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DATELINE
KÖLN MESSE
SEPT. 22-23 1994

New Camera Introductions Fill Photokina Halls

by George Schaub

photokina—While the photo world may be waiting for the alleged new format to change the way consumers take pictures and have their prints made, manufacturers continue to bring out sophisticated picture-taking machines at a record pace. Both SLR and lens/shutter camera intros are here, with nearly every manufacturer bringing forth products that push the limits of technology and offer a host of features in smaller packages.

On the lens/shutter side, miniaturization and zoom are the key words. Most of the cameras offer options that raise the level of what previously had been deemed a point-and-shoot category, all in smaller and lighter packages geared toward the compact desires of the consumer. This battle for bragging rights of being the smallest and lightest camera on the block began nearly three years ago with the introduction of the **Olympus** Stylus. Once manufacturers saw how this small camera sold (and is still selling) the design race was on. At first, fairly simple cameras with fixed focal length lenses were the norm. Now, new designs and technology bring zoom and creative options into the compact lens/shutter and focal plane shutter category.

KONICA EU-MINI

The new camera from **Contax** is dubbed the G1, and is described as a whole new class of camera. The G1 is a compact, autofocus focal plane shutter camera with four new interchangeable lenses and new accessories. It is said to integrate the high reliability and system versatility of an SLR with the portability and ease of use of a compact camera.

Compact cameras from **Kinon** are making their debut here. The Kinon KM880 is a compact 35 with three flash modes, autowind and rewind, and is available with an optional remote control and as a date back model. Their Mini Cam 35 is a palm-sized unit with three flash modes, red-eye reduction, multi-exposure capability and an LCD panel.

Konica has the exciting new EU Mini, in colorful models which they describe as a "model of photographic simplicity." The EU Mini has built-in autoflash and red-eye reduction feature, along with motorized advance and lithium power supply.

Minolta is introducing a host of new lens/shutter cameras here. Their Riva (Freedom in the US) 135 EX has a 38-135mm and is claimed by Minolta to be the smallest and

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photokina news

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Worlds largest publisher of Photographic Business Magazines

Digital Photography At Photokina 1994

by Don Sutherland

photokina—Professional–quality digital cameras, new film scanners, new photographic printing systems, color–calibration software, and even acceleration systems for photography–capable computers are among the major attractions greeting the public on this opening day of Photokina '94. As you walk the trade show floor, you'll discover no aspect of the imaging process untouched by substantial improvements in new technology and technological combinations — in devices ranging all the way from initial image capture to final output.

The names behind these fascinating devices, and the wondrous new possibilities they bring to imaging, are the sturdiest in the business: Eastman Kodak, Fuji, Ilford, Nikon, and Polaroid, for starters. This should be the most interesting Photokina in years — and, owing to certain business relationships, the most surprising.

Awaiting the Crowds at Köln Messe

Digital Cameras Arouse Comment

Perhaps most likely to arouse comment are three of the professional–quality digital cameras making their debut today. Each has something to do with Nikon, but each also has something to do with either Kodak or Fuji.

Kodak's newest DCS (Digital Camera System) model is the 460, with the highest resolution to–date in a single–pass color electronic camera: six megapixels, in a 3,060 x 2,036–pixel array. Other digital camera systems feature six–million–pixel resolution, but require three "passes" or exposures, one for each of the primary colors.

The three–pass system amounts to a time–exposure, suited to still–life subjects, principally in studio settings. By providing one–pass operation, the DCS 460 offers its high level of digital resolution at the full range of shutter speeds available to the Nikon N90 camera, whose body is the host of the new Kodak Megapixel M6 chip.

Meanwhile, an entirely new digital camera body has been introduced

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Eseco Speedmatic Doors

photokina — No more work interruption and light fogged film or paper. Eseco-Speedmaster has added to its Speedmatic line of door sizes and designs. Now there is a Revolving Darkroom Door for every size or budget. The clear view doors

allow visibility from the entrance. These are for clean rooms, inflatable buildings and other systems requiring positive air pressure. The sizes range from 28" up to 65".

