
MALAYSIA

CIVIL AVIATION AUTHORITY OF MALAYSIA
AERONAUTICAL INFORMATION SERVICES
AIR TRAFFIC CONTROL TOWER (TOWER WEST)
JALAN KLIA 2/4,
64000 KLIA,
SELANGOR DARUL EHSAN
MALAYSIA.

PHONE: 6-03-8778 4106
Email ais@caam.gov.my
URL: aip.caam.gov.my

AIRAC AIP SUP 27/25

Effective Date: 12 JUN 2025
to 12 SEP 2025
Publication Date: 01 MAY 2025

TRIAL IMPLEMENTATION OF DIRECT ROUTE OPERATIONS (DRO) WITHIN KUALA LUMPUR FIR

1 INTRODUCTION

- 1.1 DRO is a part of the Free Route Operation (FRT0) element, an initiative from CAAM to reduce CO₂ emissions by shortening aircraft track miles and increasing flight efficiency using the existing waypoints of the specified segments of ATS routes.
- 1.2 The DRO process will be executed systematically through a series of defined phases, each strategically designed to ensure thorough implementation and evaluation at every stage. This structured approach will enhance efficiency and allow for adjustments based on findings and results from each phase:
- a) Phase 1
 - Trial implementation of DRO for overflight RVSM-approved aircraft equipped with RNP 2 specifications within KL FIR.
 - b) Phase 2
 - i. Trial implementation of DRO for overflight RVSM-approved aircraft equipped with RNP 2 specifications within KK FIR.
 - ii. Tentative commencement in Q2/Q3 2025.
 - c) Phase 3
 - i. Comprehensive review of the trial implementation with the objective of revising and improving the DRO within KL FIR and KK FIR.
 - ii. Permanent implementation of DRO in KL FIR and KK FIR.

2 DRO in KL FIR

- 2.1 The purpose of this AIRAC AIP Supplement is to notify the aircraft operator of the trial implementation of Direct Route Operations (DRO) 24 hours daily within the Kuala Lumpur Flight Information Region (FIR), effective from 0000UTC on 12th June 2025 for a duration of three (3) months.

3 TECHNICAL SPECIFICATION

3.1 Aircraft Navigation Specification

- 3.1.1 Participating aircraft shall be RNP 2 and RVSM approved.

3.2 Applicable Routes and Flight Planning Procedures

- 3.2.1 DROs are available for flights overflying Kuala Lumpur FIR (except departure/destination from/to WSSS, WSSL and WIDD) on specified segments of ATS routes and flight levels (within radar coverage of KL FIR) as listed in the table below where applicable:

Flight Planning on ATS Routes	Flight Planning for DRO (24-hours)	Applicable Flight Levels	Remarks	Reduction in Distance Flown (NM)
IGOGU N571 GUNIP M630 SUKRI	IGOGU N571 GUNIP DCT SUKRI	FL350 and above	Applicable to Southbound flights	0.8
PUGER R461 VESIS M630 SUKRI	PUGER DCT VESIS DCT SUKRI			0.7
AROSO Y513 KALIL Y501 RINBA Y502 DUBAX	AROSO DCT VIH DCT DUBAX	FL360 and above	Applicable to Northbound flights	14.3
AROSO Y513 KALIL Y501 RIGTO	AROSO DCT VIH DCT RIGTO			14.1
AROSO Y513 KALIL Y501 RINBA R325 VAS A457 TAMOS	AROSO DCT VIH DCT TAMOS			15.6
AROSO Y513 KALIL Y504 GUNIP N571 ...	*AROSO DCT GUNIP N571 ...	FL340 and above	Applicable to Westbound flights	3
AROSO Y513 KALIL Y504 BILIK G582 PUGER	AROSO DCT PUGER			5.6
AROSO Y513 KALIL Y501 RINBA Y503 VPL P628 ...	**AROSO DCT VIH DCT VPL P628 ...	FL380 and above		16.6

*Note: Flight planning for DRO is not applicable within the Bay of Bengal area inside Kuala Lumpur FIR. Aircraft are to file Flight Plan using the conventional route network after WPT GUNIP.

**Note: Flight planning for DRO is not applicable within the Bay of Bengal area inside Kuala Lumpur FIR. Aircraft are to file Flight Plan using the conventional route network after WPT VPL.

3.3 Flight Planning

- 3.3.1 Flights participating in DRO shall flight plan using the direct routes listed in Paragraph 3.2.1.
- 3.3.2 While there is no planned alteration to the ICAO flight plan format concerning FRTO, aircraft participating in the DRO in KL FIR as specified by CAAM shall include RMK/KULDRO in Item 18.
- 3.3.3 Segments of the ATS route between selected waypoints, as outlined in Paragraph 3.2.1, are represented using DCT as per CAD 1101 – Air Traffic Management Chapter 17.
- 3.3.4 Given the mixed operation between the traditional fixed ATS network and DRO, only RVSM-approved aircraft equipped with at least RNP 2 are allowed to participate in this DRO.

3.3.5 Aircraft participating in DRO shall annotate their flight plan one or more of the following:

Descriptor (Item 10)	Item 18	Description
W		RVSM approved aircraft
RNP2	NAV/RNP 2	RNP 2 approved aircraft
	RMK/KULDRO	DRO participating aircraft within Kuala Lumpur FIR

3.3.6 Failure to indicate the above FPL descriptors and required remarks in Item 18 in their flight plan may result in the air traffic controller to re-route aircraft via the conventional fixed ATS network in Kuala Lumpur FIR and/or Kota Kinabalu FIR.

3.3.7 It is crucial to highlight that Item 15 concerning the indication of Flight Levels (FL) be accurately filed in accordance with the guidelines presented in table 3.2.1. Failure to comply may necessitate the air traffic controller to reroute the aircraft utilising the conventional ATS route network as indicated in AIP ENR 1.8.

4 SUSPENSION

4.1 NOTAMs may be issued 48 hours in advance if the unavailability of DRO provision is sufficiently foreseeable. This is to ensure safe and efficient fuel management for aircraft.

4.2 Contingency Event

4.2.1 DRO is not available during the activation of **Malaysia ATM Contingency Level 2**.

4.2.2 Upon the activation, either published by NOTAM or informed by the transferring ATC unit, all participating DRO aircraft shall follow the applicable Contingency Route (CR) and Flight Level Allocation Scheme (FLAS) to ensure the safety of the flight and to facilitate limited flight operations commensurate with the prevailing conditions.

- END -