

# Image conscious

The main theme this week is image acquisition and handling.

## Manual control

**Bio-Rad** [www.bio-rad.com](http://www.bio-rad.com)

*Stay in the picture*

A new manual control unit has been introduced to allow users of Radiance laser scanning microscopes to fine-tune and optimize acquisition settings without taking their eyes away from the image on the screen. Instead of using a mouse or keyboard to navigate between on-screen icons, users can manually adjust parameters such as PMT gain, laser power (attenuation) and confocal aperture (iris) via touch-sensitive dials and buttons. Instrument settings can be adjusted progressively with one hand, and the control layout is suitable for either left- or right-handed operation.

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## BioDoc-It

**UVP** [www.uvp.com](http://www.uvp.com)

*Compact image acquisition system*

The BioDoc-It system combines a CCD video camera, integrated LCD monitor, touchpad control panel, disk drive, darkroom enclosure and 302-nm UV benchtop transilluminator. It is designed for gel documentation and archiving of fluorescent and non-fluorescent gels, membranes, blots, film, plates and assays. A live preview function allows researchers to acquire exactly what is shown on the monitor. Exposure times can be pre-set for integration of the camera from 0.1 up to 10 seconds, while an auto-save function saves up to four images on disk. An optional thermal printer and UV-to-white-light converter are also available.

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## NucleoVision 920

**NucleoTech** [www.nucleotech.com](http://www.nucleotech.com)

*Versatile chemiluminescence workstation*

Based on GelExpert imaging software, this workstation supports applications involving chemiluminescence, fluorescence and visible light imaging and can be used to document and analyse blots, gels, autoradiographs and 3-D QPCR, dot blot and ELISA. The integrated software offers facilities for image preprocessing, annotation, enhancement, analysis, archiving and publication. Analytical tools include OD analysis, molecular weight calculation, 1-D automated multi-lane densitometry, Dot/Slot blot analysis, free object quantification, 2-D spot densitometry and dynamic image capture. The system supports images from CCD cameras, TWAIN-compatible scanners and phosphor imagers.

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Radiance: the right, or left, stuff.

## GP-KS1000

**Panasonic** [www.panasonic.com/indvision](http://www.panasonic.com/indvision)

*This one will make you see red*

The digital signal processing GP-KS1000 colour microcamera features a high-density CCD (830 × 970 V pixel array) that produces 560 lines of resolution with a signal-to-noise ratio of 54 dB. The camera head measures 17 mm in diameter and 42 mm in length, without the lens. Its RGB colour filter reproduces a full spectrum of colours, including reds that would normally be expected using a three-CCD camera. The unit comes with an auto/manual electronic shutter, built-in full-field colour bars, vertical and horizontal edge enhancement and four selectable user files for storage and retrieval of specific camera settings.

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## MetaMorph 4.5

**Universal Imaging Corporation**

[www.image1.com](http://www.image1.com)

*Streamlined interface with advanced features*

Refinements to the MetaMorph bioimaging software program include a simplified user interface and more advanced features. Application-specific toolbars such as Fluorescence Tools can be used to acquire multiple wavelengths from digital cameras, measure colocalization between probes and overlay images. A new Acquire dialogue box sets camera binning, gain and auto-exposure, controls camera shutters during acquisition and defines exposure times and acquisition regions. Gray values in biological samples can be quantified using the Region Measurements function to combine measurements of intensity, area and other parameters. MetaMorph 4.5 comes with a training CD and runs under Windows 95/98 and NT. The program supports a variety of black-and-white and colour-cooled CCD cameras from major manufacturers.

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## DXM 1200 digital camera

**Nikon** [www.nikon.com](http://www.nikon.com)

*Definitely worth looking into*

Aimed at microscopists who need to take and store large numbers of high-quality digital photomicrographs, the DXM 1200 1.4 million CCD produces images of 12 million output pixels that can be transferred to a computer at speeds of up to 12 frames per second. Data can be saved in TIFF, JPEG or BMP format. Shooting conditions and live, still and thumbnail formats can be viewed on screen simultaneously, switching between live and still as required. Exposures can be made while monitoring high-quality live images, with the camera set to print each time an exposure is made for immediate verification of image capture.

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## Dual-action manifold

**Bio-Tek** [www.biotek.com](http://www.biotek.com)

*Quadruples the capacity of ELx50 washers*

This 16-channel manifold offers the facility to switch between 96- and 384-well plates with no need to change washer hardware. Dispense and aspiration positions are controlled independently for overflow washing and overflow protection. Adjustable dispense and aspiration rates allow the washer to be used in a wide range of applications, including cell-based assays. An optional external valve allows automatic dispensing of up to four reagents. Up to 75 user-defined programs can be created and stored on-board, with a facility to run up to 10 programs together for complex wash routines.

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*These notes are compiled in the Nature office from information provided by the manufacturers.*

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