## PART 1 - GENERAL (GEN)

#### GEN 0.

## GEN 0.1 PREFACE

## 0.1.1 NAME OF PUBLISHING AUTHORITY

The AIP BAHRAIN FIR is published by the authority of Civil Aviation Affairs of the Kingdom of Bahrain.

## 0.1.2 APPLICABLE ICAO DOCUMENTS

The AIP is prepared in accordance with the Standards and Recommended Practices (SARPS) of Annex 15 to Chicago Convention and the Aeronautical Information Services Manual (ICAO Doc 8126 - AN 872). Charts contained in the AIP are produced in accordance with Annex 4 to the Chicago Convention and the Aeronautical Chart Manual (ICAO Doc 8697 - AN 889). Differences from ICAO Standards, Recommended Practices and Procedures are given in section **GEN 1.7**.

## 0.1.3 PUBLICATION MEDIA

See GEN 3.1.3.2.

## 0.1.4 THE AIP STRUCTURE AND ESTABLISHED REGULAR AMENDMENT INTERVAL

#### 0.1.4.1 **The AIP structure**

The AIP forms part of the Integrated Aeronautical Information Package of which details are given in Section **GEN 3.1**. The principal structure is shown in graphic form at the end of this GEN 0.1 subsection.

The AIP is the basic aeronautical information document for the BAHRAIN FIR / BAHRAIN UIR, and contains lasting information essential to air navigation. For other details reference should be made to the AIP of the State concerned.

The AIP is divided into three Parts, General (GEN), En-route (ENR) and Aerodromes (AD), each divided into sections and subsections containing various types of information subjects.

**Note:** the electronic AIP BAHRAIN FIR (see **GEN 3.1.3.1**) may not include certain subsections listed hereafter which are not relevant for an electronic AIP. These subsections are marked as underlined.

## 0.1.4.1.1 Part 1 General (GEN)

Part 1 consists of the five sections containing information as briefly described hereafter.

## GEN 0

Preface; Record of AIP Amendments; <u>Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP;</u> and the Table of Contents to Part 1.

## **GEN 1. National regulations and requirements**

Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; summary of national regulations and international agreements / conventions; and Differences from ICAO Standards, Recommended Practices and Procedures for the Kingdom of Bahrain.

# GEN 2. Tables and codes

Measuring system, aircraft markings, holidays; Abbreviations used in AIM publications; Chart symbols; Location indicators; List of radio navigation aids; Conversion tables; and Sunrise / Sunset tables.

## **GEN 3. Services**

Aeronautical information services; Aeronautical charts; Air traffic services; Communication services; Meteorological services; and rescue.

# GEN 4. Charges for aerodromes / heliports and air navigation services

Aerodrome / heliport charges; and Air navigation services charges.

## 0.1.4.1.2 Part 2 En - route (ENR)

Part 2 consists of seven sections containing information as briefly described hereafter.

## ENR 0.

Preface; Record of Amendments; Record of AIP Supplements; Check list of AIP pages; List of hand amendments to the AIP; and the Table of Content to Part 2.

# ENR 1. General rules and procedures

General rules; Visual flight rules; Instrument flight rules; ATS airspace classification; Holding, approach and departure procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures; Air traffic flow management; Flight planning; Addressing of flight plan messages; Interception of civil aircraft; Unlawful interference; and Air traffic incidents.

## ENR 2. Air traffic services airspace

Detailed description of:

Flight information regions (FIR), Upper flight information regions (UIR), Terminal control areas (TMA); and other regulated airspace.

## ENR 3. ATS routes

Detailed description of:

Lower ATS routes; Upper ATS routes; Area navigation routes; Helicopter routes; other routes; and En-route holding.

**Note:** Other types of routes which are specified in connection with procedures for traffic to and from aerodromes / heliports are described in the relevant section of the Part 3 Aerodromes.

#### ENR 4. Radio navigation aids / systems

Radio navigation aids en-route; Special navigation systems; Global navigation satellite system, Name-code designators for significant points; and Aeronautical ground lights en -route.

## **ENR 5. Navigation Warnings**

Prohibit, restricted and danger areas; Military exercise and training areas; Other activities of dangerous nature; Air navigation obstacles enroute; Aerial sporting and recreational activities; and Wildlife Management and areas with sensitive fauna.

## ENR 6. En - route charts

En-route Chart ICAO and index charts.

## 0.1.4.1.3 Part 3 Aerodromes (AD)

Part 3 consists of four sections containing information as briefly described hereafter.

## AD 0.

Preface; Record of AIP Amendments; Record of AIP Supplements; Check list of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 3.

# AD 1. Aerodromes / Heliports Introduction

Aerodrome / heliport availability; Rescue and Fire fighting services and snow plan; Index to aerodromes and heliports, Grouping of aerodromes / heliports, Status of certification of aerodromes.

## AD 2. Aerodromes

Detailed information about aerodromes, including helicopter landing areas, if located at the aerodromes.

#### AD 3. Heliports

Detailed Information about heliports (not located at aerodromes).

# 0.1.4.2 Regular amendment Interval

The AIP BAHRAIN FIR will be updated on regular basis according the AIRAC dates as published in **GEN 3.1.4.2**. Whenever an AIRAC AMDT is published a trigger NOTAM will be issued by at least three days prior to effective date. This NOTAM will give a brief description of the AIRAC's content and shall come into effect on the same date of the AIRAC.

## 0.1.5 COPYRIGHT POLICY

To be developed

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# 0.1.6 SERVICES TO CONTACT IN CASE OF DETECTED AIP ERRORS OR OMISSIONS

The AIP BAHRAIN FIR and associated NOTAM are compiled from a variety of sources. Except for Kingdom of Bahrain, all information is acquired from indepent states and from commercial sources. The greatest care is exercised in the assembly and compilation of information for the AIP BAHRAIN FIR and associated NOTAM and they are considered to be as reliable as possible at the time of issue. Civil Aviation Affairs will not be held responsible, however, for the accuracy of the content of the AIP or NOTAM or for any omissions therefrom, neither will Civil Aviation Affairs be responsible for the adequacy or receipt of NOTAM or AIP amendments.

Any errors and omissions which may nevertheless be detected, as well as any correspondence concerning the Integrated Aeronautical Information Package, should be referred to:

Aeronautical Information Management Static Data Coordinator (SDC) Kingdom of Bahrain Civil Aviation Affairs P.O. Box 586 TEL: +973 17329037 Telefax:+973 17321025 e-mail: sdc@mtt.gov.bh

Bahrain International NOTAM Office Kingdom of Bahrain Civil Aviation Affairs P.O. Box 586 TEL: +973 17321180 / 1 / 2 Telefax:+973 17323876 AFS: OBBBYNYX



# GEN 0.2 RECORD OF AIP AMENDMENTS

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## GEN 1. NATIONAL REGULATIONS AND REQUIREMENTS

## **GEN 1.1 DESIGNATED AUTHORITIES**

## 1.1.1 REQUIREMENTS AND PROCEDURES

1.1.1.1 The requirements for entry and departure of aircraft engaged in international flights, and the standard procedures for clearance of these aircraft is given for the Kingdom of Bahrain.

**Note:** It is solely the aircraft operator's responsibility to obtain any required landing and overflight permission from the appropriate state authorities.

1.1.1.2 Permission to and / or overfly issued by Civil Aviation Affairs Bahrain related only to BAHRAIN INTERNATIONAL Airport and the territorial airspace of the Kingdom of Bahrain.

1.1.1.3 Clearances issued by the BAHRAIN ACC or Flight Information Centre are based on ATC considerations and do not absolve operators from compliance with the states facilitation regulations.

#### 1.1.2 DESIGNATED AUTHORITIES

The addresses of designated authorities concerned with the facilitation of international air navigation (e.g. civil aviation, meteorology, customs, immigration, health, en - route and aerodrome / heliport charges, agricultural quarantine and aircraft accident investigation) containing, for each authority.

## 1.1.3 DIFFERENCES FROM ICAO STANDARDS AND RECOMMENDED PRACTICES

Where available, information concerning any difference from ICAO Annex 9 is published seperately for each individual State. Additional information is published when received.

#### KINGDOM OF BAHRAIN

## 1.1.4 INTRODUCTION

The requirements for entry and departure of aircraft engaged in international flights, and the standard procedure for clearance of these aircraft at international airports, are given for the information and guidance of operators conducting international flights.

#### 1.1.5 DESIGNATED AUTHORITIES

The postal and telegraphic addresses of the designated authorities concerned with the entry, transit and departure of international air navigation and for the collection of fees therefrom, are as follows:

## 1.1.5.1 CIVIL AVIATION AFFAIRS

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321100 Telefax:+973 17339066 AFS: OBBIYAYX

1.1.5.2 CIVIL AVIATION AFFAIRS

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321011 Telefax:+973 17321194 AFS: OBBIYAYX

## 1.1.5.3 CIVIL AVIATION AFFAIRS (AIR NAVIGATION DIRECTORATE)

Director Air Navigation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321116 Telefax:+973 17329977 AFS: OBBIYAYX

## 1.1.5.4 CIVIL AVIATION AFFAIRS (AIRPORT DIRECTORATE)

Vice President Airport Operations P.O. Box 24924 Kingdom of Bahrain TEL: +973 17321997 Telefax:+973 17324096 1.1.5.5 CIVIL AVIATION AFFAIRS (AIRPORT CHARGES) Director of Administration & Finance P.O. Box 586 Kingdom of Bahrain TEL: +973 17321019 Telefax:+973 17321110 CIVIL AVIATION AFFAIRS (DIRECTORATE OF AIR TRANSPORT) 1.1.5.6 Director of Air Transport P.O. Box 586 Kingdom of Bahrain TEL: +973 17321169 Telefax:+973 17333278 AFS: OBBIYAYX SITA: BAHAPYF 1.1.5.7 CUSTOMS **Director General of Customs** P.O. Box 15 Kingdom of Bahrain TEL: +973 39449050 Telefax:+973 17322919 Telex: 8642 MINA BN BAHRAIN AIRPORT CUSTOMS INSPECTION SECTION TEL: +973 17321620 Telefax:+973 17322919 1.1.5.8 IMMIGRATION General Director of Immigration and Passports P.O. Box 331 Kingdom of Bahrain TEL: +973 17535111 Telefax:+973 17535522 AIRPORT IMMIGRATION SECTION TEL: +973 17321650 Telefax:+973 17333501 1.1.5.9 HEALTH Ministry of Health P.O. Box 12 Kingdom of Bahrain TEL: +973 17255555 Telefax:+973 17252569 Airport Health Office TEL: +973 17321690 1.1.5.10 AGRICULTURAL & VETERINARY QUARANTINE Ministry of Municipalities & Agriculture Affairs Farmers' Services Directorate P.O. Box 251 Kingdom of Bahrain Telex: 7200 ZERAA BN AGRICULTURAL AFFAIRS TEL: +973 17691215 Telefax:+973 17695527

MINISTRY OF MUNICIPALITIES TEL: +973 17229888 Telefax:+973 17229666

# 1.1.5.11 MINISTRY OF INTERIOR (DIRECTOR OF AIRPORT SECURITY AREA)

Ministry of Interior P.O. Box 13 Kingdom of Bahrain TEL: +973 17321600 Telefax:+973 17332718 Telex: 9572 PSMKT BN

1.1.5.12 MINISTRY OF FOREIGN AFFAIRS

Ministry of Foreign Affairs P.O. Box 547 Kingdom of Bahrain Telefax:+973 17211416 Telex: 8228 KARJIA BN

TRACKING OFFICE TEL: +973 17227555, +973 17212006 Telefax:+973 17210575

# 1.1.6 APPROVED AIRCRAFT HANDLING AGENCIES

Bahrain Airport Services (BAS) P.O. Box 22285 Kingdom of Bahrain TEL: +973 17321444 Telefax:+973 17322317 Telex: 8971 BASBA BN AFS: OBBIXHAX SITA: BAHKBXH

# 1.1.7 APPROVED AVIATION FUELLING

Bahrain Aviation Fuelling Company - BAFCO P.O. Box 50500 Kingdom of Bahrain TEL: +973 17329400 (Office) / +973 17329440 (Operations - H24) Telefax:+973 17910925

## GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

# 1.2.1 KINGDOM OF BAHRAIN

# 1.2.1.1 REGULATIONS AND REQUIREMENTS FOR ADVANCE NOTIFICATION AND APPLICATIONS FOR PERMISSION CONCERNING ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT ON INTERNATIONAL FLIGHTS

## 1.2.1.1.1 **GENERAL**

All flights landing in, departing from or overflying the territory of Bahrain shall comply with Bahrain Civil Aviation Law and Regulations and must include a valid mailing address of the company for which payment invoice must be issued to, failure to comply will result in rejecting the relevant approval request.

#### 1.2.1.1.1.1 FLIGHT PERMISSION & SCHEDULNG SYSTEM (AL-NAWRAS)

An electronic system called flight permission & Scheduling system (AL-NAWRAS) that require all airlines / operators / agents to sign-up on the following official link: www.fps.gov.bh to submit their requests (Landing & Overflying) except state aircraft, V.V.I.P, and military requests should be via diplomatic channels according to (GEN 1.2.1.1.7).

For any inquiries, contact the following address:

Air Transport Directorate P.O. Box 586 Kingdom of Bahrain TEL: +973 17329035 / +973 17329011 / +973 17329034 / +973 17329096 / +973 17321115 / +973 17333278 Telefax: +973 17333278 e-mail: schedule@mtt.gov.bh AFS: OBBIYAYX SITA: BAHAPYF

## 1.2.1.1.1.2 INFORMATION REQUIRED FROM AIRCRAFT OPERATORS AIRLINES / AGENTS

The following information is required from all aircraft operators for any type of operations:

- 1. Aircraft Operator (Air Operator's Certificate (AOC) holder) and Address
- 2. Aircraft Charterer (if any)
- 3. Call Sign / Flight Number or Registration mark(s)
- 4. Aircraft Type & Nature of flight
- 5. Full Sector or Flight (from / to) & ETA / ETD
- 6. If Dangerous Goods are carried, refer also to GEN 1.4
- 7. Proposed date(s) of flight(s)
- 8. Aircraft configuration (passenger and cargo capacity)
- 9. Postal address of the company for collection of bills and payments.
- 10. Postal address of the agent and its client, if any.
- 11. Finance section contact details, telephone, fax and email.

Note: all operators / airlines / agents are requested to fulfill all the above information in (AL-NAWRAS).

#### 1.2.1.1.1.3 Aircraft Certification checklists

It is a PDF printable file form made available for all airlines / operators / agents to use whenever they need to apply for a request for the intention of using bahrain international airport for any commercial & non traffic purposes. The checklist form is ready supplemental as a point number 10 literally at the online interface of scheduling or landing tabs on (AL-NAWRAS) system www.fps.gov.bh

## 1.2.1.1.2 SCHEDULED OPERATION

## 1.2.1.1.2.1 TRAFFIC STOPS IN THE TERRITORY OF BAHRAIN

For regular international scheduled flights into Bahrain, the airline must be designated pursuant to a bilateral or multilateral agreement to which the government of Bahrain and that of the State in which the airline is registered are parties, or have been granted a Temporary Operating Permit (T.O.P.) by Bahrain CAA. A request shall be applied through (AL-NAWRAS) system (GEN 1.2.1.1.1.1) by at least 30 days prior to the proposed date of commencement of operation. The following information and documents are required from aircraft operators in addition to the information shown under **GEN 1.2.1.1.2** above:

- a) Information
  - 1. Period of Operation
  - 2. Aircraft Configuration (Passengers & Cargo Capacity)
  - 3. Frequency (days of the week)
- b) Pre-requisite valid documents:
  - 1. Air Operator's Certificate, reflecting the aircraft registration mark(s)

- 2. Certificate of Registration
- 3. Certificate of Airworthiness
- 4. Insurance Certificate with full liability coverage (refer to GEN 1.2.1.1.10)
- 5. Noise Certificate
- 6. Aircraft Radio Station License
- 7. ACAS II / TCAS Certificate (mandatory within Bahrain airspace)
- 8. Basic Area Navigation (B RNAV) Certificate, if equipped
- 9. RVSM Certificate, when operating above 29000 feet
- 10. In case of a leased aircraft:

a) A copy of the lease agreement, approved by the State of Registry and the state operator; and

b) Conformity statement from the State of Registry, stating that it will remain responsible for the safety oversight.

(c) In case of transfer of functions of the State of Registry to the State of Operator, evidence is required showing the state responsible for safety oversight.

Note: aircraft certificates shall be inserted in the proper field of aircraft certification checklist which is provided at (AL-NAWRAS) (GEN 1.2.1.1.1.3) on www.fps.gov.bh

# 1.2.1.1.3 EXTRA / ADDITIONAL FLIGHTS

Any scheduled airlines whether overflying kingdom of bahrain aerospace or landing at bahrain international Airport who either wish to apply for an additional flight/s partially to the seasonal schedule or an extra flight, must apply a request through (AL-NAWRAS) system by at least 72 hours before the actual time of arrival.

## 1.2.1.1.4 OVERFLYING AND TECHNICAL STOPS

- 1.2.1.1.4.1 Subject to the observance of the applicable rules and regulations, aircraft registered in ICAO States and operated by an airline of any contracting State may overfly or make non-traffic stops in the territory of Bahrain provided the State concerned being signatory to the International Air Transit Agreement. There is no requirement to request for overflying permission for such aircraft. However, for non-traffic stops a request shall be applied through (AL-NAWRAS) (**GEN 1.2.1.1.1.1**) a minimum notice period of one week is required for administrative and operational reasons. The following information is required from aircraft operators in addition to the information shown under **GEN 1.2.1.1.1.2** above:
- 1. Period of Operation
- 2. Aircraft Configuration (Passengers & Cargo Capacity)
- 3. Frequency (days of the week)
- 1.2.1.1.4.2 Operators of aircraft registered in States that are not signatory to the ICAO convention must be obtain prior approval to overfly or land in the territory of Bahrain. A minimum notice period of one week is required for administrative and operational reasons.

Note: see recommended Airlines Schedules Application Format

## 1.2.1.1.4.3 DOCUMENTARY REQUIREMENTS FOR THE CLEARANCE OF AIRCRAFT

1.2.1.1.4.3.1 It is necessary that the aircraft documents shown in the table in **GEN 1.2.1.1.4.4** be submitted by aircraft operators for the clearance on entry and departure of their aircraft to and from Bahrain.

1.2.1.1.4.3.2 One copy of the General Declaration must be signed by the pilot - in - command or an authorized agent.

1.2.1.1.4.3.3 All documents listed below must follow the ICAO standard format, set forth in the relevant appendices to Annex 9, must be furnished in English and be completed legibly.

1.2.1.1.4.3.4 No visas are required in connection with such documents.

# 1.2.1.1.4.4 AIRCRAFT DOCUMENTS REQUIRED (ARRIVAL / DEPARTURES)

REQUIRED BY	GENERAL DECLARATION	PASSENGER MANIFEST	CARGO MANIFEST
IMMIGRATION	NIL	NIL	NIL
HEALTH	1	1	NIL
CUSTOMS	NIL / 1	NIL	1/1
TOTAL	2	1	2

**Note:** If no passengers are embarking or disembarking and no articles are loaded or unloaded, no documents except copies of the General Declaration need to be submitted.

# 1.2.1.1.4.5 PUBLIC HEALTH MEASURES APPLIED TO AIRCRAFT

If more than four weeks have elapsed since the date of issue of the certificate of Residual Disinfection, and the aircraft has originated in or arrived from a malarious area or a yellow fever endemic area, aerosol disinfection of the aircraft should be carried out before taking off, or on arrival.

# 1.2.1.1.5 NON SCHEDULED OPERATIONS

## 1.2.1.1.5.1 TRAFFIC STOPS IN THE TERRITORY OF BAHRAIN

If an operator intends to make an non - scheduled stop in the territory of Bahrain for the purpose of taking on or discharging passengers, cargo or mail, the Air Operator's Certificate (AOC) - holder should apply a request through (AL-NAWRAS) **GEN 1.2.1.1.1.1** a minimum notice period of one week is required. The following valid documents are required from AOC - holder in addition to the information shown under **GEN 1.2.1.1.1.2** above:

- 1. Air Operator's Certificate, reflecting the aircraft registration mark(s)
- 2. Certificate of Registration
- 3. Certificate of Airworthiness
- 4. Insurance Certificate with full liability coverage (refer to GEN 1.2.1.1.10)
- 5. Noise Certificate
- 6. Aircraft Radio Station License
- 7. ACAS II / TCAS Certificate (mandatory within Bahrain airspace)
- 8. Basic Area Navigation (B RNAV) Certificate, if reequipped
- 9. RVSM Certificate, when operating above 29000 FT
- 10. In case of a leased aircraft:

(a) A copy of the lease agreement, approved by the State of Registry and the State of Operator; and

(b) Conformity statement from the State of Registry, stating that it will remain responsible for the safety oversight.

(c) In case of transfer of functions of the State of Registry to the State of Operator, evidence is required showing the state responsible for safety oversight.

# 1.2.1.1.5.2 OVERFLYING AND TECHNICAL STOPS

1.2.1.1.5.2.1 Subject to the observance of the applicable rules and regulations, aircraft registered in ICAO States and operated by an airline of any contracting State may over fly or make non - traffic stops in the territory of Bahrain provided the State concerned being signatory to the Chicago Convention on International Civil Aviation. There is no requirement to request for over flying permission for such aircraft except when the flight is involved in Diplomatic or Military operations e.g. State VIP, transportation of ammunitions etc. in which case an application for approval should be made in accordance with **GEN 1.2.1.1.7.1** below. Applications for non - traffic stops a request shall be applied through (AL-

NAWRAS) (GEN 1.2.1.1.1.1) A minimum notice period of 48 hours is required for administrative and operational reasons. The following information is required from aircraft operators in addition to the information shown under **GEN 1.2.1.1.1.2** above:

- 1. Date of Flight(s)
- 2. Type of Cargo (if any)

1.2.1.1.5.2.2 Operators of aircraft registered in States that are not signatory to the ICAO convention must obtain prior approval to overfly or land in the territory of Bahrain. A minimum notice period of one week is required for the administrative and operational reasons.

## 1.2.1.1.5.3 DOCUMENTARY REQUIREMENTS FOR THE CLEARANCE OF AIRCRAFT

The same as for scheduled flights (see **GEN 1.2.1.1.2.4**).

# 1.2.1.1.5.4 AIRCRAFT DOCUMENTS REQUIRED (ARRIVAL / DEPARTURE)

REQUIRED BY	GENERAL DECLARATION	PASSENGER MANIFEST	CARGO MANIFEST
IMMIGRATION	1	1	NIL
HEALTH	1	1	NIL
CUSTOMS	1/1	NIL	1
TOTAL	4	2	1

## 1.2.1.1.5.5 PUBLIC HEALTH MEASURES APPLIED TO AIRCRAFT

The same as for scheduled flights.

## 1.2.1.1.6 PRIVATE / GENERAL AVIATION OPERATIONS

#### 1.2.1.1.6.1 TRAFFIC STOPS IN THE TERRITORY OF BAHRAIN

If an operator wishes to land in the territory of Bahrain for the purpose of taking on or discharging of passengers, cargo or mail, a request shall be applied through (AL-NAWRAS) **GEN 1.2.1.1.1**.1 a minimum notice period of 48 hours is required for administrative and operational reasons. The following information is required from aircraft operators in addition to the information shown under **GEN 1.2.1.1.2** above:

- 1. Purpose of Flight
- 2. Passenger & Company Name
- 3. Name of VIP (if any)
- 4. Type of Cargo (if any)
- 5. Hosting Company and / or Contact in Bahrain

## 1.2.1.1.6.2 **OVERFLYING AND TECHNICAL STOPS**

1.2.1.1.6.2.1 Subject to the observance of the applicable rules and regulations, there is no requirement to request permission for overflying or refuelling / crew rest stops for such aircraft except when the flight is involved in Diplomatic or Military Operations e.g. State VIP, Transportation of ammunitions etc. in which case an application for approval should be made in accordance with **GEN 1.2.1.1.7.1** below.

1.2.1.1.6.2.2 Operators of aircraft registered in states that are not signatory to the ICAO convention must obtain prior approval to overfly or land in the territory of Bahrain. through (AL-NAWRAS) GEN 1.2.1.1.1.1 minimum notice period of 48 hours is required for administrative and operational reason.

## 1.2.1.1.6.3 DOCUMENTARY REQUIREMENTS FOR THE CLEARANCE OF AIRCRAFT

The same as for scheduled flights (see GEN 1.2.1.1.4)

# 1.2.1.1.6.4 AIRCRAFT DOCUMENTS REQUIRED (ARRIVAL / DEPARTURE)

REQUIRED BY	GENERAL DECLARATION	PASSENGER MANIFEST	CARGO MANIFEST
IMMIGRATION	1	1	NIL
HEALTH	1	1	NIL
CUSTOMS	1/1	NIL	1
TOTAL	4	2	1

## 1.2.1.1.6.5 PUBLIC HEALTH MEASURES APPLIED TO AIRCRAFT

The same as for non - scheduled flights

# 1.2.1.1.7 MINISTRY OF FOREIGN AFFAIRS APPROVALS

Any State or Military aircraft (including chartered flights) wishing to overfly, land in or depart from the territory of Bahrain shall apply for approval. A minimum notice period of two weeks before the intended date of overflight, arrival or departure is required.

Applications should be made to:

1.2.1.1.7.1 Address

Ministry of Foreign Affairs P.O. Box 547 Kingdom of Bahrain Telefax:+973 17210575 / +973 17104761 Telex: 8228 KARJIA BN

With a copy to:

Director of Air Transport P.O. Box 586 Kingdom of Bahrain Telefax:+973 17333278 AFS: OBBIYAYX SITA: BAHAPYF

## 1.2.1.1.8 Information required from aircraft operators

The following information is required from aircraft operators in addition to the information shown under GEN 1.2.1.1.1 above:

- 1. Purpose of Flight
- 2. Name of VIP (if any)
- 3. Type of Cargo (if any)

## 1.2.1.1.9 VVIP / VIP FLIGHT OPERATIONS

Any operator carrying out a VVIP / VIP flight for the purpose of landing in, departing from or overflying the territory of Bahrain shall apply for approval to the Ministry of Foreign Affairs as detailed in **GEN 1.2.1.1.7** above.

## 1.2.1.1.10 INSURANCE COVER IN RESPECT OF LIABILITY FOR PASSENGERS, BAGGAGE, CARGO AND THIRD PARTIES

# 1.2.1.1.10.1 REQUIREMENT FOR MINIMUM INSURANCE COVER

1.2.1.1.10.1.1 Air carriers and aircraft operators are required to provide a minimum insurance cover in respect of passengers, baggage and cargo in accordance with the rules of Montreal Convention (signed on 28 May 1999); and in respect of third parties in accordance with **GEN 1.2.1.1.10.4** below.

1.2.1.1.10.1.2 The insurance shall cover aviation - specific liability in respect of passengers, baggage, cargo and third parties. Regarding passengers, baggage and cargo insurance shall include cover for death and personal injury caused by accidents and for loss or destruction of or damage to baggage and cargo. Regarding third parties, insurance shall include cover for death, personal injury and damage to property caused by accidents.

# 1.2.1.1.10.2 **DEFINITIONS**

- a) "air carrier" means an air transport undertaking with a valid operating license or Air Operator's Certificate;
- b) "aircraft operator" means the person or entity, not being an air carrier, who has continual effective disposal of the use or operation of the aircraft; the natural or legal person in whose name the aircraft is registered shall be presumed to be the operator, unless that person can prove that another person is the operator;
- c) " flight means";
  - with regard to passengers and unchecked baggage, the period of transport of the passengers by aircraft including their boarding and disembarkation,
  - with regard to cargo and checked baggage, the period of transport of baggage and cargo from the moment the baggage or cargo is handed to the air carrier until the moment of delivery to the entitled recipient,
  - with regard to third parties, the use of an aircraft from the moment when power is applied to its engines for the purpose of taxiing or actual take - off until the moment when it is on the surface and its engines have come to a complete stop; additionally, it shall mean the moving of an aircraft by towing and push - back vehicles or by powers which are typical for the drive and lift of aircraft, particularly air streams;
- d) "SDR" means a Special Drawing Right as defined by the International Monetary Fund;
- e) "MTOM" means the Maximum Take off Mass, which corresponds to a certified amount of specific to all aircraft types, as stated in the certificate of airworthiness of the aircraft;
- f) "Passenger" means any person who is on the flight with the consent of the air carrier or the aircraft operator, excluding on duty members of both the flight crew and the cabin crew;
- g) "third party" means any legal or natural person, excluding passengers and on duty members of both the flight crew and the cabin crew;
- h) "commercial operation" means an operation for remuneration and / or hire.

## 1.2.1.1.10.3 PRINCIPLES OF INSURANCE

1.2.1.1.10.3.1 The insured risks shall include acts of war, terrorism, hijacking, acts of sabotage, unlawful seizure of aircraft and civil commotion.

1.2.1.1.10.3.2 Air carriers and aircraft operators shall ensure that insurance cover exists for each and every flight, regardless of whether the aircraft operated is at their disposal through ownership or form of lease agreement, or through joint or franchise operations, code - sharing or any other agreement of the same nature.

## 1.2.1.1.10.4 INSURANCE IN RESPECT OF LIABILITY FOR THIRD PARTIES

In respect of liability for third parties, the minimum insurance cover per accident, for each and every aircraft, shall be:

CATEGORY	MOTOM (kg)	MINIMUM insurance (million SDRs)
1	< 500	0.75
2	< 1000	1.5
3	< 2700	3

CATEGORY	MOTOM (kg)	MINIMUM insurance (million SDRs)
4	< 6000	7
5	< 12000	18
6	< 25000	80
7	< 50000	150
8	< 200000	300
9	< 500000	500
10	= / > 500000	700

# 1.2.1.1.10.5 AMENDMENT TO THE INSURANCE VALUES

The insurance values may be amended, as appropriate, when amendments in the relevant international treaties indicate the necessity thereof.

# 1.2.1.1.10.6 EVIDENCE OF ADEQUATE INSURANCE COVER

Air carriers and air operators are required to provide evidence of adequate insurance cover stated as above. In an event such evidence is not provided, operating permission shall be denied.



# **Air Transport Directorate**



**SCHEDULE FORM** 

AIRLINE:		SEASON:			
PERIOD OF OPERAT	ION	FROM:		TO:	
FLT. NO	FREQUENCY (DAYS)	FULL SECTOR OF FLIGHT	TIMES (LT)	A/C TYPE	CONFIGURATION

Notes:

1- This form may be reproduced to suit individual airline's need e.g. SITA/AFTN.

2- You may use more pages as needed.

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♣+973 17333278/17329173



# Air Transport Directorate



# SCHEDULE CHANGE/CANCELLATION FORM

**Airline Operator:** Date: 1- The nature of the request (tick proper box) CHANGE CANCELLATION 2- Type of flight (tick proper box) NON-SCHD SCHD 3- Affected Field (tick proper box and if applying for cancellation, skip this field) CALL SIGN DATE/TIME ROUTE FREQ TYPE 4- Original Flight Details: 5- New Flight Details (if applying for cancellation, skip this field):

\*Note: All timings should be inserted in LOCAL MEAN TIME

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♣+973 17333278/17329173

Chedule@mtt.gov.bh
 BAHAPYF/OBBIYAYX

# RECOMMENDED REQUEST PROCESSING INFORMATION LIST FOR PRIVATE / GENERAL AVIATION FLIGHTS

1. Aircraft Operator & Address:				
2. Aircraft Charterer (if any):				
3. Aircraft Call Sign:				
4. Aircraft Registration:				
5. Aircraft Type:	Nature of flight:			
6. Sector of flight (from / via / to):				
7. ETA / ETD:	7. ETA / ETD:			
8. Name of VIP & Title (if any):				
9. Type of Cargo (if any):				
10. Any other Details:				
For Landing other than Refuel & Crew Rest the following information is also required:				
11. Purpose of flight:				
12. Passenger & Company Name:				
13. Hosting Company and / or Person in Bahrain:				

Note: This form may be reproduced to suit individual operator's need e.g. SITA / AFTN.

## GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

# **KINGDOM OF BAHRAIN**

1.3.1 REGULATIONS (INCLUDING CUSTOMS, IMMIGRATION AND QUARANTINE, AND REQUIREMENTS FOR ADVANCE NOTIFICATION AND APPLICATIONS FOR PERMISSION) CONCERNING ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

# 1.3.1.1 IMMIGRATION REQUIREMENTS

# 1.3.1.1.1 ARRIVING PASSENGERS

A person entering Bahrain for the purpose of immigration must hold a valid passport. A 72 - hour visa can be obtained for non - immigration purposes such as business. Disembarkation cards must be completed.

# 1.3.1.1.2 TRANSIT PASSENGERS

No documents or visa are required for passengers arriving and departing on the same flight, or transferring to another flight at the same airport.

#### 1.3.1.1.3 DEPARTING PASSENGERS

From departing passengers, inspection of identity documents and completion of an embarkation card are required.

## 1.3.1.1.4 CREW

A crew member license is acceptable.

# 1.3.1.2 CUSTOMS REQUIREMENTS

## 1.3.1.2.1 ARRIVAL

Baggage belonging to disembarking passengers and crew is immediately inspected and released if it does not contain any prohibited, restricted or dutiable goods. Dutiable items are released immediately on payment of duty.

1.3.1.2.2 TRANSIT

Not specified

## 1.3.1.2.3 DEPARTURE

For embarking passengers, the inspection of baggage is not normally required.

## 1.3.1.3 PUBLIC HEALTH REQUIREMENTS

## 1.3.1.3.1 ARRIVAL

A Yellow Fever vaccination certificate is required from travellers over one year of age coming from infected areas.

## 1.3.1.3.2 TRANSIT

Not specified

## 1.3.1.3.3 DEPARTURE

On departure, no health formalities are required.

## GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

# 1.4.1 KINGDOM OF BAHRAIN

# 1.4.1.1 REGULATIONS (INCLUDING CUSTOMS, AND REQUIREMENTS FOR ADVANCE NOTIFICATION AND APPLICATIONS FOR PERMISSION) CONCERNING ENTRY, TRANSIT AND DEPARTURE OF CARGO

**Note:** Provisions for facilitating entry and departure for search, rescue, salvage, investigation, repair or salvage in connection with lost or damaged aircraft are detailed in section GEN 3.6, Search and Rescue.

## 1.4.1.1.1 CUSTOMS REQUIREMENTS CONCERNING CARGO AND OTHER ARTICLES

## 1.4.1.1.1.1 IMPORTS

All air cargo shipments for Bahrain or in transit Bahrain are subject to customs clearance before release. For clearance, the appropriate Customs Declaration supported by required documents, notably genuine commercial supplier's invoice and Certificate of Origin must be presented.

#### 1.4.1.1.1.2 TRANS - SHIPMENTS

Trans - shipment from one flight to another is permitted under customs supervision and must be recorded in the Export Manifest of departing flights.

1.4.1.1.1.3 EXPORTS

Air cargo shipments from Bahrain may be required to be cleared through customs on the appropriate customs declaration before shipment, especially when draw back of duty or deposit is claimed.

## 1.4.1.1.2 AGRICULTURAL QUARANTINE REQUIREMENTS

1.4.1.1.2.1 ARRIVAL

Advance permits are required for the importation of plants, plant parts, seeds and organic fertilizers. Advance permits are also required for the importation of live animals to Kingdom of Bahrain.

Details are available on application to the Ministry of Municipalities and Agriculture Affairs, Farmer's Services Directorate at the address shown on **GEN 1.1**.

1.4.1.1.2.2 TRANSIT

## See GEN 1.4.1.1.2.1

1.4.1.1.2.3 DEPARTURE

## See GEN 1.4.1.1.2.1

# 1.4.1.1.3 SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

#### 1.4.1.1.3.1 General

1.4.1.1.3.1.1 The Kingdom of Bahrain legislation requires that the transportation of all classes of dangerous goods is done in accordance with instructions contained in the Technical instructions for the safe Transport of Dangerous Goods by Air, ICAO Doc 9284 - AN / 905 and CAA Publication CAP 02.

1.4.1.1.3.1.2 The Kingdom of Bahrain legislation expressly forbids the transport of the following items by aircraft, except with the prior permission from Civil Aviation Affairs and in accordance with the conditions mentioned in this permission:

- a) Weapons and munitions
- b) Explosives, unless required on board the aircraft for its operation, or for signaling
- c) Poisonous Gases
- d) Germs
- e) Radioactive material, radioisotopes and similar substances
- f) Any other prohibited item as determined by the competent authority

1.4.1.1.3.1.3 An Operator who intends to transport dangerous goods by air, is required to apply and be approved in accordance with CAA publication CAP 02.

1.4.1.1.3.1.4 In the event of an accident / incident involving dangerous goods, the operator is required to adhere to the reporting procedures

in accordance with CAA publication CAP 02.

# 1.4.1.1.3.2 Overflying BAHRAIN FIR / BAHRAIN UIR

An Operator desirous to carry dangerous goods and applying for permission to overfly the BAHRAIN FIR / BAHRAIN UIR, must ensure that all dangerous goods have been packed, marked, labelled and handled in accordance with ICAO Annex 18 - Safe Transport of Dangerous Goods by Air, and the requirements of ICAO Technical Instructions Doc, 9284 - AN / 905, and must make an undertaking to CAA to this effect. This undertaking must be made at the time of providing notification of over flight / applying for the required permission (**GEN 1.2** refers).

## 1.4.1.1.3.3 Transportation of Arms, Ammunition and all Classes of Explosives

1.4.1.1.3.3.1 Furthermore, the transportation of arms, ammunition and all classes of explosives from / to / through Bahrain requires prior permission to be obtained from the Ministry of the Interior (MOI) and Civil Aviation Affairs (CAA) of the Kingdom of Bahrain.

1.4.1.1.3.3.2 Applications are required to be made at least seven working days in advance of the proposed date of transportation to an appropriate office of the Ministry of Interior (MOI):

# (a) Transportation To / From Bahrain

## (Form: AT / ARL / F002 a)

Ministry of Interior Public Security Headquarters Kingdom of Bahrain TEL: +973 17272111 Telefax:+973 17270463 Telex: 9572 BN

# (b) Transit / Transshipment at Bahrain

# (Form: AT / ARL / F 002 b)

Ministry of Interior Airport Directorate Bahrain International Airport Kingdom of Bahrain TEL: +973 17321604 / +973 17321605 Telefax:+973 17332718

1.4.1.1.3.3.3 On receipt of "no objection" from MOI, the application is required to be forwarded to CAA, at least three working days prior to the proposed date of transportation for final approval:

Head of Aircraft Registration and Licensing Air Transport Directorate Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain TEL: +973 17321006 Telefax:+973 17321061 Telex: 9186 AIRCIV BN

## GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

# 1.5.1 GENERAL

## 1.5.1.1 CARRIAGE OF RADIO AND RADAR EQUIPMENT

1.5.1.1.1 To assist in the expeditious of air traffic throughout the BAHRAIN FIR / BAHRAIN UIR by the fullest use of the Navigation Aids provided for this purpose, the appropriate authorities of state providing Approach and / or Area Control Services have agreed to the requirements shown in **GEN 1.5.1.3** and **GEN 1.5.1.4** below for the carriage of Radio and Radar equipment.

1.5.1.1.2 Carriage of equipment listed under Paragraphs GEN 1.5.1.3.1, GEN 1.5.1.3.2 and GEN 1.5.1.4.1 is mandatory.

## 1.5.1.2 CARRIAGE COMMUNICATIONS, NAVIGATION AND APPROACH AID EQUIPMENT

The requirements applicable to all aircraft flying in the BAHRAIN FIR / BAHRAIN UIR and those particular to aircraft flying for the purpose of public transport are tabulated below. No general exemption from these requirements will be granted, but in very special circumstances relaxation of the requirements for a single flight may be approved by the Bahrain Air Traffic Control Centre or by the appropriate Approach Control Unit.

## 1.5.1.3 COMMUNICATION, NAVIGATION AND APPROACH EQUIPMENT REQUIRED

## 1.5.1.3.1 Flight under IFR in Controlled Airspace up to FL 150

COMMUNICATIONS EQUIPMENT

VHF RTF with appropriate frequencies available

#### NAVIGATION EQUIPMENT

a) in Control Areas and Control Zones VOR Receiver and automatic D / F and receiver for 75 MHZ Beacons

b) in BAHRAIN CTA and Terminal Manoeuvring Areas, in addition to (a) above, DME

#### APPROACH AID EQUIPMENT

For landing at certain aerodromes within Control Zones an Approach Aid, e.g. ILS

# Exception

Gliders, helicopters and light aircraft of 2500 KG MAUW or less, and special VFR flights, are exempt from the Navigation Equipment requirements.

## 1.5.1.3.2 Flight in Controlled Airspace above FL 150

In addition to GEN 1.5.1.3.1, DME

## 1.5.1.3.3 Public Transport Aircraft flying under IFR

Equipment as in GEN 1.5.1.3.1 and GEN 1.5.1.3.2

## 1.5.1.3.4 **Public Transport Aircraft flying under VFR**

Sufficient equipment to maintain two - way communication with appropriate ATS units and also to navigate to the Flight Plan and ATC instructions.

Note: See also GEN 3.4 with reference to the continuous guarding of emergency frequencies.

## 1.5.1.4 CARRIAGE OF SSR TRANSPONDERS

1.5.1.4.1 The requirements for the carriage of radar equipment in the BAHRAIN FIR / BAHRAIN UIR are as follows:

# All TFC WI **OBBB FIR** / UIR:

Mode A - 4096 Codes and Mode C

## 1.5.1.4.2 Exception for carrying Mode C

Gliders

Helicopters below 1000 FT

## 1.5.1.4.3 **Exemptions**

The grant of exemptions from meeting the above requirements for the carriage of SSR transponder will only be considered in exceptional circumstances, and for limited periods. Applicants for exemption should submit full details of their inability to meet the requirements to:

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain Telefax:+973 17339066 AFS: OBBIYAYX

## 1.5.1.5 CARRIAGE OF AIRBORNE COLLISION AVOIDANCE SYSTEM - ACAS II

1.5.1.5.1 All fixed - wing turbine - engine aircraft having maximum take - off mass in excess of 5700 KG or approved passenger seating configuration of more than 19, will be required to be equipped with ACAS II.

1.5.1.5.2 Aircraft that failed to install ACAS II shall not be permitted to operate within BAHRAIN FIR / BAHRAIN UIR.

1.5.1.5.3 All aircraft fitted with ACAS II equipment, shall be fitted with software version 7.1 with mode S transponder compliant with Annex 10, Volume IV within the OBBB EFF 1<sup>st</sup> Jan 2017.

## 1.5.1.6 AUTHORIZATION FOR FLIGHT IN RVSM AIRSPACE

1.5.1.6.1 Aircraft intending flight in airspace where RVSM rules are applied are required to carry specific approval for RVSM operations from their State of Registry.

1.5.1.6.2 State aircraft are exempt from the requirement to carry RVSM documentation.

**Note:** In these cases 2000 FT vertical separation shall be applied. However, priority for allocation of levels will be in accordance with the criteria of making the best use of available airspace.

## 1.5.2 NAVIGATION EQUIPMENT FAILURE PROCEDURES

1.5.2.1 If part of an aircraft's radio navigation equipment fails, but two-way communication can still be maintained with ATC, the pilot must inform ATC of the failure and report his altitude and approximate position. ATC may at its discretion authorize the pilot to continue his flight in or into controlled airspace. When radar is available it may, subject to workload, be used to provide navigational assistance to the pilot.

1.5.2.2 If no authorization to proceed is given by ATC the pilot should leave or avoid controlled airspace and areas of dense traffic, and either:

a) Go to an area in which he can continue his flight in VMC, or

b) Select a suitable area in which to descend through cloud, fly visually to a suitable aerodrome and land as soon as practicable.

**Note:** Before doing so, however, he should consult ATC who may be able to give him instructions or advice. He should also take into consideration the latest meteorological information and terrain clearance.

Reference NO

## GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS / CONVENTIONS

1.6.1. The following is a list of Civil Aviation Legislation, Air Navigation Regulation etc. in force in certain areas of the BAHRAIN FIR / BAHRAIN UIR. They are available from:

Head of Aviation Safety Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain

(a)	Civil Aviation Law No: 14 / 2013	CAA Law
(b)	Air Navigation Technical Regulations	ANTR
(c)	Safe Transport of Dangerous Goods by Air	(PO1/01)
(d)	Procedures for Aircraft Accident & Incident Investigation	(PO1/02)
(e)	Procedures for ATC Incident Reporting	(PO1/03)
(f)	The Mandatory Occurrence Reporting Scheme for Bahrain Registered Aircraft	(PO1/05)
(g)	Air Operators Certificate	(PO1/06)
(h)	The Completion of Application Forms for the Grant, Renewal or Variation of an Air Operators Certificate	(PO1/07)
(i)	Maintenance Engineer Licensing	(PO1/08)
(j)	Flight Crew Licensing	(PO1/09)
(k)	Designated Examiner : Flight Crew	(PO1/10)
(I)	Procedures for Air Ambulance Operations and Emergency Medical Services	(PO1/12)

Summary of the procedure for issuance / Validation of Licenses (Refer P01/79) in **GEN 1.6.1** above:

The licenses issued by ICAO contracting state may be recognized by the Kingdom of Bahrain provided that the following are adhered to:

- a) A license is issued by a contracting state to the convention on International Civil Aviation, in accordance with Annex 1 to the convention, and is valid at the time of application;
- b) The training organization and syllabus meet Bahrain CAA requirements;
- c) The applicant is employed by a Bahrain registered operator; and
- d) The applicant successfully passes an examination on Bahrain aviation law and regulations, conducted by Bahrain CAA.

# 1.6.2 International agreements / conventions: Kingdom of Bahrain

Convention on International Civil Aviation (The Chicago Convention)

Convention for the Unification of Certain Rules Relating to International Carriage by Air (The Warsaw Convention)

International Air Services Transit Agreement

Convention on offences and certain Other Acts Committed on Board Aircraft (The Tokyo Convention)

Convention for the Suppression of Unlawful Seizure of Aircraft (The Hague Convention)

Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation (The Montreal Convention)

Convention on the Privileges and Immunities of specialized Agencies (United Nations)

Convention on the Marking of plastic Explosives for the Purpose of Detection

Convention on Damage Caused by Foreign Aircraft to Third Parties on surface (Rome, 7 October 1952) and protocol to emend the same (Montreal, 23 September 1978)

Convention for the Unification of Certain Rules for International Carriage by Air (Montreal, 28 May 1999)
#### GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

#### GENERAL

The rules of the air and air traffic procedures applicable to air traffic within the BAHRAIN FIR / BAHRAIN UIR conform with Annexes 2 and 11 to the Convention on International Civil Aviation, the Procedures for Air Navigation Services and the Regional Supplementary Procedures applicable to the MID / SIA Region, except in the cases indicated hereunder. Any differences which are attributable to the Bahrain ATC are registered with the International Civil Aviation Organization (ICAO).

With reference to Annex 2 Chapter 4 para. 4.3, VFR flights are permitted between the hours of sunset and sunrise in CLASS C, D and CLASS G airspace.

Aircraft operating off airways are required to send position reports as soon as practicable after the first half - hour of flight and at hourly intervals thereafter. As the BAHRAIN FIR and BAHRAIN UIR are considered to be areas over which Search and Rescue operations may be difficult, aircraft must transmit at least one signal in the interval between position reports.

### ANNEX 1 PERSONNEL LICENSING (14<sup>th</sup> Edition JULY 2022):

**Note:** On request, the Kingdom of Bahrain will accept international air services / commercial operations by pilots of Contracting States beyond their 60th birthday up to the age stipulated by their respective states of Registry, which has filed a difference with ICAO, to a maximum of 65 years on the condition that the other pilot is below the age of 60 years.

#### ANNEX 2 - RULES OF THE AIR (10<sup>th</sup> Edition JULY 2005):

Appendix 3

A modified table of cruising levels applies; see ENR 1.7

#### PROCEDURES FOR NAVIGATION SERVICES: AIR TRAFFIC MANAGEMENT SERVICES. (DOC 4444 - ATM / 501)

# Part II 8.4

REPETITIVE FLIGHT PLANS / FLIGHT SCHEDULE DATA LISTS

Pending full implementation of the RPL concept, RPLs are transmitted on the AFTN as if they were filed Flight Plans.

(I) Operators are required to submit advance details of their Season Scheduled Services (or any changes thereto) operating within the BAHRAIN FIR / BAHRAIN UIR, so as to the address shown below at least 14 days in advance of the effective date (s) in the format shown in the Repetitive Plan Listing Form :

THE FLIGHT DATA PROCESSING UNIT (FDPU)

P.O. Box 586 (AIM), KINGDOM OF BAHRAIN

FAX: + 973 17323876

TEL: + 973 17321084 / 17321181

Note: The submission of such details to Air Traffic Services does not constitute a request for approval of flight schedules.

(II) This Date is required to be presented, on a separate sheet for each 12 hours UTC of each day, in the format shown in Repetitive Plan Listing Form.

**Note:** There is a requirement to indicate in Column Q for all flights the Entry point Designator for BAHRAIN FIR / BAHRAIN UIR with EST (UTC).

#### (III) FLIGHT PLANS

(III - 1) Scheduled flights operating wholly within BAHRAIN FIR / BAHRAIN UIR.

(III - 2) It is not necessary to file INTRA - FIR Flight plans provided the seasonal schedules have been received and processed by the FDPU.

### (IV) SCHEDULED FLIGHTS DEPARTING AIRFIELDS IN THE FIR AND ENTERING OTHER FIR / UIR

(IV -1) Standard Flight Plans for flights leaving the FIR / UIR must be filed with the ATC Unit at the aerodrome of departure, or

(IV - 2) Alternatively, by direct arrangement between the operator and the local ATC Unit involved, a standard ICAO Flight plan may be stored at the aerodrome of departure and activated by that unit at 0001 UTC on the day of operation.

#### (v) CHANGES TO FLIGHT DETAILS

(V - 1) Permanent Changes

(V - 2) Changes of a permanent nature to any of the details previously supplied (under 1.4.1.1 or 1.4.2.2.2) require that complete details must be advised, both to the FDPU at Bahrain and to any other aerodrome concerned within the FIR, either by a completely new replacement plan, or by clear "insert / delete" editing instructions.

#### (VI) TEMPORARY CHANGES

(VI 1) Extra flights require submission of both:

a) a standard Flight Plan, and

b) Flight date details to Bahrain FDPU

(VI - 2) Replacement flights, (i.e. Flights with temporary changes to details which have been submitted under 1.4.1.1 or 1.4.2.2.2) require:

(a) A Standard Flight plan clearly annotated in ITEM 12, Replacement of Scheduled Flight (c / s)... of. (date);

**Note:** Flight Schedule Date Lists are required by ATSUs to prepare Air Traffic Control Date Systems in advance, thus reducing the possibility of traffic delay resulting from work - load in peak periods. Timely provision of Scheduled Flight Data, preferably more than the prescribed 14 days in advance, is therefore in the best interests of operators of scheduled air transport.

#### (VII) AFTN ADDRESSES

(VII - 1) All Flight Plans and Departure messages for flights operating through or within the BAHRAIN FIR / BAHRAIN UIR must include address OBBBZQZX.

(VII - 2) All aircraft operators intending to use BAHRAIN INTERNATIONAL airport as a departure aerodrome must include the address **OBBIZPZX** in their flight plan.

(VII - 3) New AFTN addresses have been installed at BAHRAIN / SAKHIR AIRBASE for the purpose of flight planning and other aviation related issues in the following form: **OBKHZTZX** for Control Tower, **OBKHZPZX** for AIS and **OBKHYFYX** for COMMS.

(VII - 4) A new eight - letter sequence AFTN address OBBINEMX is established for the purpose of Nuclear Emergency Message (NEM).

#### (VIII) FLIGHT PLAN FORM

(VIII - 1) The Flight Plan Form must be completed according to the instructions contained in DOC 4444 - ATM / 501, Appendix 2.

(VIII - 2) The following options are REQUIRED by the ATS authority for all flights operating within the BAHRAIN FIR / BAHRAIN UIR:

#### (VIII - 3) Flight plan ITEM 8

The second field letter denoting the TYPE OF FLIGHT.

