



**OPERATIONAL
LETTER OF AGREEMENT
BETWEEN
DEPARTMENT OF CIVIL AVIATION MALAYSIA
AND
VIET NAM AIR TRAFFIC MANAGEMENT**

Effective

1 Nov 2001

Document Management

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Overview

Introduction

The following document is an Operational Letter of Agreement (LOA) between Department of Civil Aviation Malaysia and the Viet Nam Air Traffic Management. The LOA details separation standards, level assignment and co-ordination procedures between the following Air Traffic Services (ATS) Units :

Malaysia	: Kuala Lumpur Area Control Centre
Viet Nam	: Ho Chi Minh Area Control Centre

Objective

To define the procedures for the transfer of control/communications of flights traversing Ho Chi Minh FIR and ATS/RNAV routes within the Singapore FIR within which Kuala Lumpur ACC is responsible for providing air traffic services.

The detailed procedures as specified in this LOA shall be applied to all aircraft operating along the ATS/RNAV routes R208, M765 and N891.

Note: The airspace within Singapore FIR within which Kuala Lumpur ACC is responsible for providing air traffic services are referred to as "delegated airspaces". The area is defined under the Airspace Definition column on page 3.

Scope

The procedures contained in this Operational LOA supplement or detail those prescribed by ICAO Annex 2, Annex 11, PANS-RAC (Document 4444), Regional Supplementary Procedures (Document 7030) and local AIP and ATS Instructions.

Effective Date

This Operational LOA becomes effective on 1 Nov 2001 at 1930 UTC and supercedes the previous LOA dated 1 Feb 1999 on the same subject.

Airspace

Airspace Definition

The "delegated airspaces" are the segments of airspace on ATS/RNAV Routes R208 and M765 that lie within the Singapore FIR delegated to Kuala Lumpur Area Control Centre for the provision of ATS. The segments are:
M765 between VENLI and IGARI;
R208 between IKUKO and IGARI.

Kuala Lumpur Area Control Centre is not responsible for the provision of ATS on N891. For ease of communication and to ensure separation between crossing tracks converging at IGARI, Kuala Lumpur Area Control Centre shall maintain communication watch on flights within the Singapore FIR between ENREP and IGARI.

Responsibility

Kuala Lumpur Area Control Centre shall be responsible for the provision of Air Traffic Control Services, Flight Information Service and Alerting Service to all aircraft within Kuala Lumpur FIR and the "delegated airspaces" on ATS/RNAV Routes R208 and M765.

For ease of communication and to ensure separation between crossing tracks converging at IGARI, Kuala Lumpur Area Control Centre shall maintain communication watch on flights within the Singapore FIR between ENREP and IGARI. Co-ordination for all flights on N891 shall be carried out by Kuala Lumpur Area Control Centre on behalf of Singapore Area Control Centre.

Ho Chi Minh Area Control Centre shall be responsible for provision of Air Traffic Control Service, Flight Information Service and Alerting Service to all aircraft within Ho Chi Minh FIR.

When acting as transferring units, both Ho Chi Minh and Kuala Lumpur Area Control Centres shall be responsible to ensure that either vertical or adequate longitudinal separation exist between aircraft converging at or diverging from IGARI.

The addresses of the responsible ATS units are detailed in Attachment A.

Separation

Assignment of Cruising Levels

Assignment of cruising levels shall comply with the IFR table of cruising levels in Appendix C of ICAO Annex 2.

Vertical Separation

The vertical separation minimum shall be:

- a) 1000 ft at FL290 and below; and
- b) 2000 ft above FL290

Longitudinal Separation – Same Tracks

The longitudinal separation minima between aircraft flying on the same track shall be ten (10) minutes subject to the application of Mach Number Technique (MNT).

Longitudinal Separation – Reciprocal Tracks

Vertical separation shall be provided for at least ten (10) minutes prior to and after the aircraft are estimated to pass, or are estimated to have passed each other. Provided that it has been determined that the aircraft has passed each other, this separation minima need not apply.

Longitudinal Separation – Crossing Tracks

The longitudinal time separation minima between aircraft operating on crossing route segments shall be ten (10) minutes.

MNT Conditions. In accordance with ICAO Regional Supplementary Procedures (Doc 7030), MNT shall be applied provided the aircraft:

- a) is equipped with approved RNAV equipment and the flight crew trained;
- b) is instructed to maintain the appropriate Mach Number between entry and exit point in the en-route phase of flight; and
- c) has reported over a common point and follow the same or continuously diverging tracks.

The table below details the minimum interval required between aircraft at the entry point. It includes guidance for the application of MNT when the succeeding aircraft is faster.

**MNT – Time
 Separation
 Minima**

Mach No. Difference Time between aircraft	Time Interval required between aircraft at the transfer of control point (ICP)
M0.06 preceding aircraft faster	5
M0.05 preceding aircraft faster	6
M0.04 preceding aircraft faster	7
M0.03 preceding aircraft faster	8
M0.02 preceding aircraft faster	9

Same Mach No.	10
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M0.01 preceding aircraft slower	11
M0.02 preceding aircraft slower	12
M0.03 preceding aircraft slower	13
M0.04 preceding aircraft slower	14
M0.05 preceding aircraft slower	15
M0.06 preceding aircraft slower	16
M0.07 preceding aircraft slower	17
M0.08 preceding aircraft slower	18

Co-ordination Procedures

Transfer of Control Point

Route	TCP
M765	IGARI (065612N 1033512E)
N891	
R208 / M765	

Communication Systems

Use of communications systems for co-ordination between Kuala Lumpur and Ho Chi Minh Area Control Centres shall be in the following order of priority:

- a) Direct Speech Circuit (DSC);
- b) International telephone system;
- c) Aeronautical Fixed Telecommunications Network (AFTN);
- d) Relay through Bangkok or Singapore Area Control Centre; and
- e) Any other means of communication available.

