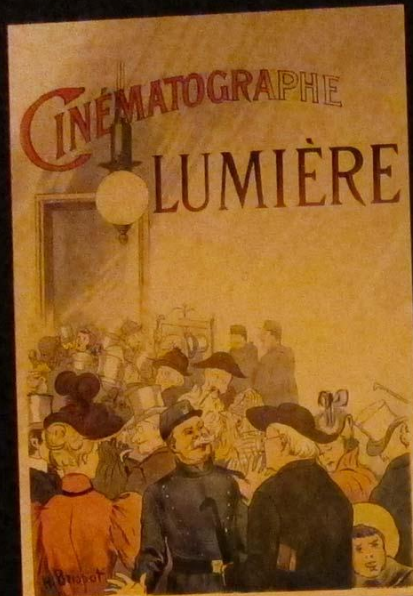


# Development of Cinema

# The Cinematographe

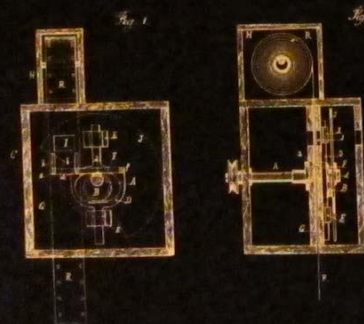




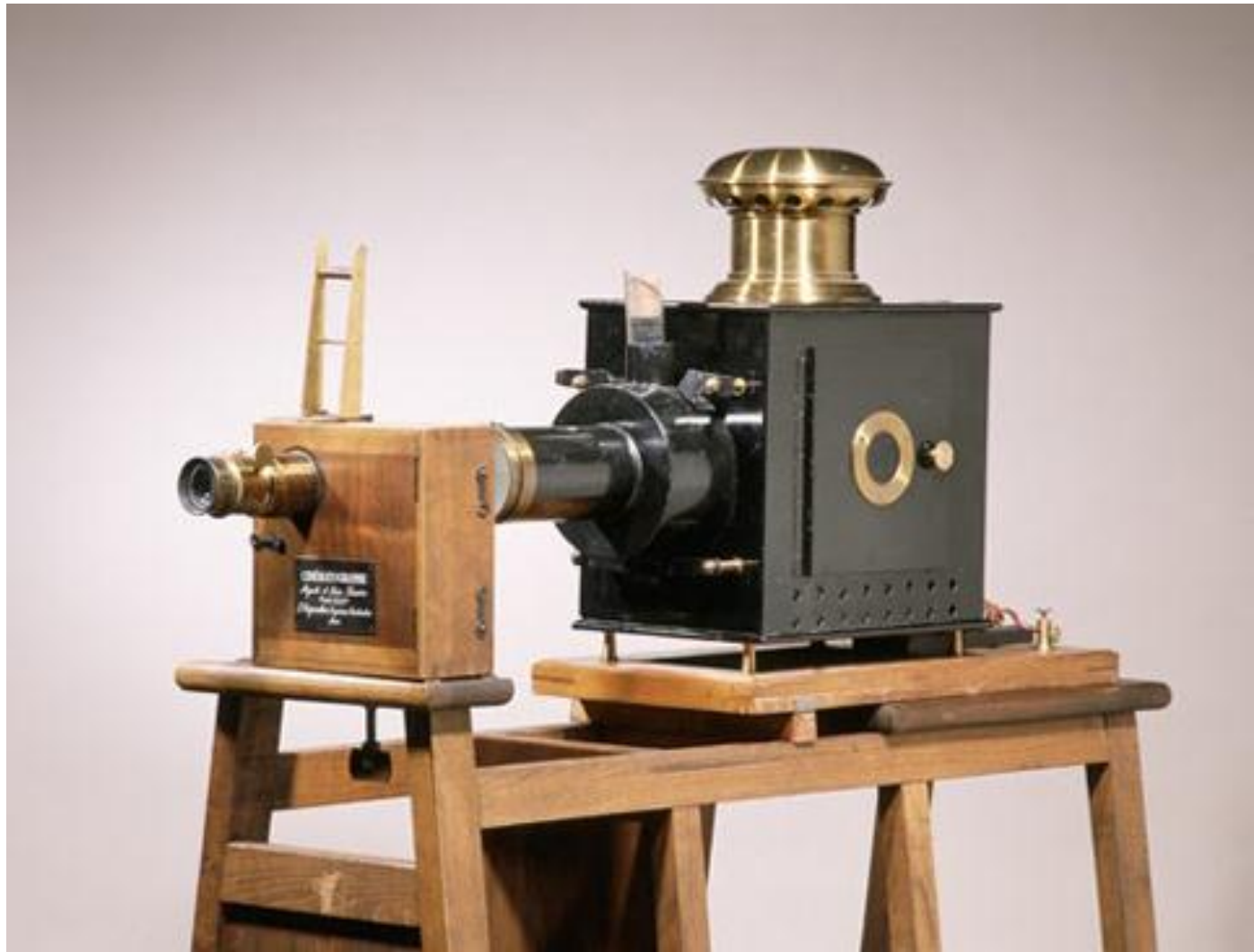
Première affiche du Cinématographe par Brissot, représentant la première séance au Grand Café (1896)