#### (VIII 4) Flight Plan ITEM 18

The indicator 'EET / ' followed by FIR / UIR boundary designators and accumulated elapsed times as follows:

- a) Flights entering the BAHRAIN FIR / BAHRAIN UIR: The location indicator for the BAHRAIN FIR / BAHRAIN UIR together with the accumulated estimated elapsed time since departure (e.g. EET / OBBB0345)
- b) Flights departing from within the BAHRAIN FIR: All boundary designators, together with the corresponding estimated elapsed times to those points. (e.g. for a flight from OBBI to EGLL, EET / OEJD0005 OJAC0125 OSTT0145 LCCC02010 LGGG0245 LTBB0300 LGGG0305 LYBA0345 LYZB0420 LOVV0540 EDDU0510 EBUR0545 EHAA0600 EGTT0615)
- c) All ACFT using BAHRAIN FIR / BAHRAIN UIR are reminded to strictly adhere to the requirements of including their relevant ACFT registration markings in item 18 of the flight plan, failure to do so will result in an anticipated delay.

#### (VIII - 5) Flight Plan ITEM 18

The indicator 'SEL/ 'followed by the SELCAL code.

#### (VIII - 6) Flight plan ITEM 19

To be completed in full.

PROCEDURES FOR NAVIGATION SERVICES: AIR TRAFFIC MANAGEMENT (DOC 4444 - ATM / 501)

# **Reference: Chapter 5 GENERAL PROVISIONS FOR THE SEPARATION OF CONTROLLED TRAFFIC**

# Difference:

1.1 No VMC climbs or descents will be permitted to aircraft operating within controlled airspace of the BAHRAIN FIR / BAHRAIN UIR while such aircraft are operating under Instrument Flight Rules.

#### Regional Supplementary Procedures (Doc 7030 / 4)

The Supplementary Procedures in force, directly applicable to aircraft is given in their entirety. Differences are printed in heavy face italic type.

Doc 7030 part 1

# 1.1 Visual Flight Rules (VFR)

(Annex 2 - 4.6)

VFR flights to be operated within a control zone established at an aerodrome serving International Flights and in specified portions of the associated terminal control area shall:

- 1. have two way radio communications;
- 2. obtain clearance from the appropriate air traffic control unit; and
- 3. report positions as required.

**Note:** The phrase "specified portions of the associated terminal control area" is intended to signify at least those portions of the TMA used by International IFR Flights in association with approach, holding, departure and noise abatement procedures.

# **1.2.1.1 Instrument Flight Rules (IFR)**

(Annex 2 - 2.2 and chapter 5)

Flights shall be conducted in accordance with the Instrument Flight Rules (even when not operating in instrument meteorological conditions) when operated:

1. more than 100 NM seaward from the shoreline within controlled airspace; or

2. at or above FL 150.

# 3.0 A / G communications and in - flight Reports

(PANS ATM / 501 Chapter 4, 4 - 11)

All aircraft on VFR flights, and aircraft on IFR flights outside controlled airspace, shall maintain a watch on a radio station furnishing communications for the unit providing a flight information service in the flight information region and file reports with that station including information as to their position unless otherwise authorized by the state overflown.

3.4.1.2 The aircraft call sign / identification shall be transmitted immediately before or after the word "position".

3.4.1.3 The position of the aircraft shall be transmitted in reference to a reporting point name, name - code designator or, if not named:

1. For flights operating in a predominantly east - west direction:

- a) latitude in degrees and minutes, and
- b) longitude in degrees only

2. For flights operating in a predominantly north - south direction:

- a) latitude in degrees only; and
- b) longitude in degrees and minutes

3.4.1.4 The time at which the aircraft is over the reporting point shall be transmitted in four digits, giving both the hour and the minutes.

3.4.1.5 The altitude / flight level of the aircraft shall be included in the position report.

3.4.2.1 Next position and time shall normally be expressed as the reporting point name, name - code designator or latitude and longitude as indicated in 3.4.1.3.

3.4.2.2 Estimated time over the next position shall be expressed in four digits.

3.4.3.1 Ensuing position information shall include the name, name - code designator or coordinates of the next succeeding reporting point, whether compulsory or not.

#### 4.0 Special Procedures for in - flight contingencies

General Procedures

The following general procedures apply to both subsonic and supersonic aircraft.

4.2.1 If an aircraft is unable to continue flight in accordance with its Air Traffic Control Clearance, a revised Clearance shall be obtained at the earliest possible time and, in the meantime, the aircraft shall broadcast position (including ATS route designator or the track code, as appropriate) and intentions, on frequency 121.500 MHZ at suitable intervals until Air Traffic Control Clearance is received.

#### 12.1.1 Alerting and Search and Rescue Services - Routes and equipment of Private Aircraft

(Annex 6 - Part II - 6.3 and 6.4):

General Aviation aircraft operating over designated areas, land or sea, where search and rescue operations would be difficult, should:

- 1. carry appropriate survival equipment
- 2. follow the routes or specified procedures if not equipped with two way radio except that under special circumstances, the appropriate authority may grant specific exemptions from this requirement.

#### 12.2 Alerting Services

(PANS ATM / 501 Chapter 9 & Chapter 10, 10 - 2)

The procedures for "Alerting Service" detailed in the PANS RAC, Part VI, 2, are applicable to all flights except those conducted wholly in the vicinity of an aerodrome when exempted by an appropriate air traffic control unit.

#### Doc 7030 / 4, Part 3

#### 1.1 Aircraft Observations and Reports

(Annex 3 - Chapter 5)

Aircraft within the BAHRAIN FIR / BAHRAIN UIR shall make and record routine observations at the ATS / MET reporting points indicated in the Regional Plan.

#### **Regional Supplementary Procedures**

Doc 7030 / 4 to Doc 7030 / 5

The Supplementary procedures in force are given in their entirety; differences are shown in **bold**.

### ANNEX 3 - METEOROLOLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION (19<sup>th</sup> Edition July 2016)

NIL

# ANNEX 4 - AERONAUTICAL CHARTS (11th Edition July 2009)

NIL

#### ANNEX 5 - UNITS MEASUREMENT TO BE USED IN AIR AND GROUND OPERATIONS (5<sup>th</sup> Edition JULY 2010)

NIL

### ANNEX 6 - OPERATION OF AIRCRAFT Part I (12<sup>th</sup> Edition), Part II (11<sup>th</sup> Edition), Part III (11<sup>th</sup> Edition JULY 2022):

NIL

#### ANNEX 7 - AIRCRAFT NATIONALITY AND REGISTRATION MARKS (6<sup>th</sup> Edition JULY 2012)

NIL

ANNEX 8- AIRWORTHINESS OF AIRCRAFT (13<sup>th</sup> Edition JULY 2022): The Kingdom of Bahrain requirement is more exacting or exceeds the SARP. Annex 8,Para 4.2.4:BCAA accepts modifications originated only by the "state of Design" of the aircraft.

# ANNEX 9 - FACILITATION (14th Edition OCTOBER 2015)

NIL

ANNEX 10 - AERONAUTICAL TELECOMMUNICATIONS Volume I RADIO NAVIGATION AIDS (6<sup>th</sup> Edition JULY 2006), Volume II COMMUNICATION PROCEDURES INCLUDING THOSE WITH PANS STATUS (7<sup>th</sup> Edition OCTOBER 2016), Volume III COMMUNICATION SYSTEMS (2<sup>nd</sup> Edition JULY 2007)

NIL

ANNEX 11 - AIR TRAFFIC SERVICES (14th Edition JULY 2016)

NIL

ANNEX 12 - SEARCH AND RESCUE (8th Edition JULY 2004)

NIL

# ANNEX 13 - AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION (10<sup>th</sup> Edition)

NIL

ANNEX 14 - AERODROMES Volume I AERODROME DESIGN AND OPERATIONS (7<sup>th</sup> Edition JULY 2016), Volume II HELIPORTS (4<sup>th</sup> Edition JULY 2013)

NIL

# ANNEX 15 - AERONAUTICAL INFORMATION SERVICES (15th Edition JULY 2016)

AD 2.10 AERODROME OBSTACLES

AD 2.10 Obstacle data not fully compliant. Reason for in compliance: Obstacle Area 2 to 4 assessment not yet completed. Work in progress.

ENR 5.4 AIR NAVIGATION OBSTACLES EN-ROUTE

ENR 5.4 Obstacle data not fully compliant. Obstacle Area 1 assessment not yet completed. Work in progress.

#### Chapter 8 Pre - flight Information Bulletin

8.1.3 Plain Language pre - flight information bulletins are currently available for the BAHRAIN FIR / BAHRAIN UIR only.

Note: Automated Pre - Flight BulletinS are presently provided on a test basis upon request.

ANNEX 16 - ENVIRONMENTAL PROTECTION VOLUME I AIRCRAFT NOISE (7<sup>th</sup> Edition JULY 2014), VOLUME II AIRCRAFT ENGINE EMISSIONS (3<sup>rd</sup> Edition 2008)

NIL

ANNEX 17 - SECURITY - SAFEGUARDING INTL. CIVIL AVIATION AGAINST ACTS OF UNLAWFUL INTERFERENCE (9<sup>th</sup> Edition March 2011)

NIL

ANNEX 18 - THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR (4<sup>th</sup> Edition July 2011)

NIL

ANNEX 19 - SAFETY MANAGEMENT (2<sup>nd</sup> Edition - July 2016)

NIL

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#### GEN 2. TABLES AND CODES

#### GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

#### 2.1.1 UNITS OF MEASUREMENT

The following table of units of measurement will be used by aeronautical stations within BAHRAIN FIR / BAHRAIN UIR for air and ground operations.

FOR MEASUREMENT OF	UNITS USED
Distance used in navigation, position reporting, etc.	
Generally in excess of 2 nautical miles	Nautical Miles and tenth
Relatively short distances such as those relating to Aerodromes (e.g. runway lengths)	Metres
Altitudes, elevations and heights	Feet
Horizontal speed including wind speed	Knots or ratio MACH number
Vertical speed	Feet per minute
Wind direction for landing and taking off	Degrees Magnetic
Wind Direction except for landing and taking off	Degrees True
Visibility including runway visual range	Kilometres or metres
Altimeter setting	Hecto Pascals (HPA)
Temperature	Degrees Celsius
Weight	Metric tons or Kilograms
Time	Hours and Minutes, the day of 24 hours beginning at midnight UTC

### 2.1.2 TIME SYSTEM

#### General

Coordinated Universal Time (UTC) is used by air navigation services and in publication issued by the Aeronautical Information Service.

Reporting of time to the nearest minute, e.g. 12:40:35 is reported 1241.

When a " Date - Time Group " is required, two figures are used for each of the following, in this order; YEAR - MONTH - DAY - HOUR - MINUTE for example, twenty seven minutes past midnight on the third of December 1995 is down as "9512030027"

Local time in the Kingdom of Bahrain is UTC plus 3 hours.

#### 2.1.3 HORIZONTAL REFERENCE SYSTEM

#### 2.1.3.1 Name / designation of the reference system

All public geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic system - 1984 (WGS - 84) geodetic reference datum except where indicated that the International 1909 spheroid is still extant.

#### 2.1.3.2 Identification and parameters of the projection

To be developed.

#### 2.1.3.3 Identification of the ellipsoid used

To be developed.

#### 2.1.3.4 Identification of the datum used

To be developed.

#### 2.1.3.5 Area of application

Area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, as well as the airspace over the high seas encompassed by the BAHRAIN FIR / BAHRAIN UIR in accordance with the regional air navigation agreement.

#### 2.1.3.6 Use of asterisk to identify published geographical co - ordinates

An asterisk (\*) will be used to identify those published geographical co - ordinates which have been transformed into WGS - 84 coordinates but whose accuracy of original field work does not meet the requirements in Annex 11, Chapter 2 and Annex 14, Volumes I and II, Chapter 2. Specifications for determination and reporting of WGS - 84 coordinates are given in Annex 11, Chapter 2 and Annex 14, Volume I and II, Chapter 2.

#### 2.1.4 AIRCRAFT NATIONALITY AND REGISTRATION MARKS

The nationality mark for aircraft registered in the Kingdom of Bahrain is A 9 C (Alfa Nine Charlie).

#### 2.1.5 PUBLIC HOLIDAYS

The following Public Holidays are fixed and applicable as indicated. Airport and ATC Facilities are unaffected. Additional Public Holidays that fall in accordance with the Islamic Calendar are published as an AIC.

HOLIDAY	DATE	DURATION OF HOLIDAY DAYS
GREGORIAN NEW YEAR	1 JAN	1
BAHRAIN LABOUR DAY	1 MAY	1
BAHRAIN NATIONAL DAY	16 DEC	2

# GEN 2.2 ABBREVIATIONS USED IN AIM PUBLICATIONS

2.2.1. Abbreviations listed in DOC 8400, "ICAO Abbreviations and Codes", are used in the AIP Bahrain FIR, and in NOTAM.

Additionally, the following abbreviations may be used:

Α	
ACAS	Airborne Collision Avoidance System
	Aerodrome Grash Rescue Venicle
A.D.	Anno Domini (Gregorian Fear)
AFD	LIAE Dirhams
AGNIS	Aircraft Guidance Nose - in System
A.H.	Anno Hejir, (Muslim Year)
AL	Ammendment List
APT	Airport
Ar	Arabic
ARAMCO	Arabian American Oil Company
AVTUR	Aviation Jet Fuel
В	
BD	Bahrain Dinars
С	
CAA	Civil Aviation Affairs
CWY	Clearway
D	
-	
DA	Decision Altitude
DH	Decision Height
DOC	Document
DVORTAC	Doppler VOR and TACAN combination
	Duplex
E	
e.g.	Exempli Gratia (= for example)
En	English
F	
FDRO	Flight Data Receiving Office
	<u> </u>
G	
GMC	Ground Movement Control
GRAND	Gradient
Н	
h	Pavement Detail
	Height Above Aerodrome
HI	High Intensity
HPOX	High Pressure Oxygen
1	
ICAO	International Civil Aviation Organisation
J	
JP 4	Jet Fuel

L	
LCN	Load Classification Number
2011	
М	
	Maximum All I In Waight
MP	Millibare
MDA	Minimum Descent Altitude
WBA	
_	
0	
001	Obstasla Classence Altitude en lleiskt
	Obstacle Clearance Height
ORCAM	Originating Region Code Allocation Method
ONOAM	
Р	
DO	Deat Office
PO	Post Office
	Prior Permission
FFU	
R	
R	Red
RAIM	Receiver autonomous integrity monitoring
RCAG	Remote Controlled Air / Ground (Transmitter / Receiver)
RDH	Reference datum neight
	Radia
	Receive Panid Intervention Vehicle
	Area Navigation
RNP	Required Navigational Perfomance
RSR	En - route surveillance radar
RTIL *	Runway threshold indicator lights
RVR	Runway Visual Range
RVSM	Reduced Vertical Separation Minima
RWY	Runway
6	
3	
SITA	Societe Internationale de Telecommunications Aeronautique
STR	Strength
	-
-	
1	
TBN	To Be Notified
TOR	Take - Off Run
TOP	Temporary Operating Permit
TL	Transition level
TRANS	Transmit
TWY	Taxiway
0	
UAE	United Arab Emirates

Additional abbreviations used:

O / R On request

W / V Wind Velocity

2.2.2. When other abbreviations are used specific to a particular subject, a separate list is provided in the appropriate section of the AIP.

# GEN 2.3 CHART SYMBOLS

RADIO FACILITIES	
VOR/DME	<ul> <li>Civil international</li> <li>Private</li> <li>Joint civil and military (intl).</li> <li>Military</li> </ul>
VORTAC	AIR TRAFFIC SERVICES
Basic radio navigation aid symbol Radio marker beacon Non directional beacon NDB	X     Significant point (not a reporting point)        Flight information region (FIR)        Airway centreline
HYDROGRAPHY Coast line 700 CULTURE	88 Distance (NM) Route designator FL 60 Minimum cruising level
City or large town Railroad (single track) Telegraph or telephone line Roundaries (international)	245° Magnetic track (VAR 2°E)     UNL Upper limit     FL 55 Lower limit     A
Fence X X X Road VISUAL AIDS	Compulsory reporting point Compulsory R/PT below FL145 Non compulsory reporting point
Marine lights  B Aeronautical ground light MISCELLANEOUS	Met reporting point On request fly-by WPT
Prominent transmission line vvvTvvvTvvvT SYMBOLS FOR AERODROME	Compulsory fly-by WPT
CHARTS Hard surface runway Unpaved runway Taxiway and parking area	Compulsory flyover WPT By Pass Point
Aerodrome reference point (ARP)	Holding pattern
Wind direction indicator   (Iighted)     Landing direction indicator   (Iighted)	Area minimum altitude (minimum clearance of 1000ft above all obstacles in the quadrangle)
Obstruction light        VOR check point and freq	Change over point (COP)
Buildings and hangers	Aerodrome traffic zone <u>ATZ</u> <u>Upper limit</u> <u>SFC</u> Lower limit

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# **GEN 2.4 LOCATION INDICATORS**

1. ENCODE		2. DECODE		
Location	Indicator	Indicator	Location	
BAHRAIN / ISA AIRBASE	OBBS	OBBB	BAHRAIN UIR	
BAHRAIN / SAKHIR AIRBASE	овкн	OBBB	BAHRAIN FIR	
BAHRAIN FIR	ОВВВ	ОВВІ	BAHRAIN INTERNATIONAL	
BAHRAIN INTERNATIONAL	OBBI	OBBS	BAHRAIN / ISA AIRBASE	
BAHRAIN UIR	OBBB	ОВКН	BAHRAIN / SAKHIR AIRBASE	

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# GEN 2.5 LIST OF RADIO NAVIGATION AIDS

	ID	Station name	Aid	Purpose A=Aerodrome E=Enroute AE=Both	Station name	ID	Aid	Purpose A=Aerodrome E=Enroute AE=Both
	BHR	BAHRAIN INTERNATIONAL	VOR/DME	AE	BAHRAIN / ISA AIRBASE	ISIB	ILS	A
—	IBIA	BAHRAIN INTERNATIONAL	ILS	A	BAHRAIN / SAKHIR AIRBASE	IKH	ILS	A
	IBIB	BAHRAIN INTERNATIONAL	ILS	A	BAHRAIN INTERNATIONAL	BHR	VOR/DME	AE
	IKH	BAHRAIN / SAKHIR AIRBASE	ILS	A	BAHRAIN INTERNATIONAL	IBIB	ILS	A
	ISIB	BAHRAIN / ISA AIRBASE	ILS	A	BAHRAIN INTERNATIONAL	IBIA	ILS	A
	SI	ISA	L	А	ISA	SI	L	А
	SIA	ISA	VORTAC	А	ISA	SIA	VORTAC	A

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### GEN 2.6 CONVERSIONS OF UNIT OF MEASUREMENTS

Tables for conversions or alternately conversion formulae between:

### 2.6.1 Nautical miles to kilometres

Conversion tables for Nautical miles to Kilometres are based upon the following conversion factors:

#### 1 NM = 1.852 KM

#### 1 KM = 0.5400 NM

Nautical Miles to Kilometres		Kilometres to Nautical Miles		
NM	КМ	КМ	NM	
1.0	1.85	1.0	.54	
1.1	2.04	1.1	.59	
1.2	2.22	1.2	.65	
1.3	2.41	1.3	.70	
1.4	2.59	1.4	.76	
1.5	2.78	1.5	.81	
1.6	2.96	1.6	.86	
1.7	3.15	1.7	.92	
1.8	3.33	1.8	.97	
1.9	3.52	1.9	1.03	
2.0	3.70	2.0	1.08	
2.1	3.89	2.1	1.13	
2.2	4.07	2.2	1.19	
2.3	4.26	2.3	1.24	
2.4	4.44	2.4	1.30	
2.5	4.63	2.5	1.35	
3.0	5.56	3.0	1.62	
4.0	7.41	4.0	2.16	
5.0	9.26	5.0	2.70	
6.0	11.11	6.0	3.24	
7.0	12.96	7.0	3.78	
8.0	14.82	8.0	4.32	
9.0	16.67	9.0	4.86	
10.0	18.52	10.0	5.40	
15.0	27.78	15.0	8.10	
20.0	37.04	20.0	10.80	
25.0	46.30	25.0	13.50	
30.0	55.56	30.0	16.20	
35.0	64.82	35.0	18.90	
40.0	74.08	40.0	21.60	
		45.0	24.30	

Nautical Miles to Kilometres		Kilometres to Nautical Miles		
		50.0	27.00	
		55.0	29.70	
		60.0	32.40	
		65.0	35.10	
		70.0	37.80	

# 2.6.2 Feet to Metres

Conversion tables for Feet to Metres are based upon the following conversion factors:

1 FT = 0.3048 M

1 M = 3.281 FT

Feet to Metres		Metres to Feet		
Feet	Metres	Metres	Feet	
1	0.305	1	3.281	
2	0.610	2	6.562	
3	0.914	3	9.842	
4	1.219	4	13.123	
5	1.524	5	16.404	
6	1.829	6	19.685	
7	2.134	7	22.966	
8	2.438	8	26.247	
9	2.743	9	29.528	
10	3.048	10	32.809	
20	6.096	20	65.617	
30	9.144	30	98.426	
40	12.192	40	131.234	
50	15.240	50	164.043	
60	18.290	60	196.852	
70	21.340	70	229.660	
80	24.380	80	262.469	
90	27.430	90	295.278	
100	30.480	100	328.087	
200	60.960	200	656.100	
300	91.440	300	984.300	
400	121.920	400	1.312.300	
500	152.400	500	1.640.400	
1,000	304.800	1,000	3.280.900	
2,000	609.600	2,000	6.561.700	
3,000	914.400	3,000	9.842.600	
4,000	1.219.200	4,000	13.123.500	

Feet to Metres		Metres to Feet		
5,000	1.524.000	5,000	16.404.300	

### 2.6.3

### From decimal minutes of an arc to seconds of an arc

MIN	SEC	MIN	SEC	MIN	SEC	MIN	SEC
0.01	0.6	0.26	15.6	0.51	30.6	0.76	45.6
0.02	1.2	0.27	16.2	0.52	31.2	0.77	46.2
0.03	1.8	0.28	16.8	0.53	31.8	0.78	46.8
0.04	2.4	0.29	17.4	0.54	32.4	0.79	47.4
0.05	3.0	0.30	18.0	0.55	33.0	0.80	48.0
0.06	3.6	0.31	18.6	0.56	33.6	0.81	48.6
0.07	4.2	0.32	19.2	0.57	34.2	0.82	49.2
0.08	4.8	0.33	19.8	0.58	34.8	0.83	49.8
0.09	5.4	0.34	20.4	0.59	35.4	0.84	50.4
0.10	6.0	0.35	21.0	0.60	36.0	0.85	51.0
0.11	6.6	0.36	21.6	0.61	36.6	0.86	51.6
0.12	7.2	0.37	22.2	0.62	37.2	0.87	52.2
0.13	7.8	0.38	22.8	0.63	37.8	0.88	52.8
0.14	8.4	0.39	23.4	0.64	38.4	0.89	53.4
0.15	9.0	0.40	24.0	0.65	39.0	0.90	54.0
0.16	9.6	0.41	24.6	0.66	39.6	0.91	54.6
0.17	10.2	0.42	25.2	0.67	40.2	0.92	55.2
0.18	10.8	0.43	25.8	0.68	40.8	0.93	55.8
0.19	11.4	0.44	26.4	0.69	41.4	0.94	56.4
0.20	12.0	0.45	27.0	0.70	42.0	0.95	57.0
0.21	12.6	0.46	27.6	0.71	42.6	0.96	57.6
0.22	13.2	0.47	28.2	0.72	43.2	0.97	58.2
0.23	13.8	0.48	28.8	0.73	43.8	0.98	58.8
0.24	14.4	0.49	29.4	0.74	44.4	0.99	59.4
0.25	15.0	0.50	30.0	0.75	45.0		

From seconds of an arc to decimal minutes of an arc

SEC	MIN	SEC	MIN	SEC	MIN	SEC	MIN
1	0.02	16	0.27	31	0.52	46	0.77
2	0.03	17	0.28	32	0.53	47	0.78
3	0.05	18	0.30	33	0.55	48	0.80
4	0.07	19	0.32	34	0.57	49	0.82
5	0.08	20	0.33	35	0.58	50	0.83
6	0.10	21	0.35	36	0.60	51	0.85
7	0.12	22	0.37	37	0.62	52	0.87

SEC	MIN	SEC	MIN	SEC	MIN	SEC	MIN
8	0.13	23	0.38	38	0.63	53	0.88
9	0.15	24	0.40	39	0.65	54	0.90
10	0.17	25	0.42	40	0.67	55	0.92
11	0.18	26	0.43	41	0.68	56	0.93
12	0.20	27	0.45	42	0.70	57	0.95
13	0.22	28	0.47	43	0.72	58	0.97
14	0.23	29	0.48	44	0.73	59	0.98
15	0.25	30	0.50	45	0.75	60	1.00

# 2.6.4 Kilograms (KG) to Pounds (LB)

	Kilograms (KG) to Pounds (LB)										
KG	LB	KG	LB	KG	LB						
1	2.20	50	110.23	99	218.26						
2	4.41	51	112.44	100	220.5						
3	6.61	52	114.64	200	440.9						
4	8.82	53	116.84	300	661.4						
5	11.02	54	119.05	400	881.8						
6	13.23	55	121.25	500	1.102.3						
7	15.43	56	123.46	600	1.322.8						
8	17.64	57	125.66	700	1.543.2						
9	19.84	58	127.87	800	1.763.7						
10	22.05	59	130.07	900	1.984.1						
11	24.25	60	132.28	1.000	2.204.6						
12	26.46	61	134.48	2.000	4.409.2						
13	28.66	62	136.69	3.000	6.613.8						
14	30.86	63	138.89	4.000	8.818.4						
15	33.07	64	141.09	5.000	11.023.0						
16	35.27	65	143.30	6.000	13.227.6						
17	37.48	66	145.50	7.000	15.432.2						
18	39.68	67	147.71	8.000	17.636.8						
19	41.89	68	149.91	9.000	19.841.4						
20	44.09	69	152.12	10.000	22.046.0						
21	46.30	70	154.32								
22	48.50	71	156.53								
23	50.71	72	158.73								
24	52.91	73	160.94								
25	55.12	74	163.14								
26	57.32	75	165.35								
27	59.52	76	167.55								

		Kilograms (KG)	to Pounds (LB)		
KG	LB	KG	LB	KG	LB
28	61.73	77	169.75		
29	63.93	78	171.96		
30	66.14	79	174.16		
31	68.34	80	176.37		
32	70.55	81	178.57		
33	72.75	82	180.78		
34	74.96	83	182.98		
35	77.16	84	185.19		
36	79.37	85	187.39		
37	81.57	86	189.60		
38	83.78	87	191.80		
39	85.98	88	194.01		
40	88.18	89	196.21		
41	90.39	90	198.41		
42	92.59	91	200.62		
43	94.80	92	202.82		
44	97.00	93	205.03		
45	99.21	94	207.23		
46	101.41	95	209.44		
47	103.62	96	211.64		
48	105.82	97	213.85		
49	108.03	98	216.05		

#### 2.6.5

Liquid

	LITRES (	L) to IMPER		ONS (IMP)		LITRES (L) to U.S GALLONS (U.S)					
L	IMP	L	IMP	L	IMP	L	U.S	L	U.S	L	U.S
1	0.22	50	11.00	99	21.78	1	0.26	50	13.21	99	26.16
2	0.44	51	11.22	100	22.00	2	0.53	51	13.47	100	26.42
3	0.66	52	11.44	200	44.00	3	0.79	52	13.74	200	52.84
4	0.88	53	11.66	300	66.00	4	1.06	53	14.00	300	79.26
5	1.10	54	11.88	400	88.00	5	1.32	54	14.27	400	105.68
6	1.32	55	12.10	500	110.00	6	1.59	55	14.53	500	132.10
7	1.54	56	12.32	600	132.00	7	1.85	56	14.80	600	158.52
8	1.76	57	12.54	700	154.00	8	2.11	57	15.06	700	184.94
9	1.98	58	12.76	800	176.00	9	2.38	58	15.32	800	211.36
10	2.20	59	12.98	900	198.00	10	2.64	59	15.59	900	237.78
11	2.42	60	13.20	1,000	220.00	11	2.91	60	15.85	1,000	264.2
12	2.64	61	13.42	2,000	440.00	12	3.17	61	16.12	2,000	528.4

LITRES (L) to IMPERIAL GALLONS (IMP)						LITRES (L) to U.S GALLONS (U.S)					
L	IMP	L	IMP	L	IMP	L	U.S	L	U.S	L	U.S
13	2.86	62	13.64	3,000	660.00	13	3.44	62	16.38	3,000	792.6
14	3.08	63	13.86	4,000	880.00	14	3.70	63	16.65	4,000	1.056.8
15	3.30	64	14.08	5,000	1.100.00	15	3.96	64	16.91	5,000	1.321.0
16	3.52	65	14.30	6,000	1,320.00	16	4.23	65	17.17	6,000	1.585.2
17	3.74	66	14.52	7,000	1,540.00	17	4.49	66	17.44	7,000	1.849.4
18	3.96	67	14.74	8,000	1,760.00	18	4.76	67	17.70	8,000	2.113.6
19	4.18	68	14.96	9,000	1,980.00	19	5.02	68	17.97	9,000	2.377.8
20	4.40	69	15.18	10,000	2,200.00	20	5.28	69	18.23	10,000	2.642.0
21	4.62	70	15.40			21	5.55	70	18.49		
22	4.84	71	15.62			22	5.81	71	18.76		
23	5.06	72	15.84			23	6.08	72	19.02		
24	5.28	73	16.06			24	6.34	73	19.29		
25	5.50	74	16.28			25	6.61	74	19.55		
26	5.72	75	16.50			26	6.87	75	19.82		
27	5.94	76	16.72			27	7.13	76	20.08		
28	6.16	77	16.94			28	7.40	77	20.34		
29	6.38	78	17.16			29	7.66	78	20.61		
30	6.60	79	17.38			30	7.93	79	20.87		
31	6.82	80	17.60			31	8.19	80	21.14		
32	7.04	81	17.82			32	8.45	81	21.40		
33	7.26	82	18.04			33	8.72	82	21.66		
34	7.48	83	18.26			34	8.98	83	21.93		
35	7.70	84	18.48			35	9.25	84	22.19		
36	7.92	85	18.70			36	9.51	85	22.46		
37	8.14	86	18.92			37	9.78	86	22.72		
38	8.36	87	19.14			38	10.04	87	22.99		
39	8.58	88	19.36			39	10.30	88	23.25		
40	8.80	89	19.58			40	10.57	89	23.51		
41	9.02	90	19.80			41	10.83	90	23.78		
42	9.24	91	20.02			42	11.10	91	24.04		
43	9.46	92	20.24			43	11.36	92	24.31		
44	9.68	93	20.46			44	11.63	93	24.57		
45	9.90	94	20.68			45	11.89	94	24.84		
46	10.12	95	20.90			46	12.15	95	25.10		
47	10.34	96	21.12			47	12.42	96	25.36		
48	10.56	97	21.34			48	12.68	97	25.63		
49	10.78	98	21.56			49	12.95	98	25.89		

# 2.6.6 Barometric

	HECTOPASCALS (h	Pa) to INCHES (INS)	
hPa	INS	hPa	INS
948	27.99	1000	29.53
949	28.02	1001	29.56
950	28.05	1002	29.59
951	28.08	1003	29.62
952	28.11	1004	29.65
953	28.14	1005	29.68
954	28.17	1006	29.71
955	28.20	1007	29.74
956	28.23	1008	29.77
957	28.26	1009	29.80
958	28.29	1010	29.83
959	28.32	1011	29.86
960	28.35	1012	29.88
961	28.38	1013	29.91
962	28.41	1014	29.94
963	28.44	1015	29.97
964	28.47	1016	30.00
965	28.50	1017	30.03
966	28.53	1018	30.06
967	28.56	1019	30.09
968	28.59	1020	30.12
969	28.61	1021	30.15
970	28.64	1022	30.18
971	28.67	1023	30.21
972	28.70	1024	30.24
973	28.73	1025	30.27
974	28.76	1026	30.30
975	28.79	1027	30.33
976	28.82	1028	30.36
977	28.85	1029	30.39
978	28.88	1030	30.42
979	28.91	1031	30.45
980	28.94	1032	30.47
981	28.97	1033	30.50
982	29.00	1034	30.53
983	29.03	1035	30.56
984	29.06	1036	30.59

HECTOPASCALS (hPa) to INCHES (INS)										
hPa	INS	hPa	INS							
985	29.09	1037	30.62							
986	29.12	1038	30.65							
987	29.15	1039	30.68							
988	29.18	1040	30.71							
989	29.21	1041	30.74							
990	29.23	1042	30.77							
991	29.26	1043	30.80							
992	29.29	1044	30.83							
993	29.32	1045	30.86							
994	29.35	1046	30.89							
995	29.38	1047	30.92							
996	29.41	1048	30.95							
998	29.47	1050	31.01							
999	29.50									

# 2.6.7 Temperature

CELCIUS (C) to FAHRENHEIT (F)											
С	F	С	F	С	F						
- 60	- 76.0	- 8	+ 17.6	+ 44	+ 111.2						
- 59	- 74.2	- 7	+ 19.4	+ 45	+ 113.0						
- 58	- 72.4	- 6	+ 21.2	+ 46	+ 114.8						
- 57	- 70.6	- 5	+ 23.0	+ 47	+ 116.6						
- 56	- 68.8	- 4	+ 24.8	+ 48	+ 118.4						
- 55	- 67.0	- 3	+ 26.6	+ 49	+ 120.2						
- 54	- 65.2	- 2	+ 28.4	+ 50	+ 122.0						
- 53	- 63.4	- 1	+ 30.2	+ 51	+ 123.8						
- 52	- 61.6	0	+ 32.0	+ 52	+ 125.6						
- 51	- 59.8	+ 1	+ 33.8	+ 53	+ 127.4						
- 50	- 58.0	+ 2	+ 35.6	+ 54	+ 129.2						
- 49	- 56.2	+ 3	+ 37.4	+ 55	+ 131.0						
- 48	- 54.4	+ 4	+ 39.2	+ 56	+ 132.8						
- 47	- 52.6	+ 5	+ 41.0	+ 57	+ 134.6						
- 46	- 50.8	+ 6	+ 42.8	+ 58	+ 136.4						
- 45	49.0	+ 7	+ 44.6	+ 59	+ 138.2						
- 44	- 47.2	+ 8	+ 46.4	+ 60	+ 140.0						
- 43	- 45.4	+ 9	+ 48.2	+ 61	+ 141.8						
- 42	- 43.6	+ 10	+ 50.0	+ 62	+ 143.6						
- 41	- 41.8	+ 11	+ 518	+ 63	+ 145.4						

	CELCIUS (C) to FAHRENHEIT (F)										
С	F	С	F	С	F						
- 40	- 40.0	+ 12	+ 53.6	+ 64	+ 147.2						
- 39	- 38.2	+ 13	+ 55.4	+ 65	+ 149.0						
- 38	- 36.4	+ 14	+ 57.2	+ 66	+ 150.8						
- 37	- 34.6	+ 15	+ 59.0	+ 67	+ 152.6						
- 36	- 32.8	+ 16	+ 60.8	+ 68	+ 154.4						
- 35	- 31.0	+ 17	+ 62.6	+ 69	+ 156.2						
- 34	- 29.2	+ 18	+ 64.4	+ 70	+ 158.0						
- 33	- 27.4	+ 19	+ 66.2								
- 32	- 25.6	+ 20	+ 68.0								
- 31	- 23.8	+ 21	+ 69.8								
- 30	- 22.0	+ 22	+ 71.6								
- 29	- 20.2	+ 23	+ 73.4								
- 28	- 18.4	+ 24	+ 75.2								
- 27	- 16.6	+ 25	+ 77.0								
- 26	- 14.8	+ 26	+ 78.8								
- 25	- 13.0	+ 27	+ 80.6								
- 24	- 11.2	+ 28	+ 82.4								
- 23	- 9.4	+ 29	+ 84.2								
- 22	- 7.6	+ 30	+ 86.0								
- 21	- 5.8	+ 31	+ 87.8								
- 20	- 4.0	+ 32	+ 89.6								
- 19	- 2.0	+ 33	+ 91.4								
- 18	- 0.4	+ 34	+ 93.2								
- 17	+ 1.4	+ 35	+ 95.0								
- 16	+ 3.2	+ 36	+ 96.8								
- 15	+ 5.0	+ 37	+ 98.6								
- 14	+ 6.8	+ 38	+ 100.4								
- 13	+ 8.6	+ 39	+ 102.2								
- 12	+ 10.4	+ 40	+ 104.0								
- 11	+ 12.2	+ 41	+ 105.8								
- 10	+ 14.0	+ 42	+ 107.6								
- 9	+ 15.8	+ 43	+ 109.4								

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#### Sunrise / Tables BAHRAIN INTERNATIONAL OBBI 261615N 0503801E Day вмст Month SR SS EECT Month Day BMCT SR SS EECT JAN JUL FEB AUG MAR SEP APR ост MAY NOV

#### GEN 2.7 SUNRISE / SUNSET

	Sunrise / Tables BAHRAIN INTERNATIONAL OBBI 261615N 0503801E											
Month	Day	вмст	SR	SS	EECT	Month	Day	вмст	SR	SS	EECT	
JUN	1	0119	0145	1526	1551	DEC	1	0243	0308	1345	1410	
	6	0118	0144	1528	1554		6	0246	0311	1345	1410	
	11	0118	0144	1530	1556		11	0249	0315	1346	1411	
	16	0118	0144	1532	1558		16	0252	0318	1348	1413	
	21	0119	0145	1533	1559		21	0255	0321	1350	1415	
	26	0120	0146	1534	1600		26	0258	0323	1353	1418	
							31	0259	0325	1356	1421	

Note: All times are UTC

BMCT		
EECT		
SR		
SS		

= Begining Morning Civil Twilight

= Ending Evening Civil Twilight

- = Sunrise
- = Sunset

#### GEN 3. SERVICES

#### GEN 3.1 AERONAUTICAL INFORMATION MANAGEMENT

#### 3.1.1 RESPONSIBLE SERVICE

3.1.1.1 The Aeronautical Information Management which forms part of the Civil Aviation Affairs of the Kingdom of Bahrain, ensures the flow of information necessary for the safety, regularity and efficiency of international air navigation within the area of its responsibility indicated under **GEN 3.1.1.2** below. It consists of AIM Headquarters, International NOTAM Office (NOF) and AIM units established at aerodromes as listed under **GEN 3.1.5** below.

#### 3.1.1.2 AIM Headquarters

AERONAUTICAL INFORMATION MANAGEMENT P.O. Box 586 Kingdom of Bahrain TEL: +973 17321180 / 1 / 2 Telefax:+973 17323876 AFS: OBBBYNYX e-mail: sdc@mtt.gov.bh Http: https://aim.mtt.gov.bh

NOTAM: OBZZNAXX

SNOWTAM: OBZZSNXX

#### 3.1.2 AREA OF RESPONSIBILITY OF AIM

The Aeronautical Information Management is responsible for the collection and dissemination of information for the BAHRAIN FIR / BAHRAIN UIR.

#### 3.1.3 AERONAUTICAL PUBLICATIONS

3.1.3.1 The aeronautical information is provided in the form of the Integrated Aeronautical Information Package consisting of the following elements:

- An electronic Aeronautical Information Publication (electronic AIP);
- An electronic Amendment Service to the electronic AIP (AIP AMDT);
- An electronic Supplement Service to the electronic AIP (AIP SUP);
- NOTAM, and Pre Flight Information Bulletins (PIB);
- An electronic Aeronautical Information Circulars (AIC) Service; and
- Check lists and summaries

NOTAM and the related monthly checklists are issued via the Aeronautical Fixed Service (AFS) while PIB are made available at aerodrome AIM units. All other elements of the package are published on the internet.

#### 3.1.3.2 Electronic Aeronautical Information Publication (electronic AIP)

The electronic AIP is the basic aviation document intended primarily to satisfy international requirements for the exchange of permanent aeronautical information and long duration temporary changes essential for air navigation.

The electronic AIP BAHRAIN FIR is available in HTML format. The HTML version and and a PDF version derived therefrom is published on the internet, and can be found at https://aim.mtt.gov.bh The HTML version is the primary method of publication of the electronic AIP BAHRAIN FIR.

#### **Electronic AIP Bahrain FIR**

This electronic AIP, issued in English only, is the basic aeronautical information document for the BAHRAIN FIR / BAHRAIN UIR, for use in international and domestic operations whether the flight is a commercial or a private one and contains lasting information essential to air navigation.

#### 3.1.3.3 Amendment service to the electronic AIP (AIP AMDT)

Amendments to the electronic AIP (AIP AMDT) are published on the internet. Two types of electronic AIP AMDT are produced:

- 1. Electronic Regular AIP Amendments (AIP AMDT) are issued in accordance with the established regular interval (ref. **GEN 0.1**), and incorporate permanent changes into the electronic AIP at the indicated publication date;
- 2. Electronic AIRAC AIP Amendments (AIRAC AIP AMDT) are issued in accordance with the AIRAC system, identified by the acronym AIRAC, and incorporate operationally significant permanent changes into the electronic AIP at the indicated AIRAC effective date.

A brief description of the subjects affected by the amendment is given on the electronic AIP Amendment cover sheet.

Each electronic AIP amendment cover sheet includes references to the serial number of those elements, if any, of the Integrated Aeronautical Information Package which have been incorporated in the electronic AIP by the amendment and are consequently cancelled.

Each AIP AMDT and each AIRAC AIP AMDT will be allocated separate two digit serial numbers which are consecutive in line with the AIRAC cycle. This will be followed by a two digit number to denote the year of issue or validity, e.g. AIP AMDT 01 / 11; AIRAC AIP AMDT 01 / 11. This new system will supersede the old system (which used a continuous sequence of numbers).

For further details refer to the electronic AIP BAHRAIN FIR version on the internet and its Help section.

#### 3.1.3.4 Electronic Supplement Service to the electronic AIP (AIP SUP)

Temporary changes of long duration (three months and longer) and information of short duration which consists of extensive text and / or graphics, supplementing the permanent information contained in the electronic AIP are published as electronic AIP Supplements (AIP SUP). Operationally significant temporary changes to the electronic AIP are published in accordance with the AIRAC system and its established effective dates and are identified clearly by the acronym AIRAC.

Electronic AIP Supplements are separated by information subject (General - GEN, En-route - ENR and Aerodromes - AD). In a similar manner to AIP AMDT, each Supplement (regular or AIRAC) is allocated a serial number which is consecutive and based on the calendar year, i. e. AIRAC AIP SUP 01 / 11.

Electronic AIP Supplements are kept in the AIP as long as all or some of their contents remain valid. The period of validity of information contained in the electronic AIP Supplement will normally be given in the supplement itself. Alternatively, NOTAM may be used to indicate changes to the period of validity or cancellation of the supplement.

The checklist of electronic AIP Supplements currently in force is issued additionally by the medium of the monthly printed plain language summary of NOTAM in force.

Electronic AIP Supplements are placed on the desktop of the electronic AIP as a separate subject item under the electronic AIP Tabulator "SUP". For further details refer to the electronic AIP BAHRAIN FIR version on the internet and its Help section.

#### 3.1.3.5 NOTAM and Pre - flight Information Bulletins (PIB)

NOTAM contain the information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential for personnel concerned with flight operations. The text of each NOTAM contains the information in the order shown in the ICAO NOTAM Format and is composed of the significations / uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, designators, call signs, frequencies, figures and plain language. NOTAM are originated and issued for BAHRAIN FIR / BAHRAIN UIR and are distributed in one series which is identified by the letter A.

#### Series A

All NOTAM information for domestic and international use pertinent to flight within the BAHRAIN FIR / BAHRAIN UIR.

# Series S (SNOWTAM) - Information providing a runway surface condition report notifying the presence or cessation of hazardous conditions due to standing water on the movement area.

# SNOWTAM are prepared in accordance with PANS-AIM (Doc 10066), Appendix 4, and are issued for individual aerodrome by Bahrain NOF, with separate serial numbers.

Pre - flight Information Bulletins (PIB), which contain a recapitulation of current NOTAM and other information of urgent character to the operator / flight crews, are available at the Aerodrome AIM Units. The extent of the information contained in the PIB is indicated in subsection 5.

#### 3.1.3.6 Electronic Aeronautical Information Circulars (AIC)

The electronic Aeronautical Information Circulars (AIC) contain information of long - term forecast of any major change in legislation, regulations procedures or facilities; purely explanatory or advisory nature liable to affect flight safety; and information or notification of an explanatory or advisory nature concerning technical, legislative or purely administrative matters. AICs are divided in accordance with subjects and their affects and are issued in one series (A).

Each electronic AIC is numbered consecutively on a calendar year basis. The year, indicated by two digits, is a part of serial number of the AIC, e.g. AIC 1 / 11. A checklist of AIC currently in force is issued as an AIC once a year.

Electronic AIC are placed on the desktop of the electronic AIP accordingly as a separate item under the eAIP Tabulator "AIC". For further details refer to the electronic AIP BAHRAIN FIR version on the internet and its Help section.

#### 3.1.3.7 Checklist of NOTAMS

A checklist of NOTAM is issued monthly via AFS. This checklist contains all valid NOTAMS, latest AIP AMDT, latest AIP SUP and AIC.

#### 3.1.3.8 Summary of NOTAM

Summary of NOTAM is published on the official website. It contains a plain language (in English) presentation of the valid NOTAM and information about the latest AIRAC AIP AMDT, AIC issued and checklist of AIP SUP.

#### 3.1.3.9 **Publication Sale**

All publications can be obtained from the following official website in both HTML and PDF versions and is free of charge to all users. https://aim.mtt.gov.bh

#### 3.1.4 THE AIRAC SYSTEM

3.1.4.1 In order to control and regulate the flow of operationally significant changes requiring amendments to charts, route - manuals etc., such changes, whenever possible, will be issued on predetermined dates according to the AIRAC SYSTEM.

Whenever possible this type of information will be published as an AIRAC AIP AMDT / SUP. If an AIRAC AMDT / SUP cannot be produced due to lack of time on a predetermined date, a NIL AIRAC notification NOTAM will be issued one cycle before the effective date of the AIRAC concern.

3.1.4.2 The table overleaf indicates AIRAC effective dates for the coming years. AIRAC information will be issued so that the information will be received by user not later than 28 days, and major changes not later than 56 days, before the effective date.

At AIRAC effective dates, a Trigger NOTAM will be issued giving a brief description of the contents, effective date and cross reference number of the AIRAC AIP AMDT or AIRAC AIP SUP that will become effective on that particular date.

#### Schedule of AIRAC effective dates

	2024	2025	2026	2027	2028	2029
1	25-Jan	23-Jan	22-Jan	21-Jan	20-Jan	18-Jan
2	22-Feb	20-Feb	19-Feb	18-Feb	17-Feb	15-Feb
3	21-Mar	20-Mar	19-Mar	18-Mar	16-Mar	15-Mar
4	18-Apr	17-Apr	16-Apr	15-Apr	13-Apr	12-Apr
5	16-May	15-May	14-May	13-May	11-May	10-May
6	13-Jun	12-Jun	11-Jun	10-Jun	08-Jun	07-Jun
7	11-Jul	10-Jul	09-Jul	08-Jul	06-Jul	05-Jul
8	08-Aug	07-Aug	06-Aug	05-Aug	03-Aug	02-Aug
9	05-Sep	04-Sep	03-Sep	02-Sep	31-Aug	30-Aug
10	03-Oct	02-Oct	01-Oct	30-Sep	28-Sep	27-Sep
11	31-Oct	30-Oct	29-Oct	28-Oct	26-Oct	25-Oct
12	28-Nov	27-Nov	26-Nov	25-Nov	23-Nov	22-Nov
13	26-Dec	25-Dec	24-Dec	23-Dec	21-Dec	20-Dec

If no information was submitted for publication at the AIRAC date, a NIL notification will be issued by NOTAM not later than one AIRAC cycle before the AIRAC effective date concerned.

#### 3.1.5 PRE - FLIGHT INFORMATION SERVICE AT AERODROMES / HELIPORTS

3.1.5.1 NOTAM ARE ADDRESSED TO AND RECEIVED FROM THE FOLLOWING NOTAM OFFICES:

Addis Ababa	Brussels	Greenland	Laos	Paris	Tokyo
Algier	Bucharest	Harare	Lilongwe	Prague	Toronto
Amman	Budapest	Helsinki	Lisbon	Riga	Tripoli
Amsterdam	Cairo	Ho Chi Minh	London	Rome	Tunis
Ankara	Casablanca	Hong Kong	Luqa	Sanaa	U.A.E.
Athens	Colombo	Iceland	Lusaka	Seeb	Vienna
Auckland	Copenhagen	Jakarta	Macau	Seoul	Vilnius
Baghdad	Damascus	Jeddah	Madras	Seychelles	Warsaw

Bangkok	Dar - es - Salaam	Johannesburg	Madrid	Shannon	Windhoek
Beijing	Dhaka	Kabul	Male	Singapore	Yangon
Beirut	Dublin	Karachi	Manila	Slovakia	Zurich
Belgrade	Entebbe	Kathmandu	Maputo	Slovenia	
Bombay	Frankfurt	Khartoum	Melbourne	Sofia	
Brisbane	Gaborone	Kuala Lumpur	Moskow	Stockholm	
Brunei		Kuwait	Nairobi	Sydney	
			Nicosia	Taipei	
				Tehran	

#### 3.1.5.2 NOTAM are additionally received from:

Kolkata	New Delhi	Tallinn
---------	-----------	---------

3.1.5.3 NOTAM are additionally addressed to:

Dallas Fort Worth	Kota Kinabalu	Luxembourg	Moscow
Ottawa	Shanghai	Washington	Vientiane

3.1.5.4 NOTAM are received from the following offices in the USA

ARTCC Boston	Corpus Christie	New York JFK	
ARTCC Houston	Dallas Fort Worth	Newark	
ARTCC Miami	Dayton	Newburgh	
ARTCC New York	Detroit	Norfolk	
ARTCC Washington	Greensboro	Philadelphia	
Atlanta	Houston Intercontinental	Pittsburgh	
Baltimore	Indianapolis	Raleigh / Durham	
Bangor	Knoxville	San Antonio	
Birmingham	Memphis	St Louis Lambert	
Boston	Minneapolis	Tampa	
Chicago O'Hare	Nashville	Washington	
Cincinnati	New Orleans		
Cleveland			

3.1.5.5 A self - briefing pre - flight information service is available at BAHRAIN INTERNATIONAL airport with the coverage indicated below:

3.1.5.5.1 BAHRAIN: Complete coverage as for BAHRAIN INTERNATIONAL NOTAM OFFICE. See GEN 3.1.5.1 to GEN 3.1.5.4.

#### 3.1.5.6 **Pre - flight Information Bulletins (PFIBs)**

3.1.5.6.1 In addition to the self - briefing pre - flight information service, a comprehensive tailored pre - flight briefing is available to scheduled operators from BAHRAIN INTERNATIONAL airport. Application for service should be made to the Airport AIM / MET Briefing Office:

AIM / MET Briefing P.O. Box 586 Kingdom of Bahrain TEL: +973 17321181 / +973 17321182 and +973 17321178 Telefax:+973 17323876

3.1.5.6.2 Bahrain Integrated Aeronautical Information Package is available on: https://aim.mtt.gov.bh

#### 3.1.5.7 Accuracy of Information

3.1.5.7.1 The AIP BAHRAIN FIR and associated NOTAM are compiled from the variety of sources. Except for Bahrain, all information is acquired from independent states and from commercial sources. The greatest care is exercised in the assembly and compilation of information for the AIP BAHRAIN FIR and associated NOTAM and they are considered to be as reliable as possible at the time of issue. Civil Affairs will not be held responsible, however, for the accuracy of the contents of the AIP BAHRAIN FIR or NOTAM or for any omissions therefrom, neither will Civil Aviation Affairs be responsible for the adequacy or receipt of NOTAM or AIP amendments.

3.1.5.7.2 Any errors or om missions discovered should be notified without delay to the AIM Department or to Civil Aviation Affairs.