Sturdily constructed of aluminum tubing and 20 gauge steel. For the Graphic Arts Pre-press and Black and White Lab there is now a full range of Red/Amber doors. Our 2-way 54" and 2-way 65" doors are handicap-accessible. The unique non-skid floor in all Speedmatic doors and the prefab wheelchair ramps assure easy entrance and exit for disabled persons.

Sizes are easily selected for any project and with the Pop-Out safety system instantaneous removal and rapid re-installation without the use of any tools. Rotary darkroom doors require less than one-fifth the floor space than a conventional labyrinth light trap and can be easily entered while carrying materials. There is also a complete compliment of pass through windows. The rotary Pass Through Windows provide a convenient method of transferring materials to the darkroom without entering or interrupting the operator. All Speedmatic Revolving Darkroom Doors are shipped assembled, ready for simple installation. "Knocked down" doors are available at no extra cost for those applications requiring on-site assembly. For more information, come to Hall 13.1, Gang T/U, Stand 31 or in the U.S.A. call Eseco-Speedmaster, 1-800-331-5904.

Kodak Digital Back

photokina — Professionals using medium-format cameras will soon be able to capture high-resolution digital images with Kodak's full-featured digital back for several popular 120 and 4x5 devices.

Known as the Kodak Professional DCS 465 digital camera back, the new back will offer photographers a unique combination of image quality and convenience. It will feature: image resolution of 3,060 x 2,036 pixels, for a total resolution of 6 million pixels; single-shot color exposure, with resulting portability that will enable the camera-back system to be used almost anywhere, inside or outside the studio; 36-bit color (12 bits per RGB color), with an ISO equivalent of 100; the ability to store images on removable PCMCIA-ATA Type III cards (both flash memory and hard disk cards); a high-power battery pack good for at least 100 images per charge, with a one-hour recharge; and a built-in microphone for image annotation, allowing the photographer to record sound clips before or after exposing an image.

The M6 back is based on the same technology now being commercialized in the Kodak DCS 400-series digital cameras, which feature a digital back fixed to the body of the Nikon N90 35mm SLR. The M6 back will complement the 400-series cameras, offering a high-resolution digital option to photographers and other prepress professionals who prefer to capture images with a camera they already know and trust.

Nikon Unveils Two Major AF–SLRs

photokina—Nikon Corporation has announced two new autofocus SLR cameras, the Nikon F90X (Nikon N90s in the U.S.) and the Nikon F70 (Nikon N70 in the U.S.).

The Nikon F90X offers an advanced autofocus system that is faster and more accurate. As a result, photographers can count on every shot to come out sharp—even in a fast action sequence. It also incorporates three exposure metering systems, a flash system with 3D Multi–Sensor Balanced Fill–Flash, and improved overall handling that includes an optional grip that enables vertical shooting. As a total system, the Nikon F90X offers unparalleled performance that will inspire professional and advanced amateur photographers alike to new heights of creativity.

The Nikon F70 is an easy–to–use SLR that appeals to a broad range of photographers—from beginners to photo enthusiasts. The camera sports an ergonomically designed Command Dial and large LCD with a graphical user interface that is color–coordinated with control buttons. The result is a revolutionary control system that provides simple, intuitive operation. This ease–of–use is complemented by powerful yet surprisingly quiet performance.

The F70's versatile built–in Speedlight furnishes 28mm coverage and is the first built–in unit ever to incorporate Nikon's 3D Multi–Sensor Balanced Fill–Flash. It also has a higher pop–up position for extended lens compatibility.

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Large-Format Digital Output on Traditional Color Paper Arrives

by Henry Wilhelm

Note: This is the first of three articles on the many options now available for making prints from scanned and digitized photographs, digital cameras, and computer-generated images. This first installment covers important breakthroughs in digital output on traditional photographic color papers. The second article, which appears in our next photokina news, will discuss thermal dye transfer printers (often referred to as dye sublimation printers); electrophotographic copier/printers; both medium- and high-resolution ink jet; liquid toner electrostatic; hybrid color photographic/thermal transfer; and other digital printing technologies. The concluding article will look at the strengths and weaknesses of the new digital output technologies — and suggests where all of this is going and how it fits into photo lab and minilab markets.

photokina—The introduction of large-format photographic paper digital color printers by Durst, HK, and Metrum finally fills the last major gap in the high-quality digital print output field. Excellent scanners and digital cameras have been available for some time, as have film recorders for producing high-resolution color negatives and transparencies from digital files. Computers and data storage devices get faster and less

expensive with almost every passing month. Color management systems to tie together the various devices on the input and output chain in a controlled and repeatable manner are on the verge of widespread application.

