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Introduction of Free Route Airspace (FRA) within Mauritius Flight Information Region

1 INTRODUCTION

- 1.1 Following the APIRG meeting of December 2020, the Republic of Mauritius was selected with six other states to introduce FRA in their Flight Information region as per the ASBU requirement.
- 1.2 In this context after the publication of the CONOPs and Gap analysis by the AFI ICAO regional office Mauritius is introducing Free Route Airspace (FRA) within the oceanic airspace of its FIR south of Latitude 25°S.

2 FREE ROUTE AIRSPACE TERMS AND DEFINITIONS

Free Route Airspace

A specified airspace within which users may freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) significant points, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

FRA Horizontal Entry Point (E)

A published Significant Point on the horizontal boundary of the Free Route Airspace from which FRA operations are allowed. The FRA relevance of such points shall be included in ENR 4.1/4.5 columns as (E).

FRA Horizontal Exit Point (X)

A published Significant Point on the horizontal boundary of the Free Route Airspace to which FRA operations are allowed. The FRA relevance of such points shall be included in ENR 4.1/4.5 columns as (X).

FRA Intermediate Point (I)

A published Significant Point or unpublished point defined by geographical coordinates or by bearing and distance via which FRA operations are allowed. If published, the FRA relevance of such points shall be included in ENR 4.1/4.5 columns as (I).

Cross-border FRA

A specified Free Route Airspace that comprises part and/or the whole areas of responsibility of at least two adjacent ATC units (e.g. ACCs, UACs, etc.) or FRA areas where common procedures are applied regardless of national and/or operational boundaries.

Special Use airspace (SUA)

“Special use airspace (SUA) consists of that airspace wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations that are not a part of those activities, or both.

DCT (Doc 8400, ICAO Abbreviations and Codes (PANS-ABC)

Direct (in relation to flight plan clearances and type of approach)

Decoded abbreviation/indicator DCT (Direct) or Encoded abbreviation/ indicator Direct (DCT) should be used only:

- for flight planning purposes when submitting FPL.
- when executing specified type of approach.

3 FREE ROUTE AIRSPACE (FRA) GENERAL PROCEDURES

3.1 Applicability

Mauritius is implementing Free Route Airspace (FRA) between Latitudes 25° and 45° South to be used mainly by overflying Traffic.

Mauritius FRA is classified as class A Airspace.

Lateral limits:

The Mauritius FRA characteristics are described in **Appendix 1**

Vertical limits: FL 460 / FL 245

Time of Applicability:

H24

3.2 Flight Procedures

3.2.1 General

All traffic, other than State aircraft, shall comply with:

- The aircraft equipment requirements.
- General Rules as published in Mauritius AIP ENR 1.1
- Letters of Agreement (LoA) between neighbouring ACCs.

For exemptions for State aircraft see the Mauritius ENR 1.8 concerning RVSM requirement.

Within Mauritius FIR FRA airspace users may fly on user-preferred trajectories by using FRA relevant points and geographical coordinates (LAT/LONG) under conditions stated in AIP.

Within Mauritius FIR FRA relevant significant points are considered as FRA Horizontal Entry (E), FRA Horizontal Exit (X), FRA Intermediate (I), as published in ENR 4.1 / ENR 4.4 of AIPs.

The use of mandatory FRA Intermediate points (I) might be required due to safety, capacity or operational reasons.

The Flight level Orientation Scheme (FLOS) applicable within Mauritius FIR FRA corresponds to the semi -circular rules according to ICAO Annex 2 Appendix 3 a) and ENR 1.7.

3.2.2 Eligible flights for Mauritius FIR FRA

Eligible flights are overflights that are intending to operate within the vertical and horizontal limits of Mauritius FIR FRA as specified in ENR 2.2 and/or ENR 6.

Overflying traffic are all flights whose aerodromes of departure and destination are located outside Mauritius FIR FRA area.

Overflying traffic may plan directly from any Horizontal Entry point (E) to any FRA Horizontal Exit point (X) and via published and unpublished FRA Intermediate points (I) as specified in AIP.

3.3 Flight Planning

3.3.1 General

Within Mauritius FIR FRA airspace users are allowed to plan using relevant FRA significant points – en-route radio navigation aids and/or five-letter name-codes published in ENR 4.1 and ENR 4.4, respectively.

Filing as FRA Intermediate point (I) of unpublished point, defined by geographical coordinates (LAT/LONG) is allowed provide that LAT/LONG point is defined on the direct line between two published points. Filing bearing and distance within Mauritius FRA is not allowed.

