



# PBN SID/STAR charts Harmonised AIP Publication

v1.0  
29 January 2024



SUPPORTING EUROPEAN AVIATION



NETWORK  
MANAGER



# Introduction

EUROCONTROL monitors the implementation of Performance-Based Navigation (PBN) procedures in ECAC using the [PBN Map tool](#), integrating data from national AIPs and implementation plans derived from PBN Transition plans produced by ATM/ANS providers.

Each AIRAC cycle prompts a thorough examination of national AIPs, with a specific focus on identifying new PBN procedures, particularly Standard Instrument Departures (SIDs) and Standard Instrument Arrivals (STARs).

It was identified that PBN information is dispersed across various sections of SID/STAR charts, varying by country or airport, contrary to the specific promulgation principles outlined by ICAO. This inconsistency prompted EUROCONTROL to address the lack of harmonization in European PBN SID/STAR charts in various stakeholder groups. The need for harmonization was agreed, with the support for creating a factsheet, especially given the mandate by the European PBN implementing regulation (EU 1048/2018) that necessitates the implementation of PBN SID/STAR at every instrument runway where these procedures are published.

This factsheet, designed for specialists responsible for chart origination, includes illustrative examples and corresponding references to ICAO documentation. It is essential to note that this resource is intended to enhance understanding and promote harmonization but does not seek to replace or override state regulations or ICAO requirements regarding AIP publication and charting.

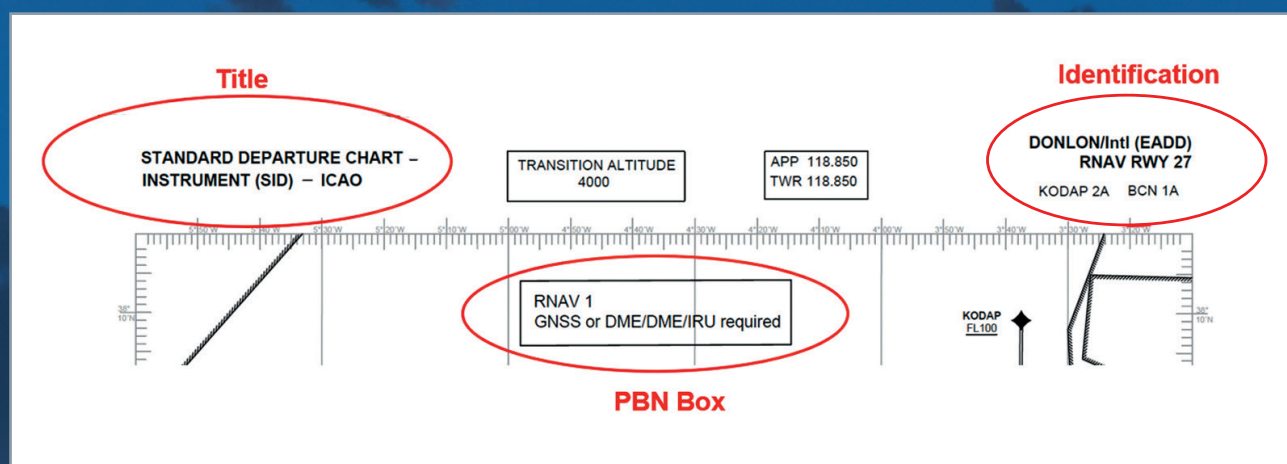


# Objective

The development of this factsheet aims to heighten awareness regarding the charting of PBN SID/STAR in accordance with ICAO principles. The primary objective is to foster harmonization in the publication of these procedures across Europe, especially in anticipation of the increased number of PBN SID/STAR charts due to the PBN Implementing Regulation (EU 1048/2018).

