ENTREX SYSTEM 480 DESCRIPTION

GENERAL

System 480 is the most powerful member of the ENTREX family and features advanced hardware and software capabilities such as: Communications, OCR, Command Sequence Processor and Sort.

SYSTEM 480

SOFTWARE

System operations, from formatting keyed data and generating the CRT display, through data editing and validation, to reformatting data records and writing blocked output to tape (including appropriate labels) are executed under software control. The following is a selected list of standard software features:

- Entry, Verify, Validate and Examine modes
- Unlimited input record size
- Unlimited program storage
- Search arguments — Record number, error flag, character sequence or field content
- Auto Dup, Skip, Increment fields
- 10 formats per job
- 5 Batch balance accumulators
- Table look-up (20)
- Batch protection
- Two flexibly-defined check digit routines
- Multiple supervisor operations — any keystation, password protected
- Multiple operators per batch
- Batch interrupt and resume
- Alpha only/numeric only — with customer specified exceptions
- Error flag insertion
- Continuous job status display
- Output blocking to 1000 characters
- Range Check — inclusive or exclusive
- Field mandatory entry and completion checks
- Record insert and delete
- Command Sequence Processor
- Auto Search
- Sort — up to 200 character keys in ascending and descending order
- Branched fields

Optional Software

- Additional check digit routines (3—15)
- Operator analysis package (includes clock)
- Expanded output blocking to 4000 characters

HARDWARE

Central Processor: 1.2 microsecond cycle time, 16-bit word, with 65,536-byte maximum capacity. Power failure detection and automatic restart features are standard.

Disk Drive: A two-surface, 2.4 million byte disk provides high-speed intermediate storage for the System 480. Additional modules of disk storage may be configured for a maximum of 9.6 million bytes of intermediate storage.

Tape Drive: Standard half-inch magnetic tape, capacity up to 2400-feet on 10-½" reels. Seven and nine channel 800-bpi (NRZI) or 1600-bpi phase modulation encoding. Reading and writing occur at 25-inches/second, rewind speed is 150-inches/second. Industry standard error checks, including read-after-write checking, are basic magnetic tape features.

Data/Scope Keystations: Integrated keyboard/CRT unit. The User can select both an 029 keypunch and a typewriter keyboard layout. Both keyboards include 17 function keys, and the typewriter-style keyboard also has a 10-key numeric pad. System 480 CRT display presents 12 lines of 40 characters. Status and diagnostic error messages appear in the upper two lines, while tags and data are formatted in the lower ten lines. The screen cursor is a blinking rectangle of light which indicates where the next character will appear on the display.

Optional Hardware

- Nine channel 1600-bpi alternate tape drive.
- Serial Printer — 165 characters-per-second, 132 characters-per-line. Horizontal spacing is 10 characters/inch, vertical 6 lines/inch. A 63-character print set is formed by a 5 by 7 dot matrix. Form widths from 2 to 14-3/8 inches are acceptable.
- Line Printer — 300 lines/minute, 132 print positions/line, 10 characters/inch horizontal, 6 lines/inch vertical. Paper width can be up to 19.5 inches.
- Line Printer — 600 lines/minute, 132 print positions/line, 10 characters/inch horizontal, 6 lines/inch vertical. Paper width can be up to 19.5 inches.
- Card Reader — 300 cards-per-minute and 51 column read option.
- Document Scanner — 3000 documents-per-hour. Automatic feeding.

COMMUNICATIONS

Remote Keystations are provided for those applications where the 1000-foot direct cable connect constraint must be exceeded. Remote Keystations transmit data over a half-duplex switched network or leased lines. Each remote keystation adapter includes an ENTREX-supplied modem which allows transmission up to 1200 bits-per-second.

System-to-System Communications provides System 480 with the ability to communicate with any other ENTREX System, or any of the several mainframes (360, 370, Burroughs, etc.) observing Binary Synchronous Protocol and equipped to support the IBM 2780 Remote Batch Terminal. With this capability, ENTREX joins a large and growing number of manufacturers providing the ability to become a plug-compatible IBM 2780 for communications to a mainframe or each other.

TECHNICAL DESCRIPTION

Control Group

Dimensions: 26" wide x 31" deep x 65" high.
Weight: 660 lbs.
Power: 117 VAC ± 10%, 15 amps, 60 Hz.
Controls: Locking system power switch and momentary contact switches to select cold start and the source of start routines — tape or disk.

Data/Scope Keystation

Local Storage: MOS Shift registers.
Power: 117 VAC ± 10%, 1.6 amps, 60 Hz.
Data Transmission to Central Unit: Serial, phase-encoded, bipolar with excellent noise margins.
Workstation: Large usable work area, locking personal effects drawers.
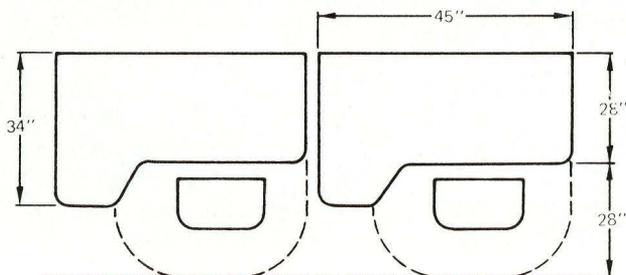Dimensions: See Figure 1 (below).

Figure 1. Data/Scope Space Requirements

INSTALLATION REQUIREMENTS

Control Group

1. Adequate area for the Control Group allowing easy access to the tape drive and the back of the unit.

2. A single-user power circuit capable of supplying 20 amp service at a Hubbell 7310B wall receptacle.

3. Air conditioning adequate to maintain a temperature between 65° and 80°F and a humidity level between 40% and 80%.

Data/Scope Keystation

1. Adequate area for the keystation and operator must be provided; see Figure 1.

2. Keystations must be within 1000 feet of the Control Group.

3. Electrical outlets are required to provide 117-volt, AC, 60 Hz, three wire service. A common bonding ground is required for all keystations and the control group.

4. Air conditioning adequate to maintain a temperature between 65° and 80°F and a humidity level between 40% and 80%.

Up to 32 keystations of the same type can be added to a system at any time. Cable raceways are available to cover cabling between Data/Scopes and the Control Group.

SUMMARY

The ENTREX System 480 has two highlights which at first glance might appear to be mutually exclusive features: ease of use and full high level computing capabilities!

Ease Of Use

Among the many advanced human factors features are:

● Using the computer to assist the operator. The System 480 "HELP" Lists are interactive aids available to the operator throughout the keying process (not just at start-up). The "HELP" Lists present the operator with detailed options, eliminating the need to memorize procedures or turn to reference materials.

- Error and prompting messages are presented in unabbreviated English phrases. The message repertoire is large and explains the specific situation in context and in English — not cryptic code.

- The System 480 CRT together with "HELP" Lists and message prompting speeds training and increases operator confidence to allow immediate full productivity.

- Single pass data capture — unlimited input record size allows one operator to enter the entire record.

Computing Capabilities

Concurrent with keying, the System 480 can perform the following functions:

- Editing — at all levels: character, field, record and batch.

- Sort — up to 200 keys of ascending and descending order can be specified in a record.

- Communications — between ENTREX systems, ENTREX system to 360/370 computers, or from remotely located Data/Scope keystations.

- Multi-Media — OCR and card input.

- Media Conversion — tape-to-tape, card-to-tape, tape-to-print, etc.