NEW ENGLAND CHAPTER. On March 12, there was an interesting paper, "Phototypesetters: A Technical History Emphasizing Imaging Systems and Displays" by George W. King, Compugraphic Corporation.

Phototypesetters produce letters, words, line of text, and pages of high quality images on photosensitive paper. This involves character storage, selection of type face and character, size, and position on the page, etc.

The modern phototypesetter is often combined with data entry (keyboard) and editing equipment utilizing several kinds of displays into a photo composing machine. Large modern systems produce text and graphics on the same page.

The optomechanical principles of the major kinds of phototypesetters were described and their performance discussed. Included will be electromechanical/strobe flash and cathode ray tube machines and their related displays. A look into the near future concluded the formal presentation.

MID-ATLANTIC CHAPTER. On March 3, there was a presentation of "High Efficiency Drive Methods for Electroluminescent Displays" by M. Robert Miller, Leader Devices Team, ERADCOM, U.S. Army Electronics Technical Devices Laboratory, Fort Monmouth, N.J. thanks to Bill McLaughlin for prompt reporting. The paper by Miller included an analysis of EL Matrix Display as an array of capacitors, leads to development of drive approach which preserves the capacitive nature of the panel, even when switching devices are applied to multiplex data into the panel. This in turn allows the panel to be operated with a resonant power supply in which the energy used to charge the panel's capacitance, can be recovered for the next cycle. Measurements indicate that significant reductions in power consumption can be realized.

JAPAN CHAPTER. On February 26, there was a meeting at Kikai Shimko Kaikan, Shibakoen, Minato-Ku, Tokyo, attended by 23 SID members and 52 non-members (Editor's Note: Only a few U.S. SID meetings can match these attendance figures.) The following subjects were discussed as reported by Ryuichi Kaneko, Chapter Secretary:

1. Reports on the 1980 Biennial Display Research Conference
1.1 General Review, Mikio Ashikawa, Hitachi Ltd., Tokyo
1.2 Liquid Crystal Displays (1), Koichi Kasahara, Toshiba Corp., Tokyo
1.3 Liquid Crystal Displays (2) and Electrophoretic Displays Shunsuke Kobayashi, Tokyo Univ. of Agriculture & Technology
1.4 Plasma Displays, Kenji Murase, Fujitsu Labs. Ltd., Kobe
1.5 CRT, VFD and PLZT, Sashiro Uemura, Ise Electronics Corp., Ise
1.6 Electroluminescent Displays, Kenji Okamoto, Osaka Univ., Osaka
2. On the Multiplexing of the Phase Changing Type Color LCD Kenkichi Suzuki, Hitachi Ltd., Mobara
3. Analysis of Discharge Shift Mechanisms for Self-Shift Plasma Display Panels Kenji Murase, Fujitsu Labs. Ltd., Kobe
4. Development of a Shadow Mask Type High-Resolution Color Picture Tube for Cockpit Display Koji Nakamura, Mitsubishi Electric Corp., Kyoto.
5. A New Three-Dimensional Television Yuzuru Yanagisawa, Sony Corp., Tokyo
6. Low-Threshold-Voltage Thin-Film AC EL Devices and Their Multi-Coloring Kenji Okamoto, Osaka Univ., Osaka

DELAWARE VALLEY CHAPTER on February 26 had a guided tour of the Naval Air Development Center, Warminster, Pa. Included at the Crew Station Evaluation Facility were demonstrations of voice synthesis, voice recognition, AIDS simulator, video taping at the video and voice distribution center, target and terrain models, AIDS ADM cockpit, and computer-generated imnagery. Also shown were the centrifuge and othr NAVAIR DEVICES facilities including a TV studio, with discussions of flat panel technology and helmet-mounted displays.

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APRIL 1981
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Information Display

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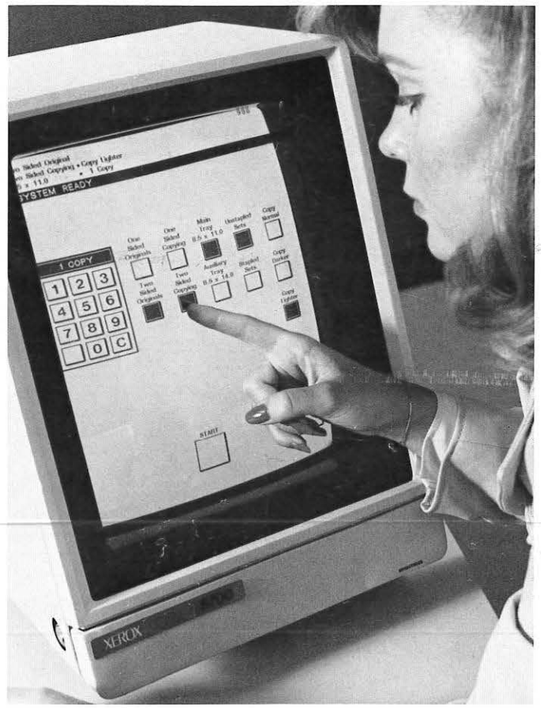
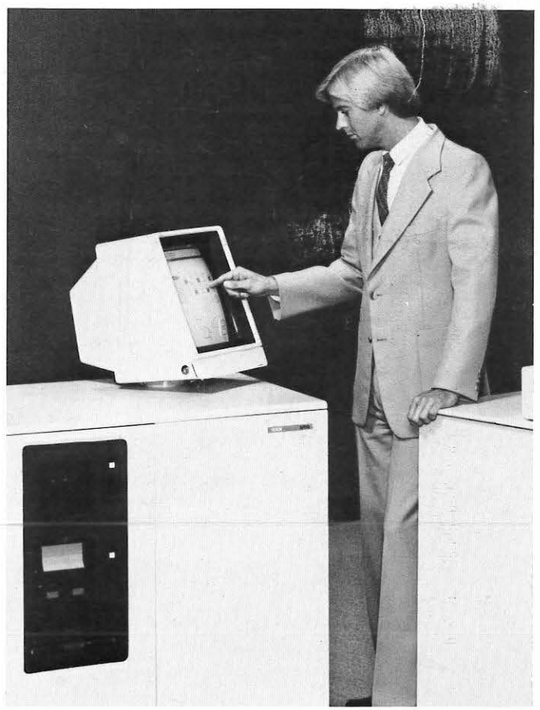
The Official Journal of the Society For Information Display

APRIL 1981



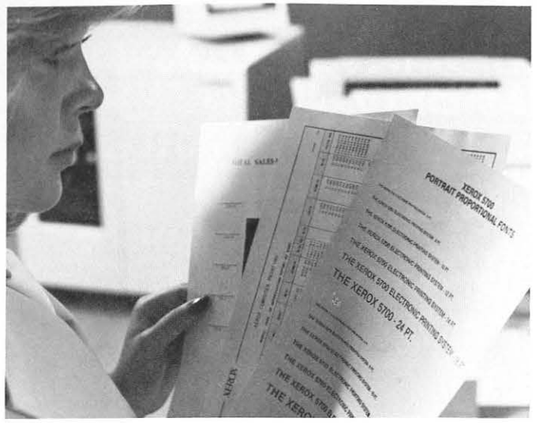
TOUCH CONTROL — Instead of pushing buttons, operator of Xerox 5700 electronic printing system just touches screen to control system. Different displays appear for each kind of office operation—printing for word processors and remote computers, electronic mail or copying. The 5700 uses a laser to create images of both text and business forms, printing them simultaneously.



