

foster+freeman

Instruments for the detection & examination of

Latent Fingerprints

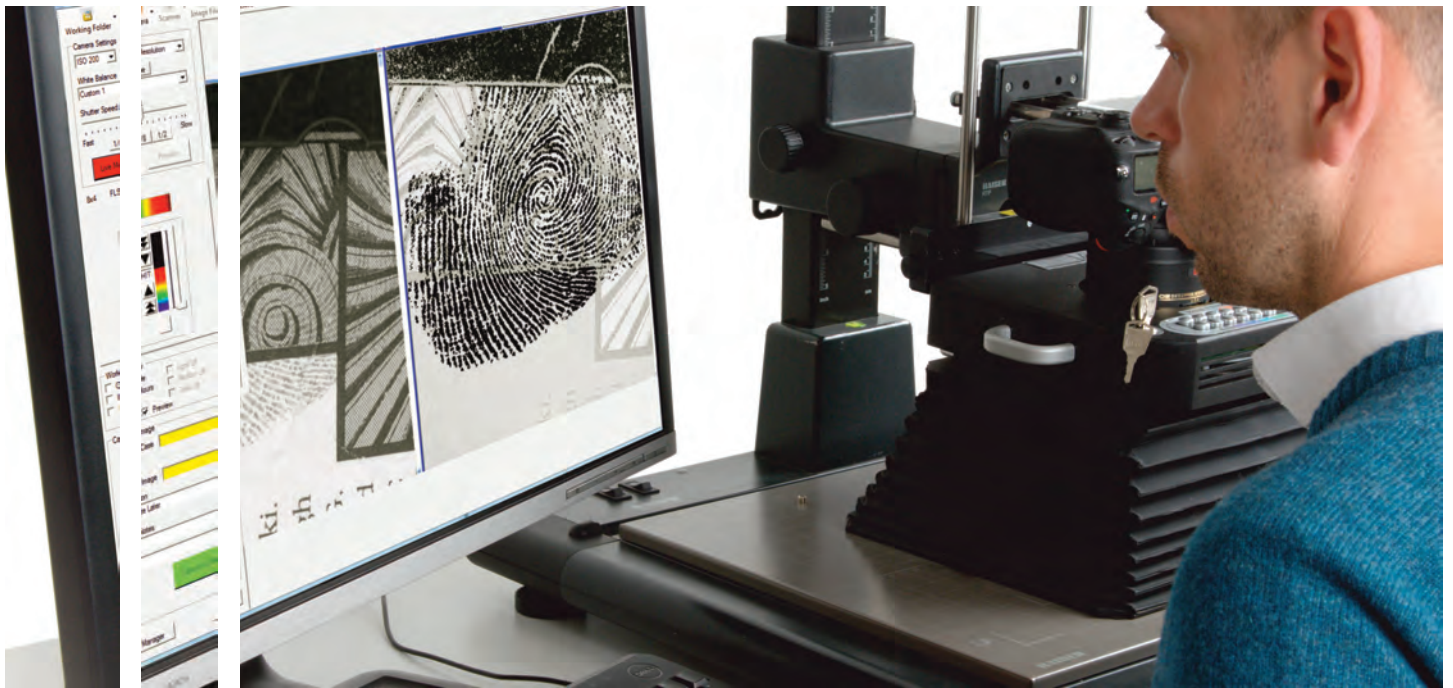


Detect & Visualise Prints

Capture & Record Images

Examine in Fine Detail

Enhance Contrast & Appearance



Latent Fingerprints

+ Fingerprint Imaging Systems

for the detection, capture & enhancement of fingerprints

Having located evidence, and returned it to the forensic laboratory for further examination, it is essential that the latent print examiner is able to detect and record fingerprints of the highest possible quality.

Foster + Freeman fingerprint imaging workstations provide comprehensive facilities for the detection, capture and enhancement of fingerprints on any surface or background to ensure that maximum detail is revealed.

Essential components of a Fingerprint Imaging System include:

- **Multi-spectral and Directional Illumination**
Observing a fingerprint under a high intensity light source may reveal detail that previously could not be seen. Advanced lighting techniques may increase print contrast or suppress the appearance of background colours and patterns. Narrow waveband illumination can be used to excite fluorescence in chemically treated marks.
- **Hi-Resolution Image Capture**
Once a mark has been visualised it must be recorded with no loss of detail.
- **Digital Enhancement Software**
Captured images may be further processed and enhanced using specialist software tools and filters.



Hi-Res Image Capture

record exceptionally high quality images of fingerprints to ensure that no detail of the original print is lost



Digital Enhancement

employ sophisticated image processing and enhancement tools to uncover hidden detail within images.