When the DSC resumes normal operation after a period of unserviceability, transfer of control messages sent via the AFTN for aircraft that have not passed the TCP, shall be retransmitted on the DSC for confirmation.

All direct voice communication between Ho Chi Minh and Kuala Lumpur Area Control Centres shall be recorded and kept for a minimum period of thirty (30) days.

**ATC Clearance
Limit and
Co-ordination
Timings**

The transferring unit shall provide at least twenty (20) minutes notification (EST message) prior to the time the aircraft is estimated to pass over the TCP. If co-ordination cannot be achieved, the clearance limit shall be the TCP. If subsequent co-ordination is achieved, the clearance limit shall be amended accordingly.

When the flying time from departure aerodrome to the TCP is less than thirty (30) minutes, clearances shall be co-ordinated with the adjacent Centre prior to issue.

After the estimate for the TCP has been advised, the transferring unit shall relay any revised TCP estimate that varies by three (3) minutes or more.

**No Pre-
departure
Coordination
(No-PDC)
Arrangement**

Transferring Unit	Route	FL
Kuala Lumpur ACC	R208, M765 N891	270 and 370 310 and 350
Ho Chi Minh ACC	M765 N891	260 and 390 330 and 410

- a) Levels indicated above are intended to facilitate initial departure. Level allocation, once airborne, is subject to normal ATC requirements. Higher level, where appropriate, may be offered when traffic permits.
- b) Flight levels other than those specified above may be available subject to prior co-ordination.

Contents and
Format of
Messages

All co-ordination messages by DSC shall contain information in the following format. Certain information may be omitted if it is known that the accepting unit already has the information.

- Prefix (e.g. Estimate, Approval Request, Revision)
- Aircraft Identification,
- Aircraft Type
- Point of Departure
- Route
- Destination
- TCP estimate,
- The assigned level, (maintaining, climbing to, descending to)
- Mach Number (if assigned)
- SSR Code; and
- The requested level
- Other pertinent information

e.g. : *IGARI estimate, Malaysian 72, B747, estimate IGARI 0735, maintaining FL270, Mach .82, Transponder A0304, Requesting FL330 Mach .84*

Confirmation by the accepting unit shall contain the following:

- Aircraft identification
- TCP estimate
- The level assigned by the transferring unit
- Mach Number (if assigned)
- SSR Code
- The word "STANDBY FOR" the requested level (necessary)

e.g.: *Malaysian 72, B747, IGARI at 0735, FL270, Mach .82, Transponder A0304, Standby for FL330*

If the accepting unit is able to accept the requested level, phraseology shall include:

- The aircraft identification
- The flight level approved

e.g.: *Malaysian 72, Flight level 330 approved.*

The transferring unit shall acknowledge the flight level approved with the phraseology:

e.g.: *Malaysian 72, transfer Flight Level 330.*

If the accepting unit is unable to accept any element of the EST message, the phraseology shall include:

- The word "UNABLE"
- The aircraft Identification
- The element of the transfer that is unacceptable
- A suggestion

e.g.: *Unable Malaysian 72, Flight Level 330, suggest Flight Level 290*

The transferring unit shall, then, acknowledge with the phraseology

e.g.: *Malaysian 72, transfer Flight Level 290.*

AFTN Estimate (EST) and Acceptance (ACP) messages are not required when voice communication has been successful.

When an AFTN message is required the following format shall be used:

Estimate Message

(Designator-Aircraft Identification/SSR Mode and Code-Departure Aerodrome-Estimate data-Destination)

Example

(EST-MAS72/A0304-WMKK-IGARI0735/M082F270-VHHH)

Acceptance Message

(Designator-Aircraft Identification/SSR Mode and Code-Departure Aerodrome-Destination)

Example

(ACP-MAS72/A5135-WMKK-VHHH)

Readbacks	The transferring unit shall ensure the readback is correct.
Exchange of Initials	Both the transferring and accepting controller shall exchange their individual two letter initials at the end of the verbal coordination messages.
Establishment of Communication	The accepting unit shall notify the transferring unit if two-way communication is not established within five (5) minutes of the estimated time over the TCP.
Clearance Amendments Involving Level Change	After the estimate for the TCP has been advised, the transferring unit shall not allow any aircraft to effect level change without prior coordination with the accepting unit if the flying time to the TCP is less than fifteen (15) minutes.
Aircraft Deviations	Both Kuala Lumpur and Ho Chi Minh Area Control Centres shall inform each other of aircraft deviating from the designated ATS route in the vicinity of the common FIR boundary.

Agreement

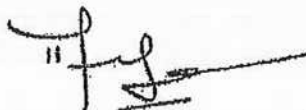
Deviations / Amendments

The procedures outlined in this LOA are intended for use under normal circumstances. In the event that unusual circumstances dictate variations from this LOA, this variation may be imposed with prior co-ordination between the Watch Supervisors on duty at the time.

Amendments to this LOA shall be made only with the concurrence of both Ho Chi Minh and Kuala Lumpur ACCs.



Authority



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Date: 18 TH JULY 2001



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Date: 18 Jul 2001