



IBM Confidential

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The IBM 1401

Model G

Card Data Processing System

A new card processing system that combines the benefits of a stored program computer with the simplicity and low cost of conventional punched card equipment.



PRINTED IN U.S.A.

CONFIGURATIONS

	Model G-1		Model G-2		Model G-3	
	1.4K 100 Prr. Pos.	1.4K 132 Prr. Pos.	2K 100 Prr. Pos.	2K 132 Prr. Pos.	4K 100 Prr. Pos.	4K 132 Prr. Pos.
1401-G	\$ 950	\$ 950	\$1050	\$1050	\$1180	\$1180
1402-4	400	400	400	400	400	400
1403-4	550		550		550	
1403-5		600		600		600
Add. Print		60		60		60
	<u>\$1900</u>	<u>\$2010</u>	<u>\$2000</u>	<u>\$2110</u>	<u>\$2130</u>	<u>\$2240</u>

THROUGHPUT

	Speed	Available Process Time
Read	450 CPM	21 ms.
Print	465 LPM	17 ms.
Punch	250 CPM	22 ms.
Read/Print	450 LPM	20 ms.
Punch/Print	250 CPM/LPM	22 ms.
Read/Punch	250 CPM	22 ms.
Read/Punch/Print	200 CPM/LPM	50 ms.

PROGRAM SUPPORT

Symbolic Programming System 1
Basic Autocoder
Report Program Generator
Fargo
1401 Card Utilities

STANDARD FEATURES

450 LPM list • Early card read and dual speed carriage are standard • Program compatible with other 1401 systems • Interleave read and print or punch and print

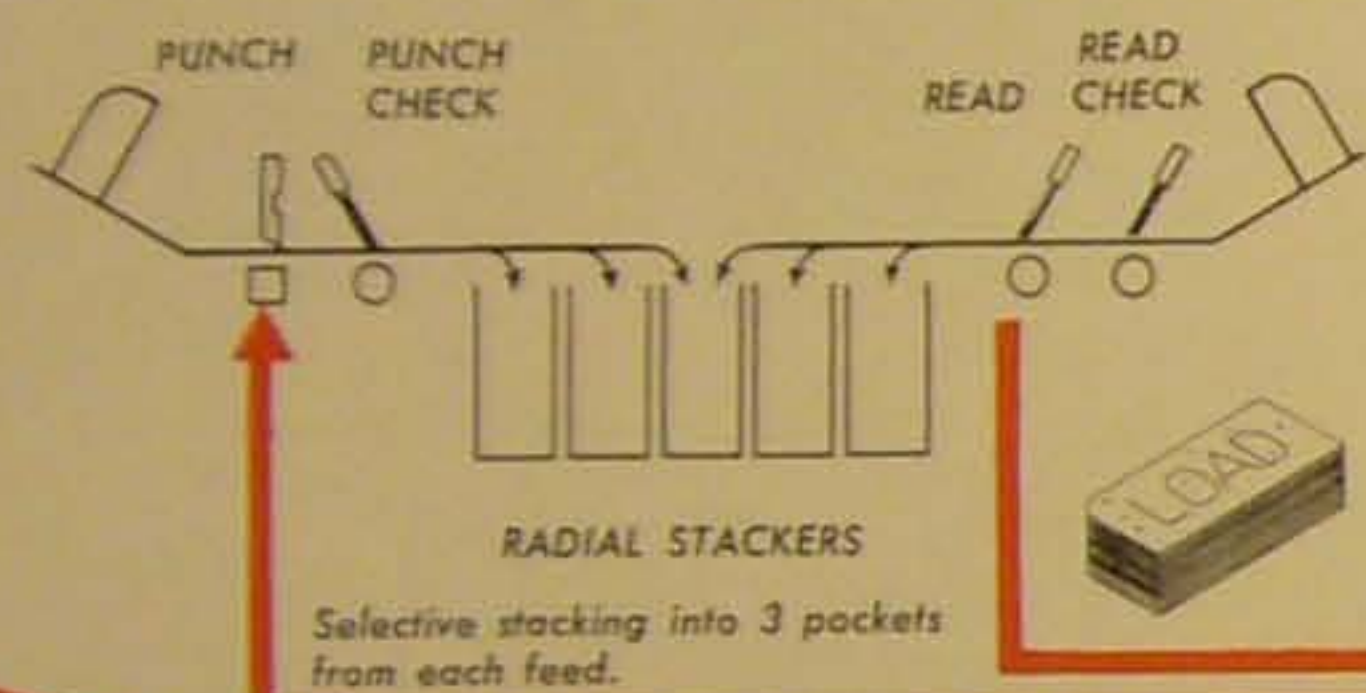
OPTIONAL FEATURES

51 Col. Feed
Punch Read Feed
Auxiliary Ribbon Feed
Interchangeable Chain
Space Suppress
Expanded Print Edit
Add. Print Control
Read Punch Release
Sense Switches
Bit Test
High-Low-Equal

T H E I N S I D E S T O R Y

1402 card read-punch

Punches 250 cards per minute. Reads 800 cards per minute.