FRIENDLY OFFICE PRINTER — Xerox 5700 eletronic printing system responds to operator's touch on control screen, and offers help by displaying instructions on screen if requested. System combines several office operations—word processor printing, electronic mail, remote computer printing and direct copying—in a single unit. A page of text can be sent from one 5700 to another across the country in three seconds. The copying feature is available initially only in Los Angeles.

Editor's Note: In the March issue of Information Display SID Member Bob Lester of Static Systems Corporation (SSC) told us via a 2-page advertisement that Xerox doesn't have the most advanced printing system — his small company does. Also we've given SSC editorial coverage, as your faithful readers know, in two 1979 issues as well as March 1980. So much for David. Now Wayne Gorski of Xerox, Los Angeles, has been bugging us (in a nice way) in behalf of Goliath. You can read more about the Xerox 5700 printing system on pages 3 and 4.

FRONT COVER MATERIAL WELCOMED: Every month **Information Display** usually features one or more active members of SID and the products with which they are most closely associated. Please send a glossy print and appropriate captions so that you, too, can be on our front cover. Send your material to Ted Lucas, Editor, P.O. Box 852, Cedar Glen, CA 92321, or to our National Office Manager, June Friend, for Information Display, 654 North Sepulveda Blvd., Los Angeles, CA 90049. Next deadline for material from you is May 10. If you miss that, try for the June issue, NOTE: We also welcome feature articles on interesting projects.



FAST AND VERSATILE — Xerox 570 electronic printing system offers virtually unlimited type styles, in sizes from 6 to 24 point. The 5700 can print up to 43 pages per minute and create business forms, signatures and company logos. Combination of computer and laser technology produces high quality xerographic printing.

The Xerox 5700 Electronic Printing System

Almost every office operation—word processing, information processing, or electronic mail—must provide printed output. Thus it has been standard practice to equip each device with its own printing unit. This has led to the development of various kinds of small printers with the single common characteristic of relatively low cost, since so many must be used. Some sacrifice speed for quality, some quality for speed. None of them offers the range of type sizes typically used in letterpress or offset printing. And none is really fast, in comparison to computer printers.

The Xerox 5700 electronic printing system offers a different approach. Instead of a printer for each device, it will be possible for many office machines to share one printer. The whole range of type sizes and fonts typical of finished documents is available, without typesetting. And the 5700 can print a whole page in the time it takes a typical small printer to print a single sentence.

In general, the new 5700 has the same imaging characteristics as the Xerox 9700 electronic printing system, a high speed computer printer. The 5700 also uses a laser scanner to produce a pattern of very small dots, under the control of an internal computer. The resolution is also the same—90,000 dots per square inch, sufficient to provide quality comparable to offset printing. Since each of the millions of dots that can be reproduced on a page is controlled—either placed on the page or not—it makes no difference what the programmed image is. It can be a box or logo as well as a numeric or alphabetic character. For the same reason, any font or size of type that is needed for an application can easily be made available.

The 5700 should be considered as a general-purpose office printer. It can serve as a word processor printer, electronic mail unit, remote computer printer, standard copier or any combination of these. (The copier option will be available initially only in Los Angeles.) It is assumed that few customers will need all the features of the 5700, at least at the time of installation. Therefore it has been designed to allow customer selection of input, output, and other facilities according to application. Additions to the basic system are priced separately as options.

The characteristics of the 5700 are described here according to function, following a summary of the basic system.

Basic System

A basic 5700 electronic printing system is housed in two separate units. One contains the digital processor, user disk storage, system diskette station, and controller for the touch control screen, which is mounted on top of the unit. The other unit contains the imaging, printing, and output devices. These are the components common to all the configurations formed by adding the options mentioned below. The customer has a choice of finishing stations. The first provides two output trays, one for stacking output offset by job and one for stapling. The other provides a large-capacity output stacker with job offsetting.

The touch control screen provided with the basic system is a unique device that gives the operator control over all system operations and also supplies diagnostic information. It replaces the usual control panel. Instead of mechanical buttons to push, it displays a sequence of options in the form of "pictures" of buttons, and the operator simply touches the screen to initiate an operation. The screen is programmed for each of the possible configurations of the 5700. There is also a "help" button displayed, which produces a complete explanation for the operator if wanted.

Functions Available

For word processor printing, the user can choose up to three of four available types of magnetic media stations. One of these is the standard diskette station. These magnetic media stations, which allow insertion of the media for reading and printing by the 5700, are available for the Xerox 800 electronic typing system, 850 display typing system, and IBM word processing systems. The user can also choose an interface for communicating word processors.

To add electronic mail, a user can choose the 5700-to-5700 communications option. Another communications option is necessary to printing from remote computers. This option also allows communications with the IBM 6670, Office System 6, and communicating word processors. A third communications option includes both facilities.

The user can also specify separately the forms compiler option, which allows the 5700 to create, store and print electronic forms.

The copier function is also an option. It includes a recirculating document handler that provides automatic copying from originals printed on both sides and allows interleaving of graphics with digital information.

Two Samples of Printing By The Xerox 5700 Electronic Printing System

Type samples. This shows the range of type sizes available on the 5700, as well as examples of logos and signatures.

Xerox Remote Computer Printing. This sample of computer printing at a remote site by communications shows horizontal or "landscape" orientation of data on the page. The company logo, lines and boxes were produced electronically by the 5700.

EXAMPLE OF A
XEROX 5700
PROPORTIONAL FONT

-REGULAR FACE -

THE XEROX 5700 ELECTRONIC PRINTING SYSTEM - 8 PT.

