

# 1101

KEYED  
DATA-RECORDER

TRANSFORMS YOUR ENTIRE  
DATA PROCESSING INSTALLATION  
TO MAGNETIC TAPE  
TECHNOLOGY



# MDS

MOHAWK DATA SCIENCES CORPORATION • HERKIMER, N.Y. 13350

# THE 1101

*TRANSCRIBES DIRECTLY*

MDS 1101 Magnetic Tape Keyed DATA-RECORDER is compatible with all existing IBM installations and most others.



An **1101** exclusive:  
In a single 024-size unit, it combines the functions ordinarily performed by a Card Punch, Key Verifier and Card-to-Magnetic-Tape conversion runs.

#### OPTIONAL DEVICES

- **UNIT RECORD COUNTER** . . . counts number of records on tape.
- **SELF-CHECK DIGIT DEVICE** . . . arithmetically proves correctness of number at time of entry.
- **ALTERNATE PROGRAM MEMORY** . . . allows additional record formats in one run.

The 1101 color-coded keyboard is designed for maximum keying speed and minimum operator fatigue. It makes changeover of trained operators...from earlier, less efficient keyboard equipment...as easy and as fast as possible. Movable for operator convenience.

# MAGNETIC TAPE KEYED DATA-RECORDER...

FROM **SOURCE DATA** TO **COMPUTER MAGNETIC TAPE...WITH NO**

The 1101 brings you the first real improvement, in the job of key transcribing, since the electrified keyboard!

The 1101 is not merely a "rehash" of an obsolete machine ...

It is an entirely new, original, better approach to "Faster, Lower-Cost Management of Information through Electronics".



The 1101 Keyed DATA-RECORDER is a revolutionary development to provide greater efficiency in magnetic tape computer installations. E.D.P. savings from operator time reduction, and better utilization of main-frame time, are available when 1101 replaces card punch and key verifier.

Data processing installations using magnetic tape can operate more efficiently when the **raw input data** is provided to the system on magnetic tape... which is faster and more easily manipulated than most other media.

The MDS 1101 now makes it possible to transcribe information from source documents directly to the usual 1/2" magnetic tape, on standard reels... and to verify the accuracy of the transcription.

Operation is in any of three modes: ENTRY (original recording), VERIFY or SEARCH. Desired mode is obtained by a simple switch setting. **Machine-function programming flexibility is provided for each mode.**

The electronically stored program system of the 1101 gives all of the automatic features available with the electro-mechanical drum card method used on yesterday's machines.

A simple, direct means for setting up a machine-controlled program is provided. Once a program is established, it can be stored for re-use whenever required. Program malfunction due to mechanical difficulty is minimized, since the 1101's Machine-Control Program is designed using only solid-state electronics.

Common information is duplicated into successive records without time delays that interrupt the operator cadence. Duplication can be controlled by the pre-set program, or by the operator from the keyboard.

INTERMEDIATE MEDIA...AND VERIFIES!

# 1101

## MODERNIZE YOUR DATA ENTRY METHODS... MOVE ON TO CONTEMPORARY TECHNIQUES

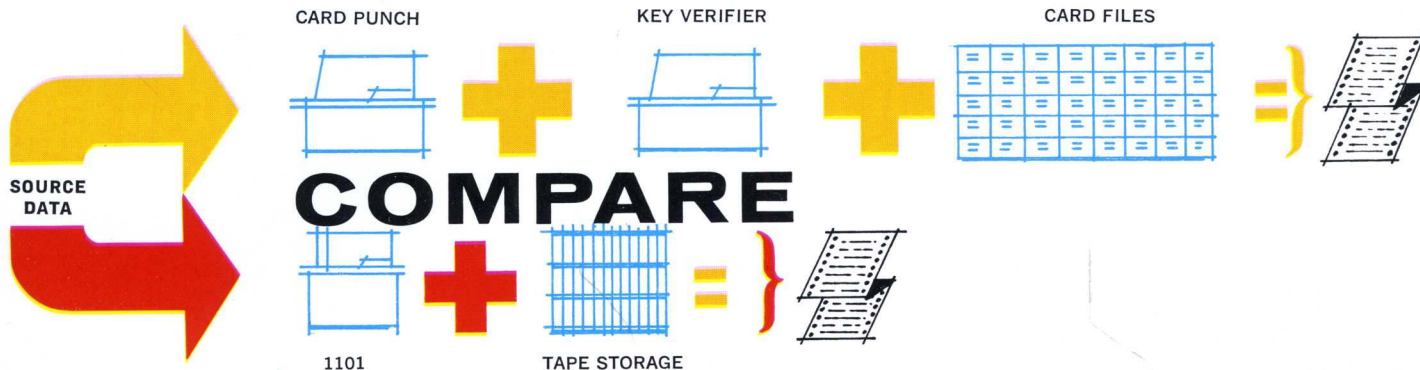
- No punched cards • Less main-frame time just to "get in" • Reduced lag time from source to report • Reduced interpreting requirements
- Automatic right justification (left zero fill)
- Keyboard correction of "sensed" errors during entry and verification... and of errors found in verification • The 1101 permits and encourages an even keying cadence for greater operator production • Skipping speed is over 150 times as fast as in existing models • Duplicating speed is 600 times faster • Almost silent operation reduces operator fatigue... actually, sound was deliberately built in to satisfy the operator • Right hand justification...at no extra cost...eliminates the need for field positioning arithmetic and decision...requires fewer operator decisions • The 1101's large memory position display is better than tiny card column numbers • Tape requires less filing space than cards • Greater security of information...no lost or misfiled unit records with 1101 magnetic tape • Work scheduling is flexible...no time lost waiting for the right machine • Less down-time and maintenance with completely solid-state electronic elements than with electro-mechanical equipment.

