



STAR BASICS

1. Introduction

A STAR is a standard instrument terminal arrival procedure. This procedure is depicted or described on aeronautical charts sometimes named arrival charts.

This chart shall provide the flight crew with information to enable it to comply with the designated standard instrument arrival route from the en-route phase to the approach phase.

The chart shall be identified by the name of the city or town or area which the aerodrome serves.

2. Coverage and topography

The coverage of the chart shall be sufficient to indicate the points where the en-route phase ends and the approach phase begins.

Where the chart is drawn to scale, generalized shore lines of all open water areas, large lakes and rivers shall be shown, except where they conflict with data more applicable to the function of the chart.

3. Bearing track and radial

Bearings, tracks and radials are magnetic. Where bearings and tracks are additionally provided as true values for RNAV segments, they shall be shown in parentheses to the nearest tenth of a degree.

Magnetic variation used in determining the magnetic bearings, tracks and radials shall be shown to the nearest degree. Where bearings, tracks or radials are given with reference to True North or Grid North, this shall be clearly indicated. When Grid North is used, its reference grid meridian shall be identified

4. Aeronautical data

The aerodrome of landing shall be shown by the runway pattern.

4.1. Prohibited, restricted and danger areas

Prohibited, restricted and danger areas which may affect the execution of the procedures shall be shown with their identification and vertical limits.

4.2. Minimum sector altitude

The established minimum sector altitude, based on a navigation aid associated with the procedure, shall be shown with a clear indication of the sector to which it applies.

Where the minimum sector altitude has not been established, the chart shall be drawn to scale and area minimum altitudes shall be shown within quadrilaterals formed by the parallels and meridians.

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4.3. Air traffic services system

The components shall comprise the following:

- 1) a **graphic portrayal of each standard arrival route**, including
 - route designator
 - significant points defining the route
 - track or radial to the nearest degree along each segment of the route
 - distances to the nearest kilometer or nautical mile between significant points
 - minimum obstacle clearance altitudes, along the route or route segments and altitudes required by the procedure to the nearest higher 50 m or 100 ft and flight level restrictions where established
 - where the chart is drawn to scale and vectoring on arrival is provided, established minimum vectoring altitudes to the nearest higher 50 m or 100 ft, clearly identified
- 2) the **radio navigation aid(s) associated with the route(s)** including:
 - plain language name;
 - identification;
 - frequency;
 - geographical coordinates in degrees, minutes and seconds;
 - for DME, the channel
- 3) the **name-codes of the significant points not marked by the position of a radio navigation aid**, their geographical coordinates in degrees, minutes and seconds and the bearing to the nearest tenth of a degree and distance to the nearest two-tenths of a kilometer (tenth of a nautical mile) from the reference radio navigation aid
- 4) the **applicable holding patterns**
- 5) the **transition altitude/height** to the nearest higher 300 m or 1000ft
- 6) the **position and height of close-in obstacles** which penetrate the obstacle identification surface (OIS)
- 7) the **area speed restrictions**, where established
- 8) the **designation of the navigation specification(s)** including any limitations, where established
- 9) all compulsory and “on-request” **reporting points**
- 10) **radio communication procedures**, including:
 - call sign(s) of ATS unit(s);
 - frequency;
 - transponder setting, where appropriate
- 11) an **indication of “flyover” significant points**

A textual description of standard instrument terminal arrival route(STAR) and relevant communication failure procedures should be provided.

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5. Designators

5.1. Definition

The system of designators shall:

- permit the identification of each route in a simple and unambiguous manner
- make a clear distinction between departure routes and arrival routes, departure or arrival routes and other ATS routes, routes requiring navigation by reference to ground based radio aids or self-contained airborne aids, and routes requiring navigation by visual reference to the ground
- be compatible with ATS and aircraft data processing and display requirements
- be of utmost brevity in its operational application
- avoid redundancy
- provide sufficient possibility for extension to cater for any future requirements without the need for fundamental changes

Each route shall be identified by a plain language designator and a corresponding coded designator.

The designators shall, in voice communications, be easily recognizable as relating to a standard departure or arrival route and shall not create any difficulties in pronunciation for pilots and ATS personnel.

5.2. Designator construction

The coded designator of a standard departure or arrival route shall consist of:

- a **coded indicator or named code of the significant point of the procedure**, followed by
- a **validity indicator**, followed by
- a **route indicator** (optional and where required) followed by
- the word “**arrival**” for the plain language designator, followed by
- the word “**visual**” for the plain language designator, if the route has been established for use by aircraft operating in accordance with the visual flight rules (VFR)

The basic indicator shall be the name or name-code of the significant point where a standard departure route terminates or a standard arrival route begins.

The validity indicator shall be a number from 1 to 9.

The route indicator shall be one letter of the alphabet. The letters “I” and “O” shall not be used.

Example:

Coded designator: AKAMO 1 D

Plain language designator: AKAMO ONE DELTA ARRIVAL

Coded designator: CARMN 4

Plain language designator: CAMRN FOUR ARRIVAL

Coded designator: LMG 6 K

Plain language designator: LIMOGES 6 KILO ARRIVAL

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6. Example of STAR chart

