

# Systems & Services

The Diversified Product World  
of California Computer Products, Inc.



CALCOMP





## **The Diversified Product World of California Computer Products, Inc.**

Welcome to the expanding and highly diversified product world of California Computer Products, Inc.

In serving you with quality known around the world, CalComp has gained a reputation for excellence earned through successful product performance.

CalComp has traditionally combined innovation, imagination, technical proficiency and a commitment to on-going product research and development. With this tradition of commitment to quality, CalComp is constantly seeking new horizons in many new and diverse areas of application.

To meet the sophisticated requirements of today's progressive EDP user, CalComp offers an ever-changing and ever-widening spectrum of advanced hardware, software and services.

Utilizing research as the material, technology as the tool, and creative management as the architect, California Computer Products, Inc. has diversified from the acknowledged world leader in computer graphics — into a complete **computer products** company — as its name implies.

From an increasingly versatile computer graphic product base, CalComp has added two new dimensions to its product line: Computer Input Systems and Disk Storage Systems.

The following pages describe the versatility and capability of CalComp's highly diversified family of Systems and Services for the Seventies.

### **CalComp: Different Things to Different Users**

CalComp offers you a unique, total-solution approach to your computer peripheral application requirements. CalComp users obtain from one source the hardware, software, and technological capabilities necessary to successfully meet their application requirements. The comprehensive product world of CalComp is composed of the following types of systems and services:

- 1. Digital Graphic Systems**  
Programmable Graphic Systems,  
Software and Programming,  
Digital Plotting Accessories
- 2. Computer Input Systems**
- 3. Disk Storage Systems**
- 4. Supporting Services**



## Table of Contents



<b>2</b>	<b>Digital Graphic Systems</b>	<b>2</b>
	Digital Plotters	3, 4, 5
	Plotter Controllers	5
	Plotter Interfaces	6
	Magnetic Tape Units	6, 7
	Remote	
	Digital Graphic Systems	8
	Programmable	
	Graphic Systems	9
	Computer-Output-	
	Microfilm Systems	9, 10
	Precision Graphics Systems	10
	Digital Plotting Accessories	11
	Software and Programming	11
	<b>Computer Input Systems:</b>	
	<b>Punchmaster</b>	12
	<b>Disk Storage Systems</b>	13, 14, 15
	<b>Supporting Services</b>	15

## Digital Graphic Systems



The use of information processing systems to solve the problems of industry, engineering, business, science and government continues to grow at an ever-accelerating rate. Digital computers have become indispensable where the volume and complexity of computations and the quantity of required data make any other system unfeasible. Automatic plotting devices are used in conjunction with digital computers where graphic or pictorial presentations of computer data are more meaningful and easier to use than extensive alphabetic or numeric listings. They are indispensable when the volume of graphic presentations makes it uneconomical or impossible to perform the task manually.

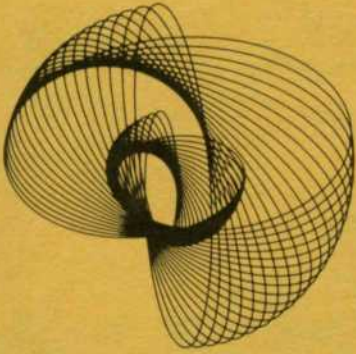
CalComp digital plotting systems provide an efficient, flexible means of producing highest quality drawn, scribed, optically exposed, cut for stripping, or COM graphic presentations of computer output data, with unvarying accuracy. There is no restriction on format, so that a pictorial representation may include any desired combination of axes, lines, letters, and symbols, with unlimited choice of scale factors, letter and symbol sizes, and printing angles.

The function of a digital plotting system is to present digital computer output in graphic form. CalComp offers a wide variety of equipment to perform this function. This brochure includes pertinent points of consideration in the evaluation of plotting systems, and provides specification on the equipments available from CalComp.