What has been missing, however, has been the ability to output high-quality, large-format digital color images, simply and inexpensively. The new Durst, HK, and Metrum printers change all of that and it is certain that the commercial lab business is never going to be the same. Capable of direct digital printing on color papers up to 127 cm (50 inches) wide by almost any length, these printers take full advantage of the excellent image quality, low cost, comparatively good permanence, and rapid print production offered by silver-halide based photographic papers and display materials.

The hybrid optical/digital minilabs introduced by Gretag and San Marco, which are discussed later in this article, and the medium-format CRT-based digital photographic printers previously introduced by Metrum, Ilford, Agfa, and Kodak offer many of the same benefits for other important segments of the market. When coupled with high-quality in-house scanning capability (an absolute necessity), these machines will help put the photo lab right back into the center of the increasingly computer-based imaging business, and will go a long way toward bringing back those many customers who have walked out the door, taking their color output work to an electronic imaging service bureau.

Advantages of Direct Digital Printers

Now let's look at some of the specific advantages of direct digital printing on color paper compared with the old, enlarger-based method of doing things:

• Running RA-4 compatible color negative paper, a digital printer can

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Large Format Digital

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Gretag and San Marco Show First Hybrid Minilabs Capable of Both Optical and Digital Printing

produce prints from any type of original.

• For labs that prefer Ilfochrome direct-positive materials, large-format prints can also be made from any type of original including, of course, color negatives. Indeed, one of the real advantages of the new large-format printers is that they can print on a wide variety of materials, including translucent and transparent display films, and even black-and-white papers!

• With no change in setup or color material, the printer can make prints from Photo CDs, computer-generated images, PostScript files, and other digital image sources.

• Small "full image" test prints can be quickly and easily produced. With digital printers, images receive the same exposure regardless of size, and exposure reciprocity problems are eliminated. There are no worries about unexpected changes in color balance and density.

• With dodging, burning, color balance, density, contrast, saturation, and curve-balance adjustments already taken care of during the computer image processing stage, printing becomes a very straight-forward operation and lends itself to around-the-clock production. In addition, the calibration procedures employed by these machines should virtually eliminate problems associated when changing paper emulsion batches.

• Because dust and scratch removal are also taken care of during the computer image processing stage — and in the digital world, this work needs to be done only once — time-consuming manual dust-spotting and retouching on each print after processing is eliminated!

• For really large prints, the computers controlling these machines can automatically and precisely panel the images and, at the same time, provide user-determined amounts of overlap.

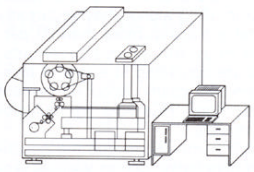
• The new Durst, HK, and Metrum large-format digital printers occupy far less space than horizontal enlargers and the huge, wall-mounted easels sitting in totally darkened rooms that they replace.

Durst Lambda 130 Digital Printer

The Durst Lambda 130 digital laser printer is a high-end machine that will be shown for the first time at Photokina. Equipped with a 5-station turret for unexposed rolls to permit rapid access to different types and widths of color paper and display materials, the Lambda 130 prints at a rate of about 15 cm (6 inches) per minute. It accepts rolls in widths of 50.8 cm (20 inches) to 127 cm (50 inches) and can print on RA-4 compatible materials, Ilfochrome, and black–and–white papers. (Durst recommends Kodak Ektacolor paper for use in the printer, and says the company is currently working out the details of a marketing and technical support agreement with Kodak. Durst reports that Kodak supplied significant technical input in the design of the Lambda 130.)