THE XEROX 5700 ELECTRONIC PRINTING SYSTEM - 10 PT.

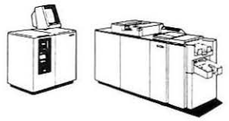
THE XEROX 5700 ELECTRONIC PRINTING SYSTEM - 12 PT.

THE XEROX 5700 ELECTRONIC PRINTING SYSTEM - 14 PT.

THE XEROX 5700 ELECTRONIC PRINTING - 18 PT.

THE XEROX 5700 ELECTRONIC - 24 PT.

EXAMPLE OF A
XEROX 5700
LOGO and SIGNATURE



XEROX

XEROX REMOTE COMPUTER PRINTING

RUN 20:46 SEPT 24, 1980

AUGUST 1980 RP DEPRECIATION REPORT BY EQBC

EA	SITE	BC	SITE NO	M	COST	M/D	CUM/D	S/D	SD	S/D	COST	CUM/D	M/D	PSTD NO
500005479	SERVICE SUPPORT TRAINING	2	9788101	2	9798.49	123.56	5453.22	7711	51		0.00	0.00	0.00	77952576
500005510	SERVICE SUPPORT TRAINING	2	9788101	2	9798.49	130.69	5202.58	7801	51		0.00	0.00	0.00	77952576
500005532	SERVICE SUPPORT TRAINING	2	9788101	2	0.00	0.00	0.00	7802	51		0.00	0.00	0.00	77952576
500005550	MANUFACTURING	2	9051004	2	9798.37	154.63	4360.48	7807	20		0.00	0.00	0.00	77952576
500005551	MANUFACTURING	2	9051004	2	9798.37	154.63	4360.48	7807	20		0.00	0.00	0.00	77952576
500005556	SERVICE SUPPORT/CHICAGO	2	9788104	2	9798.37	159.03	4205.85	7808	20		0.00	0.00	0.00	77952576
500005563	SERVICE SUPPORT/NEW YORK	2	9788104	2	9798.37	163.63	4046.82	7809	20		0.00	0.00	0.00	77952576
500005150	SERVICE SUPPORT/DALLAS	2	9788104	2	9798.37	168.20	3818.83	7810	20		0.00	0.00	0.00	77952576
500005581	SERVICE SUPPORT/LOS ANGELES	2	9788104	2	9798.37	168.20	3883.27	7810	10		0.00	0.00	0.00	77952576
500005584	SERVICE SUPPORT/WASHINGTON	2	9788104	2	9798.37	182.97	3364.18	7901	51		0.00	0.00	0.00	77952576
SUBTOTAL					88185.57	1405.54	38695.71				0.00	0.00	0.00	
810000101	SERVICE SUPPORT TRAINING	2	9788101	2	1521.42	145.29	6412.09	7711	51		0.00	0.00	0.00	77952576
810000102	XEROX	2	9497001	2	11521.42	153.67	6117.38	7801	51		0.00	0.00	0.00	77952576
810000103	SERVICE SUPPORT TRAINING	2	9788101	2	0.00	0.00	0.00	7802	51		0.00	0.00	0.00	77952576
810001003	PRODUCT DEVELOPMENT	2	9396101	2	0.00	0.00	0.00	7807	20		0.00	0.00	0.00	77952576
810001004	MANUFACTURING	2	9501004	2	11521.42	181.83	5127.28	7807	20		2205.10	981.31	34.80	77952576
810001005	MANUFACTURING	2	9501004	2	11521.42	181.83	5127.28	7807	20	7807	2205.10	981.31	34.80	77952576
810001010	SERVICE SUPPORT/CHICAGO	2	9788104	2	11521.42	181.99	4945.45	7808	20	7808	2205.10	946.51	35.79	77952576
810001013	CHICAGO DEMO	2	9379715	2	11521.42	192.31	4758.46	7809	20	7809	2205.10	910.72	36.18	77952576
810001034	SERVICE SUPPORT/NEW YORK	2	9779715	2	11521.42	192.31	4758.46	7809	20	7809	2205.10	946.51	38.18	77952576
810001034	SERVICE SUPPORT/DALLAS	2	9788104	2	10995.19	188.75	4357.59	7810	20	7809	2104.39	834.00	36.12	77952576
810001035	SERVICE SUPPORT/LOS ANGELES	2	9788104	2	11521.42	197.79	4466.15	7810	20	7810	2205.10	873.92	37.86	77952576
810001040	SERVICE SUPPORT/WASHINGTON	2	9788104	2	11521.42	204.40	4368.36	7811	20	7810	2205.10	836.06	38.93	77952576
810001054	PRODUCT SUPPORT	2	9787101	2	11521.42	209.19	4164.96	7812	51	7812	2205.10	797.13	40.03	77952576
SUBTOTAL					116209.39	2029.36	54603.46				19745.19	8107.05	332.69	
811000101	SERVICE SUPPORT TRAINING	2	9788101	2	24261.18	305.94	3502.24	7711	51		0.00	0.00	0.00	77952576
811000102	XEROX	2	9497001	2	24261.18	323.59	2881.66	7801	51		0.00	0.00	0.00	77952576
811000103	SERVICE SUPPORT TRAINING	2	9788101	2	0.00	0.00	0.00	7802	51	7802	0.00	0.00	0.00	77952576
811001003	PRODUCT DEVELOPMENT	2	9296101	2	0.00	0.00	0.00	7807	20	7807	0.00	0.00	0.00	77952576
811001004	MANUFACTURING	2	9051004	2	24261.18	382.88	10796.75	7807	20	7807	4643.39	2066.40	73.27	77952576
811001005	MANUFACTURING	2	9051004	2	24261.18	382.88	10796.75	7807	20	7807	4643.39	2066.40	73.27	77952576
811001010	SERVICE SUPPORT/CHICAGO	2	9788104	2	24261.18	393.76	10413.87	7808	20	7808	4643.39	1993.13	75.37	77952576
811001013	CHICAGO DEMO	2	9379715	2	24261.18	404.96	10020.11	7809	20	7809	4643.39	1917.76	77.50	77952576
811001017	SERVICE SUPPORT/NEW YORK	2	9788104	2	24261.18	404.96	10020.11	7809	20	7809	4643.39	1917.76	77.50	77952576
811001034	SERVICE SUPPORT/DALLAS	2	9788104	2	24261.18	416.48	9615.15	7810	20	7810	4363.39	1840.26	79.71	77952576
811001035	SERVICE SUPPORT/LOS ANGELES	2	9788104	2	24216.18	416.48	9615.15	7810	61	7810	4363.39	1840.26	79.71	77952576
811001035	SERVICE SUPPORT/LOS ANGELES	2	9788104	2	24216.18	416.48	9618.15	7810	20	7810	4363.39	1840.26	79.71	77952576
811001040	SERVICE SUPPORT/WASHINGTON	2	9788104	2	24216.18	428.32	9198.67	7811	20	7811	4643.39	1760.55	81.98	77952576
811001054	PRODUCT SUPPORT	2	9787101	2	24216.18	440.50	8770.35	7812	51	7812	4643.39	1678.57	84.31	77952576
SUBTOTAL					290954.16	4717.23	105248.96				45593.90	18921.35	782.33	

GREETINGS TO NEW SID MEMBERS!