Copie de film Lumière

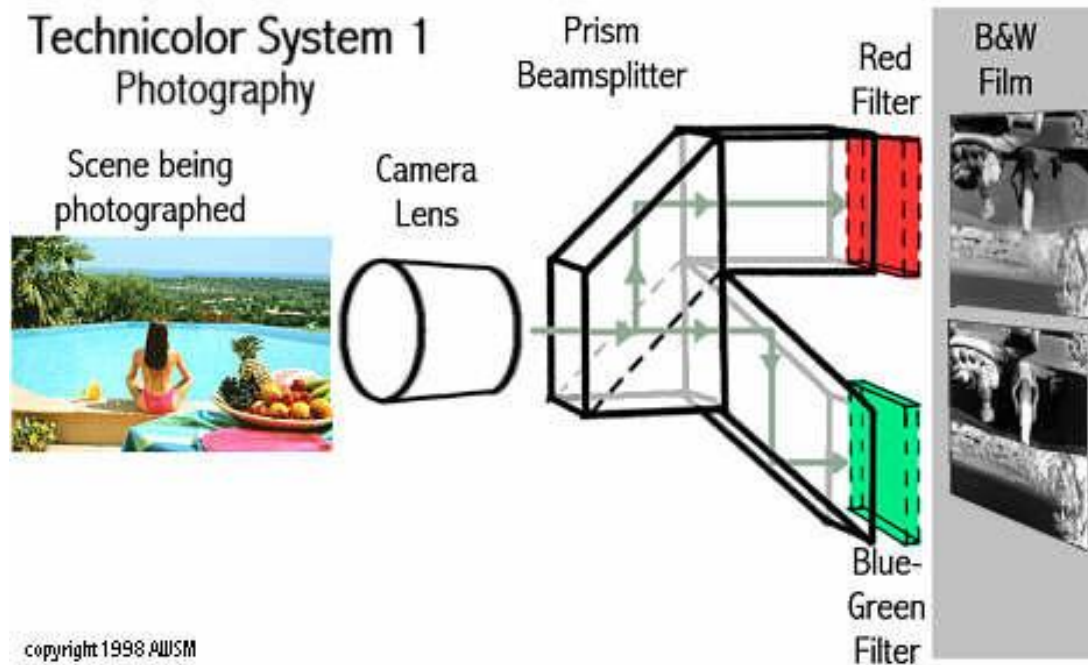




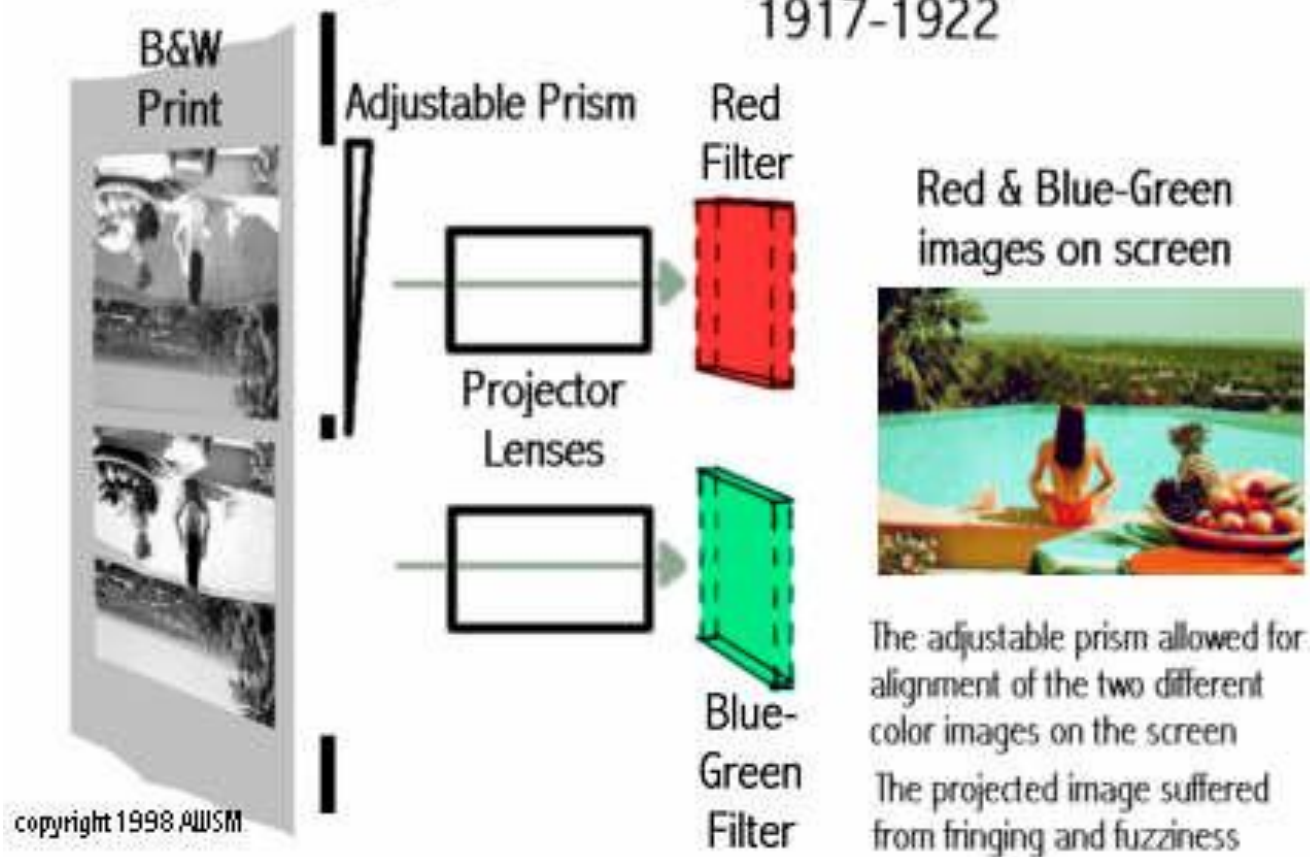


# Technicolor

Two color system : ใช้ฟิลเตอร์แดงและเขียว ใช้ฟิล์ม 2 ม้วน  
ถ่ายพร้อมกัน



## Technicolor System 1 Additive Color Projection 1917-1922

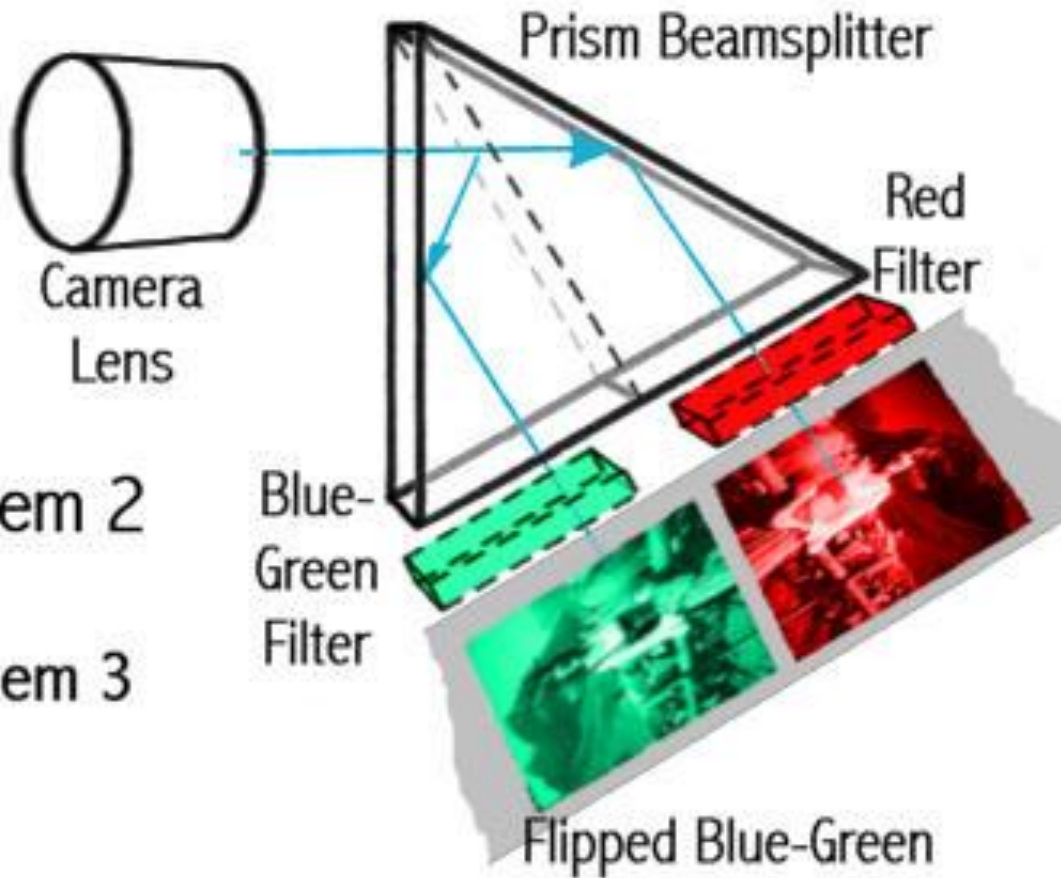