The printer is controlled by a dedicated Digital Equipment Corporation (DEC) Alpha computer workstation and can accept input from PC and Macintosh computers and other standard electronic imaging systems, which can be networked to the printer controller. The printer will also accept SyQuest and MO disks, CD-ROMs, DAT, and Exabyte tapes. Image data formats include TIFF, PostScript Level 2, Photo CD, etc. Prints can be rotated, mirrored, cropped, and enlarged by the workstation computer. The printer has a built-in calibration system to account for different emulsion characteristics.

Specific image resolution data have not yet been revealed, but output from the printer — and the printer itself — are on display at the Durst booth (Hall 13.1, Booth 49). Curious fairgoers will not, however, be able to examine the interior workings of the printer. John van Halderen, marketing manager at the



Durst headquarters in Italy, says that the company "spent quite a few million dollars" on the Lambda development project and will go public with the technical details of the machine only after all patent applications are completed. Delivery of the first machines is scheduled for mid-1995. The DEC Alpha computer and RIP are included in the purchase price.

HK Digital Photographic Writer PW50

HK's entry into the digital printer field is the Digital Photographic Writer PW50. Like the Durst Lambda 130, the HK printer can output prints 127 cm (50 inches) wide by almost any length. The minimum print size normally is 20 inches. A 72-inch (183 cm) wide machine will also be offered. As with the Durst digital printer, the HK machine will accept almost any type of photographic material, including RA-4 color negative and R-3 compatible color reversal materials,

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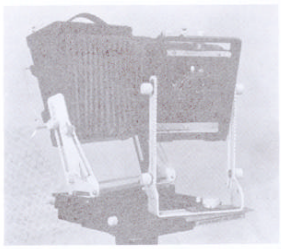
Hoffman Field Cameras

photokina—Hoffman Camera Corp., Farmingdale, New York, USA, manufacturer of photographic systems since 1953, is in Hall 14-2, Aisle F, Stand 50. An improved up–to–date unit of the Hoffman Master View Field Camera in the 4x5–5x7 size is available. It is the only field camera with two patents. One applies to the Glidamatic swinging back with side shift riding on teflon surface, which is off–axis swing. The other patent pertains to the rise and tilt from a base tilt which eliminates image shift, size change, and is yaw free. These are light–weight, all–metal cameras which are portable and rugged. No need to for ballon bellows or extensions.



Also available is the Metalmaster cutfilm holders in 4x5, 5x7, and 8x10 film sizes. The only metal clad film holders without bottom flaps, patented. The company makes all size large film and vacuum film holders.

KONICA ECOJET SYSTEM

photokina — Konica Corporation announces the Konica Nice Print System ECOJET, the world's first photofinishing minilab system to use tablet form photo chemicals. The ECOJET series was unveiled at the Lab System Show in Tokyo last June.

It attracted a very large audience and was considered a sensational attraction among visitors.

Since the birth of the Konica Nice Print System (NPS), the world's first no-wash minilab in 1984, Konica has striven to develop more user-friendly, environment-friendly systems. Over the last 10 years, minilabs have grown in popularity and have obtained a firm position in the photofinishing market with approximately 85,000 units worldwide. As the market expanded and the number of operators increased, the need for simpler, more error-free functions became essential.

To mark the 10th anniversary of NPS, the epoch-making ECOJET series was developed. By incorporating Konica's unique technology, the most troublesome processes became practically error-free. Moreover, the ECOJET series was not only designed to be the ultimate in user-friendliness, but to be environmentally-friendly as well.

For the first time, photo chemicals, which until now have been available only in liquid forms for minilabs, have been concentrated into dry tablets called ECOJET Chemicals. Encased in handy polyethylene cartridges, the ECOJET Chemicals can be easily inserted into the minilabs. User-friendly features of the ECOJET Chemicals can be summarized in these two words: simple and error-free.

The NPS 808J and 828J offer the same outstanding specifications as our best-selling NPS 808-2 and 828 with one additional attraction, Konica's revolutionary ECOJET system. The result is the most convenient and reliable minilab systems ever, user-friendly, clean and ecologically sound.

Just like the popular NPS 808-2, the compact, counter-type printer/processor, the NPS 808J allows for space-saving convenience performed from the control panel side of the printer/processor for time-saving.