3.1.5.7.3 To further enhance the quality of the services provided by AIM, Bahrain has implemented ISO 9001 : 2008 to AIM, should any comments or suggestions arise, please do not hesitate to mail or email us at the following address:

AERONAUTICAL INFORMATION MANAGEMENT P.O. Box 586 Kingdom of Bahrain e-mail: sdc@mtt.gov.bh Http: https://aim.mtt.gov.bh

#### 3.1.6 ELECTRONIC TERRAIN AND OBSTACLE DATA (ETOD)

3.1.6.1 Air Navigation Obstacles and Electronic Terrain Data Sets of Bahrain may be obtained from:

AERONAUTICAL INFORMATION MANAGEMENT - Air Navigation Bahrain Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain TEL: +973 17321180 / +973 17321181 Telefax:+973 17329977 / +973 17323876 e-mail: etod@mtt.gov.bh sdc@mtt.gov.bh 

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#### GEN 3.2 AERONAUTICAL CHARTS

#### 3.2.1 RESPONSIBLE SERVICE

Civil Aviation Affairs of Bahrain provides a wide range of aeronautical charts for use by all types of Bahrain Civil Aviation Affairs. The Aeronautical Information Service produces the charts which are part of the AIP. For addresses see **GEN 3.2.3** below.

The charts are produced in accordance with the provisions contained in the following ICAO documents: Annex 4 - Aeronautical Charts. Differences to these provisions are detailed in section **GEN 1.7**.

#### 3.2.2 MAINTENANCE OF CHARTS

3.2.2.1 The aeronautical charts included in the AIP are kept up - to - date by amendments by AIP. Corrections to aeronautical charts not contained in the AIP are promulgated by AIP Amendments and are listed under **GEN 3.2.7** of this section. Information concerning the planning for or issuance of new maps and charts are notified by Aeronautical Information Circular.

3.2.2.2 Incorrect information detected on published charts are corrected by NOTAM if they are of operational significance.

#### 3.2.3 PURCHASE ARRANGEMENTS

3.2.3.1 The charts contained in the AIP BAHRAIN FIR may be obtained from the:

Aeronautical Information Management P.O. Box 586 Kingdom of Bahrain TEL: +973 17321180 / +973 17321181 / +973 17321182 Telefax:+973 17323876 AFS: OBBBYNYX

The charts listed under GEN 3.2.5 of this section may be obtained through the following accredited chart agents:

a) Edward Stanford Ltd.

12 - 14 Long Acre, London, WC 2 E 9 L P., UK

b) British Airways (Aerad) (S 464),

P.O. Box 10, Aerad House,

Heathrow Airport

Hounslow, Middlesex

TW 6 2 JA, UK

c) Airtour International Ltd.,

Elstree Aerodrome,

Elstree,

Herts, WD 6 3 AW, UK

d) British Light Aviation Centre,

Artillery Manisions,

Victoria Street,

London SW 1, UK

3.2.3.2 Civil Aviation Affairs, the Aeronautical Information Service and the sales agents have copies of the ICAO Catalogue (ICAO Doc 7101 - MAP / 565) wherein are listed all aeronautical charts or chart series produced by this and other countries, and known to be generally available to Civil Aviation.

#### 3.2.4 AERONAUTICAL CHART SERIES AVAILABLE

3.2.4.1 The following series of aeronautical charts are acknowledged:

- a) World Aeronautical Chart ICAO 1 : 1.000.000
- b) Plotting Chart ICAO
- c) Aerodrome / Heliport Chart ICAO
- d) Aerodrome Ground Movement Chart ICAO

- e) Aircraft Parking / Docking Chart ICAO
- f) Aerodrome Obstacle Chart ICAO Type A
- g) Aerodrome Obstacle Chart ICAO Type C
- h) Precision Approach Terrain Chart ICAO
- i) En-route Chart ICAO
- j) Area Chart ICAO (departure, arrival and transit routes)
- k) Instrument Approach Chart ICAO (for each runway and procedure type)
- I) Visual Approach Chart ICAO
- m) Low Visibility Procedure Chart ICAO

The charts currently available are listed under AD 2.24 of each aerodrome.

#### 3.2.4.2 General description of each Series

#### a) World Aeronautical Chart ICAO 1 : 1.000.000

The World Aeronautical Chart ICAO 1 : 1.000.000 series is constructed on Lambert Conical Orthomorphic Projection up to  $80^{\circ}$  N and Polar Stereographic Projection between  $80^{\circ}$  N and  $90^{\circ}$  N with the scales matching at  $80^{\circ}$  N. The aeronautical data shown has been kept to a minimum, consistent with the use of the chart for visual air navigation. It includes a selection of aerodromes, significant obstacles, elements of the ATS system, prohibited, restricted and danger areas and radio navigation aids. The chart provides information to satisfy visual air navigation and is also used as a pre - flight planning chart.

#### b) Plotting Chart - ICAO

This series, covering the North Atlantic, Western Europe and North Africa is designed for in - flight long range navigation and is constructed on Mercator's projection with simple outline of land areas at a scale of 1 : 5.000.000. Aeronautical data consist of major international aerodromes, selected radio navigation aids, lattices of long range electronic aids to navigation, FIR, CTA, CTR, reporting points, etc. The chart is designed to provide a means of maintaining a continuous flight record of the aircraft position.

#### c) Aerodrome / Heliport Chart - ICAO

The Aerodrome / Heliport Chart - ICAO contains detailed Aerodrome / Heliport data to provide flight crew with information which will facilitate the ground movement of aircraft:

- a) from aircraft stand to the runway; and
- b) from the runway to the aircraft stand;

and helicopter movement:

- a) from the helicopter stand to the touchdown and lift off area and to the final approach and take off area;
- b) from the final approach and take off area to the touchdown and lift off area and to the helicopter stand;
- c) along helicopter ground and air taxiways; and
- d) along air transit routes;

It also provides essential operational information at the aerodrome / heliport.

#### d) Aerodrome Ground Movement Chart - ICAO

The Aerodrome Ground Movement Chart - ICAO is produced for those aerodromes where, due to congestion of information, details necessary for the ground movement of aircraft along the taxiways to and from the aircraft stands and the parking / docking of aircraft, cannot be shown with sufficient clarity on the Aerodrome / Heliport Chart - ICAO.

#### e) Aircraft Parking / Docking Chart - ICAO

This chart is produced for those aerodromes where, due to the complexity of the terminal facilities the information to facilitate the ground movement of aircraft between the taxiways and the aircraft stands and the parking / docking of aircraft cannot be shown with sufficient clarity on the Aerodrome / Heliport Chart - ICAO or on Aerodrome Ground Movement Chart - ICAO.

#### f) Aerodrome Obstacle Chart - ICAO, Type A (Operating Limitations)

This chart contains detailed information of obstacles in the take - off flight path areas of aerodromes. It is shown in plan and profile view. This obstacle information, in combination with an Obstacle Chart - ICAO, Type C provides the data necessary to enable an operator to comply with the operating limitations of Annex 6, Parts I and II, Chapter 5.

#### g) Aerodrome Obstacle Chart - ICAO, Type C

This chart contains obstacles data necessary to enable an operator to develop procedures to comply with operating limitations of Annex 6, Parts I and II, Chapter 5 with particular reference to information on obstacles that limit the maximum permissible take - off mass. This chart must provide certain obstacle data and topographical information covering a distance of 45 KM (24 NM) from the aerodrome reference point.
Appropriate topographical charts which are available for the area around the airports, if supplemented with "overprint" obstacle data and other significant aeronautical information, should be suitable for use as the topographic base for the AOC - ICAO, Type C. The chart is not produced if:

- a) The required obstacle data is published in the AIP; or
- b) No significant obstacles exist, and this fact is published in the AIP.

#### h) Precision Approach Terrain Chart - ICAO

Precision Approach Terrain Charts - ICAO provide detailed terrain profile information within a defined portion of the final approach so as to enable aircraft operating agencies to assess the effect of the terrain on decision height determination by the use of radio altimeters. This chart is produced for all precision approach runways Categories II and III.

## i) En-route Chart - ICAO

This chart is produced for the entire BAHRAIN FIR / BAHRAIN UIR. The aeronautical data include all aerodromes, prohibited, restricted and danger areas and the air traffic services system in detail. The chart provides flight crews with information to facilitate navigation along ATS routes in compliance with air traffic services procedures.

## j) Area Chart - ICAO

The Area Chart - ICAO is produced where the air traffic services routes or position reporting requirements are complex and cannot be shown on an En-route Chart - ICAO. It contains in more detail aerodromes, which affect terminal routings, prohibited, restricted and danger areas and the air traffic services system. This chart provides the flight crew with information to facilitate the following phases of instrument flight:

- a) the transition between the en-route phase and approach to an aerodrome;
- b) the transition between take off / missed approach and en-route phase of flight; and
- c) flights through areas of complex ATS routes or airspace structure.

#### k) Instrument Approach Chart - ICAO

Instrument Approach Charts - ICAO are produced for all aerodromes used by civil aviation where instrument approach procedures have been established.

A separate Instrument Approach Chart - ICAO has been provided for each approach procedure.

The aeronautical data shown include information on aerodromes, prohibited restricted and danger areas, radio communication facilities and navigation aids, minimum sector altitude, procedure track portrayed in plan and profile view, aerodrome operating minima etc.

This chart provides flight crew with information which will enable them to perform an approved instrument approach procedure to the runway of intended landing including the missed approach procedure and where applicable, associated holding patterns.

#### I) Visual Approach Chart - ICAO

The Visual Approach Chart - ICAO is produced for aerodromes used by civil aviation where:

- 1. only limited navigation facilities are available;
- 2. radio communication facilities are not available; or
- 3. no adequate aeronautical charts of the aerodrome and its surroundings at 1: 500.000 or greater scale are available; or
- 4. visual approach procedures have been established.

The aeronautical data shown, include information on aerodromes, obstacles, designated airspace, visual approach information, radio navigation aids and communication facilities as appropriate.

#### m) Low Visibility Procedure Chart - ICAO

Low visibility operations shall be declared whenever;

- a) The tower controller's ability to visually survey the manevering area is limited to portions of the maneuvering area, or
- b) The RVR reading is 1000 m or below.

# 3.2.5 INDEX TO OPERATIONAL NAVIGATIONAL CHARTS ONC 1 : 1.000.000 and TACTICAL PILOTAGE CHARTS TPC 1 : 500.000

LIST OF CHART SERIES				
TITLE AND SCALE	SERIES CODE	CHART NUMBER		
Topographical Operational Navigation Chart - 1 : 1.000.000	ONC	H - 6		
	ONC	H - 7		
	ONC	J - 7		
Topographical Tactical Pilotage Chart - 1 : 500.000	TPC	H - 6 A		
	TPC	H - 6 B		
	TPC	H - 6 C		
	TPC	H - 6 D		
	TPC	H - 7 D		
	TPC	J - 7 A		
	TPC	J - 7 B		
	TPC	J - 7 D		



## 3.2.6 TOPOGRAPHICAL CHARTS

To supplement the aeronautical charts, a range of topographical charts is available from:

The Ministry of Housing

Survey Directorate P.O. Box 5802 Kingdom of Bahrain TEL: +973 17533000 Telefax:+973 17533795

## 3.2.7 CORRECTIONS TO CHARTS NOT CONTAINED IN THE AIP

NIL

## INTENTIONALLY BLANK

### GEN 3.3 AIR TRAFFIC SERVICES

## 3.3.1 RESPONSIBLE SERVICE

The Air Traffic Services Department of the Bahrain Civil Aviation Affairs is the responsible authority for the provision of Air Traffic Services within the area indicated under **GEN 3.3.2** below.

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321100 Telefax:+973 17339066 AFS: OBBBZGZX SITA: BAHAPYF

The services are provided in accordance with the provision contained in the following ICAO documents:

Annex 2 Rules of the Air Annex 11 Air Traffic Services Doc 4444 Air Traffic Management (PANS - ATM) Doc 8168 Procedures for Air Navigation Services / Aircraft Operation (PANS - OPS) Doc 7030 Regional Supplementary Procedures

Differences from these provisions are detailed in sub - section GEN 1.7.

## 3.3.2 AREA OF RESPONSIBILITY

Air Traffic Services are provided for the entire territories, including territorial waters, and in the airspace over the high seas encompassed by the BAHRAIN FIR / BAHRAIN UIR.

## 3.3.3 TYPE OF SERVICES

The following types of services are provided:

Flight Information Service (FIS) and Alerting Service (ALRS) Area Control (ACC); and Radar

With the exception of services provided at military air bases, the following types of services are provided at aerodromes:

Aerodrome Control (TWR); Approach Radar; Aerodrome Flight Information Service (AFIS); and Automatic Terminal Information Service (ATIS), at certain aerodromes

For military ATS within the Kingdom of Bahrain see OBBS AD 2.17 and OBKH AD 2.17.

3.3.3.1 Air Traffic Services are provided in accordance with the standards specified in Annex 11 to the Convention on International Civil Aviation. Airspace is classified in accordance with Appendix 4 to Annex 11, and a description of the system with an indication of the utilization in the BAHRAIN FIR / BAHRAIN UIR is set out in **ENR 1.4**.

Air Traffic Control is exercised:

a) In Class A Airspace which in the BAHRAIN UIR encompasses all Controlled Airspace at and above FL 150 and;

b) In Class C Airspace which in the BAHRAIN FIR encompasses all Controlled Airspace below FL 150.

Note: Controlled Airspace is a generic term which covers ATS Airspace Classes A, B, C, D & E as defined in Appendix 4 to Annex 11.

3.3.3.2 Flight Information Service and Alerting Service within the Area of Responsibility outside the Control Zones, and Air Traffic Control service in airways within the Area of Responsibility are provided by one Centre (ACC Bahrain). Within Control Zones the Services are provided by the Approach Control Unit concerned.

The Taxis of each airway is constituted by a line connecting significant points identified as a rule by radio navigational facilities.

3.3.3.3 Air Traffic Control, Flight Information and Alerting Services are provided by:

- a) ACC Bahrain in the Bahrain CTA and along the airways, including those parts of the airways traversing Control Zones.
- b) The relevant Approach Control Unit and Aerodrome Control Unit, in co ordination with Bahrain as necessary, for arriving and departing aircraft.

3.3.3.4 The description of the airspace designated for Air Traffic Services purposes is contained in several tables, all forming part of

## ENR 3.

3.3.5 In general, the air traffic rules and procedures in force and the organization of Air Traffic Services are in conformity with ICAO Standards, Recommended Practices and Procedures. Differences between the National and International Rules and Procedures are given in **GEN 1.7**. The Regional Supplementary Procedures are given in full with an indication where there is a difference.

3.3.6 Prohibited, Restricted and Danger areas are established within BAHRAIN FIR / BAHRAIN UIR. These areas are shown in ENR
5. Activation of areas subject to Intermittent activity is notified in advance by NOTAM, given reference to the area only by its designation.

## 3.3.4 COORDINATION BETWEEN THE OPERATORS AND ATS

Coordination between the operator and Air Traffic Services is affected in accordance with Annex 11 and Doc 4444 (PANS - ATM).

Coordination for Special Use of Airspace

In order to ensure that activities potentially hazardous to civil aircraft are coordinated between Military users and ATC units and to:

- 1. Allow timely promulgation of information;
- 2. Minimize interference with normal civil aircraft operations;
- 3. Avoid hazards to civil aircraft;

The unit requesting special use of airspace shall submit a request to Bahrain ATC Head of ATC Operations for approval at least 10 days prior to the proposed operation. All requests shall include date and times of the request as well as the specific area requested, defined by Latitude and Longitude coordinates and altitude limits in terms of MSL.

Bahrain CATM contact details as follows:-

Chief Air Traffic Management Air Navigation Directorate Ministry of Transportation & Telecommunications Kingdom of Bahrain TEL: +973 17321158 Telefax: +973 17329977 MOB: +973 39522696 e-mail: a.ali@mtt.gov.bh

## 3.3.5 MINIMUM FLIGHT ALTITUDES

The minimum flight altitudes on the ATS routes as listed in **ENR 3** have been determined to ensure at least 300 M (1000 FT) vertical clearance above the highest obstacle within 5 NM from the edge of airways.

However, where the angular divergence of the navigational air signal in combination with the distance between the navigational aids could result in an aircraft being more than 5 NM (9 KM) on either side of the centre line, the 5 NM (9 KM) protection limit on each side of the centre line of the ATS route is increased by the extent to which the divergence is more than 5 NM (9 KM) from the centre line.

**Note:** The navigation performance accuracy necessary for operation on air routes within BAHRAIN UIR is expressed as RNAV type. RNAV type is containment value expressed as a distance in NM from the intended position within which flights would be for at least 95 per cent of the total flying time. For operation on the air routes in the BAHRAIN UIR, the required radio navigation specification (RNAV) is RNAV 5. RNAV 5 represents a navigation accuracy of plus or minus 9.26 KM (5 NM) on a per cent containment basis. RNAV 5 application in BAHRAIN UIR is detailed in **ENR 1.3.4**.

## 3.3.6 ATS UNITS ADDRESS LIST

BAHRAIN ACC Chief ATM P.O. Box 586 Kingdom of Bahrain TEL: +973 17321117 / +973 17321080 / +973 17321081 Telefax:+973 17329966 / +973 17321029 AFS: OBBBZQZX e-mail: bahatc@mtt.gov.bh

BAHRAIN / ISA AIRBASE Senior ATCO Air Operations Centre P.O. Box 245 Kingdom of Bahrain TEL: +973 17894628 / +973 17894474 Telefax:+973 17894600 Telex: 8429BN AFS: OBBSZTZX

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## GEN 3.4 COMMUNICATION SERVICES

## 3.4.1 KINGDOM OF BAHRAIN

## 3.4.1.1 RESPONSIBLE SERVICE

3.4.1.1.1 The telecommunications services in the BAHRAIN FIR / BAHRAIN UIR are not administered by a single authority but by different administrations or operating authorities, each responsible for the telecommunications stations under their control. Arrangements concerning these services, or any enquiries, suggestions or complaints regarding telecommunications services at individual stations, should be referred to the relevant administration or operating authority for the telecommunications stations concerned.

3.4.1.1.2 The authority responsible for the administration of telecommunications services at Bahrain is Civil Aviation Affairs.

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321011 Telefax:+973 17339066 AFS: OBBIYAYX

The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 10 Aeronautical Telecommunications Doc 8400 Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS - ABC) Doc 8585 Designator for Aircraft Operating Agencies, Aeronautical Authorities and Services Doc 7030 Regional Supplementary Procedures Doc 7910 Location Indicators

## 3.4.1.2 AREA OF RESPONSIBILITY

Communication services are provided for the entire BAHRAIN FIR / BAHRAIN UIR. Arrangements for such Services on a continuing basis should be made with the Head of Communications Civil Aviation Affairs, who is also responsible for the application of the regulations concerning the design, type and installations of aircraft radio stations. Responsibility for the day - to - day operation of these services is vested in Station Communication Officers located at each international aerodrome. Enquiries, suggestions or complaints regarding any telecommunication service should be referred to the relevant Station Communication Officer or to the Head of Communications, Civil Aviation Affairs, as appropriate.

The various authorities are in States within the BAHRAIN FIR / BAHRAIN UIR.

## 3.4.1.3 TYPES OF SERVICE

#### 3.4.1.3.1 Radio Navigation Service

The following types of radio aids to navigation are available:

Instrument Landing System (ILS) VHF Omnidirectional Radio Range (VOR) Distance Measuring Equipment (DME)

### 3.4.1.3.2 Mobile Service / Fixed Service

## 3.4.1.3.2.1 Mobile Service

The aeronautical stations within the BAHRAIN FIR / BAHRAIN UIR maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified.

3.4.1.3.2.1.1 An aircraft should normally communicate with the air - ground control station which exercises control in the area in which it is flying. Aircraft should maintain continuous watch on the appropriate frequency and should not cease watch, except for reasons of safety, without the authority of the control radio station,

3.4.1.3.2.1.2 During flight within the BAHRAIN FIR / BAHRAIN UIR, pilots must additionally guard one or both of the emergency fequencies 121.500 MHZ and 243.000 MHZ.

3.4.1.3.2.1.3 At stations within the BAHRAIN FIR / BAHRAIN UIR the language used in air - ground communications is English.

### 3.4.1.3.2.2 Fixed Service

At stations within the BAHRAIN FIR / BAHRAIN UIR messages to be transmitted over the Aeronautical Fixed Service are accepted only if:

- a) they satisfy the requirements of Annex 10, Volume 2, Chapter 3.3
- b) they are prepared in the form specified in Annex 10, and
- c) the text of an individual message does not exceed 1800 characters

General Aircraft Operating Agency messages are only accepted for transmission to countries which have agreed to accept Class "B" traffic.

## 3.4.1.3.2.3 Broadcast Service

Sub - Area Meteorological Broadcasts (VOLMET Radio - telephony Broadcasts) are available for the use of aircraft in flight. Full details are given in Section **GEN 3.5**.

## 3.4.1.3.2.3.1 Language used: English

### 3.4.1.3.2.3.2 Where detailed information can be obtained

Details of the various facilities available for the En - route traffic are to be found in the En - route Part. (ENR 4).

Detailes of the facilities available at the individual aerodrome are to be found in the relevant aerodrome (AD) section. In cases where a facility is serving both the En - route traffic and the Aerodromes, details are given in both the En - route Part and the Aerodrome section concerned.

The co - ordinates listed refer to the transmitting antennae.

### 3.4.1.4 REQUIREMENTS AND CONDITIONS

The requirements of the Directorate of Communication Services and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment, are contained in the Air Navigation (Radio) Regulations of Bahrain. The list of the main provisions is briefly summarized below:

## Article (12) Radio Equipment and its use in the Aircraft

Aircraft operating in the territory of the Kingdom of Bahrain shall not carry any radio equipment unless a license has been issued to the effect by the competent Authorities in the State of Registry. Such equipment shall be used only for air navigation purposes by the flight crew of the aircraft in accordance with the established rules.

## 3.4.2 Table Aeronautical Fixed Services - International Circuits

Station Name and Location Indicator	Correspondent AFTN Addressees	Type of Channel	Type of Traffic	Hours of Operation	Remarks
1	2	3	4	5	6
BAHRAIN OBBI	OBBIYFYX	LAN	AMHS	H24	caacomms@mtt.gov.bh TEL: +973-1732-1185
KUWAIT OKBK	OKKKYFYX	LAN	AMHS	H24	NIL
BEIRUT OLBA	OLBAYFYX	LAN	AMHS	H24	NIL
DOHA OTBD / OTHH	OTBDYFYX OTHHYFYX	LAN	AMHS	H24	NIL
JEDDAH OEJN	OEJNYFYX	LAN	AMHS	H24	NIL
ANKARA LTAC	LTACYFYX	Serial	AFTN	H24	NIL
MUSCAT OOMS	OOMSYFYX	LAN	AMHS	H24	NIL
NICOSAI LCNC	LCNCYFYX	Serial	CIDIN	H24	NIL
Singapore WSSS	WSSSYFYX	Serial	AFTN	H24	NIL
TEHRAN OIII	OIIIYFYX	LAN	AFTN	H24	NIL
ABU DHABI OMAE	OMAEYFYX	LAN	AMHS	H24	NIL

## 3.4.3 TABLE AERONAUTICAL FIXED SERVICES - Domestic Circuits

Station Name	Correspondent AFTN Addressees	Type of Channel	Type of Traffic	Hours of Operation	Remarks
1	2	3	4	5	6
COMMS	OBBIYFYX, OBKHYWYX	LAN	AFTN	H24	NIL
FIC	OBBIZQZX	LAN	AFTN	H24	NIL
Tower	OBBIZTZX, OBBSZTZX, OBKHZTZX	LAN	AFTN	H24	NIL
Radar	OBBIZRZX	LAN	AFTN	H24	NIL
NOF	OBBIYNYX, OBBIAINS	LAN	AFTN	H24	NIL
IAT AIM (OFFICE)	OBBBAISI	LAN	AFTN	H24	NIL
AIS	OBBIZPZX, OBBBZQZX, OBKHZPZX	LAN	AFTN	H24	NIL
IFPS	OBBBZEZN	LAN	AFTN	H24	NIL
MET	OBBIYMYX, OBBIYZYX	LAN	AFTN	H24	NIL
Met Backup	OBBBYMYX	LAN	AFTN	H24	NIL
RCC	OBBIRCCP	LAN	AFTN	H24	NIL
BAIMS	OBBIAIMS	LAN	AFTN	H24	NIL

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## GEN 3.5 METEOROLOGICAL SERVICES

## 3.5.1 KINGDOM OF BAHRAIN

## 3.5.1.1 Responsible Service

The Meteorological Services for civil aviation at Bahrain are provided by the Bahrain Meteorological Service.

Bahrain Meteorological Service Civil Aviation Affairs Bahrain International Airport P.O. Box 586 Kingdom of Bahrain TEL: +973 17321178 (MET Briefing), +973 17323073 (Forecaster) Telefax:+973 17320630 AFS: OBBIYMYX

The service is provided with the provisions contained in the following ICAO documents:

Annex 3: Meteorological Service for International Air Navigation Annex 15: Aeronautical Information Service Doc 8126: Aeronautical Information Services Manual Doc 7030: Regional Supplementary Procedures Doc 8700: Air Navigation Plan, MID / ASIA Doc 9377: Co - ordination between ATS and the Meteorological Services

Differences from these provisions are detailed in Section GEN 1.7.

## 3.5.1.2 Area of Responsibility

Meteorological Watch Office for the BAHRAIN FIR / BAHRAIN UIR.

Air routes from Bahrain to:	North America
	Europe
	South Africa
	The Far East

#### 3.5.1.3 Observing Systems and Operation Procedures

3.5.1.3.1 Surface wind is measured by ultrasonic wind sensor located approximately 350 M WSW of THR RWY 30L and at RWY 12R. Wind indicators are located in the meteorological units of Briefing, Observing and Operations and in the appropriate Air Traffic Services Units.

Cloud height is estimated. However Vaisala Ceilometer cloud measurements are also available near the RWY 30L.

Temperature and huminidity readings are taken from instruments located at a site some 250 M from the RWY, near to the THR RWY 30L.

Vertical / horizontal wind - shear warnings are issued.

Slant visual range observations are not made.

Visibility is estimated except for IRVR as follows.

- 3.5.1.3.2 IRVR REPORTING PROCEDURES
- 3.5.1.3.2.1 IRVR reporting is initiated when:
- a) The regular meteorological report shows visibility to be 2000 M or less;
- b) The IRVR value is observed to be 2000 M or less;
- c) Whenever shallow fog is reported, and during periods for which it is forecast.

Note: In METAR, only the touchdown and stop end values are given.

3.5.1.3.2.2 IRVR values will be passed to all aircraft at the beginning of each approach for landing and thereafter, any significant change to the IRVR is passed until the aircraft has landed. A significant change is defined as a change in value of one increment or more. IRVR information will also be provided to aircraft prior to take off.

3.5.1.3.2.3 The IRVR is measured by forward scattering visibility sensor and the system consists of three transmission meters indicating Touch - down, Mid point and Stop - end values for the RWY in use. Where all three readings are reported to the pilot, they are passed as three

sets of figures representing Touch - down, Mid point and Stop - end respectively. e.g.:

#### RVR 650 - 500 - 550

3.5.1.3.2.4 If only two values are passed they will be identified, for example, as follows:

RVR Touch - down 650 - Stop - end - 550

3.5.1.3.2.5 If only one unit is serviceable it will be identified, for example, as follows:

#### RVR Mid - point 650

except that if the only serviceable unit is the Stop - end, the value will not be reported and the whole system will be placed unserviceable for that RWY.

## 3.5.1.4 Meteorological Observations and Reports

## Table GEN 3.5.1.4 Meteorological Observations and Reports

Name of Station Location Indicator	Type and frequency of observations / autom. equipment	Types of MET reports and Suppl. Information included	Observation System and sites	Hours	Climatological Information Available
BAHRAIN MET BAHRAIN INTERNATIONAL OBBI	Half hour plus special observations	METAR, SPECI, TREND & WS	SFC wind sensors RVR EQPT Ceilometer Thermometer See AD Chart	H24	Climatological tables AVBL

#### 3.5.1.4.1 NOTIFICATION REQUIRED FROM OPERATORS

Pursuant to ICAO Annex 3, chapter 2, paragraph 2.3, notification in respect of all flight documentation and briefing is normally required. Such notification should normally be received at least six hours before expected departure time for flight of more than 1500 NM and at least 2 hours before expected departure time for flights of 1500 NM or less.

## 3.5.1.5 Types of Service

A 24-hour personal briefing and consultation service for flight crews is provided. Flights documentation provided comprises prognostic charts of upper air (for 250 MB) and significant weather (above FL 250) for long - haul flights. Charts for 500, 300 and 200 MB are available by prior arrangement. Rout sector winds for 700 MB and significant weather charts (above 10000 FT) are provided for regional flights.

Take-off data and climb and descent winds are also provided, together with the latest available aerodrome forecasts for designation and alternates.

Satellite imagery and local weather radar displays are available for inspection at the MWO and satellite imagery can be provided on request.

## 3.5.1.6 Aircraft Reports required from Pilots

## In Flight

In accordance with Annex 3, chapter 5, paragraph 5.3.1, the marking and transmission of aircraft reports (AIREP) is required of the following ATS reporting points:

BAHRAIN (DAVRI, TORBO, SODAK or SOGAT)

Reports also requested at:

TOMSO, DEGSO, RESAR, ORSIS, TUMAK, ALPOB, ORMID, ULADA, RABAP

## After landing

To establish a data-base for validating enhanced forecast information for take-off procedures, pilots of aircraft equipped with Flight Management Systems are requested to record winds and temperatures at and below 3000 FT at 500 FT intervals on a pro forma provided, and submit it to ground services after landing whenever operational requirements permit.

Pro forma are available from BAHRAIN AIRPORT SERVICES (BAS) and the MET / AIM Briefing Office.

## 3.5.1.7 VOLMET Service

Name of Station	Call Sign ID (EM)	Freq.	BCST period	Hours of services	ADs included	Continents & Format of REP and FCST & Remarks
BAHRAIN	BAHRAIN VOLMET (A3E)	128.800 MHZ	H24	CNS	OBBI, OEDF, OERK, OEJN, OKBK, OTHH, OTBD, OMAA, OMDB, OMDW, OMSJ, OMRK and OOMS	METAR, TREND, QNH

### 3.5.1.8 SIGMET Service / Validity

Name of MWO / Location Indicator	Hours	FIR Served	Type of SIGMET / Validity	Specific Procedures	ATS Unit served	Additional Information
BAHRAIN	H24	BAHRAIN FIR / BAHRAIN UIR	SIGMET / 4 HR SIGMET SST / 4 HR	NIL	BAHRAIN ACC SHAIKH ISA APC DOHA APC	NIL

#### 3.5.1.8.1 General

For safety of air traffic the Bahrain Meteorological Service maintains an area meteorological watch and warning service. This service consists partly in a continuous weather watch within the FIR / UIR and the issuance of appropriate information (SIGMET) by the Meteorological Watch Office, partly in the issue of warnings for BAHRAIN INTERNATIONAL airport and, subject to agreement, for other aerodromes by all aeronautical MET office.

#### 3.5.1.8.2 Area Meteorological Watch Service

The area meteorological watch service is performed by the Bahrain Meteorological Watch Office. The MWO issues information in the form of SIGMET messages about occurrence or expected occurrence of one of several of the following significant meteorological phenomena.

Thunderstorms\* (Obscured, Embedded, Frequent, Obscured with Hail, Embedded with Hail, Frequent with Hail). Severe turbulence Severe icing Severe mountain waves Heavy sands / dust - storm Volcanic ash cloud Tropical cyclone

\* Area of widespread Cumulonimbus clouds or Cumulonimbus along a line (squall line) with little or no space between individual clouds, or Cumulonimbus embedded in cloud layers or obscured by haze.

#### SIGMET SST messages are issued as required and relate to the following phenomena:

Cumulonimbus Turbulence (mod / severe/) Hail Volcanic ash cloud

The SIGMETS are issued in abbreviated plain language using ICAO abbreviations and are numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to 4 hours or less from the time of transmission. The MWO transmits SIGMETS issued by itself as well as SIGMETS of adjacent. MWOs. SIGMET Information is disseminated.

- a) by the Area Control Centre Bahrain for the BAHRAIN FIR / BAHRAIN UIR;
- b) by ATS units for their own area of responsibility.

The information is broadcast from Aeronautical Communication Centre and repeated every half and full hour during the period of validity of the SIGMET Information.

## 3.5.1.8.3 Warning Service

Warnings are issued for the safety of aircraft taking off and landing for the protection of parked and moored aircraft or equipment at the airport. Warnings are issued in plain language.

## Aerodrome Warnings are issued when one or more of the following phenomena are expected to affect the airport:

Thunderstorm Squall 1 Sandstorm / dust storm Rising sand / dust Strong surface wind 2 Temperature inversion 3 Hail Low level turbulence

Note 1: squall relates to a sudden increase of wind speed of at least 16 KT, the speed being 22 KT or more.

Note 2: strong wind refers to mean wind speed of 22 KT or more and / or gusts of 28 KT or more.

Note 3: Temperature inversion warnings are issued for a lapse of 07° C or more, at or below 1500 FT.

Wind Shear Warnings are issued within a radius of 8 KM from the airport and up to 1600 FT. For vertical Shear the following criteria are used:

Mod 5 - 8 KT / 100 FT Str 9 - 12 KT / 100 FT Svr 12 or more KT / 100 FT

Horizontal shear refers to a vector change of more than 20 KT. All warnings are valid for 1 to 4 hours unless cancelled. Each type of warnings is numbered consecutively on a monthly basis.

The warnings are issued in English and are distributed in accordance with a distribution list which has been agreed upon locally. In order to guarantee a rapid dissemination of the warnings, the distribution list used contains only one recipient for an interested group; this recipient will be responsible for the further dissemination for the warnings within the group.

## 3.5.1.9 Other Automated Meteorological Services

NIL

## 3.5.1.10 Meteorological Briefing at Aerodromes

Details of meteorological briefing at aerodromes are given in the individual aerodrome subsections i.e. AD 2.

## GEN 3.6 SEARCH AND RESCUE

## 3.6.1 Responsible Service

The Search and Rescue Services in the BAHRAIN FIR / BAHRAIN UIR are organized in accordance with the International Standards and Recommended Practices of ICAO, and overall responsibility for coordinating the necessary facilities rests with the Undersecretary for Civil Aviation, Bahrain Civil Aviation Affairs, Kingdom of Bahrain:

Bahrain Rescue Coordination Center (RCC) P.O. Box 586 Kingdom of Bahrain TEL: +973 17329969 / +973 17329959 Telefax:+973 17329949 AFS: OBBISARX

Note 1: New AFTN address OBBINEMX is established for the purpose of Nuclear Emergency Message (NEM).

Note 2: There is a direct speech circuits between the RCC and all related ATC Units.

Note 3: Out of the normal working hours from 0400 to 1100 to call +973 17321081 and FAX +973 17321029

#### **Applicable ICAO Documents:**

Annex 12 Search and Rescue Annex 13 Aircraft Accident Investigation Doc 7030 Regional Supplementary Procedures

#### Differences:

NIL

#### 3.6.2 Area of Responsibility

The Search and Rescue Region encompasses the BAHRAIN FIR / BAHRAIN UIR.

#### 3.6.3 Types of Service

## 3.6.3.1 Coastguard Search and Rescue Unit

Facilities Available: Marine Craft

Ministry of Interior CGD P.O. Box 13 Kingdom of Bahrain TEL: +973 17700000 Telefax:+973 17700728 Telex: 7707 CGD BN

Craft Available	Activation Time	Availability
2 RB (20 M)	Immediate	H 24
4 RB (20 M)	Immediate	H 24
4 Open oat (31 FT)	Immediate	H 24

## 3.6.3.2 Police Flying Wing

Facilities Available: Light Helicopters

Ministry of Interior Police Flying Wing P.O. Box 13 Kingdom of Bahrain TEL: +973 17240000 / +973 17254736 Telefax:+973 17253439 BDF Helicopter Wing

Aircraft Available	Activation Time	Availability
2 HEL - L	30 Mins. BTN 0500 & 1215	SR - SS
	1 HR BTN 1215 & 0500	
	1 HR during weekend and public holidays	

## 3.6.3.3 Bahrain Defence Force Helicopter Wing/ Mobile Command and Control Centre - (Air and maritime surveillance)

POST:

BDF Helicopter Wing P.O. Box 245 Kingdom of Bahrain TEL: +973 17894474 Telefax:+973 17620926

Facilities Available:

Aircraft Available	Activation Time	Availability
(10) Helicopters for Search and Rescue (SAR) missions	H24/7	SR - SS
(3) Helicopters for Medical Evacuation (MEDVAC) missions with qualified medical crew	H24/7	SR - SS
(64) Boats for Search and Rescue (SAR) missions	H24/7	SR - SS
(14) Ships for Surveillance and Reconnais- sance missions	H24/7	SR - SS
(535) Qualified and trained Rescue Divers / Medical crews	H24/7	SR - SS
(20) Jet ski for Search and Rescue (SAR) missions (shallow water purposes)	H24/7	SR - SS
(10) Military Officers for Humanitarian support missions	H24/7	SR - SS

### 3.6.3.4 COSPAS / SARSAT

Area Control Centre ACC is located at the Civil Aviation Affairs / Air Navigation Directorate to detect and locate the position of distress signals pemitted on 121.500 MHZ and 406.000 MHZ and received by the COSPAS / SARSAT satellite system. Distress signals received at the ACC will be notified to the appropriate Rescue Coordination Centre (RCC) in order to initiate immediate search and rescue coordination.

### 3.6.4 SAR agreements

To be developed

## 3.6.5 Conditions of availability

Assistance will be provided to aircraft in distress and to survivors of aircraft accidents. In addition to the facilities outlined in **GEN 3.6.3** various elements of Police organizations, the Merchant Marine and the Armed Forces are available to the Search and Rescue Organization.

Requests for entry of aircraft, equipment and personnel from other States to engage in the search for aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to:

Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321081 / +973 17320487 Telefax:+973 17329949 AFS: OBBISARX

## **Unwarrant Operations**

Civil Aviation Affairs, as the authority responsible for the coordination of rescue services for the Bahrain SRR, reserves the right to take steps to recover expenditure, incurrent either by aerodrome services or other participants involved in search and rescue operations, whenever circumstances show that the operation was unwarranted.

## 3.6.6 Procedures and signals used

Owing to the nature terrain, aircraft are advised to maintain a good look - out at all times whilst operating within the BAHRAIN FIR / BAHRAIN UIR and are requested to inform the Bahrain FIC immediately they see anything which might be relate to an aircraft in distress.

Procedures for pilots - in - command observing an accident or intercepting a distress call are in accordance with Annex 12.

#### Communications

Transmission and reception of distress messages within the Bahrain Search and Rescue Region are handled in accordance with ICAO Annex 10, Volume II, Chapter 5, paragraph 5.3.

For communications during search and rescue operations, the codes and abbreviations published in ICAO Abbreviations and Codes (Doc 8400) are used.

The frequency 121.500 MHZ is guarded continuously during the hours of service at an area control centers and flight information centers. It is also monitored at BAHRAIN INTERNATIONAL Approach Control Office.

#### Search and rescue signals

The search and rescue signals to be used are those prescribed in Annex 12, Chapter 5, paragraph 5.10.

Ground / air visual signal codes for use by survivors

NO.	Message	Code symbol	
1	Require assistance	V	
2	Require medical assistance	x	
3	No or negative	Ν	
4	Yes or affirmative	Y	
5	Proceeding in this direction	->	

Instructions for use:

1. Make signals not less than 8 FT (2.5 M).

2. Take care to lay out signals exactly as shown.

3. Provide as much color contrast as possible between signals and background.

4. Make every effort to attract attention by other means such as radio, flares, smoke, reflected light.

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## GEN 4.

## CHARGES FOR AERODROMES / HELIPORTS AND AIR NAVIGATION SERVICES

## **GEN 4.1 AERODROME / HELIPORT CHARGES**

## KINGDOM OF BAHRAIN

## 4.1.1 GENERAL

4.1.1.1 Unless an alternative arrangement has been made, all charges for the use of BAHRAIN INTERNATIONAL airport are payable by the pilot of the aircraft on demand, or before the aircraft departs from the aerodrome.

## 4.1.1.2 NON - SCHEDULED OVER FLIGHT

Operators of non - scheduled flights within the BAHRAIN FIR / BAHRAIN UIR which do not land at BAHRAIN INTERNATIONAL airport must ensure that the full name and address of the Aircraft Operator, or of the Agent authorized to pay charges on behalf of the Aircraft Operator, is include in Field 18 of the Flight Plan. In addition to the following:

1- Operator name.

- 2- Operator postal address.
- 3- Postal address of the company for collecting our bills and settling our payments.
- 4- Call sign and registration separately if they were different.
- 5- Aircraft type and the maximum takeoff weight.
- 6- The postal address of the agent and its client if any.
- 7- Telephone and fax numbers.
- 8- E-mail address.

## 4.1.1.3 LANDING CHARGES

## 4.1.1.3.1 BASIS

The maximum take - off mass of the aircraft, authorized by the State of Registration in its certificate of airworthiness.

ICAO VORTEX CLASSIFICATION	мтом	CHARGE
Light	Up to 7000 KG	BD 7.000 flat rate
Medium	7001 up to 136000 KG	BD 1.400 per 1000 KG or part of thereof
Неаvy	Over 136000 KG	BD 1.500 per 1000 KG or part thereof

## 4.1.1.3.2 **RULES**

4.1.1.3.2.1 The payment of the Landing Charge shall entitle the aircraft to:

a) The use of the aerodrome for alighting and departure.

b) The use of the radio and night lighting installations at the aerodrome.

c) The supply of all available information as to routes, and weather information.

d) The services of the aerodrome personnel, if available, for manual assistance in guiding, housing, or parking the aircraft.

4.1.1.3.2.2 The landing charge, the payment of which entitles the aircraft to the use of the radio, does not include operational charges or charges for radio services in connection with movement, which may be levied by an approved agency of the Government.

## 4.1.1.3.3 PAYMENT OF CHARGES

4.1.1.3.3.1 Charges must be paid to the Duty Aerodrome Reporting Office Official prior to the departure of the aircraft, unless previous arrangements have been made for credit facilities.

4.1.1.3.3.2 A money - changing facility exists in the passenger concourse of the Terminal Building.

## 4.1.1.3.3.3 BAHRAIN AIPORT CHARGES

In response to the privatization plan which the kingdom of Bahrain is adopting nowadays to some governmental agencies, Bahrain International Airport is considered to be one of those agencies who must go with the privatization plan.

In this context, Bahrain Airport Company has contracted the Bahrain International Airport and the associated facilities. The following elements shall be considered applicable immediately:

1. LANDING & PARKING CHARGES: Invoices raised for such matters are solely and accordingly devolved to Bahrain Airport Company since July 2010. Therefore, correspondence serving similar nature shall be made to the following contact details:

e-mail: Fatima.Ajawi@bac.bh TEL: (+973) 17 353381 Telefax: (+973) 17 920441

2. CHARGES OTHER THAN THE ABOVE: In response to the development and improvement in Civil Aviation Affairs payment process, all payments due to be made other than landing and parking fees must be sent to Civil Aviation Affairs containing the following:

- 1- Operator name.
- 2- Include all invoices numbers for the payment.
- 3- Operator code.
- 4- Any contact details.

While it is not our intention to disrupt your services, please be advised that if payment didn't contain any of the above listed information, we will be left with no option but to give priority to the old outstanding invoices, where all the correspondence shall be made to the following contact details:

e-mail: debt.collection@mtt.gov.bh TEL: (+973) 17 337724 / 17 327739 / 17 327707 Telefax: (+973) 17 534722

## 4.1.1.3.4 **REDUCTIONS**

4.1.1.3.4.1 General

Reductions in the standard charges may be granted by Civil Aviation Affairs by the issuance of specific directives. Details upon application.

4.1.1.3.4.2 The following reductions in landing fees may be granted, by prior arrangement with the airport authority, in respect of flights undertaken soley for the purpose of the training or testing of flying personnel, or in respect of flights performed by an aircraft constructor and undertaken soley for the purpose of experimenting with or testing the constructor's aircraft.

## 4.1.1.3.4.3 AIRCRAFT WEIGHING / RATES PER LANDING

AIRCRAFT WEIGHING	RATES PER LANDING	
Up to 45000 KG	50 % of the standard charge	
Exceeding 45000 KG, but not exceeding 90000 KG	BD 30	
Exceeding 90000 KG	25 % of the standard charge up to a maximum of BD 100	

4.1.1.3.4.4 A reduction in the standard fee may be granted, by prior arrangement with Civil Aviation Affairs, in respect of a series of flights through Bahrain, when landing are made for non - traffic purposes, e.g. fuelling, crew - rest, change of crew.

## 4.1.1.3.5 **EXEMPTIONS**

### 4.1.1.3.5.1 GENERAL

Exemptions from payment of landing charges for aircraft other than those listed below may be granted by Civil Aviation Affairs by the issuance of special directives. Details upon application.

4.1.1.3.5.2 The following aircrafts shall be exempted by law from landing and parking fees:

- a) State aircraft and aircraft of Kings. Heads of State and Emirs and persons of similar status;.
- b) Aircraft of the United Nations and its specialised agencies;
- c) Aircraft of the League of Arab States and its specialised agencies, and aircraft of regional organisations of which the Sate is a member...
- d) Aircraft used free of charge in ambulance operations, search and rescue operations, as well as aircraft of the Red Crescent and Red Cross; and
- e) Any other aircraft or any government or diplomatic agency that the Minister may exempt from fees either totally or partially, if this is in the public interest, following consultation with the Minister of Finance and approval of the Prime Minister.

### 4.1.1.4 PASSENGER SERVICE CHARGES

4.1.1.4.1 Unless specifically exempted by the appropriate Authority, the following Passenger service charges are levied on all

Passengers as follows:-

4.1.1.4.1.1 An Airport charge of BD 7,000 (SEVEN) is levied on all Passengers leaving the Kingdom of Bahrain by Air.

4.1.1.4.1.2 An Airport charge of BD 1,000 (ONE) is levied on all transfer Passengers through the Kingdom of Bahrain.

4.1.1.4.1.3 Common user Platform service of (30 CENT) of a (USD) per Passengers check-in shall be so charged.

4.1.1.4.1.4 All the above charges are Incorporated in the Passengers ticket upon issuance.

## 4.1.1.4.2 Exemptions

4.1.1.4.2.1 General

Exemptions from payment of landing charges for aircraft other than those listed below may be granted by Civil Aviation Affairs by the issuance of special deirecves. Detail upon application.

The following aircrafts should be exempted by law from landing and parking fees:

4.1.1.4.2.2 The following categories shall be exempt from departure service charge:

- a) Bahraini and foreign official and deplomatic delegations.
- b) Chiefs and members of the diplomatic missions approved by the State.
- c) Members of the aircraft crew, provided they are dressed formally;
- d) Transit passengers.
- e) Children who are less than two years of age.
- 4.1.1.4.2.3 The Minster may exempt any other categories, after obtaining the opinon of the Minster of Finance and approval of the Prime Minster.

#### 4.1.1.5 **PARKING**

4.1.1.5.1 Maximum take - off weight of the aircraft authorized by the State of Registration in its certificate of airworthiness.

## 4.1.1.5.2 PARKING RATES

Aircraft up to 25000 KG MTOW	Flat rate BD 5.000	
Aircraft of 25001 KG MTOW & over	BD 0.200 per 1000 KG or part thereof	

#### See GEN 4.1.1.5.3.1 for applicability

#### 4.1.1.5.3 RULES

4.1.1.5.3.1 No parking fee will be charged for the first two hours after landing. After the first two hours and for each period of 24 hours or part thereof the above parking rates will be charged.

4.1.1.5.3.2 An authorized official from Civil Aviation Affairs may at any time order an aircraft operator either to move a parked aircraft to another position, or to remove it from the airport. Failure to comply with the order within the period specified in it will render the operator liable to a special charge, equivalent to five times the standard parking charge set out above, for every day or part of a day during which the aircraft remains in position after the expiry of the period specified in the order.

## 4.1.1.5.4 PAYMENT OF CHARGES

See payment of landing charges.

4.1.1.5.5 **REDUCTIONS** 

4.1.1.5.5.1 Monthly rates, payable in advance, are 22 times the daily rates.

4.1.1.5.5.2 Reductions in the standard charges may be granted by Civil Aviation Affairs by the issuance of special directives. Details upon application.

## 4.1.1.5.6 **EXEMPTIONS**

The same as for exemption for landing charges.

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## GEN 4.2 AIR NAVIGATION SERVICES CHARGES

## 4.2.1 EN - ROUTE CHARGES

## 4.2.1.1 **GENERAL**

4.2.1.1.1 An en - route charge will be payable by the owner or operator of the aircraft concerned in respect of each flight carried out, whether in whole or in part within the BAHRAIN FIR / BAHRAIN UIR, which entails the use of facilities provided by the Bahrain Air Traffic Control Centre in accordance with authorised procedures.

4.2.1.1.2 A flight is defined as the complete process of take - off, journey en - route and subsequent landing.

4.2.1.1.3 The assessment for the en - route charge is based on a sliding scale relating to the maximum permitted take - off weight of the aircraft.

## 4.2.1.2 SCALE OF CHARGES

#### 4.2.1.2.1 STANDARD CHARGES

The standard charge will be assessed in accordance with the following schedule:

Charges impose on each landing and take-off to / from Bahrain International Airport			
Weight	Charges		
Up to 40,000 Kg	BD 12.600		
40,001 Kg - 80,000 Kg	BD 18.900		
80,001 Kg - 120,000 Kg	BD 25.200		
120,001 Kg - 200,000 Kg	BD 31.500		
200,001 Kg - 300,000 Kg	BD 37.800		
300,001 Kg or more	BD 42.000		

## 4.2.1.3 EN-ROUTE CHARGES

Air Navigation charges for aircraft that does not landing in Bahrain International Airport			
Weight	Charges		
Up to 40,000 Kg	BD 24.000		
40,001 Kg - 80,000 Kg	BD 35.000		
80,001 Kg - 120,000 Kg	BD 47.000		
120,001 Kg - 200,000 Kg	BD 59.000		
200,001 Kg - 300,000 Kg	BD 71.000		
300,001 Kg or more	BD 79.000		

## 4.2.1.4 REBATES

Rebates in the standard charges may be granted by Civil Aviation Affairs upon issuance of specific directives. Details upon application.

A special rate of 50% of the standard en - route charge may be applied in the case of a flight carried out for the sole purpose of the training ot testing of fliying personnel that entails the aircraft being flown outside the aerodrome Control Zone. Prior written application for the grant of such special rates should be made to the Under Secrectary of Civil Aviation, Bahrain.

### 4.2.1.5 EXEMPTIONS

### 4.2.1.5.1 GENERAL

Exemptions from the payment of en - route charges other than those listed below may be granted by Civil Aviation Affairs by the issuance of special directives. Details upon application.

4.2.1.5.2 The following classes of aircraft are exempt by law from Air Navigation Services charges:

- a) State aircraft and aircraft of Kings, Heads of State and Emirs and persons of similar status;
- b) Aircraft of the United Nations and its specialised agencies;
- c) Aircraft of the Leauge of Arab States and its specialised agencies, and aircraft of region lorganisations of which the State is a member;
- d) Aircraft used free of charge in ambulance operations, search and rescue operations, as well as aircraft of the Red Crescent and Red Cross; and
- e) Any other aircraft or any government of diplomatic agency that the Minister may exempt from fees either totally or partially, if this is in the public interest, following consultation with the Minister of Finance and approval of the Prime Minister.

## PART 2 - EN-ROUTE (ENR)

ENR 0.

ENR 0.1 PREFACE

Not applicable.

ENR 0.2 RECORD OF AIP AMENDMENTS

Not applicable.

ENR 0.3 RECORD OF AIP SUPPLEMENTS

Not applicable.

ENR 0.4 CHECKLIST OF AIP PAGES

Not applicable.

## ENR 0.5 LIST OF HAND AMENDMENTS TO THE AIP

Not applicable.

ENR 0.

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## ENR 1. GENERAL RULES AND PROCEDURES

## ENR 1.1 GENERAL RULES

The air traffic rules and procedures applicable to air traffic in the BAHRAIN FIR / BAHRAIN UIR conform with Annexes 2 and 11 to the Convention on International Civil Aviation and to those portions, applicable to aircraft, for the Procedures for Air Navigation Services - Rules of the Air and Air Traffic Services, and the Regional Supplementary Procedures applicable to the MID / ASIA Region, except for the differences listed in **GEN 1.7**.

