

Federal Aviation Agency

ADVISORY CIRCULAR



AC NO: AC 120-4

AIR CARRIER AND
COMMERCIAL OPERATIONS

EFFECTIVE :

7/30/63

Committed
Rec. 120-4a

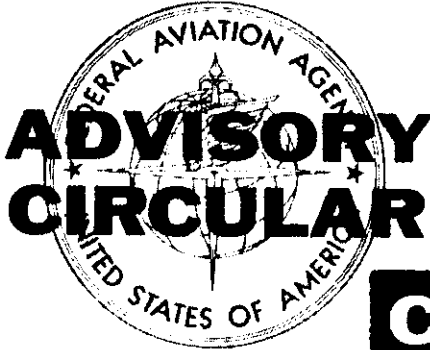
SUBJECT : CRITERIA FOR AIR CARRIER TURBOJET LANDING MINIMUMS

1. **PURPOSE.** This advisory circular is to advise air carriers and FAA field personnel of the criteria that will be used to approve applications for amendment to operations specifications to include landing minimums of 200-1/2 - 2600' runway visual range for turbojet aircraft.
2. **BACKGROUND.** On December 28, 1961, the Flight Standards Service issued its criteria for the approval of turbojet landing minimums of 200-1/2. At that time FAA field personnel were advised that these criteria would be reevaluated after operating experience had been gained using these minimums. This advisory circular reflects the reevaluation.
3. **AIRPORTS.** Straight-in landing minimums of 200-1/2 - 2600 RVR may be authorized for specific runways at selected airports when it has been determined that:
 - a. Complete ILS is installed.
 - b. Maximum glide slope angle is 3 degrees.
 - c. The runway is served by the following:
 - (1) High intensity runway lights.
 - (2) Full configuration A approach lights with condenser discharge flashers.
 - (3) TSO-N10A all weather runway marking or runway centerline lighting.
 - (4) Approval of runways at foreign airports will be on an individual basis with primary consideration given to equivalent safety with respect to the type and adequacy of runway and approach lighting facilities and facilities for determining runway visibility.

4. AIRBORNE EQUIPMENT. In addition to the instrument and radio equipment required by the Civil Air Regulations, the following equipment is required:
- a. A flight director system or an automatic approach coupler. The air carriers must show that such equipment has an acceptable level of reliability.
 - b. An improved instrument failure warning system and/or a cockpit procedure to insure the ready detection of instrument failures or malfunctions.
5. INITIAL AIR CARRIER APPROVAL. The initial application for amendment of the operations specifications for authority to operate at landing minimums of 200-1/2 - 2600' RVR will be approved when 30% of the air carrier's turbojet pilots-in-command have successfully demonstrated their ability to utilize these lower minimums to an FAA air carrier inspector. However, following this approval only those pilots who have been certified to use these minimums by an FAA inspector will be authorized to use these lower minimums. The certification of the remaining pilots assigned to the air carrier will also be accomplished by FAA inspectors.
6. INITIAL PILOT-IN-COMMAND PROFICIENCY REQUIREMENTS. Each pilot-in-command shall satisfactorily demonstrate the following to an FAA inspector before initially being qualified to utilize the lower landing minimums:
- a. One manual ILS approach to 200' without using either the flight director or approach coupler. This demonstration will not be required if the carrier has installed a dual flight director system and predicates its operation on both systems. (See Operational Requirements paragraph 8b).
 - b. One ILS approach to 100' using either the flight director system or the approach coupler. If an air carrier desires to qualify its pilots to use both the flight director and approach coupler then both demonstrations will be required. However, in such cases the coupler demonstration may be conducted in an approved aircraft simulator.
 - c. From at least one of the approaches to 100' using the flight director or approach coupler a landing will be accomplished.
 - d. From at least one of the approaches specified in either subparagraph a or b above, a missed approach shall be executed with one of the critical engines in the idle thrust position.

The initial pilot proficiency requirements must be satisfied in each turbojet aircraft type for which approval of the lower minimums is sought. However, if an air carrier predicates its operation on both the flight director system and the automatic approach coupler, the coupler demonstration need be accomplished in only one type turbojet aircraft.

Federal Aviation Agency



AC NO: AC 120-4 CH 1

AIR CARRIER AND
COMMERCIAL OPERATIONS

EFFECTIVE :

10/5/63

CHANGE

SUBJECT : CH 1 TO CIRCULAR NO. 120-4, SUBJ: CRITERIA FOR AIR CARRIER
TURBOJET LANDING MINIMUMS

1. PURPOSE. This advisory circular transmits page changes to AC 120-4 dated July 30, 1963.
2. EXPLANATION OF CHANGES.

Paragraph 9

- a. Section (a) has been amended to correspond with the intent of section (c), paragraph 8, by inserting the words "whichever is greater" after "15% or 1000".
- b. Runway 4L at the Idlewild Airport has been changed to read 4R.
- c. The minimums applicable to pilots-in-command with less than 100 hours in a particular type of airplane, as provided for by sections 40.406(e) and 41.406(e), have been clarified.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
3 and 4	7/30/63	3	7/30/63
		4	10/5/63


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Director
Flight Standards Service

NOTE: If a pilot has been certified by the FAA based on the flight director system, he may on a subsequent flight check be certified by a company check pilot to use these minimums based on the automatic coupler.