1401 processing unit

ARITHMETIC UNIT AND CONTROLS

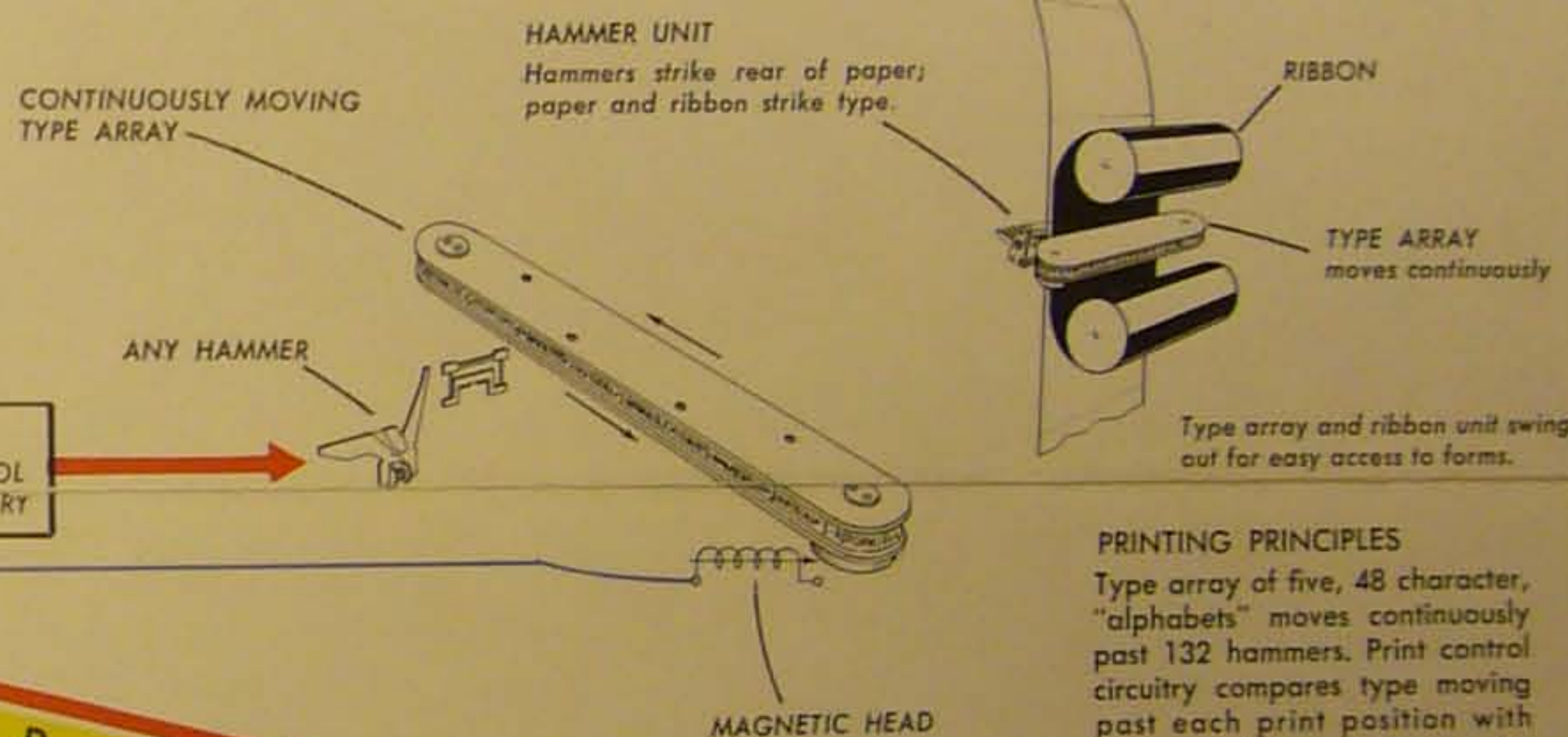
Performs:
Addition, subtraction, comparing, modifying of data (editing). Also multiplication and division (optional feature).