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#### ENR 1.2 VISUAL FLIGHT RULES

1.2.1. Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table 1.

1.2.2. Except when a clearance is obtained from an air traffic control unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic pattern:

- a) When the ceiling is less than 1500 FT (450 M); or
- b) When the ground visibility is less than 5 KM.

1.2.3. VFR flights between sunset and sunrise, or such other period between sunset and sunrise as may be prescribed by the appropriate ATS authority, shall operated in accordance with the conditions prescribed by such authority.

1.2.4. Unless authorized by the appropriate ATS authority, VFR flights shall not be operated:

a) at or above FL 150,

b) at transonic and supersonic speeds.

Airspace class	A *** BCD E	F G	
		ABOVE 3000 FT (900 M) AMSL or above 1000 FT (300 M) above terrain, whichever is the higher	At and below 3000 FT (900 M) AMSL or 1000 FT (300 M) above terrain, whichever is the higher
Distance from cloud	1500 M horizontally 1000 FT (300 M) vertically		Clear of cloud and in sight of the surface
Flight visibility	8 KM at and above 10000 FT (3050 M) AMSL 5 KM below 10000FT (3050 M) AMSL		5 KM **

### Table \*

\* When the height of the transition altitude is lower than 10000 FT (3050 M) AMSL, FL 100 should be used in lieu of 10000 FT.

\*\* When so prescribed by the appropriate ATS authority:

a) lower flight visibilities to 1500 M may be permitted for flights operating:

- 1. at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in the time to avoid collision; or
- 2. in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.
- b) HELICOPTERS may be permitted to operate in less that 1500 M flight visibility, if maneuvered at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

\*\*\* The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights Class A airspace.

1.2.5. Except when necessary for take - off or landing, or except by permission from the appropriate authority, a VFR flight shall not be flown:

a) over the congested area of cities, towns or settlements or over an open - air assembly of persons at a height less than 1000 FT (300 M) above the highest obstacle within a radius of 600 M from the aircraft;

b) elsewhere than as specified in 5 (a), at a height less than 500 FT (150 M) above the ground or water.

1.2.6. Except where otherwise indicated in air traffic control clearances or specified by the appropriate ATS authority, VFR flights in level cruising flight when operated above 3000 FT (900 M) from the ground or water, or a higher datum as specified by the appropriate ATS authority, shall be conducted at a flight level appropriates to the track as specified in the table of cruising levels.

1.2.7. VFR flights shall comply with the provisions of Chapter 3 para 3.6 of Annex 2:

- a) when operated within Class B, C and D airspace;
- b) when forming part of aerodrome traffic at controlled aerodromes; or
- c) when operated as special VFR flights.

1.2.8. An aircraft operated in accordance with the visual flight rules which wishes to change to Compliance with the instrument flight rules shall:

a) If a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan, or

b) When so required by Chapter 3 para 3.3 of Annex 2, submit a flight plan to the appropriate air traffic services unit and obtain a clearance prior to proceeding IFR when in controlled airspace.

## ENR 1.3 INSTRUMENT FLIGHT RULES

## 1.3.1 RULES APPLICABLE TO ALL IFR FLIGHTS

## 1.3.1.1 Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

### 1.3.1.2 Minimum levels

Except when necessary for take - off or landing except when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown or, where no such minimum flight altitude has been established:

- a) over high terrain or in mountainous areas, at a level which is at least 2000 FT (600 M) above the highest obstacle located within 8 KM of the estimated position of the aircraft;
- b) elsewhere than as specified in a), at a level which is at least 1000 FT (300 M) above the highest obstacles located within 8 KM of the estimated position of the aircraft.

**Note:** The estimated position of the aircraft will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

### 1.3.1.3 Change from IFR flight to VFR flight

1.3.1.3.1 An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

1.3.1.3.2 When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

### 1.3.1.4 **Orbits on final**

1.3.1.4.1 Orbits on final shall not be approved for IFR aircraft at Bahrain intl airport (OBBI)

## 1.3.2 RULES APPLICABLE TO IFR FLIGHTS WITHIN CONTROLLED AIRSPACE

1.3.2.1 IFR flights shall comply with the provisions of 3.6 of Annex 2 to the Convention on International Civil Aviation when operated in controlled airspace.

1.3.2.2 An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level or, if authorized to employ cruise climb techniques, between two levels or above a level, selected from:

- a) the tables of cruising levels in Appendix 3 of Annex 2 or,
- b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of Annex 2 for flights above FL 410.

Except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearance or specified by the appropriate ATS authority in the Aeronautical Information Publication.

For cruising levels within the BAHRAIN FIR / BAHRAIN UIR see ENR 1.3.3.1.

## 1.3.2.3 Five minutes longitudinal separation

In accordance with ICAO DOC 4444 PARA 5.4.2.2.1.1 C. Within the AMMAN FIR, BAHRAIN FIR / BAHRAIN UIR, DAMASCUS FIR, JEDDAH FIR and NICOSIA FIR / NICOSIA UIR, a minimum of five minutes longitudinal separation will be applied when the leading aircraft is maintaining a TAS of 20 KTs or more faster than the following aircraft.

The application of this separation minimum may require ATC to impose speed restrictions on aircraft. When subject to speed restrictions, pilots must notify ATC immediately if at any time they are unable to comply with the restrictions.

Pilots should note that speed restrictions applied in one FIR will continue to apply in succeeding FIRs unless specifically cancelled by ATC.

## 1.3.3 RULES APPLICABLE TO IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

### 1.3.3.1 Cruising levels

An IFR flight operating in level cruising flight outside if controlled airspace shall be flown at a cruising level appropriate to its track as specified in:

a) the tables of cruising levels in Appendix 3 of Annex 2, except when otherwise specified by the appropriate ATS authority for flight at or below 3000 FT (900 M) above mean sea level; or

b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of Annex 2 for flight above FL 410. (Not used at the present in the BAHRAIN UIR)

**Note:** This provision does not preclude the use of cruise climb techniques by aircraft in supersonic flight.

#### 1.3.3.2 Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) of Annex 2 shall maintain a listening watch on the appropriate radio frequency and established two - way communication, as necessary, with the air traffic services unit providing flight information services.

## 1.3.3.3 Position reports

An IFR flight operating outside controlled airspace and required by the appropriate ATS authority to:

- submit a flight plan,
- maintain a listening watch on the appropriate radio frequency and establish two way communication, as necessary, with the air traffic services unit providing flight information service, shall report position as specified in 3.6.3 of Annex 2 for controlled flights.

**Note:** Aircraft electing to use the air traffic advisory service whilst operating IFR within specified advisory airspace are expected to comply with the provisions of 3.6 of Annex 2, except that the flight plan and changes thereto are not subjected to clearance and that two - way communication will be maintained with the unit providing the air traffic advisory service. There is no Advisory Airspace currently designated within the BAHRAIN FIR / BAHRAIN UIR.

## 1.3.4 OPERATIONS ON ATS ROUTES IN THE BAHRAIN FIR / BAHRAIN UIR WHERE AN RNAV TYPE IS SPECIFIED

## 1.3.4.1 APPLICATION OF RNAV 1 AND RNAV 5 TO ATS ROUTES IN THE BAHRAIN UIR

1.3.4.1.1 Requirements for RNAV capability and aircraft navigation accuracy meeting RNAV 1 and RNAV 5 will be progressively introduced in BAHRAIN UIR.

1.3.4.1.2 RNAV 1 and RNAV 5 requirements may be specified on a route by route basis or by designation of airspace.

1.3.4.1.3 Within BAHRAIN UIR only RNAV equipped aircraft having a navigation accuracy meeting RNAV 1 and RNAV 5 may plan for operations under IFR on those ATS routes, and within those levels bands, which have been specified as requiring RNAV 1 and RNAV 5 in **ENR 1.3.4.2**.

1.3.4.1.4 Aircraft operating under IFR on designated RNAV 1 and RNAV 5 routes shall be equipped with, as a minimum, RNAV equipment meeting the following requirements:

- a) A system use accuracy equal to, or better than, (2.5 NM) for one standard deviation, with a 95 % containment value of plus or minus 5 NM, thereby meeting the accuracy requirements for RNAV 5; and
- b) A system use accuracy equal to, or better than, (0.5 NM) for one standard deviation, with a 95 % containment value of plus or minus 1 NM, thereby meeting the accuracy requirements for RNAV 1; and
- c) An average continuity of service of 99.99 % of flight time.

## 1.3.4.2 AREA OF APPLICABILITY

Area Navigation "RNAV" will be implemented within BAHRAIN FIR / BAHRAIN UIR within designated airspace on area basis as follows:

- All Lower Routes of Bahrain within TMAs are RNAV 1 with requirements.
- RNAV 5 will be implemented from TMA levels to FL 145. At Upper Routes RNAV 1 will be implemented from FL 150 to FL 460 within TMAs.

## 1.3.4.3 MEANS OF COMPLIANCE

Conformance to the navigation requirement shall be verified by the State of Registry or the State of Operator as appropriate.

**Note:** Guidance material concerning navigation accuracy requirements is contained in the Manual on Required Navigation performance (RNP) Doc 9613, Chapter 5.

## 1.3.4.4 FLIGHTS PLANNING

Operators of aircraft fitted with RNAV having a navigation accuracy meeting RNAV 5 shall insert the designator "R" in item 10 of the flight plan.

### 1.3.4.5 PROCEDURES FOR OPERATION IN RNAV 5 ROUTES

1.3.4.5.1 Correct operation of the aircraft RNAV system shall be verified before joining and during operation on an RNAV 5 route. This shall include confirmation that:

a) The routing is in accordance with the clearance; and

b) The aircraft navigation accuracy meets RNAV 5.

1.3.4.5.2 If, as a result of failure of the RNAV system or its degradation to below RNAV 5, an aircraft is unable to enter an ATS route

designated as RNAV 5 or to continue operations in accordance with current air traffic control clearance, a revised clearance shall, wherever possible, be obtained by the pilot.

1.3.4.5.3 Subsequent air traffic control action in respect of that aircraft will be dependent upon the nature of the reported failure and the overall traffic situation. Continued operation in accordance with the current ATC clearance may be possible in many situations. When this cannot be achieved, a revised clearance may be required to revert to VOR / DME.

### 1.3.4.6 ATC PROCEDURES FOR AIRCRAFT EXPERIENCING FAILURE OR DEGRADATION OF THE RNAV SYSTEM

1.3.4.6.1 If, as a result of failure or degradation of the RNAV system, detected either before or after departure, the aircraft cannot meet the requirements of **ENR 1.3.4.1.4**, the following ATC procedures are applicable.

1.3.4.6.1.1 Coordination messages (PANS ATM / 501 Chapter 11, 11.4.2.3)

- a) Computer assisted coordination of estimate messages. In the case of automated messages not containing the information provided in item 18 of the flight plan, the sending air traffic control unit shall inform the receiving air traffic control unit by supplementing the ATC message verbally with the phrase "RNAV OUT OF SERVICE" after the call sign of the aircraft concerned.
- b) Verbal coordination of estimate messages. When a verbal coordination process is being used, the sending air traffic control unit shall include the phrase "RNAV OUT OF SERVICE" at the end of the message.

#### 1.3.4.6.1.2 Pilot phraseology (PANS ATM / 501 Chapter 12)

The phrase "UNABLE RNAV DUE EQUIPMENT" shall be included by the pilot immediately following the aircraft call sign whenever initial contact on an air traffic control frequency is established.

1.3.4.6.1.2.1 All military formation flights are considered NON-RVSM within Bahrain UIR, Regardless of the RVSM status of individual Aircraft in the formation. These Aircraft's shall not be permitted in RVSM Airspace except in exceptional circumstances. These exceptions may be accommodated, subject to prior approval, on a workload or traffic-permitting basis.

# 1.3.4.7 ATC PROCEDURES FOR STATE AIRCRAFT NOT EQUIPPED WITH RNAV EQUIPMENT MEETING RNAV 5 REQUIREMENTS

1.3.4.7.1 Instructions for the completion of the flight plan (PANS ATM / 501 Appendix 2, A 2 - 3)

1.3.4.7.1.1 Operators of state aircraft not equipped with RNAV equipment meeting RNAV 5 shall not insert "S" or "R" in item 10 of the flight plan.

- 1.3.4.7.1.2 Since such flight require special handling by air traffic control, "STS / NORNAV" shall be inserted in item 18 of the flight plan.
- 1.3.4.7.2 Air traffic control clearances (PANS ATM / 501 Chapter 4, 4.5.7)
- 1.3.4.7.2.1 Within TMAs, state aircraft not equipped with RNAV approved for RNAV 5 should be routed via non RNAV SIDs and STARs.
- 1.3.4.7.2.2 Such aircraft operating en route should be routed via VOR / DME defined ATS routes.

1.3.4.7.2.3 When the above procedures cannot be applied, the air traffic control unit shall provide the aircraft with radar vectors until the aircraft is capable of resuming its own navigation.

- 1.3.4.7.3 Coordination messages (PANS ATM / 501 Chapter 11,11.4.2.3)
- a) Computer assisted coordination of estimate messages. In case of automated messages not containing the information provided in item 18 of the flight plan, the sending air traffic control unit shall inform the receiving air traffic control unit by supplementing the ATC message verbally with the phrase "NEGATIVE RNAV" after the call sign of the aircraft concerned.
- b) Verbal coordination of estimate messages. When a verbal coordination process is being used, the sending air traffic control unit shall include the phrase "NEGATIVE RNAV" at the end of the message.

## 1.3.4.7.4 Pilot phraseology (PANS ATM / 501 Chapter 12)

The phrase "NEGATIVE RNAV" shall be included by the pilot immediately following the aircraft call sign whenever initial contact on an air traffic control frequencies established.

## 1.3.4.8 EQUIPMENT, REQUIREMENT AND CERTIFICATION

RNAV 5 defines RNAV operations which satisfy a required track keeping accuracy of plus or minus 5 NM for at least 95 % of the flight time in accordance with the requirements set out in ICAO Document 7030 - Regional Supplementary Procedures for the Middle East region, as amended, and ICAO Document 9613 - Manual on RNP.

RNAV equipped aircraft operating on designated RNAV 5 routes in designated RNAV 5 routes airspace must be certified for RNAV 5 operations by the State of Operator or the State of Registry of the aircraft. Conformance to the navigation requirement shall be verified by the State of Registry or the State of Operator, as appropriate.

Foreign air carriers operating within BAHRAIN UIR shall ensure their operations specifications are updated to reflect RNAV 5 approvals.

The address for information regarding RNAV 5 certification is:

Aviation Safety Section Air Transport Directorate Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain TEL: +973 17321006 Telefax:+973 17321061 SITA: BAHAPYF

## 1.3.4.9 Formation Flights

### 1.3.4.9.1 General Rule for Formation Flights

In general, a formation flight shall operate as a single aircraft in regard to navigation and position reporting and clearances issued by ATC.

Sufficient safety distance between the aircraft comprising a formation flight shall be the responsibility of the formation leader and the individual pilots-in-command at all phases of the flight, which includes take-off and landing, join-up, break-up and all parts of the Enroute flight.

Upon each initial report on a new radio frequency, the formation leader shall indicate to ATC that the flight is a formation, including standard or non- standard formation type and the number of aircraft the formation flight consists of. (E.g. Callsign/ Standard Formation Flight of 4).

## 1.3.4.9.2 Standard Military Formation

In a standard military formation, each aircraft/element of this formation shall remain within 1 NM horizontally and 100 ft. vertically from the formation leader.

Only the lead aircraft (formation leader) shall squawk as directed by ATC.

## 1.3.4.9.3 Non-standard Formation

Aircraft/elements of a formation flight that are outside the horizontal and/or vertical limits as described in 1.3.4.9.2 are considered a non-standard formation.

Only the lead aircraft (formation leader) shall squawk unless otherwise directed by ATC.

Non-standard Formation flights represent an unusual aerial activity. It is an ATC decision to approve or disapprove a non-standard formation and to determine special conditions for the conduct of a non-standard formation flight.
#### ENR 1.4 ATS AIRSPACE CLASSIFICATION AND DESCRIPTION

#### 1.4.1 ATS airspaces classification

ATS airspaces are classified and designated in accordance with the following:

Class A. IFR flights only are permitted, all flights are subject to air traffic control services and are separated from each other.

Class B. IFR and VFR flights are permitted, all flights are subject to air traffic control service and are separated from each other.

*Class C.* IFR and VFR flights are permitted, all flights are subject to air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

*Class D.* IFR and VFR flights are permitted and all flights are subject to air traffic control service, IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights, VFR flights receive traffic information in respect of all other flights.

*Class E.* IFR and VFR flights are permitted, IFR flights are subject to air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as is practical.

Class F. IFR and VFR flights are permitted, all participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested.

Class G. IFR and VFR flights are permitted and receive flight information service if requested.

The requirements for the flights within each class of airspace are as shown in the following tables.

#### 1.4.2 ATS airspace description

1.4.2.1 Within the BAHRAIN FIR / BAHRAIN UIR the Airspace is further divided into five classifications. A, B, C, D and G. Two ICAO Classifications, E and F which have been adopted by the Kingdom of Bahrain are available for use but at present no portions of BAHRAIN FIR / BAHRAIN UIR Airspace have been classified.

Airspace classified as A, B, C and D are Controlled Airspace.

The Airspace Classifications are described in subsequent paragraphs, and notifications, descriptions and procedures of individual Airspaces within each classification are contained in ENR 2, ENR 3 and AD 2.

#### 1.4.2.2 Airspace Classification

#### 1.4.2.2.1 Class A - Controlled Airspace

The provisions of Class A Airspace are shown below:

	IFR	VFR
Separation Provided	All Aircraft	
Service Provided	Air Traffic Control Service	VFR FLIGHT
VMC Minima	Not applicable	NOT
Speed Limitation	Not applicable	PERMITTED
Radio Communication	Continuous two - way	
ATC Clearance	Required	

BAHRAIN FIR / BAHRAIN UIR class A airspace, over international waters, is subject to high concentration of military activity acting in due regard in accordance with article 3 of the convention of International Civil Aviation.

#### Class A Airspace comprises

All controlled Areas (Airways) FL 150 and above. BAHRAIN CTA FL 150 and above.

## 1.4.2.2.2 Class B - Controlled Airspace

The provisions of Class B Airspace are shown below:

	IFR	VFR	
Separation Provided	All Aircraft	All Aircraft	
Service Provided	Air Traffic Control Service   Air Traffic Control Service		
VMC Minima	Not applicable At and above 10000 FT AMS   8 KM visibility Clear of Cloud   Below 10000 FT AMSL: 5 KM visibility   Clear of Cloud Clear of Cloud		
Speed Limitation	Not applicable	Not applicable	
Radio Communication	ation Continuous two - way Continuous two - way		
ATC Clearance	Required	Required	

## **Class B Airspace comprises**

ISA AIRBASE CTR

## 1.4.2.2.3 Class C - Controlled Airspace

## The Provisions of Class C Airspace are shown below:

	IFR	VFR
Separation Provided	IFR from IFR IFR from VFR	
Service Provided	Air Traffic Control Service	Air Traffic Control Service for separation from IFR VFR / VFR Traffic Information (and traffic avoidance advice on request)
VMC Minima	Not applicable	At and above 10000 FT AMSL: 8 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud Below 10000 FT AMSL: 5 KM visibility 1500 m horizontal and 1000 FT vertical distance from Cloud
Speed Limitation	Not applicable	250 KT IAS below 10000 FT AMSL
Radio Communication	Continuous two - way	Continuous two - way
ATC Clearance	Required	Required

## Class C airspace comprises:

All Controlled Areas (Airways) at and above 4500 FT and below FL 150 BAHRAIN CTA below FL 150

## 1.4.2.2.4 Class D - Controlled Airspace

## The provisions of Class D Airspace are shown below:

	IFR	VFR		
Separation Provided	IFR from IFR	Not provided		
Service Provided	Air Traffic Control Service including Traffic information about VFR flights (and traffic avoidance advice on request)	Traffic information between VFR and IFR Flights (and traffic avoidance advice on request)		
VMC Minima	Not applicable	At and above 10000 FT AMSL: 8 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud Below 10000 FT AMSL: 5 KM visibility 1500 horizontal and 1000 FT vertical distance from Cloud		
Speed Limitation	Not applicable	250 KT IAS below 10000 FT AMSL		
Radio Communication	Continuous two - way	Continuous two-way		
ATC Clearance	Required	Required		

## Class D Airspace comprises:

BAHRAIN CTR and TMA at and above 1000 FT and below 4500 FT

#### 1.4.2.2.5 Class E - Controlled Airspace

#### The provisions of Class E Airspace are shown below

	IFR	VFR		
Separation Provided	IFR from IFR	Not provided		
Service Provided	Air Traffic Control Service including Traffic information about VFR flights as far as practicable	Traffic information as far as practicable		
VMC Minima	Not applicable	At and above 10000 FT AMSL: 8 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud Below 10000 FT AMSL: 5 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud		
Speed Limitation	250 KT IAS below 10000 FT AMSL	250 KT IAS below 10000 FT AMSL		
Radio Communication	Continuous two - way	Not required		
ATC Clearance	Required	Not required		

No BAHRAIN FIR / BAHRAIN UIR Airspace is currently designated Class E.

## 1.4.2.2.6 Class F

## The provisions of Class F Airspace are shown below:

	IFR	VFR
Separation Provided	IFR from IFR as far as practical	Not provided
Service Provided	Air Traffic Advisory Service Flight Information Service	Flight Information Service
VMC Minima	Not applicable	At and above 10000 FT AMSL: 8 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud Below 10000 FT AMSL: 5 KM visibility 1500 m horizontal and 1000 FT vertical distance from Cloud At and below 3000 FT AMSL or 1000 FT above terrain whichever is higher: 5 KM visibility and in sight of ground or water
Speed Limitation	250 KT IAS below 10000 FT AMSL	250 KT IAS below 10000 FT AMSL
Radio Communication	Continuous two - way	Not required
ATC Clearance	Required	Not required

## 1.4.2.2.7 Class G

## The Provisions of Class G Airspace are shown below:

	IFR	VFR
Separation Provided	Not provided	Not provided
Service Provided	Flight Information service	Flight Information Service
VMC Minima	Not applicable	At and above 10000 FT AMSL: 8 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud Below 10000 FT AMSL: 5 KM visibility 1500 M horizontal and 1000 FT vertical distance from Cloud At and below 3000 FT AMSL or 1000 FT above terrain whichever is higher and speed greater than 140 KT 5 KM visibility Clear of cloud and in sight of ground or water or; At and below 3000 FT AMSL or 1000 FT above terrain whichever is higher and speed less than 140 KT 1500 M visibility clear of cloud and in sight of ground or water
Speed Limitation	250 KT below 10000 FT AMSL	250 KT IAS below 10000 FT AMSL
Radio Communication	Continuous two - way	Not required
ATC Clearance	Not required	Not required

## Class G Airspace comprises:

All BAHRAIN FIR / BAHRAIN UIR Airspace not covered by classes A, B, C and D.

#### ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

#### 1.5.1 GENERAL

1.5.1.1 The holding, approach and departure procedures in use are based on those contained in the latest edition of ICAO DOC 8168 - OPS - procedures for Air Navigation Services - Aircraft Operation (PANS - OPS).

1.5.1.2 The holding and approach procedures in use have been based on the values and factors contained in Part II of the PANS - OPS. The holding patterns shall be entered and flown as indicated below:

Flight level (FL)	CAT A and B aircraft	Jet A	ircraft
	Normal conditions		Turbulence conditions
Up to 13000 FT (4250 M) inclusive	170 KT		
Above 13000 FT (4250 M) to FL 200 (6100 M) inclusive	240 KT (445 KM / H)		280 KT (520 KM / H) or (Mach 0.8) which ever is less
Above FL 200 (6100 M) to FL 340 (10350 M) inclusive	265 KT (490 KM / H)		
Above FL 340 (10350 M)	0.83 Mach		0.84 Mach

#### 1.5.2 ARRIVING FLIGHTS

1.5.2.1 IFR flights entering and landing within, a Terminal Control Area will be cleared to a specified holding point and instructed to contact Approach Control at a specified time, level or position. The terms of this clearance shall be adhered to until further instructions are received from Approach Control. If the clearance limit is reached before further instructions have been received, holding procedure shall be carried out at the level last authorized.

1.5.2.2 Due to the limited airspace available, it is of importance that the approaches to the patterns and the holding procedures are carried out as exactly as possible. Pilots are strongly requested to inform ATC if for any reason the approach and / or holding cannot be performed as required.

1.5.2.3 No landing will be allowed to BAHRAIN INTERNATIONAL airport RWY 12R / 30L if the reported met visibility is less than 4000 M.

1.5.2.4 For CAT I ILS approaches the localiser is not to be used below 200 FT AGL.

1.5.2.5 Pilots carrying out practice CAT II or III approaches are cautioned that ILS critical and sensitive areas are not protected to CAT II / III standards.

1.5.2.6 Instrument approach charts publish applicable Obstacle Clearance Altitude (OCA) for the procedure. This should not be confused with the Decision Altitude (DA) established by the operator in accordance with the provisions of ICAO Annex 6. However, in accordance with ICAO standards, the Decision Height for ILS approaches established by operators shall in no case be lower than:

- ILS CAT I - 200 FT above THR ELEV.

- ILS CAT II - 100 FT above THR ELEV.

1.5.2.7 All ACFT arriving BAHRAIN INTERNATIONAL airport are requested to advise BAHRAIN GMC of ACFT registration after landing.

1.5.2.8 All ACFT arriving BAHRAIN INTERNATIONAL airport are required to adjust IAS as per the following speeds unless otherwise instructed by ATC:

Unless otherwise authorized by the ATC, no aircraft below 10000 FT MSL may operate at an indicated airspeed of more than 250 KT.

1.5.2.9 The longitudinal separation between aircraft established on final approach runway 30R/12L is reduced to 3NM.

#### 1.5.3 DEPARTING FLIGHTS

1.5.3.1 IFR flights departing from controlled aerodromes will receive initial ATC clearance from the local Aerodrome Control Tower. The clearance limit will normally be at the aerodrome of destination. IFR flights departing from non-controlled aerodromes will not take - off without prior arrangements with BAHRAIN ACC.

1.5.3.2 Detailed instructions will be issued with regard to routes, turns, etc. after take - off.

1.5.3.3 Pilots are required to call BAHRAIN GROUND on freq 121.850 MHZ ten minutes prior to start - up for the purpose of ATC

clearance delivery.

## 1.5.4 BAHRAIN TMA, BAHRAIN CONTROL ZONE

1.5.4.1 REPORTING POINTS

The reporting points for aircraft taking off, operating, or landing within the Control Area are as instructed by ATC.

- 1.5.4.2 The reporting points for aircraft overflying the Control Area or Control Zone are as follows:
  - BHR DVOR / DME

Compulsory REP

## Or such other positions as may, from time to time, be indicated in an ATC clearance.

- 1.5.4.3 HOLDING POINTS
- 1.5.4.3.1 En route holding points are as instructed by ATC.
- 1.5.4.3.2 High level holding will be carried out at FL 150 and above.
- 1.5.4.4 ROUTING

Aircraft are not permitted to route off the centre - lines of the published routes unless specifically instructed by ATC.

#### ENR 1.6 RADAR SERVICES AND PROCEDURES

#### 1.6.1 PRIMARY RADAR

#### 1.6.1.1 Radar Units

Radar units in the BAHRAIN FIR / BAHRAIN UIR operate as integral parts of the parent ATS unit and provide radar service, to the maximum extend practicable, to meet the operational requirement. Factors, such as radar coverage, controller workload, and equipment capabilities, may affect these services, and the radar controller shall determine whether he is able to provide, or continue to provide, radar services in any specific case.

#### 1.6.1.2 Radar Service

A pilot will know when radar services are being provided because the radar controller will use the ATS callsign depending on the position of the aircraft in BAHRAIN FIR / BAHRAIN UIR and under what ATS unit the aircraft is operating, followed by "Radar" for example:

- a) Aircraft under Area Control "BAHRAIN RADAR";
- b) Aircraft under Approach Control "BAHRAIN APPROACH".

#### 1.6.1.3 RADAR COVERAGE

The following radar units operate within the BAHRAIN FIR / BAHRAIN UIR:

#### a) BAHRAIN MSSR:

Position: 261637.66 N 0503751.96 E

Range: 230 NM

#### b) BAHRAIN TAR with co - located MSSR:

Position: 261600.45 N 0503845.69 E

Range: Primary 80 NM, Secondary 230 NM

(Note that Bahrain may delegate the resonsibility for providing ATS, FIS and Alerting Service to other radars when aircraft are within their cover in the BAHRAIN FIR / BAHRAIN UIR.)

#### 1.6.1.4 THE APPLICATION OF RADAR CONTROL SERVICE

1.6.1.4.1 RADAR IDENTIFICATION is achieved according to the provisions specified by ICAO.

#### 1.6.1.4.2 RADAR SERVICES

Radar control service is provided in controlled airspace to aircraft operating within BAHRAIN CTA and on airways within Bahrain radar coverage. These services may include:

- a) radar separation of arriving, departing and en -route traffic;
- b) radar monitoring of arriving, departing and en -route traffic to provide information on any significant deviation from normal flight path;
- c) radar vectoring when required;
- d) assistance to aircraft in emergency;
- e) assistance to aircraft crossing controlled airspace;
- f) warnings and position information on other aircraft considered to constitute a hazard;
- g) information to assist in the navigation of aircraft;
- h) information on observed weather.

Radar Advisory Service and Flight Information Service are provided to identified aircraft operating within the BAHRAIN FIR / BAHRAIN UIR to the extent possible within radar cover.

#### 1.6.1.4.3 MINIMUM HORIZONTAL RADAR SEPARATION

BAHRAIN PSR (TAR Range 80): 20 NM when one aircraft is supersonic, otherwise 5 NM.

BAHRAIN MSSR: 20 NM when one aircraft is supersonic, otherwise 10 NM reducing to 5 NM within 150 NM of radar head.

#### TERRAIN CLEARANCE

Flight Levels assigned by a radar controller to pilots will provide a minimum terrain clearance according to the phase of flight.

#### 1.6.1.5 RADAR AND RADIO FAILURE PROCEDURES

#### 1.6.1.5.1 Radar failure

In the event of radar failure or loss of radar identification, instructions will be issued to restore non - radar standard separation and the pilot will be instructed to communicate with the parent ATS unit.

#### 1.6.1.5.2 Radio failure

1.6.1.5.2.1 The radar controller will establish whether the aircraft radio receiver is working by instructing the pilot to operate the SSR transponder (see also **GEN 1.5**) or, if the aircraft is not SSR equipped, to carry out a turn. If appropriate actions are observed the radar controller will continue to provide radar services to the aircraft.

1.6.1.5.2.2 Aircraft unable to receive radio transmissions shall comply with the ICAO radio communication failure procedures as detailed in Annex 2 para 3.6.5. If radar identification was established prior to radio failure the radar controller will vector other identified aircraft clear of the radio failure aircraft until such time as the aircraft leaves radar coverage or has landed.

1.6.1.5.2.3 Flights departing from BAHRAIN INTERNATIONAL airport on a radar clearance and experiencing a total radio communication failure shall carry out the following procedures:

#### IN VMC:

Continue to fly in VMC and land at the nearest suitable aerodrome.

#### In IMC:

Maintain last assigned heading and flight level or altitude for a period of three minutes after departure or to a distance of 12 DME BAH whichever occurs earlier. Thereafter continue according to current flight plan by routing direct to the first en - route reporting point and climbing to the last acknowledged en -route flight level cleared by ATC.

### 1.6.1.6 AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS)

All aircraft fitted with ACAS II equipment, shall be fitted with software version 7.1 with mode S transponder compliant with Annex 10, Volume IV within the OBBB EFF 1<sup>st</sup> Jan 2017.

#### REF. ICAO DOC 8168 - OPS / 611 VOL. I PART VIII CHAPTER 3

1.6.1.6.1 The information provided by ACAS is intended to assist pilots in the safe operation of aircraft. The traffic alert and collision avoidance system - TCAS II is accepted as a suitable system provided the installation is certified for use by the State of Registry of the aircraft concerned and it's operation is in accordance with instructions for use of the equipment laid down in the company operations manual issued by the aircraft operator.

1.6.1.6.2 Nothing in the following procedures shall prevent pilots - in - command from exercising their best judgement and full authority in the choice of the best course of action to resolve a traffic conflict.

#### 1.6.1.7 USE OF ACAS INDICATIONS

ACAS indications are intended to assist pilots in the active search for, and visual acquisition of, the conflicting traffic and the avoidance of potential collisions. The following safety considerations apply:

a) Pilots shall not manoeuvre their aircraft in response to traffic advisories only;

**Note:** Traffic advisories are intended to assist in visual acquisition of conflicting traffic and to alert the pilot to the possibility of a resolution advisory. The restriction in the use of traffic advisories is due to the limited bearing accuracy and to the difficulty in interpreting altitude rate from displayed traffic information.

- b) In the event of a resolution advisory, ATC will expect the pilot to respond. If avoiding action is necessary, alteration of flight path should be limited to the minimum extent necessary to comply with the resolution advisories;
- c) Pilots who deviate from an air traffic control clearance in response to a resolution advisory shall promptly return to the terms of the previous air traffic control instruction or clearance when the conflict is resolved and shall notify the appropriate ATC unit as soon as possible.



#### 1.6.2 SECONDARY SURVEILLANCE RADAR (SSR)

#### 1.6.2.1 Emergency Procedures

1.6.2.1.1 Except as provided for paragraph **ENR 1.6.2.2** below, pilot shall operate transponders and select modes and codes in accordance with ATC instructions. In particular, when entering BAHRAIN FIR / BAHRAIN UIR pilots who have already received specific instructions from ATC concerning the setting of the transponder shall maintain that setting until otherwise instructed.

1.6.2.1.2 Pilots of aircraft about to enter the BAHRAIN FIR / BAHRAIN UIR who have not received specific instructions from ATC concerning the setting of the transponder shall operate the transponder on Mode A / 3 Code 2000 before entry and maintain that setting until otherwise instructed.

Mode C, if fitted, is to be selected at all times.

1.6.2.1.3 If the pilot of an aircraft encountering a state of emergency has previously been instructed by ATC to operate the transponder on a specific code, this code setting shall be maintained until otherwise advised. In all other circumstances, the transponder shall be set to Mode A / 3 Code 7700.

1.6.2.1.4 Notwithstanding the procedures set out above, a pilot may select Mode A / 3 Code 7700 wheneever the nature of the emergency is such that this appears to him to be the most suitable course of action.

Note: Continuous monitoring of responses on Mode A / 3 Code 7700 is provided.

#### 1.6.2.2 Radio communication failure and unlawful interference procedures

1.6.2.2.1 Radio Communication failure procedures

In the event of an aircraft radio receiver failure, a pilot shall select Mode A / 3 Code 7600 and follow established procedures, and subsequent control of aircraft will be based on these procedures.

#### 1.6.2.2.2 Unlawful Interference procedure

Pilots of aircraft in flight subjected to unlawful interference shall endeavour to set the transponder to Mode A Code 7500 to give indication of the situation, unless circumstances warrant the use of A / 3 Code 7700.

Note: Continuous monitoring in responses on Mode A / 3 Code 7500 is provided.

#### 1.6.2.3 System of SSR Code assignment

Codes are assigned according to the ICAO "ORIGINATING REGION CODE ALLOCATION METHOD2 - ORCAM - for the MID / ASIA Region.

#### 1.6.2.4 Mode S operation within OBBB FIR

#### 1.6.2.4.1 INTRODUCTION

The provision of air traffic services (ATS) using SSR Mode S in Bahrain FIR airspace will rely on a unique ICAO 24-bit aircraft address for selective interrogation of individual aircraft. The 24-bit aircraft address is also an essential element of the airborne collision avoidance system (ACAS II). In addition, Mode S surveillance requires the reporting of aircraft identification as stated below.

Pilots of aircraft equipped with mode 'S' transponder having an aircraft identification feature shall set the aircraft identification in the transponder while operating within OBBB FIR. This setting shall correspond to the aircraft identification specified in item 7 of the standard ICAO FPL, or if no FPL has been filed, the aircraft registration. ATC equipment requires strict compliance with mode 'S' settings to ensure proper radar tracking. Inability to comply with these requirements may result in aircraft being denied entry into OBBB class 'A' airspace.

The aircraft address shall be one of 16 777 214 twenty-four-bit aircraft addresses allocated by ICAO to the State of Registery or common mark registering authority and assigned as prescribed in the ICAO Annex 10.

All Mode S equipped aircraft engaged in international civil aviation are required to have an aircraft identification feature as prescribed in ICAO Annex 10.

This guidance is provided to ensure consistency regarding 24-bit aircraft addresses and the reporting of aircraft identification relevant to the operational introduction of Mode S Elementary and Enhanced Surveillance. In particular:

- 1. Adherence to the world-wide scheme for assignment of ICAO 24-bit Aircraft Addresses.
- 2. Correct setting of Aircraft Identification by flight crew.

#### 1.6.2.4.2 THE ICAO 24-BIT AIRCRAFT ADDRESS

Instances occur of incorrect 24-bit aircraft addresses being installed/hard-wired on individual aircraft. This has happened not only on first installation of Mode S transponder but also when a major modification has been made to the Mode S equipment, and following a change of State of Registration. Incorrect installation, such as setting the address to all zeros, or, inadvertent duplication of an address can pose a severe risk to flight safety. In particular, the airborne collision avoidance system (ACAS II), performs on the assumption that only a single, unique 24-bit aircraft address per airframe exists. The performance of ACAS II can be seriously degraded and in some instances disabled if an incorrect

or duplicate address is installed on an aircraft. Incorrect or duplicated 24-bit aircraft addresses will also undermine the effectiveness of surveillance services based on SSR Mode S.

It is essential that aircraft operators comply with the aircraft address assignment procedures of the state regulatory authority to which blocks of addresses have been allocated by ICAO.

Note: Telephony designators for aircraft operating agencies are contained in ICAO Doc 8585.

The world-wide addressing scheme has been designed so that, at any one time, no address is assigned to more than one aircraft. Only one address can be assigned to an aircraft and it can not be changed except under exceptional circumstances authorised by the State Regulatory Authority concerned.

When an aircraft changes it's State of Regulatory of Registry, the previously assigned address is to be relinquished and a new address assigned by the new registering authority.

It is essential that the aircraft address is periodically verified using ramp tests. Such checks must also be conducted when a major maintenance check has taken place and when the aircraft has changed registration, to ensure that a newly assigned address has been properly set.

#### 1.6.2.4.3 CORRECT SETTING OF AIRCRAFT IDENTIFICATION

To comply with airborne equipment requirements, Mode S transponder equipped aircraft must incorporate an Aircraft Identification Feature. Correct setting of aircraft identification is essential for the correlation of radar tracks with flight plan data in the ATM and Airport Operator ground systems. Initial operational trials using SSR Mode S have shown that many aircraft are transmitting incorrect aircraft identification, e.g. J9165 instead of JZR165. Such erroneous settings of aircraft identification prohibit automatic flight plan correlation and, if perpetuated, will severely limit the effectiveness of Mode S to relieve the shortage of SSR codes.

In accordance with ICAO Doc 8168 [PANS-OPS] Vol. I, Part III, flight crew of aircraft equipped with Mode S having an aircraft identification feature shall set the aircraft identification in the transponder. The setting shall correspond to the aircraft identification specified in item 7 of the ICAO flight plan, or, if no flight plan has been filed, the aircraft registration.

Note: All Mode S equipped aircraft engaged in international civil aviation are required to have an aircraft identification feature.

**Note:** No zeroes, dashes or spaces are to be added when the aircraft identification consists of less than 7 characters.

Mode (S) and Selected Altitude use in the OBBB FIR

The provision of the selected altitude set by aircrew, to the controller, gives them the ability to intervene, where the selected altitude does not match the clearance. This greatly reduces the chance of a Level Bust.

Selected altitude data is presented as either a flight level or an altitude, depending on surveillance system settings, For ATC and Air-Ground Communication purposes, the generic phrase 'Seleted level' is often used to encompass data presented as either an altitude or flight level.

The following factors are preventable, using the display of a Selected Altitude / CFL mismatch:

- Correct pilot Read-back or Hear-back followed by incorrect action;

- Incorrect pilot read-back by correct aircraft;

- Pilot read-back by incorrect aircraft.

The ATM System will generate an alert where there is a discrepancy between the Cleared Level and the aircraft Selected Altitude; Controllers are required to advise the pilot using the following phrase; "(Callsign), Check Selected Level. Cleared Level is (correct cleared level)"

Pilots of Mode (S) equipped aircraft, operating within the OBBB FIR shall ensure that their current cleared level is set as the selected altitude in the aircraft mode control panel, unless established on final approach for OBBI.

Any failure to comply with the above, pilots shall immediately inform ATC.

1.6.2.4.4 FURTHER INFORMATION

Or guidance may be obtained from:

Bahrain Senior Air Traffic Control Officer

+973 17 32 9927

satco@mtt.gov.bh



#### ENR 1.7 ALTIMETER SETTING PROCEDURES

### 1.7.1 INTRODUCTION

The Altimeter setting procedures in use generally conform to those contained in ICAO Doc 8168 - OPS, / 611 Volume 1 and DOC 7030, and are given in full below. QNH reports and temperature information for use in determining adequate terrain clearance are provided in MET broadcasts, and are available on request from Air Traffic Services Units. QNH values are given in whole hectopascals.

### 1.7.2 BASIC ALTIMETER SETTING PROCEDURES

#### 1.7.2.1 General

1.7.2.1.1 The Transition Altitude is fixed at 13000 FT AMSL for the entire BAHRAIN FIR. The Transition level is fixed at FL 150 for the entire BAHRAIN FIR / BAHRAIN UR.

1.7.2.1.2 Vertical displacement of aircraft at or below the Transition Altitude is expressed in terms of altitude. Vertical displacement of aircraft at or above the Transition Level is expressed in terms of Flight Levels. While an aircraft is passing through the Transition Layer, vertical displacement is expressed as altitude when descending, and as Flight Levels when climbing.

1.7.2.1.3 Flight Level Zero is located at the atmospheric pressure level of 1013.2 HPA (29.92"). Consecutive Flights are separated by a pressure interval corresponding to 500 FT in the Standard Atmosphere below FL 290, and by a pressure interval corresponding to 1000 FT above FL 290. Simultaneous flight at both the Transitional Altitude and the Transition Level is permissible as a minimum of 1000 FT separation exists between the two layers, however, level flight within the Transition Layer is not permitted.

1.7.2.1.4 QNH ALTIMETER SETTING DURING CLIMB: ALL AIRCRAFT SHALL REMAIN ON LOCAL QNH UNTIL PASSING TRANSITION ALTITUDE (13,000 FT) REGARDLESS OF ASSIGNED LEVEL. PASSING TRANSITION ALTITUDE, THE STD QNH (1013) SHOULD BE SELECTED.

1.7.2.1.5 STANDARD ALTIMETER SETTING DURING DESCENT: ALL AIRCRAFT SHALL REMAIN ON STD QNH (1013) UNTIL PASSING TRANSITION LEVEL (FL 150) REGARDLESS OF ASSIGNED LEVEL. PASSING TRANSITION LEVEL, THE LOCAL QNH SHOULD BE SELECED.

#### 1.7.2.2 Take - off and climb

1.7.2.2.1 A QNH altimeter setting is made available to aircraft in the routine take - off and climb instructions.

1.7.2.2.2 Vertical displacement of aircraft during the climb is controlled by reference to altitudes until reaching the Transition Altitude, above which vertical displacement is controlled by reference to Flight Levels. In this context, the word "controlled" is used in a composite sense in that a pilot will wish to fly his aircraft at predetermined Flight Levels or altitudes, and Air Traffic Services will wish to advise the pilot of the availability of Flight Levels and altitudes. Both are concerned with the vertical position of aircraft.

#### 1.7.2.3 En - route at and below the transition altitude - altimeter pressure setting

BAHRAIN INTERNATIONAL airport QNH

#### 1.7.2.4 Vertical separation - En-route

1.7.2.4.1 Aircraft shall be flown En-route at Flight Levels at all times when above 13000 FT AMSL.

1.7.2.4.2 When complying with the semi-circular system of cruising levels of Annex 2, an aircraft shall be flown at Flight Levels or Flight Altitudes corresponding to the magnetic track as shown in the following table:

Magnetic Track	000° - 179°		180°	- 359°	
Flight Rules	IFR	VFR	IFR	VFR	
Flight Altitudes		1500	2000	2500	
	3000	3500	4000	4500	
	5000	5500	6000	6500	
	Up to 13000	Up to 11500	Up to 12000	Up to 12500	
Flight Levels	150		160		
	170		180		
	190		200		
	Up to 290		Up to 280		

Magnetic Track	000° -	000° - 179° 180° - 3		
Flight Rules	IFR	VFR	IFR	VFR
	310		300	
	330		320	
	350		340	
	370		360	
	390		380	
	etc		etc	

#### 1.7.2.5 Approach and landing

1.7.2.5.1 A QNH altimeter setting is made available in the routine approach and landing instructions.

1.7.2.5.2 Vertical displacement of aircraft during approach is controlled by reference to Flight Levels until reaching the Transition Level, below which vertical displacement is controlled by reference to altitudes.

Note: This does not preclude a pilot from using a QFE setting to terrain clearance purposes during the final approach of the runway.

#### 1.7.2.6 Missed approach

The relevant portions of ENR 1.7.2.1, ENR 1.7.2.2 and ENR 1.7.2.5 shall be applied to the case of a missed approach...

## 1.7.3 DESCRIPTION OF ALTIMETER SETTING REGION

There is a single altimeter pressure setting region which covers the entire BAHRAIN FIR / BAHRAIN UIR, however see ENR 1.7.2.2.2.

#### 1.7.4 PROCEDURES APPLICABLE TO OPERATORS, INCLUDING PILOTS

The levels at which flight is to be conducted shall be specified in a Flight Plan;

- a) in terms of Flight Levels, if the flight is to be conducted at or above the Transition Level, and
- b) in terms of altitudes of the flight is to be conducted in the vicinity of an aerodrome, and at or below the Transition Altitude.

Note: Short flights in the vicinity of an aerodrome may often be conducted only at altitudes below the Transition Altitude.

Note: Flight Levels are specified in a plan by number; and not in terms of feet as is the case with altitudes.

## 1.7.5 TABLE OF CRUISING LEVELS

TRACK											
		From	1 000° to 17	'9°				From	180° to	359°	
IFR Flights VFR Flights					IFR Flight	s		VFR Flig	ghts		
FL	Altit	ude	FL	Altit	ude	FL	Altit	ude	FL	AI	titude
	Metres	Feet		Metres	Feet		Metres	Feet		Metres	Feet
	900	3000		450	1500		600	2000		750	2500
	1500	5000		1050	3500		1200	4000		1350	4500
	2150	7000		1700	5500		1850	6000		2000	6500
	2750	9000		2300	7500		2450	8000		2600	8500
	3350	11000		2900	9500		3050	10000		3200	10500
	3950	13000		3500	11500		3650	12000		3800	12500

	TRACK										
	From 000° to 179°						From 180° to 359°				
	IFR Flights			VFR Flights	5		IFR Flight	S		VFR Flig	hts
FL	Altit	ude	FL	Altit	ude	FL	Altit	ude	FL	Alt	titude
	Metres	Feet		Metres	Feet		Metres	Feet		Metres	Feet
150			Class A a	irspace		160			Class	A airspace	
170						180					
190						200					
210						220					
230						240					
250											
270						280					
290						300					
310						320					
330						340					
350			Class A a	irspace RVSM	l applied	360		Class A	airspace	e RVSM applie	ed
370				K 1.10)		380		(See En	IR 1.10)		
390						400					
410											
450			Class A a	irspace		430			Class	A airspace	
490						470					
etc.						etc.					

#### ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030 / 5)

The Supplementary Procedures in force, directly applicable to aircraft are given in their entirety. Differences are printed in heavy face italic type.

DOC 7030 part 1

#### **Reference Procedure**

#### 1.1 Visual Flight Rules (VFR)

(Annex 2 - 4.6)

VFR flights to be operated within a control zone established at an aerodrome serving International Flights and in specific portions of the associated terminal control area shall:

- 1. have two way radio communications;
- 2. obtain clearance from the appropriate air traffic control unit; and
- 3. report position as required

**Note:** The phrase "specified portions of the associated terminal control area" is intended to signify at least those portions of the TMA used by International IFR Flights in association with approach, holding, departure and noise abatement procedures.

#### 1.2.1.1 Instrument Flight Rules (IFR)

(Annex 2 - 2.2. and Chapter 5)

Flights shall be conducted in accordance with the Instrument Flight Rules (even when not operating in instrument meteorological conditions) when operated:

- 1. more than 100 NM seaward from the shoreline within controlled airspace; or
- 2. at or above Flight Level 150

#### 3.0 A / G communications and in - flight reporting

(ANNEX 2 -3 6.3, 3.6.5, and 5.3.3 and PANS ATM / 501 Chapter 4, 4 - 11)

All aircraft on VFR flights, and aircraft on IFR flights outside controlled airspace, shall maintain a watch on a radio station furnishing communications for the unit providing flight information service in the flight information region and file with that station information as their position unless otherwise authorized by the State overflown.

#### **Reference Procedure**

3.4.1.2 The aircraft call sign / identification shall be transmitted immediately before or after the word "position".

3.4.1.3 The position of the aircraft shall be transmitted in reference to a reporting point name, name code designator or, if not named:

- 1. for flights operating in a predominantly east west direction:
  - a) latitude in degrees and minutes; and
  - b) longitude in degrees only;
- 2. for flights operating in a predominantly north south direction:
  - a) latitude in degrees only; and
  - b) longitude in degrees and minutes.

3.4.1.4 The time at which the aircraft is over the reporting point shall be transmitted in four digits, giving both the hour and the minutes.

3.4.1.5 The altitude / flight level of the aircraft shall be included in the position report.

3.4.2.1 Next position and time shall normally be expressed as the reporting point name, name - code designator or latitude and longitude as indicated in 3.4.1.3.

3.4.2.2 Estimated time over the next position shall be expressed in four digits.

3.4.3.1 Ensuing position information shall include the name, name - code designator or coordinates of the next succeeding reporting point, whether compulsary or not.

#### 4.0 Special Procedures for in - flight contingencies

General Procedures

The following general procedures apply to both subsonic and supersonic aircraft

4.2.1 If an aircraft is unable to continue flight in accordance with its Air Traffic Control Clearance, a revised Clearance shall be obtained at the earliest possible time and, in the meantime, the aircraft shall broadcast position (including ATS route designator or the track code, as appropriate) and intentions, on frequency 121.500 MHZ at suitable intervals until Air Traffic Control Clearance is received.

#### 12.1.1 Alerting and Search and Rescue Services - Routes and equipment of Private Aircraft

Annex 6 - part II - 6.3 and 6.4):

General Aviation aircraft operating over designated areas, land or sea, where search and rescue operations would be difficult, should:

- 1. carry appropriate survival equipment;
- 2. follow the routes or specified procedures if not equipped with two way radio except that under special circumstances, the appropriate authority may grant specific exemptions from this requirement.

#### **Reference Procedure**

#### 12.2 Alerting Services

(PANS ATM / 501 Chapter 9 & Chapter 10, 10 - 2)

The procedures for "Alerting Service" detailed in PANS RAC, Part V1.2 are applicable to all flights except those conducted wholly in the vicinity of an aerodrome when exempted by the appropriate air traffic control unit.

DOC 7030 / 4, Part 2

#### **Referrence Procedure**

#### **1.0 AERONAUTICAL MOBILE SERVICE**

1.1 Languages to be used in radiotelephony

(A10, Vol. 11, 5.2.1.1.2, Note 2)

1.1.1 English is used in radiotelephony

#### 2.0 AERONAUTICAL FIXED SERVICE

2.1 Priority of MOTNE messages on AFTN

NIL

**3.0 RADIO FREQUENCIES** 

3.1 Air - to - air channel

(A10, Vol. 1, Part 11 - 4.1.3.2)

3.1.1 The frequency 123.450 MHZ has been approved for use as the air - to - air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

#### DOC 7030 / 4, Part 3

#### 1.1 Aircraft observations and Reports

(Annex 3 - Chapter 5)

Aircraft within the BAHRAIN FIR / BAHRAIN UIR shall make and record routing observations at the ATS / MET reporting points indicated in the Regional Plan.

