Crime-lite®
IMAGER

Rapid high resolution photography and digital enhancement of forensic evidence

Digital Image Capture of:
- Latent Fingerprints
- Trace Evidence including Body Fluids, Fibers, Paint, Glass Fragments, & Gun Shot Residues
- Counterfeit & Altered Documents

- Record and enhance images of evidence recovered from the crime scene
- Advanced technology provides excellent image clarity
- Two modes of operation to allow manual or semi-automated control

foster + freeman
The Crime-lite Imager, an evidence recording system, is designed to meet the varying demands of forensic photography providing optimum illumination for all types of evidence and backgrounds.

Combining advanced imaging and multi-wavelength illumination with simple to use software, the Crime-lite Imager is the only digital imaging system for forensic applications with two distinct modes of operation (Automatic and Advanced) providing rapid, high quality results for users with varying degrees of photographic expertise.

**Professional results in minutes without training**
Using the Automatic Mode of operation effective imaging and enhancement can be achieved in 3 simple steps.

1. Place the evidence under the Crime-lite Imager
2. Select a pre-set evidence type from the drop down menu.

   **Preset Examinations exist for:**
   - **Fingerprints**, including commonly used chemical treatments
   - **Documents**, handwritten and printed
   - **Trace evidence**, including blood, fibres, GSR etc.

3. Having pressed the ‘Run’ button, the image of the evidence is automatically enhanced in several ways with results being displayed as thumbnails. Select the best result to view as a full-screen image or for further enhancement in Advanced Mode.

In Advanced Mode the user has complete manual control of all lighting, filters, and enhancement software.

**System features**

- High sensitivity, scientific grade camera and optimised colour corrected lens providing 5 Megapixel 14bit monochrome and full colour composite imaging. High resolution images are achieved in the visible and infrared wavelengths from 300-1100nm.
- Maintenance free integral LED ringlight providing intense focussed multi-wavelength illumination.
- Variable wavelength narrow band light source for advanced hyperspectral imaging of fingerprints on highly coloured backgrounds.

www.fosterfreeman.com/CLI.html
**Advanced Mode of Operation**

In Advanced Mode the operator may select and apply specific image enhancement processes with full manual control of lighting, filters, and post imaging enhancement.

This mode allows an expert operator to fine tune the enhancement process.

**Advanced Mode features include:**

- Manual selection of over 100 illumination combinations
- Manual camera filter selection
- Image enhancement tools including: Auto contrast, colour extraction, invert, lowpass, despeckle, gamma correction, and colour removal
- Creation and storage of custom examination routines
- Calibrated measurement
- Optional hyperspectral imaging (requires FLS light source)

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**Automatic Mode of Operation**

Expert photographic practice is made simple using the Automatic Mode of operation where enhancement options are presented as a simple dropdown list.

After selecting the type of evidence and evidence treatment the Crime-lite Imager automatically performs a number of preset standard enhancements, displaying each enhanced image in a thumbnail gallery.

**Preset evidence types include:**

- 18 fingerprint treatment types including: DFO, ninhydrin, BY40, PolyCyano UV, Ardrox etc.
- Handwritten and printed documents
- Trace evidence including blood, fibres, GSR etc.

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**Dual-Mode SOFTWARE**

The user is able to select from a comprehensive list of preset evidence types. Each preset contains two or more illumination and filter settings appropriate for the enhancement of that subject.

After executing all options within the chosen preset, results are displayed as thumbnail images. Thumbnails can be expanded to full screen for further examination or imported into Advanced Mode.
**Automatic Mode**

1. A fingerprint on packing tape treated with ninhydrin and enhanced using the Fingerprint-Ninhydrin preset

2. Using the Documents-IR preset, evidence of tampering can be seen.

3. The preset examination for PolyCyano UV staining renders fingerprints clearly visible on polystyrene.

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**Advanced Mode**

4. Following enhancement this complex background is reduced improving the clarity of the print.

5. Latent prints fumed with PolyCyano UV and enhanced using contrast stretch and gamma adjustment before colour inversion.

6. Hyperspectral Imaging is used for the advanced discrimination of inks on a document.
**Crime-lite Imager System**

**HARDWARE**

The standalone Crime-lite Imager provides high sensitivity image capture and multi-wavelength illumination. Additional illumination, system mounting, PC hardware, and camera lens options allow you to build a system to meet any requirements.

