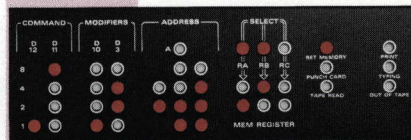


MANAGEMENT GUIDE

NCR



SERIES 500 DATA PROCESSING SYSTEM

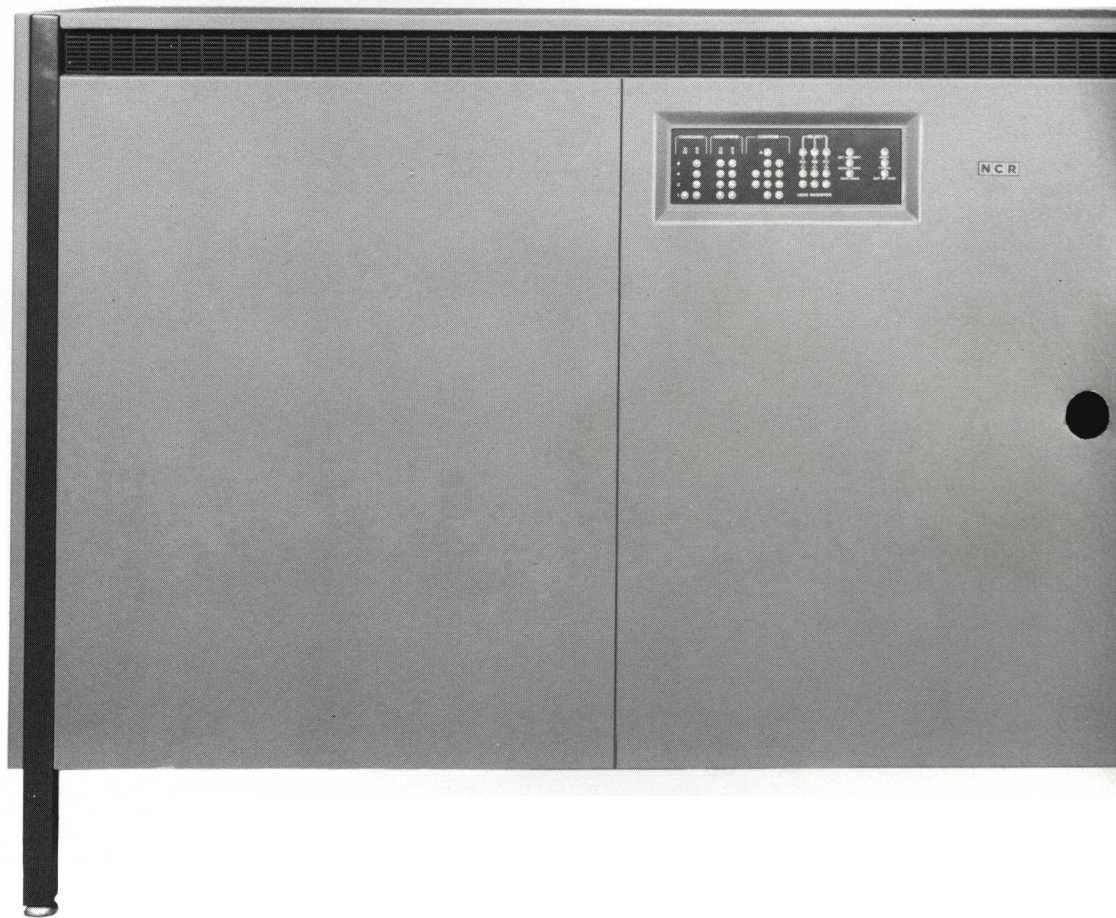
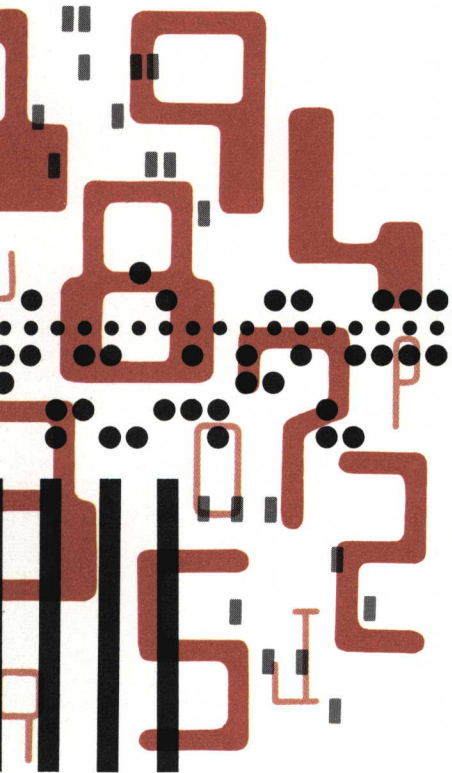




This brochure is presented to introduce you to the NCR 500 electronic data processing system . . . a computer system that offers a choice in the use of processing capabilities . . . a computer that can efficiently merge data from several sources, process it and provide desired results in the most applicable form.