Each month you'll find a roster of new SID Members, listed by Chapters with the Chapters in alphabetical order. If your name — or a friend's — should have been listed and was inadvertently omitted, please let June Friend or your Editor know immediately. We'll make amends in the next issue. See the front cover for your choice of addresses to which to send vital data.

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SID CALENDAR
MARCH TO SEPTEMBER 1981

1981		
April	1	Proceedings, Volume 22, No. 2, 1981, Mailed
	6	National Ballot Return Deadline
	20	Quartlery Mailed
	20	Executive Committee Meeting
	27	National Board Meeting, New York, NY
April	27	ID 1981 International Symposium
May	1	Grand Hyatt Hotel, New York, NY
July	1	Proceedings, Volume 22, No. 3, 1981, Mailed
	20	Quartlery Chapter Rebates Mailed
September	16-18	Eurodisplay 81 — The First European Display Research Conference, Munich, Germany

OTHER EVENTS

1981		
May	4-7	National Computer Conference, Chicago, IL
	4-7	Personal Computing Festival, Chicago, IL
June	17-19	International Conference on Optical Radiation Measurements of Fluorescent and Retroflective Materials, Minneapolis, MN
	18	20th Annual ACM Symposium (NBS and ACM), College Park, MD
	24-26	Computer Industry Trade Expo, Atlantic City, NJ
July	26-31	SPSE International Symposium on Fundamentals of Latent Image Formation and Photosensitive Interface, Lake Placid, NY
August	17-22	5th International Congress of Cybernetics and Systems, Mexico City
	24-28	SPIE Annual International Technical Symposium & Exhibit, San Diego, CA
	26-29	National Small Computer Show, New York, NY
November	1-4	DPMA's 30th International Conference & Business Exposition, San Francisco, CA

New US Enterprise Launched To Market British Videotex and Teletext

In a recent announcement, Dr. Dill Faulkes, president of Logica Inc., outlined a major joint initiative with British Telecom to market British teletext and videotex systems in the United States. The venture, known as BVT (British Videotex and Teletext), will promote the technology and standards of UK videotex and teletext services.

Logica is a leading computing and communications company with offices throughout the world including a rapidly growing U.S. subsidiary based in New York. British Telecome, formerly the telecommunications arm of the British Post Office, operates Britain's telephone system.

"The BVT systems are operational now. We believe they will offer a substantial advantage over our international competitors, whose systems are still primarily experimental," says Dr. Faulkes. He also points out that BVT will be marketing a wide range of systems, and will make information on equipment, software, and operational knowhow available for the teletext and videotex industry.

A British industry submission to the US Federal Communications Commission (FCC) on teletext standards for 525 and 625 line transmissions is imminent. Multilevel standards have been defined so that presently conceived and future technology will be encompassed, in addition to the system which is already operating in seven countries with almost 250,000 teletext receivers in use.

On the videotex side, BVT will market in the U.S. both the hardware and the software for Prestel systems to telephone, cable, and broadcasting companies, and to industrial/and commercial organizations which operate their own videotex systems. Prestel is the videotex system, developed by British Telecom, now operating as a national service in the U.K.

On the teletext side, BVT will market a range of television-related systems developed by Logica and the BBC. The products include:

- "Context" teletext systems, which allow the broadcaster to transmit "pages" of up-to-the-minute news, magazine, and advertising information which television viewers can call onto their screens at any time in place of the regular program. Context is based on the Ceefax system successfully operated by the BBC.
- "Flair", an electronic paintbrush tool for the graphic designer which allows him to create artwork and graphics directly on the television screen with an artistic finish similar to that produced with conventional materials on canvas.
- "Icon", an intelligent, interactive graphics system for the on-air creation of high resolution text and diagrams, with a comprehensive range of real-time facilities.

In addition to its marketing activities, BVT will promote the relevant videotex and teletext technology and standards in the U.S. and act as a conduit between American business inquirers and other UK manufacturers of related equipment. A UK industry contact group of manufacturers and other interested organizations is to be formed to work with BVT.

A feature of the UK systems for videotex and teletext is that a modified television set can be used as the terminal for both.

Of the 16 countries throughout the world now operating videotex services, seven (United Kingdom, West Germany, Hong Kong, Switzerland, Austria, the Netherlands, and Italy) use Prestel hardware and software, and an additional five are using the terminal standards applicable to Prestel. A market trial of the Prestel international business information service has been successfully conducted in seven countries. A full commercial service will be launched in 1981.

British teletext technology is said to be similarly well placed in the international market place. According to British sources, most Western European countries have adopted or plan to adopt the UK standard and this trend is spreading. In designing its Context system for the U.S. market, Logica has capitalized on six years of operational experience; the system recently installed by Logica for ORF, Austrian television in Vienna, is reported to be the most up-to-date one in operation anywhere in the world.

Richard Hooper, director of British Telecom's Prestel, says: "The BVT venture represents a meeting point of two separate lines of television and computing technology. They transform the television set into a display terminal with a new role to paly in the home and in the office.

"Teletext allows the viewer to use his television as a newspaper, a shopping guide or an educational tool. Videotex turns the set into an interactive business terminal, and a cost-effective electronic publishing facility. Private customized versions may be used by business organizations as a flexible filing system".

DeAnza Introduces High Performance Large Memory, Image Array Processor

Claiming state-of-the-art performance for a variety of remote sensing, non-destructive testing and three-dimensional computer graphics applications, DeAnza Systems of San Jose, CA, has introduced the IP8500 image array processor.

According to company officials, the IP8500 is compatible with the DEC PDP-11 or VAX systems. Up to twenty 512x512x8 bit image memories (each with integer zoom, pan and independent intensity transformation tables) enhance the IP8500's capabilities for advanced image and display system applications where high resolution color, multi-image mono or pseudo color displays are required.

