

THE RULES HAVE CHANGED.

FURY™



C·E·L·C·O  
The Science of Light

# THE POWER OF LIGHT

CELCO has harnessed the power of intense light and focused the purity of the entire color spectrum to create a film recorder that changes the rules of digital film production. Unleashing the FURY, the most powerful digital film recording tool the motion picture industry has ever seen.



# The Speed of Light

ONE SECOND PER FRAME.

60 FRAMES PER MINUTE.

3,600 FRAMES PER HOUR.

86,400 FRAMES A DAY.

216,000 FRAMES PER WEEKEND.

NO MATTER HOW YOU COUNT IT,

THE FURY DELIVERS.

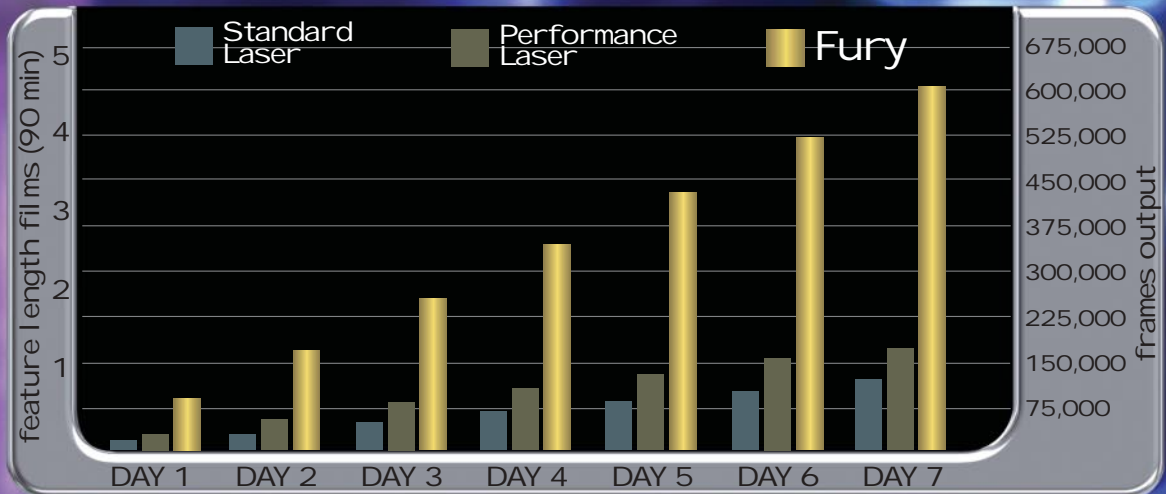
# THE SPEED OF FLIGHT

Never before has a film recorder been capable of achieving images of the highest quality at an incredible speed of one second per frame, making CELCO's new FURY the fastest film recorder on earth.

This changes the rules for imaging facilities allowing massive digital film productivity. The FURY dramatically reduces the cost per frame, enabling a new era where all films will have a digital master negative.



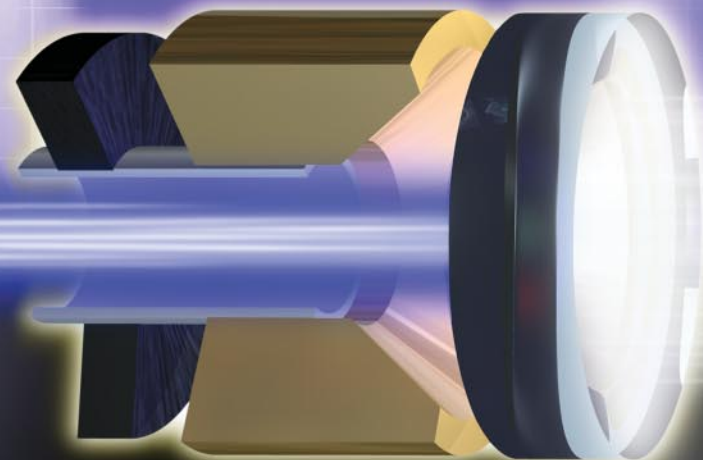
The Fury is capable of over 3 times the output productivity compared to the fastest Laser recorder available.



# SYSTEM FEATURES

- Large, user-friendly, high resolution color-Liquid crystal touch screen interface.
- Unique CELCO 1utless 1ogarithmic or 1inear color space modes. This automatic system eliminates look-up tables and complex calibration procedures.
- Automatic bit depth compensation has been designed to accommodate 8, 10, 12, or 16 bit per channel files.
- Original negative, interpositive, and internegative imaging modes for shooting onto virtually any Fuji or Kodak color or black & white motion picture stocks including Eastman EXR 5242, 5245 and 5234.
- Multiple resolution modes capable of outputting any resolution including true 1920 x 1080 high definition, 2K, 3K, 4K and higher.
- Automatic resizing and centering. Video resolution files are easily handled via user selectable, interpolative resizing tools.
- User-selectable image sharpening and grain reduction algorithms.
- Sequential exposure for black & white separations.
- Compatibility with virtually any file format.
- Large format 65mm options available featuring MSM vacuum back or Oxberry transports for 5, 10, or 15 perf IMAX applications.
- 2000 ft. split magazine, optional 1000 ft. magazine, or 1000/2000 ft. combination motor drive assembly.
- Rock Solid, proven technology
- Global support

