blown to life at 50 feet

According to a man who knows, automatic ejection isn't the most pleasant way to get out of an aircraft.

Low-Level Escape. The photo strip on the left graphically illustrates the result of dummy tests carried out on the Martin-Baker 2E seat in a CF-100 a scant 50 feet above Toronto's Malton airport.

Operation of the M-B 2E seat has been well described by Donald A. Ridler, flight test engineer at Avro Aircraft.

High velocities are the keynote of ejection to ensure the seat and crewman will clear the aircraft's tail assembly by a wide margin under all flight conditions. The speed must develop during a very short power stroke since the space available for guide rails is limited.

Human Element. In developing ejection seats, designers not only had to solve mechanical and installation problems. They also had to analyze certain physiological characteristics of the men who would be using the seats.

Tests showed that 18 to 20 "G" could be applied safely for the upward ejection if the rate of application was kept below 250 to 300 "G" per second and the body well supported.

Good position is almost inevitable in the Martin-Baker 2E seat since it is necessary to reach both hands back over the head and pull a blind over the head and face to fire the seat.

In the newer Mk. 3 seat, leg-restraining straps are fitted instead of footrests. These pull the legs back under the seat during ejection to keep them from flailing in the airstream.

Automatic Separation. Once clear of the aircraft, the 2E seat is decelerated with the man still aboard. Separations and opening of the chute is automatic. A two-foot diameter drogue chute keeps the seat from tumbling after ejection and rotates it to almost a horizontal attitude.

Under 10,000 feet, separation from the 2E seat takes place five seconds after ejection. In effect, the airman is lifted out of the seat by his fully developed chute and starts normal descent.