#### **Regional Supplementary Procedures**

DOC 7030 / 4

The Supplementary Procedures in force, directly applicable to ATSUs and indirectly applicable to aircraft, are not given in their entirety. The relevant differences are given but only differences from ICAO have been published in full.

#### **Reference Differences**

NIL

## ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT (ATFM) AND AIRSPACE MANAGEMENT

## 1.9.1 Air traffic flow management structure, service area, service provided location of unit and hours of operation

## Service provided

Within the BAHRAIN FIR / BAHRAIN UIR there is no requirement for Strategic Flow Management at present, or in the forseeable future, and the establishment of a Regional Flow Management Unit is perceived as not being necessary. Tactical Flow Management is implemented from time to time, as required.

#### ENR 1.10 FLIGHT PLANNING

(Restriction, Limitation or advisory Information)

#### 1.10.1 PROCEDURES FOR THE SUBMISSION OF A FLIGHT PLAN

#### 1.10.1.1 General

A flight plan shall be submitted as per the requirements specified in ICAO Annex 2 - Rules of the Air, Chapter 3.3. The format and content of the flight plan form shall be according to ICAO PANS - ATM Doc 4444, Chapter 4.4:

- a) any IFR flight,
- b) any VFR flight.
  - i. departing from or destined for an aerodrome within a CTR;
  - ii. crossing any CTR within BAHRAIN FIR;
  - iii. across any International State Boundary or the FIR / UIR boundary.

#### 1.10.1.2 Time of submission

Except for repetitive flight plans, a flight plan shall be submitted up to 120 Hours and at least 60 minutes prior to EOBT, taking into account requirements for timely information of ATS units in airspace along the route to be flown, including requirements for early submission for ATS Air Traffic Flow Management (ATFM) purposes.

#### 1.10.1.3 Submission of Flight Plan

- a) Flight plans shall be submitted via AFTN to "OBBBZQZX"
- b) In absence of AFS, a flight plan shall be submitted by email BAHFPL@mtt.gov.bh or Fax +973 17323876. An acknowledgement of receipt must be obtained via Tel: +973 17321181 / +973 17321182

#### **10.10.1.4 ADDITIONAL FLIGHT PLAN REQUIREMENTS**

All FPL within OBBB FIR should include:

- 1. Entry and exit point for overflying flights.
- 2. Entry point for landing BAHRAIN aerodromes.
- 3. Exit point for departing from BAHRAIN aerodromes.

#### Adherence to ATS route structure

No flight plans shall be filed for routes deviating from the published STANDARD ROUTE DOCUMENT, unless prior permission has been + obtained from BAHRAIN ACC.

#### Authorization for special flights

Flights of a specific character such as survey flights, scientific research flights etc. may be exempted from the restriction specified above.

Request for exemption shall be mailed so as to be received at least one week before the intended day of operation to:

Undersecretary for Civil Aviation Bahrain Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain

#### 1.10.2 REPETITIVE FLIGHT PLAN SYSTEM

RPL System not in use in the Kingdom of Bahrain.

#### 1.10.3 CHANGE TO THE SUBMITTED FLIGHT PLAN

All changes to a flight plan submitted for an IFR flight or a controlled VFR flight and significant changes to a flight plan submitted for an uncontrolled VFR flight shall be reported as soon as possible to the appropriate ATS unit.

1.10.3.1 In the event of a delay in departure of 30 minutes or more for a flight for which a flight plan has been submitted, the flight plan shall be amended or a new flight plan shall be submitted after the old plan has been cancelled.

**Note 1:** If a delay in departure of a controlled flight is not properly reported, the relevant flight plan date may no longer be readily available to the appropriate ATS unit when a clearance is ultimately requested, which will consequently result in extra delay for the flight.

**Note 2:** If a delay in departure (or cancellation) of an uncontrolled VFR flight is not properly reported, alerting or search and rescue action may be unnecessarily initiated, when the flight fails to arrive at the destination aerodrome within 30 minutes after current ETA.

1.10.3.2 Whenever a flight, for which a flight plan has been submitted, is cancelled, the appropriate ATS unit shall be informed

immediately.

Changes to a current flight plan for a controlled flight during flight shall be reported or requested subject to the provisions in Annex 2.3.6.2 (Adherence to flight plan).

Significant changes to a flight plan for an uncontrolled VFR flight include changes in endurance, or total number of persons on board and changes in time estimates of 30 minutes or more.

#### 1.10.3.3 Arrival report (Closing a flight plan)

A report of arrival shall be made at the earliest possible moment after landing to the airport office of the arrival aerodrome by any flight for which a flight plan has been submitted except when the arrival has been acknowledged by the local ATS unit.

After landing at an aerodrome which is not the destination aerodrome (diversionary landing) the local ATS unit shall be specifically informed accordingly.

In the absence of a local ATS unit at the aerodrome of diversionary landing the pilot is responsible for passing the arrival report to the destination aerodrome.

- aircraft identification
- departure aerodrome
- destination aerodrome
- time of arrival

In the case of diversion, insert between "destination aerodrome" an "time of arrival":

the "arrival aerodrome"

#### 1.10.4 ADDITIONAL REQUIREMENTS RELATED TO RVSM AIRSPACE

Note: Flights will not be given access to BAHRAIN RVSM airspace when:

a) No flight plan has been received, or

b) A flight plan has been received but the required RVSM data has not been included in the flight plan.

1.10.4.1 Except as indicated in **ENR 1.10.4.3** flight between FL 290 to FL 410 is for exclusive use of RVSM approved aircraft. Non - RVSM certified aircraft shall flight plan accordingly.

1.10.4.2 Operators of RVSM certified aircraft shall insert the letter "W" in item 10 of the flight plan regardless of the requested level.

1.10.4.3 Acceptance of non - RVSM certified State aircraft for flight at RVSM levels is subject to prevailling traffic conditions. RVSM certified aircraft will be offered priority in order to make maximum use of airspace capacity.

**Note:** Consequently, operators of State aircraft intending to navigate within BAHRAIN FIR / BAHRAIN UIR are advised to dispatch RVSM certified aircraft or flight plan at non - RVSM levels.

1.10.4.4 Operators of non - RVSM certified State aircraft requesting a flight level within RVSM airspace shall insert the phrase "STS / NONRVSM" in item 18 of the flight plan.

1.10.4.5 In addition to the requirements of **ENR 1.10.4.4** operators of non - RVSM certified State aircraft requesting to operate in RVSM airspace shall include the letter "M" in item 8 of the flight plan.

1.10.4.6 The flight plan for an aircraft intending to operate across or within the lateral limits of RVSM airspace shall include:

a) The entry point and requested flight level for that portion of the route commencing immediately after the entry point.

b) The exit point and requested flight level for that portion of the route commencing immediately after the exit point.

#### ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

Flight movement messages relating to traffic into or via BAHRAIN FIR / BAHRAIN UIR shall be addressed as stated below in order to warrant correct relay and delivery.

**Note:** Flight movement messages in this context comprise flight plan messages, amendment messages relating thereto and flight plan cancellation messages. ICAO ATM - DOC 4444, chapter 11 para. 11.2.1.1.3 refers.

#### 1.11.1 AFTN ADDRESSES

#### 1.11.1.1 Category of flight (IFR, VFR or both)

All Flight Plans and Departures messages for flights operating through or within the BAHRAIN FIR / BAHRAIN UIR must include addressees **OBBBZQZX**.

1.11.1.2 All aircraft operators intending to use BAHRAIN INTERNATIONAL airport as a departure aerodrome must include the addressees **OBBIZPZX** in their flight plan.

1.11.1.3 BAHRAIN / SAKHIR AIRBASE installed new AFTN addresses necessary for flight planning puropses and other relevant issues as follows: **OBKHZTZX** for Control Tower, **OBKHZPZX** for AIS and **OBKHYFYX** for COMMS.

#### 1.11.2 IFPS SYSTEM

#### 1.11.2.1 IFPS Requirements

- 1. All FPLs and associated messages for the flights to/from/within and overflying BAHRAIN FIR shall be submitted to OBBBZQZX address for processing at least one (1) hour prior to the EOBT of those flights but not more than one hundred and twenty (120) hours
- 2. All FPL within OBBB FIR should include:
  - a) Entry and exit point for overflying flights.
  - b) Entry point for landing BAHRAIN aerodromes.
  - 1. Exit point for departing from BAHRAIN aerodromes.
- 3. Airline operators/FPL originators are responsible for ensuring that the flight plan filed adheres to the current required routing as published in AIP SUP standard route document (SRD) and complies with applicable NOTAMs.
- 4. All Flight Plans (FPLs) that require special handling within the OBBB FIR must include the designation 'STS/' in Item 18 of the flight plan, in accordance with ICAO PANS-ATM Doc 4444, Appendix 2.

#### 1.11.2.2 IFPS VALIDATION SYSTEM

- Operational reply messages (ORM) will be sent by the BAHRAIN IFPS in response to all ATS messages falling under the categories of FPL, DLA, CHG, AND CNL messages to message originators from OBBBZEZN, which is the BAHRAIN IFPS Address. There are two types of ORM messages: ACK (acknowledge - for messages processed automatically) REJ (reject - for messages rejected automatically).
- 2. To avoid confusion, Originators must wait until they receive an ACK or REJ message from BAHRAIN IFPS for the first message before submitting the second associated message.
- 3. In case operational reply messages (ORM) are not received within 30 minutes, originators are advised to contact flight plan operations Tel: +973 17321181 / +973 17321182 to check the status of the FPL or associated messages.

#### ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

### 1.12.1 Interception procedures

All unknown aircraft within the airspace over territories and territorial waters of states within the BAHRAIN FIR / BAHRAIN UIR may be intercepted by air defense fighters by day and by night.

#### 1.12.2 Applicability

1.12.2.1 The procedures and signals set out in this section apply in the event of an interception over the territory and territorial waters of the Kingdom of Bahrain.

1.12.2.2 An aircraft which is intercepted by another aircraft is required immediately to:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to the signals given under ENR 1.12.3;
- b) notify, if possible, the Air Traffic Services Unit responsible for the airspace in which the aircraft is flying;
- c) make a general call on the emergency frequency 121.500 MHZ to attempt to establish radio communication with the intercepting aircraft or with the intercept control unit, giving the identity and position of the aircraft and the nature of the flight. This call should be repeated on 243.000 MHZ if necessary and practicable;
- d) if equipped with SSR transponder, select Mode A Code 7700, unless otherwise instructed by the appropriate Air Traffic Services Unit.

1.12.2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft is required to request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

1.12.2.4 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft is required to request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

1.12.2.5 All aircraft shall, at all times, remain well clear from areas being published as prohibited areas, however, if an aircraft was so be compelled to enter a prohibited area due to weather avoidance or otherwise track deviation from the intended route, which would finally take the aircraft into prohibited areas, was observed and such initiative was made by the pilot without obtaining a specific approval from ATC to carry out the maneouvre, then this particular flight may expect an interception by military jets by the ROYAL BAHRAIN AIR FORCE during which full compliance to the instructions issued by the interceptors must be immediately adhered to.

1.12.2.6 If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in the following table and transmitting each phrase twice:

Phrases for use by INTERCEPTING aircraft			
Phrase	Pronunciation <sup>1</sup>	Meaning	
CALL SIGN	KOL SA - IN	What is your call sign?	
FOLLOW	FOL - LO	Follow me	
DESCEND	DEE - SEND	Descend for landing	
YOU LAND	YOU LAAND	Land at this aerodrome	
PROCEED	PRO - SEED	You may proceed	
<sup>1</sup> Syllables to be emphasized are printed in bold letters.			

Phrases for use by INTERCEPTED aircraft			
Phrase	Pronunciation <sup>1</sup>	Meaning	
CALL SIGN <sup>2</sup>	KOL SA - IN	My call sign is (call sign)	
WILCO	VILL - KO	Understood. Will comply.	
CAN NOT	KANN - NOTT	Unable to comply	
REPEAT	REE - PEET	Repeat your instruction	
AM LOST	AM - LOSST	Position unknown	
MAYDAY	MAYDAY	I am in distress	
HIJACK <sup>3</sup>	HI - JACK	I have been hijacked	
LAND (place name)	LAAND (place name)	I request to land at (place name)	

DESCEND	DEE - SEND	I required descent	
<sup>1</sup> Syllables to be emphasized are printed in bold letters.			
<sup>2</sup> The call sign required to be given is that used in radio telephony communications with air traffic services units and corresponding to the aircraft's identification in the flight plan.			
<sup>3</sup> Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK"			

#### 1.12.3 TABLES OF VISUAL SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

## 1.12.3.1 Signals initiated by INTERCEPTING aircraft and responses by INTERCEPTED aircraft

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY or NIGHT - Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in case of a helicopter) on the desired heading. <b>Note 1:</b> - Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. <b>Note 2:</b> - If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	DAY or NIGHT - Rocking aircraft, flashing navigational lights at irregular intervals and following. <b>Note:</b> - Additional action required to be taken by intercepted aircraft is prescribed on <b>ENR</b> <b>1.12.2.6</b> .	Understood, will comply.
2	DAY or NIGHT - An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of the flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT - Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and overflying the runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepted helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT - Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood will comply.

Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
1	DAY or NIGHT - Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300 M (1000 FT) but not exceeding 600 M (2000 FT) in the case of a helicopter, at a height exceeding 100 M (350 FT) above the aerodrome level, and continuing to circle the	Aerodrome you have designated is inadequate.	DAY or NIGHT - If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the	Understood, follow me. Understood, you may proceed.
	runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.		Series 2 signals prescribed for intercepting aircraft.	
2	DAY or NIGHT - Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.
3	DAY or NIGHT - Irregular flashing of all available lights.	In distress.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.

## 1.12.3.2 Signals initiated by INTERCEPTED aircraft and responses by INTERCEPTING aircraft

#### ENR 1.13 UNLAWFUL INTERFERENCE

## 1.13.1 General

The following procedures are intended for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

#### 1.13.2 Procedures

1.13.2.1 Unless considerations aboard the aircraft dictate otherwise, the pilot - in - command should attempt to continue flying on the assigned track and the assigned cruising level at least until able to notify an ATS unit or within radar coverage.

1.13.2.2 When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot - in - command should, whenever possible:

- a) attempt to broadcast warnings on the VHF emergency frequency and other appropriate frequencies, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on board transponders, data links, etc. should also be used when it is advantageous to do so and circumstances permit; and
- b) Proceed in accordance with applicable special procedures for in flight contingencies, where such procedures have been established and promulgated in Doc 7030 Regional Supplementary Procedures; or
- c) If no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for IFR flight:
  - 1. 150 M (500 FT) in an area where a vertical separation minimum of 300 M (1000 FT) is applied; or
  - 2. 300 M (1000 FT) in an area where a vertical separation minimum of 600 M (2000 FT) is applied.
#### ENR 1.14 AIR TRAFFIC INCIDENTS

#### 1.14.1 Definition of air traffic incidents

1.14.1.1 "Air traffic incident" is used to mean a serious occurrence related to the provision of air traffic services, such as:

### a) aircraft proximity (AIRPROX);

- b) serious difficulty resulting in a hazard to aircraft caused, for example, by:
  - 1. faulty procedures
  - 2. non-compliance with procedures, or
  - 3. failure of ground facilities.

1.14.1.1.1 Definitions for aircraft proximity and AIRPROX.

**Aircraft proximity.** A situation in which, in the opinion of the pilot or the air traffic services personnel, the distance between aircraft, as well as their relative positions and speed, have been such that the safety of the aircraft involved may have been compromised. An aircraft proximity is classified as follows:

*Risk of collision.* The risk classification of aircraft proximity in which serious risk of collision has existed. *Safety not assured.* The risk classification of aircraft proximity in which the safety of the aircraft may have been compromised. *No risk of collision.* The risk classification of aircraft proximity in which no risk of collision has existed. *Risk not determined.* The risk classification of aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

AIRPROX. The code word used in an air traffic incident report to designate aircraft proximity.

1.14.1.2 Air traffic incidents are designated and identified in reports as follows:

Туре	Designation
Air traffic incident	Incident
as a) above	AIRPROX (Aircraft proximity)
as b) 1) and 2) above	Procedure
as b) 3) above	Facility

#### 1.14.2 Use of the Air Traffic Incident Report Form (See model below)

The Air Traffic Incident Report Form is intended for use:

a) by a pilot for filing a report on an air traffic incident after arrival or to confirm a report made initially by radio during flight.

Note: The form, if available on board, may also be of use in providing a pattern for making the initial report in flight.

b) by an ATS unit for recording an air traffic incident report received by radio telephone or teleprinter.

Note: The form may be used as the format for the text of a message to be transmitted over the AFS network.

#### 1.14.3 Reporting procedures (including in-flight procedures)

1.14.3.1 The following are the procedures to be followed by a pilot who is or has been involved in an incident:

- a) during flight, use the appropriate air / ground frequency for reporting an incident of major significance, particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;
- b) as promptly as possible after landing, submit a completed Air Traffic Incident Report Form;
  - 1. for confirming a report of an incident made initially as in a) above, or for making the initial report on such an incident if it had not been possible to report it by radio;
  - 2. for reporting an incident which did not require immediate notification at the time of occurrence.

1.14.3.2 An initial report made by radio should contain the following information:

- a) aircraft identification;
- b) type of incident, e.g. aircraft proximity;
- c) the incident; 1. a) and b); 2. a), b), c), d), n); 3. a), b), c), i); 4. a), b);
- d) miscellaneous: 1. e).

1.14.3.3 The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to The Aviation Safety Board, P.O. Box 586, Kingdom of Bahrain or to the ATS Reporting Office of the aerodrome of first

landing for submission to The Aviation Safety Board. The pilot should complete the Air Traffic Incident Report Form, supplementing the details of the initial reports as necessary.

Note: Where there is no ATS Reporting Office, the report may be submitted to another ATS unit.

1.14.3.4 The pilot should complete the Air Traffic Incident Report Form (see **ENR 1.14.4.2** - ICAO model Air Traffic Incident Report Form, supplementing the details of the initial reports as necessary.

### 1.14.4 Purpose of reporting and handling of the form

1.14.4.1 The purpose of the reporting of aircraft proximity incidents and their investigation is to promote the safety of aircraft. The degree of risk involved in an aircraft proximity incident should be determined in the incident investigation and classified as "risk of collision", "safety not assured", "no risk of collision" or "risk not determined".

1.14.4.2 The purpose of the form is to provide investigatory authorities with as complete information on an air traffic incident as possible and to enable them to report back, with the least possible delay to the pilot or operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

	AIR TRAFFIC INCIDENT REPORT FORM									
For	For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded items should be included.									
A –	– AIRC	RAFT IDENTIFICATION	в	_	TYPE OF INCIDENT					
			A	IRP	ROX / PROCEDURE / FACILITY*					
c –	C — THE INCIDENT									
1.	1. General									
	a)	Date / time of incident UTC								
	b)	Position								
2.	Own	aircraft								
	a)	Heading and route								
	b)	True airspeed			measured in ( ) kt ( )	km/h				
	c)	Level and altimeter setting			、 , 、 ,					
	d)	Aircraft climbing or descending								
		() Level flight	(	)	Climbing	(	)	Descending		
	e)	Aircraft bank angle								
		() Wings level	(	)	Slight bank	(	)	Moderate bank		
		() Steep bank	(	)	Inverted	(	)	Unknown		
	f)	Aircraft direction of bank	,	,	D. H.	,	,			
	~)	() Leπ	(	) (	Right	(	)	Unknown		
	g)	( ) Sundare	quir (	ea)	Windscreen pillar	(	`	Dirty windscreen		
			(	)	None	(	)	Dirty windscreen		
	h)	Use of aircraft lighting (select as many as rec	) Juire	, ed)	None					
	,	() Navigation lights	(	)	Strobe lights	(	)	Cabin lights		
		() Red anti-collision lights	(	)	Landing / taxi lights	(	)	Logo (tail fin) lights		
		() Other	(	)	None					
	i)	Traffic avoidance advice issued by ATS								
		() Yes, based on radar	(	)	Yes, based on visual sighting	(	)	Yes, based on other information		
		( ) No								
	j)	Traffic information issued								
		() Yes, based on radar	(	)	Yes, based on visual sighting	(	)	Yes, based on other information		
		( ) No								
	k)	Airborne collision avoidance system — ACAS	;							
		( ) Not carried	(	)	Туре	(	)	Traffic advisory issued		
		() Resolution advisory issued	(	)	Traffic advisory or resolution advisor	y not	issı	ued		
	I)	Radar identification								
		() No radar available	(	)	Radar identification	(	)	No radar identification		
	m)	Other aircraft sighted				,				
		() Yes	(	)	No	(	)	Wrong aircraft sighted		

	n)	Avoiding action taken						
	- )	() Yes	(	)	No			
	0)	Type of flight plan	IF	R /	VFR / none"			
3.	Other	r aircraft						
	a)	Type and call sign / registration (if known)						
	b)	If a) above not known, describe below						
		( ) High wing	(	)	Mid wing	(	)	Low wing
		() Rotorcraft						
		() 1 engine	(	)	2 engines	(	)	3 engines
		( ) 4 engines	(	)	More than 4 engines			
	Marki	ng, colour or other available details						
	c)	Aircraft climbing or descending						
		() Level flight	(	)	Climbing	(	)	Descending
		( ) Unknown						
	d)	Aircraft bank angle						
		( ) Wings level	(	)	Slight bank	(	)	Moderate bank
		( ) Steep bank	(	)	Inverted	(	)	Unknown
	e)	Aircraft direction of bank						
		() Left	(	)	Right	(	)	Unknown
	f)	Lights displayed						
		() Navigation lights	(	)	Strobe lights	(	)	Cabin lights
		() Red anti-collision lights	(	)	Landing / taxi lights	(	)	Logo (tail fin) lights
		() Other	(	)	None	(	)	Unknown
	g)	Traffic avoidance advice issued by ATS						
		() Yes, based on radar	(	)	Yes, based on visual sighting	(	)	Yes, based on other information
		( ) No	(	)	Unknown			
	h)	Traffic information issued						
		() Yes, based on radar	(	)	Yes, based on visual sighting	(	)	Yes, based on other information
		( ) No	(	)	Unknown			
	i)	Avoiding action taken						
		() Yes	(	)	No	(	)	Unknown

4.	Dista	nce							
	a)	Closest horizontal distance							
	b)	Closest vertical distance							
	.,								
5.	Fligh	t weather conditions							
	a)	IMC / VMC*							
	b)	Above / below* clouds / fog / haze or between layers*							
	c)	Distance vertically from cloud m / ft* below m / ft* above							
	d)	In cloud / rain / snow / sleet / fog / haze*							
	e)	Flying into / out of* sun							
	f)	Flight visibility m / km*							
6.	6. Any other information considered important by the pilot-in-command								
D –	- MISC	ELLANEOUS							
1.	Infor	mation regarding reporting aircraft							
	a)	Aircraft registration							
	b)	Aircraft type							
	c)	Operator							
	d)	Aerodrome of departure							
	,	Aerodrome of first landing							
	e)	destination							
	f)	Reported by radio or other means to (name of ATS unit) at time UTC							
	g)	Date / time / place of completion of form							
2.	Func	tion, address and signature of person submitting report							
	a)	Function							
	b)	Address							
	c)	Signature							
	d)	Telephone number							
∥—	-,	·							
3.	Func	tion and signature of person receiving report							
	a)	Eunction b) Signature							
	aj								



	Instructions for completion of the Air Traffic Incident Report Form							
ltem								
А	Aircraft identification of the aircraft filing the report.							
В	An AIRPROX report should be filed immediately by radio.							
C1	Date / time UTC and position in bearing and distance from a navigation aid or in LAT / LONG.							
C2	Information regarding aircraft filing the report, tick as necessary.							
C2 c)	E.g. FL 350 / 1013 HPA or 2500 FT / QNH 1 007 HPA or 1200 FT / QFE 998 HPA.							
C3	Information regarding the other aircraft involved.							
C4	Passing distance - state units used.							
C6	Attach additional papers as required. The diagrams may be used to show aircraft's positions.							
D1 f)	State name of ATS unit and date / time in UTC.							
D1 g)	Date and time in UTC.							
E2	Include details of ATS unit such as service provided, radiotelephony frequency, SSR Codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.							

I

## ENR 2. AIR TRAFFIC SERVICES AIRSPACE ENR 2.1 FIR, UIR, TMA AND CTA

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
BAHRAIN FIR	BAHRAIN ACC			
284400.00N   0494000.00E   -     270500.00N   0505500.00E   -     265500.00N   0511000.00E   -     261356.00N   0513849.00E   -     262134.00N   0512301.00E   -     262134.00N   0514220.00E   -     262117.00N   0510420.00E   -     261330.00N   0505513.00E   -     261102.00N   0505503.00E   -     then follow the limit of Qatar and Bahrain   territorial waters then follow the sovereign     boundary and limit of territorial waters between   Qatar and Saudi Arabia to 243731N 0512406E     243747N 0512421E   243817N 0512608E     244247N 0513422E   244900N 0520000E     245046N 0522215E   240300N 0514700E then     follow the sovereign boundary between Saudi   Arabia and the United Arab Emirates to     224200N 0551200E   . And     250224N   0523054E     245059N   0521837E     245046N   0522215E     250224N   0523054E     FIR vertical limit: SFC to UNL.     Bahrain FIR also includes the airspace defined by	DARRAIN ACC			
NORTH LOW SECTOR	BAHRAIN ACC	BAHRAIN	126.700 MHZ	SFC to FL345
271557.30N 0504650.00E - 270757.00N 0503655.32E - 270838.05N 0495202.00E - 275000.00N 0490800.00E - 281500.00N 0485200.00E - 284400.00N 0494000.00E - 271557.30N 0504650.00E		NORTH LOW English H24		

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
NORTH HIGH SECTOR	BAHRAIN ACC	BAHRAIN NORTH HIGH	127.575 MHZ	Above FL345
271557.30N 0504650.00E - 270757.00N 0503655.32E - 270838.05N 0495202.00E -		English		
275000.00N 0490800.00E - 281500.00N 0485200.00E -		H24		
284400.00N 0494000.00E - 271557.30N 0504650.00E				
CENTRAL LOW SECTOR	BAHRAIN ACC	BAHRAIN CENTRAL LOW	122.300 MHZ	FL295 and Below
270838.05N 0495202.00E - 270757 00N 0503655 32E -		English		
271557.30N 0504650.00E -		English		
270500.00N 0505500.00E -		H24		
265810.49N 0510515.00E -				
265500.00N 0511000.00E -				
264440.00N 0514359.00E -				
261356.00N 0513849.00E -				
262134.00N 0512301.00E -				
262309.03N 0511035.90E -				
261706.75N 0510440.96E -				
253931.23N 0504955.03E -				
253214.43N 0504639.92E -				
253246.99N 0503421.79E -				
253400.00N 0503319.00E -				
253544.00N 0503147.55E -				
254057.00N 0502608.00E -				
254227.58N 0502503.18E -				
254412.03N 0502415.09E -				
254906.47N 0502201.00E -				
255100.70N 0502002.40E -				
255700 25N 0501735 44E				
260038 72N 0501656 30E -				
260450 10N 0501611 00F -				
261018 28N 0501852 34F -				
261515 00N 0501908 00F -				
262217.45N 0502026 57F -				
262424.00N 0502218.51E -				
263148.00N 0502315.00E -				
263420.00N 0502759.00E -				
265644.00N 0500434.00E -				
270838.05N 0495202.00E				

Name	Unit providing	Call sign	Frequency/	Remarks
Lateral limits	service	Languages	Purpose	
Vertical limits		Area and		
Class of airspace		conditions of		
		use		
		Hours of service		
1	2	3	4	5
CENTRAL HIGH SECTOR	BAHRAIN ACC	BAHRAIN CENTRAL HIGH	124.300 MHZ	Above FL295 to FL345
270838.05N 0495202.00E -				
270757.00N 0503655.32E -		English		
271557.30N 0504650.00E -				
270500.00N 0505500.00E -		H24		
265810.49N 0510515.00E -				
265500.00N 0511000.00E -				
264440.00N 0514359.00E -				
261356.00N 0513849.00E -				
262134.00N 0512301.00E -				
262309.03N 0511035.90E -				
261706.75N 0510440.96E -				
253931.23N 0504955.03E -				
253214.43N 0504639.92E -				
253246.99N 0503421.79E -				
253400.00N 0503319.00E -				
253544.00N 0503147.55E -				
254057.00N 0502608.00E -				
254227.58N 0502503.18E -				
254412.03N 0502415.69E -				
254908.47N 0502201.00E -				
255106.78N 0502002.46E -				
255301.53N 0501807.00E -				
255709.25N 0501735.44E -				
260038.72N 0501656.30E -				
260450.10N 0501611.00E -				
261018.28N 0501852.34E -				
261515.00N 0501908.00E -				
262217.45N 0502026.57E -				
262424.00N 0502218.51E -				
263148.00N 0502315.00E -				
263420.00N 0502759.00E -				
265644.00N 0500434.00E -				
270838.05N 0495202.00E				

Name Lateral limits Vertical limits	Unit providing service	Call sign Languages Area and	Frequency/ Purpose	Remarks
Class of airspace		conditions of use		
		Hours of service		
1	2	3	4	5
CENTRAL SUPER SECTOR	BAHRAIN ACC	BAHRAIN CENTRAL	127.525 MHZ	Above FL345
270838.05N 0495202.00E -		SUPER		
270757.00N 0503655.32E -		E a alla h		
271557.30N 0504650.00E -		English		
270500.00N 0505500.00E -		LI24		
265500 00N 0511000 00E -		F124		
264440.00N 0514359.00E -				
261356 00N 0513849 00E -				
262134.00N 0512301.00E -				
262309.03N 0511035.90E -				
261706.75N 0510440.96E -				
253931.23N 0504955.03E -				
253214.43N 0504639.92E -				
253246.99N 0503421.79E -				
253400.00N 0503319.00E -				
253544.00N 0503147.55E -				
254057.00N 0502608.00E -				
254227.58N 0502503.18E -				
254412.03N 0502415.69E -				
254908.47N 0502201.00E -				
255100.76N 0502002.40E -				
255709 25N 0501735 44E -				
260038 72N 0501656 30E -				
260450 10N 0501611 00F -				
261018.28N 0501852.34E -				
261515.00N 0501908.00E -				
262217.45N 0502026.57E -				
262424.00N 0502218.51E -				
263148.00N 0502315.00E -				
263420.00N 0502759.00E -				
265644.00N 0500434.00E -				
270838.05N 0495202.00E				
	DALIDANIA	DALID	400 407	AL
EAST HIGH SECTOR	BAHRAIN ACC	BAHRAIN EAST	132.125 MHZ	Above FL345
264440.00N 0544250.00F		HIGH		
204440.00N 0514359.00E -		English		
200+00.00N 0333700.00E -		English		
253801 00N 0525744 00E -		H24		
261356 00N 0513849 00E -		1124		
264440.00N 0514359.00E				
EAST LOW SECTOR	BAHRAIN ACC	BAHRAIN EAST	132.850 MHZ	FL250 to FL345
		LOW		
264440.00N 0514359.00E -		En ell's h		
200400.00N 0535700.00E -		English		
234900.00N 0530000.00E -		Ц24		
255501.00N 0525744.00E - 261356 00N 0513849 00E -		1124		
264440.00N 0514359.00E				

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
BAHRAIN UIR	BAHRAIN ACC			RVSM rules apply between FL 290 - FL 410 inclusive
THE BOUNDARY OF THE UIR IS THE SAME AS THAT OF THE FIR. UNL FL250 Class of Airspace A, FL 150 / FL 460 Class of Airspace; G, above FL 460				ALL AIRCRAFT INBOUND TO OBBB FIR FROM OIIX FIR ARE REQUIRED TO CONTACT OBBB ATC FIVE MINUTES BEFORE FIR BOUNDARY ESTIMATE.KUVER ABOVE FL345 CONTACT FREQ 127.575 MHZ.KUVER AT AND BELOW FL345 CONTACT FREQ 126.700 MHZ,ALSER FL240 AND BELOW CONTACT FREQ 126.700 MHZ,ALSER FL250 UP TO FL295 CONTACT FREQ 122.300 MHZ.ALSER FL300-FL345 CONTACT FREQ 122.300 MHZ.ALSER FL300-FL345 CONTACT 124.300 MHZ. AND ABOVE FL345 CONTACT 127.525 MHZ.MIDSI FL250 - FL345 CONTACT FREQ 132.850 MHZ.MIDSI ABOVE FL345 CONTACT FREQ 132.125 MHZ.
BAHRAIN TMA     2655644.00N   0500434.00E -     265553.00N   0504134.00E Clockwise arc     radius 40 NM centered at 261529.93N     0503919.18E (BHR DVOR) -     260838.00N   0512245.00E -     261706.56N   0510440.74E -     253643.00N   0503852.00E -     251546.00N   0503855.00E -     252144.00N   0503855.00E -     252336.00N   0503711.00E -     252510.00N   0503716.00E -     252510.00N   0503716.00E -     252510.00N   0503741.00E -     252510.00N   0503741.00E -     25336.00N   0503741.00E -     253111.00N   0503544.00E -     25343.98N   0503147.55E -     254057.00N   0502607.75E -     25427.58N   0502200.71E -     255709.25N   0501735.44E -     260450.10N   0501852.34E -     261018.28N   0501852.34E -     261514.69N   0501907.80E -     26217.45N   0502206.57E -     262423.93N   0502218.51E -     263148.00N   0502315.00	BAHRAIN APP	BAHRAIN APPROACH English H24	127.850 MHZ 119.100 MHZ 234.950 MHZ Alternate frequency	ALL FLIGHTS OPERATING WI OBBB FIR ARE REQUESTED TO ADHERE TO THE FOLLOWING:-THE WORD ( HEAVY ) OR (SUPER ) SHALL BE USED IN INITIAL COMMUNICATION CALLS BETWEEN SUCH AIRCRAFT AND BAHRAIN APPROACH OR BAHRAIN TOWER.

	-			
Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use	Frequency/ Purpose	Remarks
		Hours of service		
1	2	3	4	5
BAHRAIN CTA	BAHRAIN ACC			For Call sign and frequency
				see Sector description.
284400.00N 0494000.00E -				
270500.00N 0505500.00E -				
265500.00N 0511000.00E -				
264440.00N 0514359.00E -				
261356.00N 0513849.00E -				
262340.00N 0512301.00E -				
262117 00N 0510420 00E -				
261609 00N 0510016 00E -				
261330.00N 0505513.00E -				
261102.00N 0505503.00E -				
260438.00N 0505427.00E -				
260040.00N 0505100.00E -				
255342.00N 0504857.00E -				
255226.00N 0504912.00E -				
255140.00N 0504953.00E -				
254843.00N 0505032.00E -				
254657.00N 0505123.00E -				
254600.00N 0505140.00E -				
254535.00N 0505153.00E -				
254458.00N 0505205.00E -				
254407.00N 0505158.00E -				
254227.00N 0505109.00E -				
254127.00N 0505143.00E -				
254010.00N 0505030.00E -				
253843 00N 0505000.00E -				
253819 00N 0505022 00E -				
253745 00N 0504944 00E -				
253721.00N 0504754.00E -				
253533.00N 0504649.00E -				
253433.00N 0504737.00E -				
253349.00N 0504832.00E -				
253344.00N 0504904.00E -				
253255.00N 0504848.00E -				
253240.00N 0504854.00E -				
253206.00N 0504836.00E -				
253243.00N 0504746.00E -				
253255.00N 0504648.00E -				
253249.00N 0504611.00E -				
253329.00N 0504549.00E -				
253421.00N 0504405.00E -				
253453.00N 0504133.00E -				
253510 00N 0503448 00E -				
253434 00N 0503403 00E -				
253400.00N 0503319.00E -				
253544.00N 0503147.54E -				
254057.00N 0502608.00E -				
254227.57N 0502503.18E -				
254908.46N 0502201.00E -				
255301.53N 0501807.00E -				
255709.25N 0501735.43E -				
260450.10N 0501611.00E -				
261018.28N 0501852.34E -				
261515.00N 0501908.00E -				
262217.45N 0502026.56E -				
202424.00N 0502218.51E	1			

	Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
	1	2	3	4	5
263148.00N 263420.00N 265234.00N 265644.00N 265645.24N 275000.00N 281500.00N 284400.00N 240300.00N 240300.00N 240724.00N 241458.00N 241458.00N 244247.00N 245959.00N 245959.00N 250224.00N 250224.00N 250224.00N 250224.00N 250224.00N 253801.00N 253801.00N 261356.00N 261356.00N 261356.00N 261356.00N 261356.00N 261356.00N	0502315.00E - 0502759.00E - 0500434.00E - 0500432.59E - 0490800.00E - 0485200.00E - 0494000.00E - 0514700.00E - 0514700.00E - 0513526.00E - 0513526.00E - 0522215.00E - 0522215.00E - 0522215.00E - 05223054.00E - 0523054.00E - 0523054.00E - 0523054.00E - 0525744.00E - 0513849.00E - 0513849.00E - 0514359.00E - 0514550.00E - 0514550.00E - 0514550.00E - 0514550.00E - 0514550.00E - 0514550.00E - 05145				

## ENR 2.2 OTHER REGULATED AIRSPACE

## 2.2.1 KINGDOM OF BAHRAIN

2.2.1.1 See AD 2.24 chart list. Also see AD 1.1 for civil use and AD 2.17 for ATS airspace.

2.2.1.2 RBAF authorities are responsible for Air Traffic Services within Bahrain territorial airspace East of Jeddah FIR, West of Doha TMA and south of line:- 255405N 0505543E - 260457N 0503655E - 260457N 0501615E.

This line is commonly referred to as referred to as "OBSOBI" line.

### ENR 3. ATS ROUTES

### ENR 3.1 LOWER ATS ROUTES

Note: All ATS Routes in Bahrain FIR are RNAV 1, See joint listing in ENR 3.3

## ENR 3.2 UPPER ATS ROUTES

NIL

## ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route designator	Track MAG	Upper limit	Lateral	Direct	ion of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruis	sing	Controlling unit channel
Name of significant points	VOR RDL	Aironace	(NM)	lev	els	Logon address
Coordinates		Airspace				
	(INIVI) (COP)	classification		Odd	Even	
		Minimum flight				
1	2	annude	4	5		6
1	2	5	-		,	0
A453 (BNAV 1)						
(KNAV I)						
						DEP
						DEST OKAC AP. REFER TO SRD SUP
						FOR
						DETAILS.
						AVBL FOR OIIX FIR TFC TRANSITING
						ТО
						OEJD FIR. REFER TO SRD SUP FOR
						DETAILS.
264142N 0515442E	226°	FL 460	1			OIIX / OBBB FIR BDRY
	12.0 NM	4 500 FT MSL			_ ↓	BAHRAIN CONTROL
					•	FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345 ABV)
DOTOD	1					FREQ: 132.830 (FL345 BLW)
ROIOR		ļ				
263350N 0514505E	225°					BAHRAIN CONTROL
	17.0 NM					FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345 ABV)
						FREQ: 132.850 (FL345 BLW)
SOLOB						
▲ 262241N 0513132E	260°					BAHRAIN CONTROL
	8.0 NM					FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.3 (BLW FL295)
TOBLI						
▲ 262134NL0512301E	260°					BAHRAIN CONTROL
20213410 03123012	8.0 NM					FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.3 (FL175 – FL290)
						FREQ: 127.85 (FL170 BLW)
SOGAT						
262020N 0511442E	260°	1				BAHRAIN CONTROL
262029N 0511443E	4 0 NM					FI 145 BI W CLASS C
	4.0 140					FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.3 (FL175 – FL290)
						FREQ: 127.85 (FL170 BLW)
RIKET	1					
	260°	1				
261952N 0510954E	7 0 NM					FL 145 BLW CLASS C
	7.0140					FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.3 (FL175 – FL290)
	1					FREQ: 127.85 (FL170 BLW)
KUKDA (FIR BDRY)	1					
	260°	1				BAHRAIN CONTROL
2010001 U01U228E	5 0 NM					FL460/FL150 CLASS A
	5.0 INIVI					FL145 - 4500 FT MSL CLASS C
	1					FREQ: 127.525 (ABV FL345)
	1					FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL180 – FL295)
						FREQ: 127.850 (FL170 BLW)
ASTAD	1					
I▲	L		1	L		

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	limits (NM)	cruising levels	Controlling unit channel Logon address
Coordinates	DIST (NM) (COP)	Airspace classification		Odd Fuer	-
	(, (,	Minimum flight		Odd Even	
1	2	3	4	5	6
261812N 0505646E	260°	FL 460	1		BAHRAIN CONTROL
	16.0 NM	4 500 FT MSL		↓	FL145 BLW CLASS C FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290) FREQ <sup>:</sup> 127 85 (FL170 BLW)
BAHRAIN DVORDME (BHR)					
▲ 261530N 0503919E	337°				BAHRAIN CONTROL
	9.0 NM				FL145 BLW CLASS C FREO: 127 525 (ABV EL 345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
ELOSO					FREQ. 127.03 (FL170 BLW)
▲	339°				BAHRAIN CONTROL
	9.0 NM				FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
DESBU					FREQ: 127.85 (FL170 BLW)
▲ 263240N 0503241E	339°				BAHRAIN CONTROL
	10.0 NM				FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
FGMOR					FREQ: 127.85 (FL170 BLW)
▲	315°				BAHRAIN CONTROL
2042111 0302307	9.0 NM				FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
LOTOR					FREQ: 127.85 (FL170 BLW)
	314°				BAHRAIN CONTROL
204894N 0502200E	19.0 NM				FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREQ: 124-3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
DAMSI					FREQ: 127.85 (FL170 BLW)
	308°				BAHRAIN CONTROL
270249N 05007 14E	40.0 NM				FL460/L150 CLASS A
					FL145 BLW CLASS C FREO: 127 575 (ABV EL 345)
					FREQ: 126.700 (FL345 BLW)
ORNAK					
272854N 0493248E	319°				BAHRAIN CONTROL
	30.0 INIM				FL145 BLW CLASS C
					FREQ: 127.575 (ABV FL345)
SOLEM					11124 120.700 (FL340 DLVV)
▲ 275229N 0491136E	328°				BAHRAIN CONTROL
	28.0 NM				FL460/L150 CLASS A
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
281705N 0485526E					REFER TO KUWAIT AIP

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction of cruising levels Odd Even	Remarks Controlling unit channel Logon address
1	2	3	4	5	6
B415 (RNAV 1)					AVBL FOR OBBB FIR AP OR E OEJD AP DEP DEST OKAC AP. REFER TO SRD SUP FOR DETAILS. AVBL FOR OIIX FIR TFC TRANSITING TO OEJD FIR. REFER TO SRD SUP FOR DETAILS.
250445N 0521151E	103° 283°	FL 460 4 500 FT MSL	1	↓	REFER TO QATAR, UAE AIP FOR DE- TAILS
BUNDU (FIR BDRY)	16.5 NM				
250024N 0522924E					OBBB / OMAE FIR BDRY REFER TO UAE AIP

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction cruising levels Odd Ev	of Remarks Controlling unit channel Logon address
1	2	3	4	5	6
B416 (RNAV 1)   △ AMBIK (FIR BDRY)   283222N 0492025E	116° 46.0 NM	FL 250 4 500 FT MSL	1	→	AVBL FOR OKAC FIR TFC TRANSITING TO OIIX FIR AT OR BLW FL250. REFER TO SRD SUP FOR DETAILS. OKAC / OBBB FIR BDRY BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 126.700
▲ 280924N 0500600E					OBBB / OIII FIR BDRY REFER TO IRAN AIP

B419 (RNAV 1)

RAMSI

270249N 0500714E

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction of cruising levels Odd Even	Remarks Controlling unit channel Logon address
1	2	3	4	5	6
					AVBL FOR E OEJD AP DEP TFC TO OKAC FIR. REFER TO SRD SUP FOR DETAILS. WHEN INDICATED BY NOTAM ONLY, AVBL FOR E OEJD AP DEP TFC TO OIIX FIR VIA ROTOX. REFER TO SRD SUP FOR DETAILS.
265645N 0500433E	019° 7.0 NM	FL 460 4 500 FT MSL	1	↓	OBBB / OEJD FIR BDRY BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 126.7 (FL175 – FL250)

### ENR 3.3-5 23 MAR 23

FREQ: 122.300 (FL255 - FL295) FREQ: 127.850 (FL170 BLW BAHRAIN

BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)

APP)

			1	<b>D</b>	
Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEU)	Lower limit		cruising	
		Airspace	(INIVI)	levels	Logon address
Coordinates		classification			
		olacomouton		Odd Even	
		Minimum flight			
1	2	3	4	5	6
		J	-	J	,
B457					
					AVBL FOR OBBB FIR AP DEP TO OEJD
					FIR OR OTHH, OTBD DEP TFC LDG
					OKAC FIR. REFER TO SRD SUP FOR
					DETAILS. AVBL FOR OTDF FIR DEP TO
TULUB					OEJD FIR
	20.20	EL 460		· · ·	
260644N 0510041E	292	FL 400	1		
	6.0 INIVI	4 500 FT MSL		↓	FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
					FREQ: 127 85 (FI 170 BI W)
	0000				
260908N 0505452E	292°				BAHRAIN CONTROL
	15.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					EREQ: 122 3 (EI 175 – EI 290)
					EREO: 127 85 (EL 170 BLW)
BAHRAIN DVORDME (BHR)					
	0700			1	
261530N 0503919E	2/6				BAHRAIN CONTROL
	17.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL175 – FL290)
					EREQ: 127.85 (EL 170 BLW)
NARMI (FIR BDRY)					
261802N 0501939E					
		1	1	1	

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	L ower limit	limits	cruising	Controlling unit channel
Name of significant points	VOR RDL	Lower mint	(NM)	levels	Logon address
Coordinates	DIST	Airspace			
	(INIM) (COP)	Classification		Odd Even	
		Minimum flight			
1	2	3	4	5	6
G663		-	-		
(RNAV 1)					
					AP OR E OEJD AP. REFER TO SRD SUP
					FOR DETAILS.
					AVBL FOR OIXX FIR TFC TRANSITING
					DETAILS.
ALSER (FIR BDRY)					
271100N 0504900E	225°	FL 460	1		
	3.0 NM	4 500 FT MSL			FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 122.3 (FL255 – FL290)
					FREQ: 126.700 (FL250 BLW)
VEDOR					
270855N 0504630E	226°				BAHRAIN CONTROL
	7.0 NM				FL460/FL150 CLASS A
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
OFTAL					FREQ: 126.700 (FL250 BLW)
270410N 0504040E	226°				
	8.0 NM				
					FREQ: 127 525 (ABV FL 345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 126.700 (FL250 BLW)
КОВОК					
▲	226°				BAHRAIN CONTROL
2000001100000402	5.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ. 124.3 (FL295 – FL345) FREO: 122.3 (FL255 – FL290)
					FREQ: 126.700 (FL250 BLW)
τοι μο					
	224°				
265504N 0502927E	224 4 0 NM				EL 460/EL 150 CLASS A
	4.0 140				FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL255 – FL290)
DAKAK					ΓΚΕΨ: 121.000 (FL110 BLW)
265221N 0502618E	226°				
	5.0 NM				
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345)
					FREQ: 122.3 (FL255 – FL290)
					FREQ: 127.850 (FL170 BLW)
LOTOR					
▲ 264854N 0502200F	234°				BAHRAIN CONTROL
	6.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.3 (FL295 – FL345) FREO: 122.3 (FL255 – FL200)
					FREQ: 127.850 (FL 170 BLW)
ULADA (FIR BDRY)					
20402/IN 0501024E			1	1	

REFER TO SAUDI AIP

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direc crui lev Odd	tion of sing vels	Remarks Controlling unit channel Logon address
1	2	3	4	4	5	6
L319 (RNAV 1) ▲ BAHRAIN DVORDME (BHR) 261530N 0503919E	023° 38.0 NM	FL 460 4 500 FT MSL	1	Ļ		AVBL FOR OEJD FIR TFC TRANSITING TO OIIX FIR VIA OBTAR. MAX FL230. REFER TO SRD SUP FOR DETAILS. AVAILABLE FOR BAH TMA AP DEP OR E OEJD AP DEP TO OIIX FIR VIA OBTAR. REFER TO SRD SUP FOR DETAILS. BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 122.300 (FL175 ABV) FREQ: 127.850 (FL170 BLW BAHRAIN APP)
▲ DAVRI 264936N 0505732E OBTAR (FIR BDRY) 265934N 0510309E	025° 11.0 NM					BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 122.300 (FL175 ABV) FREQ: 127.850 (FL170 BLW BAHRAIN APP) OBBB / OIIX FIR BDRY
265934N 0510309E						OBBB / OIIX FIR BDRY REFER TO OIIX AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Name of significant points	VOR RDL	Aironaaa	(NM)	levels	Logon address
Coordinates	(NM) (COP)	classification		0.1115	
	(1111) (001)	Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	6
L602					
(RNAV 1)					
					AVAILABLE FOR OMAE FIR TFC OR
					OTBH DEP TFC TO OVERFLY OKAC
					FIR. REFER TO SRD SUP FOR
					DETAILS.
					MANDATORY X ALTOM IN LVL FLT.
TUMAK (FIR BDRY)					
255031N 0531108E	292°	FL 460	1		OBBB / OMAE FIR BDRY
	26.0 NM	FL 250			BAHRAIN CONTROL
					FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
260109N 0524456E	294°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
OBLUB					(1230 - 12343)
	00.4%				
260651N 0523216E	294°				
	14.0 INIVI				
					$ERE(-132, 125, (\Delta R)/E1, 345)$
					FREQ: 132.123 (ABV 1 2345)
	204°				
261307N 0521821E	294 13.0 NM				
	10.0 110				EL 145 - 4500 ET MSL CLASS C
					FREQ: 132 125 (ABV FL 345)
					FREQ: 132.850 (FL250 – FL345)
LABOP					
A 261007N 0520420E	294°				BAHRAIN CONTROL
20190710 03204292	80 NM				FI 460/FI 150 CI ASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
ALTOM					
▲ 262230N 0515639F	289°				BAHRAIN CONTROL
	6.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
BOPOV					
262430N 0515043E	288°				BAHRAIN CONTROL
	9.0 NM				FL460/FL150 CLASS A
	1				FL145 - 4500 FT MSL CLASS C
	1				FREQ. 132.123 (ABV FL345) FREO: 132.850 (FL 250 - EL 245)
					$  1 \times 10^{-1}$ $  1 \times 10^{-1$

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST	Upper limit Lower limit Airspace	Lateral limits (NM)	Direction of cruising levels	Remarks Controlling unit channel Logon address
	Coordinates	(NM) (COP)	classification Minimum flight		Odd Even	
			altitude			
	1	2	3	4	5	6
	262743N 0514108E	288° 3.0 NM	FL 460 4 500 FT MSL	1	V	BAHRAIN CONTROL FL460/FL150 CLASS FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.300 (FL290 BLW)
	ALMOK					
	262832N 0513840E	288° 20.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.300 (FL290 BLW)
	GITBO					
	263527N 0511750E	287° 16.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.3 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)
	VEDOS					
	264106N 0510045E	287° 21.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.3 (FL175 – FL290) FREO: 127 850 (FL 170 BLW)
	MOGAS					
	264800N 0503909E	307° 11.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.3 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)
						Theg. 127.000 (TETTO DEW)
	265504N 0502927E	311° 11.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.3 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)
	EGLIT					
	270256N 0502006E	311° 10.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.3 (FL295 – FL345) FREQ: 122.3 (FL255 – FL290) FREQ: 126.700 (FL250 BLW)
	ТОКМА					
	270939N 0501159E	322° 15.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
	ORSOL					
. ▲				I		

				-	
Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction of cruising levels Odd Even	Remarks Controlling unit channel Logon address
1	2	3	4	5	6
272135N 0500208E	320° 32.0 NM	FL 460 4 500 FT MSL	1	V	BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
ITNAS					
▲ 274644N 0493957E	320° 19.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
DAMUR					
▲ 280137N 0492638E	319° 18.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
ITEVO					
281558N 0491332E	319° 10.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
282346N 0490622E					REFER TO KUWAIT AIP