## Digital Plotters

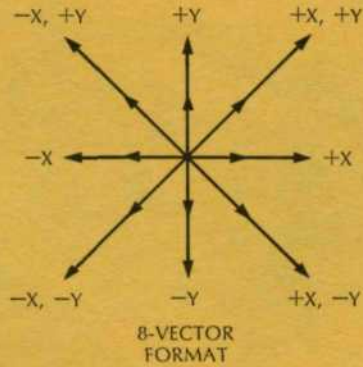
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CalComp offers you a highly diversified line of digital incremental plotters — for computer controlled preparation of quality graphic presentations. All operate either off-line or on-line

## Digital Plotters

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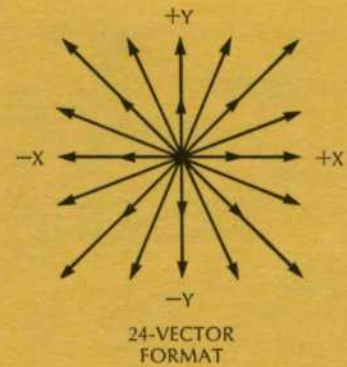


### 500 Series

The CalComp 500 Series includes two drum and one flatbed type, each available with a choice of increment sizes; and a remote drum system capable of recording computer output at distant locations over land lines. CalComp's low-cost product line for medium speed plotting, the 500 Series operates at maximum speeds up to 300 increments-per-second in an eight-vector mode.

## Digital Plotters

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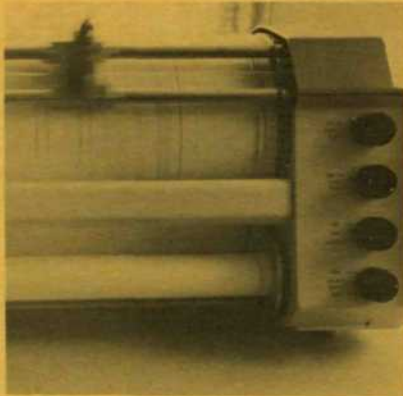


### 600 Series

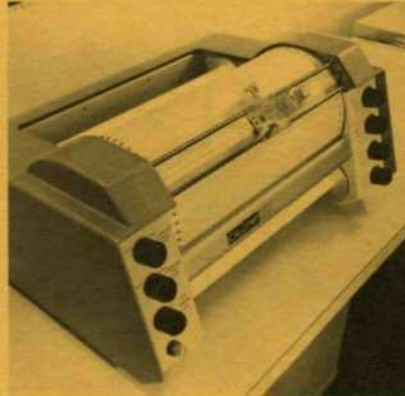
The CalComp 600 Series includes two drum and two flatbed types. Operating with either 8-vector or 24-vector incremental input command formats, the 600 Series is capable of recording with two different increment sizes, which provides for controlled intermix of increment sizes for smoother, more accurate plotting. Capable of operating at speeds up to 900 increments-per-second, depending upon plotter model, input command format and increment size, the CalComp 600 Series provides outstanding resolution with corresponding high speed.



## Digital Plotters



## Digital Plotters



## Digital Plotters



4

### 700 Series

The CalComp 700 Series includes two drum and three flatbed types — and is capable of operating in either the incremental or ZIP MODE. In the incremental mode, the 700 Series operates in a manner similar to the 600 Series, providing for controlled intermix of increment sizes. CalComp's exclusive ZIP MODE drives the plotter at several times the maximum incremental speed, operating at a maximum rate equivalent to 3488 increments per second.

### Drum Plotters

CalComp basic drum plotters are available in three sizes: a 12-inch drum, a 30-inch drum, and a 36-inch drum. The plot is produced by rotary motion of the drum (X-axis) and lateral motion of the pen carriage (Y-axis). Ballpoint pens, liquid ink pens, film cutters or scribes may be used, depending on output media requirements. The drum-type plotter uses special chart paper rolls and can produce continuous plots up to 120 feet in length. A wide selection of chart paper is available.

### Model 1136 Drum Plotter

The newest and most advanced digital incremental drum plotter developed by CalComp technology is the high-performance Model 1136. Capable of functioning with up to 3 pens in a variable data-rate format, the Model 1136 operates at a speed up to 2600 increments-per-second and achieves a movement rate of 6.1 inches per second axially or 9.1 inches per second diagonally. Drawing formats up to and including E-size (34" x 44") can be accommodated with the 36 $\frac{1}{2}$  inch drum.

Included with the basic Model 1136 Drum Plotter is an operator interchangeable narrow-paper-width drum. Available in either one of two optional sizes (11-inch or 297 mm) this drum provides narrow-paper width capability.