The IP8500 is ideal for such applications as remote sensing, LANDSAT, aerial photography infra-red, three-dimensional computer graphics, process control synthesis, multi-image comparison and feature extraction and movie-mode animation.

The full IP8500 system has the capacity to store a 1024x1024x32 bit image with graphics and alphanumerics on a 512x512x32 bit image window. Larger, more flexible memories of the IP8500 also allow up to twenty 512x512x8 bit memory planes. These can be reorganized under software control into any shape that can be built from 16, 512x512x8 bit blocks. For example, a four-channel (true color and graphics) 1024x1024 image or a 2048x2048 monochrome image may be stored. Intensity, zoom and scroll on any configuration of the logical image space are fully supported.

The system architecture provides modularity so that a small configuration may initially be purchased and later expanded without penalty of down time, to a full configuration.

Interactive options include a dual programmable matrix (64x64) cursor for each output channel and joystick, lightpen or trackball. An independent alphanumeric overlay generator capable of displaying 80 characters by 25 lines is initially available, with a programmable font character generator available soon as an option.

Typesetting by Telephone Said To Cut Costs 40%

Businesses using a small word processor or a sophisticated computer system now can take advantage of a major cost-cutting, high-quality printed communication breakthrough...telephone typesetting.

Referred to as Data Communications Interface (DCI) by The Spittin' Image, Inc., an innovative typesetting firm adjoining Mississippi's capitol city in the suburb of Clinton, the system enables a word processor or computer to be used as if it were an expensive, sophisticated phototypesetter.

"Chances are that companies using the word processor to insure that typed, finished copy is letter perfect give this copy to someone, somewhere to be typeset for printing," Spittin' Image president Robert D. Gilmore says. "Isn't it a waste to require all that copy to be rekeyboarded just so it merely can be printed in a better-looking format than is available on your word processor or computer?"

With Data Communications Interface, the word processor uses its communications ability to send already letter-perfect copy to The Spittin' Image by telephone. SI has the ability to interpret the word processor's complex electronic coding, enabling the client to transmit to The Spittin' Image over a simple telephone in the office. Without retyping the copy, SI can typeset it to meet any company's needs...in any of 75 type styles produced in 228 different sizes from five to 120 points.

DCI is extremely fast. It can set approximately 71 (6 x 9) pages of final 10 point copy in just 17 minutes at 2400 Baud.

"The bottom line, however," according to Gilmore, "is that Data Communications Interface can cut company typesetting costs up to 40 percent while providing clear typeset copy with all lines, rules, and boxes electronically generated to insure the highest quality available anywhere."

A system similar to DCI is available for printers,

Clients dump copy from their computers or word processors by telephone to one of these Data Communications Interfaces at The Spittin' Image, Inc. The copy is then output by The Spittin' Image digitized typesetter at 650 lines per minute in the size, style, and format desired and shipped via Federal Express or other carrier, camera ready for printing anywhere in the U.S.A.

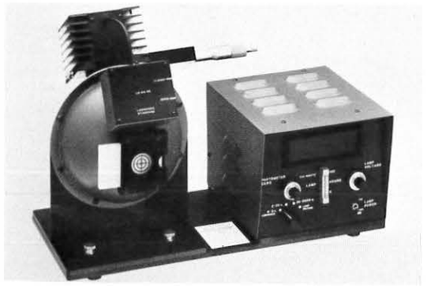
advertising agencies and other firms with extensive typesetting needs. Called Simplified Satellite Keyboarding, this approach involves an inexpensive, simplified keyboard terminal that virtually any secretary can operate. Installed at the printing firm or advertising agency, it communicates with The Spittin' Image by telephone and a telecopier that sends rough layouts and forms showing how the copy should be arranged. SI then processes the keystrokes (the transmissions sent to SI from the printer's or agency's keyboard terminal), providing the client with camera-ready copy for the camera plate system or darkroom.

"Whether the telephone is in Houston, Honolulu or Hazelhurst,' Gilmore observes, "telephone typesetting can save companies thousands of dollars. When you can offer the combination of extremely high quality, speed and what we believe will be a huge cost reduction in typesetting, without the client having to make a major investment, you have every reason to expect a big increase in business. We're well prepared to meet the anticipated demand from coast to coast."

New Wide Range Luminance Standard From Photo Research Meets MIL Specifications

Photo Research, Burbank, CA a Division of Killmorgen Corporation, has introduced a new wide range luminance standard that meets all MIL-P-7788-E specifications according to Ed Goff, manager of new product planning and development.

Called the LS-65 luminance standard, this fully integrated photometric calibration standard of luminance and color temperature features a wide range of zero to 350 fl, or zero to 1000 cd/m2. Luminance is continuously adjustable from 1800 to 3000 Kelvins for color temperature. "The LS—65 meets the requirements of MIL-P—7788-E as a laboratory standard for color and luminance," says Goff.



Another outstanding feature is the high accuracy internal monitor, which displays the actual source luminance. Accuracy is 2% relative to NBS, for 100 hours burning time, or one year. Luminance uniformity across the aperture is 0.2% typical. Stability is 0.1% or 0.01 fl per eight hours at 23°C. Chromacticity coordinates are certified at 2856, 2750, 2500, 2366, 2250, and 2000 Kelvins.

The LS-65 consists of a luminance standard, a self-contained photometric calibration system with a 4½-digit display for luminance level and lamp voltage, and an internal power supply for the lamp source. The luminance standard includes: a six-inch integrating sphere; a quartz tungsten-halogen lamp; a lamp housing; a micrometer-controlled attenuator assembly; and, an exit port filter holder for 2" x 2" filters.

The calibration system includes: a photometer with photopically corrected silicon detector, a patented (U.S. Patent #4,090,071) photo-detector thermal stabilization system; and, a 4½-digit display for luminance or lamp voltage. The lamp power supply is variable from 2.5 to 11 volts DC, and has a front panel locking control on the voltage adjustment. An elapsed time indicator (0-100 hours) displays cumulative lamp burning time.

"In addition to being the most reliable field standard currently available," declares Goff, "the LS—65 does not require special technical skills to provide photometer calibrations. Also, it can be easily carried to the production area for on-the-spot calibrations."

The LS—65 is available in a compact, 10" x 16" x 11.5" (25.4 cm x 40.6 cm x 29.2 cm) package, and weighs 17 pounds (8 kg).

