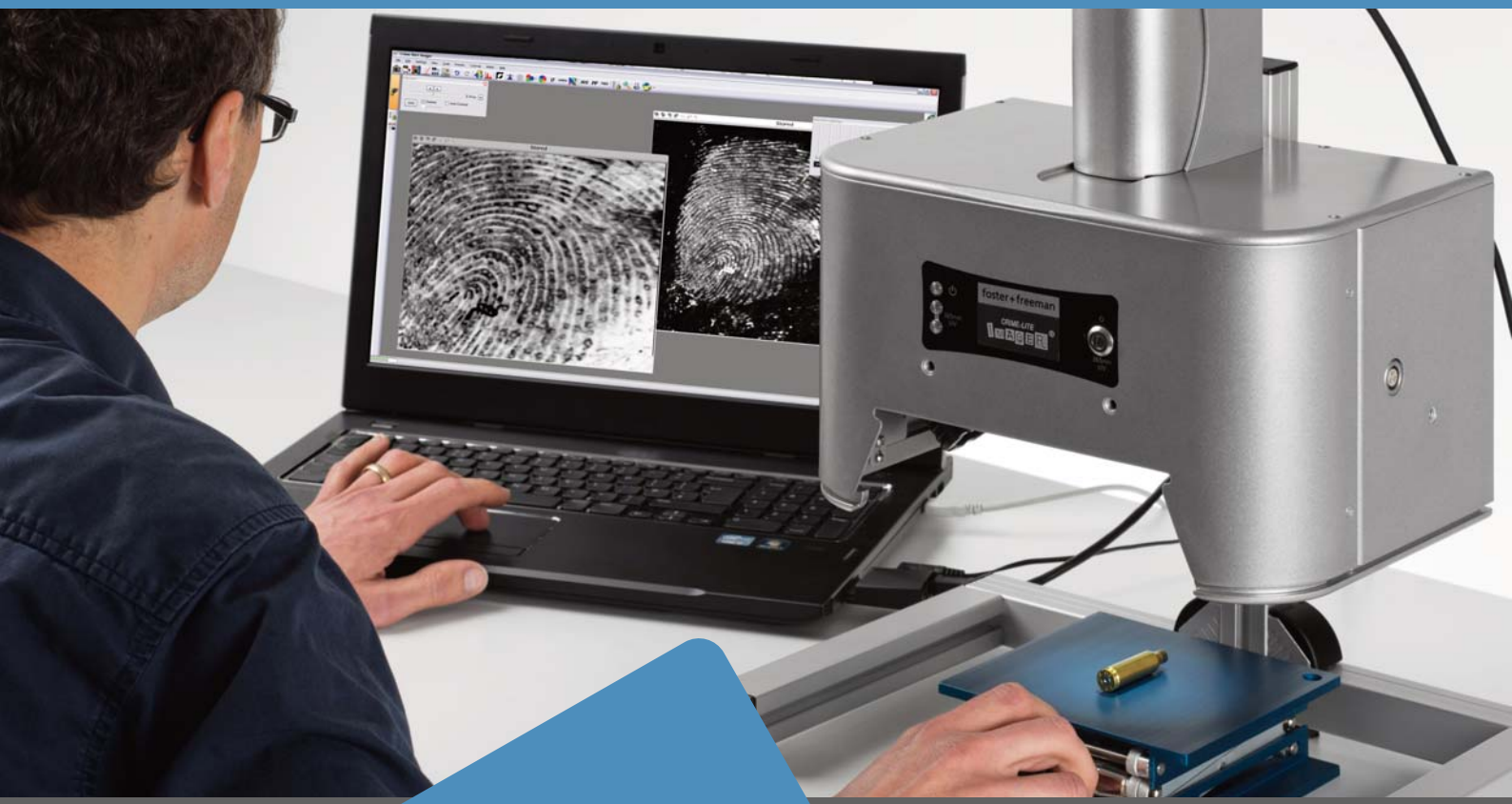
Crime-lite® IMAGER

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

Crime-lite®
IMAGER
Evidence Photography System

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:

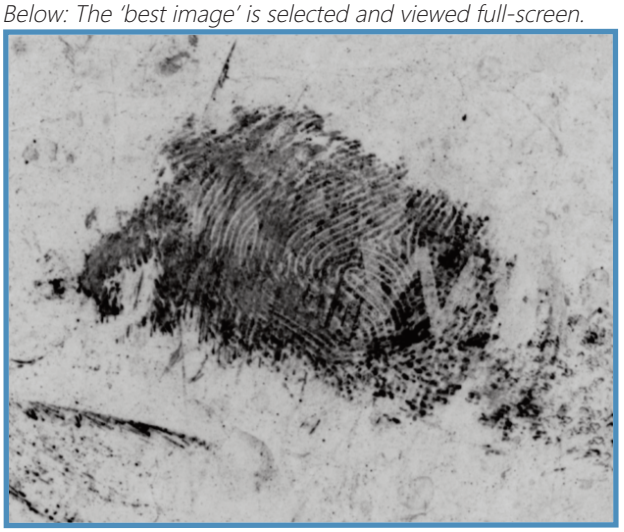
   Fingerprints, including commonly used chemical treatments

   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.

Above: In Automatic Mode examination results are displayed as thumbnails.
Below: The 'best image' is selected and viewed full-screen.



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

Crime-lite® Imager

Dual-Mode SOFTWARE

Automatic Mode of Operation

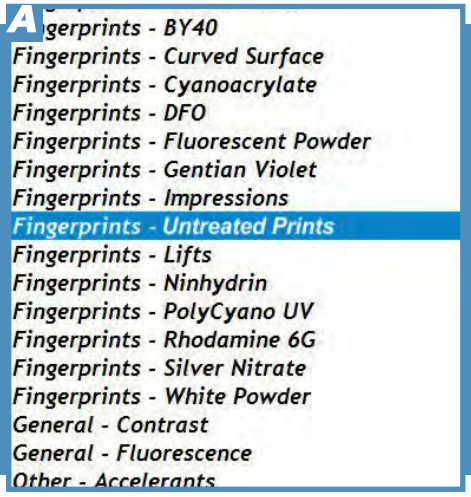
Expert photographic practice is made simple using the Automatic Mode of operation where enhancement options are presented as a simple dropdown list.

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.

A



B

A 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.

B 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.

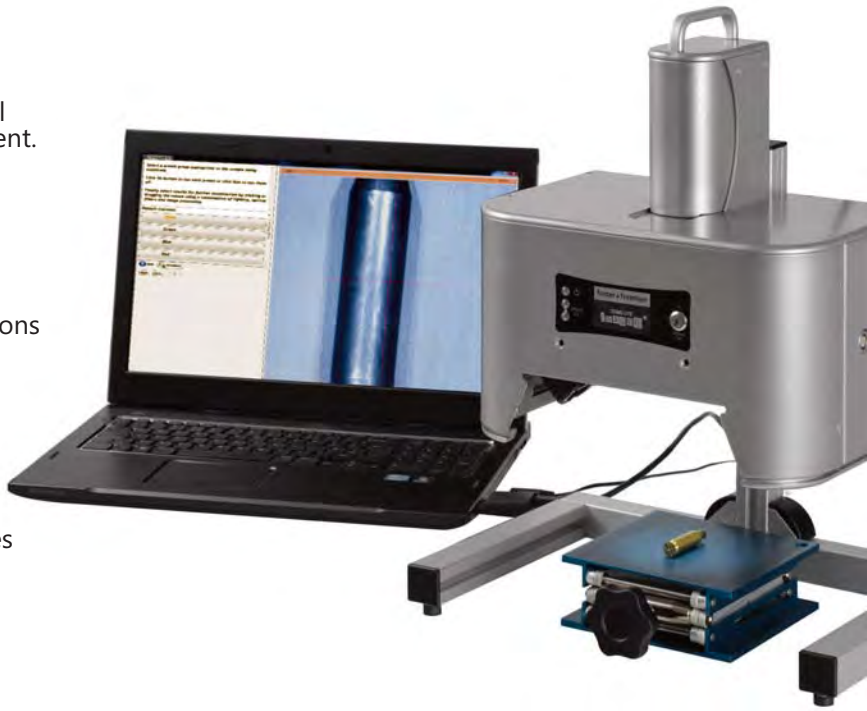
Advanced Mode of Operation

In Advance 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)