The NCR 500 is based on a modular concept. It is specifically designed and engineered to provide management with an operating tool for fast, accurate organization of data. It quickly supplies the facts and figures necessary for logical, effective management decisions.

ELECTRONIC PROCESSING



The 500 system is controlled by a magnetic core, alphameric processor. It contains the logic and arithmetic units for the entire system.

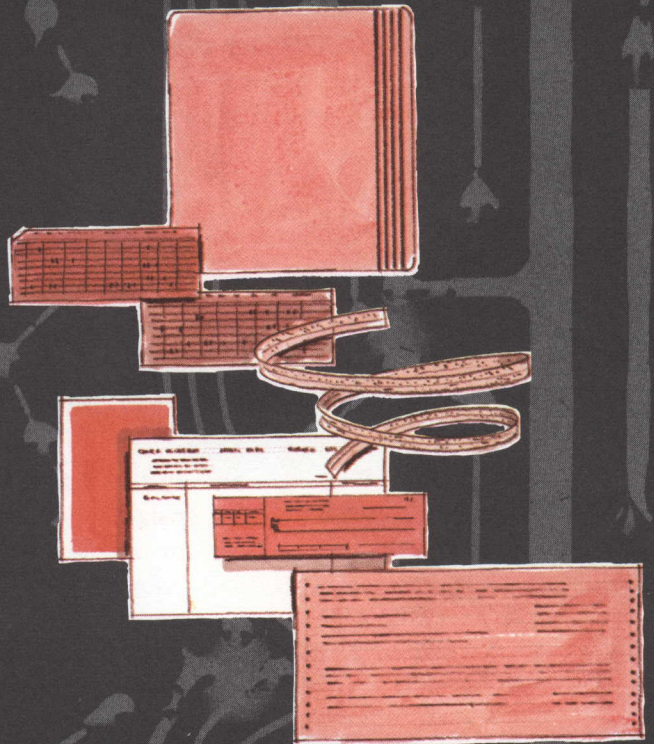
Data and program instructions are stored in the processor which has capacity for 4,800 characters of information. Instructions and data enter the system as numeric or alphabetic characters. Internal logic converts data to binary coded decimal for processing.

Data for processing can be from any one or a combination of five types of media:

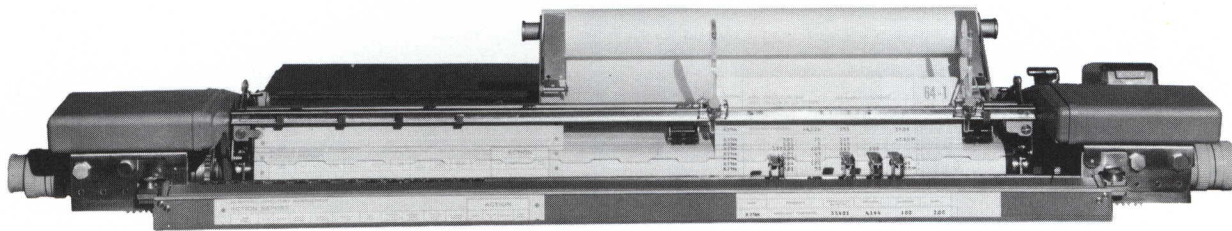
1. punched tape
2. optical type font
3. magnetic ledger
4. console entry
5. punched card

Data exit can be to magnetic ledgers, punched cards punched tape or hard-copy records, documents and reports.

The 500 system offers a choice of processing methods . . . merely select the method or combination of methods that best meets the requirements of your business . . . the method that will provide you with the best overall efficiency.



THE PRINTERS



“MULTI-FORM” CARRIAGE PRINTER. The exclusive “multi-form” carriage and printer features a programmable, horizontal and vertical print format. In addition it offers a “split” platen for different spacing needs and a pin-feed form handling mechanism for continuous forms.

An alphameric, magnetic read-write facility is contained in the carriage and is under control of the processor. It verifies the encoding on the magnetic ledger, aligns it to the proper line and up-dates encoding on the back of the ledger with results of processing.

The versatility provided by this type of printer permits wide latitude in the design of ledgers, journals, documents and reports for unique and specialized system needs.

96 CHARACTER LINE PRINTER—The all-purpose line printer has a programmable print format of 96 alphameric characters per line. Print speed is 125 lines per minute for a full 96 character numeric line or for a 48 character alpha line. Print edit and form feed is under control of the processor.

A combination of the line printer and the “multi-form” printer offers complete capability and versatility for handling a wide range of applications. For example, individual ledger records can be processed and up-dated in the “multi-form” printer. Reports and control data can be printed by the line printer. Use of both printers in a system offers a wide range of print formats for diverse application needs.



MAGNETIC LEDGERS a dual-purpose record . . .

Magnetic Ledgers provide a highly versatile means of storing data for processing by a computer. They offer all the advantages of hard-copy ledger records plus the ability to store electronic data for automatic entry and utilization by the computer.

Alphameric magnetic encoding on each ledger provides the facility for storing identity, control, status, history and statistical information pertaining to individual accounts. Data can be stored in variable record sizes to permit greater utilization of storage capacity.

External storage of data affords greater utility of internal memory for processing. Data is available on a random-access basis for both the human language and the electronic language record.