# Process 2 & 3

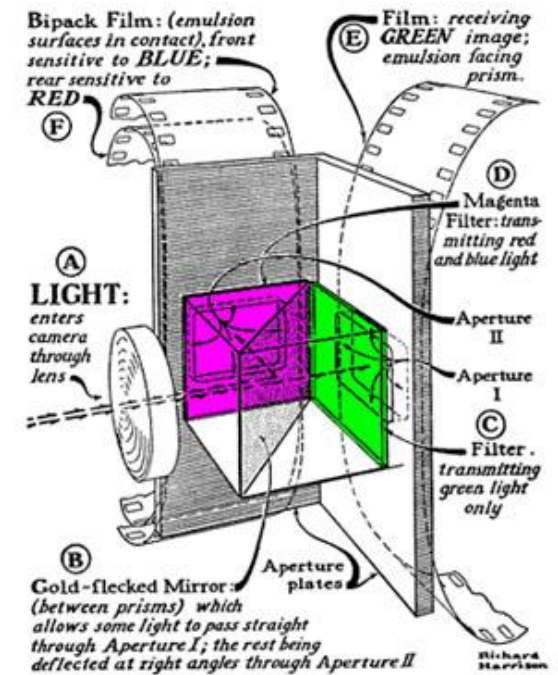


Scene being  
Photographed

Technicolor System 2  
Photography  
also used on System 3



# Three color system



# Negative film



*Red*



*Green*



*Blue*

นำฟิล์ม 3 สี่ มาฉายรวมกัน



ดึงแต่ละสีให้เข้มข้น



*Red*



*Green*

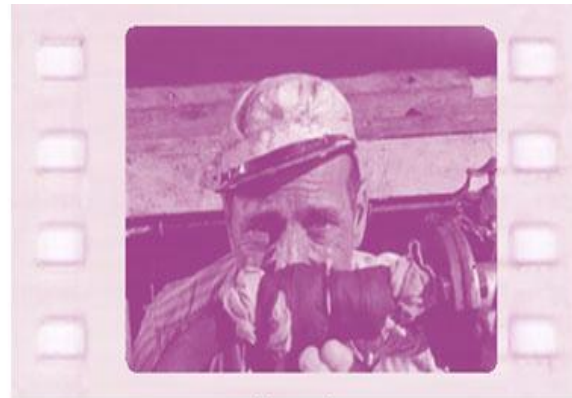


*Blue*