**CRIME-LITE IMAGER QCL/CI/01**

**High Sensitivity Camera**

5 Megapixel monochrome camera
- Capable of full colour composite imaging
- Sensitive from 300-1100nm
- Focus assistance laser system (Class 1)

**Standard lens**

- 35mm wide angle lens (25mm & 50mm available)
- Field of view 62mm x 52mm
- Resolution 1000 pixels/inch

**Integral Second Camera**

2MP colour autofocus video camera
- For entirety shots of evidence

**High Intensity Illumination**

**Crime-lite 8x4 Multi-wavelength light source**

- 32 high efficiency surface mount LEDs
- Up to 98 colour combinations
  - 4 x white LED 400-700nm,
  - 10 levels of intensity and 10 colour temperature settings
  - 4 x UV LED peak at 365nm,
  - 10% intensity bandwidth of 350-380nm
  - Key switch safety isolation
  - 4 x violet LED peak at 410nm,
  - 10% intensity bandwidth of 395-425nm
  - 4 x blue LED peak at 445nm,
  - 10% intensity bandwidth of 420-470nm
  - 4 x blue/green LED peak at 480nm,
  - 10% intensity bandwidth of 450-510nm
  - 4 x green LED peak at 530nm,
  - 10% intensity bandwidth of 490-560nm
  - 4 x orange LED peak at 590nm,
  - 10% intensity bandwidth of 570-610nm
  - 4 x red LED peak at 640nm,
  - 10% intensity bandwidth of 600-660nm

**VIS/IR Illumination**

- 4 x 20W halogen capsule lamps

**Long-pass camera filters**

- 400nm, 455nm, 495nm, 530nm, 550nm, 570nm, 590nm, 610nm, 630nm, 645nm, 665nm, 695nm, 715nm, 780nm, 850nm

**Short pass camera filters**

- 720nm, 660nm, 610nm and 550nm, plus polarising filter
**Optional ACCESSORIES**

**ILLUMINATION**

- **Crime-lite FLS Light Source**
  - QCL/CI/12
  - Vis/IR, continuous narrow band illumination 400-1000nm
- **Ring light**
  - QCL/CI/13
  - For uniform semi-bright field illumination
- **Coax light box**
  - QCL/CI/15
  - For coaxial illumination
- **Dark Field Ring light**
  - QCL/CI/16
  - For uniform dark field/oblique illumination

- **Cross polarising filter**
  - QCL/CI/23
  - 110mm Ø adjustable analyser and 70mm Ø fixed analyser
- **Transmitted Light**
  - QCL/CI/18
  - For transmitted and side lighting
- **Dual Gooseneck**
  - QCL/CI/19
  - For side lighting
- **Linelight**
  - QCL/CI/20
  - For oblique lighting

**LENSES**

- **System is supplied with a 35mm lens (QCL/CI/01) as standard.**
  - LINOS MeVis 35mm f/1.6 camera lens
  - Field of view 62mm x 52mm, Resolution 1000 pixels/inch

- **Additional lens options are described below:**
  - 25mm lens
    - QCL/CI/02
    - LINOS MeVis 25mm f/1.6
    - Wide angle lens.
    - Field of view 97mm x 81mm
    - Resolution 650 pixels/inch
  - 50mm lens
    - QCL/CI/03
    - LINOS MeVis 50mm f/1.8
    - Narrow angle lens.
    - Field of view 42mm x 35mm
    - Resolution 1500 pixels/inch
  - 25mm Quartz lens
    - QCL/CI/22
    - For UV imaging 230-400nm
    - Field of view 97mm x 81mm
    - Resolution 650 pixels/inch
    - Supplied with 10nm narrowband 365nm filter

**STANDS & STORAGE**

- **Floor Stand**
  - QCL/CI/07
  - Structural aluminium frame with removable magnetic tabletop (requires QLC/CI/05)
- **Bench Mount Stand**
  - QCL/CI/06
  - To fit over existing laboratory work surfaces.
  - (requires QLC/CI/05)
- **Motorised Column**
  - QCL/CI/05
  - For smooth automated adjustment of Crime-lite Imager.
  - For use with QCL/CI/06 or QCL/CI/07
- **Portable Stand**
  - QCL/CI/04
  - Lightweight aluminium stand with quick release screw clamp.
- **Carry Case**
  - QCL/CI/08
  - Rugged, shock-resistant and waterproof

**PC HARDWARE**

- **Desktop PC**
  - QCL/CI/110
  - High specification desktop computer.
- **Laptop PC**
  - QCL/CI/09
  - High specification laptop computer.
- **24” Widescreen Monitor**
  - QCL/CI/11
  - Widescreen colour 1920x1200

For details of the current laptop, PC and monitor specifications please contact your local Foster + Freeman sales representative

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