### PRODUCTION IMPROVEMENTS WITH THE 1101

- A. Skip speed of 80 microseconds per data position on the 1101 vs. 12,500 microseconds on a card punch.
- B. Duplicate speed of 80 microseconds per data position on the 1101 vs. 50,000 microseconds on a card punch.
- C. Automatic verification speed of 80 microseconds per data position on the 1101 vs. 12,500 microseconds on the latest key verifier.
- D. Automatic right-hand justification (left zero fill) of data as in quantity or money fields.
- E. No time-loss correction of "sensed" keying errors during entry and verification... and errors found in verification (just backspace and write the correct characters. Even transpositions and major errors are easy to correct).

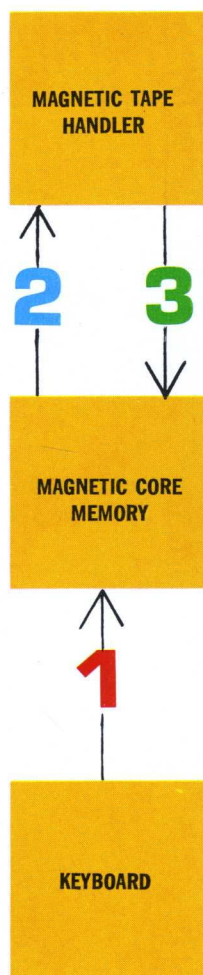
**FASTER KEY ENTERING** — The 1101 permits your operators to key-enter data in 50% to 75% of the time previously required. The secret of this proven saving is the function speed of the 1101, allowing a touch-method operator to maintain a constant, even rhythm. Even the fastest operator is able to maintain a steady cadence.

**VERIFICATION SHOWS EVEN GREATER TIME SAVINGS** — All of the 1101 features that contribute to fast, even key operation also apply to verification... PLUS the fact that error correction is accomplished **immediately** by the verifying operator. No delays for reproducing, re-transcribing, re-punching, or other time-consuming and costly procedures.



# HOW THE 1101 BOTH TRANSCRIBES & VERIFIES ENTRY

## ENTRY

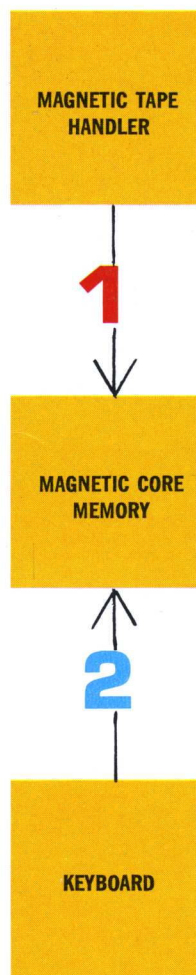


1. Operator key-transcribes information into 1101 Magnetic core memory. If a keying error is "sensed," the operator merely backspaces and makes correct entry.

2. Upon command, the unit record in memory is written on magnetic tape. Horizontal and longitudinal parity are calculated and written on the tape with the data.

3. The 1101 automatically backspaces one record, and reads the record just written. Information on tape is checked bit-for-bit against the memory, and parity is checked.

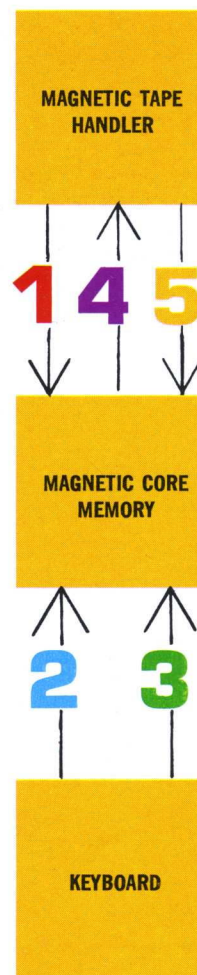
## VERIFY



When verifying...if no errors are found...the 1101 does this:

1. A unit record is read from an entry tape and copied in the magnetic core memory. As this is done, all characters programmed for automatic verification are verified.

2. Operator keys in all information to be verified from the source document. Each keyed character is compared with the character in memory. If no differences are found, the next unit record is read from tape memory.



When verifying...if an error is found...the 1101 does this:

1. A unit record is read from an entry tape and copied in the magnetic core memory. As this is done, all characters programmed for automatic verification are verified.

2. Operator keys in all information to be verified from the source document. Each keyed character is compared with the character in memory.

3. If an error is found, the verify operator determines the correct character, touches the Error Release Key, and keys the correct character into the memory. The machine is conditioned to remember that an error has been found.

4. Because an error was found, the corrected record in memory is written on the magnetic tape in place of the record containing the error.

5. The corrected record just written on tape is read, automatically, and compared with the memory record... bit-for-bit and parity.

# A COMPOSITE OF EXPERIENCE AND IMAGINATION

Long both on experience and imagination, Mohawk Data Sciences Corporation is ideally equipped to make advanced contributions to the booming data processing industry. The MDS staff has been carefully selected to meet the high "experience/imagination mix" standards established by the founders. The result is a highly skilled combination of specialists completely dedicated to the success of the venture. Creative thinking is our stock-in-trade at MDS. Our intent is to concentrate our efforts in the field of electronic data processing... applying our creative abilities to advancing the "management of information through electronics". Although the 1101 Magnetic Tape Keyed DATA-RECORDER is only now reaching the market, several other new products of equal or greater importance are in various stages of design. Our long range planning includes development both of improved peripheral equipment, and new devices for which there is a known need but no available supply. We'll be pleased to discuss your data processing problems with you... demonstrate how the MDS 1101 Magnetic Tape Keyed DATA-RECORDER can speed up your operator production, cut data processing costs.



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