## คู่สีตรงข้าม



*Cyan*

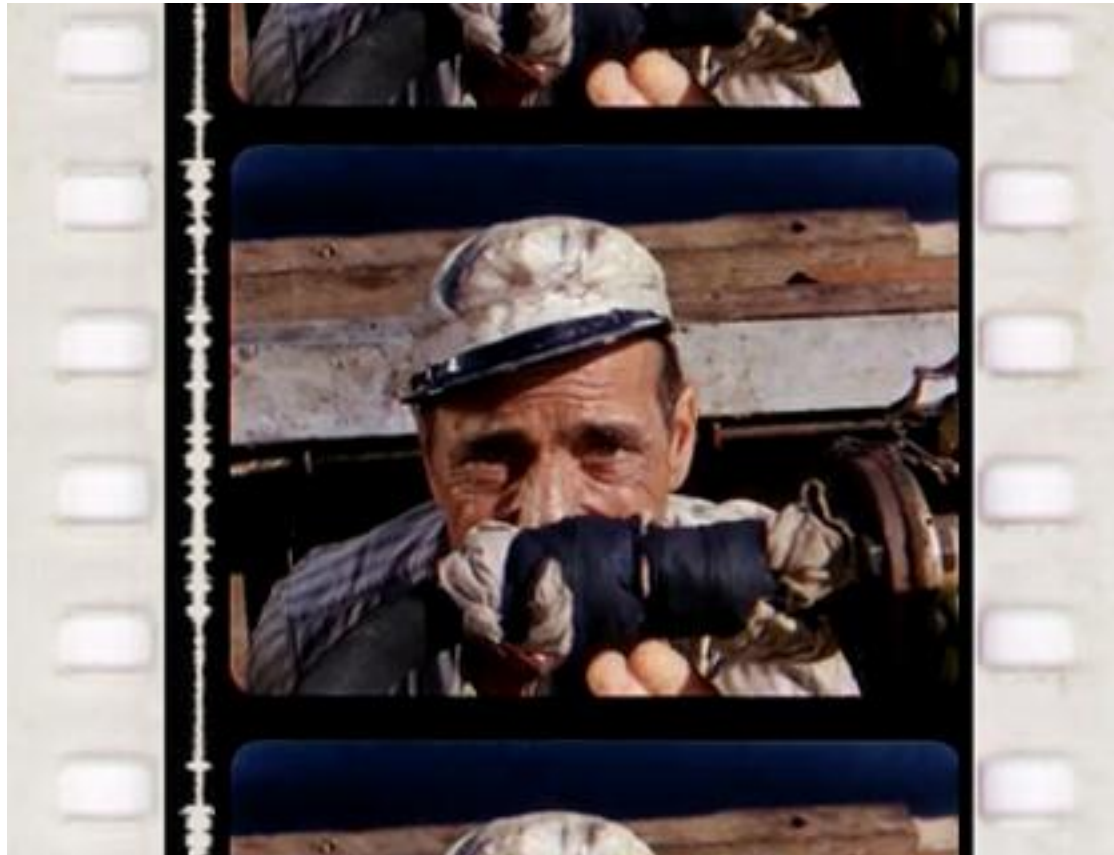


*Magenta*

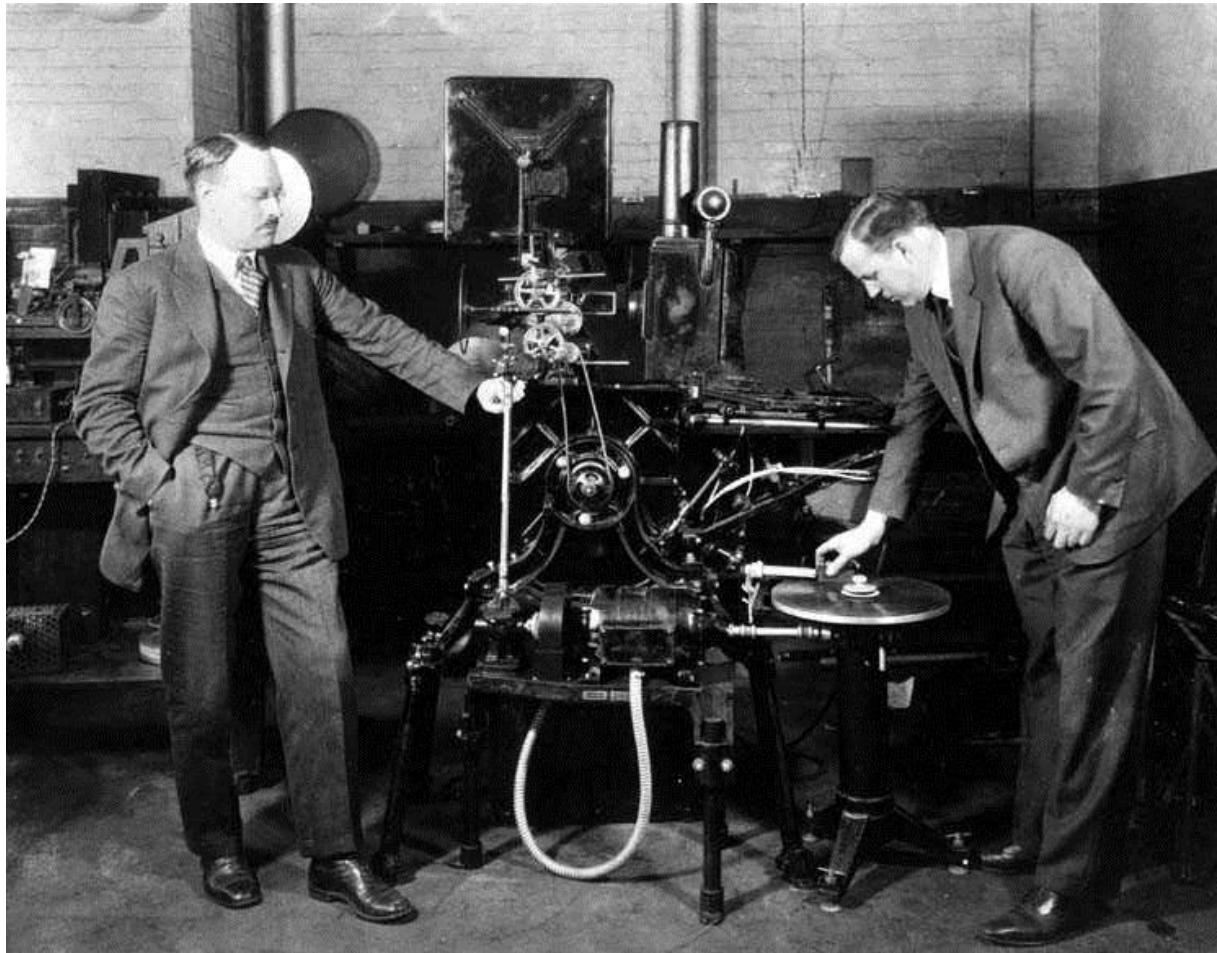


*Yellow*

# Final process : Positive process



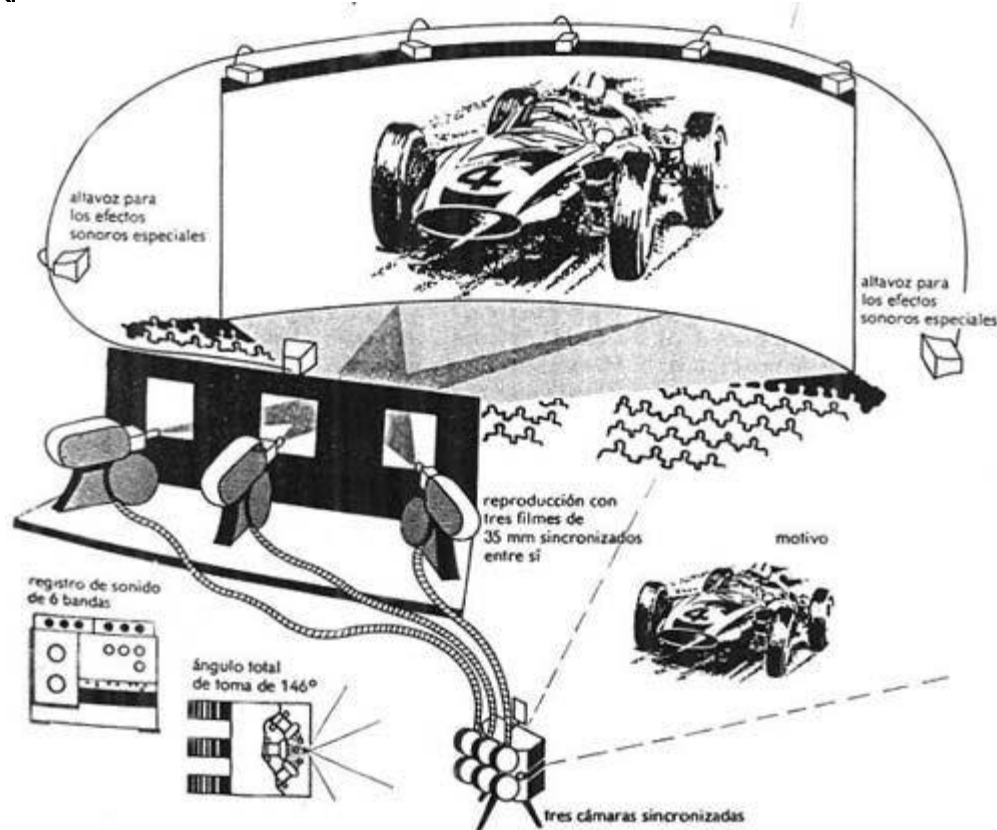
# Sound on film in 1920's



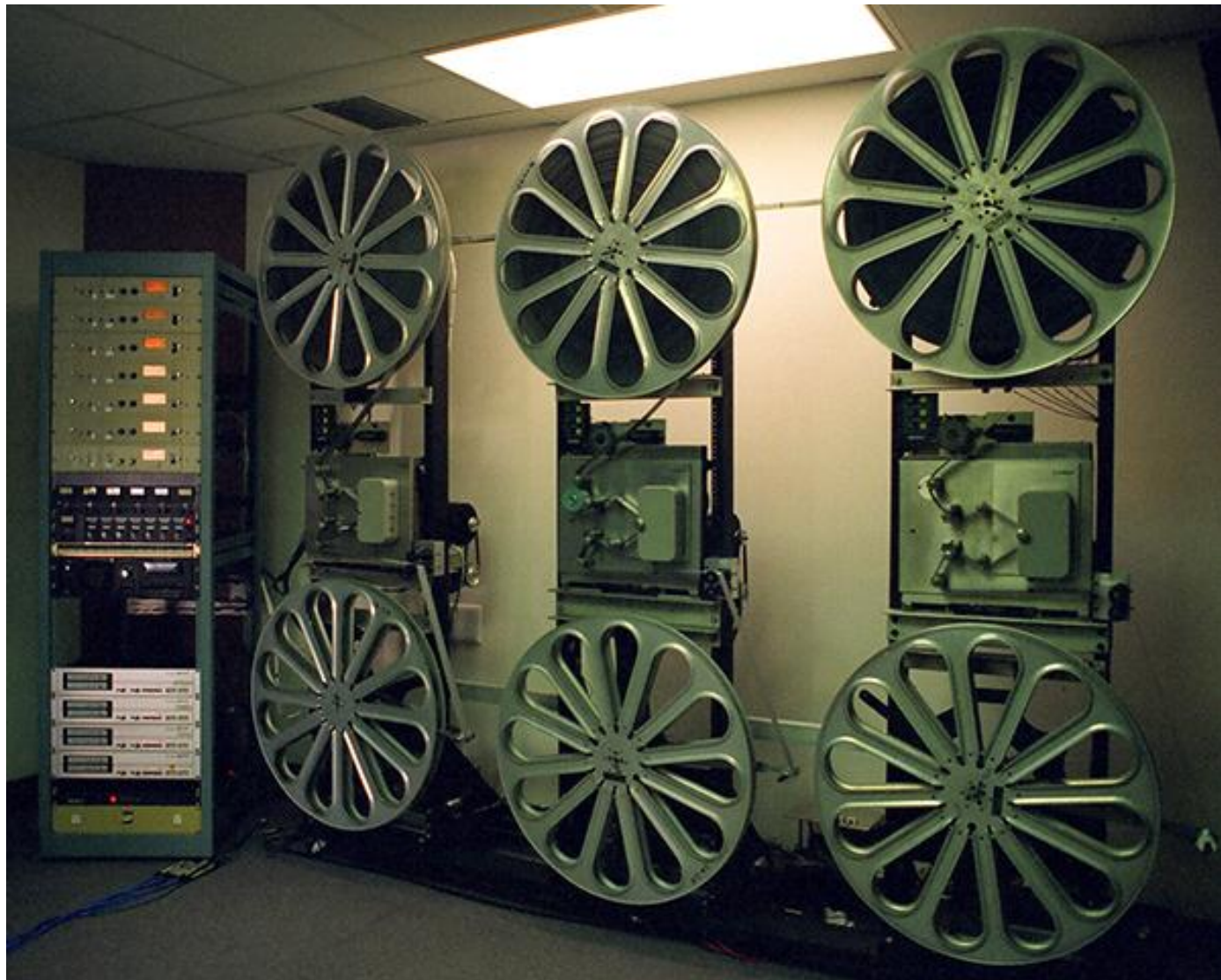