Capable of on-line interfacing with your main computer, the 36 $\frac{1}{2}$  inch Model 1136 also functions in an off-line capacity as an integral member of the CalComp Graphic Output System 900/1136. Included in the basic Graphic Output System configuration are the Model 900 Controller and the Model 937 Magnetic Tape Unit.



## Digital Plotters



### Graphic Output System 900/1136

CalComp's Graphic Output System 900/1136 is a revolutionary concept in a high-performance, off-line digital plotting system that significantly improves through-put due to more efficient input/output.

The unmatched capabilities of the graphic Output System 900/1136 will reduce your plotting costs and increase the over-all efficiency of your installation.

See CalComp Bulletin 271, **Graphic Output System 900/1136** for detailed information.

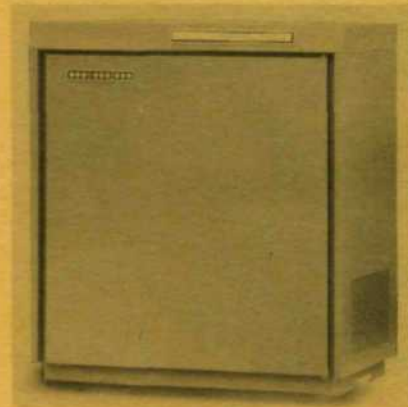
## Digital Plotters



### Flatbed Plotters

CalComp flatbed plotters are available in three sizes: 31 by 34 inches, 48 by 72 inches, and 45 by 59 inches (plot area). The plot is produced by lateral motion of the beam across the plotter bed and lateral motion of the pen carriage on the beam. Ballpoint pens, liquid ink pens, film cutters, scribes or CalComp's Optical Writing System may be used to plot on a variety of media. The flatbed plotter provides continuous display during plotting. It does not require special paper when producing ink plots and handles a large variety of preprinted forms and special materials.

## Plotter Controllers



### For On-Line Digital Plotting

Included in CalComp's creative product line of digital plotting systems are controller units for a widely diversified information processing system. Model 110 Series plotter controllers are available for the following systems:

#### Domestic

IBM System/360  
 CDC 3000/6000 Series  
 GE 400 and 600 Series  
 RCA Spectra 70  
 XDS 900/9300 Series  
 Univac 9000 Series  
 XDS Sigma Series 7/5/2  
 IBM 1800  
 Univac 1200 Series Defense and 400 and 1100 Series Commercial Computers  
 NCR Century Series

#### International

Honeywell-Bull 400 and 600 Series  
 ICL System 4, Siemens 4004, Hitac 8000  
 CM 10070, 10050, 10020, Prodac 250  
 Philips P1000 Series

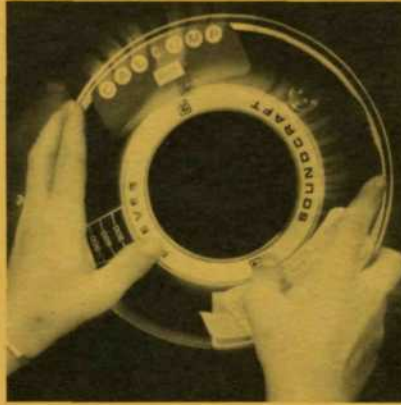
All models in this series are capable of driving any of the CalComp plotters. Modification of the computer circuitry is never required with CalComp on-line units. Model 110 Series controllers include a number of special features for operator convenience and improved system efficiency. For detailed information about on-line plotting with **your** computer system, contact your local CalComp sales representative.



## Plotter Interfaces



## Magnetic Tape Units



## Magnetic Tape Units



6

### For On-Line Plotting

To further facilitate on-line operation, CalComp has designed a wide array of on-line interfaces which will expedite the use of various CalComp plotters with the following information processing systems:

IBM 1401, 1620 and 1130

DEC Models PDP 8I, 8L and 12

Honeywell Models DDP 516 and 316

Additional interfaces are available directly from individual computer manufacturers.

### For Off-Line Digital Plotting

CalComp off-line digital plotting systems are compatible with any computer that writes standard IBM-format tapes at densities up to 1600 bits-per-inch. Each magnetic tape unit is suitable for driving any of several models of CalComp COM, drum or flatbed digital plotters. CalComp 700 Series tape units are also "convertible," so that a customer's system can be tailored to his present needs, and updated and expanded as those needs increase.

