

# ENTREX MODEL 720 OPTICAL DOCUMENT SCANNER

## Overview

ENTREX has a new answer to the steadily increasing workload in the Data Entry Department — an inexpensive Optical Scanner that really works.

The Model 720 Optical Document Scanner may be added at any time to System 480 as an evolutionary first step into optical scanning. A User may install S480 to realize savings in time and increases in flexibility of data management and then add Model 720 Document Scanner at any time with absolutely no interruption of workflow.

With the addition of scanning capability, System 480 becomes a true multi-media data entry system in which data from machine-printed documents is automatically captured and processed concurrent with keyboard entry from up to 32 keystations.

Applications for Model 720 are found in banking, insurance, retailing — especially mail order, utility billing, and many others.

## Operation

Operation of Model 720 Document Scanner is extremely simple. Documents to be scanned are batched and placed in the automatic feed hopper. The supervisor starts a job and the documents are then read by System 480 one after another to the end of the batch. Rejected characters are entered in the data records as System 480 error flags, and cause the document to be stacked in the reject hopper to assist in later correction.

Following batch entry from the scanner, the data is available for validation using all the power of ENTREX field, record, and batch editing techniques. Data may be sorted if necessary, and printed, communicated or written on magnetic tape in the exact format expected by your mainframe.

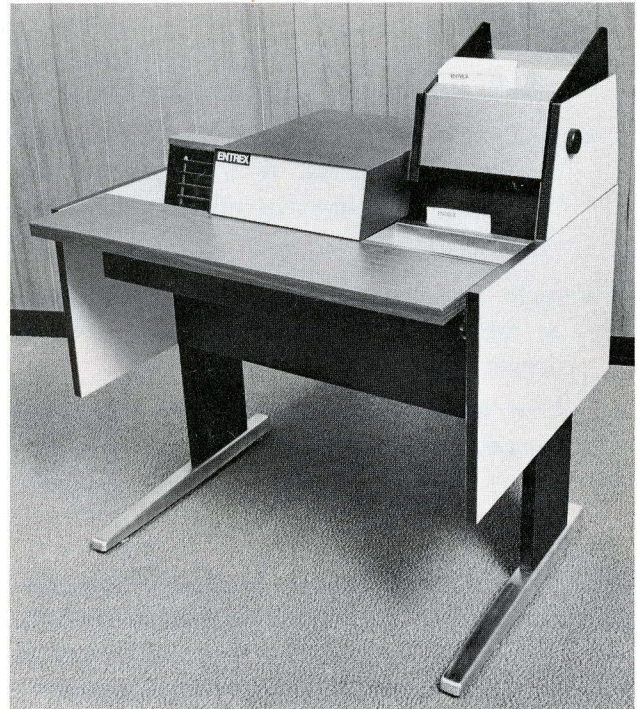
## Scanner Hardware Features

### Document Size

Width — 3.5" minimum to 9" maximum  
Height — 3" minimum to 6" maximum

### Thickness

Minimum: .003 (20 lb. bond)  
Maximum: .007 (Tab card stock)



## Throughput

Documents pass through the scanner at the rate of 10 inches per second. A maximum of 64 characters may be read from one document. Throughput is 50 documents per minute for a typical document. Maximum data rate is 3200 characters per minute, or 192,000 characters/hour. For comparison, this would be equivalent to approximately 20 operators.

## Character Set

ANS-A (OCRA, size 1)

The numbers 0 1 2 3 4 5 6 7 8 9 and vertical bar ( | )

## Reading Performance

Reject Rate — less than 1 in 10,000 characters\*

Substitution (error) rate — less than 1 in 50,000 characters\*

*\*Subject to acceptable print quality*

## Hardware Options

- Fonts. Additional numeric fonts such as the following are planned for availability in 1975:

IBM 1428

OCR B

E 13 B

- Extended OCRA character set: adds to the standard character set the letters C N S T X and Z plus the OCRA control characters fork (  $\Psi$  ), chair (  $\Upsilon$  ), and hook (  $\text{J}$  ).
- Audit Trail Printer — Prints up to 32 characters on the face of the documents scanned, under System 480 control.

*Note: When the Audit Trail Printer is used, maximum document width is 7.5".*

## Software Features

No special software is required for Scanner operation. Information scanned is automatically divided into fields and associated with a processing format and stored in batches on the disk as it is read. Characters rejected by the scanner are entered as error flags. The standard system features are then used for checking and correction of errors before output of data batches for mainframe processing.

- Validate Batch. System 480 begins at the first record of each batch and applies all field, record and batch edit checks specified in the formats and the standard job. OCR fields may be checked in this manner for content, range, check digit validity and batch balance, among others. Errors are flagged for correction.
- Automatic Error Flag Search. Each error flag is located automatically and the cursor positioned over it for correction. The operator only needs to strike the proper character to replace the error flag after which the system automatically resumes the search for the next character.

- Update Batch. Where the application requires both scanned and keyed entry, System 480 automatically locates field positions within the records created during scanning where new data is to be keyed or verified.

Following validation and correction, batches may be merged with other batches, collated with additional file data and output in any of the forms provided by System 480.

## Industry Applications

The Model 720 Document Scanner is ideally suited for use in turnaround document applications. Fonts read are the most widely used industry fonts. Documents may be prepared on the ENTREX Line Printers Models 533 and 536, on any other computer printer, or on Selectric typewriters equipped with the OCRA typing element.

Following is a brief list of some of the applications for which Model 720 is well suited for use.

- Insurance: Direct premium billing, draft reconciliation, special billing or refund accounting.
- Banking: Lock box operation, mortgage billing, trust accounting, stock transfers.
- Utilities: Meter recording, billing.
- Government and municipality tax billing.
- Retail companies and membership associations: Billing and retail promotion — offers, order processing and billing.
- Oil companies and bank card associations: Transaction accounting and billing.
- Publishing: Subscription fulfillment.
- Manufacturing: Inventory control, material movement tickets, time reporting.