# Cinerama



Cinerama : ใช้กล้องฉาย 3 ตัว และ เครื่องถ่าย 3 เครื่อง เพื่อสร้าง  
ภาพจอกว้าง

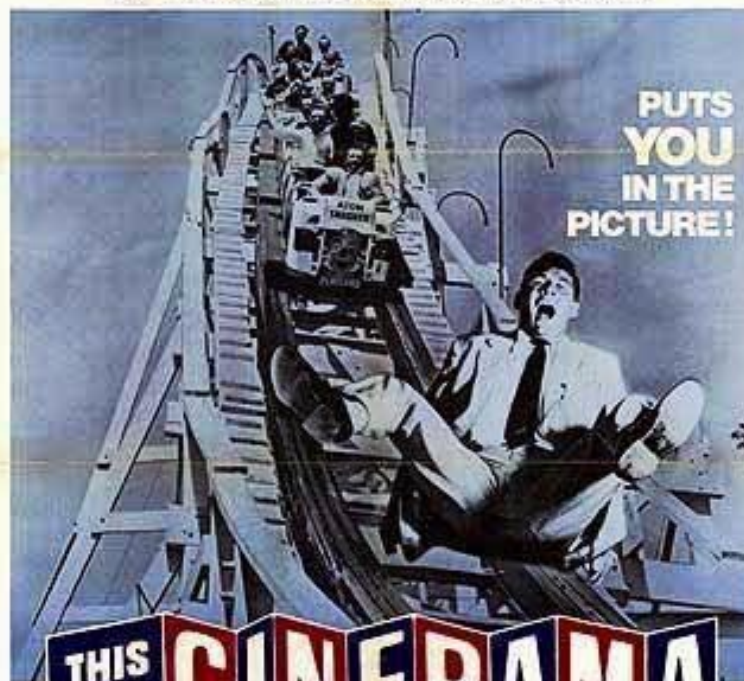








**STILL THE ONLY NEW WONDER  
OF THE ENTERTAINMENT WORLD!**



**PUTS  
YOU  
IN THE  
PICTURE!**

**THIS  
IS CINERAMA**

**is  
BACK!**

**TO ENTERTAIN A WHOLE NEW GENERATION!**

© 1964

"THIS IS CINERAMA"

8 mm.