Specifically, this factsheet concentrates solely on three key chart elements:

- Title
- Identification
- PBN box



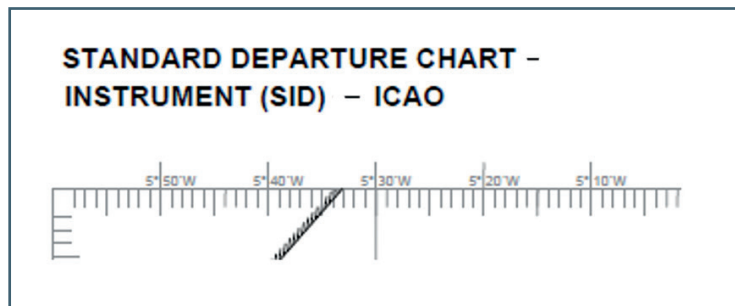
# PBN SID/STAR - Chart Title

According to ICAO Doc 8697 Aeronautical Chart Manual, chapter 7.9 (SID):

## Title

*"The title must be **Standard Departure Chart - Instrument (SID) - ICAO**". Such title must not include "ICAO" unless the chart conforms with all Standards specified in Annex 4, Chapters 2 and 9. The chart title is placed at the top left corner of the chart in bold upper-case type."*

Example:

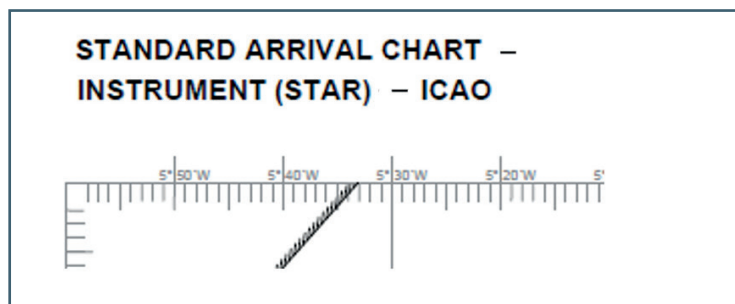


According to ICAO Doc 8697 Aeronautical Chart Manual, chapter 7.10 (STAR):

## Title

*"The title must be **Standard Arrival Chart - Instrument (STAR) - ICAO**". Such title must not include "ICAO" unless the chart conforms with all Standards specified in Annex 4, Chapters 2 and 10. The chart title is placed at the top left corner of the chart in bold upper-case type."*

Example:



# PBN SID/STAR - Chart Identification

According to ICAO Doc 8168 PANS-OPS Vol II, Part III, Section 5, Chapter 1.3.2 "Chart Identification":

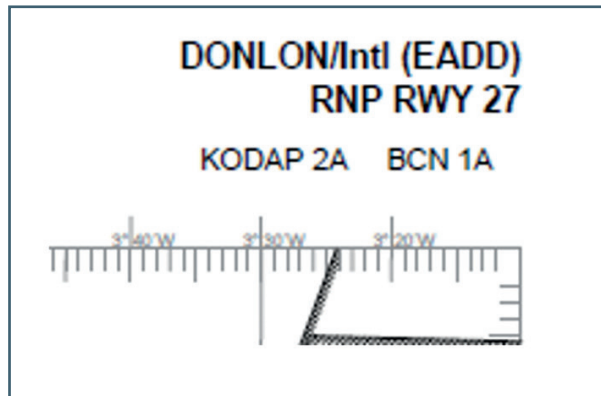
*"The chart shall be identified in accordance with Annex 4, 9.5 for departures and 10.5 for arrivals and **shall include the term RNAV or RNP, depending on the navigation specification.**"*

According to ICAO Doc 8697 Aeronautical Chart Manual, chapter 7.9 (SID) and 7.10 (STAR) "Identification":

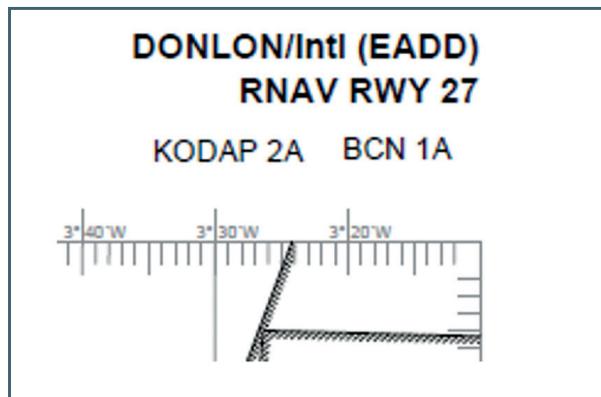
*"The chart must be identified by the name of the city or town, or area, that the aerodrome serves, the name of the aerodrome, and the identification of the standard departure/arrival route(s) — instrument as established in accordance with the PANS-OPS, Volume II, Part I, Section 3. The identification of the standard departure/arrival route(s) — instrument is provided by the procedures specialist.*