### CalComp Model 470

Design integrated into a desk-style console, the compact Model 470 magnetic tape unit provides a complete off-line digital plotting capability at minimum cost. Compatible with most standard digital computers, the Model 470 reads 93 plot commands per inch of tape at 556 bpi. The Model 470 has been designed to generate input commands to CalComp 500 Series plotters.



## Magnetic Tape Units



### CalComp Model 760

The Model 760 magnetic tape unit is capable of operation with any CalComp 500 or 600 Series plotter, and with the Model 835 COM plotter. The unit features a single-character code tape format that greatly reduces host computer tape preparation time over that of the Model 470. Reading 278 plot commands per inch of tape at 556 bpi the Model 760 provides automatic search and recognition of pre-selected block address codes, and supplies input commands to CalComp plotters. The unit is capable of operating at tape densities of 200, 556 or 800 bits-per-inch. The Model 760 can easily be field upgraded to either the CalComp Model 770 or 780.

## Magnetic Tape Units



### CalComp Model 770

The Model 770 magnetic tape unit includes all the features of the Model 760 while adding the capability of driving the CalComp 700 Series plotters for increased speed and greater precision. Reading 278 plot commands per inch of tape at 556 bpi, the Model 770 provides automatic search and recognition of pre-selected block address codes, and supplies input commands to CalComp plotters. The Model 770 can be easily converted to the more sophisticated CalComp Model 780 magnetic tape unit.

## Magnetic Tape Units



### CalComp Model 780

The Model 780 is the senior member of CalComp's 700 Series off-line magnetic tape units. Like the Model 770, this unit has been designed to drive and to supply input commands to CalComp's 700 Series of Zip Mode plotters, the 600 Series and the Model 835 COM plotter.

Capable of reading high-density magnetic tapes, the Model 780 reads 556 plot commands per inch of tape at 556 bpi while providing automatic search and recognition of pre-selected block address codes.



### Remote Digital Graphic Systems



8 CalComp remote digital graphic systems are designed for automatic digital plotting of computer output data at remote locations.

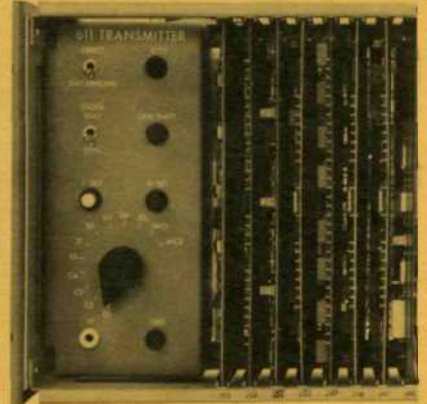
### Remote Digital Graphic Systems



#### The 200 Series

This CalComp series of remote plotter controllers is intended for operation with time-shared computer systems and is compatible with standard keyboard printing terminals. The configuration permits intermixed plotting and printing operations under remote programmed control. One central processing center can serve a large number of remote plotter stations, supplying separate data to each station or the same data to all stations. Each plotter/printer station can transmit instructions directly to the computer.

### Remote Digital Graphic Systems



#### The 600 Series

High-speed modem adapters provide the required interface to drive CalComp plotters at one or more locations. These adapters provide high speed plotting capability at remote sites. The transmitting adapter may be interfaced to a Model 760, 770 or 780 magnetic tape unit or a 110 Series controller, while receiving adapters can be interfaced to 500, 600, or 700 Series digital plotters. CalComp's Model 900 Controller also can be used as a remote controller. Now, you can perform your largest and most complex graphic applications on a remote basis.



## Programmable Graphic Systems



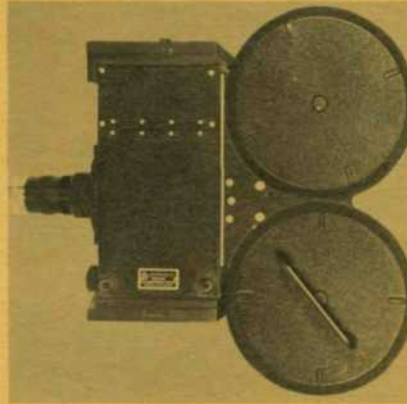
### **A complete, off-line concept...**

CalComp programmable system capabilities and activities are fitted into a dynamic series of patterns, each shaped to a particular set of requirements but all relating to a common base—the CalComp Model 900 Controller, a stored program device.