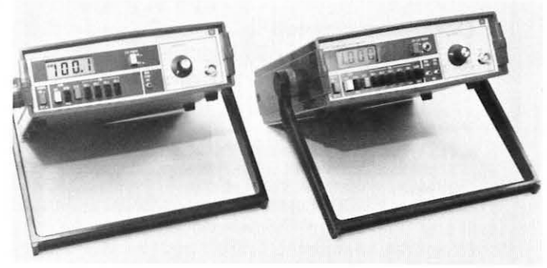
Two New Optometers Introduced By United Detector Technology

United Detector Technology, Culver City, CA, recently announced two new electro-optic instruments, the UDT 161 optometer and the UDT S-350 linear/log optometer.

The UDT 161 optometer is a field and benchtop radiometer/photometer said to incorporate many unique features in a full range, low cost digital unit. A built-in "tracking auto-zero" aids in power and energy measurements, and a "cal verification" ensures accurate operation at a push of a button, the maker states.

The UDT 161 provides a measurement range of 200 to 2000nm and a sensitivity of 10^{-11}W/ 10^{-13}A/ 10^{-3}FC. The unit features a uniprobe sensor with radiometric/photometric filters and cosine corrected diffuser. A back lit LCD display provides good visibility.

The UDT 161 has multiple calibration channels and analog output as well as voltage comparator output. Calibrated traceable to NBS, the instrument comes with a carrying case, battery charger, and manual.



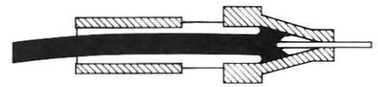
Two new optometers introdued by united detector technology.

The UDT S-350 is a linear/log displaying optometer designed to accommodate both fiber optics and radiometric/photometric measurements in a single portable instrument. It provides the flexibility to accommodate the full range of optic measurments with no compromises or continuous conversions from linear to log.

EPO-TEK® 353ND Epoxy Bonds Optical Fiber Into Fiber Optic Connectors

Designed for securing fiber optic cable into plastic and metal connectors, EPO-TEK 353ND epoxy is available from Epoxy Technology, Inc., Billerica, MA.

EPO-TEK 353ND was also developed for use in bonding of fiber optic bundles into ferrules; the amber color of the epoxy is a visual indicator of the "wicking" action along the fibers. When cured, the epoxy turns dark red; a visual aid to indicate that the epoxy is fully cured. EPO-TEK 353ND has been subjected to autoclaving conditions without degradation of its physical characteristics, thereby it is recommended for medical instrument applications.



EPO-TEK 353ND exhibits a Tg of 125°C, a refractive index of 1.560, pot life of 4 hours and has excellent resistance to solvents, chemicals and moisture. Epoxy can be applied by brush, dipping, pouring or commercial dispensing equipment. Curing can be accomplished in 1 minute at 150°C, or at 60°C in 1.5 hours — can also be cured with a heat gun in 4-5 minutes. Operating temperature range is —50 to 200°C continues with a maximum of 400°C for several hours.

Computer-Stored Pictures Permit Instant Remote Recall In Adda Graphic Storage

A new digital graphic storage and retrieval system that will store from 20 to 3,000 color or black-and-white stills, and retrieve any one within 0.5 second on-site or from a remote location, has been introduced by the ADDA Corporation, Campbell, CA.

"This system, called the ESP-50 (Electronic Still Processor), is the first computerized still storage product to be marketed for industrial, medical, educational, and government applications," says William B. Hendershot III, ADDA president. "The ESP-50 is similar to the graphic storage systems our company has marketed for over three years and placed in use in broadcast installations throughout the country, including the major television networks," he said.

According to Hendershop, ADDA Corporation has been a pioneer in this technology, and a new product line for non-broadcast applications is a natural extension of the technology.

The first installation outside of the broadcast field has already been completed and is currently in use by the U.S. Navy. It was purchased by the Navy's Electronics Systems Command, Patuxent River, Maryland. The installation has 16 remote locations, each with an ADDA ESP still storage unit panel permitting instant simultaneous recall of up to 400 digitally stored pictures on computer disk packs.

Pictures can be created and stored from any NTSC television source. Potential applications for the digital storage and recall of pictures are unlimited, Hendershot points out. Medical personnel in Los Angeles, for instance, can recall x-ray or other medical graphics from a central radiographic file in Washington, D.C.

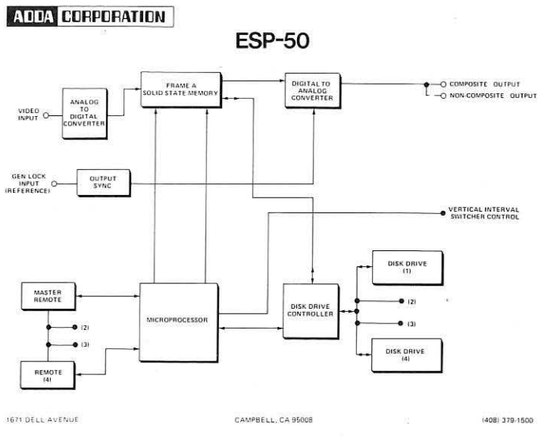
Real estate agencies would be able to display digitally stored pictures from anywhere in the country. A regional office of a major corporation can request slides of an installation process from the main office. The Sacramento, CA, Police Department could request mug shots from the New York City Police Department.

Remote retrieval in the ADDA system is accomplished through the transmission of digital signals over standard common carrier frequencies or via satellite.

To accomplish the storage, manipulation, and retrieval of high quality video images, the ADDA ESP system consists of one or more remote control panels, a solid-state video memory, and one or more disk drives. The remote control panel is the means by which the operator controls the system. The digital processor contains a digital video memory and a microprocessor that controls system operation. The video processor contains the video and color processing circuitry.

Graphics are added to the disk packs by using a standard television camera, a graphics production table, or a television slide film chain system. The ESP-50 can be operated with ADDA's library control system, which has the capacity to record the description and location of as many as 100,000 catalog entries in the system, permitting review of a listing of the available pictures before recalling them. The ESP system itself can also be operated from the library control system.

"ADDA's capability of storing, retrieving, and transmitting digital graphic stills is unmatched by any other company," Hendershot says, "and we anticipate that our growth into the non-broadcast fields will extend this reach."



Unlimited digital graphic storage and retrieval — A new digital graphic storagve retrieval system from the ADDA Corporation is designed for use in industrial, educational and government applications. A simple system will store up to 3,000 color graphics and recall them in less than half a second. Called the ESP-50, the system is similar to the graphic storage systems the company has placed in broadcast installations throughout the country.

