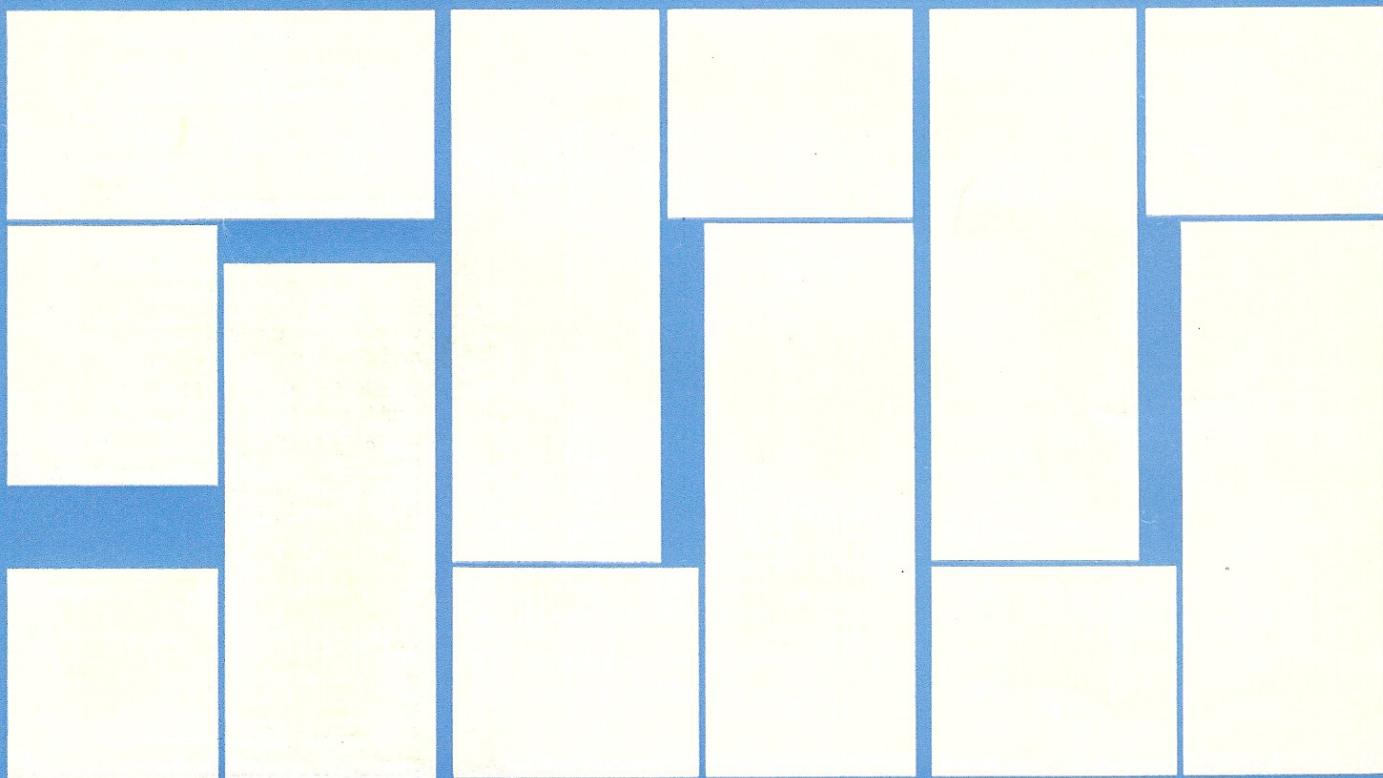# NCR

500 SERIES ELECTRONIC DATA PROCESSING SYSTEM
MAGNETIC CARD CONCEPT

MAGNETIC CARDS FOR UNLIMITED STORAGE...INSTANT REFERENCE

The basis of the 500 Series Magnetic Card System is a dual-purpose document with printed entries on one side and magnetic data on the other. NCR pioneered this record-keeping technique and has already incorporated it in many thousands of business machines.