Extremely reliable and easily expandable, the Model 900 Controller is the key to the CalComp series of programmable off-line plotting systems. Created by CalComp to increase the efficiency and performance of your data processing operation, the Model 900 offers you an increasingly wider range of plotter applications while operating at significantly increased throughput speeds.

The Model 937 Magnetic Tape Unit has been designed for utilization with the Model 900 Controller. The Model 937 MTU provides you with up to 60,000 byte/second input to the Model 900 Controller. A variety of flexible Computer-Output-Microfilm Systems, Precision Graphics Systems and Graphic Output Systems are offered by CalComp in the programmable mode.

## Computer-Output-Microfilm Systems



The speed and power of the latest generation of host computers has dictated the demand for a revolutionary new approach to the output of computer information. Computer-Output-Microfilm is the answer to this demand.

An acronym for Computer-Output-Microfilm, COM can easily be defined as microfilm produced by a recorder from computer generated data. COM provides an electronic output medium compatible with high speed computer operations, and a convenient storage medium for the mass of data generated by today's processing systems.

Now, CalComp makes available a wide spectrum of Computer-Output-Microfilm capabilities with the Model 835 COM Plotter and the 1670 COM System.

## Computer-Output-Microfilm Systems



### **Model 835 COM Plotter**

The Model 835 COM Plotter is the low-cost, high performance member of CalComp's COM family. The Model 835 COM Plotter is capable of operating on-line when interfaced with any third-generation host computer or off-line with a CalComp Magnetic Tape Unit. A high-speed digital plotter, the Model 835 also features line printer capability.

Featuring a choice of five microfilm camera options, 16mm or 35mm sprocketed or non-sprocketed drives and interchangeable 16mm/35mm sprocket drive cameras, the Model 835 is also compatible with the Model 900 Controller and Model 937 Magnetic Tape Unit. This latter configuration further expands the capabilities of this most versatile COM device.



## Computer-Output-Microfilm Systems



10

### The 1670 COM System

As a full-performance, computer-output-microfilm system, the 1670 COM System features high resolution and the highest throughput speed available today. A blend of high-performance and advanced state-of-the-art data processing technology, the CalComp 1670 COM System brings you the two worlds of COM, plotting and printing—and with complete system capability.

This programmable COM system achieves the exceptionally high level of performance required for computer service bureaus, large-scale businesses and an ever-widening range of scientific applications.

CalComp's unique 1670 COM System includes a Model 900 Controller, a stored program device featuring maximum input flexibility and formatting capability.

The output device for this computer-output-microfilm system is the Model 1670 Plotter/Printer. When operating in the graphics mode, the system features 16,384x16,384 addressable positions and a resolution of 4,096x4,096 positions. At least 192 pages per minute can be expected while operating in the print mode. This mode of operation permits printing speeds of between 10,000 and 15,000 lines per minute.

The high-resolution and high-speed of the CalComp 1670 COM System make it particularly applicable to high-volume output where highest resolution is a prime factor.

Supported by CalComp's long tradition of and total commitment to high standards of quality, the 1670 COM System is one of the most versatile, efficient and productive COM Systems currently available.

See CalComp Bulletin 278, **1670 COM System** for detailed information.

## Precision Graphics Systems



### Precision Graphics System 900/738

As the world leader in computer graphics, CalComp has produced high-speed, high-performance flatbed plotters for many years. More CalComp flatbed plotter systems have been delivered than any other digital flatbed plotting system in the world.

The Model 738 offers the highest throughput of any large flatbed system. This means that the average time required to complete a given job is less with a CalComp system than with any other.

This general purpose plotter has CalComp's exclusive ZIP MODE feature, which makes it capable of speeds up to 3374 increments per second. To assure its accuracy, each Model 738 is calibrated with a laser interferometer before shipment, after installation, and periodically thereafter while the unit is covered by a CalComp service agreement.

CalComp's Model 900 Controller and Model 937 Magnetic Tape Unit augment throughput even more by making input/output most efficient. Compared to the Model 780 Magnetic Tape Unit, tape-write time savings of 10 to 100 times have been achieved with this combination, and with corresponding savings in total execution time.

Versatility completes the picture of the CalComp Precision Graphics System 900/738. The ease with which plotting tools can be interchanged makes it practical to alternate such plotting tasks as strippable film cutting, pen and ink plotting, scribing and optical lighthouse plotting.