All solid state circuitry, using Standard Modular System (SMS). Transistors, and printed circuits on "cards"; cards plugged to gates; gates contained in "modules" (Cube Approx. 2 1/2 feet on each side); two or four modules per 1401 System.

CORE STORAGE
Storage capacities from 1,400 to 4,000 character positions. Variable Word Length principle — field length is unrestricted in storage unit. Operates on a 12 micro-second storage cycle.

1403 printer

Prints 100 positions (Model 1) or 132 positions (Model 2) at 600 lines per minute.



PRINTING PRINCIPLES

Type array of five, 48 character, "alphabets" moves continuously past 132 hammers. Print control circuitry compares type moving past each print position with storage information to be printed. Hammer is allowed to fire only when character on type and memory character for that position match.

A I D S T O Q U A L I T Y C U S T O M E R E N G I N E E R I N G

Processing Unit

- Operator's Console has printed "picture" of all data flow paths in the entire system.
- If an error occurs, panel lamps will indicate the unit in which the error was sensed. Characters are checked for validity on all transfers of data to and from storage unit.

OPERATOR'S CONSOLE



- During diagnosis, the system may be operated from the console in any of eight modes ("Single Cycle", "Run", and others).



- SMS Modules are both compact and accessible. Swing open any gate in the Processing Unit to expose SMS cards, circuitry, and components.



- DIAGNOSTIC PANEL**
Store any information into core memory from Diagnostic Panel during trouble analysis.
- Additional Diagnostic Panel mounted on SMS gate for 1401 Tape Systems.

Card Read-Punch

- PUNCH CHECK** brushes enable a "hole count" check, assuring that the number of holes to be punched were punched.
- READ CHECK** brushes permit "hole count" checking for the card reader.
- DIAGNOSTIC PANEL**
Set a selector switch to automatically display major Card Read-Punch impulses on dynamic timer index.
Test hubs on panel simplify trouble analysis. Built-in dynamic timer power-pack for your convenience.

Printer



PRINTER OPERATOR'S PANEL

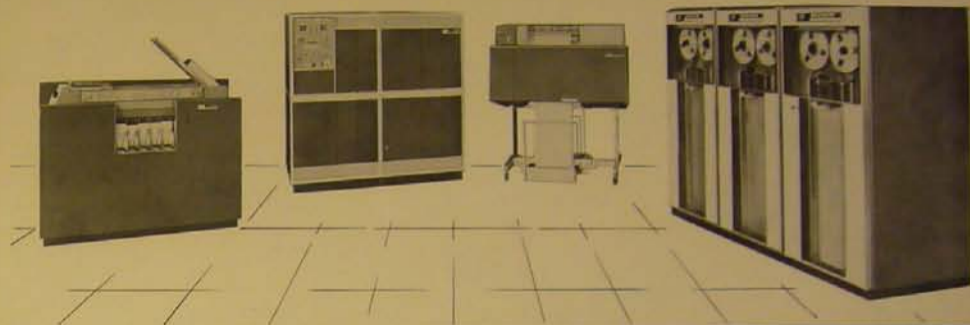
- Operate the printer from separate panel during trouble analysis.

- ERROR CHECKING** features assure reliable operation and easier trouble analysis. Hammer firing check assures that all selected hammers were impulsed to fire and that unselected hammers did not.

ACCOUNTING MACHINE SYSTEM or COMPUTER SYSTEM

Building Blocks of 1401 Systems

- IBM 1403 PRINTER, Models 1 or 2—prints 100 or 132 positions at 600 lines per minute.
- IBM 1402 CARD READ-PUNCH — reads 800 cards per minute; punches 250 cards per minute.
- IBM 1401 PROCESSING UNIT — any of four models can control the system's operation, providing flexibility to fit many needs. The smallest model controls the system to perform accounting machine functions. The three remaining models may be expanded to the computer range, including the ability to multiply and divide, control magnetic tape units, and communicate with the IBM 1210 Sorter-Reader.
- IBM 729 MAGNETIC TAPE UNIT, Models II or IV— up to six of these transistorized tape units may be used with 1401 Tape Systems.