*The ICAO location indicator may also be included with the name of the aerodrome. **The chart identification is placed at the top right corner of the chart in bold upper-case type.**"*

Example for PBN SID/STAR based on RNP:



Example for PBN SID/STAR based on RNAV:



# PBN SID/STAR - PBN BOX

According to ICAO Doc 8168 PANS-OPS Vol II, Part III, Section 5, Chapter 1.3.4 "Chart notes":

*"Additional procedure requirements shall be provided as chart notes. **PBN items shall be separated out and published in a PBN requirements box on the plan view of the chart** immediately below the chart identifier. **The PBN requirements box shall include the identification of the navigation specification used in the procedure design, any navigation sensor limitations (e.g. GNSS required, GNSS or DME/DME/IRU required), and any required functionalities (e.g. RF required) that are described as options in the navigation specification, that is, not included in the core navigation specification.**"*

Examples of PBN boxes:

**RNAV 1**  
GNSS or DME/DME/IRU required

**RNP 1**  
RF required

**RNAV 1**  
GNSS required

**RNP 0.3**

**Advanced RNP**

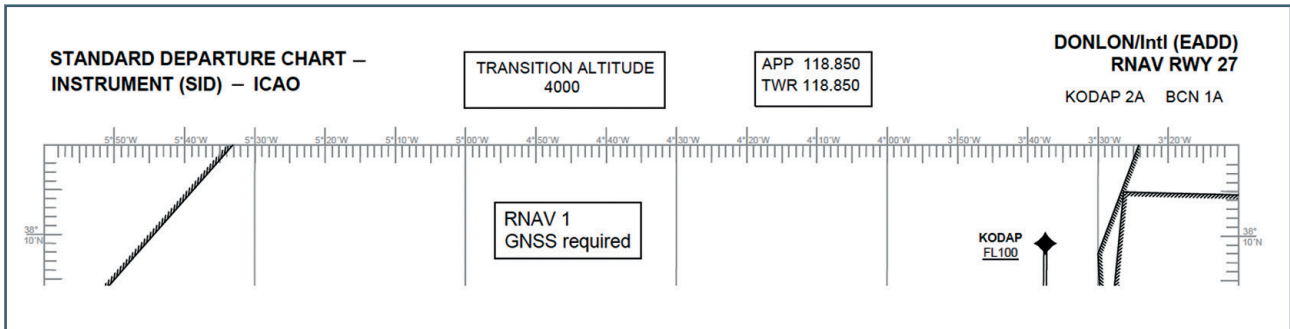
**RNAV 5**  
GNSS or DME/DME required

# PBN SID/STAR EXAMPLES

Navigation specification: **RNAV 1**

Navigation sensor limitations: **GNSS required** (DME/DME is not available)

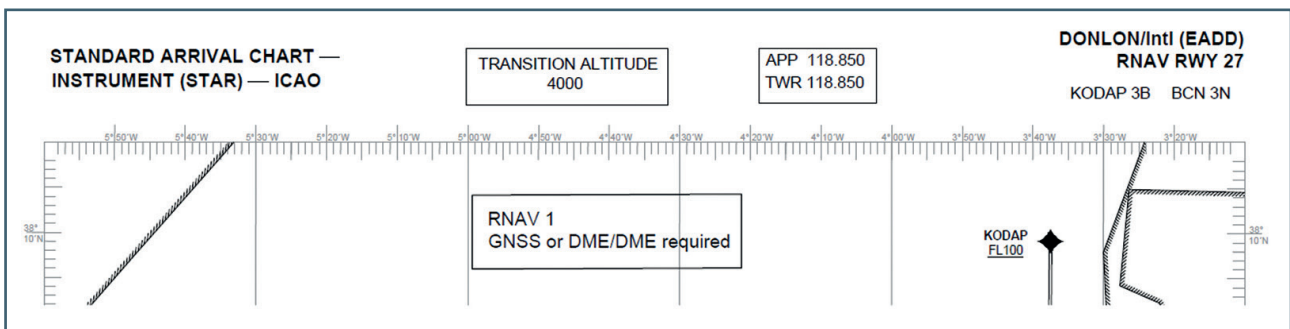
Functional requirement: **None**



Navigation specification: **RNAV 1**

Navigation sensor limitations: **None** (GNSS and DME/DME are available)

