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ENR/AD

IMPLEMENTATION OF AUTOMATIC DEPENDENT SURVEILLANCE BROADCAST (ADS-B) OUT EXCLUSIVE AIRSPACE WITHIN COLOMBO FIR

(Effective Date: 10th September 2020)

1. INTRODUCTION

- 1.1 The purpose of this AIP Supplement is to notify airspace users of the implementation of exclusive ADS-B (Out) airspace within a designated volume of airspace in Colombo FIR effective from 0000UTC, 10th September 2020.
- 1.2 AIC A02/14 published on 10th November 2014 notified the aircraft operators on the plans of the state to introduce ADS-B (Out) services within the TMA of Colombo FIR and to designate Colombo TMA as an exclusive ADS-B airspace by 2020. Aircraft operators were notified to plan ahead their forward purchasing and retrofitting aircraft to meet the requirements for ADS-B equipage.
- 1.3 AIC A02/16, published on 11th July 2016 notified the aircraft operators intending to use ADS-B (Out) when operating within Colombo TMA shall have relevant operational approval as for the ADS-B equipage from the respective state.
- 1.4 The ADS-B Surveillance system derives data from 5 ADS-B Ground receivers with two independent sensors, located at BIA, Piduruthalagala, MRIA, Kilinochchi and Sooriyakanda. ATM system is configured to receive ADS-B surveillance to augment a multi sensor environment with MSSR and ADS-C.

2. EXCLUSIVE ADS-B (OUT) AIRSPACE

- 2.1 Volume of Airspace between FL290 and FL460 (inclusive) enclosed by the boundary starting from a point 100000N 0800000E thence along straight lines joining the points 100000N 0820000E – 082048N 0860758E thence clockwise along an arc of 330NM radius centered on 070003N 0804618E up to a point 030000N 0843509E thence along straight lines joining the points 030000N 0780000E(LAVOX) - 060000N 0780000E - 060000N 0770000E - 070000N 0770000E - 090000N 0793000E thence straight line to the starting point (100000N 0800000E), here in after referred to as “Colombo ADS-B (Out) airspace” (Depicted in “Appendix A” to this AIRAC AIP SUPPLEMENT).

3. AIRCRAFT EQUIPAGE MANDATE FOR ADS-B (OUT)

- 3.1 On and after 10th September 2020, if an aircraft operates within Colombo ADS-B (Out) airspace;

The aircraft must carry serviceable 1090MHz extended squitter (1090ES) ADS-B transmitting equipment that has been certificated as meeting:-

- (a) European Aviation Safety Agency - Certification Considerations for the Enhanced ATS in Non-Radar areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHz Extended Squitter (AMC 20-24), or
 - (b) European Aviation Safety Agency - Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance Subpart D — Surveillance (SUR) (CS-ACNS.D.ADS-B), or
 - (c) Federal Aviation Administration – Advisory Circular No: 20-165A (or later versions) Airworthiness Approval of Automatic Dependent Surveillance – Broadcast (ADS-B) Out Systems, or
 - (d) The equipment configuration standards in Appendix XI of Civil Aviation Order 20.18 of the Civil Aviation Safety Authority of Australia.
- 3.2 Any registered aircraft with a maximum certified take-off mass exceeding 5700 kg or having a maximum cruising true airspeed capability greater than 250 knots, with a date of manufacture on or after 1 January 2020 which intends to operate within Colombo ADS-B airspace be equipped with ADS-B avionics compliant with Version 2 ES (equivalent to RTCA D0-260B) or later version.
- 3.3 Carriage of ADS-B equipment will remain as an option for aircraft flying below FL290 until further notice.
- 3.4 No Operational approval is required by the aircraft operators, to conduct ADS-B (Out) operations within Colombo ADS-B (Out) airspace.
- 3.5 Aircraft not complying with the equipment requirements specified in paragraph 3.1 and 3.2 will not be permitted to operate in the Colombo ADS-B (Out) airspace.