The cards are an inexpensive form of magnetic storage that can be expanded as required. In the 500 system they are used to maintain business ledgers, or to hold data for engineering, scientific and other computer applications. They also provide a particularly convenient method of storing and inserting programs.

The face of each card is reserved for printed entries. On the back are the four magnetic stripes that form its 'built-in memory'. These can store over 200 characters of alphanumeric data (such as account numbers, names and addresses and balances) plus control signals.

When the card is placed in the console, the magnetic data is read, checked and fed to the processor. During processing, the card is updated both visually and magnetically.

These magnetic files add a new dimension to low-cost data processing. Unlimited storage . . . automatic input . . . the flexibility of visible records that can be referred to at any time without interrupting the computer.

EARNINGS & TAX RECORD

NAME: S D SERPELL

| DATE	GROSS TO DATE	TAX TO DATE	GRADUATED PENSION TO DATE	CHANGES	
				CODE	AMOUNT
7 APR 67	31. 0. 0	6.11. 0	9. 9		
14 APR 67	52. 0. 0	9.18. 0	18. 7		
21 APR 67	66. 2. 2	11. 0. 0	1. 3. 5		
28 APR 67	80. 2. 9	22. 6. 0	1. 8. 2		
5 MAY 67	95. 2. 9	13. 3. 8	1.13.10		
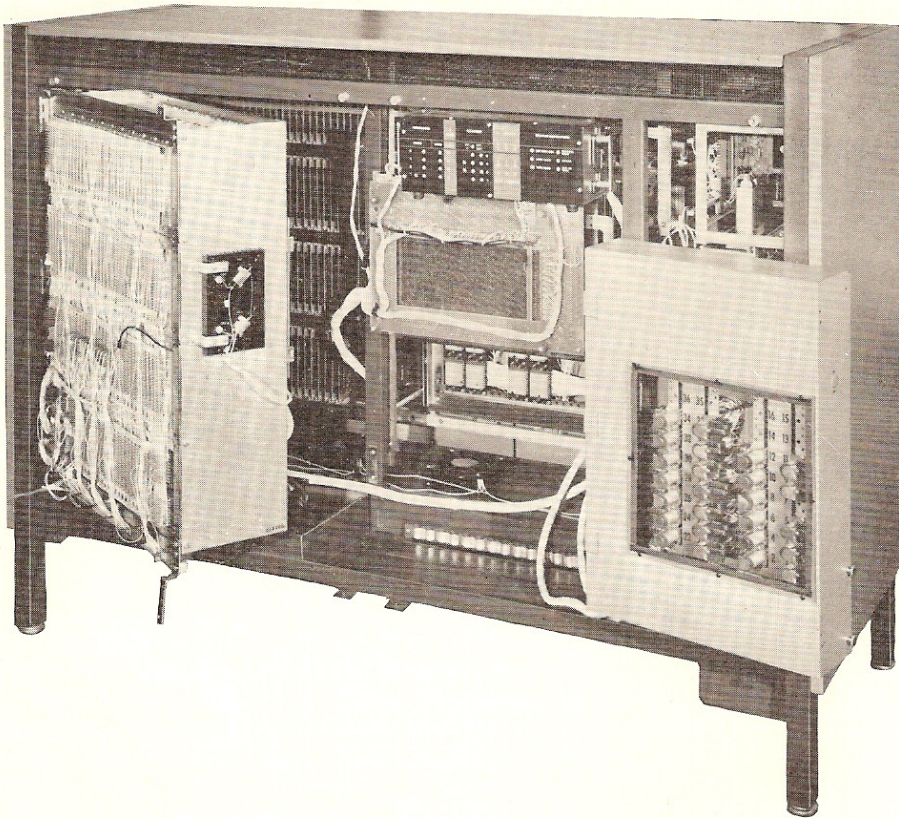
POWERFUL PROCESSOR

The central processor of the 500 system provides *real* computing power in a compact and economical form. All calculations are carried out automatically at speeds measured in thousandths of a second.