50 feet  
3 Inch  
Diameter



200 Feet  
5 inch  
Diameter



300 Feet  
6 inch  
Diameter



400 Feet  
7 inch  
Diameter

Approximate Run Time in Minutes

8mm 3:30  
Super8 3:00

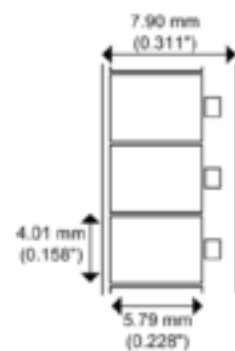
8mm 14:00  
Super8 12:00

8mm 21:00  
Super8 18:00

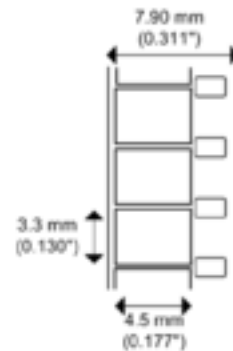
8mm 29:00  
Super8 25:00



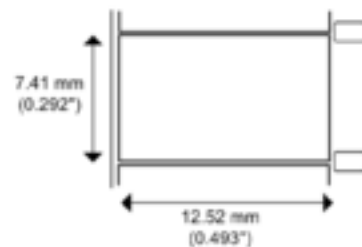




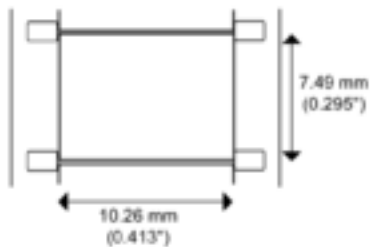
Super 8



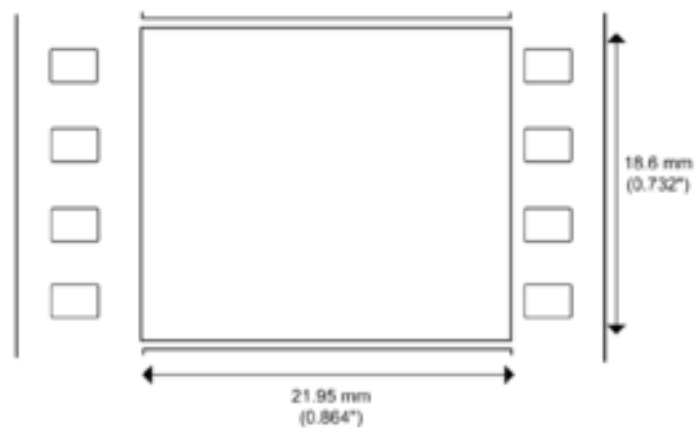
8 mm



Super 16



16 mm



35 mm – 4 perf

35 mm.

