The 'basic' Zebra, shown above, is used mainly for mathematical and scientific research. Because it can be adapted for use with most forms of input/output equipment, Zebra can also serve as the control centre for small or medium-sized Data Processing Systems.

Zebra compares favourably with larger machines, and in its field leads in performance, reliability and flexibility. This is due both to the novel programming philosophy upon which it is based and to the up-to-date methods of equipment practice used in its construction, which incorporate, for example, overall use of plug-in units and printed circuitry and the judicious selection of transistors for track switching.
**BRIEF TECHNICAL SPECIFICATION**

Mode  
Serial/binary.

Word Length  
33 binary digits (including 1 sign digit).

Word Time  
312 microsecs.

Main Store  
Magnetic drum with capacity of 8,192 words.  
Speed of 6,000 r.p.m.  
Maximum access time of 10 ms (average of 5 ms).

Computing Store  
12 immediate access registers, each of 1-word length.  
2 accumulators.

Optimum Operation Times  
Addition, subtraction—312 microsecs.  
Multiplication—11 milliseconds.  
Division—35 milliseconds.

Monitor/Test  
Monitoring C.R.T. displays contents of four stores at any one time;  
Marginal control facilities;  
Test keys for maintenance checking;  
Plug-in units for ease of maintenance.

Power Supply  
Approximately 5 kVA.

**SOME PROGRAMMING FEATURES**

Normal Code  
15 single letters each perform a particular basic operation of arithmetic, transfer, control or testing. Many operations can be executed in the same word time—this increases the intrinsic speed and flexibility of the machine.

Simple Code  
This is a simple order code, slower than the Normal Code; yet favourable speeds may be obtained.  
All calculations are performed in floating point.  
Sample Simple Code performance: inversion of a $30 \times 30$ matrix in 63 minutes.

In using these codes, Zebra can be made to operate as a 1 + 1-address, 2-address, or 1 + B (modifying)-address machine.

**BASIC INPUT/OUTPUT**

Input Medium  
Normally 5-channel punched paper tape.

Input Device  
A high speed photo-electric paper tape reader normally operating at 100 characters per second (maximum is 200 characters per second).

Output Devices  
High speed paper tape punch at 50 characters per second.  
7-character per second on-line teleprinter (50 bauds).