



# Rebirth of an icon



Panchro by Cooke range of lenses are cost effective and lightweight. Ideal for multi-camera shoots, risky environments such as camera cars, 2nd unit and budget conscious filmmakers. Compatible with RED, F35, SI 2K, and all with Cooke quality.

Panchro by Cooke Prime Lenses are designed and developed in close technical collaboration with industry professionals. They are colour-matched and compatible with Cooke S4/i, 5/i, CXX 15-40 mm T2 S4/i Zoom, 18-100mm T3.0 and 25-250mm T3.7 and the SK4 16mm lenses.

Panchro optics offer superb optical and mechanical performance, control of flare, distortion, veiling glare and spherical aberrations at full aperture. The cam-type focus mechanism allows for smooth focus adjustments. Modular construction increases ease of maintenance and serviceability. Panchro by Cooke is manufactured by us to our traditional high standards in Leicester, England

## Feature Highlights

- Lenses available 18, 25, 32, 50, 75, and 100mm
- T 2.8 to T 22 aperture
- Colour matched with all other Cooke lenses
- /i Technology included as standard
- Lightweight
- Cooke Quality and S4/i like construction
- Linear iris
- Cam-style focus

## /i Technology

All of our Panchro Prime lenses are supplied with /i Technology, and are designed for all PL mounted professional motion picture film and electronic cameras. /i Technology provides cinematographers and camera operators with vital information on lens setting, focusing distance, aperture and depth-of-field, hyperfocal distance, serial number, owner data, lens type and focal length in both metric and footage measurements. For zoom lenses, the zoom position is displayed. Significantly, all the information is captured downstream for use in post-production.



## Technical Specifications

### Optical Design

The optics are designed to give maximum performance at full aperture with superior control of flare, distortion and spherical aberration.

### /i Electronics

Accessible via cable connector near the lens mount and contacts in mount that sync with /i compatible cameras and accessories.

### Colour Balance

All Panchro prime lenses are colour balanced to a specification within parameters approved by Kodak.

### Aperture

All Panchro primes have a true T2.8 aperture and cover Super 35mm format.

### Index Marks

Every index mark is labelled. More detailed markings allow for more detailed focus control.

### Focus Movement

Our Academy Award® winning cam-style focus movement coupled with the added benefit of a large lens barrel diameter, has allowed for an increased number of focus markings, particularly at close focus. Spherical aberration has been controlled throughout the range of focal lengths to eliminate compensation of changes in back focus with aperture. A four-point contact bearing provides a smooth positive backlash-free movement.

### Camera Mounts

Arriflex PL Mount

### Focus Scaling

Large, clear numerals on both sides of the focus barrel benefit the focus puller when shooting under difficult lighting conditions.

### Compatibility

All Cooke Panchro primes have a common fixed front diameter of 110mm, with a focus drive gear of 121T x 0.8 mod and an iris drive gear of 119T x 0.8.

### External Finish

A scratch resistant PTFE hard anodised finish is provided on all Cooke lenses, providing a durable, hard-wearing surface to meet the most demanding environmental conditions.

### Iris

An eight-leaf linear module iris assembly is fitted into Panchro primes with an aperture range of T2.8 to T22.

### Weight/Size Ratio

The lenses are designed for all shooting applications, including handheld and Steadicam, providing comfortable balance ratio with the latest compact cameras.

### Reliability and Service

Panchro prime lenses are designed to meet a market requirement for fully reliable performance with a minimum of downtime.

Cases Available



## Panchro Range of Lenses

	Units	18mm	25mm	32mm	50mm	75mm	100mm
<b>T Stop Range</b>		T2.8 - T22	T2.8 - T22	T2.8 - T22	T2.8 - T22	T2.8 - T22	T2.8 - T22
<b>Angular Rotation of Iris Scale</b>	Degrees	75	75	75	75	75	75
<b>Minimum Marked Object Distance</b>	mm inches	250 9	250 9	350 12	550 20	800 30	900 36
<b>Close Focus from Lens Front</b>	mm inches	79 3	100 4	160 6	360 13	610 23	710 29
<b>Angular Rotation to MOD Endstop</b>	Degrees	300	300	300	300	300	300
<b>Maximum Diagonal Angle for S35 format</b>	Degrees	80	62	50	34	22	17
<b>Length from Front of Lens to Lens Mount</b>	mm inches	120 4.70	106 4.17	137 5.39	137 5.39	137 5.39	137 5.39
<b>Maximum Front Diameter</b>	mm inches	87 3.43	87 3.43	87 3.43	87 3.43	87 3.43	87 3.43
<b>Total Weight</b>	kg lbs	2.10 4.62	1.90 4.18	1.70 3.74	1.50 3.30	1.60 3.52	1.60 3.52
<b>Max. Format Covered</b>	30mm Diameter (Super 35mm Format)						
<b>Focus Scales</b>	Two opposing focus scales - metric or footage. Scales marked from infinity to MOD						
<b>Focus Drive Gear</b>	121 teeth 0.8 metric module x 5.0 wide x 104 from the image plane						
<b>Iris Scales</b>	Two opposing linear T scales - whole and third stops marked						
<b>Iris Drive Gear</b>	119 teeth 0.8 metric module x 2.5 wide x 84 from image plane						



## Further resources

### Depth of Field charts

<http://www.cookeoptics.com/cooke.nsf/technical/technical.html>

### Downloads

<http://www.cookeoptics.com/cooke.nsf/technical/downloads.html>

## About the Panchro name



**The Panchro name has played a major role in the history of Hollywood. Horace W. Lee designed the original Cooke Speed Panchro in 1921; it was a cine prime lens that chromatically enhanced an image when filming under restricted illumination.**

The advent of sound films created a great demand for faster lenses since arc lamps could no longer be used due to the noise they made, making all existing lenses obsolete. The Speed Panchros were born from the industry need for faster lenses to cope with the new noise requirements on the set. Cooke Speed Panchros combined a relative aperture of  $f/2$  with an angular field of view and definition previously impossible with much smaller apertures. The Cooke Panchro was also instrumental in the introduction and success of Technicolor's 3 strip process in the 1930s because the Panchro's unusually high correction for chromatic aberrations and remarkable vignetting characteristics rendered it suitable for colour photography.

## About Cooke Optics

**For 100 years, Cooke has been at the centre of the filmmaking business. We've been listening to the community of which we are a part. We lead by introducing new products such as /i Technology and now the 5/i range, and we remember our success is built on a simple idea - do what the filmmaker needs.**

Our factory in Leicester, England has generations from the same family working side by side. That experience is un-beaten anywhere. We manufacture a full range of primes and zooms for 35mm, digital and Super 16mm photography, plus a range of large format stills lenses.

We know our customers, and they know us, as individuals. Our rental partners do their training next to the craftsman who built their lenses. There are no barriers. We meet our customers at our factory, at trade events, distributors and rental houses and of course on the set.

We're intolerant when it comes to tolerances. We research continuously to drive innovation. Our lenses are dependable and practical in use on the set; our optics superb. The lenses are straightforward to maintain – which is why so many rental facilities carry our products. Our manufacturing and testers keep going until we get each lens within our very tight specification. We get it right, whatever it takes.

At the heart of what makes Cooke special is the "Cooke Look". The Cooke Look is about the science of creating beautiful images for the motion picture industry.

As a result, for over a century, cinematographers have chosen Cooke lenses for a smooth roundness and dimensionality to the picture and for the velvety skin tones that flatter.



## Cooke Contact information

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