



AC NO: 90-41B

DATE: 8 Dec 71

*Repl. by -41C*

# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT:** REVISED STANDARD INSTRUMENT DEPARTURE/ARRIVAL PROCEDURES

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1. PURPOSE. This circular describes the revised Standard Instrument Departure (SID) and Standard Terminal Arrival Route (STAR) program which basically eliminates the ability to file STARs in a flight plan and informs pilots that altitudes and airspeeds will no longer be embedded within the body of a STAR.
2. CANCELLATION. AC 90-41A, Standard Instrument Departure/Arrival Procedures, is canceled.
3. BACKGROUND.
  - a. Airman's Information Manual.
  - b. U.S. Government Standard Instrument Departure (SID) Publications - Eastern and Western United States.
4. DEFINITIONS.
  - a. SID. A preplanned coded instrument flight rule (IFR) air traffic control departure route printed for pilot use in graphic and textual or textual form only.
  - b. STAR. A preplanned coded instrument flight rule (IFR) air traffic control arrival route printed for pilot use in graphic and textual or textual form only.
5. DISCUSSION.
  - a. The concept of the SID/STAR program from its inception has been to reduce pilot/controller workload and the congestion of communications frequencies. The simplification of clearance delivery and pilot receipt reduces the possibility of ambiguity

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AC 90

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and misunderstanding on the part of the pilot or controller when the SID or STAR being used is simple and easily adhered to. However, particularly in the use of STAR, the practice has evolved of embedding altitude or airspeed restrictions within the body of the arrival route. In addition to adding to the complexity of the STAR, these preplanned altitudes and airspeeds used in the context of precleared coded clearances contribute to excessive in-trail restrictions. Pilot complaints have pointed up the potential for misunderstanding as to when descent must commence or reduction of airspeed must be accomplished in order to comply with the STAR. Therefore, the elimination of altitude and airspeed restrictions within STARs has been directed.

- b. SIDs may be used for departure routes from any airport. STARs may be used and applied to the preinstrument approach phase of flight. These routes (SIDs/STARs) are planned to serve the legitimate needs of users and the air traffic control system. Each is limited in number.
- c. Pilot use of SIDs/STARs was not restricted by past program requirements. However, use of the procedures by air traffic control (ATC) was restricted to aircraft who, through group representatives, had indicated a desire to use them and to those individual aircraft whose pilots indicated desired use.
- d. Expansion of the SID and STAR programs to provide for application to any aircraft operating IFR from or to an airport where either or both types of procedures are in effect was a planned phase of each original program. It has been determined that such expansion is feasible and that expanded pilot/ATC system benefits can be derived. Benefits in the form of reduced communications are demonstrated in the following example departure and arrival clearances.

(1) A typical departure clearance would be:

" . . . AFTER TAKEOFF CLIMB VIA OAKLAND TWO EIGHT EIGHT RADIAL TO THREE THOUSAND, CROSS OAKLAND TWO EIGHT EIGHT FOUR MILE DME FIX AT OR BELOW THREE THOUSAND, TURN RIGHT HEADING ZERO SIX ZERO, INTERCEPT AND PROCEED VIA THE OAKLAND ZERO TWO TWO RADIAL TO COLLEGE INTERSECTION, CROSS COLLEGE AT OR ABOVE FIVE THOUSAND, THENCE VIA THE OAKLAND ZERO TWO TWO RADIAL AND SACRAMENTO ONE NINER FIVE RADIAL TO SACRAMENTO. . . ."

Using a SID, the departure clearance issued by ATC would be:

" . . . COLLEGE TWO DEPARTURE, SACRAMENTO TRANSITION. . . ."

- (2) A typical detailed preinstrument approach arrival route clearance would be:

". . . FROM OVER THE POINT REYES VORTAC VIA THE POINT REYES ONE FOUR FOUR RADIAL TO HALF MOON BAY INTERSECTION THENCE VIA THE WOODSIDE TWO FIVE FOUR RADIAL TO WOODSIDE, EXPECT RADAR VECTORS TO ILS RUNWAY TWO EIGHT LOCALIZER. . . ."

Using a STAR, the same clearance would be:

". . . POINT REYES ONE ARRIVAL. . . ."

#### 6. PUBLICATION.

- a. SID data are published in the National Flight Data Digest for use by charting organizations. Lists of locations within the conterminous 48 states with established SIDs/STARs are published in Part 3 of the AIM. Agency publication of SIDs in textual and graphic form is in U.S. Government Eastern, Western and Alaska SID booklets and in the Pacific Chart Supplement. When an urgent need exists, interim publication of SIDs may be accomplished in Part 3 of the AIM, the Alaska Supplement and Special Notices to the Pacific Chart Supplement.
- b. STAR data are published in the National Flight Data Digest for use by charting organizations. Additionally, until such time that agency charting is accomplished, the name and full text of each STAR within the conterminous 48 states will be carried in Part 3 of the AIM. Charting of STARs in the same or similar manner used for SIDs is planned.
- c. SID/STAR computer identification codes are published for use in ARTCC computer systems. SID codes may be transmitted on-line to a center computer by offices such as FSSs and military/air carrier flight operations.

#### 7. APPLICATION.

- a. ATC. An IFR clearance containing a SID or a STAR may be issued by ATC whenever appropriate.
- b. Pilot.
  - (1) A SID, when a part of a filed flight plan and issued as a clearance, i.e., "cleared as filed," or when assigned by ATC and accepted by the pilot, constitutes the ATC clearance or a portion thereof and pilots are expected to comply with all provisions of the SID unless otherwise authorized by ATC. In issuing the SID, the full name and number of the SID shall be included in the clearance by the departure center/tower.

- (2) A STAR will be issued, when appropriate, by the arriving center/tower. The advance filing of STARS in IFR flight plans shall no longer be accepted by the ARTCC nor required of the pilot. Assigned altitudes or airspeeds will be issued, as appropriate, by ATC. A STAR when assigned by ATC and accepted by the pilot constitutes the ATC clearance or portion thereof and pilots are expected to comply with all the provisions of the STAR unless otherwise authorized by ATC.
- (3) Use of a SID or STAR by any pilot requires that he have in his possession at least a textual description of the approved effective procedure. The textual description of each procedure, when issued in an ATC clearance by name and accepted by the pilot, constitutes the ATC clearance or portion thereof.
- (4) It is the responsibility of each pilot to accept or reject any issued clearance, including one consisting of a SID or STAR.
- (5) Civil pilots who for any reason do not wish SIDs/STARS applied in an ATC clearance may so indicate by including in the remarks section of their flight plan "NO SID/STAR" as appropriate.
- (6) An alternative but less desirable method by which pilots may advise ATC that they do not have or do not wish to use SIDs/STARS is to verbally state "NO SIDs"/"NO STARS," as appropriate, when requesting IFR departure clearance or upon first contact with the air route traffic control center within whose area the destination airport is located.
- (7) Until such time that military publication and distribution of STARS to military pilots are accomplished, ATC will not issue a clearance containing a STAR to a military aircraft unless specifically requested by the pilot. Request may be made by inclusion of "STAR" in the remarks section of the flight plan or the less desirable method of verbally requesting use of a STAR upon first contact with the air route traffic control center within whose area the destination airport is located.



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