UV-Vis-IR Imaging

suppress background information and visualise the latest generation of IR fluorescent fingerprint powders



Manual or Semi-Automated

take full-manual control of the imaging process (DCS 5) or semi-automate capture & enhancement using the Crime-lite Imager

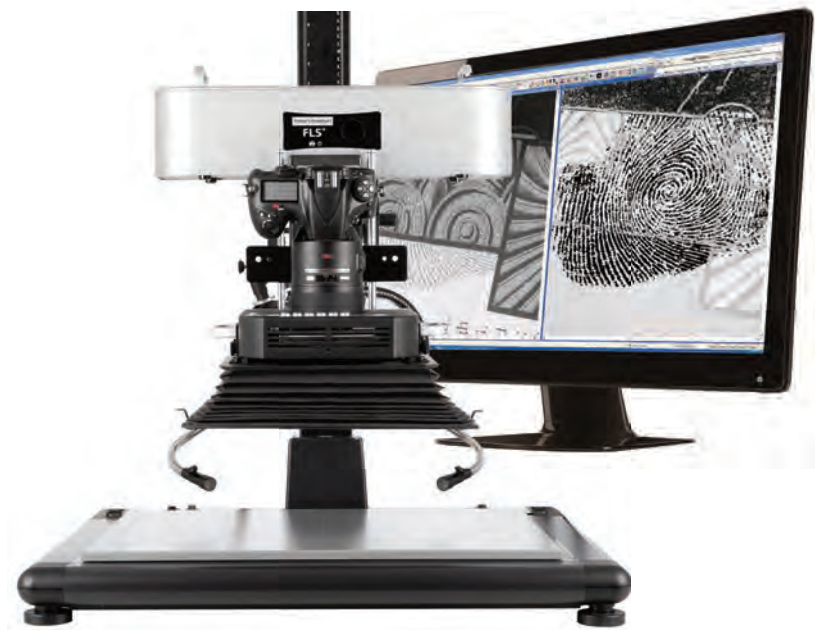
DCS[®] 5 ADVANCING THE SCIENCE OF FINGERPRINT DETECTION

DCS 5 is a comprehensive imaging workstation for the detection, capture and enhancement of almost any type of fingerprint on any surface or background.

An expert system, DCS 5 images are captured using a custom-modified 36.3MP camera fitted with a choice of application specific macro lenses.

Advanced digital enhancement, applied simply, maximises print detail to improve the value of evidence.

- UV-Vis-IR imaging workstation
- 36.3MP digital imaging
- Powerful enhancement software



Crime-lite[®] Imager SEMI-AUTOMATED CAPTURE AND ENHANCEMENT

The Crime-lite Imager is designed to meet the varying demands of fingerprint photography by providing optimum illumination for all common treatments and background.

A semi-automated system, the Crime-lite Imager combines advanced imaging and multi-wavelength illumination with simple to use software and enables operatives to consistently produce high quality results.

- Consistent high-quality results
- Increases throughput of evidence
- Simple software guides the user



The CSU can be used to 'unwrap' fingermarks from bullets and other cylindrical objects



CSU CYLINDRICAL SURFACE UNWRAPPER

A plug-in accessory for use with the Crime-lite Imager and DCS fingerprint imaging systems, the CSU enables examiners to extract 2D images of fingerprints from a 3D cylindrical surface.

Used to capture high-quality images of fingerprints from the cylindrical surfaces of bullet casings, pens, and hand tools etc., the CSU uniformly rotates items of evidence while the attached Crime-lite Imager or DCS workstation captures, stitches and blends a series of images together to create a single 2D image of the fingerprint.



Latent Fingerprints

+ Fuming Systems

tried & trusted technology for the development of fingerprints

A tried and trusted technique for the development of latent fingerprints on evidence, cyanoacrylate fuming is widely used by forensic laboratories worldwide.

In production for over 30 years, foster+freeman fuming cabinets are manufactured to provide a safe and effective environment for the controlled development of fingerprints.

- **Automatic & Manual Operation**
Choose to run automatic pre-set fuming cycles or take full manual control of the process.
- **Reliable Safety Features**
With the health and safety of the operator in mind, all MVC/D systems include door interlocks and self-contained fume cleansing.
- **Consistent Results**
Air circulation and internal humidity is monitored throughout the development process to maintain optimum conditions.



Items of evidence are placed inside a MVC3000 fuming cabinet.



Durable & Dependable

Robust construction and trusted technology separate the MVC from its competitors with many cabinets still operational more than 10 years after installation



PolyCyano Compatible

All MCV/D cabinets feature dual-temperature heating to accommodate the use of PolyCyano UV, a one-stage fuming process



Consistent Results

Throughout the fuming process, sensors monitor and control humidity and airflow to maintain optimum conditions.



Reliable Safety Features

The health and safety of the operator is paramount, as such all systems feature self-contained cleansing filters

MVC/D[®] CYANOACRYLATE (SUPERGLUE) FUMING CABINETS

The MVC/D range of fuming cabinets are the latest and most advanced range of systems for the development of latent fingerprints with cyanoacrylate monomer.

The cabinets can be operated in either manual or automatic mode and have been designed to accommodate both cyanoacrylate and PolyCyano UV (see below).

- Extremely durable construction
- Reliable safety features
- Produces a consistent high quality of results



MVC/D cabinets are available in 4 sizes

PolyCyano UV: One stage glue/stain process

MVC/D fuming cabinets are designed to accommodate the use of PolyCyano UV one-stage chemical staining process.