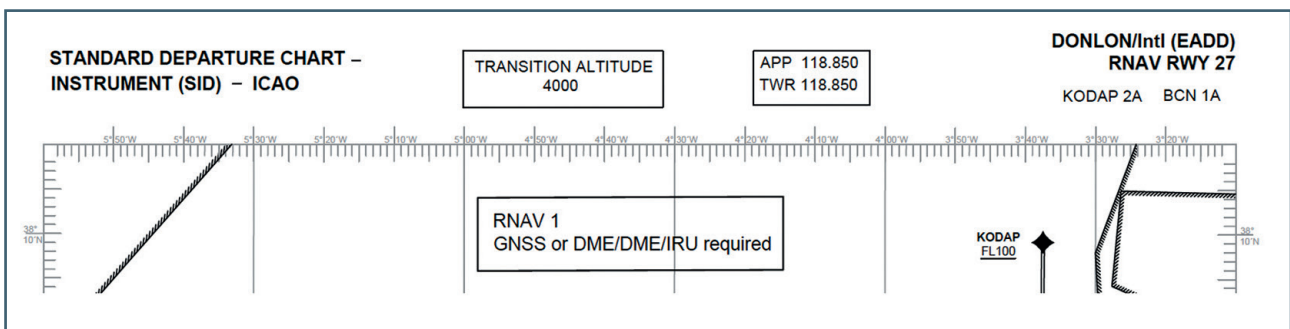
Functional requirement: **None**



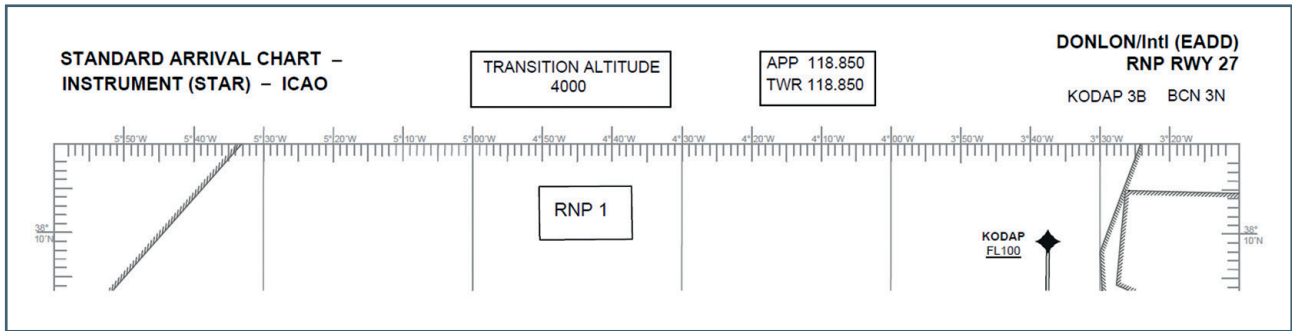
Navigation specification: **RNAV 1**

Navigation sensor limitations: **GNSS or DME/DME/IRU required.**

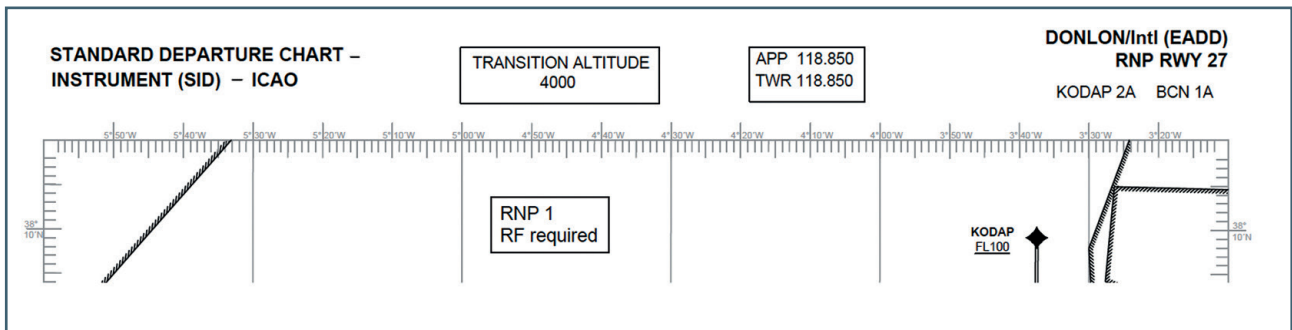
Functional requirement: **None**



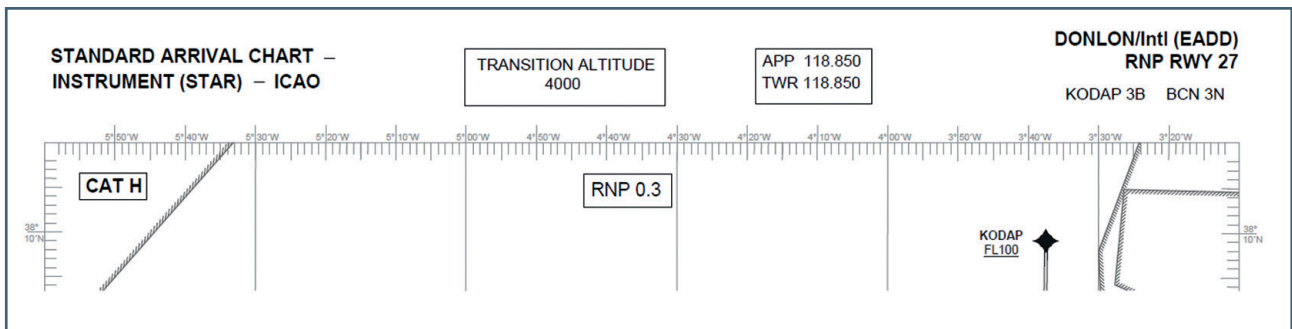
Navigation specification: **RNP 1**  
 Navigation sensor limitations: **None** (GNSS required)  
 Functional requirement: **None**



Navigation specification: **RNP 1**  
 Navigation sensor limitations: **None** (GNSS required)  
 Functional requirement: **RF required**



Navigation specification: **RNP 0.3 (CAT H)**  
 Navigation sensor limitations: **None** (GNSS required)  
 Functional requirement: **None**





# Glossary

<b>AIP</b>	Aeronautical information publication
<b>ANS</b>	Air navigation services
<b>ATM</b>	Air traffic management
<b>DME</b>	Distance measuring equipment
<b>GNSS</b>	Global navigation satellite system
<b>IRU</b>	Inertial reference unit
<b>PBN</b>	Performance-based navigation
<b>RF</b>	Radius to fix
<b>RNAV</b>	Area navigation
<b>RNP</b>	Required navigation performance
<b>SID</b>	Standard instrument departure
<b>STAR</b>	Standard instrument arrival

## Further Information

The EUROCONTROL Navigation Steering Group (NSG) coordinates the activities necessary for the implementation of PBN procedures in ECAC.

For more information, please contact the [nav.user.support@eurocontrol.int](mailto:nav.user.support@eurocontrol.int) or visit our website: <https://www.eurocontrol.int/communications-navigation-and-surveillance>





## SUPPORTING EUROPEAN AVIATION



© EUROCONTROL - January 2024

This document is published by EUROCONTROL for information purposes. It may be copied in whole or in part, provided that EUROCONTROL is mentioned as the source and it is not used for commercial purposes (i.e. for financial gain). The information in this document may not be modified without prior written permission from EUROCONTROL.

[www.eurocontrol.int](http://www.eurocontrol.int)