Route designator	Track MAG	Upper limit	Lateral	Direc	tion of	Remarks
(RNAV type)		Lower limit	(NIM)	cru	ising	Controlling unit channel
Coordinates	DIST	Airspace	(1111)	10	1013	Logon address
	(NM) (COP)	classification		Odd	Even	-
		Minimum flight		000		
		altitude				
1	2	3	4		5	6
L703						
(RNAV 1)						
						AVBL FOR OKAC FIR TFC LDG OBBB
						FIR AP OR E OEJD AP. REFER TO SRD
						SUP FOR DETAILS.
						AVBL FOR OKAC FIR STATE ACFT LDG
						DEMAIN OVER INTL WATERS DEEED
						TO SOD SUD EOD DETAILS
LONOS (FIR BDRY)						TO SRD SUP FOR DETAILS.
	135°	FL 460	1	1.		OKAC / OBBB FIR BDRY
283027N 0491713E	15.0 NM		1			BAHRAIN CONTROL
		4 500 FT MSL		$ \Psi $		FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
LOPOL						
	136°	1		1		BAHRAIN CONTROI
201030N 0492043E	8 0 NM					EI 460/EI 150 CLASS
	0.0					FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
GEPUT						
▲	139°					BAHRAIN CONTROL
20100111 04004202	13.0 NM					FL460/FL150 CLASS
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
GODRI						
280257N 0494308E	142°					BAHRAIN CONTROL
	17.0 NM					FL460/FL150 CLASS
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
GOGRA						
274918N 0495344E	142°					BAHRAIN CONTROL
	27.0 NM					FL460/FL150 CLASS
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.375 (ABV FL345)
OBNAX						1 1 1 2 0 1 1 2 0 1 1 2 0 1 1 2 0 1 1 2 0 1 1 1 1
	1400					
272651N 0501103E	142 12 0 NIM					
	13.0 1000					EL 145 - 4500 ET MSL CLASS
						EREO: 127 575 (ABV/ EL 345)
						FREQ: 126.700 (FL345 BLW)
DEKTA						
	142°					BAHRAIN CONTROL
271605N 0501946E	17 0 NM					EL 460/EL 150 CLASS
	17.0140					EI 145 - 4500 ET MSL CLASS C
				1		FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
VELOG						
▲ 270215N 0503056E	142°	1		1		BAHRAIN CONTROL
	4.0 NM			1		FL460/FL150 CLASS
						FL145 - 4500 FT MSL CLASS C
				1		FREQ: 127.575 (ABV FL345)
				1		FREQ: 126.700 (FL345 BLW)
КОВОК				1		
		•				-

Route designat (RNAV type) Name of significant Coordinates	or Track MAG (GEO) points VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction o cruising levels Odd Ever	f Remarks Controlling unit channel Logon address
1	2	2 3 4		5	6
265839N 0503349E	137° 47.0 NM	FL 460 4 500 FT MSL	1	→	BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL255 – FL290) FREQ: 126.700 (FL250 BLW)
GIRMO (FIR BDRY)					
▲ 262217N 0510740E	137° 3.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)
RIKET					
261952N 0510954E					BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST	Upper limit Lower limit Airspace	Lateralli mits(NM)	Direction of cruising levels		Remarks Controlling unit channel Logon address
		Minimum flight altitude		Odd	Even	
1	2	3	4	ļ	5	6
L721 (RNAV 1)						
ELIDU (FIR BDRY)						BAHRAIN FIR
▲ 262424N 0525133E	222° 4.0 NM	FL 460 FL 250	1		V	OIIX / OBBB FIR BDRY BAHRAIN CONTROL FL250-FL460 CLASS A FREQ 132.12 (ABV FL345) FREQ 132.85 (FL250 - FL345)
UKNEP						
▲ 262127N 0524818E	222° 10.0 NM					BAHRAIN CONTROL FL250-FL460 CLASS A FREQ 132.12 (ABV FL345) FREO 132.85 (EL 250 - EL 345)
ИКИВИ						The 102.00 (1 2200 1 2040)
▲ 261428N 0524039E	222° 11.0 NM					BAHRAIN CONTROL FL250-FL460 CLASS A FREQ 132.12 (ABV FL345) FREQ 132 85 (FL 250 - FL 345)
ORLUP						
▲ 260651N 0523216E	222° 11.0 NM					BAHRAIN CONTROL FL250-FL460 CLASS A FREQ 132.12 (ABV FL345) FREQ 132.85 (FL250 - FL345)
ITMUB						
▲ 255919N 0522402E	222° 5.0 NM					BAHRAIN CONTROL FL250-FL460 CLASS A FREQ 132.12 (ABV FL345) FREQ 132.85 (FL250 - FL345)
UKRET (FIR BDRY)						
255526N 0521946E						OTDF / OBBB FIR BDRY
Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks	
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(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel	
Name of significant points	VOR RDL	Aironaaa	(NM)	levels	Logon address	
Coordinates		classification				
		classification		Odd Even		
		Minimum flight				
1	2	altitude	4	5	6	
	-	•	-	-	<b>`</b>	
(RNAV 1)						
					AVBL FOR OMAE FIR TFC OR OIIX FIR	
					TFC TRANSITING TO OEJD FIR EXC	
					TFC LDG E OEJD AP. REFER TO SRD	
					SUP FOR DETAILS.	
					OMAE FIR AP DEP TFC MANDATORY X	
					RAMKI IN LVL FLT.	
					ULADA MIN FL300.	
ALPOB (FIR BDRY)						
	296°	FL 460	1		OMAE / OBBB FIR BDRY	
254216N 0530055E	25.0 NM	FL 050	1		BAHRAIN CONTROL	
	20.0 1414	FL 250		♥	EI 460/EI 150 CLASS A	
					FL 145 - 4500 FT MSL CLASS C	
					EREO: 132 125 (ABV/ El 345)	
					FREQ: 102.120 (FL250 - FL345)	
					(1 L200 - 1 L040)	
DOTAD						
RUTAG						
255353N 0523621E	294°				BAHRAIN CONTROL	
	12.0 NM				FL460/FL150 CLASS A	
					FL145 - 4500 FT MSL CLASS C	
					FREQ: 132.125 (ABV FL345)	
					FREQ: 132.850 (FL250 – FL345)	
ITMUB						
	204°					
2009 1910 0022402E	25.0 NM					
	20.0 1414				EL 145 - 4500 ET MSL CLASS C	
					EREO: 132 125 (AB)/ El 345)	
					ERE(132.123 (ADV + 2040))	
					(1230 - 12343)	
MODOG						
261012N 0515935E	294°				BAHRAIN CONTROL	
	3.0 NM				FL460/FL150 CLASS A	
					FL145 - 4500 FT MSL CLASS C	
					FREQ: 132.125 (ABV FL345)	
					FREQ: 132.850 (FL250 – FL345)	
RAMKI						
	294°				BAHRAIN CONTROL	
201138N 0515025E	8 0 NM					
	0.0 100					
					EDEO: 132 125 (AB)/ EL 345)	
					EDEO: 122.950 (EL250 EL245)	
					FREQ. 132.000 (FL200 - FL340)	
RABLA						
261506N 0514834E	294°				BAHRAIN CONTROL	
	9.0 NM				FL460/FL150 CLASS A	
					FL145 - 4500 FT MSL CLASS C	
					FREQ: 132.125 (ABV FL345)	
					FREQ: 132.850 (FL250 – FL345)	
OBROS (FIR BDRY)						
· · · · · · · · · · · · · · · · · · ·			1		]	

Route designator	Track MAG	Upper limit	Lateral	Direc	tion of	Remarks
(RNAV type) Name of significant points	(GEO)	Lower limit	limits (NM)	crui	sing	Controlling unit channel
Coordinates	DIST	Airspace	(1111)	101	613	Logon address
	(NM) (COP)	Minimum flight		Odd	Even	
		altitude				
1	2 204°	3 EL 460	4	4	5	
261903N 0513940E	294 8.0 NM	4 500 FT MSI	1			FL460/FL150 CLASS A FL145 BLW
		1000111102			v	CLASS C
						FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL290 BLW)
SOLOB						
262241N 0513132E	287° 9.0 NM					BAHRAIN CONTROL
						FL460/FL150 CLASS A FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL290 BLW)
ALREP						
262541N 0512209E	287°					
	0.0 INIVI					FL460/FL150 CLASS A FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 - FL290)
						FREQ: 127.850 (FL170 BLW)
ORDIG	0070					
262738N 0511603E	287° 20.0 NM					FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 - FL290)
						FREQ: 127.850 (FL170 BLW)
	286°					BAHRAIN CONTROL
2034211003034342	13.0 NM					FL460/FL150 CLASS A
						FL145 BLW CLASS C FRFO: 127 525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 - FL290) FREO: 127.850 (FL170 BLW)
OBMON						
263832N 0504125E	285°					BAHRAIN CONTROL
	12.0 NM					FL460/FL150 CLASS A
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345)
						FREQ: 127.850 (FL170 BLW)
EGMOR						
264211N 0502907E	284°					
	12.0 INIVI					FL460/FL150 CLASS A FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 - FL290)
						FREQ: 127.850 (FL170 BLW)
ULADA (FIR BDRY)						
264527N 0501624E						REFER TO SAUDI AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	(NM)	levels	Logon address
Coordinates	DIST	Airspace	. ,		C C
	(INIVI) (COP)	Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	6
L934					
(RNAV 1)					
					OVERFLY OKAC FIR. REFER TO SRD
					SUP FOR DETAILS.
					MANDATORY X ITEVO IN LVL FLT.
261441N 0510347E	317° 4 0 NM	FL 320	1		BAHRAIN CONTROL
	4.0 140	4 500 FT MSL		♥	FL145 BLW CLASS C
					FREQ: 124.300 (FL295 – FL320)
					FREQ: 122.300 (FL175 – FL290) FREO: 127.850 (FL 170 BLW)
IMLAD (FIR BDRY)					
A 261723N 0510115E	317°				BAHRAIN CONTROL
	15.0 NM				FL460/FL150 CLASS
					FL145 BLW CLASS C EREO: 124 300 (EL 295 – EL 320)
					FREQ: 122.300 (FL175 – FL290)
					FREQ: 127.850 (FL170 BLW)
EGPUD					
262904N 0505019E	317°				BAHRAIN CONTROL
	12.0 10101				FL460/FL150 CLASS FL145 BLW CLASS C
					FREQ: 124.300 (FL295 – FL320)
					FREQ: 122.300 (FL175 – FL290)
OBMON					FREQ. 127.850 (FL170 BLW)
A 263832NI 0504125E	317°				BAHRAIN CONTROL
20303211 03041232	19.0 NM				FL460/FL150 CLASS
					FL145 BLW CLASS C
					FREQ: 124.300 (FL295 – FL320) FREQ: 122.300 (FL175 – FL290)
					FREQ: 127.850 (FL170 BLW)
265320N 0502727E	317°				
	21.0 NM				FL460/FL150 CLASS FL145 BLW CLASS C
					FREQ: 124.300 (FL295 – FL320)
					FREQ: 122.300 (FL175 – FL290)
токма					TREW. 121.000 (FL110 BLVV)
270030N 0501150E	322°				BAHRAIN CONTROL
270939N 0301139E	15.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS
ORSOL					FREW. 120.700 (FL320 BLVV)
	320°				BAHRAIN CONTROL
272133N 0300200E	32.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS
ITNIAS					FREQ: 126.700 (FL320 BLW)
	310°				
274644N 0493957E	19.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS
DAMUD					FREQ: 126.700 (FL320 BLW)
					]

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	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
	Name of significant points	VOR RDL		(NM)	levels	Logon address
	Coordinates	DIST	Airspace			
		(NM) (COP)	classification		Odd Even	
			Minimum flight			
			altitude			
-	4	2	2	4	5	6
	I	2	3	4	5	0
	280137N 0492638E	319°	FL 320	1		BAHRAIN CONTROL
		18.0 NM	4 500 FT MSI			FL460/FL150 CLASS A
					V V	FL145 - 4500 FT MSL CLASS
						EREO: 126 700 (EL 320 BLW)
						11(EQ. 120.700 (1 E320 DEW)
	ITEVO					
4	2015501 04012225	319°				BAHRAIN CONTROL
	201550N 0491552E	10.0 NIM				
		10.0 100				
						FL145 - 4500 FT MSL CLASS
						FREQ: 126.700 (FL320 BLW)
	DAVUS (FIR BORY)					
1	282346N 0490622E					OBBB / OKAC FIR BDRY
						REFER TO KUWAIT AIP
					1	1

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	limits (NM)	cruising levels	Controlling unit channel Logon address
Coordinates		Airspace			<b>3</b>
		Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	6
(KNAV I)					
					AND OTHH/OTBD DEP TO
					OVERFLY OKAC FIR. REFER TO SRD
тшив					SUP FOR DETAILS.
	292°	FL 460	1	1	BAHRAIN CONTROL
20004410 0310041E	6.0 NM	4 500 FT MSL	1		FL460/FL150 CLASS A
				<b>v</b>	FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREO: 124 300 (FL 295 – FL 345)
					FREQ: 122.300 (FL175 – FL290)
					FREQ: 127.850 (FL170 BLW)
KINID (FIR BDRY)					
260908N 0505452E	292°				BAHRAIN CONTROL
	15.0 100				FL460/FL150 CLASS A FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL295 – FL345)
					FREQ: 122.300 (FL175 – FL290) FREQ: 127.850 (FL 170 BLW)
BAHRAIN DVORDME (BHR)					
▲	337°				BAHRAIN CONTROL
	9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C EREO: 127 525 (ABV EL 345)
					FREQ: 124.300 (FL295 – FL345)
					FREQ: 122.300 (FL175 – FL290)
51.000					FREQ: 127.850 (FL170 BLW)
	220°				
262409N 0503551E	339 9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL 175 – FL290)
					FREQ: 127.850 (FL170 BLW)
DESBU					
263240N 0503241E	339°				
	10.0 NM				FL460/FL150 CLASS A FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL295 – FL345)
					FREQ: 122.300 (FL175 – FL290)
EGMOR					(1 L 17 DEVV)
▲	314°				BAHRAIN CONTROL
	9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345)
					FREQ: 122.300 (FL175 – FL290)
					FREQ: 127.850 (FL170 BLW)

	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
	Name of significant points	VOR RDL	201101 11111	(NM)	levels	Logon address
	Coordinates	DIST	Airspace	. ,		, i i i i i i i i i i i i i i i i i i i
		(NM) (COP)	classification		Odd Even	•
		( )( )			Odd Even	
			Minimum flight			
			altitude			
	1	2	3	4	5	6
	2649E4N 0E02200E	314°	FL 460	4	1	
	204004IN U0U22UUE		1 2 400	1		
		19.0 NW	4 500 FT MSL		1 1	FL460/FL150 CLASS A
					•	FL145 BLW CLASS C
						FREQ: 127 525 (ABV FL 345)
						EDEO: 124 200 (EL 205 EL 245)
						(124.300 (1223) - 12343)
						FREQ: 122.300 (FL175 – FL290)
						FREQ: 127.850 (FL170 BLW)
	DAMO					
	RAMSI					
	270249N 0500714E	319°				BAHRAIN CONTROL
	27024011 00007 142	18.0 NM				EL460/EL150 CLASS A
		10.0 110				
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126,700 (FL345 BLW)
	ODDAN					
	ORDAN					
	271706N 0405442E	319°				BAHRAIN CONTROL
	271700IN 0493442L	21 O NM				
		31.0 NW				
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						EREQ: 126 700 (EL 345 BLW)
	GIRSI					
	274126N 0402211E	318°				BAHRAIN CONTROL
	27412010 0495511E					
		20.0 INIVI				FL400/FL 150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						EREO: 126 700 (EL 345 BLW)
						11(EQ: 120.700 (1 E040 DEW)
1.	ENASO					
	275707N 0401011F	334°				BAHRAIN CONTROL
	21310/10 0491911E					
		19.0 INIVI				
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						EREO: 126 700 (EL 345 BLW)
						11120.120.100 (1 2040 DEW)
1.	EMORI					
	2014241 04040545	333°				BAHRAIN CONTROL
	201434N 0491051E	10.0 114				
		10.0 NM				FL400/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						EREO: 126 700 (EL 345 BLW)
						$(\Gamma L 345 D L VV)$
	DAVUS (FIR BDRY)					
					1	
	282346N 0490622E					
						REFER TO KUWAIT AIP

EGNIM (FIR BDRY)

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Coordinates		Airspace	(INIVI)	levels	Logon address
	(NM) (COP)	classification		Odd Even	
		Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	6
M600					
(RNAV 1)					
					AVBL FOR OMAE FIR TEC OR OTBH
					DEP TECT DG IN OKAC FIR REFER TO
					SRD SUP FOR DETAILS
					EXP X KUMBO EL 180 BLW
TUMAK (FIR BDRY)					
	202°	EL 460		-	
255031N 0531108E	292	FL 400	1		
	26.0 INIVI	FL 250		↓	
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
VEDOM					
260109N 0524456E	294°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
ORLUP					
	294°				BAHRAIN CONTROL
200051N 0523210E	14 0 NM				EL 460/EL 150 CLASS A
	14.0 140				EL 145 - 4500 ET MSL CLASS C
					EREQ: 132 125 (ABV FL 345)
					EREQ: 132 850 (El 250 – El 345)
261307N 0521821E	294°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
LABOP					
261907N 0520429E	294°				BAHRAIN CONTROL
	8.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
ALTOM					
	289°				BAHRAIN CONTROL
202230N 0515039E	6 0 NM				EL 460/EL 150 CLASS A
	0.0 1111				EI 145 - 4500 ET MSL CLASS C
					EREQ: 132 125 (ABV FL 345)
					EREQ: 132 850 (El 250 – El 345)
BOROV					
262430N 0515043E	288°				BAHRAIN CONTROL
	9.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)

		-				
	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
	Name of significant points	VOR RDL	Airanaaa	(NM)	levels	Logon address
	Coordinates		classification			
		(INIVI) (COP)	classification		Odd Even	
			Minimum flight			
			altitude			
	1	2	3	4	5	6
	262742N 0514108E	287°	FL 460	4		
	262743N 0514108E	201	1 2 400	1		
		5.0 INIVI	4 500 FT MSL		↓	
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.300 (FL290 BLW)
	ALMOK					
	//Emore					
	262832N 0513840E	288°				BAHRAIN CONTROL
		20.0 NM				FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127 525 (ABV FI 345)
						EREO: 124 3 (EI 295 - EI 345)
						EDEO: 122 300 (EL 200 BL W/)
						(122.300 (12290 BEW)
	GITBO					
	263527N 0511750E	287°				BAHRAIN CONTROL
	LUGULIN UUTTUUL	16.0 NM				EL460/EL150 CLASS A EL145 BLW
		10.011				
						FREQ. 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.300 (FL290 BLW)
						FREQ: 127.850 (FL170 BLW)
	VEDOS					
		007°				
	264106N 0510045E	287				
		21.0 NM				FL460/FL150 CLASS A FL145 BLW
						CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.3 (FL295 – FL345)
						FREQ: 122.300 (FL290 BLW)
						FREQ: 127 850 (FI 170 BI W)
	MOCAS					
	MOGAS					
	264800N 0503909E	289°				BAHRAIN CONTROL
		12.0 NM				FL460/FL150 CLASS A FL145 BLW
						CLASS C
						FREQ: 127.525 (ABV FL345)
						EREO: 124.3 (El 295 – El 345)
						EREO: 122 300 (EL 200 BLW)
						EDEO: 127.850 (EL 170 PL W)
	DALLALL					$\left[ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
	RAKAK					
	265221N 0502618E	300°				BAHRAIN CONTROL
	2002211000020102	20.0 NM				EL460/EL150 CLASS A EL145 BLW
						EDEO: 127 525 (AD)/ EL 245)
						FREQ. 127.325 (ABV FL345)
						FREQ: 124.3 (FL295 - FL345)
						FREQ: 122.300 (FL290 BLW)
						FREQ: 127.850 (FL170 BLW)
	RAMSI					
		308°				
	270249N 0500714E	300				
		40.0 NM				FL40U/FL15U CLASS A
						FL145 BLW CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
	ORNAK					
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Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Name of significant points	VOR RDL	Airanaaa	(NM)	levels	Logon address
Coordinates		classification			
		classification		Odd Even	
		Minimum flight			
		altitude			
1	2	3	4	5	6
272854N 0493248E	319°	FL 460	1		BAHRAIN CONTROL
	30.0 NM	4 500 FT MSI	-		FL460/FL150 CLASS A
				v	FL145 BLW CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126,700 (FL345 BLW)
SOLEM					
275229N 0491136E	328°				BAHRAIN CONTROL
	28.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
281705N 0485526E					OBBB / OKAC FIR BDRY
					REFER TO KUWAIT AIP

Route designator	Track MAG	Upper limit	Lateral	Direc	tion of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	limits (NM)	crui lev	sing /els	Controlling unit channel Logon address
Coordinates	DIST (NM) (COP)	Airspace classification		Odd	Even	, i i i i i i i i i i i i i i i i i i i
		Minimum flight altitude		ouu		
1	2	3	4		5	6
M677						
(RNAV 1)						
						OVERFLYING N OMAE FIR. REFER TO
						SRD SUP FOR DETAILS. MANDATORY X DEBGU IN LVL FLT
						N OMAE FIR LDG TFC ABV FL310 EXP X
RABAP (FIR BDRY)						DEGSO FL310 BLW.
283625N 0492722E	119°	FL 460	1	1		
	22.0 NIM	4 500 FT MSL		$ \downarrow$		FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
PASAK						
282500N 0494847E	146°					BAHRAIN CONTROL
	57.0 NM					FL460/FL150 CLASS A FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
273734N 0502437E	143°					BAHRAIN CONTROL
21313410 0302431	13.0 NM					FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
DEBGU						
272648N 0503252E	143° 22.0 NM					BAHRAIN CONTROL FL460/FL150 CLASS A
	22.0 14					FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
VEDOR						
270855N 0504630E	133°					BAHRAIN CONTROL
	13.0 NM					FL460/FL150 CLASS FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL255 -FL290)
						FREQ: 126.700 (FL250 BLW)
270005N 0505629E	120° 15.0 NM					BAHRAIN CONTROL EL 145 - 4500 ET MSL CLASS C
	13.0 1000					FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREQ: 122 300 (FL175 – FL290)
						FREQ: 127.850 (FL170 BLW)
TORBO						
265223N 0511024E	106° 26.0 NM					BAHRAIN CONTROL
	20.0 110					FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 122.300 (FL290 BLW)
SEVNI						
264401N 0513815E	106°					BAHRAIN CONTROL
	J.U INIVI					FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 122.300 (FL290 BLW)
ASROK (FIR BDRY)						

	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
	Name of significant points	VOR RDL	Airenaco	(NM)	levels	Logon address
	Coordinates		classification			
		(INIVI) (COP)	classification		Odd Even	
			Minimum flight			
			altitude			
	1	2	3	4	5	6
	264225N 0514336E	106°	FL 460	1		BAHRAIN CONTROL
	2042231 03143302	10.0 NM	EL 050			EL 460/EL 150 CLASS A
		10.0 140	FL 250		$\mathbf{v}$	
						FE145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
	SOGAN					
	20204EN 0545400E	107°				BAHRAIN CONTROL
	263915N 0515408E	42.0 NM				
		42.0 INIVI				
						FL145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
	MURUB					
		106°				
	262455N 0523751E	100				
		10.0 NM				FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
						, , ,
	ORNEF					
	262127N 0524818E	106°				BAHRAIN CONTROL
		30.0 NM				FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						ERE(0.132, 125, (AB)/E1, 345)
						EDEO: 122 950 (EL 250 EL 245)
						FREQ. 132.030 (FL230 - FL343)
	DEGSO					
	261054N 0531946E	112°				BAHRAIN CONTROL
	2010041000010402	25.0 NM				EL460/EL150 CLASS A
1		_0.0				EL 145 - 4500 ET MSL CLASS C
1						
1						FREQ. 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
	OBNET (FIR BDRY)					
	260032N 0534514E					
						REFER TO UAE AIP

Route designator (RNAV type)	Track MAG (GEQ)	Upper limit	Lateral limits	Dire	ction of iisina	Remarks Controlling unit channel
Name of significant points	VOR RDL	Lower limit	(NM)	le	vels	Logon address
Coordinates	DIST (NM) (COP)	Airspace			-	
	() (001 )	Minimum flight		Udd	Even	
		altitude				
1	2	3	4		5	6
N318						
(RNAV 1)						
						OR OVERFLYING S OMAE FIR. REFER
						TO SRD SUP FOR DETAILS.
						REFER TO SRD SUP FOR DETAILS.
						OEJD FIR TFC LDG QATAR AP EXP X
						LADNA FL330 BLW, EXP X LUBET FL290
						E OEJD AP DEP LDG S OMAE FIR MAX
LADNA (FIR BDRY)						FL250. OR LDG OOMS FIR MAX FL330.
262749N 0502245E	105°	FL 460	1			OEJD / OBBB FIR BDRY
	12.0 NM	4 500 FT MSL		$\mathbf{V}$		ELAGO/EL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREO: 122.300 (FL175 – FL290)
						FREQ: 127.850 (FL170 BLW)
ELOSO						
▲ 262409N 0503551E	105°					BAHRAIN CONTROL
	8.0 NM					FL460/FL150 CLASS A
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 – FL290)
GOLKO						
A 262140N 0504404E	106°					BAHRAIN CONTROL
2021431 03044042	12.0 NM					FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.323 (ABV FL345) FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 – FL290)
						FREQ: 127.850 (FL170 BLW)
ASTAD	1100					
261812N 0505646E	116° 4 0 NM					ELAGO/EL150 CLASS A
	4.0 110					FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 – FL290)
						FREQ: 127.850 (FL170 BLW)
GEXIM (FIR BDRY)						
▲ 261622N 0510026E	116°					BAHRAIN CONTROL
	3.0 NM					FL460/FL150 CLASS A
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)
LUBET						
▲				-		BAHRAIN CONTROL
20177111 0310347 L						FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.323 (ABV FL345) FREQ: 124.300 (FL295 – FL345)
						FREQ: 122.300 (FL175 – FL290)
				1		FREQ: 127.850 (FL170 BLW)

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight	Lateral limits (NM)	Direction of cruising levels Odd Even		Remarks Controlling unit channel Logon address
	1	2	3	4		5	6
N6	85						
(R	NAV 1)						AVBL FOR OEJD FIR TFC FL310 ABV LDG OR OVERFLYING S OMAE FIR. REFER TO SRD SUP FOR DETAILS. AVBL FOR BAH TMA AP DEP LDG QATAR AP OR LDG OR OVERFLYING S OMAE FIR. REFER TO SRD SUP FOR DETAILS. BAH TMA AP DEP LDG S OMAE FIR
							MAX FL250 OR LDG OOMS FIR MAX
	261802N 0501939E	096° 17.0 NM	FL 460 4 500 FT MSL	1	¥		OEJD / OBBB FIR BDRY BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) EREO: 127.950 (FL 170 PLW)
	BAHRAIN DVORDME (BHR)						rreg. 127.000 (re170 bew)
	261530N 0503919E	111° 15.0 NM					BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.850 (FL170 BLW)
	KINID (FIR BDRY)						
	260908N 0505452E	112° 6.0 NM					BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.850 (FL170 BLW)
	TULUB						
	260644N 0510041E						BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL295 – FL345) FREQ: 122.300 (FL175 – FL290) FREQ: 127.850 (FL170 BLW)

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	limits (NM)	cruising levels	Controlling unit channel Logon address
Coordinates	DIST (NM) (COP)	Airspace	()		
		Minimum flight		Odd Even	
	2	altitude	4	-	6
	2	3	4	5	6
(RNAV 1)					
					AVBL FOR BAH TMA AP DEP TO OIIX FIR OR LDG OR OVERFLYING N OMAE FIR. REFER TO SRD SUP FOR DETAILS. AVBL FOR TFC DEP OBBS, OBKH REQUIRED TO REMAIN OVER INTL WATERS IN OBBB FIR LDG OR OVERFLYING S OMAE FIR. REFER TO SRD SUP FOR DETAILS. TFC TO DIX FIR VIA DASUT FL250, FLCTO FLCTO, FUE DATA
NARMI (FIR BDRY)					FL370, FL390 NOT AVBL. TFC FILED FL310 ABV EXP X DASUT FL300 ABV. TFC LDG OMAE FIR MAX FL250 OR TFC LDG OOMS FIR MAX FL330.
▲ 261802N 0501939E	096° 276° 17.0 NM	FL 460 4 500 FT MSL	1	↓ ↓	OEJD / OBBB FIR BDRY BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
BAHRAIN DVORDME (BHR)					
261530N 0503919E	036° 8.0 NM			↓ ↓	BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
	026°				
262149N 0504404E	8.0 NM				FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
	0000	-			
262746N 0504913E	8.0 NM				FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
MEDMA		]			
263421N 0505454E	036° 9.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
VEDOS					

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direct cruis leve	ion of sing els Even	Remarks Controlling unit channel Logon address
	1	2	3	4	5		6
	264106N 0510045E	036° 7.0 NM	FL 460 4 500 FT MSL	1	$\rightarrow$		BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
Ŧ	SODAK						TREQ. 127.03 (TETTO DEW)
	264634N 0510530E	035° 7.0 NM					BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)
-	TORBO						
	265223N 0511024E						BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL175 – FL295) FREQ: 127.85 (FL170 BLW)

Route designator	Track MAG	LIpper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	L ower limit	limits	cruising	Controlling unit channel
Name of significant points	VOR RDL		(NM)	levels	Logon address
Coordinates	DIST	Airspace			
	(NM) (COP)	classification		Odd Even	
		Minimum flight altitude			
1	2	3	4	5	6
P430					
(RNAV 1)					
					AVBL FOR OTBH DEP TRANSITING TO
					ORBB FIR OR LDG OKAC AP, REFER
					TO QATAR SRD SUP FOR DETAILS
LOXIM (FIR BDRY)					BLW FL245
▲ 260621N 0515541E	004°	FL 460	1	1	BAHRAIN CONTROL
	5.0 NM	FL 250	•		FL460/FL150 CLASS A
		00		<b>V</b>	FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 ABV FL345
					FREQ: 132.850 FL250 – FL345
RAMKI					
▲ 261138N 0515625E	359°			Í	BAHRAIN CONTROL
2011001 00100202	11.0 NM				FL460/FL150 CLASS A
				<b>₩</b>	FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 ABV FL345
					FREQ: 132.850 FL250 – FL345
ALTOM					
A 262230N 0515639E					BAHRAIN CONTROL
					FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 132.125 ABV FL345
					FREQ: 132.850 FL250 – FL345

Route designator	Track MAG	Upper limit	Lateral	Direction of	of Remarks
(RNAV type)		Lower limit	(NIM)	cruising	Controlling unit channel
Coordinates	DIST	Airspace	((14101)	167613	Logon address
	(NM) (COP)	classification		Odd Eve	n
		Minimum flight		000 210	
		altitude			
1	2	3	4	5	6
P559					
(RNAV 1)					
					AVBL FOR OEJD FIR TFC LDG OR
					OVERFLYING N OMAE FIR.
					AVBL FOR OEJD FIR OR OKAC FIR
					STATE ACFT LDG OR OVERFLYING
					OMAE FIR REQ TO REMAIN OVER INTL
					WATERS. OEJD FIR STATE ACFT
					JOINING VIA ROTEL MAX FL230.
					REFER TO SRD SUP FOR DETAILS.
					AVBL FOR BAH TMA AP DEP LDG OR
					OVERFLYING N OMAE FIR OR STATE
					ACFT DEP BAH TMA AP LDG OR
					OVERFLYING S OMAE FIREQUIRED TO
					REMAIN OVER INTL WATERS IN OBBB
					OVERFLYING IN OWAE FIR. REFER TO
					OBBB OR E OF ID AR DER I DO NOMAE
					FIR MAX EL 250 L DG OOMS EIR MAX
					FL 330
					N OMAE FIR I DG TEC ABV FI 310 EXP
					X TOMSO FL310 BLW.
DAROR (FIR BDRY)					FL290 NOT AVBL AT DAROR
270244NL0405815E	087°	FL 460	1	I	OFJD / OBBB FIR BDRY
27024410 0495815E	8.0 NM	4 500 FT MSI			BAHRAIN CONTROL
		4 300 T T MOL		V	FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL340)
					FREQ: 122.300 (FL260 – FL290)
					FREQ: 126.700 (FL250 BLW)
RAMSI					
270249N 0500714E	087°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL340)
					FREQ: 122.300 (FL260 – FL290)
					FREQ: 126.700 (FL250 BLW)
GASSI					
270257N 0502229E	111°				BAHRAIN CONTROL
27023711 03022232	11.0 NM				FL460/FL150 CLASS A
	-				FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL340)
					FREQ: 122.300 (FL260 – FL290)
					FREQ: 126.700 (FL250 BLW)
КОВОК					
l 🔺	L	l	I	1	

		1	r				
	Route designator	Track MAG	Upper limit	Lateral	Direct	tion of	Remarks
	Name of significant points	VOR RDL	Lower limit	(NM)	lev	els	Logon address
	Coordinates	DIST	Airspace	( )	_		
		(NM) (COP)	classification		Odd	Even	
			Minimum flight				
	1	2	3	4		5	6
265		 110°	FL 460	-		•	BAHRAIN CONTROL
2050	839N 0503349E	15.0 NM		1			EL460/EL150 CLASS A
		10.01111	4 500 FT MSL		$\mathbf{v}$		FL 145 BLW CLASS C
							FREQ: 127.525 (ABV FL345)
							FREQ: 124.300 (FL300 – FL340)
							FREQ: 122.300 (FL180 – FL290)
							FREQ: 127.850 (FL170 BLW)
DEE	BEN						
265	254NL0504856E	110°					BAHRAIN CONTROL
205	2341 0304830E	8.0 NM					FL460/FL150 CLASS A
							FL145 BLW CLASS C
							FREQ: 127.525 (ABV FL345)
							FREQ: 124.300 (FL300 – FL340)
							FREQ: 122.300 (FL180 – FL290)
							FREQ: 127.850 (FL170 BLW)
DAV	/RI						
2649	936N 0505732E	111°					BAHRAIN CONTROL
2010		8.0 NM					FL460/FL150 CLASS A
							FL145 BLW CLASS C
							FREQ: 127.525 (ABV FL345)
							FREQ: 124.300 (FL300 – FL340)
							FREQ: 122.300 (FL180 – FL290)
							FREQ: 127.850 (FL170 BLW)
SOE	DAK						
264	634N 0510530E	108°					BAHRAIN CONTROL
		20.0 NM					FL460/FL150 CLASS A
							FL145 BLW CLASS C
							FREQ: 127.525 (ABV FL345)
							FREQ: 124.300 (FL300 – FL340)
							FREQ: 122.300 (FL180 – FL290)
							FREQ. 127.650 (FL170 BLW)
	10B	1000					
2639	946N 0512640E	108°					
		15.0 NM					FL460/FL150 CLASS A
							FREQ. 127.525 (ABV FL345)
							FREQ: 124.300 (FE300 - FE340) FREO: 122.300 (SEC - FL290)
ROF							
		108°	EL 460	4			
2634	444N 0514218E	3 0 NM	FL 400	1			
		3.0 100	FL 250		$\mathbf{V}$		FL 145 BLW CLASS C
							FREQ: 127 525 (ABV FI 345)
							FREQ: 124.300 (FL300 – FL340)
							FREQ: 122.300 (SFC – FL290)
BOT	ГОВ						
A 262	350N 0514505E	108°					BAHRAIN CONTROL
203.	550N 0514505E	7.0 NM					FL460/FL250 CLASS A
							FREQ: 132.125 (ABV FL345)
							FREQ: 132.850 (FL250 – FL345)
ROS	SAN						
263	129N 0515220E	108°	1				BAHRAIN CONTROL
200		15.0 NM					FL460/FL250 CLASS A
							FREQ: 132.125 (ABV FL345)
							FREQ: 132.850 (FL250 – FL345)
KUN	ЛLA						

Route desi (RNAV t Name of signifi Coordina	gnator ype) cant points ates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direc crui lev Odd	tion of sing vels Even	Remarks Controlling unit channel Logon address
1		2	3	4		5	6
262609N 0520822E	5	108° 14.0 NM	FL 460 FL 250	1			BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
ASPAK							
▲ 262115N 0522257E	Ξ	110° 17.0 NM					BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
UKUBU							
▲ 261428N 0524039E	<u> </u>	110° 21.0 NM					BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
TOMSO							
260611N 0530214E	Ξ	110° 27.0 NM					BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
	) -						
255602N 0532945E	=						REFER TO UAE AIP

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateralli mits(NM)	Directi cruis leve Odd	ion of sing els Even	Remarks Controlling unit channel Logon address
	1	2	3	4	5	;	6
P (F	693 RNAV 1) DEMTA (FIR BDRY)						ROUTE AVAILABLE BY NOTAM ONLY
	241926N 0513533E	048° 228°	FL 460 FL 195	1	¥	↑	REFER TO QATAR, JEDDAH, EMIR- ATES AIP
	250024N 0522924E	03.0 NM				Į	OBBB / OMAE FIR BDRY

Pouto designator	Trook MAC	Lippor limit	Latoral	Diroo	tion of	Bomarka
(RNAV type)	(GEO)		limits	crui	sina	Controlling unit channel
Name of significant points	VOR RDL	Lower IIIII	(NM)	lev	rels	Logon address
Coordinates	DIST	Airspace	` '			5
	(NM) (COP)	classification		Odd	Even	
		Minimum flight				
		altitude				
1	2	3	4	!	5	6
P699						
(RNAV 1)						
RIKET						Route not available in the Bahrain FIR
261052N 0510054E	260°	FL 460	1		I	BAHRAIN CONTROL
2019321003109342	7 0 NM	4 500 ET MSI				EI 460/EI 150 CLASS A
		4 500 FT MISE			V	FL 145 - 4500 FT MSL CLASS C
						EREO: 127 525 (ABV/ EL 345)
						ERE(124,300) (EI 300 – EI 345)
						EREO: 122 300 (El 180 – El 295)
						EREO: 127 850 (EL 170 BLW)
						1 NEQ. 127.000 (1 E170 DEW)
261855N 0510228E	260°					BAHRAIN CONTROL
	5.0 NM					FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL180 – FL295)
						FREQ: 127.850 (FL170 BLW)
ASTAD						
261812N 0505646E	260°					BAHRAIN CONTROL
	16.0 NM					FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL180 – FL295)
						FREQ: 127.850 (FL170 BLW)
BAHRAIN DVORDME (BHR)						
261530N 0503919F	276°					BAHRAIN CONTROL
	17.0 NM					FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL180 – FL295)
						FREQ: 127.850 (FL170 BLW)
						· · · · ·
NARMI (FIR BDRY)						
A 261802N 0501939F						OBBB / OEJD FIR BDRY
						REFER TO SAUDI AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Name of significant points		Airspace	(NM)	levels	Logon address
Coordinates	(NM) (COP)	classification		Odd Even	
	( )()	Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	6
P708					
(RNAV 1)					
					AVBL FOR OKAC FIR TECTING OR
					OVERELYING SOMAE FIR REFER TO
					SRD SUP FOR DETAILS
					OKAC FIR DEP EXP X REVAX IN I VI
LONOS (FIR BDRY)					FLT.
	120°	FL 460	1	1	OKAC / OBBB FIR BDRY
283027N 0491713E	31.0 NM		1		BAHRAIN CONTROL
	01.011	4 500 FT MSL		$ \Psi $	
					FL 145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
OBGEL					
	1400				
281312N 0494614E	14Z				
	51.0 INM				
					EDEO: 127 575 (ADV EL 345)
					FREQ. 127.575 (ABV FL345)
DATEN					FREQ: 120.700 (FE345 BEVV)
273118N 0501832E	143°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
REVAX					
272026N 0502651E	140°				BAHRAIN CONTROL
	20.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
GETAL					
270410N 0504040F	144°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
DEBEN					
265254N 0504856E	144°				BAHRAIN CONTROL
	35.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
GESIT (FIR BDRY)					
202309N 0511036E					EL460/EL150 CLASS A
					FL 145 BLW CLASS C
					FREQ: 127.525 (ABV FI 345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122 300 (FI 180 – FI 295)
					FREQ: 127.850 (FL170 BLW)

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direct crui lev Odd	tion of sing rels Even	Remarks Controlling unit channel Logon address
	1	2	3	4	Į	5	6
P8 (R	99 NAV 1) TOVOX (FIR BDRY) 245342N 0522429E	311° 16.0 NM	FL 460 4 500 FT MSL	1			RESTRICTED USE. REFER TO SRD SUP FOR DETAILS OBBB / OMAE FIR BDRY SEE OMAE AND OTDF AIP FOR DE-
	KUPSA 250445N 0521151E						OBBB / OTDF FIR BDRY

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Coordinates		Airspace	(INIVI)	levels	Logon address
Coordinates	(NM) (COP)	classification			-
	() ()	Minimum filmlet		Odd Even	
		altitude			
1	2	3	4	5	6
R659					
(RNAV 1)					
					NOT AVBL FOR USE IN THE BAHRAIN
ITUMA (FIR BDRY)					FIR
	100°	EL 460	- ·		
261005N 0514725E	190	FL 400	1		
	5.0 NM	FL 250			FL460/FL250 GLASS A
					FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
					BLW FL250 SEE QATAR AIP FOR DE-
					TAILS
RABLA					
	100°				
261506N 0514834E	190				
	10.0 NM				FDEO: 122 125 (AD)/ EL 245)
					FREQ. 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
					BLW FL250 SEE QATAR AIP FOR DE-
					TAILS
BOPOV					
	190°				BAHRAIN CONTROL
202430IN 0515043E	100				EL460/EL250 CLASS A
	7.0 NM				EPEO: 132 125 (ABV/ EL 345)
					EDEO: 122 950 (EL 250 EL 245)
					$\left[ FREQ. 132.030 \left( FL230 - FL343 \right) \right]$
					BLW FL250 SEE QATAR AIP FOR DE-
					TAILS
ROSAN					
A 263129N 0515220E	190°				BAHRAIN CONTROL
2001201000102202					EL460/EL250 CLASS A
	8.0 NM				EREQ: 132 125 (ABV EL 345)
					ERE(132, 850) (El 250 - El 345)
					TAILS
SUGAN					
263915N 0515408E	190°				BAHRAIN CONTROL
					FL460/FL250 CLASS A
	2.0 NIVI				FREQ: 132.125 (ABV FL345)
					FREQ: 132.850 (FL250 – FL345)
			1		BLW FL250 SEE QATAR AIP FOR DF-
				•	TAILS
			1	1 T	
264142N 0515442E					

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(KNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	(NM)	levels	Logon address
Coordinates		Airspace	\`,		
	(NM) (COP)	Minimum		Odd Even	
		altitude			
1	2	3	4	5	6
T308					
(RNAV 1)					
					AVBL FOR OEJD FIR TFC EXC E OEJD
					FIR DEP TO OIIX FIR VIA DASUT.
					FL 290 NOT AVBL AT DAROR. FL250,
DAROR (FIR BDRY)					FL270, FL290 NOT AVBL AT DASUT.
270244N 0495815E	087°	FL 460	1	1	OEJD / OBBB FIR BDRY
	8.0 NM	4 500 FT MSL		↓	BAHRAIN CONTROL
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 126.700 (FL250 BLW)
RAMSI					· · · ·
270249N 0500714E	087°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C FREQ: 127 525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
	0028				
270257N 0502229E	093 <sup>-</sup> 8.0 NM				BAHRAIN CONTROL EL460/EL150 CLASS A
	0.0 110				FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345) FREO: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
VELOG					
270215N 0503056E	093°				BAHRAIN CONTROL
	23.0 NM				FL460/FL150 CLASS A
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
TOSDA					FREQ: 126.700 (FL250 BLW)
	120°				
270005N 0505629E	15.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
TORBO					
265223N 0511024E	106°				
	26.0 NM				FL460/FL150 CLASS A
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
	1000				
264401N 0513815E	106° 5.0 NM				BAHKAIN CONTROL
	J.U INIVI				FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL295 BLW)
					]

	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
	Name of significant points	VOR RDL	A	(NM)	levels	Logon address
	Coordinates	DIST	Airspace			
		(NM) (COP)	classification		Odd Even	
			Minimum flight			
			altitude			
ŀ	1	2	3	4	5	6
		106°	EL 460			
	264225N 0514336E	100	FL 400	1		
		10.0 NM	FL 250		14	FL460/FL250 CLASS A
					•	FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
						BIW FI 250 SEE OATAR AIP FOR DE-
						TAILS
	SOGAN					
		107°				
	263915N 0515408E	40.0 MIM				
		42.0 INIVI				FL460/FL250 CLASS A
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
						BLW FL250 SEE QATAR AIP FOR DE-
						TAILS
	MURUB					
		099°				BAHRAIN CONTROL
	202400N 002375TE	21 0 NIM				
		31.0 INIVI				
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL250 – FL345)
						BLW FL250 SEE QATAR AIP FOR DE-
						TAILS
	261832N 0531108E					OBBB / OIIX FIR BDRY
						REFER TO IRAN AIP
			1	1	1	

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(KNAV type) Name of significant points		Lower limit	(NM)	cruising	Controlling unit channel
Coordinates	DIST	Airspace	()	101010	
	(NM) (COP)	classification		Odd Even	
		Minimum flight			
		altitude			
1	2	3	4	5	6
T319					
(RNAV 1)					
					AVBL FOR OEJD FIR TFC EXC E OEJD
		<b>E</b> L (00		-	
270244N 0495815E	087°	FL 460	1		
	8.0 NIVI	4 500 FT MSL		$\mathbf{v}$	BAHRAIN CONTROL
					FL400/FL150 CLASS A
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
RAMSI					
270249N 0500714E	087°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
GASSI					
270257N 0502229E	093°				
	8.0 INIVI				
					FREO: 127 525 (ABV FI 345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
VELOG					
▲ 270215N 0503056E	093°				BAHRAIN CONTROL
2702131 03030302	23.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL260 – FL295)
TOODA					FREQ. 120.700 (FL250 BLVV)
270005N 0505629E	093°				BAHRAIN CONTROL
	6.0 NM				FL460/FL150 CLASS A
					FL 143 - 4500 FT MOL GLASS G
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
OBTAR (FIR BDRY)					. ,
					FL145 - 4500 FT MSL CLASS C
200904N 0010009E					OBBB / OIIX FIR BDRY
					REFER TO IRAN AIP

Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direction cruisir levels Odd E	n of Remarks g Controlling unit channel Logon address
1	2	3	4	5	6
T430 (RNAV 1)					NOT AVBL FOR ROUTING IN THE BAHRAIN FIR
▲ <u>300542N 0515707E</u>	024° 5.0 NM	FL 460 FL 250	1	V	BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
▲ MODOG 261012N 0515935E	024° 10.0 NM				BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
▲ LABOP 261907N 0520429E	025° 8.0 NM				BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
▲ KUMLA 262609N 0520822E BAGAS (FIR BDRY)	024° 11.0 NM				BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
▲ 263537N 0521337E					OBBB / OIIX FIR BDRY REFER TO IRAN AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Coordinates	DIST	Airspace	(INIVI)	leveis	Logon address
	(NM) (COP)	classification		Odd Even	
		Minimum flight			
		altitude			
1	2	3	4	5	6
T444					
(RNAV 1)					
					RTE AVBL BY NOTAM ONLY.
					AVBL FOR OBBB AND OTDF DEP OR E
					OEJD AP DEP TO OIIX FIR VIA ROTOX.
					REFER TO SRD SUP FOR DETAILS.
TULUB					MIN FL300.
260644N 0510041E	292°	FL 460	1		BAHRAIN CONTROL
	6.0 NM	4 500 FT MSL			FL460/FL150 CLASS A
				•	FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
KINID (FIR BDRY)					
260908N 0505452E	292°				BAHRAIN CONTROL
	15.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
BAHRAIN DVORDME (BHR)					
261530N 0503919E	337°				BAHRAIN CONTROL
	9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
FLOSO					FREQ. 127.000 (FE170 BEVV)
ELUSU					
262409N 0503551E	339°				
	9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.323 (ABV 1 2343)
					FREQ: 122.300 (FL 180 – FL 295)
					FREQ: 127.850 (FL170 BLW)
DESBU					· · · ·
	330°				BAHRAIN CONTROL
263240N 0503241E	10.0 NM				EL460/EL150 CLASS A
	10.0 1414				FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
EGMOR					
264211N 0502907F	314°				BAHRAIN CONTROL
201211100020012	9.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
264854N 0502200E	314°				BAHRAIN CONTROL
	19.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.323 (ABV FL345)
					FREQ: 122 300 (FL300 - FL345)
					FREQ: 127.850 (FI 170 BI W)
RAMSI					
▲					J I

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	Route designator	Track MAG	Upper limit	Lateral	Direct	tion of	Remarks
	(RNAV type) Name of significant points		Lower limit	(NM)	lev	sing els	
	Coordinates	DIST	Airspace	()	101	010	Logon addross
		(NM) (COP)	classification		bbO	Even	
			Minimum flight		ouu	21011	
			altitude				
ľ	1	2	3	4	Į	5	6
	270249N 0500714F	319°	FL 460	1			BAHRAIN CONTROL
		18.0 NM	4 500 FT MSI	•			FL460/FL150 CLASS A
			4 000 T T MOL			v	FL145 - 4500 FT MSL CLASS C
							FREQ: 127.575 (ABOVE FL345)
							FREQ: 126.700 (FL345 BLW)
	ORDAN						
		0.100					
	271706N 0495442E	319°					BAHRAIN CONTROL
		31.0 NM					FL460/FL150 CLASS A
							FL145 - 4500 FT MSL CLASS C
							FREQ: 127.575 (ABOVE FL345)
							FREQ: 126.700 (FL345 BLW)
	GIRSI						
	274126N 0493311E	341°					BAHRAIN CONTROL
		21.0 NM					FL460/FL150 CLASS A
							FL145 - 4500 FT MSL CLASS C
							FREQ: 127.575 (ABOVE FL345)
							FREQ: 126.700 (FL345 BLW)
	DAMUR						
		028°			-		
	280137N 0492638E	12 0 NM					
		13.0 INIVI			$ \mathbf{v} $		
							FE 145 - 4500 FT MOL CLASS C
							FREQ. 127.575 (ABOVE FL345)
							FREQ. 120.700 (FL345 BLW)
	GEPUT						
	281307N 0493423E	028°					BAHRAIN CONTROL
		23.0 NM					FL460/FL150 CLASS A
							FL145 - 4500 FT MSL CLASS C
							FREQ: 127.575 (ABOVE FL345)
							FREQ: 126.700 (FL345 BLW)
	ROTOX (FIR BDRY)						
	283323N 0494809E						OBBB/ OIIX FIR BDRY
	20002010 040400002						REFER TO IRAN AIP
		1			1		

T557 (RNAV 1)

oute designator (RNAV type) of significant points Coordinates	Track MAG Upper limit (GEO) Lower limit VOR RDL DIST Airspace		Lateral limits (NM)	Direction of cruising levels		Remarks Controlling unit channel Logon address	
	(NM) (COP)	Minimum flight altitude		Odd	Even		
1	2	3	4		5	6	
R BDRY) 531108E	292° 26.0 NM	FL 460 FL 250	1		$\downarrow$	AVBL FOR OMAE FIR TFC TO OIIX FIR VIA RAGAS. REFER TO SRD SUP FOR DETAILS. FL320, FL380 NOT AVBL MANDATORY X VELAK IN LVL FLT OMAE / OBBB FIR BDRY BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL345 BLW)	
524456E	294° 13.0 NM					BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345)	

FREQ: 132.850 (FL345 BLW)

FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL345 BLW)

BAHRAIN CONTROL

BAHRAIN CONTROL

FL460/FL250 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL345 BLW)

OBBB /OIIX FIR BDRY REFER TO IRAN AIP

FL460/FL250 CLASS A

294°

347°

14.0 NM

23.0 NM

TUMAK (FIR BDRY) ▲ 255031N 0531108E

260109N 0524456E

260651N 0523216E

261307N 0521821E

RAGAS (FIR BDRY)