The NPS 858J is the newest in the series of convenient counter-type printer/processor incorporating the ECOJET system and a Hyper-DFS (Decision Free Scanner), an improved version of Konica's popular one-channel scanner DFS. Combined with a high-quality, 10-inch color display monitor, Hyper-DFS not only minimizes printing skill previously required, but also decreases paper loss and working hours.

The Hyper-DFS adopts a one-channel algorithm to achieve high precision auto-scanning from order-specific information combined with statistical data. The 10-inch color CRT monitor can display a color image very close to that of the finished prints in either single-frame or six frames. With the monitor, it becomes easy to verify color balance and density, skip unwanted frames, and make corrections without wasting paper , time and chemicals.

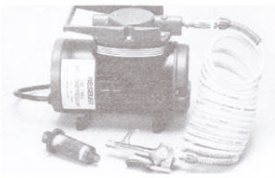
IMAPRO PRODUCT

photokina — Imapro has launched a new Windows range of digital film recorders, scanners, and workstations. Displayed at photokina 1994, Hall 13.2, aisle M, stand 8, the WinRange of products boast state-of-the-art digital imaging hardware technology with Imapro's specially developed proprietary software.

The "WinRange" includes: the QCS 3,200 ppi, 36 bit, flatbed scanner; a 4,000 ppi, 36 bit, 3.8 density range desktop drum scanner; the high performance entry level WinFoto Provider workstation; and the professional Photographics 8k workstation. IN addition, the WinSetter PostScript RIP workstation provides page output, impositions, and 4-color page separations.

The new range of QCR high resolution film recorders will also be introduced at photokina with shipments scheduled for early 1995. Imapro's trade-up program allows you to invest in a QCR film recorder today and migrate to the new QCR-32k when made available.

Beseler Air Compressor



photokina—The Charles Beseler Company of Linden, New Jersey has introduced the DG–100A Air Compressor, a cost efficient alternative to canned air for the medium to high volume users. The DG–100A features an integral trigger activated pressure switch which automatically turns the compressor on or off. A 12 ft. coiled hose with nozzles are also included. The DG–100A offers quieter operation with less vibration than other compressors of its type. It is virtually maintenance free. An in–line dryer which filters out unwanted moisture from the air is available as an option. The DG–100A is also suitable for air–brush use.

New Kodak Ektacolor Papers

photokina—Kodak has announced improved versions of its popular Ektacolor papers for traditional photofinishers, photo specialty shops and minilabs.

Kodak Ektacolor edge 2 and Royal III papers are resin–coated color papers designed for printing color negatives using a variety of printers, minilabs and enlargers. They share a new, advanced dopant technology, emulsion finishing technology, and significant dispersion enhancements.

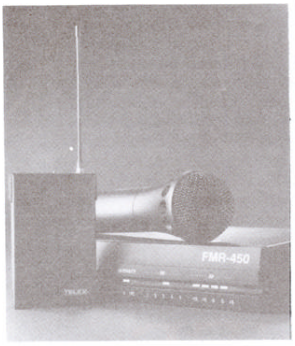
Both papers deliver excellent print contrast over a range of printing speeds, brilliant whites, and improved high color saturation. The papers also have improved natural age keeping for more consistent results over a wider range of storage times.

Kodak Ektacolor Royal III and edge 2 papers display many improvements including: improved natural age keeping produces consistent photographic results day–to–day and month–to–month with minimal printer adjustments; reduced thermal sensitivity for improved color balance consistency during printing, despite ambient temperature variations during production; improved speed and contrast reciprocity to minimize differences between over, under, and normal negatives for similar printing characteristics on high–speed and minilab equipment; and reformulated emulsions that make Ektacolor Royal III paper and Ektacolor edge 2 paper more scratch resistant during processing.

Telex UHF Wireless System

photokina—Telex Communications, Inc. adds a professional UHF wireless microphone system that operates from 524 MHz to 746 MHz (UHF TV channels 23-60). The system is designed to operate up to 50 simultaneous systems, using hand–held or belt pack transmitters, without compromising operating range or audio quality. The FMR–450 includes patented Pos–i–Phase true diversity circuitry for highly stable RF performance. Telex's exclusive Pos–i–Squelch II provides a greater degree of integrity in maintaining overall system quieting, and the new compandor design results in flawless audio response with a signal–to–noise ratio of greater than 110 dB.