## Precision Graphics Systems



### Precision Graphics System 900/745

Standard-setting accuracy and repeatability coupled with complete CalComp system capabilities and support makes the Model 745 flatbed plotter the best answer to a wide range of precision graphics requirements. While it is nearly as fast as Model 738, Model 745 is primarily designed to deliver utmost accuracy.

Every feature of Model 745—from its polished drafting surface of black granite to its recirculating-ball lead-screw drive system—contributes to its ultra-high precision.

Quickly interchangeable CalComp accessories allow the Model 745 to cut strippable film, scribe coated materials, and expose photographic film as well as plot with pen and ink on paper and synthetic material.

CalComp's Model 900 Controller and Model 937 Magnetic Tape Unit combine to drive the Model 745 plotter and, using CalComp software, can drive an associated CalComp high-speed drum plotter as part of a complete verification and production system.

See CalComp Bulletin 281, **Model 745 Precision Flatbed Plotter** for detailed information.



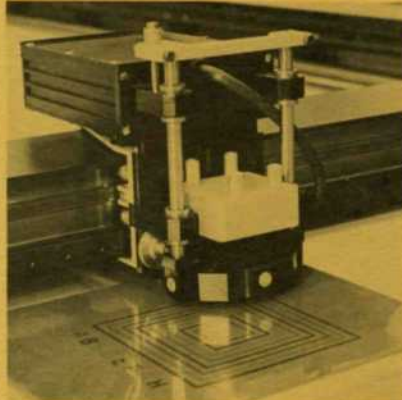
## Digital Plotting Accessories



To assure our customers of maximum performance and flexibility of use, CalComp offers an extensive line of digital plotting accessories. These include a wide range of plain and preprinted chart papers for digital plotters, as well as an expanding line of pens and inks for your every application. Included are ball-points in assorted colors and liquid ink pens in several line widths and a variety of colors.

These pens and inks have been designed to match the specific plotting capabilities of each of the CalComp plotters.

## Digital Plotting Accessories



CalComp's line of accessories includes:

- Model 8350 Visual Monitor which presents graphic data generated by CalComp COM Plotters, Models 835 and 1670.
- Model 7180 or 7181 Optical Writing Head which utilizes a spot of light to draw on photographic film.
- A strippable film cutter capable of cutting photographic masks on all drum and three models of CalComp flatbed plotters.
- A four-unit strippable film cutter system for use with CalComp flatbed plotters, Models 638, 738 and 745.
- Switching adapters for simultaneous or alternate operation of one, two or three CalComp plotters by one or two magnetic tape units and/or on-line interface units.
- Plot display attachments, rack mounting and tables in matching colors and styles for 500 Series plotters.
- Paper conversion kits that permit the economy of 12-inch chart paper rolls when narrow plots are generated on 30 and 36-inch plotters. For detailed information, contact your local CalComp Sales Representative.

## Software and Programming



Comprehensive software support provided by CalComp makes it possible for you to put your CalComp system to work on the same day that it is installed. CalComp maintains a staff of highly skilled programmers whose sole function is to provide software and programming assistance to customers. The years of experience of this staff insure that the software will be versatile, efficient, and complete. Our programming instructors conduct training classes for customer programmers and assist in solving any specialized problems. CalComp software is written for use with FORTRAN, ALGOL, and COBOL compilers, and where necessary, is written in assembly language for optimum efficiency. Tested subroutines for most computers are available from our extensive software library. Our programming staff and our customers are constantly adding to this collection of routines. Simplicity of software design provides customer programmers full flexibility of utilization with a bare minimum of training.



## Computer Input Systems: Punchmaster

In keeping with its commitment to fulfill expanding user requirements, CalComp has utilized its wide range of engineering resources in the creation of a unique computer-input system — **Punchmaster**. **Punchmaster** significantly speeds the conversion of source data to punch cards. A program memory stores up to 22 program cards for one or more jobs.

Keystrokes are significantly reduced because **Punchmaster** can insert constant data peculiar to a particular card format — from memory. The control unit and electronics are compact and easily attached to an IBM Card Punch or Verifier, providing a wide range of time and cost saving features.

**Punchmaster** eliminates the multiple handling of documents. Now it takes only one pass to punch or verify all your multiformat jobs.