Exclusive to Foster+Freeman outside of Japan, PolyCyano UV dramatically reduces fingerprint processing times by combining cyanoacrylate monomer with a fluorescent stain in a one-stage fuming process inside the cabinet.

Once evidence has been treated with PolyCyano UV, fingerprints can be seen to fluoresce brightly under UV illumination.



SUPERfume[®]

CRIME SCENE CYANOACRYLATE FUMING SYSTEM

SUPERfume is a cyanoacrylate fuming system for developing latent fingerprints in situ at major scenes of crime.

Designed to treat domestic rooms, offices, garages and vehicles, the kit eliminates the need for dismantling fixtures & fittings and transporting items back to the laboratory for processing.

The kit is designed as individual components that are easily transported. An optional fuming tent provides a rapidly deployed fuming enclosure.



MVC[®] lite

THE FULLY PORTABLE FUMING SOLUTION

MVClite is a fully portable fingerprint fuming chamber for the safe and controlled development of latent fingerprints at the crime scene.

Mounted within a rugged weather-proof case, the MVClite retains all the features of a full sized fuming chamber and can be used for the development of latent fingerprints using both cyanoacrylate and PolyCyano UV, the cyanoacrylate/fluorescent stain that eliminates the need for subsequent chemical dyeing.



Latent Fingerprints

+ Novel Techniques

developed in-house to reveal prints on difficult surfaces

Through collaboration with leading authorities and prestigious universities, foster+freeman have been first to market with a number of pioneering fingerprint visualisation techniques.

Most recently, the company's continued research and development in this area has resulted in a new range of infrared imaging systems that enable investigators to obtain high quality fingerprints, with excellent ridge detail, from surfaces and backgrounds that may have previously been dismissed.

*In-house research:
Seeking to improve the quantity
and quality of fingerprints*



Reveal More Evidence

by detecting and examining fingerprints that may have been invisible or of insufficient quality when developed using traditional methods



Improve Print Quality

minimise the impact of background noise or fluorescence to reveal high contrast fingerprints



Increase Throughput

by reducing the requirement to perform time consuming and often messy chemical treatments



Improve upon Existing Techniques

the ongoing aim of our research in this area is produce new methods and treatments that improve upon those currently available

RECOVER LATENT FINGERPRINT TECHNOLOGY

Cutting-Edge Technology for the Development of 'Impossible' Fingerprints



RECOVER LFT is a unique chemical vapour enhancement technique that is capable of revealing fingerprints on a range of difficult surfaces including discharged bullet casings and items that have been washed 'clean' in an attempt to prevent identification.

Jointly developed by foster+freeman, the MoD Defence Science and Technology Laboratory (dstl), the Home Office Centre for Applied Science and Technology (CAST), and Loughborough University, RECOVER LFT can reveal fingerprints even after they have been physically removed from an object, and has been demonstrated to consistently out-perform existing fingerprint development techniques on a range of 'difficult' surfaces.

Key benefits include:

- Reveal fingerprints on metals exposed to extreme temperatures such as fired ammunition cases or vehicles that have been set on fire.
- Develop fingerprints on metal/alloy surfaces, including surfaces that have been wetted such as knives that have been thrown into rivers or canals, as well as surfaces that have been deliberately washed.
- Develop consistent fingermarks across different surfaces such as the plastic and metal sections of a shotgun cartridge

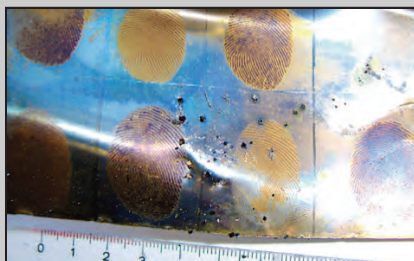
RECOVER Bullet Casings

Notoriously difficult to retrieve 'usable' prints from, fired bullet cartridges treated with RECOVER LFT, can yield fingerprints of an incredibly high quality



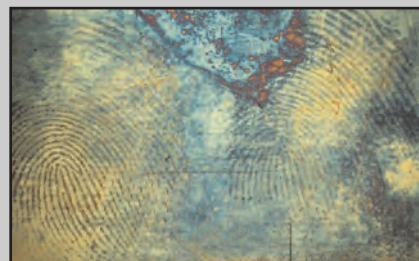
RECOVER IED Fragments

The original RECOVER LFT application; prints can be visualised on metals exposed to extreme heat, including Improvised Explosive Device (IED) fragments



RECOVER Washed Items

Even when an item of evidence has been washed clean, or submerged for an extended period of time, RECOVER can still retrieve identifiable prints.



Head Office, UK Sales Office
Vale Park | Evesham | WR11 1TD | United Kingdom

Tel: +44 (0)1386 768 050 | sales@fosterfreeman.com

USA Sales Office
46030 Manekin Plaza | Suite 170 | Sterling | VA 20166 | USA

Tel: 888 445 5048 | usoffice@fosterfreeman.com

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fosterfreeman.com