Other unique features include a specially–matched, 1/2–wave collinear ground independent antenna system, which offers a substantial gain improvement over 1/4–wave designs. The receiver features RF, audio and diversity LED indicators, and a transformer isolated balanced mic level output with attenuation control. The receiver measures a compact one–half rack space wide by one rack space high. Optional rack kit allows two receivers to occupy only one rack space.



Art Leather Offers 'USA at Home'

photokina—Art Leather—the leading, worldwide manufacturer of high–quality, custom albums and folios—created a perfect setting to display its products at the 1994 Photokina Trade Show. The premier wedding and portrait album maker recreates an up–scale American living room, fully decorated with stylish U.S. furnishings, including a Baby Grand piano.

The spectacular Art Leather display is a "must–see" stop for visitors touring Photokina. The Art Leather exhibit is easy to find—Hall 13.3, Stand A–11—just following the sophisticated music of a tinkling Baby Grand piano.

Another part of the Art Leather display with a uniquely American flavor is a Los Angeles–style diner, which offers Photokina food fare in a distinctive Hollywood ambiance. A 1950s railroad–passenger–turned–restaurant is reproduced in chrome and plastic, and the diner's decorations include portraits of Elvis Presley, Marilyn Monroe, James Dean, and other '50s movie stars.

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as well as Ilfochrome print and display materials.

The roll of paper, in a light-tight cassette, is loaded on one side of the unit and threaded under the exposing unit into the collecting cassette. When exposure is completed the paper is cut, and the receiving box is removed and taken to the processor. It is a very compact machine and occupies a laboratory floor area of only 6 feet by 2 feet; the printer stands 3 feet high. The printing speed initially has been targeted at 4 inches (10 cm) per minute.

The PW50 is controlled by an IBM compatible PC with a standard SCSI interface for external devices. HK describes the exposing unit as "multiple hybrid assemblies of semiconductor diodes." The UK-based company says that "the image resolution has been selected to give visually continuous-tone images which, because they are grainless, compare very favorably with conventional photomural pictures." HK says that the image resolution is "equivalent to a 60mb file being printed onto a sheet of 50 x 80 inch paper."

A PW50 printer and sample output prints are on display in the HK booth (Hall 13.1, booth S 11). Delivery of the 50-inch PW50 printer is scheduled for the first quarter of 1995, with delivery of the first 72-inch machine following a few weeks later.

Metrum FP5060 Digital Mural Imager

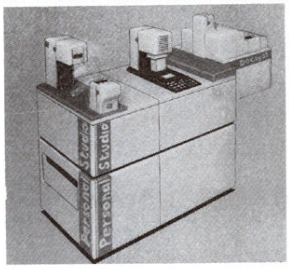
Although Metrum's new large-format digital printer will not be in the Metrum booth this year (a prototype unit was at Photokina in 1992), sample prints made with the big printer are displayed along with working 8 x 10-inch Metrum FP1000 printer/processors. Todd W. Swanson, marketing and sales manager at Metrum Imaging Products headquarters near Denver, Colorado, says that the company's engineers wanted to keep working on their final prototype machine and its complex digital electronics and did not want to let it out of their hands long enough for the machine to be transported to Cologne for Photokina. Metrum is planning to bring the new 132 cm (52-inch) printer to market in the first half of 1995 and expects to show a production machine at the Photo Marketing Association show in Las Vegas in February.

With a printing speed of approximately 25 cm (10 inches) per minute, the Metrum FP5060 is the fastest of the new large-format digital printers. It can print a 127 x 152 cm (50 x 60 inch) print in only 6 minutes. The maximum recommended print length is 100 feet and the minimum image size is 50 cm.

The FP5060 printer is optimized for RA-4 compatible materials, including translucent and transparent display films. In the past, Metrum has recommended Konica papers for its printers, but Fuji, Kodak, and Agfa papers can also be used. Loaded paper cassettes supplied by Metrum contain a small digital data module that transmits to the printer's electronics the characteristics of that particular emulsion bath. Using Metrum supplied software and a special digital test image, users may also perform their own calibrations.