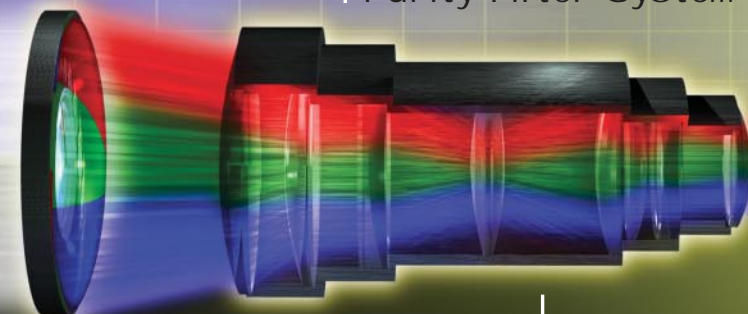
High Intensity Advanced CRT with CELCO Magnetic Deflection & Electron Beam Focusing Optics



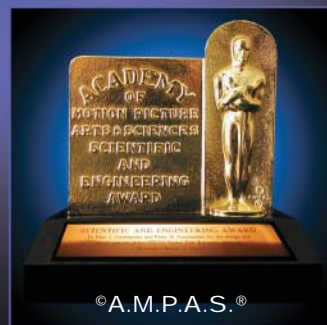
# THE SCIENCE OF LIGHT

Our commitment to the Motion Picture Industry has demanded that we pour into the FURY enormous effort and creativity. The FURY project began with the belief that CELCO could forever change the world of Motion Picture Digital Imaging. This effort has caused change in every aspect of our recording technology. The design project required that we leave no stone unturned in our quest for pure performance. Most believed it couldn't be done, but we have come to understand that it is only our ability to imagine that limits what we, as engineers, can accomplish. The FURY will forever change the world of Motion Picture Digital Imaging.

CELCO Engineered Precision Band Interference Color Purity Filter System



Ultra Precision Light Beam Focusing Optics



On March 2, 2002 CELCO Engineers Paul J. Constantine and Peter M. Constantine received Scientific and Engineering Awards from the Academy of Motion Picture Arts and Sciences for the design and development of the CELCO Digital Film Recorder Products. The Academy cited CELCO film recorder products have had a significant impact on the industry through continual improvements in their technology. The Fury is a continuation of CELCO's advancement of their proven, award-winning electron beam control technology for transferring digital images to motion picture film with perfection.

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# TECHNICAL SPECIFICATIONS

## Supported Film Stocks

- Fujicolor Intermediate Film F-CI 8502/8602
- Fujicolor Negative Film F-64D 8522/8622
- Fujicolor Negative Film F-125 8532/8632
- Fujicolor Negative Film F-250 8552/8652
- Fujicolor Negative Film F-250D 8562/8662
- Eastman Color Intermediate EXR 5242
- Eastman Color Negative EXR 50D 5245
- Eastman Color Negative EXR 100T 5248
- Eastman Color Negative EXR 200T 5293
- Kodak Vision 200T, 250D, 320T
- Eastman Black and White Plus-X 5231
- Eastman Fine Grain Duplicating 5234 Panchromatic Negative
- Eastman High Contrast 5369

## Supported Image Formats

- 16mm
- 16mm Super 16
- 35mm Full Screen
- 35mm Academy Offset
- 35mm Standard 1.66
- 35mm High Definition 1.78
- 35mm Standard 1.85
- 35mm Cinemascope
- 35mm 8-perf Vista Vision
- 65mm 5-perf
- 65mm 8-perf
- 65mm 15-perf IMAX

## Supported Resolutions

All Resolutions Including:

- NTSC and PAL Video
- High Definition 1920 x 1080
- 2K, 3K, 4K, 8K
- Any user-defined customized resolution up to 8K



## Supported File Formats

.ALS, .BMP, .CIN, .DPX, .JBT, .JFIF, .JPEG, .PCT, .PIC, .PICT, .RGA, .RGB, .RLA, .SHT, .SGI, .TIF, .TIFF, .TGA, .YUV

## Operating Software

CELCO eXtreme Command Line & Graphical User Interface Includes Calibration Tools

## Digital Interface

High Speed Synchronous PCI Bus

## Host Computer

Silicon Graphics FUEL - IRIX OS

## System Display User Interface

Touch Screen 7.5" X 12" XGA, TFT Color Liquid Crystal Display

## 35mm Recording Speeds

- 1 second per frame (1920 X 1080 HD 5245)
- 1.2 seconds per frame (1920 X 1080 HD 5242)
- 1.0 seconds per frame (2K, 1.85 5245)
- 1.2 seconds per frame (2K, 1.85 5242)
- 1.3 seconds per frame (2K, 1.33 5245)
- 1.5 seconds per frame (2K, 1.33 5242)
- 3.5 seconds per frame (4K, 1.85 5245)
- 3.5 seconds per frame (4K, 1.85 5242)
- 4.7 seconds per frame (4K, 1.33 5245)
- 4.7 seconds per frame (4K, 1.33 5242)

## 65mm Recording Speeds

- 3.5 seconds per frame (5-perf 4K 5245)
- 5.0 seconds per frame (15-perf 4K 5245)
- TBD (5-perf 4K 5242)
- TBD (15-perf 4K 5242)

## Repeatability

>99.97%

## Steadiness

>99.99%

## 35mm Uniformity

>97% FI at Field at LAD

## 35mm Cine Pixel Size

- 35mm 4k Cine Resolution 6 Micron Typical
- 35mm 2k Cine Resolution 12 Micron Typical

## Color Resolution

36 bits (12 bits per color channel)

## Weight

375 lbs.

## Dimensions

43" H x 38" W x 30" D  
(not including film transport)

## Film Magazine Capacity

2000 ft. (optional 1000 ft., 1000 ft./2000 ft)

## Temperature Requirements

15°C to 28°C with no more than 5°C change per hour

## Humidity

20% to 75% Non-Condensing

## Power

120V 60Hz, 5A, Nema 5-15R  
220V / 240V, 50Hz, 3A

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