Solid State Video Camera Withstands Harsh Factory Environments

A rugged computer-compatible, solid state video camera for use in on-line video inspection and analysis systems has recently been introduced by Hamamatsu Sytems, Inc., Waltham, MA.

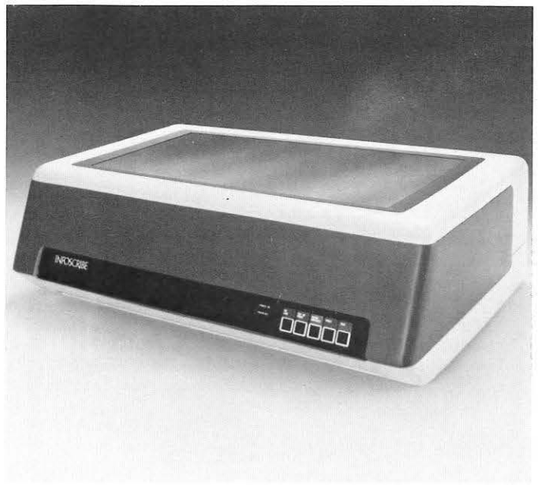
The Hamamatsu C1000-35 solid state video camera is said to resist shock, vibration, humidity up to 90%, temperatures from 0 to +40°C, and to be unaffected by strong magnetic fields. Like other Hamamatsu C1000 Series Cameras, it can transfer video information directly into a wide variety of computers using optional plug-compatible interfaces.

This new video camera provides 400 to 1100 nm spectral response, and a high grade 320 (X) x 244 (Y) pixel image said to be free from distortion, lag, burn-in, and microphonics. Use of a MOS imaging device permits a small, light camera head only 2"W x 2.8"H x 6.3"L, weighing 1.1 lb. The control unit may be mounted in a standard rack.

Infroscribe Provides Serial Matrix Printer Line

The first in a series of new serial matrix impact printers has been announced by Infoscribe, Inc., Santa Ana, CA.

Designated the Infoscribe 500, this computer printer is aimed at designers of small business and minicomputer systems who require up to 150 cps print speed, and up to 136 column output, at a very competitive price according to the maker.



"Designed around the concept of user convenience, this printer has only a few, easily understood external controls, and can be successfully operated with a minimum of training," says Carl J. Peterson of Infoscribe.

Paper loading for the printer is said to be very simple, and up to six copies (original plus five carbons) can be produced in either continuous roll or fan-fold paper. Use of a cartridge ribbon also eliminates tedious threading and ink-smudged fingers.

"The Infoscribe 500 is extremely quiet in operation", Peterson states. "Paper feeds in either the front or bottom of the printer, and exits at the top rear, further reducing forward noise transmission. These features make the printer well suited to use in office environments."

The Infoscribe 500 is said to offer unlimited duty cycle with exceptional reliability. The adjustable form-feed tractors can handle paper widths from 1.5 to 16 inches. A nine-wire ballistic printhead forms a 9 x 9 dot matrix capable of producing a wide range of characters under software control.

The standard ACSII 96-character set is stored in the printer memory. An alternate character set may also be stored there, and selected on a line-by-line basis. Additional character sets may be used by simply exchanging memory chips.

Printing format can be selected for 10, 13.6, and 16.5 cpi, and either six or eight lines per inch. At 10 cpi, up to 136 characters can be printed per line. Subscripts or superscripts may be printed at any character position.

Double-wide printing (or reducing the selected cpi to half) may be performed in any selected pitch. These double-wide characters may start or stop any number of times within a line. Double-density printing can be produced at 10 cpi.

An 11-channel electronic vertical format unit (VHU) permits varying form length up to 132 lines per form, and allows vertical tabbing within a form. Forms length may be manually selected for either an 11- or 12-inch form.

The Infoscribe 500 incorporates a microprocessor to control character recognition, print-head positioning, printing, and paper movement. Bidirectional printing and lobic seeking are employed, increasing throughput when less than a full line is printed. To enhance application flexibility, the host CPU can be used for on-line control of forms selection, print format, and character set selection.

Simplified maintenance is said to be anothr benefit of the Infoscribe 500. The total number of parts is small, and there are very few moving parts. When service is required the cover lifts off, affording access to all parts of the printer mechanism. The printhead can be readily removed by taking out two screws and unplugging a connector.

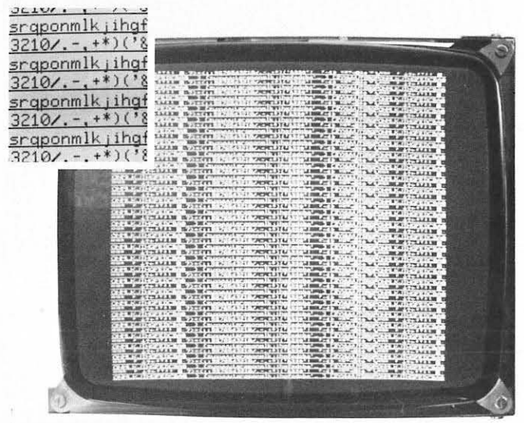
Power and control functions are combined on a single PC board. Either serial or parallel interfacing may be used, as determined by a field-interchangeable personality board.

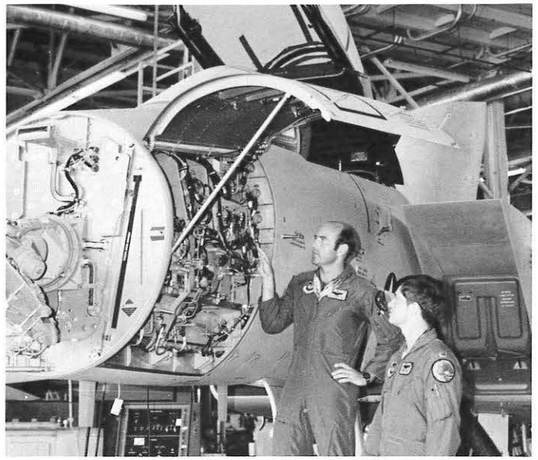
132 column monitor added by Moniterm Corporation

A full 132 x 66 character computer page can be displayed on a new CRT display module for the computer and word processing industry. The VR-800L15 is now available in OEM quantities from Moniterm Corporation, Wayzata, MN. The low cost module displays an 800 x 1200 non-interlaced raster using a 15" CRT in the "landscape" position.

Designed for use in computer and word processing systems, the VR-800L15 can be used to generate 66 lines of upper and lower case alphanumeric characters with 132 characters to the line. The entire screen is refreshed at 60 frames per second, producing a totally flicker-free image.