MAGNETIC LEDGER READER

The NCR 586 Magnetic Ledger Reader automatically feeds ledger cards, reads encoded data into computer memory, and stacks the ledgers in the same order they were read.

Automated ledger handling levels peak computer loads . . . provides additional computer time . . . and increases productivity of the 500 system by reducing the time associated with manual handling of ledgers for trial balances and reports.

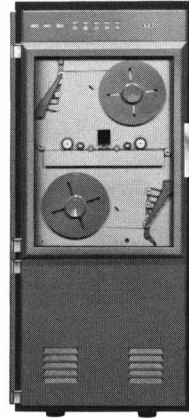
PUNCHED PAPER TAPE

fast, flexible, functional

High-speed, photo-electric readers provide the facility for processing alphanumeric data from tape in either "reel" or "strip" form. Punched paper tape created independently or on-line can be used to introduce data into the system.

Data from two tapes can be merged. Data from tape can be merged with data from other media. Master tape files can be up-dated with current transactions and a new master file created. Tape created on-line can later be used in the 500 system or serve as input to other computer systems. Data can be read in random or sequential order. Two readers permit many unusual matching, merging and sequencing techniques to be performed.

Punched paper tape processing offers outstanding processing versatility and provides unlimited external storage of data. Paper tape provides a convenient, fast and automatic means of introducing complete programs, program overlays and sub-routines. Valuable reliability checks such as parity check, answer-back circuitry and correct frame length edit are inherent in the system.



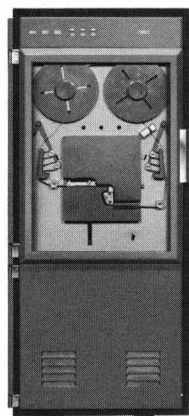
NCR 561 photo-electric punched tape reader

Tape reading at 600 cps includes parity check . . . reading can be from either reels, strips or loops of tape . . . and re-winding at 800 cps is fully time-shared with electronic functions of computer and peripherals.

NCR 562 photo-electric punched paper tape reader

The NCR 562 reads strips, loops or a roll of tape at a speed of 650 cps. It can be used as the only source reader with the 500 system or it can be used in conjunction with the Class 561 reel reader.

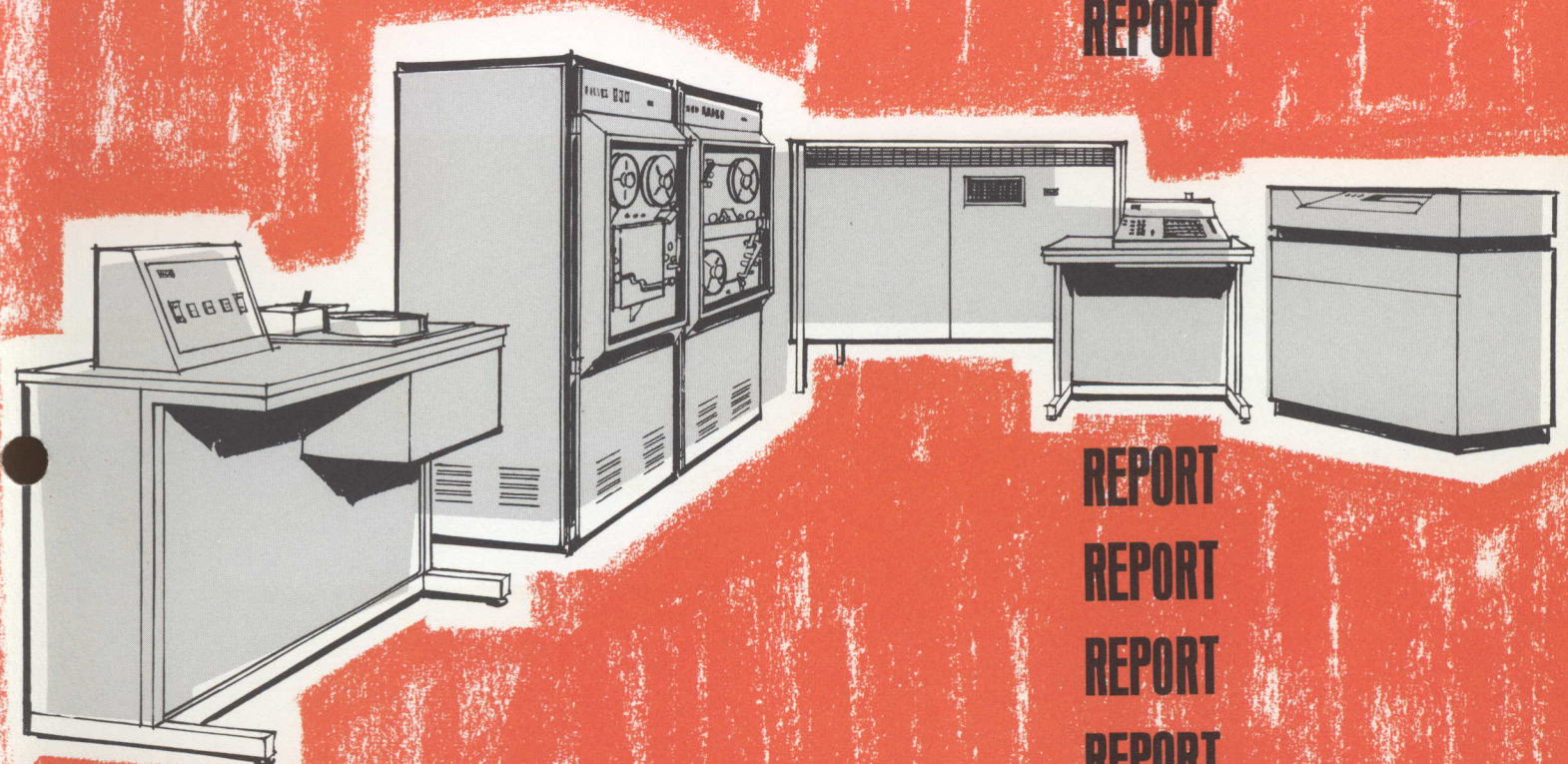
The 517 Processor has logic and commands for selecting and merging data from the two readers.