- **Only Punchmaster** gives you automatic program selection.
- **Only Punchmaster** eliminates clerical presorting.
- **Only Punchmaster** increases throughput by 30 to 80 percent.

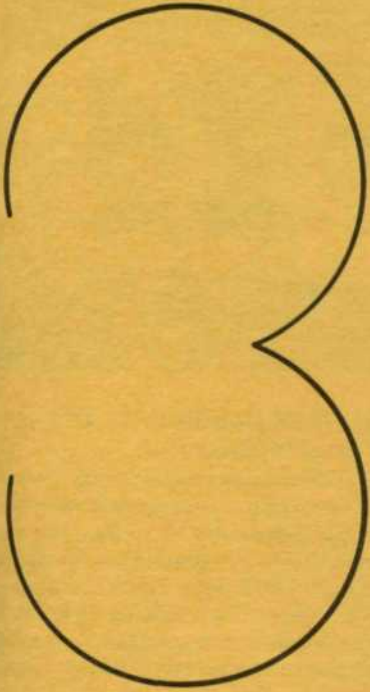
CalComp's **Punchmaster** can substantially increase the productive capacity and efficiency of your keypunch operations, and provide a net savings several times greater than its low monthly cost. Your present card record system represents a big investment in time, effort and money. **Punchmaster** can make it the most efficient of all input systems.



See CalComp Bulletin 262, **Punchmaster** for detailed information.



## Disk Storage Systems



Adding another element to the expanding product line of CalComp is a wide spectrum of Disk Storage Systems.

To meet today's disk storage requirements with a system you can expand to meet tomorrow's; CalComp has developed several random access storage devices, the CD1, CD12, CD22, 213 and 215 Disk Drives. CD12 and CD22 operate through the CD14 Controller to provide complete direct access storage with from one to nine Disk Drives. Dual-Density Model 213 and 215 Disk Drives are controlled by the Model 1015 Controller within the 1015 Disk Storage System.

## Disk Storage Systems



### The CD1 Disk Drive

CalComp's CD1 is plug-to-plug interchangeable and format compatible with the IBM 2311 disk storage unit, yet its cost is much lower and its access time is more than twice as fast. It is ready to plug in to any IBM System 360/20 or larger with no system or programming modifications. Format compatibility means that any disk pack written on the IBM 2311 can be read by the CD1, and that disk packs written on the CD1 can be read with the IBM 2311.

## Disk Storage Systems



### The CD12 Disk Drive/ CD14 Controller

Now CalComp offers you the extraordinary disk storage device — the CD12. The CD12/CD14 costs considerably less than an IBM 2314, yet it has faster access time. As your needs change, you can add more CD12s — one or more at a time — to a total of nine drives per CD14 Controller. With the nine-drive configuration, you can have eight drives operating on-line and one in the off-line position.

Consider our electro-magnetic design. We've engineered the CD12 to be interchangeable and format compatible with the IBM 2314 and provide better performance, too. Just plug it into any System 360/30 and up — there's no need for system or programming modifications.



## Disk Storage Systems



### CD22 Dual Disk Drive/ CD14 Controller

The CD22 and CD14 make up a direct access storage system with removable disk packs. Each CD22 Dual Disk Drive is composed of two spindles and their associated electronics in a cabinet only slightly larger than a CD12. A single-spindle version of the CD22 allows for direct replacement of up to a 9 spindle IBM 2314 system. The CD22/14 system is fully equivalent to the IBM 2314 direct access storage facility, and is functionally interchangeable and program compatible with the corresponding IBM system. This advanced CalComp system offers you significantly faster access times than equivalent memory systems.

## Disk Storage Systems



### The CD14 Controller

CalComp's CD14 Disk Drive Controller operates with one or more CD12 or CD22 Disk Drives to provide an on-line, direct access mass storage system for IBM System/360 computers, Models 30 and above. The CD12/14 and the CD22/14 systems are plug-to-plug interchangeable with the IBM 2314 direct access storage facility and utilize IBM 2316 disk packs or their equivalents. Disk packs recorded on the IBM 2314 units can be read by the CD12/14 or CD22/14 systems, and disk packs recorded on the CalComp system can be read by the IBM units. The CD12 or 22/14 system is connected to the System/360 computer via the IBM Selector Channel, and any System already using the 2314 will need no additional IBM hardware.

See CalComp Bulletin 277, **Disk Storage Systems** for detailed information.