263537N 0521337E

VEDOM

ORLUP

VELAK

۸

Route designator (RNAV type)	Track MAG (GEO)	Upper limit Lower limit	Lateral limits	Direction of cruising	Remarks Controlling unit channel
Coordinates	DIST (NM) (COP)	Airspace classification			Logon address
		Minimum flight altitude			
1	2	3	4	5	6
Т602					
(RNAV 1)					RTE AVBL BY NOTAM ONLY AVBL FOR OMAE FIR TFC TO OIIX FIR VIA ROTOX. REFER TO SRD SUP FOR DETAILS.
TUMAK (FIR BDRY)					OMAE FIR AP DEP MANDATORY X ALTOM IN LVL FLT ROTOX MIN FL 300.
▲	292°	FL 460	1	I	BAHRAIN CONTROL
25505110 0551106E	26.0 NM	FL 250		↓	FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
	22.48				
260109N 0524456E	13.0 NM				FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
ORLUP					
260651N 0523216E	294° 14.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
VELAK					
▲ 261307N 0521821E	293° 13.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
LABOP					
▲ 261907N 0520429E	294° 8.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
ALTOM					
262230N 0515639E	289° 6.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
BOPOV					
262430N 0515043E	288° 9.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
EGNIM (FIR BDRY)					
262743N 0514108E	288° 3.0 NM	FL 460 4 500 FT MSL			BAHRAIN CONTROL FL460/FL150 CLASS A FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL 250 - FL345)
	2000				
262832N 0513840E	288° 20.0 NM				EAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.525 (ABV FL345) FREQ: 124.300 (FL300 – FL345) FREQ: 122.300 (FL295 BLW)
GITBO					
· A					J I

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type) Name of significant points	(GEO) VOR RDL	Lower limit	limits (NM)	cruising levels	Controlling unit channel Logon address
Coordinates		Airspace			
		Minimum flight		Odd Even	
		altitude			
1	2	3	4	5	
263527N 0511750E	287° 16.0 NM	FL 460	1		BAHRAIN CONTROL EL460/EL150 CLASS A
		4 500 FT MSL		₩	FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345) FREO: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
VEDOS					
264106N 0510045E	287°				BAHRAIN CONTROL
	21.0 NM				FL460/FL150 CLASS A
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295) FREO: 127.850 (FL 170 BLW)
MOGAS					
▲ 264800N 0503909E	307°				BAHRAIN CONTROL
	11.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C FREQ: 127 525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
	311°				BAHRAIN CONTROL
20330410 0302927 E	11.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.325 (ABV FL345) FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
	2110				
270256N 0502006E	10.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 122.300 (FL260 – FL295)
					FREQ: 126.700 (FL250 BLW)
270939N 0501159E	322°				BAHRAIN CONTROL
	13.0 100				FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
	320°				
272135N 0500208E	32.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
ITNAS					(120.100 (12040 DEVV)
I			L	ļ	

Route designator	Track MAG	Upper limit	Lateral	Direction	n of Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruisir	g Controlling unit channel
Name of significant points	VOR RDL	201101 1111	(NM)	levels	Logon address
Coordinates	DIST	Airspace	. ,		ů –
	(NM) (COP)	classification		<u> </u>	
	() (001.)				/en
		Minimum flight			
		altitude			
 1	2	3	4	5	6
274644N 0493957E	007°	FL 460	1	1	BAHRAIN CONTROL
214044N 0403037E	16.0 NM				EL460/EL150 CLASS A
	10.014141	4 500 FT MSL		$\mathbf{v}$	
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					EREO: 126 700 (EL 345 BLW)
GODRI					
	005°				
280257N 0494308E	005				
	31.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					EREO: 127 575 (ABV EL 345)
					TREQ. 121.575 (ABV TE545)
					FREQ: 126.700 (FL345 BLW)
ROTOX (FIR BDRY)					
283323N 0494809E					ORRR / OILY FIK RDKA
					REFER TO IRAN AIP
				1	

	Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight altitude	Lateral limits (NM)	Direc crui lev Odd	tion of sing rels Even	Remarks Controlling unit channel Logon address
	1	2	3	4		5	6
T8 (R	00 NAV 1) OVESU (FIR BDRY) 254923N 0523301E	047° 45.0 NM	FL 460 FL 250	1	↓		NOT AVBL IN OBBB FIR. SEE QATAR AIP FOR FL245 BLW INSTRUCTIONS BAHRAIN CONTROL FL460/FL250 CLASS A FREQ: 132.850 (FL250 – FL345) FREQ: 132.12 (ABV FL345)
	261832N 0531108E						OBBB / OIIX FIR BDRY

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruising	Controlling unit channel
Name of significant points	VOR RDL	Aironaaa	(NM)	levels	Logon address
Coordinates		Allspace			
	(INIVI) (COP)	classification		Odd Even	
		Minimum flight			
		altitude			
1	2	3	4	5	6
T872					
(RNAV 1)					
					AVBL FOR BAH TMA AP DEP TO OIIX
					VIA DASUT REFER TO SED SUP FOR
					AVBL FOR E OEJD AP DEP TO OIIX
					AND LDG OR OVERFLYING N OMAE
					FIR. REFER TO SRD SUP FOR
					DETAILS.
					TFC VIA DASUT FL250, FL270, FL290
					NOT AVBL. TFC FILED FL310 ABV EXP
ROTEL (FIR BDRY)					X DASUT FL300 ABV.
	072°	FL 460	4	+	
2640 ISIN 0502 149E	7 0 NM		1		
	7.0 100	4 500 FT MSL		↓	
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
EGMOR					
	072°				
264211N 0502907E	26.0 NM				
	20.0 110				
					FREQ. 127.525 (ABV FL345)
					FREQ. 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
DAVRI					
A 264036N 0505732E	074°				BAHRAIN CONTROL
20493011 03037 322	12 0 NM				EL460/EL150 CLASS A
	12.011				
					EREO: 127 525 (ABV EL 345)
					EPEO: 124 300 (EL 300 EL 345)
					FREQ: 124.300 (FL300 - FL343)
					FREQ. 122.300 (FL160 - FL293)
					(FE170 BEW)
TORBO					
265223N 0511024E	106°				BAHRAIN CONTROL
	26.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					EREQ: 124 300 (EL 300 – EL 345)
					EREO: 122 300 (EL 180 – EL 295)
					-1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2
SEVNI					
264401N 0513815E	106°				BAHRAIN CONTROL
	5.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL295 BLW)
					``´´´
			1	1	
	-				
--	---	--	---------------------------	--	---
Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Upper limit Lower limit Airspace classification Minimum flight	Lateral limits (NM)	Direction of cruising levels Odd Even	Remarks Controlling unit channel Logon address
		altitude			
1	2	3	4	5	6
264225N 0514336E	106° 10.0 NM	FL 460 FL 250	1	V	BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
SOGAN					
▲	107° 42.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
MURUB					
▲ 262455N 0523751E	099° 31.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 132.125 (ABV FL345) FREQ: 132.850 (FL250 – FL345)
DASUT (FIR BDRY)					
▲ 261832N 0531108E					OBBB / OIIX FIR BDRY REFER TO OIIX AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
Name of significant points	VOR RDL	Lower limit	(NM)	levels	Logon address
Coordinates	DIST	Airspace	. ,		
	(NM) (COP)	classification		Odd Even	
		Minimum flight			
1	2	3	4	5	6
T934					
(RNAV 1)					
					RTE AVBL BY NOTAM ONLY.
					AVBL FOR DOH FIR AP DEP TO OIXX
					FIR. REFER TO SRD SUP FOR
					DETAILS.
					MIN FL300.
					MANDATORY X ROTOX IN LVL FLT.
261441N 0510347E	317°	FL 460	1		
	4.0 NM	4 500 FT MSL		↓	FL460/FL150 CLASS A
					FE 145 - 4500 FT MSL CLASS C FREO: 127 525 (AB)/ FL 345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
IMLAD (FIR BDRY)					
▲	317°				BAHRAIN CONTROL
2011/2010 00101102	15.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
ECRUD					
	2479				
262904N 0505019E	12 0 NM				
	12.0 110				FL 145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
					FREQ: 127.850 (FL170 BLW)
OBMON					
263832N 0504125E	317°				BAHRAIN CONTROL
	19.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 122.300 (FL 180 – FL 295)
					FREQ: 127.850 (FL170 BLW)
OVUPI					
A 265320N 0502727E	317°				BAHRAIN CONTROI
20002010 0002727E	21.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.525 (ABV FL345)
					FREQ: 124.300 (FL300 – FL345)
					FREQ: 122.300 (FL180 – FL295)
TOKMA					FREQ: 127.850 (FL170 BLW)
	0000				
270939N 0501159E	322°				
	15.0 NW				FL400/FL 100 GLASS A
					FREQ: 127 575 (ARV/ FL345)
					FREQ: 126.700 (FL345 BLW)
ORSOL					
	320°				BAHRAIN CONTROL
272133N 0300200E	32.0 NM				FL460/FL150 CLASS A
					FL145 BLW CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
ITNAS					
A					-

Devite designation	Treat MAC	l la a sa liasit	1 -41	Dire effect of	Demonto
Route designator (RNAV type) Name of significant points Coordinates	Track MAG (GEO) VOR RDL DIST (NM) (COP)	Lower limit Lower limit Airspace classification	Lateral limits (NM)	Direction of cruising levels Odd Even	Remarks Controlling unit channel Logon address
		Minimum flight altitude			
1	2	3	4	5	6
274644N 0493957E	007° 16.0 NM	FL 460 4 500 FT MSL	1	$\downarrow$	BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
GODRI					
280257N 0494308E	005° 31.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.575 (ABV FL345) FREQ: 126.700 (FL345 BLW)
ROTOX (FIR BDRY)					
283323N 0494809E					OBBB / OIIX FIR BDRY REFER TO IRAN AIP

Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
(RNAV lype)		Lower limit	(NM)		
Coordinates	DIST	Airspace	(11117)	levels	Logon address
	(NM) (COP)	classification		Odd Even	
		Minimum flight		Oud Lven	
		altitude			
1	2	3	4	5	6
Y604					
(RNAV 1)					
					AVBL FOR OKAC FIR STATE ACFT LDG
					S OMAE FIR REQ TO REMAIN OVER
					INTI WATERS REFER TO SRD SUP
					TEC EL 310 ABV EXP X DEKTA EL 290
					BLW.
					TFC FL230 BLW EXP X VEDED FL250.
LONOS (FIR BDRY)					
	135°	FL 460	4	1	OKAC / OBBB FIR BDRY
283027N 0491713E	15.0 NM	T L 400	1		
	10.0 140	FL 250		↓	
					EL 145 - 4500 ET MSL CLASS C
					EREO: 127 575 (ABV EL 345)
					EREO: 126 700 (EL 345 BLW)
					(1 EQ. 120.700 (1 E343 DEW)
281850N 0492845E	136°				BAHRAIN CONTROL
	8.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
GEPUT					
281307N 0493423F	139°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
GODRI					
	142°				BAHRAIN CONTROL
280257N 0494308E	17 0 NM				
	17.0110				EL 145 - 4500 ET MSL CLASS C
					EREO: 127 575 (ABV EI 345)
					EREO: 126 700 (EL 345 BLW)
COCRA					
	1.100				
274918N 0495344E	142°				BAHRAIN CONTROL
	27.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
OBNAX					
272651N 0501103E	142°				BAHRAIN CONTROL
	13.0 NM				FL460/FL150 CLASS A
					FL145 - 4500 FT MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
DEKTA					
A 271605N 0501046E	142°				BAHRAIN CONTROL
21 1000N 000 1940E	17 0 NM				FL460/FL150 CLASS A
					EL 145 - 4500 ET MSL CLASS C
					FREQ: 127.575 (ABV FL345)
					FREQ: 126.700 (FL345 BLW)
VELOG					
			1	1	

	Route designator	Track MAG	Upper limit	Lateral	Direction of	Remarks
	(RNAV type)	(GEO)	Lower limit		cruising	
			Airsnace		levels	Logon address
	Coordinates	(NM) (COP)	classification		<u></u>	
		() (00)			Odd Even	
			Minimum flight			
			annoue	4	Ļ	
	1	2	3	4	5	6
2702	15N 0503056E	142°	FL 460	1		BAHRAIN CONTROL
		4.0 NM	FL 250		I↓	FL460/FL150 CLASS A
					•	FL145 - 4500 FT MSL CLASS C
						FREQ: 127.575 (ABV FL345)
						FREQ: 126.700 (FL345 BLW)
KOB	ОК					
A		1100				
2658	39N 0503349E	110				
		15.0 NM				FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL260 – FL295)
						FREQ: 126.700 (FL250 BLW)
DEB	EN					
		110°				
2652	54N 0504856E					
		8.0 NW				FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL260 – FL295)
						FREQ: 126.700 (FL250 BLW)
DAV	RI					
	001105057005	1110				
2649	36N 0505732E					
		0.0 INIVI				FL460/FL150 CLASS A
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL180 – FL295)
						FREQ: 127.850 (FL170 BLW)
SOD	AK					
2646	34N 0510530E	108°				BAHRAIN CONTROL
2040	34N 0310330E	20.0 NM				EL460/EL150 CLASS A
		_0.0				FL 145 - 4500 FT MSL CLASS C
						EDEO: 127 525 (AD)/ EL 345)
						EDEO: 124.200 (EL200 EL245)
						EDEC: 124.300 (FL300 - FL343)
						FREQ. 122.300 (FL293 BLVV)
DAN	OR					
2639	46N 0512640E	108°				BAHRAIN CONTROL
		18.0 NM				FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 127 525 (ABV FL 345)
						FREQ: 124 300 (FI 300 – FI 345)
						FREQ: 122 300 (FL 295 BLW)
POT	OP					
2633	50N 0514505E	175°				BAHRAIN CONTROL
		23.0 NM				FL460/FL150 CLASS A
						FL145 - 4500 FT MSL CLASS C
						FREQ: 132.125 (ABV FL345)
						FREQ: 132.850 (FL345 BLW)
KARI	UG (FIR BDRY)					
					I	
2610	30N 0514014E					

Route designator (RNAV type) Name of significant points	Track MAG (GEO)	Upper limit Lower limit	Lateral limits	Direction of cruising	Remarks Controlling unit channel
Coordinates	DIST (NM) (COP)	Airspace classification	()		
		Minimum flight altitude		Odd Even	
1	2	3	4	5	6
Y856					
(RNAV 1)					
					AVBL FOR OMAE FIR TFC LDG BAH TMA AP OR E OEJD AP. REF TO SRD SUP FOR DETAILS. TFC FL180 ABV EXP X ALREP FL160
	20.4°				
261903N 0513940E	8.0 NM	FL 150	1	↓	FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 122.300
SOLOB					
262241N 0513132E	287° 9.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 122 300
ALREP					
▲ 262541N 0512209E	287° 6.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREO: 127 850 (BAHRAIN APP)
ORDIG					
▲ 262738N 0511603E	287° 20.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.850 (BAHRAIN APP)
MEDMA					
263421N 0505454E	214° 23.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.850 (BAHRAIN APP)
BAHRAIN DVORDME (BHR)					
▲ 261530N 0503919E	276° 17.0 NM				BAHRAIN CONTROL FL460/FL150 CLASS A FL145 BLW CLASS C FREQ: 127.850 (BAHRAIN APP)
NARMI (FIR BDRY)					
261802N 0501939E					OBBB / OEJD FIR BDRY REFER TO SAUDI AIP

Route designator	Track MAG	Upper limit	Lateral	Directio	on of	Remarks
(RNAV type)	(GEO)	Lower limit	limits	cruis	ing	Controlling unit channel
Name of significant points	VOR RDL		(NM)	leve	els	Logon address
Coordinates	DIST	Airspace				
	(NM) (COP)	classification		Odd I	Fven	
		Minimum flight		000		
		altitudo				
		allitude				-
1	2	3	4	5		6
Z622						
(RNAV 1)						
						AVBL FOR STATE ACFT FROM OEJD
						FIR LDG OR OVERFLYING S UAE FIR
						REQ TO REMAIN OVER HIGH SEAS.
						REFER TO SPD SUP FOR DETAILS
						SOLOB MIN FL250
261802N 0501939E	067°	FL 460	1	1		OEJD / OBBB FIR BDRY
20100211 00010002	28.0 NM	EL 250	•			BAHRAIN CONTROL
	20.011	FL 200		$ \Psi $		
						FL145 BLW CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREO: 122 300 (FI 180 - FI 295)
						TREQ. 122.000 (TE100 TE200)
TOSTA						
	095°					BAHRAIN CONTROL
2027401 0304913E	38.0 NM					
	30.0 NIVI					
						FL145 BLVV CLASS C
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122 300 (FI 180 – FI 295)
SOLUB						
262241N 0513132E	138°					BAHRAIN CONTROL
2022 4 IN OUTOTOLE	12.0 NM					EL460/EL150 CLASS A
						FREQ: 127.525 (ABV FL345)
						FREQ: 124.300 (FL300 – FL345)
						FREQ: 122.300 (FL295 BLW)
						· · · · ·
261331N 0513944E				T		

## ENR 3.4 HELICOPTER ROUTES

NIL

### ENR 3.5 OTHER ROUTES

NIL

### ENR 3.6 EN-ROUTE HOLDING

	HLDG ID / FIX / WPT coordinates	INBD TR (°MAG)	Direction of PTN	MAX IAS (KT)	MNM - MAX HLDG LVL FL / FT (MSL)	TIME (MIN)	Controlling unit and Frequency
	1	2	3	4	5	6	7
	ALMOK 262832.00N 0513840.00E	288	Right		6000 FT FL 460	1.5	Bahrain Central 127.525 (ABV FL345) 124.300 (FL300-FL345) 122.3 (FL295 BLW)
	ALRAS 262805N 0503200E	300	Right	210	3000 FT 13000 FT	1.5	BAHRAIN APPROACH 127.850 MHZ
	ALTOM 262230.00N 0515639.00E	294	Right		FL250 FL 460	1.5	Bahrain East 132.85 (FL250 - FL345) 132.12 (ABV FL345)
	ITNAS 274643.70N 0493957.02E	320	Right		6000 FT FL 460	1.5	Bahrain North 126.700 MHZ
	MARWA 262208.05N 0502747.07E	302	Left	240	5000 FT FL 150	1.5	BAHRAIN APPROACH 127.850 MHZ
	NAGAT 261549N 0505319E	120	Left	210	3000 FT 13000 FT	1.5	BAHRAIN APPROACH 127.850 MHZ
	OBSAS 262622N 0504525E	207	Right	240	3000 FT 13000 FT	1.5	BAHRAIN APPROACH 127.850 MHZ
	RABAD 254747.00N 0504602.00E	152	Right	250	3500 FT 7500 FT	1	ISA AIRBASE APPROACH 124.95 MHZ
	RABLA 261505.73N 0514833.68E	190	Right	250	FL250 FL 280	1.5	Bahrain East 132.85 MHZ
	RAZAN 261021.0N 0504813.8E	122	Right	240	5000 FT FL 150	1.5	BAHRAIN APPROACH 127.850 MHZ
_	RIKET 261952.00N 0510954.00E	137	Left	250	FL 190 FL 290	1.5	Bahrain Central 122.3 MHZ
	SOLOB 262241.00N 0513132.00E	294	Right		6000 FT FL 460	1.5	Bahrain Central Sectors 122.3 (FL295 BLW) 124.3 (FL300 - FL345) 127.525 (ABV FL345)
	VELOG 270215.03N 0503055.83E	142	Left	240	5000 FT FL 290	1.5	BAHRAIN 126.7 MHZ

## ENR 4. RADIO NAVIGATION AIDS/SYSTEMS

## ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

Name of station (VAR) VOR: Declination)	ID	FREQ (CH)	Hours of operation	Coor	dinates	<b>ELEV</b> DME Antenna	Remarks
1	2	3	4		5	6	7
BAHRAIN DVOR/DME (2.49° E) (decl: 2.72°E 2017)	BHR	111.80MHZ (CH 55X)		261530.00N	0503919.18E	36.8 FT EGM_96	

### ENR 4.2 SPECIAL NAVIGATION SYSTEMS

NIL

## ENR 4.3 GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)

### ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

Name-code designator	Coordinates	ATS route or other route
1	2	3
ALMOK	262832.00N 0513840.00E	L602, M600, T602
ALPOB	254218.00N 0530055.00E	L768
ALRAS	262805N 0503200E	Note 1
ALREP	262541.00N 0512209.00E	L768, Y856
ALSER	271100.00N 0504900.00E	G663
ALTOM	262230.00N 0515639.00E	L602, M600, P430, T602
AMBIK	283222.0N 0492025.0E	B416
ASPAK	262115.49N 0522257.49E	P559
ASROK	264224.85N 0514336.18E	M677,T308,T872
ASTAD	261811.64N 0505646.41E	A453, N318, P699
AWALI	260510.9706N 0503112.5281E	Note 1
BOPOV	262429.69N 0515043.17E	L602, M600, R659, T602
BORUK	263443.84N 0514218.47E	P559
вотов	263350.00N 0514505.00E	A453, P559, Y604
BUNDU	250024.00N 0522924.00E	B415, P693
DAMUR	280137.46N 0492637.95E	L602, L934, T444
DANOB	263946.00N 0512640.00E	P559, Y604
DAROR	270244.03N 0495815.25E	P559, T308, T319
DASUT	261832N 0531108E	Т308, Т800, Т872
DATEN	273118.44N 0501832.26E	P708
DAVRI	264936.05N 0505731.88E	L319, P559, T872, Y604
DAVUS	282346.28N 0490622.28E	L602, L934, M444
DEBEN	265253.56N 0504856.14E	P559, P708, Y604
DEBGU	272647.92N 0503252.05E	M677
DEGSO	261054.00N 0531946.00E	M677
DEKTA	271605.08N 0501946.46E	L703, Y604
DEMTA	241926.02N 0513532.83E	P693
DESBU	263240.00N 0503241.00E	A453, M444, T444
EGLIT	270255.95N 0502005.80E	L602, T602
EGMOR	264210.81N 0502906.73E	A453, L768, M444, T444, T872
EGNIM	262742.64N 0514107.62E	L602,M600
EGPUD	262904.00N 0505019.00E	L934, T934
EGTAB	282608.92N 0491021.71E	Note 3
ELELO	263220N 0503501E	Note 1
ELIDU	262424.00N 0525133.00E	L721
ELOSO	262409.19N 0503550.70E	A453, M444, N318, T444
EMORI	281433.98N 0491050.62E	M444
ENAKO	284205.43N 0493647.95E	Note 3
ENASO	275706.87N 0491911.13E	M444
GASSI	270257.00N 0502229.00E	P559, T308, T319
GEPUT	281307.00N 0493423.00E	L703, T444, Y604
GESIT	262309.03N 0511035.90E	P708
GEXIM	261621.50N 0510025.89E	N318
GETAL	270409.98N 0504039.93E	G663, P708
GETEK	264610.44N 0501537.83E	Note 3
GIRMO	262216.75N 0510740.32E	L703
GIRSI	274126.04N 0493310.51E	M444, T444

Name-code designator	Coordinates	ATS route or other route
1	2	3
GITBO	263527.00N 0511750.00E	L602, M600, T602
GODRI	280256.85N 0494307.68E	L703, T602, T934, Y604
GOGRA	274918.00N 0495344.00E	L703, Y604
GOLKO	262149.22N 0504404.35E	N318, N697
IMKOM	261331.49N 0513943.67E	Z622
IMLAD	261723.27N 0510114.80E	L934,T934
INDIA	254442N 0504140E	Note 2
ITEVO	281557.59N 0491332.28E	L602, L934
ITMUB	255919.00N 0522402.00E	L721, L768
ITNAS	274643.70N 0493957.02E	L602, L934, T602, T934
ITUMA	261004.53N 0514724.52E	R659
IVAKO	260251.20N 0520325.01E	Y856
IVIVI	273734.00N 0502437.00E	M677
JALYD	260002.0N 0504513.0E	Note 2
KARUG	261036.16N 0514614.17E	Y604
KINID	260907.55N 0505452.26E	B457,M444, N685, T444
КОВОК	265839.18N 0503349.32E	G663, L703, P559, Y604
KUKDA	261855.28N 0510227.67E	A453,P699
KUMBO	281705.00N 0485526.00E	A453, M600
KUMLA	262609.00N 0520822.00E	P559, T430
KUPSA	250445.0N 0521151.0E	B415, P899
KUVER	280924.0N 0500600.0E	B416
LABOP	261907.00N 0520429.00E	L602, M600, T430, T602
LADNA	262749.34N 0502244.63E	N318
LONOS	283027.00N 0491713.00E	L703, P708, Y604
LOPOL	281849.62N 0492845.12E	L703, Y604
LOTOR	264854.45N 0502200.30E	A453, G663, M444, T444
LOVAK	262012N 0505603E	Note 1
LOXIM	260620.75N 0515541.27E	P430
LUBET	261440.67N 0510346.54E	L934, N318, T934
MARWA	262208.05N 0502747.07E	Note 1 & 2
MEDMA	263421.34N 0505454.02E	L768, N697, Y856
METLA	265645.21N 0500432.59E	B419
MIDSI	264142.00N 0515442.00E	A453, R659
MODOG	261012.00N 0515935.00E	L768, T430
MOGAS	264759.61N 0503909.06E	L602, M600, T602,
MURUB	262455.00N 0523751.00E	M677, T308, T872
NAGAT	261549N 0505319E	Note 1
NALPO	255602.00N 0532945.00E	P559
NARMI	261802.33N 0501939.01E	B457, N685, N697, P699, Y856, Z622
NONTI	262924N 0511919E	Note 3
OBMON	263832.00N 0504125.00E	L768, L934, T934
OBNAX	272650.91N 0501103.18E	L703, Y604
OBNET	260032.00N 0534514.00E	M677
OBROS	261903.36N 0513940.48E	L768,Y856
OBSAS	262622N 0504525E	Note 1 & 2
OBTAR	265934.00N 0510309.00E	L319, T319
ORDAN	271706.38N 0495442.06E	M444, T444
ORDIG	262738.00N 0511603.00E	L768, Y856, Note 1

Name-code designator	Coordinates	ATS route or other route
1	2	3
ORGEL		P708
ORLUP	260651.00N 0523216.00E	L602, L721, M600, T557, T602
ORNAK	272853.74N 0493248.10E	A453, M600
ORSOL	272135.03N 0500207.77E	L602, L934, T602, T934
OVESU	254922.77N 0523301.34E	Т800
OVUPI	265320.00N 0502727.00E	L934, T934
PASAK	282459.91N 0494846.65E	M677
PEGOK	253254N 0520759E	Note 3
RABAD	254747.00N 0504602.00E	Note 2
RABAP	283625.20N 0492722.07E	M677
RABLA	261505.73N 0514833.68E	L768, R659, Y856
RADMO	260231N 0504125E	Note 1
RAGAS	263537.00N 0521337.00E	T430, T557
RAKAK	265221.00N 0502618.00E	G663, M600
RAMKI	261138.00N 0515625.06E	L768, P430
RAMSI	270249.00N 0500714.00E	A453, B419, M444, M600, P559, T308, T319, T444
RAZAN	261021.0N 0504813.8E	Note 1 & 2
REVAX	272026.10N 0502651.27E	P708
RIGAG	262157.0N 0504241.0E	Note 1 & 2
RIKET	261952.00N 0510954.00E	A453, L703, P699
ROSAN	263129.13N 0515220.05E	P559, R659
ROTAG	255353.00N 0523621.00E	L768
ROTEL	264015.01N 0502149.08E	T872
ROTOX	283323.00N 0494809.00E	T444,T602,T934,Note 5
SEVNI	264401.00N 0513815.00E	M677, T308, T872
SIMBU	260542.13N 0515706.85E	T430
SOBUS	282137.42N 0490253.99E	Note 3
SODAK	264634.00N 0510530.00E	N697, P559, Y604
SOGAN	263915.00N 0515408.00E	M677, R659, 1308, 1872
SUGAT	262029.00N 0511443.00E	A453
SOLAV	260742N 0504027E	
SOLEM	275229.24N 0491138.38E	A453, M000
TOPU	262134 0N 0512301 0E	A453, L706, 1650, 2022
	270038 08N 0501150 02E	1602 1034 1602 1034
	265504 00N 0502927 00E	G663   602 T602
TOEMO	260611 00N 0530214 00E	P559
TORBO	265222 68N 0511024 30E	M677 N697 T308 T872
	270004 88N 0505629 45E	M677, T308, T319
TOSTA	262746 42N 0504912 51E	N697 7622
τονοχ	245342N 0522429F	P899
тохам	253658N 0524816F	Note 3
TULUB	260644.00N 0510041 00F	B457, M444, N685, T444
ТИМАК	255031.00N 0531108 00F	L602. M600. T557. T602
TYLOS	255309.00N 0504300 00F	Note 2
UKNEP	262127.00N 0524818.00E	L721, M677
UKRET	255525.98N 0521945.77E	L721
UKUBU	261428.00N 0524039.00E	L721, P559
ULADA	264526.72N 0501623.55E	G663, L768

Name-code designator	Name-code Coordinates ATS route or other r designator		route	
1	2	3		
ULAMU	264452.04N 0501659.80E	Note 3		
UMAVA	260552N 0504648E	Note 1		
VEDOM	260109.00N 0524456.00E	L602, M600, T557, T602		
VEDOR	270855.00N 0504630.00E	G663, M677		
VEDOS	264105.85N 0510044.69E	L602, M600, N697, T602		
VELAK	261307.00N 0521821.00E	L602, M600, T557, T602		
VELOG	270215.03N 0503055.83E	L703, T308, T319, Y604		

Note 1: Part of SID or STAR.

Note 2: Traffic sequence waypoints.

Note 3: Only for record, states requirement to record / locate position not connected with airways but used for LOA (Letter of Agreement) between ATS units and considered important to disseminate them.

Note 4: Only for enroute holding purposes.

Note 5: Available by NOTAM only.

NIL

## ENR 4.5 AERONAUTICAL GROUND LIGHTS - EN-ROUTE

#### ENR 5. NAVIGATION WARNINGS

#### ENR 5.1 PROHIBITED, RESTRICTED AND DANGER AREAS

### 5.1.1 CLASSIFICATION

5.1.1.1 All airspace in which a potential hazard to aircraft operations may exist and all areas over which the operation of civil aircraft may, for one reason or another, be restricted either temporarily or permanently, are classified according to the following three types of area as defined by ICAO.

### 5.1.1.1.1 PROHIBITED AREA

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited. This term is used only when the flight of civil aircraft within the designated airspace is not permitted at any time under any circumstances.

### 5.1.1.1.2 RESTRICTED AREA

An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions. This term is used whenever the flight of civil aircraft within the designated airspace is not absolutely prohibited but may be made only if specified conditions are complied with. Thus, prohibition of flight except at certain specified times leads to the designation of the airspace as a "Restricted Area", as would prohibition except in certain meteorological conditions. Similarly, prohibition of flight unless special permission has been obtained leads to the designation of a "Restriction Area". However, conditions of flight imposed as a result of application of the Rules of the Air or air traffic services practices or procedures, (For example, compliance with minimum safe heights or with rules stemming from the establishment of controlled airspace) do not constitute conditions calling for designation of a "Restricted Area".

### 5.1.1.1.3 DANGER AREA

An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times. This term is used only when the potential danger to aircraft has not led to the designation of the airspace as "Restricted" or "Prohibited". The effect of the creation of the Danger Area is to caution operators or pilots of aircraft that it is necessary for them to assess the dangers in relation to their responsibility for the safety of their aircraft.

#### 5.1.2 GENERAL

5.1.2.1 The TYPE of area is indicated by the letters:

"D" for Danger - followed by number 1 to 39 "P" for Prohibited - followed by number 40 to 49 "R" for Restricted - followed by number 50 and above

5.1.2.2 Each Area is described in a tabulation which indicates:

Its lateral and vertical limits The type of restriction or hazard involved The time at which the area is active, and Any other pertinent information

5.1.2.3 The positions of these Areas are also shown on the Airspace Charts, see **ENR 6**.

5.1.2.4 Altitudes are given in feet.

Prohibited , Restricted and Danger areas:

Ī	Identification, name and lateral limits	Upper limit Lower limit	Remarks (time of activity, type of restriction, nature of hazard, risk of interception)	
	1	2	3	
	PROHIBITED AREAS			
_	OBP42 BAHRAIN 260936.00N 0503036.00E 260936.00N 0503342.00E 260648.00N 0503342.00E 260648.00N 0503200.00E 260548.00N 0503036.00E	UNL SFC	H24	
-	RESTRICTED AREAS			
_	OTR52 QATAR Area encloses Qatar territorial land and water boundaries.	UNL SFC	H24 Controlling Authority State of Qatar Military flying activities. Restriction does not apply for the flights approved by Qatar Civil Aviation Authority (QCAA) and for the flights on all ATS routes listed in ENR 3.	
	OBR57   Area encloses entire Bahrain Island   contained within the following coordinates:-   261523.00N 0502608.00E   261523.00N 0503446.00E   260957.00N 0504032.00E   255000.00N 0503800.00E   254959.00N 0503639.00E   255001.00N 05031153.00E   255000.00N 0503100.00E   255001.00N 0503100.00E	UNL SFC	H24. Except on instructions from Bahrain ATC	
	OBR66 BAHRAIN 260457.00N 0503655.00E 255806.00N 0504838.00E 253934.00N 0504955.00E 253445.00N 0504543.00E 253524.00N 0503241.00E 255353.00N 0501821.00E	UNL SFC	Military Exercise Area. Controlled and activated by Bahrain Defense Force	
-	DANGER AREAS			
_	OBD8 BAHRAIN 271100.00N 0504900.00E 270400.00N 0505618.00E 265500.00N 0511000.00E 265424.00N 0511148.00E 263512.00N 0503954.00E 264424.00N 0502906.00E	FL 150 4500 FT	ACTIVITY WILL BE NOTIFIED BY NOTAM. MILITARY JET TRAINING.	

Identification, name and lateral limits		Upper limit Lower limit	Remarks (time of activity, type of restriction, nature of hazard, risk of interception)	
	1	2	3	
_	OTD26 QATAR / BIR ZIRKIT A circle 5 NM centred on 253000.00N 0505200.00E	3500 FT SFC	H24 Gun Firing. Controlling Authority State of Qatar Military exercise area	
	SAUDI ARABIA			
	DANGER AREAS OED46 SAUDI ARABIA 280700N 0493000E 275300N 0493000E 275300N 0492200E 280700N 0492200E	4000FT MSL	Activity as notified by NOTAM	
	EMIRATES RESTRICTED AREAS			
	OMR54 SHAHEEN 244600N 0523000E 244600N 0523800E 243600N 0531800E 243100N 0533830E 242800N 0535500E 242424N 0540828E 241805N 0542246E 241930N 0543100E 240000N 055000E 234730N 0552312E 223730N 0550748E 225600N 0523500E 240800N 0513500E 244830N 0521540E	UNL SFC	H24 Controlled by UAE Air Force. Military Jet Training Area.	

### ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS AND AIR DEFENCE IDENTIFICATION ZONE (ADIZ)

NIL

NIL

### ENR 5.3 OTHER ACTIVITIES OF A DANGEROUS NATURE AND OTHER POTENTIAL HAZARDS

### ENR 5.4 AIR NAVIGATION OBSTACLES - EN-ROUTE

(Height 330 FT (100 M) or higher)

Designation	OBST type	OBST position	ELEV/HGT (M)	OBST LGT Type/Colour	Remarks
1	2	3	4	5	6
	OTHER:MAST	262203N 0500135E	454 FT/405 FT	Yes	
	OTHER:MAST	261859N 0501202E	330 FT/330 FT	Yes	-
## ENR 5.5 AERIAL SPORTING AND RECREATIONAL ACTIVITIES

#### ENR 5.6 WILDLIFE MANAGEMENT

#### 5.6.1 BAHRAIN INTERNATIONAL AIRPORT (OBBI)

Proximity to the sea provides a constant risk of bird-strike. Of greatest risk to aircraft are migratory birds, which are present in increased numbers during the winter.

Critical area infringements are exacerbated during high tide when birds search for roosts located on the airfield. Significant numbers of birds are attracted to any standing water, so extra caution should be exercised following periods of rain or when standing water is observed in the runway strip.

Any bird-strike event should be reported to ATC as soon as possible, as BIA employs a management strategy which is constantly updated.

### 5.6.2 BAHRAIN SAKHIR AIRBASE (OBKH) & ISA AIRBASE (OBBS)

#### 5.6.2.1 Location and Habitat

- 1. Sakhir airbase is situated in the middle of Bahrain on the western side of the highest point on the island, Jabal Al Dukan, The habitant is essentially semi-desert with tufts of scrub grass and occasional small desert plants and occasional naturally occurring small trees of around 4 meters in height.
- 2. The airfield is boarded by small ridges to the west and to the east by rising ground towards the Jabal Al Dukan, To the east and west there is very little vegetation; however, on the runway approaches to the north and south, there are artificially planted large gardens. There are date palms and small and medium sized shrubs and trees up to 7 metres in height which can attract birds.
- 3. The climate is hot and dry in summer with temperatures normally reaching the mid forty degress centigrade during July and August, In winter it is normally mild and frost free, staying mainly dry with the occasional day of heavy rain which can cause some flooding.
- 4. As Bahrain is an island, the airbase is subject to sea influences and strong winds can be a frequent occurrence causing rising sand, dust and sand storms.

#### 5.6.2.2 Wildlife

- 1. Wildlife activity around the base is assessed as light. Whilst, the occasional feral dog has been seen, the airfield is protected by fencing and there have been no incursions on the airfield since the fencing has been strengthened and repaired.
- 2. Bird activity is assessed as very light in summer and light in winter. Occasional flocks of gulls have been sighted on the airfield in winter, other bird activity is confined to small numbers of doves, plovers, lapwings and small game birds (Partridge) that are often seen throughout the year in small numbers of 2-6 individuals rather than folcks, Mainly is spring and autumn, small groups of ducks of around 3-5 in number have been observed crossing the airfield on an occasional basis.

### ENR 6. EN-ROUTE CHARTS

(including Index Charts)









AERONAUTICAL INFORMATION CORRECT AT 1st SEPTEMBER 2004

NAUTICAL MILES 10 0 STATUTE MILES 10 0

KILOMETRES 10 0

Lines of equal magnetic variation for 2004 Annual change is negligible.

KILOMETRES

200 NAUTICAL MILES

240 STATUTE MILES

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### PART 3 - AERODROMES (AD)

AD 0.

AD 0.1 PREFACE

Not applicable.

AD 0.2 RECORD OF AIP AMENDMENTS

Not applicable.

AD 0.3 RECORD OF AIP SUPPLEMENTS

Not applicable.

AD 0.4 CHECKLIST OF AIP PAGES

Not applicable.

#### AD 0.5 LIST OF HAND AMENDMENTS TO THE AIP

Not applicable.

AD 0.

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#### AD 1. AERODROMES / HELIPORTS - INTRODUCTION

#### AD 1.1 AERODROME / HELIPORT AVAILABILITY AND CONDITIONS OF USE

#### 1.1.1 General conditions

1.1.1.1 The conditions under which aircraft may land, be parked, housed or otherwise be dealt with at the aerodromes under the control of the administrations of the Kingdom of Bahrain.

- a) The fees and charges for landing, parking or housing of aircraft, as notified, from time to time by the various administrations concerned shall be published in the AIP BAHRAIN FIR, or by NOTAM. Unless otherwise agreed in advance the administration concerned shall levy reasonable fees and charges, as determined from time to time, for services and / or supplies furnished by, or on behalf of the administration to aircraft any aerodrome under its control. Such fees and charges as referred to above shall accrue from day to day and be payable to the administration on demand.
- b) The administration shall have a lien on the aircraft, its parts and accessories, for such fees and charges as aforesaid.
- c) If payment of such fees and charges is not made to the administration within fourteen days after a letter demanding payment thereof has been sent by post to the registered owner of the aircraft, the administration shall be entitled to sell, remove destroy or otherwise dispose of the aircraft, and any of its parts and accessories, and to apply the proceeds from so doing to the payment of such fees and charges.
- d) Neither the particular administration nor any servant of agent of the government shall be liable for the loss of, or damage to, the aircraft, its parts of accessories or any property contained in the aircraft, however such loss or damage may arise, occurring whilst the aircraft is on any of the aerodromes under the control of a particular administration, or is in the course of landing or taking off at any such aerodrome, or of being removed or dealt with elsewhere, for the purposes of AD 1.1.3 of these conditions.

#### 1.1.1.2 Landings made other than at an international aerodrome / heliport or designated alternate aerodrome / heliport

If a landing is made elsewhere than at an international airport or a designated alternate airport the pilot - in - command shall report the landing as soon as possible to the health, customs and immigration authorities of the state in whose territory the aircraft has landed. This notification may be made through the air radio channels if this method of communication is available.

The pilot - in - command is responsible for ensuring that:

- a) If permission has not been granted to the aircraft at the previous landing, contact between other persons on the one hand and the passengers and crew on the other is avoided.
- b) That cargo, baggage and mail are not removed from the aircraft except as provided below.
- c) Any foodstuff of overseas origin, or any plant material, is not removed from the aircraft except where local food is unobtainable. All food refuse, including peelings, cores and stones of fruit, etc., must be collected and returned to the galley refuse container, the contents of which should not be removed from the aircraft except for hygiene reasons, in which case they must be destroyed by burning or deep burial.

#### 1.1.1.3 Traffic of persons and vehicles on aerodrome

1.1.1.3.1 Demarcation of zones

The grounds of each aerodrome are divided into two zones:

- a) A Public zone comprising the part of the aerodrome open to the public;
- b) A restricted zone comprising the rest of the aerodrome.

#### 1.1.1.3.2 Movement of persons

1.1.1.3.2.1 Access to the restricted zone is authorized only under conditions prescribed by the special rules governing the aerodrome.

1.1.1.3.2.2 The customs, police and health inspection offices and premises assigned to transit traffic are normally accessible only to passengers, to staff of public authorities and to airlines, and to authorized persons in the pursuit of their duty.

1.1.1.3.2.3 The movement of persons having access to the restricted zone of the aerodrome is subject to the conditions prescribed by the air regulations and the special rules laid down by the person responsible for the management of the airport.

#### 1.1.1.3.3 *Movement of vehicles*

1.1.1.3.3.1 The movement of vehicles in the restricted zone is strictly limited to vehicles driven, or used by, persons carrying a traffic permit or an official card of admittance.

1.1.1.3.3.2 Ground vechicles shall use frequencies separate from those used for control of aircraft, however a vehicle operating on a maneuvering area shall operate on the appropriate aerodrome control frequency.

1.1.1.3.3.3 Drivers of vehicles, of whatever type, driving within the confines of the aerodrome must respect the direction of the traffic, the traffic signs and the posted speed limits, and generally comply with the provisions of the highway code and with the instructions given by the competent authorities.

#### 1.1.1.3.4 Policing

Care and protection of aircraft, vehicles, equipment and goods for which the aerodrome facilities are used are not the responsibility of the state or any concessionaire, who cannot be responsible for loss or damage which is not incurred through action by them or their agents.

## KINGDOM OF BAHRAIN

#### SPECIAL REGULATIONS FOR AIRPORT USE

1.1.1.4 Conditions applicable to the landing, parking, or storage of aircraft on aerodromes under the control of Civil Aviation Affairs

1.1.1.4.1 An authorized official from Civil Aviation Affairs may at any time order an aircraft operator either to move a parked aircraft to another position or to remove it from the airport. Failure to comply with the order, within the period specified in it, will render the operator liable to a special charge, equivalent to five times the standard parking charge, for every day or part of a day during which aircraft remains in position after the period specified in the order has expired.

1.1.1.4.2 It is mandatory for all aircraft arriving / departing from the Kingdom of Bahrain to employ the services of the Handling Agent.

1.1.1.4.3 BAHRAIN INTERNATIONAL airport is a civilian airport and for reasons of safety, diversions to the airport by military aircraft shall only be permitted under the following circumstances:

- 1. Diversion to the airport by military combat aircraft which are fully loaded (i.e. armed) shall not be permitted under any circumstances.
- 2. Military combat aircraft not loaded (i.e. unarmed) shall be permitted to divert to the airport in cases of a declared emergency and as a matter of last resort.
- 3. Procedures for diversions by non combat military aircraft remain as at present.

In all cases the preferred division airport for BAHRAIN INTERNATIONAL airport should be BAHRAIN / ISA AIRBASE.

1.1.1.4.4 All military fixed wing tactical aircraft will not permitted to arrive to BAHRAIN INTERNATIONAL airport daily between the following timings: 1430 - 1630.

Enquiries should be made to:

 Bahrain Airport Services (BAS)

 TEL:
 +973 17321443 / +973 17321453

 Telefax:+973 18335304

 Telex:
 8971 BASBA BN

 AFS:
 OBBIXHAX

 SITA:
 BAHKBXH

VHF AIR / GRD: 131.900 MHZ

Call sign: BAS OPERATIONS

#### 1.1.1.4.5 Carriage of explosives, arms and ammunition

1.1.1.4.5.1 The carriage of explosives, arms and ammunition in aircraft arriving at, departing from, or in transit through BAHRAIN INTERNATIONAL airport is prohibited without prior permission from the Ministry of the Interior (see **GEN 1.1**)

1.1.1.4.5.2 The prohibition stated in **AD 1.1.1.4.3** does not apply to arms and ammunition which the State of Registry of the aircraft allows to be carried for the protection of persons on board the aircraft.

#### 1.1.1.5 Dangerous goods

The carriage of dangerous goods in aircraft arriving at, departing from, or in transit through BAHRAIN INTERNATIONAL airport and Bahrain sovereign Airspace shall comply fully with, or be to no less a standard than that specified in, the latest edition of:

Government Legislation, Decree or Instruction.

ICAO Annex 18 to the Convention on International Aviation

ICAO Doc 9284 - AN / 905, Technical Instructions for the Safe Transport of Goods by Air.

Instructions and Notices issued by the Under Secretary for Civil Aviation.

#### 1.1.2 Use of military air bases

#### Kingdom of Bahrain

#### General

Use of military air bases in the Kingdom of Bahrain with other than State registered aircraft may be made solely when prior permission has been obtained.

The use of military air bases as alternate aerodromes may likewise be made solely when prior permission thereto has been obtained.

BAHRAIN / ISA AIRBASE is designated as an emergency diversion aerodrome for BAHRAIN INTERNATIONAL airport.

A permission may at any time be withdrawn with immediate effect, should circumstances so require.

#### Submission of application

Application to use a military air base shall be submitted in writing well in advance of the intended flight to the Bahrain Defence Force General Headquarters.

The address is:

Bahrain Defence Force War Operation Room P.O. Box 245 Kingdom of Bahrain

#### **Rules and conditions**

Operations on the air base must be carried out in accordance with the rules and conditions stated below with due regard to such other conditions as may have been stipulated for each individual permission.

A flight plan shall be submitted for each flight. During operations in military airspace or at a military air base, the pilot - in - command shall closely adhere to any instruction given.

The Commander of the air base establishes the rules which are to be observed by flight crew members and passengers concerning security measures, traffic and stays at the air base.

Photographing from the air or on the ground is totally prohibited at all military bases.

Flight crew members, and ground personnel shall immediately report any violations.

Bahrain Defence Force shall not be liable for the theft, fire-, water or other damage to aircraft, their equipment, flight crew members, passengers, cargo, etc. caused by civil aircraft, flight crew members or passengers to Defence Force material, buildings and personnel within the area of an air base.

#### 1.1.3 Low visibility procedures (LVP)

1.1.3.1 All taxi routes are available during (LVP) operations subject to ATC clearance (For CAT II taxi procedures, ref. AIP AD 2.22.1).

#### 1.1.4 Aerodrome operating minima

Promulgation of an aerodrome as available for Category II or Category III operations means that it is suitably equipped and that procedures appropriate to such operations have been determined and are applied when relevant.

Promulgation implies that at least the following facilities are available:

ILS - certificated to relevant performance category.

Lighting - suitable for Category promulgated.

RVR System - may be automatic or manned system for Category II; will be automatic system for Category III.

Special Procedures and safeguards will be applied during Category II and III operations. In general, these are intended to provide protection for aircraft operating in low visibilities and to avoid disturbance to the ILS signals.

Protection of ILS signals during Category II or III operations may dictate that pre- take-off holding positions are more distant from the runway than the holding positions used in good weather. Such holding positions will be appropriately marked and will display signs conforming to the specifications in Annex 14, Volume I on one or both sides of the taxiway; there may also be a stop bar of red lights. For aircraft taxing off the runway during Category III operations exit taxiway center line lights are colour coded to facilitate notification of runway vacation and the colour coding ends at the boundary of the ILS critical / Sensitive Area. Pilots are required to make a "Runway Vacated" call on R / T when the aircraft has colour code of part of exit taxiway centre line lights, due allowance being made for aircraft size to ensure that the entire aircraft is clear of the ILS critical / Sensitive Area.

In actual Category II or III weather conditions pilots will be informed by ATC of any unserviceabilites in the promulgated facilities so that they can amend their minima, if necessary, according to their operations manual. Pilots who wish to carry out a practice Category II or Category III approach are to request practice Category II (or Category III) approach on initial contact with Approach Control. For practice approaches there is no guarantee that the full safeguarding procedures will be applied and pilots should anticipate the possibility of resultant ILS signal disturbance.

#### 1.1.5 Runway friction measuring

#### BAHRAIN INTERNATIONAL airport

Friction Measuring surveys are conducted at BAHRAIN INTERNATIONAL airport four times per year. The Friction Classification Survey Table is displayed here:

Friction Classification Survey Table - BAHRAIN INTERNATIONAL airport							
1	2	3	4	5	6	7	8
Equipment	Design object ice for New Runway Surfaces	Maintenance Planning Level	Minimum Friction Level	Test Water Depth mm (tolerance)	Test Speed kph (tolerance)	Tyre Pressure Psi (tolerance)	Tyre
Grip Tester	Above 0.80	0.53	0.43	1 mm (+ / - 5 %)	65 ( + / - 5)	20 ( + / - 1)	Туре А 10 x 3.6 - 5

Friction measuring devices are not used at BAHRAIN INTERNATIONAL airport on a daily operational basis.

Whenever water is present on the runway, a description of the runway surface conditions on the centre half of the width of the runway, including the possible assessment of water depth, where applicable, should be made available using the following terms:

DAMP - the surface shows a change of colour due to moisture WET - the surface is soaked but there is no standing water WATER PATCHES - significant patches of standing water are visible FLOODED - extensive standing water is visible

1.1.6 Other information

NIL

#### AD 1.2 RESCUE AND FIRE FIGHTING SERVICES AND SNOW PLAN

### 1.2.1 Rescue and fire fighting services

At aerodromes approved for scheduled and / or non - scheduled traffic with aeroplanes carrying passengers, Rescue and Fire Fighting Services, and in some cases also Sea Rescue Services, are established in accordance with regulations for civil aviation.

Note: For heliports special rules will apply.

Information about whether there is a service or not and also the extent of the service is given on the relevant page for each aerodrome.

Scheduled or non - scheduled traffic with aeroplanes carrying passengers are not allowed to use aerodromes without Rescue and Fire Fighting Services.

Each individual service is categorised to the table shown below. Temporary changes will be published by NOTAM.

Rescue and fire fighting services		
Aerodrome Category	Amount of water in litres for Production of performance level B Foam	
7	12100	
8	18200	
9	24300	
10	32300	

#### 1.2.2 Snow Plan

The local climate precludes the requirement for a snow plan.

#### 1.2.3 De-watering Plan at Bahrain International Airport

Duration: Annually between 1<sup>st</sup> October until 1<sup>st</sup> May of the following year

During winter season, weather conditions usually get so unsettled to an extent that it may be unforeseeable practice to predict the weather condition with respect to rain and when and the amount of rain that could fall during then, as clouds would rapidly and largely start to develop at the area around Bahrain International Airport at which rain between shows to thunderstorms may be experienced. Therefore, it became essentially important to take all precautionary measures to ensure that a safe yet uninterrupted conduct of air navigation is implemented and is maintained at the airport throughout the whole rainy season.

In this context, Bahrain Airport Company for being the airport operator, has identified certain concourse locations which standing water and associated patches are believed to accumulate. Accordingly a number of nearly 10 pumps will be at the runway strip at a symmetrical distance of 135M from the runway centre-line with a max HGT of 1.5M, such pumps will immediately allow De-watering process to take place off the runway strip.

The attached diagram is clearly depicting various locations of the pumps within the runway strip with arrows pointing to either the gutter or the manhole where the water should drain.