1401 TAPE SYSTEM

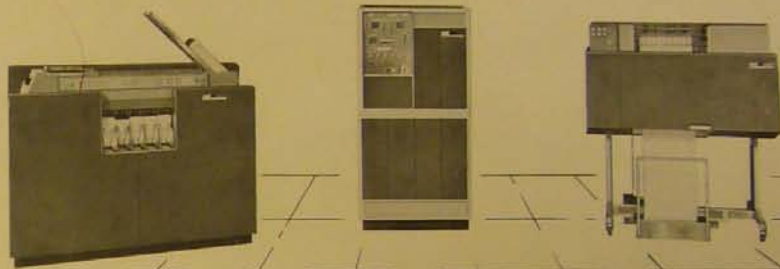
- **CREATIVE DESIGN** ● completely transistorized ● no control panels
- variable word length principle of stored programming ● new printing method.

- **RELIABILITY** IBM craftsmanship means reliable operation at high speeds.
- Prints 600 lines per minute.
- Reads 800 cards per minute.
- Punches 250 cards per minute.
- Reads and writes tape at 62,500 characters per second.

- **FEATURING QUALITY CUSTOMER ENGINEERING** ● circuitry and components readily accessible
- continual data validity checking ● data flow paths printed on operator's console ● separate diagnostic panels for your exclusive use ● automatic diagnostic programs possible.

Customer Engineers! Introducing—

THE IBM 1401 DATA PROCESSING SYSTEM



1401 CARD SYSTEM



INTERNATIONAL BUSINESS MACHINES CORPORATION
590 MADISON AVENUE, NEW YORK 22, N. Y.

Printed in U.S.A.

R 25-4608-0

1401 CARD SYSTEM

A complete stored-programmed accounting system, integrated for efficiency. Can also be used to augment any existing system.



Model A

Optional Features

- *Expanded Print Edit
- *Read Punch Release
- *Sense Switches (6)
- *Additional Print Control

Complete in itself, this more powerful system can also be connected to the IBM 1210 Model 4 Sorter Reader to enhance the power and service to financial institutions.



Model B

Standard Feature

Dual Speed Carriage

Optional Features

- *Expanded Print Edit
- *Read Punch Release
- *Sense Switches (6)
- *Additional Print Control
- Multiply/Divide
- 1210 Model 4 Sorter Reader Adapter
- Print Storage
- Column Binary
- High/Low, Equal Compare

*Can be field installed

1401 TAPE SYSTEM

A complete magnetic tape system. Features totally alphameric printing in 132 positions. Providing substantial savings in tape editing, this system can edit magnetic tapes prepared on 650, 705, 7070, 704, 709 and 7090 systems. Up to six 729 II or IV Tape Units can be used for handling large volumes of work. Model C provides greater power and service when connected to the IBM 1210 Model 4 Sorter Reader.



Model C

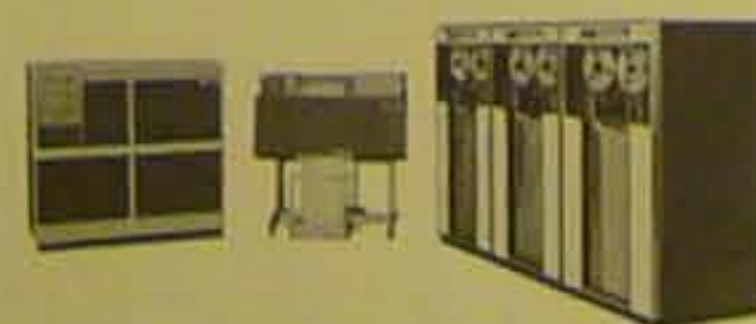
Standard Features

- Expanded Print Edit
- Read Punch Release
- Sense Switches (6)
- Additional Printer Control
- Tape Input/Output Adapter
- Dual Speed Carriage

Optional Features

- Multiply/Divide
- 1210 Model 4 Sorter Reader Input Adapter
- Print Storage
- Column Binary
- High/Low, Equal Compare

For 700/7000 Series users, Model D will serve either as a tape editing system or as a complete data processing system using magnetic tape input. It will print in 132 alphameric printing positions and will edit magnetic tape prepared on 650, 705, 7070, 704, 709 and 7090 systems. Up to six 729 II or IV Tape Units can be used.



Model D

Standard Features

- Expanded Print Edit
- Sense Switches (6)
- Additional Print Control
- Dual Speed Carriage

Optional Features

- Print Storage
- High/Low, Equal Compare
- Tape Input/Output Adapter

IBM

International Business Machines Corporation
590 Madison Avenue, New York 22, N. Y.

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