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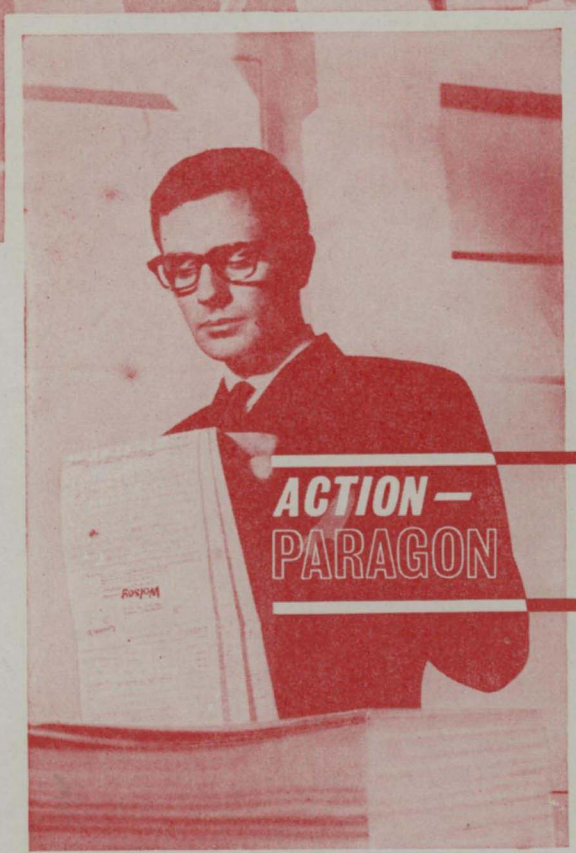

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I·C·T Datagram No. 2

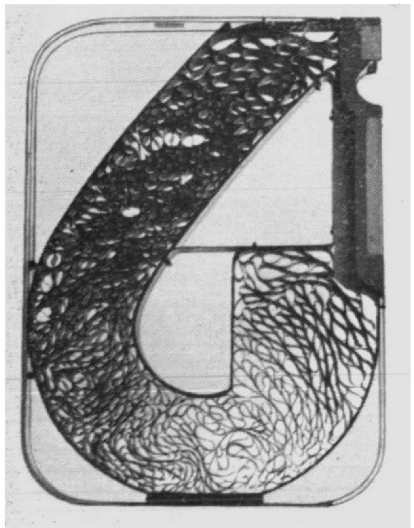
Cassette tape unit

REVOLUTIONARY CASSETTE SAVES THOUSANDS ON PRICE OF NEW I.C.T. 1901 COMPUTER

Literally thousands of pounds have been saved on the price of the new I.C.T. 1901 computer by this revolutionary cassette tape deck. Here are some of the facts about it.

How it saves money. Tape systems in general are designed for large files. These hold on average 12-15 million characters, two thousand per block. But sometimes *small* files need magnetic tape. And up to now they have had to have a scaled-down version of a large tape system—with all its reels, drive motors and servo mechanisms.

The cassette puts an end to this needless expense. It is *designed* for small files. Tape length is 240 feet, precisely fitted to the size of the cassette. A fast start/stop time makes small blocks feasible and these save space in small computer stores. A special commercial language, NICOL, makes programming easy and 80 character blocks can be used to make it simple to transfer from punched card systems and use a unit record format.



In the I.C.T. 1901 cassette, the length of the tape has been precisely determined so that the pressure exerted by one loop on another eliminates any possibility of the tape twisting.

In this form, cassette capacity is nearly 880,000 characters (it can be as much as 1,530,000) or about six full trays of cards. There are four cassettes on line at one time in a 1901 configuration *and this amount of data is more than enough to satisfy the needs of a very large number of users.*

Cassette characteristics:

Needs minimum air-conditioning. (a) Because the tape is enclosed and therefore protected from dust and atmospheric conditions, and from general handling dangers. (b) Because the tape is loosely looped and *not* wound on a reel. (As you know, during storage the tape on the outside of a tightly wound reel is more exposed to atmospheric changes than the inside, and consequently to uneven expansion and contraction. This can result in distortion of the tape.)

Saves on space. The cassette needs 75% less floor area than conventional tape units.

Loads easily, safely. There is no threading of tape, linking with leaders or screwing-on of reels—the cassette is just pushed in. The usual automatic label checks are built into the software.

Performance details

Low start/stop time—six milliseconds. So this 10kc tape is actually faster than a conventional 20kc tape when handling block sizes of up to 240 characters.

Tape life—is better than 10,000 loop passes, or five years if a file is read daily. One reason for this long life is the 'G' shape design. The tape channel curves up at the bottom, so the drive mechanism never has more than the weight of half a loop to pull. Another factor: the channel is lined with a special tape coated with millions of glass beads—which give the cassette tape a low friction (0.2) static-free ride.

Reliability. A read-after-write check is provided. Permanent read error rate (i.e. errors not corrected automatically by the Executive program) is remarkably low—better than 1 in 10^{11} bits read. Any transient read and write errors are detected by check procedures—one during writing, one during reading—and automatic corrections made by Executive.

Recording system. This is a bit and character serial system, so only one track of the eight is read on one pass of the loop. This greatly reduces skew problems and of course means a big reduction in the amount of circuitry needed compared with a conventional tape, where seven or nine tracks are read at the same time.

For further information about the cassette, the 1901 computer, or any other of the 1900 Series machines, please get in touch with your local I.C.T. office.

1900 Series sales reach £50 million

Fact—by February 12th, 1966, 392 I.C.T. 1900 Series computers had been ordered. Sales value £50 million.

Fact—136 of these are for export.

Fact—by the beginning of February, 55 had already been delivered. And this year deliveries will be increased to a rate of one per working day.

Fact—Only five months after its announcement, 108 I.C.T. 1901 computers had been ordered.

Fact—In recent tests carried out under the surveillance of experts from a Government Department, the reliability factor of a 1900 Series computer was shown to be 99.8%.

Footnote

Against keen international competition, I.C.T. has recently won large orders from The British Aircraft Corporation and the Ministry of Pensions and National Insurance. These orders amount to approximately £2 million—a notable triumph for the British computer industry.

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