Crime-lite® Imager

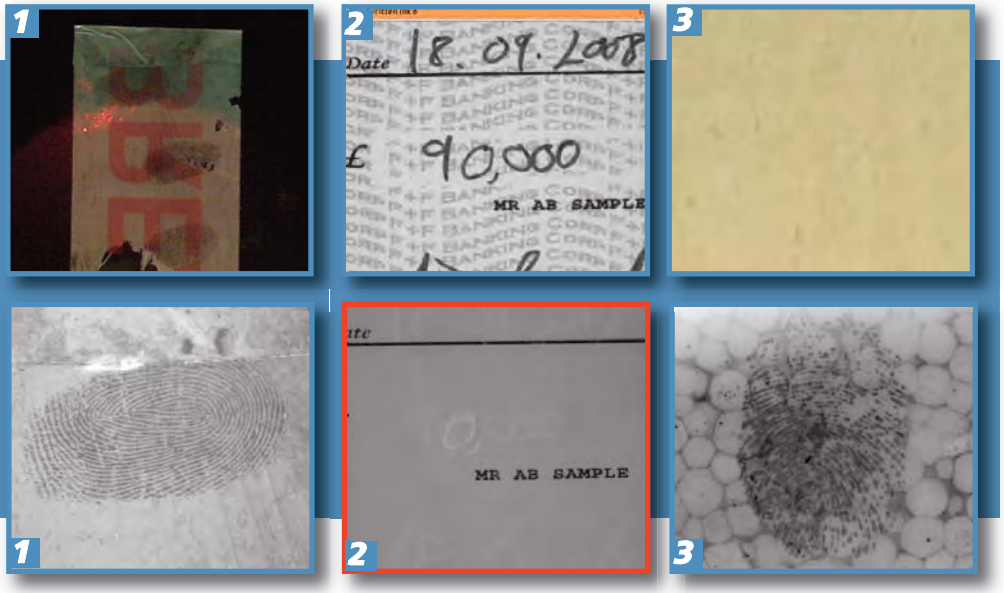
Application EXAMPLES

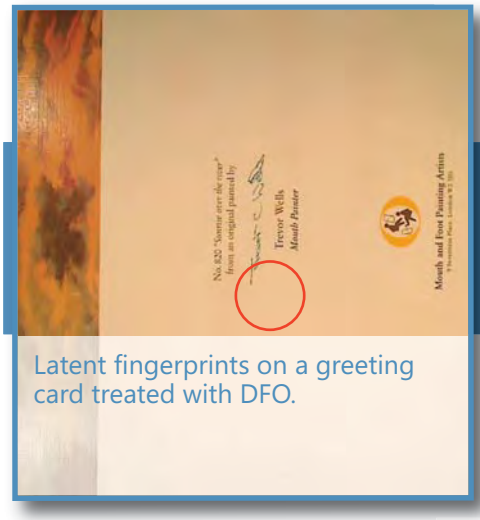
Automatic Mode

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

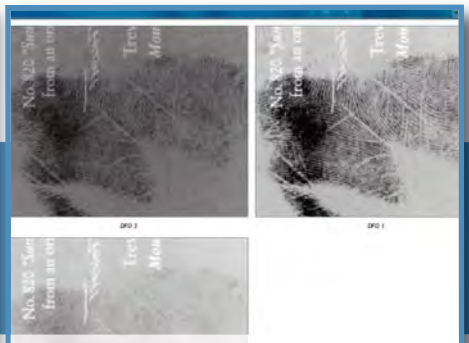
2. Using the Documents-IR preset, evidence of tampering can be seen.