All eligible flights shall flight plan via FRA relevant points according to the table below:

From	To	Remark
FRA Horizontal Entry Point (E)	FRA Horizontal Exit Point (X)	Flight plan direct or via one or several intermediate points.
	FRA Intermediate Point (I)	
FRA Intermediate Point (I)	FRA Horizontal Exit Point (X)	
	FRA Intermediate Point (I)	

Route portions between significant points or geographical coordinates shall be indicated by means of "DCT" in accordance with ICAO Doc. 4444 Appendix 2 "Flight Plan, Item 15".

Within Mauritius FIR FRA there is no limitation on the:

- Number of FRA intermediate points used;
- Maximum DCT distance.

Flights shall not be planned closer than 3 NM to the published Mauritius FIR FRA border.

For Y/Z flights changes of flight rules (IFR joining or cancelling) shall be indicated by reference to any FRA relevant point as published in ENR 4.1 and ENR 4.5 (**Appendix 2**) respectively.

3.3.2 Cross Border Application – NOT ALLOWED

3.3.3 Use of geographical coordinates in FPL ITEM 15: ROUTE

Unpublished significant points defined by geographical coordinates shall in general only be inserted along the direct trajectory between two FRA relevant points (E/X/I) to indicate changes of level and speed.

3.3.4 Airspace Reservation - Special Use Airspaces

Flights must be planned around active SUAs within Mauritius FIR, as published in the AIP, by using FRA relevant points published in ENR 4.1 /ENR 4.4, unless otherwise authorized by NOTAM or tactically cleared by ATC.

3.3.5 Chart ENR 6-1 with FRA is included for ease of reference as Appendix 3.

4 EFFECTIVE DATE

This AIP Supplement will become effective at 0000 UTC on the 07 October 2021.

5 CANCELLATION

This AIP Supplement will remain effective until incorporated in the AIP.