7. RECURRENT PILOT-IN-COMMAND PROFICIENCY REQUIREMENTS. During each required proficiency check the pilot-in-command shall demonstrate, in flight, to a company check pilot or FAA inspector, his proficiency on the items listed in paragraph (6) above. If a carrier has an approved aircraft simulator, the alternate check may be accomplished in the simulator. However, in the case of a pilot-in-command who is dual aircraft qualified, the proficiency requirements must be accomplished at least once annually in flight in each turbojet aircraft type. If a pilot is approved to use both the flight director system and the approach coupler, the coupler demonstration need not be accomplished.

The air carrier's approved training program will be amended to reflect the requirements of paragraphs 6 and 7.

8. OPERATIONAL REQUIREMENTS. The air carrier's operations manual, and minimum equipment list, as appropriate, shall be amended to include the following:
 - a. Instructions for the mandatory use of the flight director system or automatic approach coupler, as appropriate, for ILS approaches when the weather is reported to be below 300-3/4.
 - b. If a carrier wishes to predicate its 200-1/2 operation on dual flight director systems, the minimum equipment list shall be amended requiring both to be operative for dispatch when the destination is forecast or reported to be below 300-3/4.
 - c. Landing distance performance information for each approved airport providing the greater of 15% or 1,000' additional runway length over the present CAR field length requirements.
9. AMENDMENT OF OPERATIONS SPECIFICATIONS. When the applicable provisions of the above have been satisfied, the air carrier's operations specifications may be amended as follows:

Basic Turbojet Minimums for Particular Airports

The minimums listed below may be used by those pilots-in-command who have been certified by an FAA inspector as being qualified to operate at such lower minimums. (Omit this paragraph from Foreign Flag Air Carrier Operations Specifications).

An approach shall not be started when the ceiling and visibility are reported to be less than 300-3/4 unless:

- *a. 15% or 1000', whichever is greater, additional runway is available over the present CAR field length. *
- b. The crosswind component does not exceed 10 knots.
- c. All components of the ILS or PAR, high intensity runway lights, and approach light system, including the sequenced flashers are operative. (Delete reference to sequenced flashers for foreign airports not so equipped).

<u>Airport</u>	<u>Runway</u>	<u>Aircraft</u>	<u>Facility</u>	<u>Landing Minimums</u>
Ex. Big Town	4R	B-707	ILS/PAR	200-1/2 - 2600' RVR

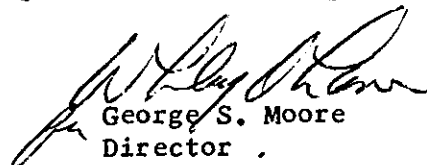
Foreign Flag Air Carrier Operations Specifications also may be amended to include 200-1/2 authorization at those airports in the U. S. approved for U. S. air carriers.

The following list of selected airports and runways may be approved for turbojet landing minimums of 200-1/2 by amendment of the carrier's operation specifications when all requirements are met:

Runway 25L	- Los Angeles International	
*Runway 4R	- New York, Idlewild	*
Runway 14R	- O'Hare International Airport, Chicago	
Runway 9	- Philadelphia International Airport, Philadelphia	
Runway 28R	- San Francisco International Airport, San Francisco	
Runway 3L	- Detroit Metropolitan Wayne County Airport, Detroit	
Runway 10	- Friendship Airport, Baltimore	
Runway 1R	- Dulles International, Washington, D. C.	
Runway 10R/28L	- London, England	
10L/28R	-	
Runway 26/2L	- Paris, Orly	

Additional airports are being evaluated and will be added to the above list.

- *Pilots with less than 100 hours of pilot-in-command time in a particular type turbojet aircraft, who have been certified by the Federal Aviation Agency as having met the requirements of paragraph 6, will be governed by the provisions of Civil Air Regulations 40.406 (e) and 41.406(e). The applicable minimums for these pilots, at the airports listed above, will be 300-1 until they have acquired at least 100 hours of pilot-in-command experience in that type aircraft. *


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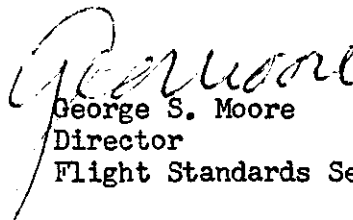
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