Processing is controlled by programs stored in the ferrite core main memory and automatically modified, where necessary, while the work is in progress. For this reason the 500 has the versatility of much larger and more costly EDP systems.

The memory holds 4,800 digits of data in the form of 400 12-digit 'words'. This enables the 500 to use complex programs far beyond the scope of mechanically controlled systems . . . and also makes it possible to perform such operations as the simultaneous analysis of results under several hundred heads.

Of solid-state construction, the processor employs the latest developments in 'wire wrap' circuitry. It is based on NCR's experience of building thousands of computers for businesses throughout the world.
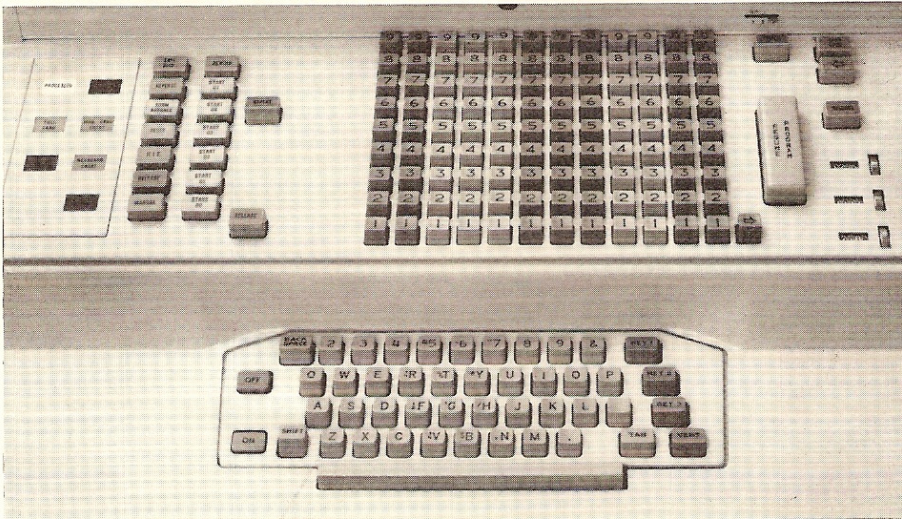
DIRECT-ENTRY CONSOLE

With the 500 system described here, you have two methods of input—direct entries through the console and automatic entries from magnetic cards. This combination provides the most practicable approach to many data processing operations.

By drawing on its unrivalled experience of direct-entry accounting systems, NCR has developed a console that is fast and easy to operate, yet far more versatile than the type normally available to computer users.

Two logically-arranged keyboards enable even inexperienced operators to enter alphanumeric data at high speed. The numeric keyboard accepts both *sterling and decimal figures* and is controlled by a single motor bar.
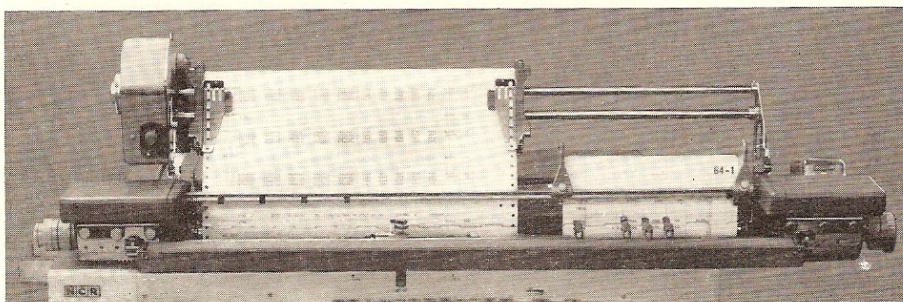
MULTI-FORM PRINTER

One of the big advantages of the 500 system is that complete sets of working documents—for example, invoice, statement, sales ledger and sales journal—can be produced automatically as part of the data processing operation.

The printer, directly controlled by the processor, has a 26-inch printing line and handles all types of document from continuous stationery to magnetic cards.