S. AYASAMY

for Director of Civil Aviation

ENR 2. AIR TRAFFIC SERVICES AIRSPACE

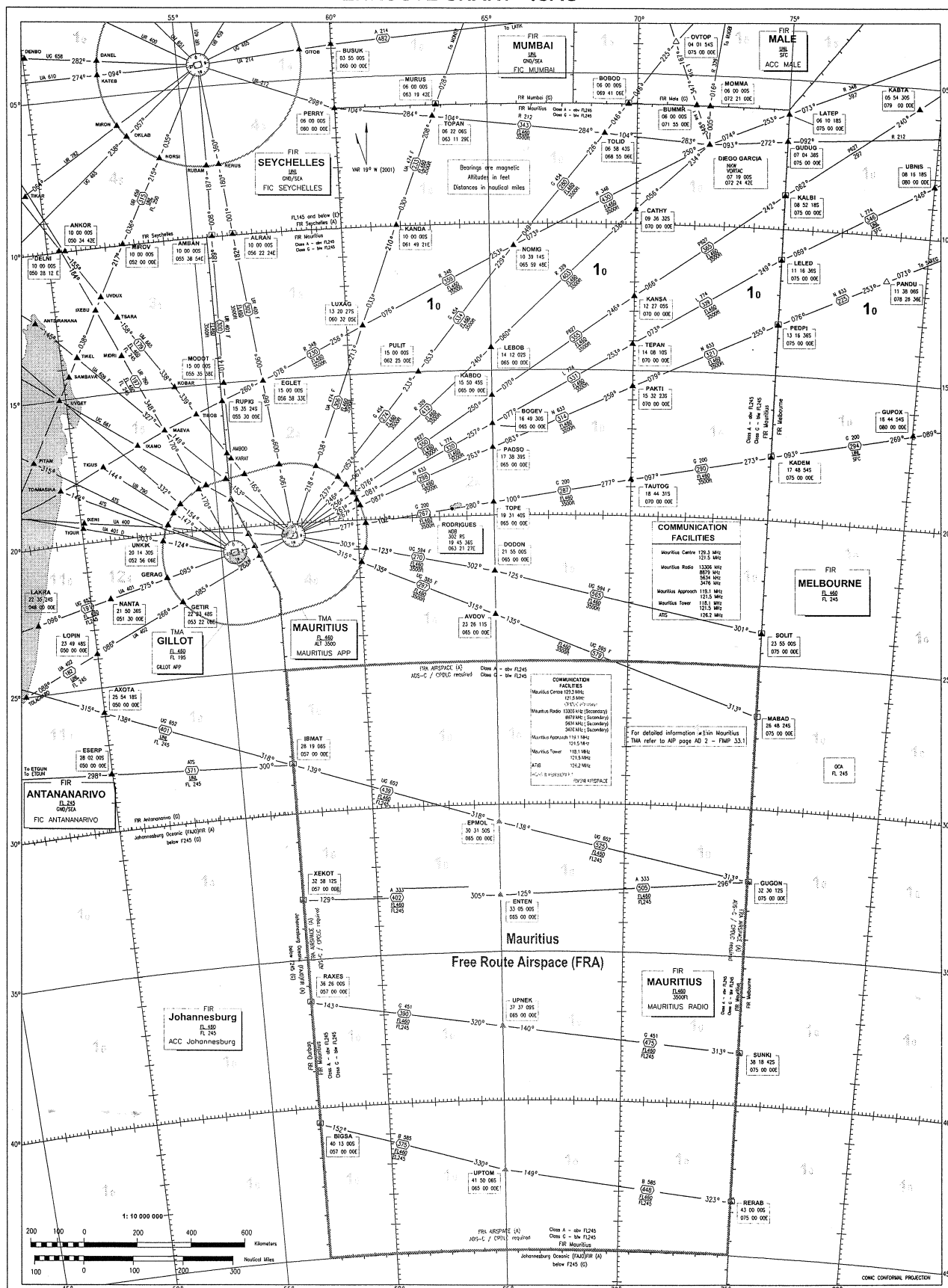
2.2 OTHER REGULATED AIRSPACEMAURITIUS FRA

Name Lateral limits Vertical limits Class of Airspace	Unit providing service	Call sign Language Area and condition of use Hours of service	Frequency / purpose	Remark
1	2	3	4	5
MAURITIUS FRA 25°00'00"S 057°00'00"E - 25°00'00"S 075°00'00"E - 45°00'00"S 075°00'00"E - 45°00'00"S 057°00'00"E - 25°00'00"S 057°00'00"E FL460 FL245 Class of Airspace within Regulated Airspace: A Class of Airspace outside Regulated Airspace Above FL460 - G Below FL245 - G	Mauritius ACC Mauritius Radio	Mauritius Centre English French (by prior arrangement) H24 Mauritius Radio (in case CPDLC not AVBL) English French (by prior arrangement) H24	129.3 MHz 121.5 MHz (Emergency FREQ) CPDLC (Primary) (Secondary) 13306 KHz 8879 KHz 5634 KHz 3476 KHz	Aircraft must be ADS-C and RNP 10 capable SELCAL AVBL on all HF FREQ

ENR 4.5. Free Route Airspace (FRA) Waypoints

Waypoint	Latitude	Longitude	FRA Relevance En-route	ICAO	Level Availability	Time Availability
IBMAT	28°19'06.00" S	057°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
GUGON	32°30'12.00" S	075°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
XEKOT	32°58'12.00" S	057°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
RAXES	36°26'00.00" S	057°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
SUNKI	38°18'42.00" S	075°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
BIGSA	40°13'00.00" S	057°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
RERAB	43°00'00.00" S	075°00'00.00" E	EX	ODD/EVEN	FL245/FL460	H24
EPMOL	30°31'50.00" S	065°00'00.00" E	I	ODD/EVEN	FL245/FL460	H24
ENTEN	33°05'00.00" S	065°00'00.00" E	I	ODD/EVEN	FL245/FL460	H24
UPNEK	37°37'09.00" S	065°00'00.00" E	I	ODD/EVEN	FL245/FL460	H24
UPTOM	41°50'06.00" S	065°00'00.00" E	I	ODD/EVEN	FL245/FL460	H24

ENROUTE CHART - ICAO



LEGEND Aerodrome Flight Information Region (FIR) Name of FIR Upper Limit Lower Limit Unit providing service Free Route Airspace (FRA) Collocated VOR and DME Navigation Aids (VORDME) Compass rose oriented on the chart to Magnetic North	Oceanic Control Area (TMA) Name of OCA Upper Limit Lower Limit Unit providing oceanic control service Terminal Control Area (TMA) Name of TMA Upper Limit Lower Limit Unit providing approach control service Control Zone (CTR) Name of CTR Upper Limit Lower Limit Unit providing aerodrome control service	Reporting Point (REP) Name of REP ATS/MET Reporting Point (MRP) FRA waypoint CAUTION Consult respective NOTAM and AIP of States concerned for the latest information. The Department of Civil Aviation of Mauritius does not accept responsibility of any errors or omissions in the information shown outside the Mauritius FIR	ATS Route Route designator Magnetic track Distance in nautical miles Vertical limits Restricted Airspace Identification of Area Name of Area Upper Limit Lower Limit Vertical limits	Identification for radio navigation aids (NAVAID) Name NAVAID, frequency, identification or call sign Geographical coordinates Area Minimum Altitude (AMA) Each 5° quadrilateral contains an area minimum altitude (AMA) which represents the lowest altitude which may be used under instrument meteorological conditions (IMC). The AMA provides a minimum clearance of 1000 feet (300 M) above all terrain and obstacles in the quadrilateral Example 1000 feet = 10
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