



# AIP RNP (VPT)

approach evolution

# CIR 359 – AIP RNP (VPT)

- Demands?
- Safety?
- Complexity?
- Threats?
- Benefits?



## Circular 359

Development of Procedures for Visual  
Manoeuvring with Prescribed Tracks  
using Required Navigation Performance

Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION

# CIR 359 parts

## PART 1

Published Procedures

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*AIP RNP (VPT)*

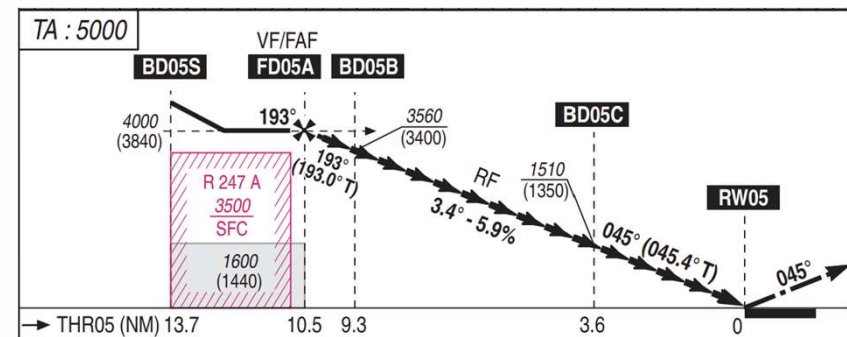
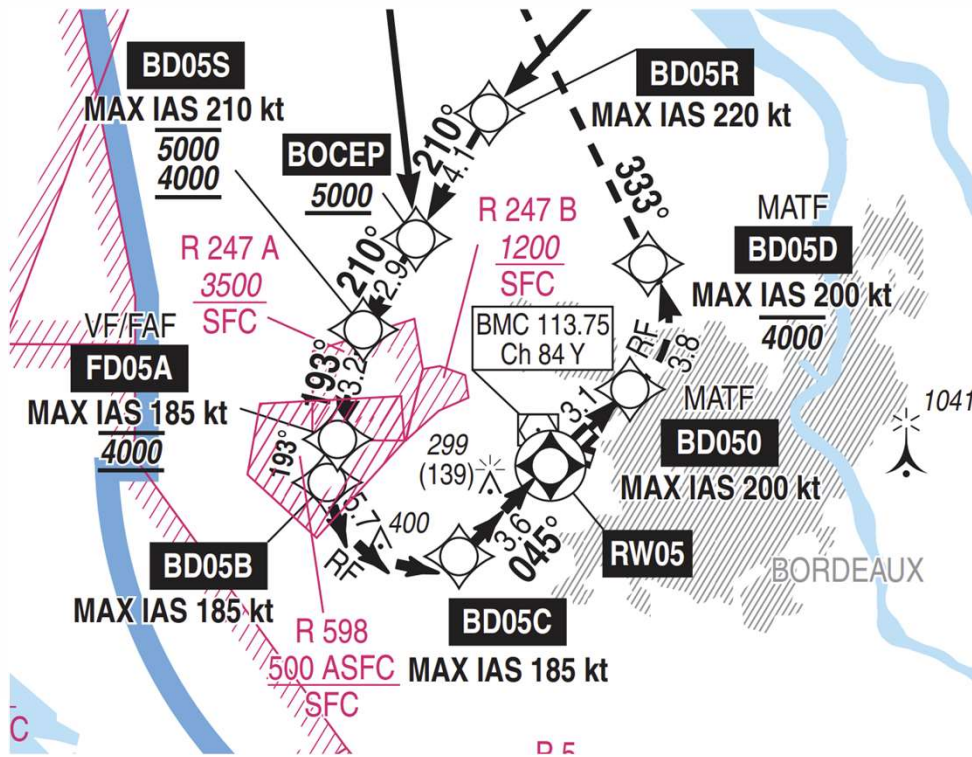
## PART 2

Operator Proprietary Procedures

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*Company RNP (VPT)*

# LFBD RNP (VPT)



*Missed APCH : Without ground visual reference at **FD05A**, maintain **4000** (3840) and follow prescribed track until **BD05C** (MAX IAS 185 kt) then continue to **RW05** and **BD050** (MAX IAS 200 kt). RF turn left to **BD05D** (MAX IAS 200 kt) maintaining **4000** (3840) then to **ETPAR** to enter **ETPAR** holding pattern or proceed according to ATC instructions.*