San Marco Imaging Personal Studio-DOCSY 51 Minilab

Incorporating one of the rectangular Metrum Fiber Optic CRT exposing units used in the big Metrum FP5060 and other Metrum digital printers, Italy-based San Marco is introducing a new hybrid optical/digital minilab called the Personal



Studio-DOCSY 51 (Digital Optical Combined System 5 in 1). The machine is built on the platform of San Marco's Personal Lab, which combines C-41 film processing and the ability to enlarge negatives up to 30 x 46 cm (12 x 18 inches) and processing the resulting prints in the self-contained RA-4 processor.

The built-in Metrum CRT imager gives the Personal Studio the added capability of producing prints up to 20 x 30 cm (8 x 12 inches) directly from digital files. The imaging resolution of the digital prints is 300 ppi, and is the same for all print sizes.

The new minilab has the unique ability to make prints that combine a photographic background with digital images. For example, a print that has been optically exposed in the Personal Studio can have text and graphic elements digitally added to the image, in register, with the CRT unit. The combination image is then processed. For catalog and advertisement prints, seasonal greeting cards, business cards, and similar items, the minilab can optically print the original negative, which eliminates the need to scan the negative, and then have type and graphic elements that have been composed in a Mac or PC added to the final image! The minilab can output Photo CD images, and accept digital files from Adobe Photoshop and other image editing programs.

According to G. Visintin of San Marco's marketing department, "The Personal Studio-DOCSY 51 is particularly suitable for those customers that, wanting to keep the advantages of conventional minilab profitability and flexibility, wish to enter into the electronic imaging market with a wide range of services offered (conventional amateur D/P from 3.5 x 3.5 inches up to 12 x 18 inch prints, digital prints from 4 x 6 inches up to 8 x 12 inches, and combined prints —

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photographic backgrounds with electronic images — up to 12 x 18 inches) with a affordable investment."

San Marco is showing a prototype Personal Studio-DOCSY 51 at Photokina, with availability expected in the first half of 1995.

Gretag MasterLab Digital

Gretag Imaging's entry into the hybrid optical/digital minilab market is the new MasterLab Digital, which features a Kodak-supplied CRT digital image exposing module. The high-definition monochrome CRT produces color images by rapid sequential-exposure through red, green, and blue filters.

The MasterLab Digital can make prints from 9 x 13 cm (3.5 x 5 inches) up to 20 x 30 cm (8 x 12 inches); it can expose and process up to 300 prints per hour, depending on the image size. The RA-4 paper processor is an integral part of the unit, and models are available both with and without a C-41 film processor.

Digital imaging functions are controlled by a customer-supplied Power Macintosh computer with built-in CD-ROM drive which runs special Gretag software and can accept input from Photo CDs, CD-ROMs, CD-I disks. The Macintosh can also be used with Adobe Photoshop, Aldus Freehand, and many other digital image editing and illustration programs. Through its SCSI interface, the printer can accept TIFF files from Corel Draw, Photostyler, and a wide variety of other graphics software. The addition of an external film scanner and flatbed scanner gives the operator full digital imaging capabilities.

The user switches between digital and optical modes by swinging the CRT fixed focal length lens assembly into the active position. In the digital mode, the resolution of prints is a function of image size. A 10 x 15 cm (4 x 6 inch) print is imaged at 250 ppi; a 13 x 19 cm (5 x 7.5 inch) print is imaged at about 200 pixels per inch; a 20 x 30 cm (8 x 12 inch) print is imaged at approximately 125 pixels per inch. The 10 cm (4 inch) CRT has a resolution of 1,024 x 1,536 pixels.

Other Digital Printers

In addition to the new large-format digital printers and hybrid optical/digital minilabs we have discussed, there are a number of other digital printers available that can output images on color photographic paper. Except for a number of newly-announced enhancements, all of these printers were introduced to the market prior to this year's Photokina.

Using the same rectangular CRT fiber-optic technology employed in the new Metrum large-format digital printer, Metrum also supplies a smaller format, single CRT printer/processor called the Metrum FotoPrint FP1000. This machine, which is being demonstrated at the Metrum booth, was introduced in 1992 and is now installed at more than 300 sites around the world.

