2.35 ratio. (see lens focal length selection below).

Camera silence is improved too, Penelope at 24dB is a real sync-sound, ultra-mobile camera.

...and a blessing for producers

On top of the natural 50% savings, another 8% economy is added by the reduction of the short-ends given by the longer running magazines.

A ninety-minute film can be made with 50,000 feet instead of 120,000.

The post chain

The camera negative is transferred to video on any modern telecine machine. The Aaton [Keylink](#) telecine code reader handles 2Perf Keycode in all situations (including upside-down keycode found on short-ends). The offline editing being done, the Aaton [Edilite](#) software generates a 2Perf negative-cut-list from the video EDL constructed by the editing computer. From this list a flash to flash extraction negative roll is then assembled and scanned into DPX files by a scanner. Color corrections, special effects and 16x9 extraction for TV broadcast are done in the digital domain. The result for cinema distribution is directly shot with X2 anamorphosis on the internegative stock.

Lens choice tips

The 9.3mm x 22.1mm 2Perf image format is unusual, and to answer the question 'which lenses should I select', we found the comparison to the 24x36mm photographic format, that everybody in the professional world perfectly keeps in mind, as the best way to foresee the angle of view vs the focal length. Who doesn't know the still photography 28 35 50mm angle of view?

Here is a table of the 24x36 equivalent focal lengths in both the horizontal and vertical directions for common cine-lenses.

cine-lens (mm)	still photography equivalent	
	hor (x1.64)	vert (x2.6)
85	140	220
50	82	130
40	66	104
32	52	83
24	40	62
20	32	52
14	23	37