# Operational Demands

## Airline

- Safe
- Simple to fly
- Shortest possible track
- Noise abatement
- Fuel saving

## ATCO

- Safe
- Simple to use
- Identical for all traffic
- High efficiency

# Safety – RNP AR and RNP (VPT)

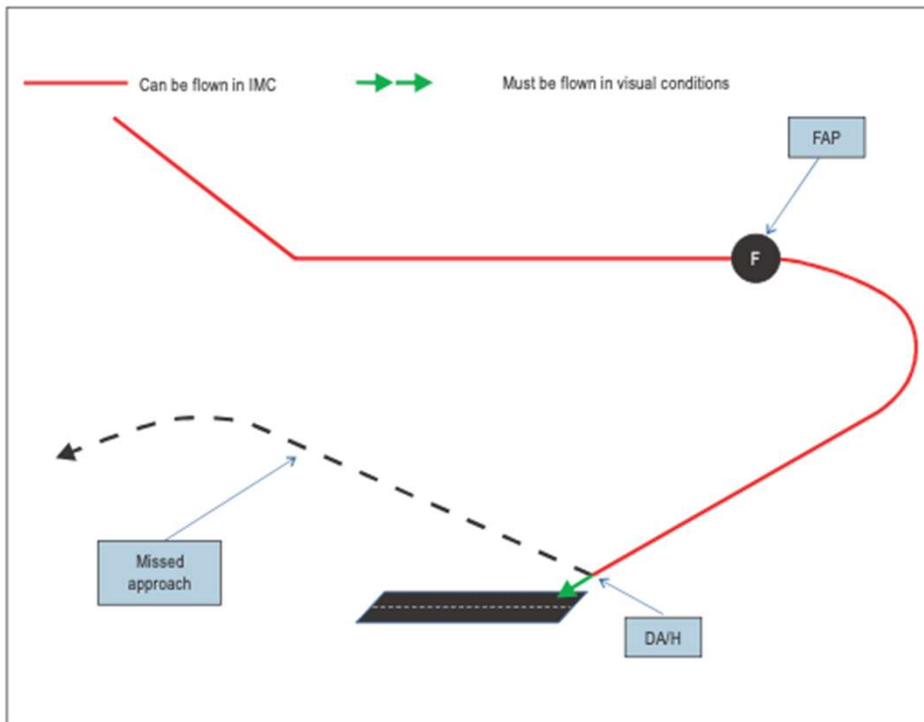


Figure I-2-1. A typical RNP AR approach procedure

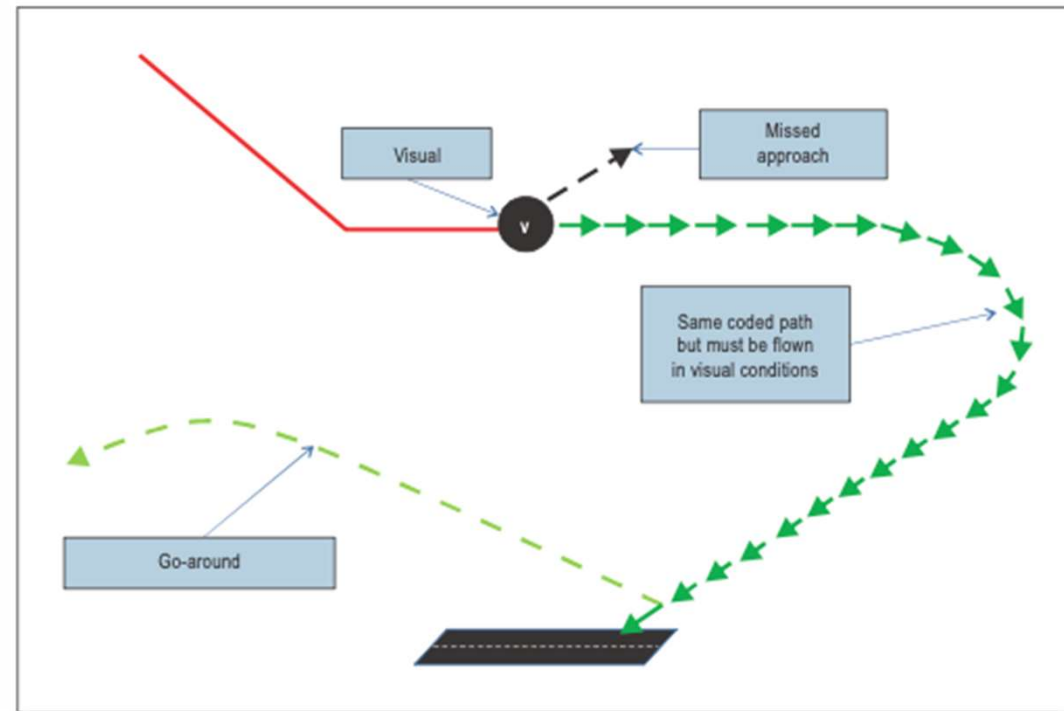


Figure I-2-2. An RNP (VPT) procedure based on the RNP AR procedure shown in Figure I-2-1

# Safety – Protection Area

- RNP AR → Doc 9905
  - Obstacle clearance for entire track
- RNP (VPT) → 8168 Vol 2 until Visual Fix (VF)
  - Obstacle clearance until the VF
  - During the visual segment the commander remains responsible for remaining clear of obstacles

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# Complexity – Validation

- RNP AR procedure when to be published?
- RNP (VPT) procedure?

# Complexity – AIP & chart requirements

*“Charts should be available in the AIP unless State regulations require them not to be.  
The **relevant air traffic controllers** should **be provided** with the **approach chart**.  
Use of the **chart** should be **restricted to operators holding an authorization**  
to operate on the procedure only.”*

- Authorization
- Visual Fix
- Missed approach concepts

# Threat – Weather Requirements

- Appropriate ceiling and visibility
- Visual reference with the ground
- Visual reference with the airport is not required

CAT	RNP (VPT)
A	Visibilité / <i>Visibility</i> > 10 km Plafond / <i>Ceiling</i> > 4500 ft
B	
C	
D	

# Threat - ATCO training

Only minimum training required:



- action to be taken if not visual when overflying the Visual Fix
- higher approach minima for the RNP (VPT)

# RNP (VPT) – Benefits

- ATCO friendly
- Standardized and safe approach
- Efficient for airport capacity
- Sustainable and fuel optimized operation
- Implementation requires simplification

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# Simple is not easy!



# PVS as pathfinder to manage efficient implementation

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