Newly announced at Photokina this year is the Ilfochrome Digital Imager 1100P. The machine combines the digital exposure unit of the Ilford 1100 with a specially-designed Ilfochrome P4 processor that features a continuous chemical replenishment which, according to Ilford, eliminates the need for process control. The compact daylight operating machine can produce prints and overheads on the full range of Ilfochrome Rapid materials. The 1100P operates from standard computer platforms, and can accept input from almost any digital source including Photo CDs, scanned transparencies and prints, and image-editing and illustration programs. The new machine can be seen at Ilford's booth (Hall 8 EG, booth CD11/CD1).

Eastman Kodak has a number of small to medium format digital printing products built around the Kodak CRT Color Printer that is used in the new Gretag Imaging MasterLab Digital hybrid optical/digital minilab described earlier in this article. Kodak's CRT printer technology was first employed in the Kodak CRT Digital Color Printer which is used with the Kodak Photo CD Imaging Workstation 6600 to produce index prints on standard color negative paper for Photo CD orders. The Kodak CRT Digital Color Printer has also found application in a system developed for school and portrait finishers to easily produce photo ID cards, Rolodex cards, sports cards, and other small items that incorporate both photographs and text.

The CRT printer is used as the exposure module in the Kodak Digital PFX System introduced in 1993 that makes prints up to 13 x 18 cm (5 x 7 inches) from slides directly on color negative paper, thus eliminating the need for reversal paper or internegatives.

The new Kodak Digital Index Print System (also called the Kodak PhotoFile Index System) uses the Kodak CRT Digital Color Printer together with a Kodak scanner and Sun computer workstation to produce a compact "contact sheet" on 10 x 15 cm (4 x 6 inch) paper. This furnishes customers with up to 42 reduced-size "imagettes" from a roll of 35mm film on an easy-to-store reference print. For the consumer, the index print greatly simplifies the task of identifying particular color negative frames for reprints and enlargements. The Kodak Digital Index Print System, which accepts standard reels of spliced, notched 35mm color negative film, is targeted for use in large photofinishing labs.

Last, but by no means least, is the Agfa DPS digital slide printing system. Introduced at the beginning of 1990 — a long time ago in the fast-moving world of digital electronics — the CRT printer module of this pioneering piece of equipment was the world's first high-speed digital printer designed to output on standard color negative paper. The machine's ability to digitally modify image contrast and color saturation — while at the same time reversing the positive image of color slides to a negative image suitable for printing on low-cost color negative papers — was a far-reaching innovation for the photography industry.

VIVITAR COMPACT AF CAMERAS

photokina — Vivitar Corporation, a leader in innovative compact 35mm auto focus cameras, has introduced two affordable, compact models that make auto focus photography simpler and more affordable than ever.

Key features of the new Vivitar AF300 and AF400 cameras include auto focus, automatic film transport, and a sophisticated, three-way electronic flash. The cameras also include a red-eye-reduction device for more pleasing people pictures.

The pocketable AF300 and AF400 include a broad array of automated features, yet measure only 4.7 x 2.5 x 1.7 in. (119 x 64 x 42.5mm). They feature a sharp Vivitar 30mm f/4.5 auto focus lens for sharp results from 3.9 ft. to infinity.

Both cameras utilize an advanced, three-way sensor flash that is automatically activated upon entering a low-light situation. The flash turns itself off to conserve batteries when not in use. Other modes include fill-flash for achieving accurate flash exposures outdoors, and a flash default or "museum mode" setting.

The advanced AF400 offers all the features of the AF300, with the addition of a panorama mode that permits dramatic wide-perspective photographs. The panorama mode is switchable in mid-roll, and is facilitated with dotted panorama frame lines in the camera's viewfinder.

InfoGraphix

photokina—InfoGraphix Technologies, Inc. will be joined by DIAZ Gmbh, distributors for Germany, as well as Swiss, Austrian and other European partners at varying times during the show in Köln. New to the international market from InfoGraphix will be Color Copier Connectivity, an announcement of he Infographix Capital Corporation, which offers financing terms for International partners and their customers, and the launch of the latest version and additional features of the popular digital imaging system, RasterServe 3.0.