4. SURVEILLANCE AND SEPARATION

- 4.1 ADS-B data may be used in combination with data obtained by other means of surveillance (such as Radar, ADS-C)
- 4.2 All safety net features (MSAW, STCA, MTCD, RAM, DAIW etc.) shall possess the same responsiveness as equivalent radar safety net features.
- 4.3 ADS-B separation standard shall be 10NM within the Colombo ADS-B airspace.

5. PHRASEOLOGY

Where system functionality is derived from the same source for both MODE S SSR and ADS-B the phraseology used between ATC and pilots should be as follows;

To request the capability of the ADS-B equipment	<p>a) ADVISE ADS-B CAPABILITY; *b) ADS-B TRANSMITTER (data link); *c) ADS-B RECEIVER (data link); *d) NEGATIVE ADS-B.</p> <p>* Denotes pilot transmission.</p> <p><i>Note: For (b) and (c) – the options are not available for aircraft that are not equipped.</i></p>
To request reselection of aircraft identification re-enter Flight Identification	REENTER FLIGHT IDENTIFICATION.
Termination of RADAR and/or ADS-B service	IDENTIFICATION LOST [reasons] (instructions).
To request the operation of the MODE S or ADS-B IDENT feature	SQUAWK IDENT.

6. FLIGHT PLANNING REQUIREMENTS

6.1 Flight Identity

6.1.1 The aircraft identification (ACID) must be accurately recorded in “item 7” of the ICAO Flight Plan form. The Aircraft Identification, not exceeding 7 characters, is to be entered both in “item 7” of the flight plan and replicated exactly when set in the aircraft FMS (for transmission as Flight ID) in ADS-B transmissions as follows:

- (a) The ICAO three-letter designator for the aircraft operating agency followed by the flight identification; or
- (b) The aircraft registration, when the radiotelephony call sign consists of the aircraft registration.

Note: ACID entered should not have any leading zeros unless it is part of the flight number as indicated in “item 7” of the ICAO flight plan. Hyphens, dashes or spaces are NOT to be used.

6.2 Surveillance Equipment and Capabilities –“Item 10b”

6.2.1 Aircraft operators complying with the requirements stipulated in paragraph 3 shall indicate the appropriate ADS-B designator in “item 10b” of the flight plan.

B1-ADS-B with dedicated 1090 MHz ADS-B "out" capability

B2- ADS-B with dedicated 1090 MHz ADS-B "out" and "in" capability.

6.3 Transponder Capability –“Item 10b”

6.3.1 Aircraft operators complying with the requirements stipulated in paragraph 3 shall indicate the appropriate Mode S designator in “item 10b” of the ICAO flight plan.

- (a) E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability, or
- (b) L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability.

6.4 Other Information –“Item 18”

6.4.1 ICAO Aircraft Address (24 Bit Code) shall be recorded in “Item 18” of the ICAO flight plan, in hexadecimal format as per the following example:

CODE/7C432B

7. CONTINGENCIES

7.1 ATC shall terminate the Surveillance separation and immediately provide the Procedural separation for aircraft, if the radar and or ADS-B contact is lost from an ATC air situation display.

7.2 The pilot-in-command, upon awareness of an onboard ADS-B equipment failure, shall inform ATC as soon as possible. ATC would then provide the necessary clearance to ensure separation with other flights operating in the delineated airspace.

8. CANCELLATION

8.1 This AIRAC AIP SUP will become effective at 0000UTC, 10th September 2020 and will remain current until the above updates are incorporated in the AIP Sri Lanka.