## Disk Storage Systems



### The Dual-Density 1015 Disk Storage System

CalComp brings you the most innovative member of its family of memory systems for IBM System/360 and System/370 computers—the Dual-Density 1015 Disk Storage System. By providing two 203 track elements per disk surface instead of the standard 203 on conventional IBM 2314B/2319B systems, the high capacity 1015 System offers you **twice the information storage** capacity per spindle.

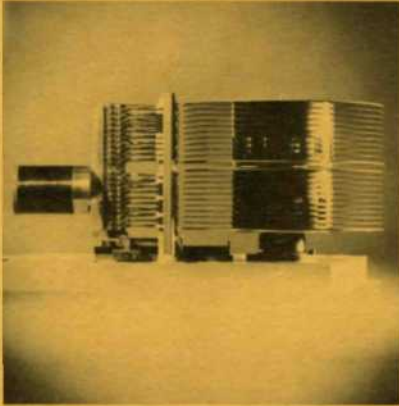
Forming the most unique two-high direct access memory system of its kind—the CalComp 1015 System requires no modification in computer system hardware or standard software. Logical data organization differences are incorporated in 1015 System hardware and are transparent to System/360 or System/370 software. The system utilizes existing 20 surface IBM 2316 disk packs or their equivalent.

This revolutionary memory system offers an unmistakably significant improvement in computing performance—**without a parallel increase in price**. In fact the 1015 System offers you more storage at less cost per byte than any IBM or IBM-compatible disk drive system. And it reduces the amount of floor space required for an equal amount of storage by as much as 50%.

Depending upon your application requirements, the 1015 System is capable of storing and delivering information at a capacity of from 58 to 232 million bytes (8-bit) based upon the system configuration chosen. The system features a transfer rate of 312,000 bytes per second and a format that is compatible to the IBM 2314B/2319B.



## Disk Storage Systems



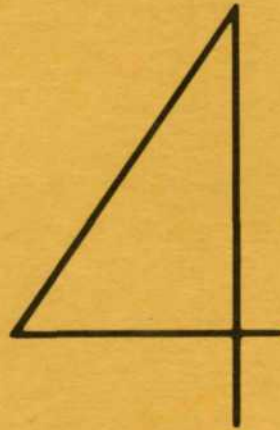
While giving you the lowest cost per byte in the industry, the 1015 System also features significant reductions in power requirements and in the heat dissipation rate (BTU's/Hr.). These reductions of up to 50% are achieved because the 1015 System allows for twice the density of information storage that other disk storage systems require. Therefore, you need only one half the amount of hardware previously required to achieve the same amount of storage capacity.

See CalComp Bulletin 286, **CalComp 1015 Disk Storage System** for detailed information.

## CalComp Offers You All These Features In The CD12/14, CD22/14 and 1015 Disk Storage Systems:

- Average access times — significantly faster than the IBM 2314.
- Electromagnetic head positioning and electronic track detent, eliminating the many troublesome moving parts found in hydraulic or mechanical systems.
- Expandable mass storage capacity.
- Self-contained diagnostics for off-line checkout of disk drives.
- The significant differences between CalComp Disk Memory Systems and comparable systems are price, performance, and service — and CalComp is the winner on all three counts.

## Supporting Services



People, purpose, products and performance are the more colorful segments of CalComp's diversified world of computer products. Balancing and sustaining them in the pattern are the "quieter-hued" service and support functions of field service and training.

## Supporting Services



### Field Service and Training

The excellent field service and training support provided by CalComp assures our customers of optimum efficiency and maximum performance from their systems, with a minimum of downtime. CalComp field service personnel establish maintenance procedures, provide consultation services, supervise the regional service centers, and conduct periodic in-plant training programs for our customers. Contract service is available for CalComp products on a world-wide basis. Imagine what you could do... if you could do everything you imagine. The people at CalComp imagined what they could do... and did it!



### **The World of Total Capabilities ...**

It is the availability of the entire CalComp spectrum of capabilities — both primary and supporting, in whatever combination required, and when needed — that will continue to assure you of higher productivity, and increased efficiency, along with the best in price/performance ratios. To discover what the diversified product world of CalComp can do for you, contact your local CalComp Sales Representative.







### U.S. SALES OFFICES

ANAHEIM, CALIFORNIA  
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