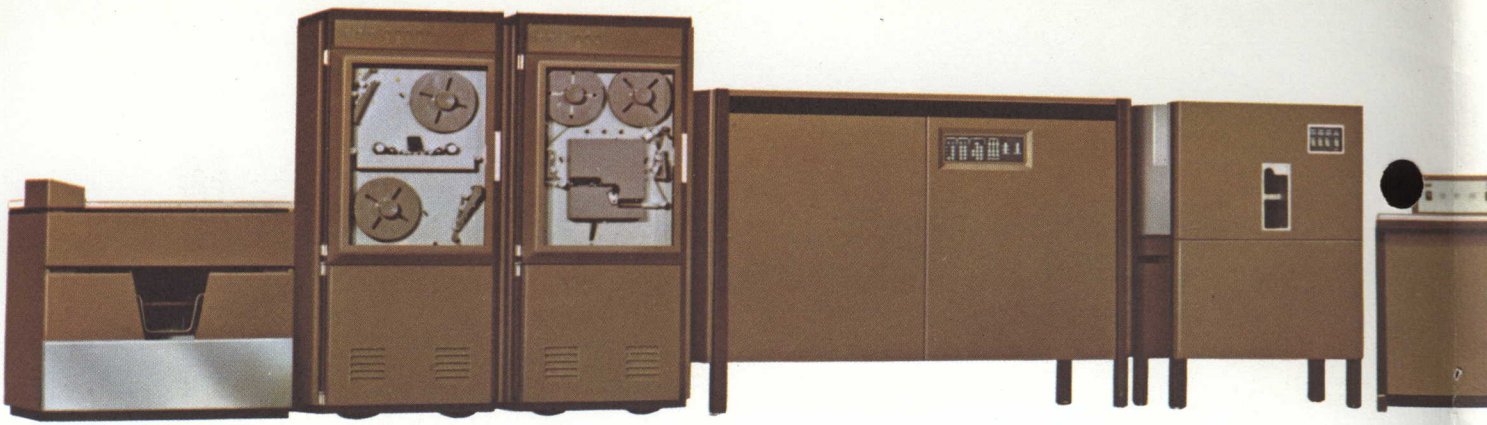
HIGH SPEED paper tape punch

The NCR 571 paper tape punch receives output signals from the 517 Processor and punches alphanumeric tape at the rate of 120 digits per second. The entire memory of the 500 system can be punched in tape from a single computer command.

