

AC NO: 90-40

DATE: 9/5/68



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT: INTERSECTION TAKEOFFS**

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1. PURPOSE. This circular apprises pilots concerning procedures governing intersection takeoffs.
  2. REFERENCES.
    - a. Airman's Information Manual (AIM).
    - b. Advisory Circular 90-14A, Altitude-Temperature Effect on Aircraft Performance, dated January 26, 1968.
  3. BACKGROUND.
    - a. The ever increasing volume of aircraft operations has focused attention on the fact that airport congestion is one of our most serious problems. Despite the many new and lengthened runways which have been added to the Nation's airports in recent years, the fact remains that limited runway availability is a major contributing factor to this congestion.
    - b. Although pilots have long had the prerogative of using only a portion of a runway by requesting takeoff from an intersection, relatively little use has been made of this technique, perhaps because pilots think it would disrupt the traffic flow. The result has been something less than the most efficient use of runways. This is manifested in inordinate delays, wasted fuel, overheated engines, excessive brake wear, and the like.
    - c. More efficient use of runways and reduction in congestion and delays can be gained through increased use of intersection takeoffs. A number of aviation groups have, in fact, recommended that we broaden the utilization of intersection takeoffs by allowing air traffic control personnel to initiate them. We
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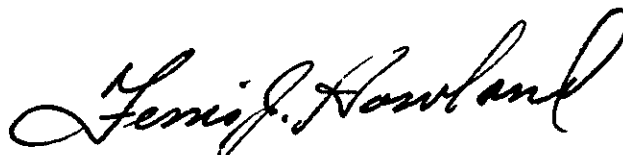
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have taken action to do so in the interest of achieving more efficient movement of air traffic. This will also serve in the long run to reduce radio frequency congestion and controller workload.

- d. As other air traffic studies are completed, we will make further procedural changes aimed at attaining these goals. Advisory information on such changes will be published in the AIM and, on occasion, in Advisory Circulars such as this one.

#### 4. DISCUSSION.

- a. Air traffic control procedures. To enhance airport capacities, reduce taxiing distances, and minimize departure delays, we have amended our procedures so that tower controllers may now initiate intersection takeoffs as well as approve them when the pilot requests. Controllers can provide information on the distances (in hundreds of feet) from intersections to the runway end when the pilot asks for it. Not every intersection at every airport will be available, however, because airport managers may elect to prohibit the use of certain intersections.
  - b. Pilot considerations. In the use of intersection takeoffs, as in the use of entire runway lengths, the pilot is responsible for the safe operation of his aircraft. If, for ANY reason he prefers to use a different intersection or the full length of the runway or desires to know the distance between an intersection and the runway end, HE IS EXPECTED TO INFORM ATC ACCORDINGLY. In making his decision regarding an intersection takeoff, the pilot must consider the possibility of wake turbulence along with the same factors of aircraft performance characteristics, runway gradient, wind direction and velocity, density altitude effect, obstruction clearance, etc., that he would if he were using an entire runway of equal length.
5. MISCELLANEOUS. An informative treatise on density altitude effect is contained in the referenced Advisory Circular 90-14A. This circular also includes information on a handy computer for use in determining takeoff distances under given pressure-altitude and temperature conditions.



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