The 50 KHZ scan rate, coupled with a video bandwidth of 65 MHZ, produces clearly defined pixels 8 MILS in size. The standard phosphor is P-104. (other phosphors also available).





Enhanced Eagle Eyes — U.S. Air Force Captains Howard L. Pope, Jr., left, and Fred Bell of the 36th Tactical Fighter Wing, Bitburg, Germany, examine the enhanced AN/APG-63 radar in a new F-15C Eagle at McDonnell Douglas Corporation in St. Louis. The 36th TFW and the 32nd Tactical Squadron, Camp New Amsterdam, the Netherlands, are the first to receive F-15Cs with radars incorporating a Programmable Signal Processor (PSP). Developed by the Radar Systems Group of the Hughes Aircraft Company, this fifth-generation PSP provides the F-15C with the ability to change or add radar modes through software reprogramming rather than extensive hardware retrofit. F-15Cs deployed prior to full-scale production of the PSP also are scheduled to receive the new equipment. Hughes developed and builds the NA/APG-63 radar under contract to McDonnell Douglas.

Crodata of Walthem, MA, is making a new battery powered M1600L portable data logger which records in ANSI format using convenient magnetic tape cartridge. Data can be replayed on site for monitoring or calibration built-in LCD display, or directly into a computer for analysis.

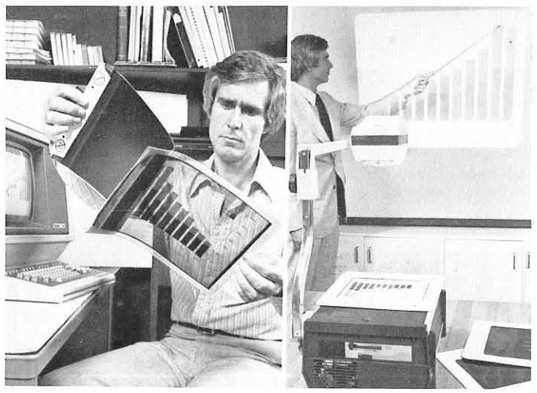
Joint Efforts By Hazeltine And Imlac Subsidiary To Produce Low-Cost Graphic Terminals

Sal J. Nuzzo, president and CEO of Hazeltine Corporation Greenlawn, NY, and Bruce S. Backe, president of IMLAC Corporation, a Hazeltine subsidiary in Needham, MA, recently, announced that the new IMLAC SERIES II interactive graphic terminals will be manufactured by Hazeltine at the company's automated production facilities in Greenlawn, New York.

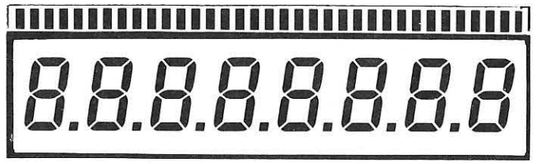
Developed and marketed by IMLAC, a leader in interactive, refreshed vector graphics, the new microprocessor-based terminals will be manufactured by Hazeltine to provide high volume availability of these systems for OEM and other large volume end users.

The Series II terminals are used with CAD/CAM and other engineering and scientific applications to provide what is said to be dynamic, easy interaction of the user with his work, virtually in pictorial form.

The IMLAC Series II terminals, which include builtin terminal firmware and provide a host software package, let users interact with such devices as a light pen, tablet, or the system's own keyboard. The Series II terminal is described as designed for use anywhere in the world and is implemented on (supported by) such broad use CAD/CAM software systems as the AD-2000, marketed by Manufacturing and Consulting Services, Inc. of Santa Ana, California.



At the National Computer Conference in Chicago, Polaroid will demonstrate a prototype instant color transparency film for overhead projection. Conceived for use in the rapidly expanding technology of computer color graphics, the film makes use of Polaroid's 8 x 10 film processor to produce an overhead slide ready to present at a business meeting or conference within minutes.



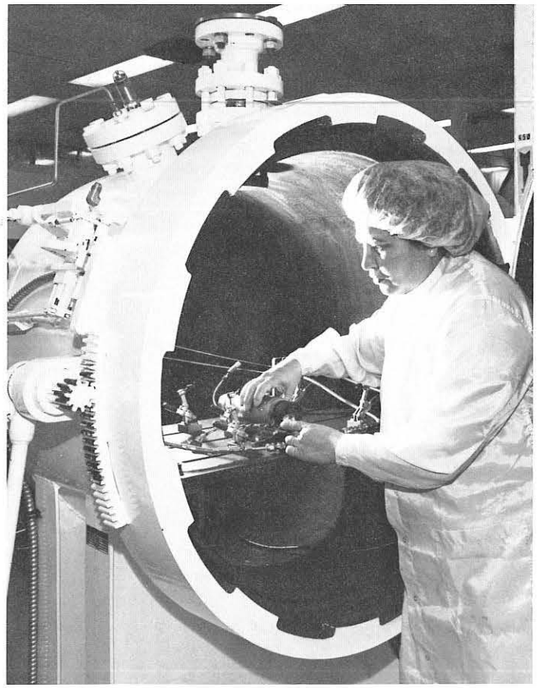
New Integrated Circuits Expand Liquid Crystal Display Applications

UCE Inc., Norwalk, CT, has announced the availability of a new 0.5 inch high seven-segment LCD to complement the new wave of semiconductor drivers. The UCE 3608-MUX is an 8-digit, seven-segment, 3-level multiplex display designed to complement microprocessor outputs.

The 3608 is designed to be utilized with several new MOS drivers that are now available to drive this display. These include Hughes HLCD 0438, 32-segment LCD driver; Intersil 7231/32, 8-digit driver; Mitel MD4055/56B LCD decoder driver with logic level version; and NEC micro PD7502G single chip 4-bit microcomputer with on-chip LCD direct driver or mic ro PPD 7225G programmable LCD controller/driver.

The UCE display consists of 8 seven-segment 0.5 inch high digits with decimal, with 0.100 inch connections on a single edge for elastomer or pins-in-plastic connectors by the user.

A complementary 4-character 16-segement A/N display is also currently available. The 4624-2 MUX uses 3 rows and then 4 columns per character. This may be customized for more than 4 characters or butted for expanded application.



LASER COOLER — A technician prepares a pressure test for the cooling module of a laser device that enables aircrews of the F-5 jet fighter to pinpoint ground targets for laser-homing weapons. Marion Szewczyk readies the module, part of a compact laser designator, inside a containment chamber at Hughes Aircraft Company's Electro-Optical and Data Systems Group, Culver City, CA.