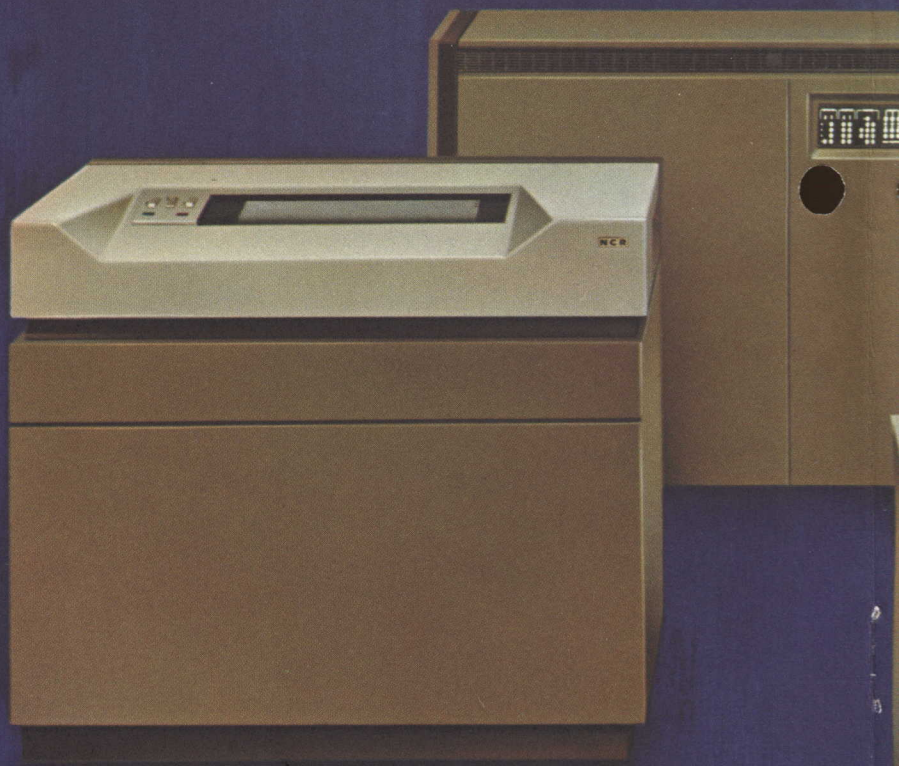
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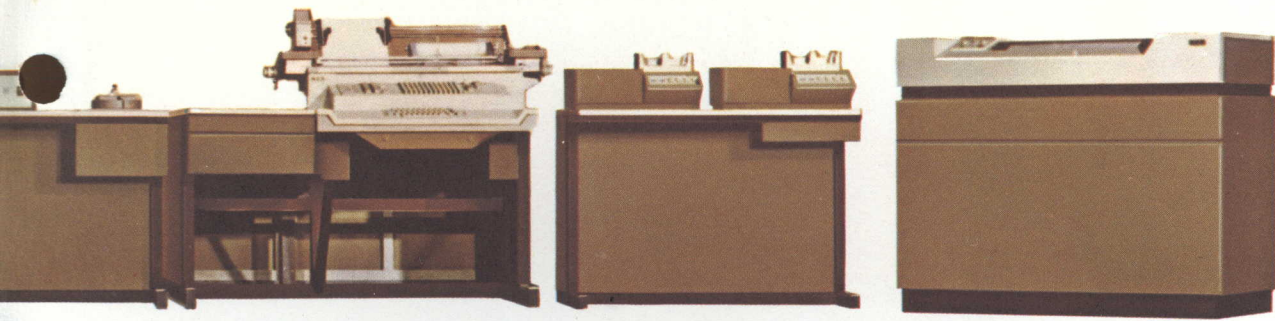


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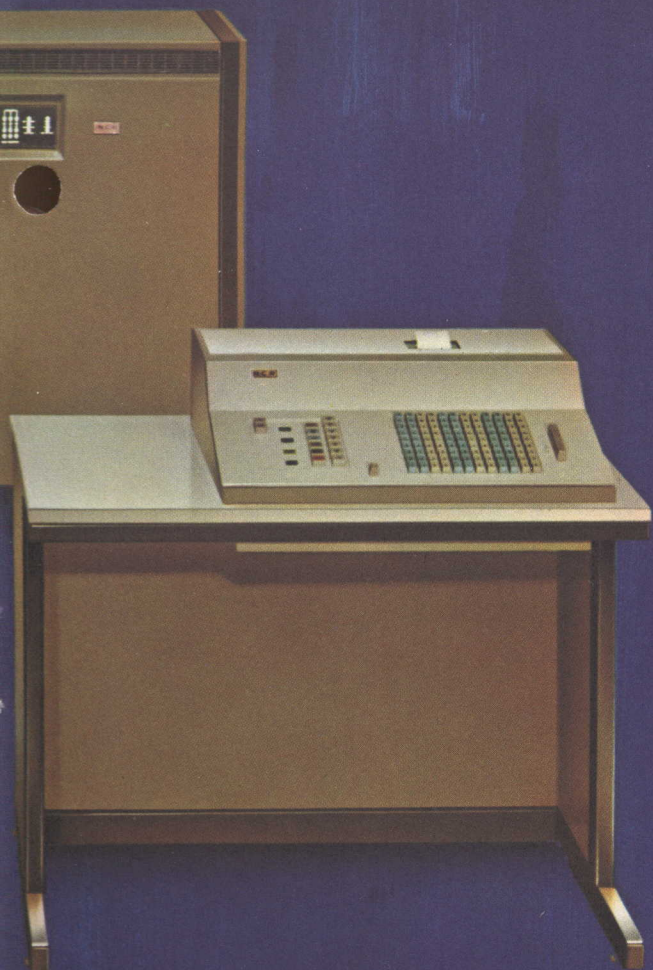


NCR 500 DATA PROCESSING SYSTEM—a system designed exclusively for handling business complex. It is capable of handling many unique and specialized applications.