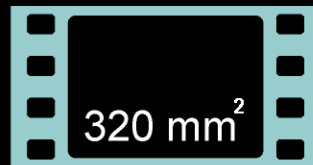




# Imax

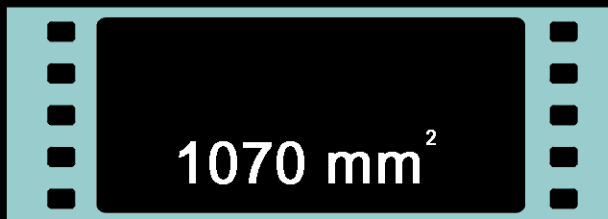
0,456 m/s

klasický formát 35 mm

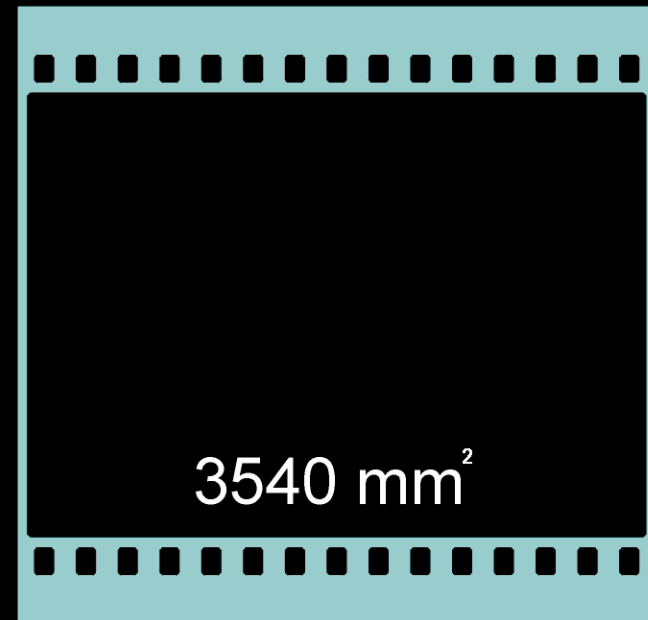


0,570 m/s

Todd – A.O. 70 mm 5 /70



**IMAX 15/70**



1,710 m/s



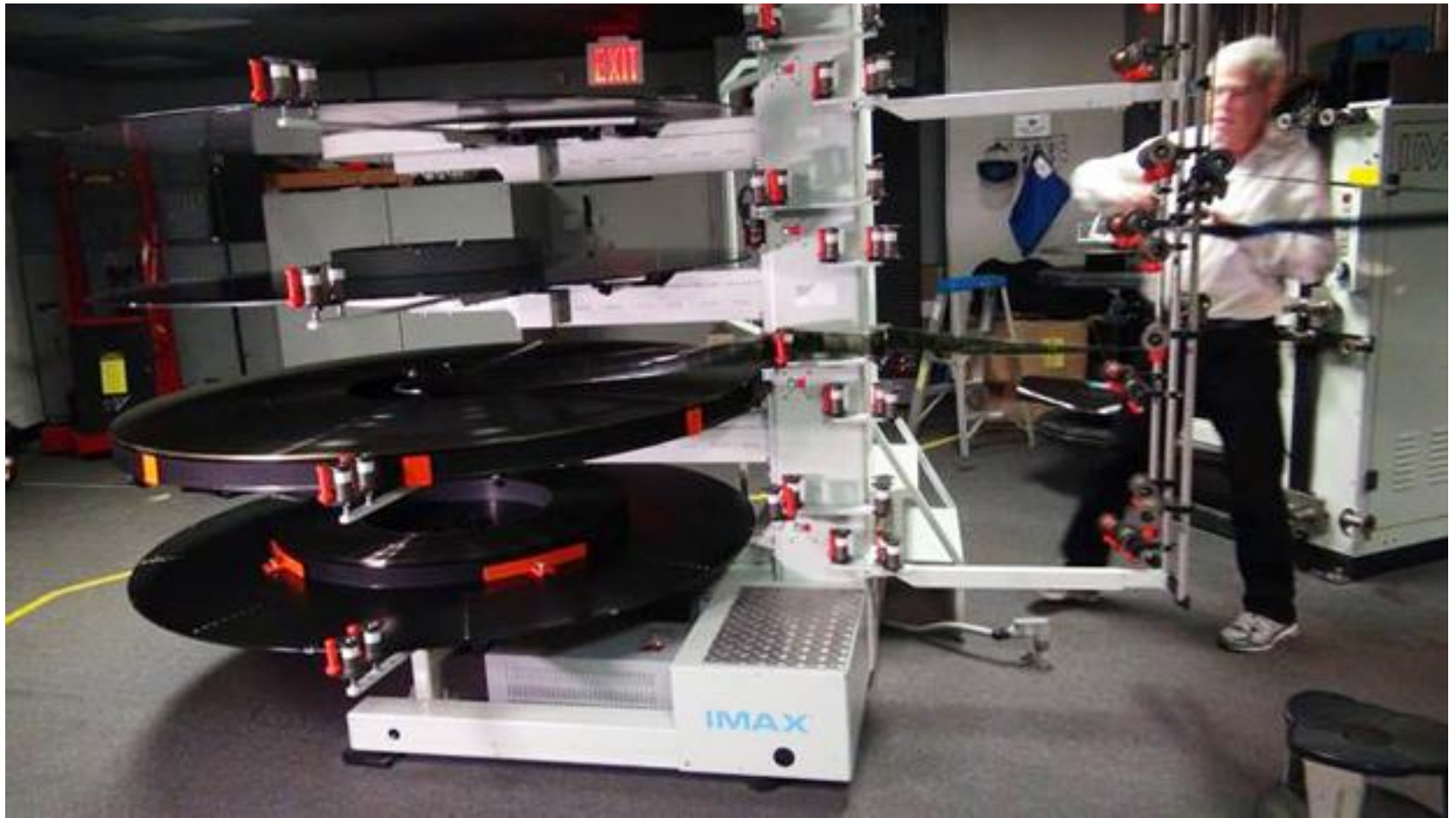


35mm

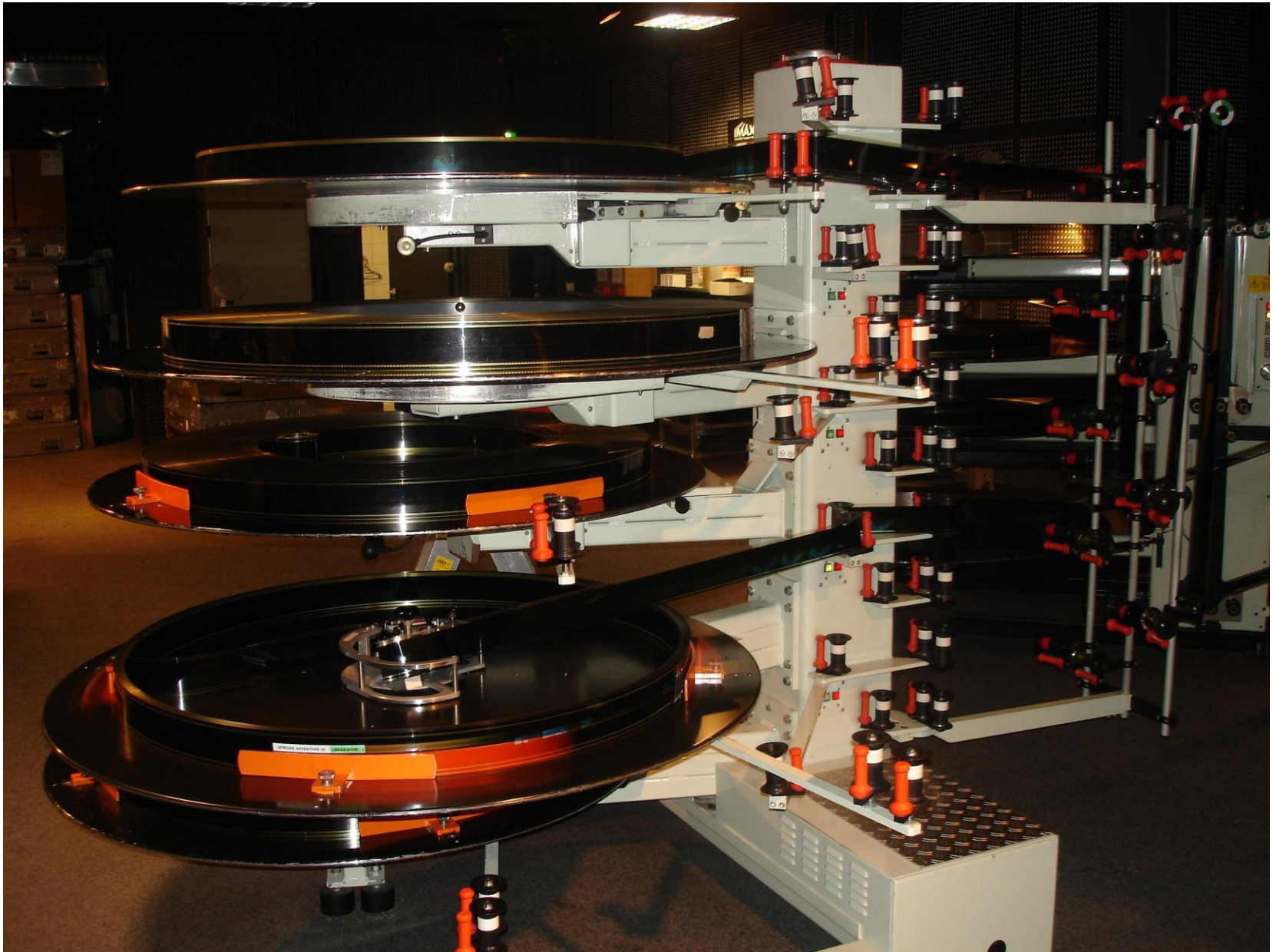


**Standard 35mm  
Widescreen**



















FROM THE DIRECTOR OF THE DARK KNIGHT TRILOGY AND INCEPTION

# INTERSTELLAR

IS AVAILABLE IN THE FOLLOWING FORMATS:

## IMAX® 70mm Film

Select IMAX® theatres will be offering The IMAX Experience® featuring 15 perf/70mm film projection which combines the brightest, clearest images at almost 10 times the resolution of standard projection formats, with powerful, laser-aligned digital sound and customized theatre geometry to create the world's most immersive movie experience.

