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AIRAC
95/15
14TH MAY

IMPLEMENTATION OF ATS ROUTE L649 IN SINGAPORE FIR AND AMENDMENT TO ATS ROUTE M772 RESTRICTIONS

1 INTRODUCTION

- 1.1 The purpose of this AIP Supplement is to provide details on the implementation of ATS Route L649 in Singapore FIR and amendment to ATS Route M772 restrictions.

2 IMPLEMENTATION OF ATS ROUTE L649 AND AMENDMENT TO ATS ROUTE M772

- 2.1 ATS Route L649 will become effective at **0000UTC** on **23 July 2015**. The details of ATS Route L649 applicable within Singapore FIR are shown in Appendix A and depicted in Chart 1.
- 2.2 Amendment to ATS Route M772 restrictions is shown in Appendix B.
- 2.3 Operating restrictions applicable within Singapore FIR are detailed in paragraphs 3 and 4 below.

3 RNP 10 NAVIGATION REQUIREMENTS

- 3.1 ATC will apply 50NM lateral separation minima to aircraft which are approved for RNP 10 operations on the segment of the route which falls within Singapore FIR.
- 3.2 Pilots must advise ATC of any deterioration or failure of navigation systems below the navigation requirements for RNP 10. ATC shall then provide alternate separation and / or alternate routing.
- 3.3 Pilots of aircraft meeting RNP 10 navigation requirements must indicate /R in Item 10 of the ICAO Flight Plan.
- 3.4 An aircraft that is unable to meet the minimum navigation requirements for RNP 10 shall not file flight plan to operate on ATS Route L649.

4 FLIGHT PLANNING REQUIREMENTS

4.1 The use of ATS Route L649 joining ATS Route M772 is subject to the following conditions:

- ATS Route L649 joining ATS Route M772 is to be used for traffic originating from airports in Borneo and landing at Hong Kong only (Please see **Table 1**);
- Flight Levels FL300 and FL380 will only be available on ATS Routes L649 and M772 under the existing Flight Level Allocation Scheme (FLAS);
- Longitudinal separation of 15 minutes, or 10 minutes based on Mach Number Technique (MNT), shall be applied on ATS Routes L649 and M772;
- Contingency procedures during Large Scale Weather Deviations (LSWD) and periods of non-availability of HF communications shall apply within Manila FIR. When LSWD occurs within Manila FIR, ATS Route L649 may be suspended similar to current conditions imposed on ATS Route M772.

Departure Aerodrome	Destination Aerodrome	ATS Route
Jakarta • Halim Perdanakusuma (WIHH) • Soekarno-Hatta (WIII)	Hong Kong (VHHH) and airports in People's Republic of China	M772
Bintulu (WBGB) Kuching (WBGG) Sibu (WBGS)	Hong Kong only	M772
Brunei (WBSB) Labuan (WBKL) Miri (WBGR)	Hong Kong only	L649 joining M772

Table 1

5 SAFETY ASSESSMENT CRITERIA

5.1 The safety assessment criteria associated with the introduction of the reduced lateral separation minima of 50NM will be in accordance with the requirements for RNP 10 navigation performance, that is, aircraft navigation performance shall be such that the standard deviation of lateral track errors shall be less than 8.7km (4.7NM).

6 MONITORING OF AIRCRAFT NAVIGATION PERFORMANCE

6.1 Monitoring of aircraft navigation performance is a joint responsibility between operators, States of Registry or States of Operators (as applicable), regulatory authorities and the ATS providers. The detection and reporting of non-conformance with the navigation requirements against the following parameters will rely primarily on radar monitoring by ATC units:
Lateral deviation

- (i) a deviation of 15NM or more from the track centreline based on radar observations;

Longitudinal deviations

- (i) where time separation is applied by ATC – when the reported separation based on ATC verified pilot's estimates varies by 3 minutes or more from the expected separation at the reporting point; or
- (ii) where a distance based standard is applied by ATC based on ADS, radar observation or RNAV distance reports – when the distance varies by 10NM or more from the expected distance.

6.2 ATC will advise the pilot-in-command when such deviations are observed and implement the required investigation procedures.

6.3 The ATC authorities will investigate the causes of such deviations in conjunction with the aircraft operator and the State of Registry, or the State of Operator, as applicable.

7 SEPARATION MINIMA

7.1 Lateral Separation Minima

7.1.1 A lateral separation minima of 50NM may only be applied between aircraft equipped in accordance with RNP 10 navigation requirements.

7.2 Longitudinal Separation Minima

7.2.1 A longitudinal separation minima of 80NM RNAV or 10 minutes (or less) Mach Number Technique (MNT) separation minima may be applied between aircraft equipped in accordance with RNP 10 navigation requirements.

8 OPERATORS PROCEDURES

8.1 The operator shall ensure that in-flight procedures, crew manuals and training programmes are established in accordance with RNP 10 navigation requirements.

ENR 3. ATS ROUTES ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
L649 (RNP 10)						
▲ LAXOR (WSJC/RPHI FIR BDRY) 094937N 1144829E	NIL	98	<u>FL 460</u> FL 240 FL 250 Class A		↑	Lateral Limits: 25NM either side of line joining DAKIX to LAXOR. Available only for flights departing from Brunei (WBSB), Labuan (WBKL) and Miri (WBGR) to Hong Kong (VHHH) only. No-PDC Flight Levels FL300 and FL380 applicable.
▲ URKET 081130N 1145000E	NIL					
▲ DAKIX (WBFC/WSJC FIR BDRY) 070854N 1145054E	BRU 359° 136NM	62				

ENR 3. ATS ROUTES ENR 3.3 AREA NAVIGATION (RNAV) ROUTES						
Route Designator (RNP Type) Name of Significant Points Coordinates	Way-point IDENT of VOR/DME BRG & DIST ELEV DME Antenna	Great Circle DIST (NM)	Upper Limits Lower Limits Minimum Flt Alt Airspace Classification	Direction of Cruising Levels		Remarks Controlling Unit Frequency
				Odd	Even	
1	2	3	4	5		6
M772 (RNP 10)						
▲ LAXOR (WSJC/RPHI FIR BDRY) 094937N 1144829E	NIL	020° 147.5	FL 460 FL 240 FL 250 Class A			Lateral Limits: 25NM either side of line joining ASISU to LAXOR. Available only for flights departing from: - Jakarta (WIII and WIHH) to Hong Kong (VHHH) and airports in People's Republic of China. - Bintulu (WBGB), Brunei (WBSB), Kuching (WBGG), Labuan (WBKL), Miri (WBGR) and Sibiu (WBGs) to Hong Kong (VHHH) only.
▲ BIDAG 073101N 1135544E	NIL					
▲ ASISU (WBFC/WSJC FIR BDRY) 055906N 1132046E	BRU 305° 113.3NM	020° 97.9				

IMPLEMENTATION OF ATS ROUTE L649