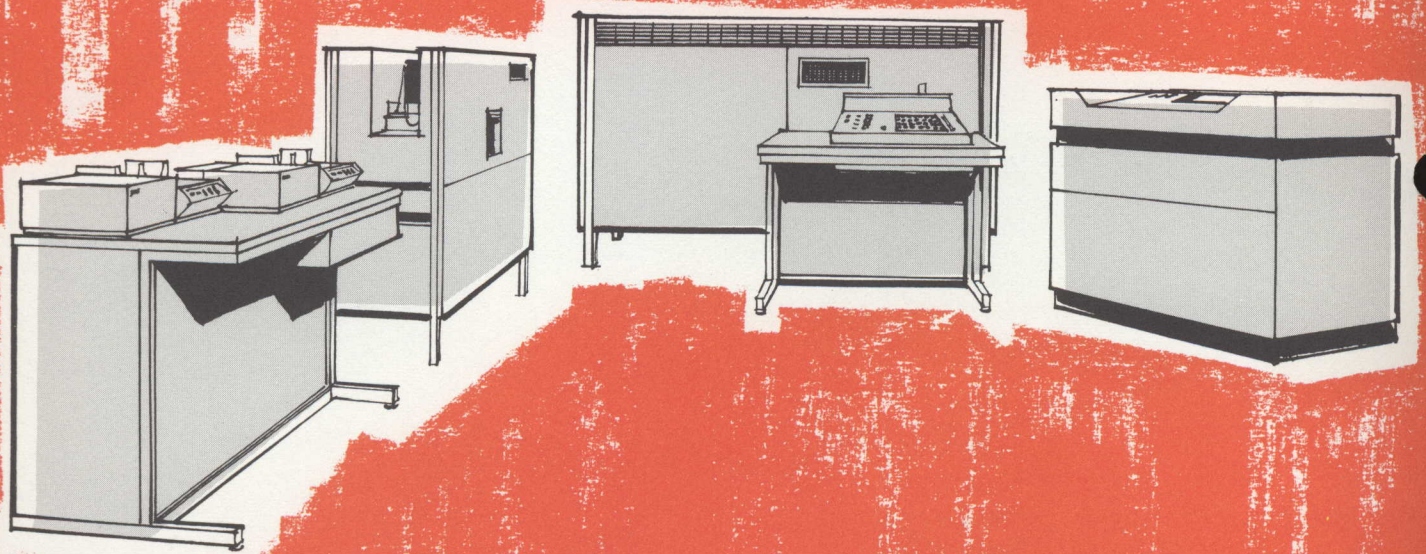




g the management information and problems encountered in today's
ions. And best of all it can be adapted to your needs in your business.



PUNCHED CARD PROCESSING



PROCESS

MERGE
UP-DATE
SUMMARIZE
ACCUMULATE
SORT



The NCR 581 provides for fast, accurate input of data from punched cards to the 500 system.

It offers the advantage and ability to read alphameric data from two separate decks of punched cards. This single feature avoids preliminary merging procedures and reduces the need for outsourcing after processing to restore cards to their original sequence. Summary cards can be punched as output and used for subsequent processing.

Punched card processing can be used to augment punched tape, magnetic ledgers or optical reading in any system where a combination of processing procedures is desired.

If you are currently using a punched card system, the NCR 500 offers the advantage of high speed electronics to your processing procedures. It requires a minimum of conversion time and is completely compatible with your present card formats.

If you are planning a punched card system, the NCR 500 provides a highly versatile, integrated electronic "tabulating" system. Punched cards are read into the processor . . . data is organized and processed electronically . . . desired reports, hard-copy records and new machinable media are developed automatically.

POWERFUL "four-address" COMMAND STRUCTURE

The NCR 500 is an internally programmed system. All programs are written in decimal language. It features a powerful command structure that is simplified in operation, easy to learn and practical in application.

COMMAND:

Summarize A thru B → C

SYMBOL	COMMAND		PLANE	ADDRESSES			
	CODE	MODE		A	B	C	NI
SUM	08	0	0	50	55	18	30

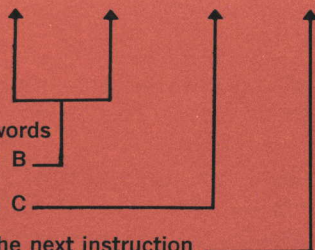
COMMAND

SUM

the consecutive words in address A thru B

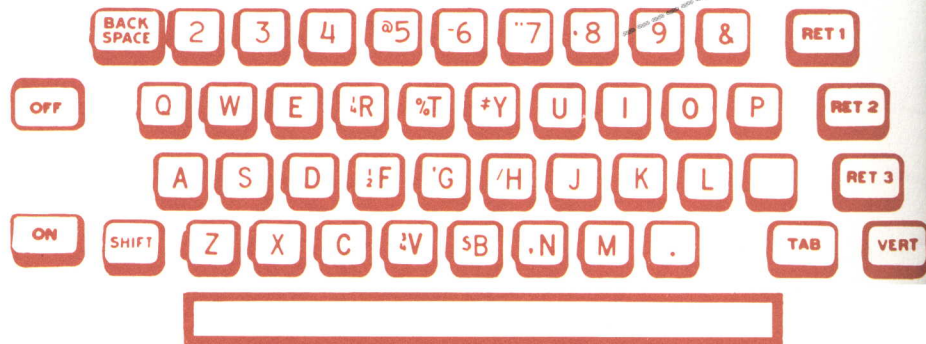
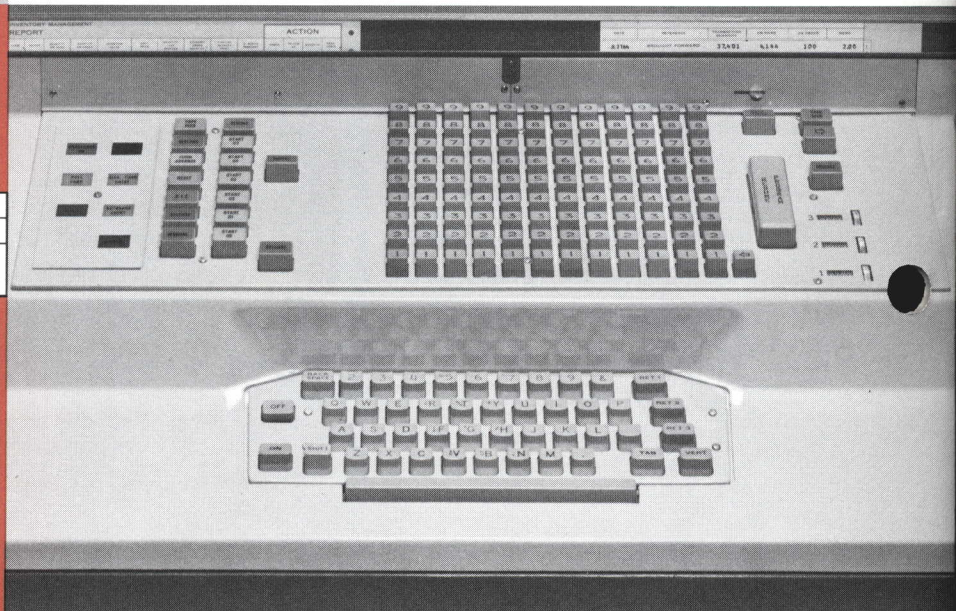
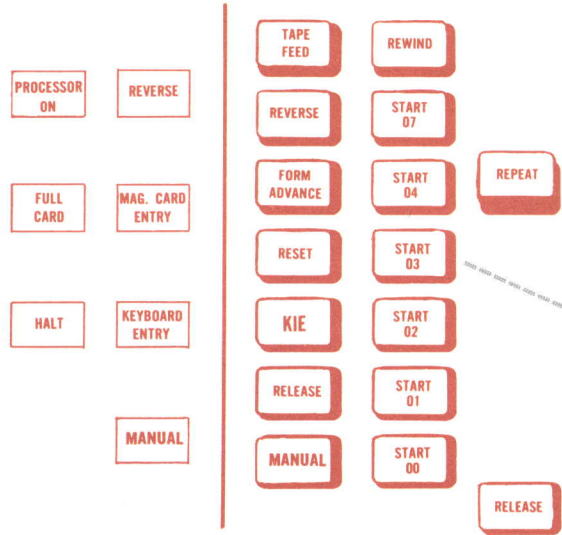
Put the answer in C

Go to cell 30 for the next instruction



The "four-address" command structure utilized by the 517 Processor enables it to perform a sequence of operations from one command. Such power conserves memory, facilitates programming, speeds performance and improves operating efficiency.

The NCR 517 is capable of receiving instructions from all sources of input: thus, a program can be modified, steps added without concern for sequential memory location, sequences changed or sub-routines inserted . . . all under complete program control . . . all adding versatility and flexibility to the system.





OPTICAL PROCESSING

Optical Reading of Journal Tapes offers the convenience and ease of electronic processing from a stylized printing format that can be read by both people and machines. NCR Optical Type Font is a major advance in simplifying the creation of input for data processing systems.

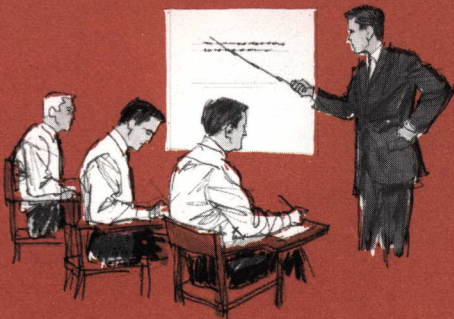
The NCR Optical Reader operates on-line with the 500 system. The reader scans the journal tape at 26 lines per second . . . 20 characters per line . . . for a total of 520 characters per second.

NCR Optical Reading offers these outstanding advantages:

- It is a simple, efficient and economical method of creating input for computer processing.
- It does not change clear cut and established audit trails of present original entry equipment.
- Substantial savings in original entry equipment investment can be made. In many cases present NCR machines can be adapted to NCR Optical Type Font.



CONSULTATION—System consultants, trained in business systems, backed by a company with almost a century of experience, stand as a knowledgeable team ready to assist in every phase of your data processing needs.

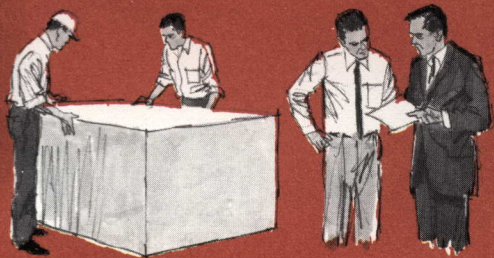


TRAINING—NCR maintains a programming school for training customer programmers. Instructors are thoroughly trained in both systems and computer programming. Training manuals, forms, supplies, programmed learning and classroom instruction are furnished.