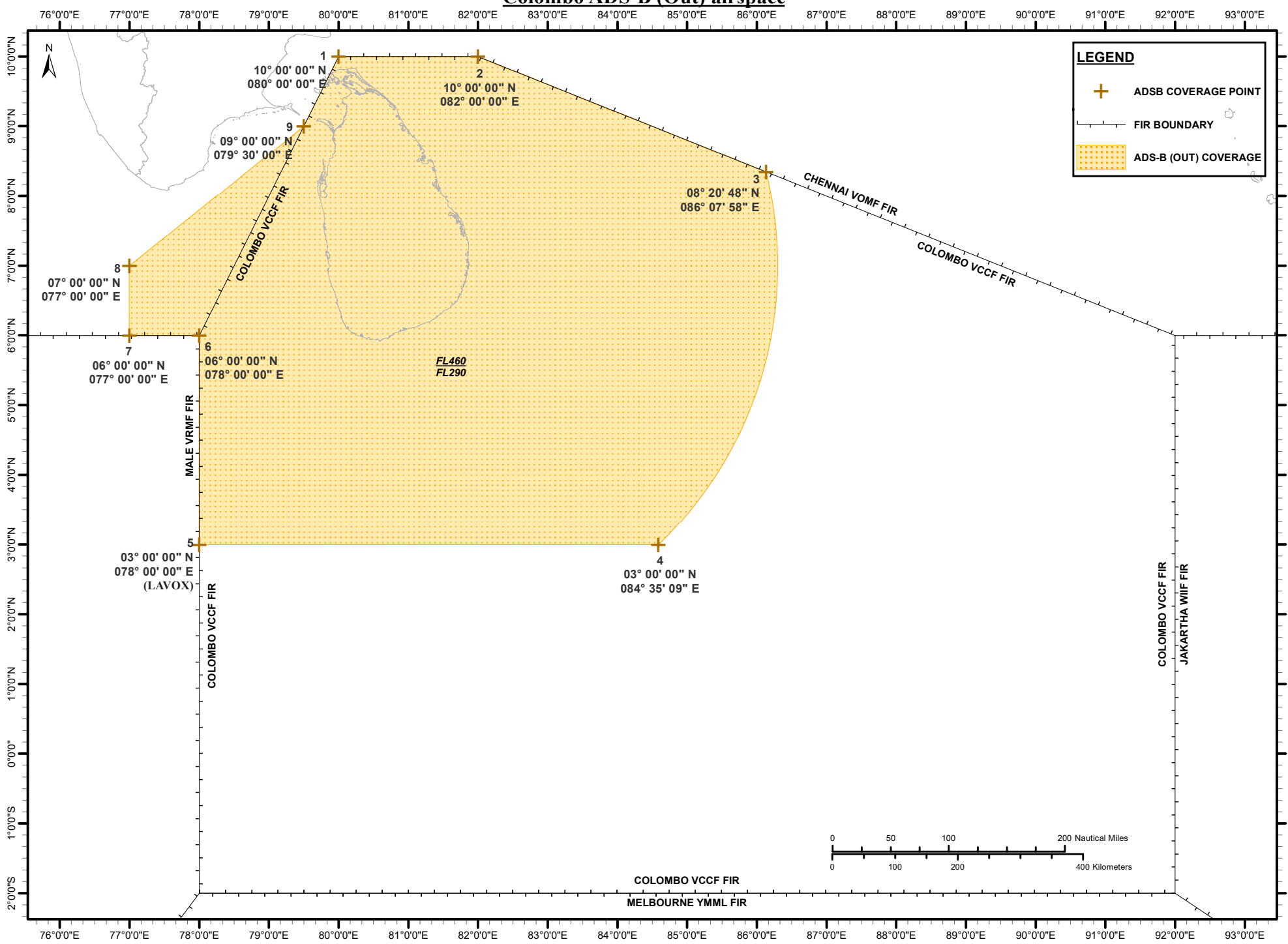
8.2 AIC A02/16 published on 11th July 2016 and NOTAM A0501/20 dated 09th July 2020 are hereby superseded.

Capt. THEMIYA ABEY WickRAMA
DIRECTOR GENERAL OF CIVIL AVIATION & CEO
CIVIL AVIATION AUTHORITY OF SRI LANKA

Colombo ADS-B (Out) airspace

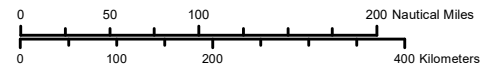
CIVIL AVIATION AUTHORITY OF SRI LANKA

30 JUL 2020



LEGEND

- ✚ ADSB COVERAGE POINT
- - - FIR BOUNDARY
- ▨ ADS-B (OUT) COVERAGE



APPENDIX - A
AIRAC AIP SUP 02/20
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