## 70mm Film

70mm film offers a brighter, clearer image, with 3 times the resolution of standard projection formats, using the process of projecting light through celluloid to deliver clear images in rich analog color with state-of-the-art digital sound.

## 35mm Film

35mm film presentations project light through the 35mm frame to deliver clear, high resolution images with rich analog color combined with state-of-the-art digital sound in most locations.

## IMAX®

IMAX® digital projection uses dual projectors with sub-pixel alignment to produce clear, high contrast images, with powerful, laser-aligned digital sound and customized theatre geometry, creating the world's most immersive digital movie experience.

## 4K Digital

4K digital projection produces a clear, bright, high-resolution image with absolute stability and cleanliness, combined with uncompressed digital sound for a powerful movie-going experience.

## Digital

Digital projection presents a clear, bright, stable image that never degrades in terms of cleanliness or fidelity and uses uncompressed digital sound for a powerful movie-going experience.

## UK cinemas featuring 70mm film projection of Interstellar

(IMAX sequences presented in 1.43:1 aspect ratio at IMAX theatres or 2.2:1 at conventional cinemas)

BFI IMAX = 26m x 20m

Science Museum IMAX = 24.3m x 16.8m

National Media Museum IMAX = 19.8m x 14.6m

Printworks IMAX = 24.39m x 13.74m

Leicester Square Odeon = 15m x 7m approx



6-foot man

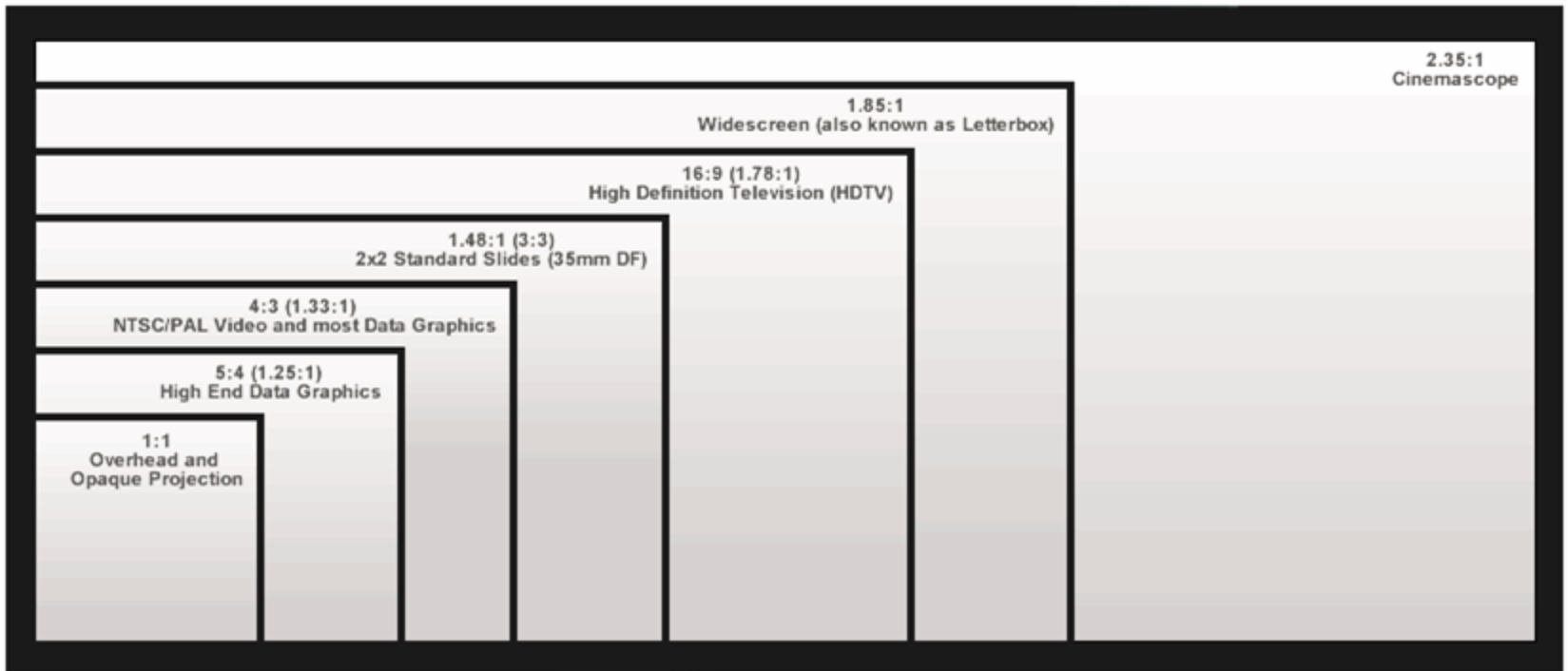
## An assortment of Digital IMAX screen sizes from across the UK

( Aspect ratio of up to 1.9:1 for Interstellar sequences shot on IMAX film )



6-foot man

# Aspect ratio



1.33:1  
Academy  
Aperture

1.65:1  
Early  
Widescreen

1.66:1  
European  
Widescreen

1.77:1  
Widescreen  
Television

1.85:1  
American  
Widescreen

2.2:1  
70mm  
Frame

2.35:1  
Anamorphic  
Projection

2.77:1  
Cinerama

**IMAX® 1.43 : 1**

**IMAX® 1.9 : 1**

**STANDARD WIDESCREEN 2.4 : 1**



IMAX® is a registered trademark of IMAX Corporation.

# Film & Digital ratio

## RED, Digital, and Film Format Size Chart

RED DRAGON 6K (30.7x15.8mm)

\*All Dragon resolutions/formats are in red.

RED Mysterium-X 5K (27.7x 14.6mm)

6K

5.5K

5K

4.5K

4K

3.5K

3K

2.5K

2K

Micro Four Thirds (17.3x13mm)

Super 16mm (12.52x7.41mm)

APS-C (22.3x14.9mm)

Super 35mm 3-Perf (22/24.89x12mm)

Academy 35mm (22x16mm)

Super 35mm 4-perf Full Ap (24.89x18.67mm)

FF35 135 Still Film (36x24mm)

VistaVision (37.72x24.92mm)

65mm 5-perf (52.51x23.07mm)

ALL FORMATS EXACTLY TO SCALE

made by Phil Holland 5/31/2014

645 220 Still Film (60x45mm)

70mm IMAX 15-perf (70.41x52.62mm)

Phil Holland  
PHFX.COM