PACKAGE PROGRAMS—Program manuals, tested techniques and routines are all part of the library furnished customer personnel as a part of their training. These manuals are updated with new material as it is developed. New systems ideas and techniques are featured in systems reports that are sent to you on a periodic basis.

SYSTEM SUPPORT



INSTALLATION—Trained personnel are available on site to assist in every step of the installation. Layout, scheduling, design, training, consultation, planning, and supervision of the system during the installation are all provided.



SERVICE AND MAINTENANCE—Trained technicians provide service for every component of the system. Men with years of experience in technical service are trained well in advance of the installation to be ready to serve you the moment your equipment arrives.

BRANCH OFFICES—NCR Branch Offices are strategically located throughout the country to support and assist you in planning and implementing your system— from original entry to final report.



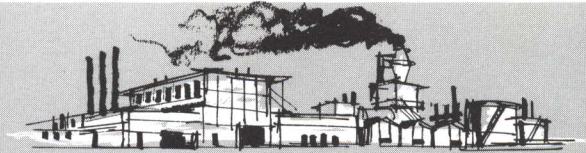
CONSTRUCTION

Estimating
 Job Cost Control
 Accounts Payable
 Labor Distribution
 Critical Path
 Accounting
 Equipment Records
 Payroll Distribution
 Payroll Processing
 Cost Records



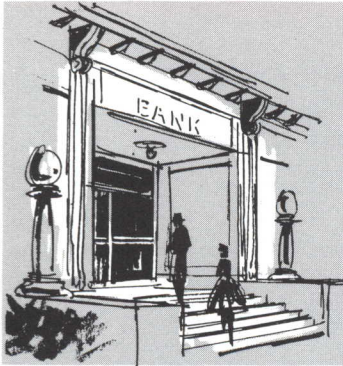
MANUFACTURING

Production Control Material Explosion Incentive Payroll
 Machine Loading Manpower Requirements Wage Accrual
 Cost Accounting Inventory Control Efficiency Reporting



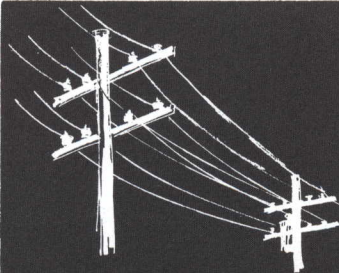
FINANCIAL

Savings Accounting
 Mortgage Accounting
 Trust Accounting
 Commercial Loans
 Share Accounting
 Installment Loans
 1099 Reporting
 Loan Analysis
 Escrow Analysis



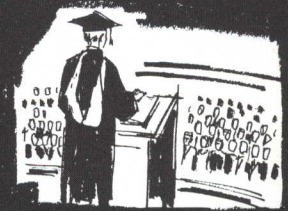
UTILITY

Billing Line Loading
 Customer Analysis
 Plant Accounting
 Equipment Records
 Efficiency Reporting
 Transformer Loading



EDUCATION

Student Scheduling
 Report Cards
 Attendance Reports
 Fund Accounting
 Retirement Records
 Payroll Pupil Placement
 Budget Reporting



WHOLESALE

Inventory Management
 Pricing Invoicing
 Accounts Receivable



DIRECT DISTRIBUTION

Route Settlement
 Producers Payroll
 Customer Billing
 Sales Analysis
 Stock Control



GOVERNMENT

Appropriation Accounting
 Tax Billing
 Motor Vehicle Records
 Payroll Revenue Analysis
 Stores Accounting
 Expense Analysis
 Budget Reports
 Tax Reporting
 Delinquency Reporting



HOSPITAL

Patient Accounting
 Insurance Billing Medical Records
 Patient Billing Revenue Analysis
 Hourly Payroll Salary Payroll
 Budget Reporting
 Statistical Reporting



RETAILING

Merchandise Control
 Accounts Payable Cycle Billing
 Sales Analysis Payroll
 Government Reports Price Line
 Reports Sales Analysis
 Buyer Reports Stock Control



SERVICE

Premium Billing
 Commission Statements
 Client's Records
 P & L Reporting Sales Analysis
 Revenue Analysis
 Circulation Analysis



PRESIDENT
ACCOUNTANT
DIRECTOR
BOARD CHAIRMAN
MANAGER
TREASURER
FOREMAN

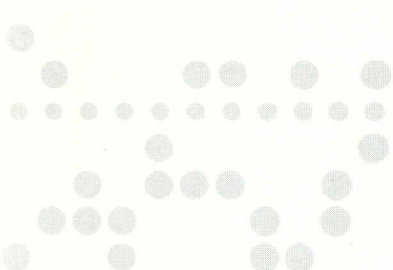


The NCR 500 offers a solution to data processing and reporting for a wide range of applications in firms of varying size and with divergent needs.

It can be applied as a total system . . . to a specific application or division . . . as a satellite to a larger installation . . . or as an individual unit in a network.

Regardless of how you apply it . . . taking advantage of the input-output facilities and unique processing capabilities of the NCR 500, management can shorten the time for organization of data required for efficient operation of a business.

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NCR

THE NATIONAL CASH REGISTER COMPANY

DAYTON, OHIO 45409