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



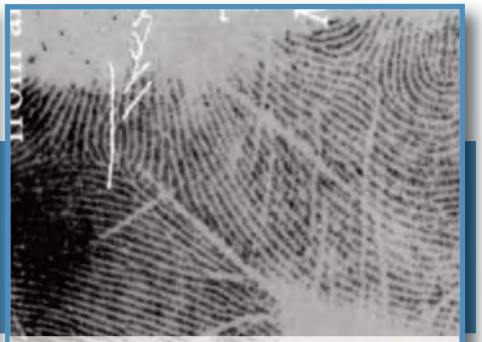


Latent fingerprints on a greeting card treated with DFO.



User selects the Fingerprint-DFO preset.

This option enhances the image in three ways with results displayed as thumbnails



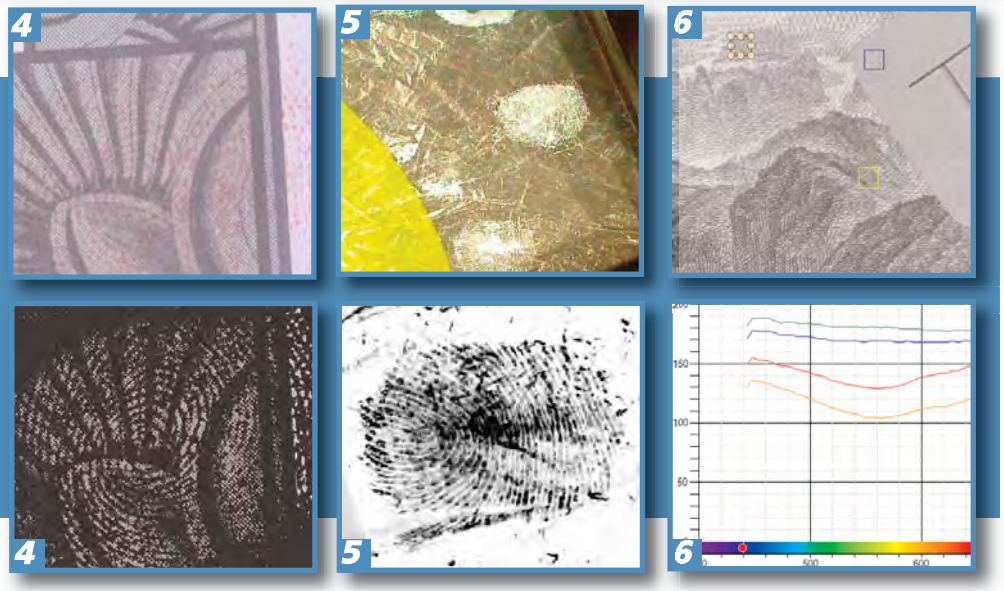
User is able to select a thumnail for full screen examination and, if required, further enhancement within Advanced Mode.

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

Above: Crime-lite Imager shown with portable stand QCL/CL/04

Below: Underside of Crime-lite Imager

Optional ACCESSORIES

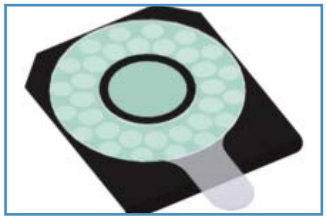
ILLUMINATION

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

PC HARDWARE

Desktop PC
QCL/CLI10
- 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

STANDS & STORAGE

Floor Stand
QCL/CI/07
- Structural aluminium frame with removable magnetic tabletop (requires QLC/CI/05)

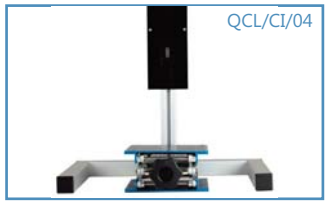
Bench Mount Stand
QCL/CI/06
- To fit over existing laboratory work surfaces. (requires QLC/CI/05)

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 aluminuim stand with quick release screw clamp.

Carry Case
QCL/CI/08
- Rugged, shock-resistant and waterproof


QCL/CI/07


QCL/CI/04


QCL/CI/08

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