E EXTRA POWER AND VERSATILITY
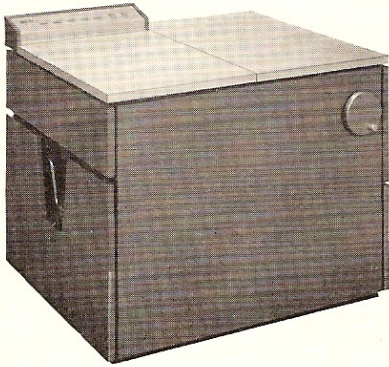
AUTOMATIC MAGNETIC CARD READER

Used on-line to the 500, this unit enables magnetic card files to be processed automatically at speeds of up to 2,500 cards per hour.

As each card is read the reader transmits data to the central processor. The processor, in turn, carries out its calculations and instructs the printer to produce the necessary documents.

In this way many applications—including the preparation of trial balances, stock reports and financial summaries—are made wholly automatic.
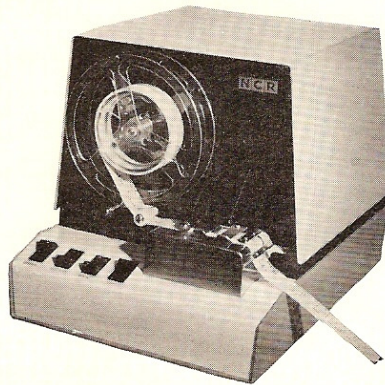
PAPER TAPE INPUT

As your business expands, it may take too long to enter all data through the console. This low-cost photo-electric reader speeds up the input operation by 20 times.

Little more than one foot in all dimensions, it greatly increases the posting capacity of the 500 system and enables analysis to be performed without human intervention.
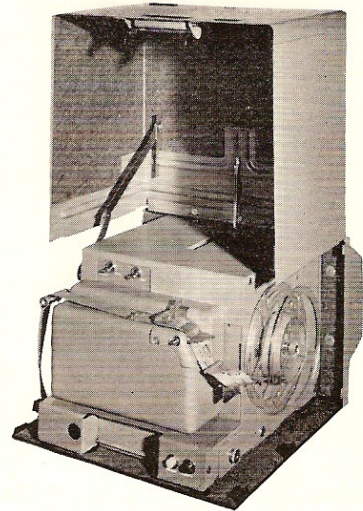
PAPER TAPE OUTPUT

Operating at 30 characters per second, this compact paper tape punch automatically 'captures' data from one application so that it can be used to up-date other records. (For example, job details from the payroll can subsequently be posted to the cost records).
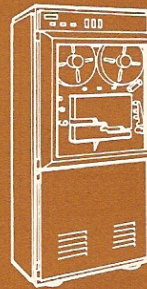
In this way you can develop fully integrated accounting systems without significantly increasing either the cost or dimensions of your 500 installation.
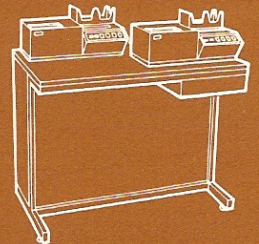
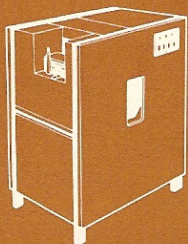**PAPER TAPE STRIP READER**
650 characters per second

PAPER TAPE REEL READER
400 to 600 characters per second
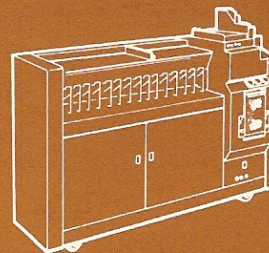
PAPER TAPE PUNCH
120 characters per second
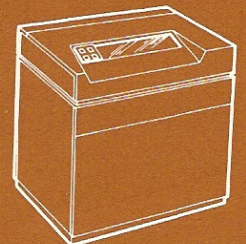
PUNCHED CARD READERS
100 cards per minute

CARD PUNCH
100 cards per minute

SERIAL CARD PUNCH
25 columns per second

PUNCHED CARD SORTER/COMPARATOR
1,000 cards per minute

LINE PRINTER
Up to 125 lines per minute