Aerodrome/heliport name	Type of traffic p	Reference to AD Section		
	International- National (INTL-NTL)	IFR-VFR	S = scheduled NS = Non-scheduled P = Private	and remarks
1	2	3	4	5
Aerodromes				
BAHRAIN / ISA AIRBASE OBBS		IFR, VFR		AD 2-OBBS
BAHRAIN / SAKHIR AIRBASE OBKH	NTL	IFR, VFR	S, NS	AD 2-OBKH
BAHRAIN INTERNATIONAL OBBI	INTL, NTL	IFR, VFR	S, NS, P	AD 2-OBBI
* The location indicators marked with an a	sterisk (*) cannot be	used in the address	component of AFS mess	ages.

## AD 1.3 INDEX TO AERODROMES AND HELIPORTS

### AD 1.4 GROUPING OF AERODROMES / HELIPORTS

The criteria applied in grouping aerodromes / heliports for the provision of information in this AIP is as follows:

#### Primary / major international aerodrome / heliport

Aerodrome / heliport of entry and departure for international air traffic, where all formalities concerning customs, immigration, health, animal and plant quarantine and similar procedures are carried out and where air traffic services are available on a regular basis.

#### Secondary / other international aerodrome / heliport

Other aerodrome / heliport available for entry or departure of international air traffic, at which the formalities of customs, immigration, health and similar procedures and air traffic services are made available on a restricted basis to flights, with prior approval only.

#### National aerodrome / heliport

Aerodrome / heliport available only for domestic air traffic, including those military aerodromes / heliports where civil air traffic is allowed under certain conditions.

## AD 1.5 STATUS OF CERTIFICATION OF AERODROMES

Aerodrome Name	Date of Certification	Validity of Certification	Remarks
Location Indicator			
1	2	3	4
	15 JULY 2011	3 years	
OBBI	15 JULY 2014	5 years	Certified by BCAA
	15 JULY 2019	5 years	

#### AD 2. AERODROMES

## OBBI AD 2.1 AERODROME LOCATION INDICATOR AND NAME

### **OBBI - BAHRAIN INTERNATIONAL**

#### OBBI AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	261615N 0503801E Mid - point of RWY on CL
2	Direction and distance from (city)	3.3 NM NE of Manama
3	Elevation/Reference temperature	8 FT / 38° C
4	Geoid undulation at AD ELEV PSN	-83.18 FT
5	MAG VAR/Annual change	2.49° E (2020) / 0°3' per year
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Undersecretary for Civil Aviation P.O. Box 586 Kingdom of Bahrain TEL: +973 17321100 Telefax:+973 17339060 AFS: OBBIYAYX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	

#### **OBBI AD 2.3 OPERATIONAL HOURS**

1	AD Operator	SUN - THU 04:00 - 11:15
2	Customs and immigration	H24
3	Health and sanitation	H24
4	AIM Briefing Office	H24
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24
7	ATS	H24
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

## OBBI AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	BAHRAIN AIRPORT SERVICES
2	Fuel/oil types	Jet A1 available to contract customers or on cash basis only (for cash pre deposit should be arranged with Bahrain Aviation Fuelling Company BAFCO). TEL: +973 17348280 / 17348272 Mob. +973 66769958 , email: Operation@BAFCO.BH.Fuel AVGAS 100 LL not available.
3	Fuelling facilities/capacity	Jet A1 hydrant stands 07 – 26A, E1-E4, C1-C4. Jet A1 Bowsers Stands: 1-6, 50-58, 61-63, 71-75, 26B, 27-28, 80-88.
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	Gulf Air

7	Remarks	<ol> <li>Handling Services available H24 from Bahrain Airport Services (BAS)</li> <li>Private / Business Aircraft shall carry a tow bar compliant to its type</li> </ol>
		of aircraft

## **OBBI AD 2.5 PASSENGER FACILITIES**

1	Hotels	In Manama and at Airport
2	Restaurants	At Airport
3	Transportation	Taxis and courtesy coaches to Hotels
4	Medical facilities	First aid; Ambulance; Hospitals in Manama
5	Bank and Post Office	At airport; At airport
6	Tourist Office	At airport
7	Remarks	NIL

## OBBI AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 10
2	Specialized Rescue equipment	1 Rescue Staircase Vehicle available
3	Capability for removal of disabled aircraft	Limited
4	Remarks	Trained personal: 13 per shift; Fire vehicles: 5 vehicles, 2 with 13300L of capacity each, 2 with 12500L of capacity each and 1 with 12000L of capacity, 2 of those vehicles are used as backup in case of equipment failure

### OBBI AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

## OBBI AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron designation,	MAIN APRON A: (Stands 07 to 10) Concrete, PCN 86 / R / B / W / T (29,000 m2)
	surface, strength and area	MAIN APRON B ( STAND 11 TO 22): (94.000 m2)
		Stands 11 to 19 Concrete, PCN 86 / R / B /W /T
		Stands 20 to 22 Concrete, PCN 120/R/B/W/T
		MAIN APRON C (Stands 23 to 28) Concrete, PCN 120/R/B/W/T (40,000 m2)
		MIDDLE APRON ( STAND 1 TO 6) Concrete, PCN 104 / R / B / W / T (18,000 m2)
		EASTERN APRON ( STAND 81 TO 88) Asphalt, PCN 22 / F/ B / X / T (16,000 m2)
		WESTERN A ( STAND 61 TO 63) Concrete, PCN 120 / R / C / W / T (13,000 m2)
		WESTERN B ( STAND 50 TO 58 including STAND 52A) Concrete, PCN 82 / R / C / W / T (93,000 m2)
		EXECUTIVE APRON ( STAND E1 TO E4) Concrete, PCN 120 / R / B / W / T (18,000 m2)
		CARGO APRON ( STAND C1 TO C5) Concrete, PCN 120 / R / B / W / T (37,000 m2)
		NORTHERN APRON ( STAND 70 TO 75) Asphalt, PCN 105 / F / A / W / T (45,500 m2)
		MENA APRON : Concrete, PCN 120 / R / D / W / T(10,000 m2)

2	Taxiway designa- tion, width, surface, strength and shoul- der width (m)	<ul> <li>TWY A1: 28 M, Asphalt, PCN 120 / F / A / W / T 17.50 West - 17.50 East</li> <li>TWY A2: 25.5 M, Asphalt, PCN 114 / F / A / W / T 17.50 West - 17.50 East</li> <li>TWY A3: 30 M, Asphalt, PCN 69 / F / A / W / T 17.50 West - 17.50 East</li> <li>TWY A4: 31.5 M, Asphalt, PCN 65 / F / A / W / T 17.50 West - 17.50 East</li> <li>TWY A5: 30 M, Asphalt, PCN 120 / F / A / W / T 15.00 West - 16.00 East</li> <li>TWY A6, 23 M, Asphalt, PCN 107 / F / A / W / T 15.00 West - 15.00 East</li> <li>TWY A6, 23 M, Asphalt, PCN 107 / F / A / W / T 15.00 West - 15.00 East</li> <li>TWY A7, 22 M, Asphalt, PCN 107 / F / A / W / T 17.50 West - 17.00 East</li> <li>TWY A8: 30 M, Asphalt, PCN 120 / F / A / W / T 17.50 West - 17.50 East</li> <li>TWY A9: 29 M, Asphalt, PCN 87 / F / A / W / T 17.50 West - 11.50 East</li> <li>TWY A9: 29 M, Asphalt, PCN 85 / F / A / W / T 17.50 West - 11.50 East</li> <li>TWY K: 26 M, Concrete, PCN 83 / R / B / W / T No Limit West - No Limit East</li> <li>TWY L: 26 M, Asphalt, PCN 59 / F / A / W / T No Limit West - No Limit East</li> <li>TWY A ( between A1 &amp; Stand 1): 26M, Asphalt,PCN 112 / F / A / W / T 17.50 North - No Limit South</li> <li>TWY N: 34 M, Asphalt, PCN 102 / F / A / W / T No Limit West - No Limit East</li> <li>TWY A ( Between Stand 1 &amp; Stand 6): 11.5m North of (CL) &amp; 51m South of (CL), Asphalt, PCN 112</li> <li>/ F / A /W / T 15.00 North - No Limit South</li> <li>TWY P: 41 M, Asphalt, PCN 67 / F / A / X / T No Limit West - No Limit East</li> <li>TWY Q: 49 M, Asphalt, PCN 67 / F / A / X / T No Limit Vest - No Limit East</li> <li>TWY A (Between Stand 6 &amp; S): 30M, Asphalt, PCN 112 / F / A / W / T 15.00 North - No Limit South</li> <li>TWY 2: 45 M, Asphalt, PCN 67 / F / A / X / T No Limit - No Limit</li> <li>TWY 2: 45 M, Asphalt, PCN 67 / F / A / X / T No Limit - No Limit</li> <li>TWY 2: 45 M, Asphalt, PCN 75 / F / A / X / T No Limit - No Limit</li> <li>TWY 2: 45 M, Asphalt, PCN 75 / F / A / W / T 17.50 West - 18.00 East</li> <li>TWY U: 42 M, Asphalt, PCN 75 / F / A / W / T 17.50 West - 7.50 East&lt;</li></ul>
3	Altimeter checkpoint location and elevation	Bays 42 - 46: 6 FT
4	VOR checkpoints	TBN
5	INS checkpoints	See ACFT Parking / Docking charts
6	Remarks	Main Apron A consists of Stands 07 – 10 and can accommodate up to Code F aircrafts with the exception of Stand 07, which accommodates up to Code C aircrafts only. Main Apron B consists of Stands 11 – 22 and can accommodate up to Code F aircrafts with the exception of Stand 14, which accommodates up to Code E aircrafts only. Main Apron C consists of Stands 23 – 28 and can accommodate up to Code F aircrafts with the exception of Stand 28, which accommodates up to Code C aircrafts only.

## OBBI AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	<ul> <li>Taxiing guidance signs at all intersections with TWY and RWY at all holding positions.</li> <li>Taxi guide lines at all aprons.</li> <li>SAFEGATE Visual Docking Guidance System</li> <li>(VDGS) installed on stands:</li> <li>MIDDLE APRON (STAND 1 TO 6),</li> <li>Fuel pits &amp; SAFEGATE Visual Docking Guidance System (VDGS) installed on stands:</li> <li>CARGO APRON (STAND C1 TO C5),</li> <li>EXECUTIVE APRON (STAND C1 TO C5),</li> <li>EXECUTIVE APRON (STAND C1 TO E4)</li> <li>Fuel pits &amp; (VDGS) (FMT) installed on stands:</li> <li>MAIN APRON A (STAND 07 TO 10)</li> <li>(VDGS). (FMT), PLB, 400HZ/PCA pop-up pits, fuel pits installed on stands:</li> <li>MAIN APRON B (STAND 11 TO 22).</li> <li>VDGS), SAFEGATE, 400HZ/PCA pop-up pits, fuel pits installed on stands</li> <li>MAIN APRON C (STAND 23 TO 28),</li> </ul>
2	RWY and TWY markings	RWY 12L / 30R: designation, THR, Displaced THR, TDZ, CL, Edges marked and lighted RWY 12R / 30L: designation, THR, Displaced THR, TDZ, CL, Edges marked and Displaced THR & Edges lighted TWY: CL, holding positions at all TWY/RWY intersections, marked and lighted (except TWY B2).

3	Stop bars	Where appropriate, manually controlled by TWR.
4	Remarks	See also Aerodrome Ground Movement Chart for taxiing guidance. Road Holding positions to RWY: Reflective signs are available.

### **OBBI AD 2.10 AERODROME OBSTACLES**

	In appro	ach/TKOF areas		In circling area and at AD				
		1			2			
Obstacle identification or designation	RWY NR/ Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle identification or designation	tacle Obstacle type O fication Elevation gnation Markings/LGT		dinates	
а	b	с	d	а	b		c	
OB-1025	12L APCH	Lamppost 11.41 M, 37.43 FT NIL / NIL	261658.36N 0503658.50E	OB-1127	Comms Mast 41.29 M , 135.46 FT NIL / NIL	261704.32N	0503745.26E	
OB-2273	12L APCH 12R TKOF	Building 16.27 M, 53.38 FT NIL / NIL	261654.76N 0503706.50E	OB-1146	ATC Dipole 53.56 M, 175.72 FT NIL / NIL	261600.98N	0503751.70E	
OB-1234	12L TKOF	ILS FFM 7.86 M, 25.79 FT NIL / NIL	261534.71N 0503910.92E	OB-1209	Comms Mast 40.85 M , 134.02 FT NIL / NIL	261626.78N	0503856.76E	
OB-2130	12L TKOF	Lamppost 12.46 M, 40.88 FT NIL / NIL	261535.00N 0503920.39E	OB-1213	Comms Mast 36.48 M, 119.68 FT NIL / NIL	261523.53N	0503857.43E	
OB-1104	12L	Lamppost 12.92 M, 42.39 FT NIL / NIL	261654.60N 0503705.60E	OB-1295	Comms Mast 56.15 M , 184.22 FT NIL / NIL	261605.12N	0503649.33E	
OB-1105	12L	Lamppost 12.33 M, 40.45 FT NIL / NIL	261652.95N 0503708.24E	OB-1321	Power Stn Chimney 68.21 M, 223.78 FT NIL / NIL	261306.68N	0503932.70E	
OB-1106	12L	Lamppost 12.40 M, 40.68 FT NIL / NIL	261652.55N 0503709.23E	OB-2011	Water Tower 46.32 M 151.97 FT NIL / NIL	261650.15N	0503833.33E	
OB-1107	12L	Lamppost 12.32 M, 40.42FT NIL / NIL	261652.24N 0503710.26E	OB-2024	Comms Mast 39.99 M, 131.2 FT NIL / NIL	261611.61N	0503915.02E	
OB-1109	12L	Lamppost 12.20 M, 40.03FT NIL / NIL	261652.06N 0503711.30E	OB-2072	Building 77.30 M, 253.61 FT NIL / NIL	261725.96N	0503954.66E	
OB-1115	12L	Tree 7.50 m, 24.61 FT NIL / NIL	261650.53N 0503711.82E	OB-2078	Crane (T) 95.81 M, 314.33 FT NIL / NIL	261704.89N	0503951.69E	
OB-2269	12L	Building 18.62 M, 61.09 FT NIL / NIL	261657.46N 0503704.07E	OB-2165	Crane (T) 191.90 M, 629.59 FT NIL / NIL	261326.11N	0503633.69E	
OB-2270	12L	Building 18.65 M, 61.19 FT NIL / NIL	261657.24N 0503704.26E	OB-2166	Crane (T) 201.55 M, 661.25 FT NIL / NIL	261324.31N	0503632.51E	
OB-2272	12L	Building 17.59 M, 57.71 FT NIL / NIL	261655.33N 0503707.41E	OB-2233	Building 82.29 M, 269.98 FT NIL / NIL	261445.33N	0503606.04E	
OB-5115	12L	Mobile Obstacle 6.47 M, 21.23 FT NIL / NIL	261651.07N 0503710.26E	OB-2235	Crane (T) 252.40 M, 828.07 FT NIL / NIL	261427.54N	0503421.34E	

	In appro	ach/TKOF areas		In circling area and at AD			
		1			2		
Obstacle identification or designation	RWY NR/ Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle identification or designation	Obstacle type Elevation Markings/LGT	Coordinates	
а	b	с	d	а	b	c	;
OB-5116	12L	Mobile Obstacle 6.38 M, 20.93 FT NIL / NIL	261650.35N 0503711.51E	OB-2240	Financial Harbour Building 266.57 M, 874.56 FT NIL / NIL	261415.86N	0503421.56E
OB-1018	30R TKOF	Lamppost 11.57 M, 37.96 FT NIL / NIL	261659.85N 0503651.62E	OB-2241	Financial Harbour Building 266.74 M, 875.12 FT NIL / NIL	261415.89N	0503427.61E
OB-1048	30R TKOF	Lamppost 11.52 M, 37.79 FT NIL / NIL	261653.00N 0503646.81E	OB-2242	WTC Building 246.81 M, 809.73 FT NIL / NIL	261422.26N	0503453.85E
OB-1197	30R	DVOR Monitor 8.584 M, 28.15 FT NIL / NIL	261531.38N 0503916.68E	OB-2243	WTC Building 247.07 M, 810.59 FT NIL / NIL	261421.81N	0503453.14E
OB-1247	12R TKOF	Tree 10.46 M, 34.32 FT NIL / NIL	261527.67N 0503916.88E	OB-2249	Building Antenna 206.60 M, 677.81 FT NIL / NIL	261346.40N	0503331.13E
OB-1248	12R TKOF	Tree 9.62 M, 31.56 FT NIL / NIL	261527.23N 0503916.61E	OB-2250	Building Antenna 206.51 M, 677.52 FT NIL / NIL	261350.69N	0503331.27E
OB-1272	12R TKOF	Lamppost 8.19 M, 26.87 FT NIL / NIL	261523.70N 0503909.89E	OB-2261	Building Antenna 213.23 M, 699.56 FT NIL / NIL	261412.06N	0503259.14E
OB-2121	12R TKOF	Lamppost 16.64 M, 54.59 FT NIL / NIL	261516.53N 0503924.54E	OB-2299	Flag Pole 52.35 M, 171.75 FT NIL / NIL	261556.95N	0503545.28E
OB-2122	12R TKOF	Lamppost 16.58 M, 54.4 FT NIL / NIL	261516.95N 0503922.10E	OB-2309	Building 52.09 M, 170.9FT NIL / NIL	261547.74N	0503545.31E
OB-2144	12R TKOF	Lamppost 11.72 M, 38.45 FT NIL / NIL	261526.28N 0503920.36E				
OB-2145	12R TKOF	Lamppost 11.86 M, 38.91FT NIL / NIL	261525.34N 0503920.08E				
OB-5206	12R TKOF	Mobile Obstacle 6.45 M, 21.16 FT NIL / NIL	261530.03N 0503913.81E				
OB-5761	12R TKOF	Mobile Obstacle 6.27 M, 20.57 FT NIL / NIL	261526.99N 0503905.27E				
OB-1093	30L TKOF	Apron Light 23.14 M, 75.92 FT NIL / NIL	261633.28N 0503707.18E				
OB-1094	30L	Apron Light 23.19 M, 76.08 FT NIL / NIL	261634.49N 0503708.04E				
OB-1095	30L TKOF	Apron Light 15.14 M, 49.67 FT NIL / NIL	261635.67N 0503708.88E				

	In appro	ach/TKOF areas		In circling area and at AD			
		1			2		
Obstacle identification or designation	RWY NR/ Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle identification or designation	Obstacle type Elevation Markings/LGT	Coordinates	
а	b	с	d	а	b	с	
OB-1213	30L	Comms Mast 36.48 M, 119.68 FT NIL / NIL	261523.53N 0503857.43E				
OB-5760	30L	Mobile Obstacle 6.21 M, 20.37 FT NIL / NIL	261530.23N 0503859.66E				

## **OBBI AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	BAHRAIN MET. See also GEN 3.5.1.4
2	Hours of service MET Office outside hours	H24. See also GEN 3.5.1.4 NIL
3	Office responsible for TAF preparation Periods of validity	BAHRAIN MET HR 30
4	Trend forecast Interval of issuance	Trend 1/2 HR
5	Briefing/consultation provided	Personal consultation, partial self briefing, telephone to Forecaster. See also GEN 3.5.1.5
6	Flight documentation Language(s) used	Charts, abbreviated plain language text English
7	Charts and other information available for briefing or consultation	S, U25, P25 (other levels on request), T, SWH (East & West), SWM (MID), TB (Gulf sector winds). See also GEN 3.5.1.5
8	Supplementary equipment available for providing information	Telefax, Self briefing terminal. See also GEN 3.5.1.5
9	ATS units provided with information	BAHRAIN TWR, APC, ACC, RCC
10	Additional information (limitation of service, etc.)	See GEN 3.5.1

## **OBBI AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS**

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
12L	122°37'02"TB	3964 x 60	120 / F / A / W / T Asphalt between landing THRs 120 / R / B / W / T Concrete	Landing THR: 261644.34N 0503710.28E	7.55 FT
	119°42'02"MB		first 307 M	THR end: 261649.67N 0503701.03E -90.38 FT	8.63 FT
30R	302°37'47"TB	3964 x 60	120 / F / A / W / T Asphalt between landing THRs 120 / R / B / W / T Concrete	Landing THR: 261545.62N 0503852.03E	7.35 FT
	299°42'47"MB		first 307 M	THR end: 261540.28N 0503901.28E -90.38 FT	7.35 FT

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
12R	122°37'20"TB	2530 x 45	120 / F / A / W / T Asphalt	Landing THR: 261610.74N 0503755.62E	8.04 FT
	119°42'20"MB			THR end: 261616.13N 0503746.29E -90.38 FT	8.04 FT
30L	302°37'48"TB	2530 x 45	120 / F / A / W / T Asphalt	Landing THR: 261533.91N 0503859.44E	6.76 FT
	299°42'48"MB			THR end: 261531.79N 0503903.10E -90.38 FT	6.46 FT
Note: Runway	12R/30L is current	ly not available.		•	•

	Slope of RWY	′-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks	
	7		8	9	10	11	12	
12L	0.0%	NIL	NIL	NIL	4084 x 300	Yes	Non load bearing shoulders 8 M.	
30R	0.0%	NIL	NIL	NIL	4084 x 300	Yes	Non load bearing shoulders 8 M.	
12R	0.0%	NIL	NIL	60 x 150	2650 x 150	No	Non load bearing shoulders 7.5 M	
30L	0.0%	NIL	NIL	600 x 150	2650 x 150	No	Non load bearing shoulders 7.5 M	
Note:	Note: Standard RESA 240 M available for RWY 12L and 30R							

## **OBBI AD 2.13 DECLARED DISTANCES**

RWY TORA Designator (M)		TODA (M)	ASDA (M)	LDA (M)	Remarks	
1	2	3	4	5	6	
12L	3964	3964	3964	3657	NIL	
30R	3964	3964	3964	3657	NIL	
12R	2530	2590	2530	2222	NIL	
30L	2530	3130	2530	2410	NIL	

## OBBI AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
12L	ICAO CAT II precision approach lighting sys- tem 900 M LIH	Green	PAPI LEFT 3° 67.15FT	900 M	White LIH 3964 M; 30 M white; 3000 M - 3600 M red / white; from 3600 M red LIH	White LIH 3964 M; 60 M; last 600 M yellow	Red	NIL	NIL
30R	ICAO CAT II precision approach lighting sys- tem 900 M LIH	Green	PAPI LEFT 3° 67.15 FT	900 M	White LIH 3964 M; 30 M white; 3000 M - 3600 M red / white; from 3600 M red LIH	White LIH 3964 M; 60 M; last 600 M yellow	Red	NIL	NIL
12R	Simple ap- proach lighting sys- tem (for non-instru- ment RWY) 420 M	Green	PAPI LEFT 3° 70.4 FT	NIL	NIL	White LIH 2530 M; 60 M; last 600 M yellow	Red	NIL	NIL
30L	Simple ap- proach lighting sys- tem (for non-instru- ment RWY) 420 M	Green	PAPI LEFT 3° 70.4 FT	NIL	NIL	WHITE LIH 2530 M; 60 M; last 600 M yellow	Red	NIL	NIL

OBBI AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	NIL 350 M WSW of THR 30R; lighted
3	TWY lighting	Green CL , Runway intersections
4	Secondary power supply/switch-over time	- SECONDARY POWER SUPPLY TO ALL AD LIGHTING : 5 SEC- ONDS. - DURING CAT II OPERATION, STANDBY GENERATOR SWITCH- OVER TIME 1 SECOND
5	Remarks	Apron: Blue Apron edge, TWY " B1 " is a solar powered blue edge light.

## OBBI AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
---	---	--------------------
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	As directed by ATC

# **OBBI AD 2.17 ATS AIRSPACE**

	-	-
1	Designation and lateral limits	BAHRAIN CTR: A Circle, radius 10 NM centered at BAH ARP (261615N 0503801E).
2	Vertical limits	SFC - 2500 FT
3	Airspace classification	D
4	ATS unit call sign Language(s)	BAHRAIN TOWER English
5	Transition altitude	13000FT
6	Hours of applicability	H24
7	Remarks	New ATC Control Tower at 261601.3N 0503751.5E top elevation 53 M (174 FT) AMSL located aprox DIST / MAG BRG at 210 $^{\circ}$ / 500 M (0.3 NM) from ARP, penetrates Obstacle Limitation Surfaces

# **OBBI AD 2.18 ATS COMMUNICATION FACILITIES**

Service Call sign designation		Channel	Hours of operation	Remarks
1	2	3	4	5
APP / TAR	BAHRAIN APPROACH	127.85 MHZ	H24	
		234.95 MHZ	H24	Alternate Frequency
TWR	BAHRAIN TOWER	118.5 MHZ	H24	
		296.025 MHZ	H24	Alternate Frequency
SMC	BAHRAIN GROUND	121.85 MHZ	H24	
A/G	BAHRAIN RADIO	2992 KHZ	H24	
		5658 KHZ	H24	
		5667 KHZ	H24	
		8918 KHZ	H24	
		13288 KHZ	H24	
		13312 KHZ	H24	
D - ATIS	BAHRAIN INFORMATION	127.2 MHZ	H24	
VOLMET	BAHRAIN VOLMET	128.8MHZ	H24	
DLV	BAHRAIN DELIVERY	121.90MHZ	H24	

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates		Elevation of DME transmitting antenna	Remarks						
1	2	3	4		5		5		5		5		7
DVOR (2.49° / 2020) (decl: 2.72°E 2017)	BHR	111.80 MHZ	H24	261530.00N	0503919.18E	36.8 FT	120° MAG .48NM From THR RWY 30R						
DME	BHR	CH 55 X	H24	261530.41N	0503919.53E	36.8 FT	Co-located with DVOR.						
ILS LOC RWY 12L CAT II (2.49° / 2020)	IBIB	111.5 MHZ	H24	261534.17N	0503911.85E	15.86 FT	NIL						
GP RWY 12L		332.9 MHZ	H24	261642.07N	0503722.58E	52.97 FT	Angle 3°, RDH 55 FT						
ILS DME RWY 12L	IBIB	CH 52 X	H24	261641.92N	0503722.47E	42 FT	Co - located with GP						
ILS LOC RWY 30R CAT II (2.49° / 2020)	IBIA	110.3 MHZ	H24	261656.27N	0503650.00E	22.14 FT	300° MAG 2.18 NM from THR RWY 30R						
GP RWY 30R		335 MHZ	H24	261555.16N	0503844.83E	53.136 FT	Angle 3°, RDH 55 FT						
ILS DME RWY 30R	IBIA	CH 40 X	H24	261555.16N	0503844.83E	42 FT	Co - located with GP						

# OBBI AD 2.19 RADIO NAVIGATION AND LANDING AIDS

### OBBI AD 2.20 LOCAL AERODROME REGULATIONS

#### (i) Operations on the Eastern Apron

### (1) Stands 23 - 28

Following are the source of ground power available and shall be provided accordingly:

- 1. FEGP when serviceable
- 2. GPU when FEGP is not serviceable
- 3. No APU is to be left running unless either a qualified person is in attendance or the APU has both an auto-shut

#### (ii) Operation on TWY (B1)

TWY (B1) is a viable for night operations subject to the following conditions:-

- 1. No centre line lights are provided other than the existing CAT-EYE reflectors.
- 2. Lights are provided.
- 3. No LEAD ON/LEAD off lights are provided.
- 4. STOP-BAR, at present, is illuminated continuously, where contrast and ON / OFF functionality still remains uncontrollable by ADC day and night.
- 5. Clearance to cross the STOP-BAR shall only be issued by ADC when deemed necessary in order for ACFT to proceed day and night.
- 6. FOLLOW-ME vehicle will be provided for all ACFT entering TWY (B1) down to the engine-shut down markings day and night.
- 7. FOLLOW-ME vehicle will be provided for all ACFT leaving TWY (B1) from the engine-start markings up to the stop-bar only. Pilot shall then request an individual clearance from ADC to cross the stop-bar fro progressive taxiing day and night.

#### {iii} Single Engine Taxi

ICAO resolution A37-19 emphasizes the importance of the International Civil Aviation to limit or reduce the Carbon Dioxide emissions from aircraft within a state boundary. For this reason Bahrain has adopted a procedure which will help in reducing the emission of CO2 from aircraft and allow for airline fuel conservation. Single Engine Taxi Operations may be exercised by multi--engine aircraft provided the following conditions are met:

- 1. The Pilots should be familiar with Bahrain International Airport in terms of aerodrome layout.
- 2. Pilots executing Single Engine Taxi Operation, should comply to ATC instructions as may be issued during taxiing without any delay.

In addition to the above, Single Engine Taxi Operations shall NOT be used if one of the following cases prevails:

- 1. If taxi or parking will involve a turn of 180 degrees or more.
- 2. The aircraft is on the active RWY or requesting to cross the RWY.

#### {iv} Stop Bars Holding

Aircraft or vehicles shall not cross a runway holding point until they have received verbal clearance from ATC and the STOP BAR has been extinguished.

STOP BARS shall not be crossed without specific ATC clearance as follows. Unable to turn STOP BARS off. Cross Red STOP BAR.

### {v} Transponder Setting

All Transponder equipped aircraft shall select transponder to standby or off, when fully parked on the stand or gate.

#### {vi} Clearance Delivery

In addition to clearances via radio, Bahrain ATC offers to issue en-route clearances by means of data link (ACARS based PreFANS DCL). The data link address for Bahrain International Airport is OBBI.

Departing IFR flights shall request their en-route clearance between TOBT -30 and TOBT -10 via radio or data link. With the request for the en-route clearance the parking stand shall be transmitted. Pilots shall maintain continuous air-ground communication watch on BAHRAIN DELIVERY frequency throughout the complete DCL process via data link.

Departing VFR flights contact BAHRAIN DELIVERY for their VFR departure instructions.

## {vii} RWY 12L Operations on TWY A4

TWY A4 marking and AGL is not available for aircraft landing on RWY 12L. Aircraft landing on RWY 12L shall not vacate via A4.

# {viii} RWY 30R Operations on TWYs A6 and/or A7

TWYs A6 and A7 marking and AGL is not available for aircraft landing on RWY 30R. Aircraft Landing on RWY 30R shall not vacate via A6 and/or A7.

#### {ix} Code F Operations:

During landing or takeoff of a Code F aircraft on the Main Runway, portion of Taxiway Alpha, between A1 and A2 shall not have any movement including vehicular movement. Accordingly, ATC will ensure the following in relation to aircraft intended to taxi on the above-mentioned portion:

1. Aircraft at Western Apron A, hold at Taxiway Lima

2. Aircraft at Western Apron B, hold at Taxiway Kilo 3. Aircraft East of Alpha 2, hold abeam Taxiway Mike

5. All chait East of Alpha 2, field abeatin Taxiway

# {x} APU Restriction:

1. Any aircraft that is designated to park at a stand equipped with GSE pop-up pits shall utilize the fixed ground power supply (400Hz) and fixed pre-conditioned air (PCA).

a) Fixed ground supply (400Hz): Aircraft operators are recommended to reduce electric load immediately after parking. 400hz ground power supply shall be connected no more than 05 minutes after on-block time. If fixed ground power supply is out of service, mobile Ground Power Unit (GPU) or Auxiliary Power Unit (APU) may be used with consent from Airside Operations by communicating through GHA operational control centre.

b) Fixed pre-conditioned air (PCA): Aircraft operators are recommended to turn off the cabin air re-circulation system to prevent outside air mixing with PC-Air. If fixed PCA is out of service, mobile Air Conditioning Unit (ACU) may be used with consent from Airside Operations by communicating through GHA operational control centre

2. APU shall not be used more than 10 minutes before off-block time and 05 minutes after on-block time.

3. If the aircraft operator needs to run the APU more than the mentioned time length, they must seek approval from Airside Operations through GHA operational control centre. Any acts of non-compliance by the aircraft operator will result in actions being taken by the airport authority, including the assignment of parking stand to one not equipped with serviceable GSE pop-up pits.

4. Aircraft operators that would like to run the APU for an extended period shall notify the ground staff to ensure that they are prepared for the effect of extra ground noise.

# {xi} Western Apron A Engine shut down procedure:

-Aircraft proceeding to Western Apron A shall shut down their engines at the designated position near TWY L. With the exception for Royal flights.

#### {xii} Stand 52A Engine Run Operations:

Stand 52A located between Stands 50 and 52 is designated for high engine run ops up to B777-300ER aircraft, in addition to Taxiway Alpha. Furthermore, Stand 61 is designated for high engine run ops up to Code C aircraft.

### OBBI AD 2.21 NOISE ABATEMENT PROCEDURES

NOISE ABATEMENT PROCEDURES - BAHRAIN

1. Circuit directions at BAHRAIN INTERNATIONAL airport are:

RWY 30L/ 30R: right hand;

RWY 12L / 12R: left hand.

- 2. Departing and arriving flights are not permitted to operate within the eighty degree arc subtended by the 180° and 260° Radials of the BHR DVOR, and containing the main Bahrain Islands. Exceptionally, flights which the Controlling Authority has deemed operationally essential may be permitted to operate within this arc, provided they can remain either visually clear of the land, or be vectored clear by BAHRAIN APPROACH.
- 3. Usage of reverse thrust:

Usage of reverse thrust more than idle is not permitted during landing between the hours of 2100 and 0300, unless an aircraft is in an emergency and has been cleared to use the reverse thrust by the ATC.

4. Engine Run Ups at BAHRAIN INTERNATIONAL airport

Between the hours of 2100 and 0300, testing of aircraft engines is permissible at ground idle power only. Settings above this, however brief, are not allowed.

#### **OBBI AD 2.22 FLIGHT PROCEDURES**

Low Visibility Procedures Applicable to ILS CAT II operations at Bahrain International Airport

#### 2.22.1. Authorization

All Air operators may conduct Low Visibility Operations (take-off, CAT II approaches and landings) if they are legally authorized-approved by their own aeronautical authority of the state of registration.

Aerodrome Information concerning surface wind and RVR is immediately provided by ATC and significant changes will be reported in accordance with the provisions of PANS - ATM (DOC 4444).

LVP operations for arrivals and departures are limited to the main runway at Bahrain International Airport:

RWY 30R ILS CAT II

RWY 12L ILS CAT II

Any changes in the operational status or the facilities will be promulgated by NOTAM and/or pilots will be advised accordingly by ATIS or on initial contact with ATC.

# 2.22.1.1 Low Visibility Procedures (LVP)

Low Visibility Procedures (LVP) shall be declared at Bahrain International Airport whenever the RVR reading is 1000M or less, or whenever conditions are such that all of the maneuvering area is not visible from the control tower.

The procedures will ensure protection of the ILS sensitive and critical areas to ILS CAT II limits, provide an effective surface movement guidance and control system, and ensure a safe CAT II operations environment.

LVP procedures will not normally be introduced for aircraft carrying out practice CAT II approaches.

#### 2.22.1.2 Aerodrome Operating Minima

#### A- Arrival RWY 12L / 30R LVP Minima

-Runway 30R, Refer to AIP chart IAC -ICAO RWY 30R VOR DME ILS CAT A-D

-Runway 12L, Refer to AIP chart AD 2-OBBI-51

-LVP shall be in force

-No aircraft shall be permitted to make an approach to land when the RVR is less than 350 meters.

#### B- Departure RWY 12L / 30R LVP Minima

-LVP shall be in force

-No aircraft departure is permitted when the RVR is less than 350 meters.

### 2.22.1.3 Runway Utilization

To ensure the maximum runway utilization during LVP operations, the runway shall not be used as a taxi/towing route except for aircraft required to exit the runway. The runway shall not be used to cross from taxiways B1 and B2; pilots are expected to comply with the following operational procedures:

#### A- Departures

RWY 30R

- 1. RWY holding position H shall be used for departure. Intersection departures are not authorized during LVP.
- 2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
- 3. Strict adherence to ATC taxi instructions is required, refer to the AIP (LVP DEP Taxi route RWY 12L 30R AD 2-OBBI-87).
- 4. Notify ATC immediately of any noncompliance to the above requirements

### RWY 12L

- 1. RWY holding position A1 shall be used for departure traffic. Intersection departures are not authorized during LVP.
- 2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
- 3. Strict adherence to ATC taxi instructions is required, refer to the AIP (LVP DEP Taxi route RWY 12L 30R AD 2-OBBI-87).
- 4. Notify ATC immediately of any noncompliance to the above requirements.

### **B-Arrivals**

RWY 30R

- 1. Arriving aircraft may exit the RWY to the south at TWY A4 or beyond or,
- 2. Arriving aircraft may exit the RWY to the north at TWY B1 or TWY B2.
- 3. Strict adherence to ATC taxi instruction is required, refer to the AIP (LVP ARR Taxi route RWY 12L 30R LOW VISIBILITY PROCEDURE ARR RWY 12L 30R).
- 4. Report RWY vacated and taxi speed to ATC.

## RWY 12L

- 1. Arriving aircraft may exit the RWY to the south at TWY A5 or beyond or,
- 2. Arriving aircraft may exit the RWY to the north at TWY B1 or TWY B2
- 3. Strict adherence to ATC taxi instruction is required, refer to the (LVP ARR Taxi route RWY 12L 30R AD 2-OBBI-89).
- 4. Report RWY vacated and/or taxi speed to ATC.

### 2.22.1.4 Ground Movement Operations Transponder procedures

Advanced Surface Movement Guidance and Control System (ASMGCS) using Mode-S Multi-lateration had been commissioned at Bahrain International Airport. Aircraft Taxi and Transponder Operating Procedures on the movement area are listed below:

### A- Departures

While on the apron including pushback operations:

- 1. Enter the discrete SSR code received from Clearance Delivery/TWR.
- 2. Enter the three letter ICAO designator followed by the flight number (e.g.GFA123) through the FMS or the Transponder.
- 3. ATC will verify the data and use it for identification.

### **B- Arrivals**

Landing aircraft to maintain their transponder switched - On until they are fully parked on the stand.

## 2.22.2 RNAV GNSS APPROACH

GNSS approach is part of the GPS service and is established at Bahrain, therefore, acquisition of such service could only be done by means of flying towards a number of way points which are prevailed along the approach phases within BAHRAIN TMA after which it will guide an aircraft to the final approach of the landing RWY, such procedure may only be flown using significant position co - ordinates that are stored in the aircraft's navigational data base.

## a) Path Terminators RUNWAY 12L

#	ID	Latitude	Longitude	P/T	Fly- Over	Course (° T)	VPA	Altitude (ft)	Dist ( nm )	speed limit (kts)
010	OB1N3	262712.8781N	0503044.3194E	IF	N			+2500		
020	BI502	262122.55N	0502907.28E	TF	N	194.01		+1400	6	-210
010	LOVAL	262406.31N	0502422.32E	IF	N			+2500		
020	BI502	262122.55N	0502907.28E	TF	N	122.52		+1400	5.06	-210
010	BI502	262122.55N	0502907.28E	IF	N			+1400		
020	BI501	261909.61N	0503258.24E	TF	N	122.56		+1400	4.1	
030	RW12L (MAPt)	261644.33N	0503710.28E	TF	Y	122.58	-2.8	@58	4.8	
040				VM		122.62		@2500		

b) Path Terminators RUNWAY 30R

#	ID	Latitude	Longitude	P/T	Fly- Over	Course (°T)	VPA	Altitude (ft)	Dist (nm)	Speed limit (kts)
1	OB3N1	261454.5833N	0505204.7346E	IF	Ν			+2500		
2	BI602	261106.96N	0504654.00E	TF	Ν	230.94		+1400	6	-210
3	DAXEL	260822.45N	0505137.90E	IF	Ν			+2500		
4	BI602	261106.96N	0504654.00E	TF	Ν	302.72		+1400	5.06	-210
5	BI602	261106.96N	0504654.00E	IF	Ν			+1400		
6	BI601	261320.28N	0504303.57E	TF	Ν	302.69		+1400	4.1	
7	RW30R (MAPt)	261545.62N	0503852.03E	TF	Y	302.66	-2.8	@57	4.48	
8				VM		302.66		@2500		

c) Path Terminators Runway 12R

#	ID	Latitude	Longitude	P/T	Fly- Over	Course (° T)	VPA	Altitude (ft)	Dist ( nm )	speed limit ( kts )
010	OB1N3	262712.8781N	0503044.3194E	IF	N			+2500		
020	BI502	262122.55N	0502907.28E	TF	Ν	194.01		+1400	6	-210
010	LOVAL	262406.31N	0502422.32E	IF	N			+2500		
020	BI502	262122.55N	0502907.28E	TF	N	122.52		+1400	5.06	-210
010	BI502	262122.55N	0502907.28E	IF	N			+1400		
020	OB2F1	261836.62N	0503342.52E	TF	N	123.77		+1400	4.96	
030	RW12R	261610.74N	0503755.62E	TF	Y	122.58	-2.8	@58	4.5	
040				VM		122.62		@2500		

d) Path Terminators RWY 30L

#	ID	Latitude	Longitude	P/T	Fly- Over	Cours e(°T)	Turn Direction	Altitud e (ft )	Dist (nm)	Speed limit (kts)
010	OB3N1	261454.5833N	0505204.7346E	IF	N			+2500		
020	BI602	261106.96N	0504654.00E	TF	N	230.94		+1400	6	-210
010	DAXEL	260822.45N	0505137.90E	IF	Ν			+2500		
020	BI602	261106.96N	0504654.00E	TF	Ν	302.72		+1400	5.06	-210
010	BI602	261106.96N	0504654.00E	IF	Ν			+1400		
020	OB3F1	261305.83N	0504316.03E	TF	Ν	301.17		+1400	3.82	
030	RW30L	261533.91N	0503859.44E	TF	Y	302.63		@57	4.5	
040				VM		302.63		@2500		

# 2.22.3 RVR RESTRICTIONS

No landing and take off will be allowed at BAHRAIN INTERNATIONAL airport if the reported RVR reading is less than 350 M.

### **OBBI AD 2.23 ADDITIONAL INFORMATION**

#### 2.23.1 Minimization of time of the RUNWAY

A number of recent incidents have led to a reduction in the minimum requirement for runway separation between arriving and departing aircraft. The factors causing these incidents have been found to be:

- 1. Arriving aircraft delay to vacate the runway after landing and / or stop before the entire aircraft has vacated the runway.
- 2. Departing aircraft, having reported "ready" and been cleared for takeoff, delay on the runway before commencing takeoff roll.

#### Factors ATC considers:

- 1. IFR separation on final approach course may reduce to 3NM. This reduced separation minima enhances airspace efficiency and runway utilization.
- 2. For the purposes of issuing a takeoff or landing clearance to subsequent aircraft, a preceding aircraft is not considered to be clear of the runway until the arriving aircraft is completely clear of the runway or the departing is airborne.
- 3. in the order to achieve the maximum runway utilization, it is essential that landing aircraft vacate the runway without delay; and that the departing aircraft, once cleared for takeoff, commence takeoff roll without delay.
- 4. in the event of arriving or departing aircraft delaying on the runway, it may become necessary for the subsequent departing aircraft's takeoff clearance to be delayed; or for the subsequent arriving aircraft to be instructed to go around. Incidents of this nature have serious safety implication for all operators.

Pilots are, therefore, reminded of their responsibilities.

### Arriving Aircraft

- Plan their runway exit point prior to landing, it is preferred that aircraft landing Runway 12L vacate via taxiway A6, A7 or before; and that aircraft landing Runway 30R vacate via taxiway 'A4' or before. Advise ATC as soon as practicable if unable to exit the runway as instructed.
   Do not stop or reduce speed to less than required taxi speed prior to vacating the Runway completely.
- 3. Vacate the Runway expeditiously.
- 4. To be considered to have vacated the runway, And Aircraft must continue at required taxi speed until completely crossing the relevant stop bar.

#### **Departing Aircraft**

- 1. Report "ready" only when ready for immediate takeoff.
- 2. Once cleared for takeoff, commence takeoff roll with minimum delay.

# Visual Docking Guidance System TKE APIS - Stands 7 to 22

# 1-FMT APIS Docking Process

Step	rocess									
	The following steps occur during the aircraft entry and docking process of the FMT APIS VDGS.									
1.1	1.1 Azimuth Panel Directional Guidance									
	The APIS (Aircraft Parking Information System) on stands 7 to 22 provides the aircraft with guidance onto the centerline by Azimuth. The Azimuth (yellow square) will show a black arrow pattern pointing towards the centerline and when the aircraft nosewheel is on the centerline, it will show a straight back line.									
	A340 -300	A340 -300	A 3 4 0 - 3 0 0 K k							
	Turn to the right! You	are on the cente	erline! Turn to the left!							
	Turn to the right!	You are on the centerline!	Turn to the left!							

1.2

```
1.2 Captain and Co-Pilot Displays
                                                                                Pilot Azimuth guidance!
                                             First Officer Azimuth guid-
                                                                              APIS as seen from the Pilots
   Should only be view
                                             ance! Should only be viewed
                                                                              view (left seat) when on the
   from the left seat!
                                             from the right seat!
                                                                              centerline!
Captain's Display
                                                                                            Co-Pilot's Display
                                                          1
```





# OBBI AD 2.24 CHARTS RELATED TO AN AERODROME

# Chart name

Page

	AERODROME/HELIPORT CHART	AD 2-OBBI-26
	AERODROME GROUND MOVEMENT CHART	AD 2-OBBI-28
	AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON A	AD 2-OBBI-30
	AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON B	AD 2-OBBI-32
	AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON C	AD 2-OBBI-34
	AIRCRAFT PARKING DOCKING CHART MIDDLE AND CARGO APRONS	AD 2-OBBI-36
	AIRCRAFT PARKING DOCKING CHART EXECUTIVE AND CARGO APRON	AD 2-OBBI-38
	AIRCRAFT PARKING DOCKING CHART WESTERN APRONS A & B AND CARGO & EXECUTIVE APRONS	AD 2-OBBI-40
	AIRCRAFT PARKING DOCKING CHART NORTHERN APRON	AD 2-OBBI-42
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	AERODROME OBSTACLE CHART RWY 12L / 30R	AD 2-OBBI-46
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	PRECISION APPROACH TERRAIN CHART - ICAO RWY 30R	AD 2-OBBI-50
Ī	PRECISION APPROACH TERRAIN CHART - ICAO RWY 12L	AD 2-OBBI-52
	AREA CHART BAHRAIN	AD 2-OBBI-54
	DEPARTURE CHART (RADAR) RWY 12L	AD 2-OBBI-56
	DEPARTURE CHART (RADAR) RWY 30R	AD 2-OBBI-58
	CIRCLING AUTHORIZATION AREA	AD 2-OBBI-60
	IAC - ICAO RWY 12L VOR DME ILS CAT A-D	AD 2-OBBI-62
	IAC - ICAO RWY 12L VOR DME CAT A-D (L)	AD 2-OBBI-64
	IAC - ICAO RWY 12L VOR CAT A-D (L)	AD 2-OBBI-66
	IAC ICAO RWY 12R RNP CAT A-D (L)	AD 2-OBBI-68
	IAC ICAO RWY 12L RNP CAT A-D (L)	AD 2-OBBI-70
	IAC - ICAO RWY 12R VOR DME CAT A-D (L)	AD 2-OBBI-72
	IAC- ICAO RWY 30L VOR DME CAT A-D (L)	AD 2-OBBI-74
	IAC - ICAO RWY 30R VOR DME ILS CAT A-D	AD 2-OBBI-76
	IAC - ICAO RWY 30R VOR DME CAT A-D (L)	AD 2-OBBI-78
	IAC - ICAO RWY 30R VOR CAT A-D (L	AD 2-OBBI-80
	IAC ICAO RWY 30R RNP CAT A-D (L)	AD 2-OBBI-82
	IAC ICAO RWY 30L RNP CAT A-D (L)	AD 2-OBBI-84
	Visual Approach Chart - ICAO	AD 2-OBBI-86
	BIRD CONCENTRATIONS	AD 2-OBBI-88
	RADAR MINIMUM ALTITUDE CHART	AD 2-OBBI-90
	STAR CHART - ICAO RWY 12L-30R RNAV1 - RADIO COMMUNICATION FAILURE STAR	AD 2-OBBI-92
	STAR CHART - ICAO RWY 12L-30R RNAV1 - KOBOK 1 ARRIVAL	AD 2-OBBI-94
	STAR CHART - ICAO RWY 12L-30R RNAV1 - LADNA 1 ARRIVAL	AD 2-OBBI-96
	STAR CHART - ICAO RWY 12L-30R RNAV1 - ORDIG 1 ARRIVAL	AD 2-OBBI-98
	LOW VISIBILITY PROCEDURE - DEPARTURE RWY 12L-30R	AD 2-OBBI-100
	LOW VISIBILITY PROCEDURE - ARR RWY 12L - 30R	AD 2-OBBI-102















Amendment: MAG VAR Updated & DLV FREQ Added.
























**AIP BAHRAIN FIR** 
























#### **BAHRAIN INTL.**

## **OFF-AIRPORT, BIRD HAZARD LOCATIONS**



#### Warning:

• During periods of rainfall there are significantly higher levels of bird activity within the airport perimeters, especially around areas of standing water. All pilots are advised to maintain vigilance and exercise extreme caution.







- 1- Advise Bahrain ATC if unable to comply with the RNAV STAR.
- 2- Request STAR designator, current altitude, and cleared altitude on first contact with Bahrain Approach. 3- Maintain altitude assigned by ATC until cleared for the approach.
- 4- Expect to cross RIGAG between 5000-7000FT AMSL as instructed by ATC.
- 5- No Circling authorised BTN radials 180° and 260° Clockwise.
  6- ALRAS is a Downwind Termination Waypoint (DTW) for the STAR to RWY 12.
- 7- NAGAT is a Downwind Termination Waypoint (DTW) for the STAR to RWY 30.



- 1- Advise Bahrain ATC if unable to comply with the RNAV STAR.
- Advise Banrain ATC if unable to comply with the RNAV STAR.
   Request STAR designator, current altitude, and cleared altitude on first contact with Bahrain Approach.
   Maintain altitude assigned by ATC until cleared for the approach.
   Expect to cross RIGAG between 5000-7000FT AMSL as instructed by ATC.
   No Circling authorised BTN radials 180° and 260° Clockwise.
   ALRAS is a Downwind Termination Waypoint (DTW) for the STAR to RWY 12.
   NAGAT is a Downwind Termination Waypoint (DTW) for the STAR to RWY 30.





- 3- Maintain altitude assigned by ATC until cleared for the approach.4- Do not expect lower than 7000FT AMSL until past RIGAG.
- 5- No Circling authorised BTN radials 180° and 260° Clockwise.
- 6- ALRAS is a Downwind Termination Waypoint (DTW) for the STAR to RWY 12. 7- NAGAT is a Downwind Termination Waypoint (DTW) for the STAR to RWY 30.

AIRAC AMDT 01/24





### OBBS AD 2.1 AERODROME LOCATION INDICATOR AND NAME

### **OBBS - BAHRAIN / ISA AIRBASE**

#### OBBS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	255506.11N 0503526.16E, Mid - point of RWY on CL
2	Direction and distance from (city)	18 NM S of Manama
3	Elevation/Reference temperature	139 FT / 39° C
4	Geoid undulation at AD ELEV PSN	NIL
5	MAG VAR/Annual change	2.56 E (2021) / 0°3' per year
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Royal Bahrain Air Force Air Operations Centre P.O. Box 245 Kingdom of Bahrain TEL: +973 17894474 Telefax:+973 17620926 AFS: RBAF HQ & OPS OBBSYWYX, RBAF ATC OBBSZTZX, RBAF MET OBBSYMYX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Emergency Diversion only; otherwise strictly PPO

#### **OBBS AD 2.3 OPERATIONAL HOURS**

1	AD Operator	SUN - THU 04:15 - 10:30
2	Customs and immigration	Prior arrangement
3	Health and sanitation	Prior arrangement
4	AIS Briefing Office	by prior arrangement
5	ATS Reporting Office (ARO)	SUN - THU 04:15 - 10:30 or by prior arrangement
6	MET Briefing Office	SUN - THU 04:15 - 10:30 or by prior arrangement
7	ATS	SUN - THU 04:15 - 10:30 or by prior arrangement
8	Fuelling	Prior arrangement
9	Handling	Prior arrangement
10	Security	H24
11	De-icing	NIL
12	Remarks	NIL

### OBBS AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	Fuel: AVGAS 100 LL by prior arrangement, Jet A1 by prior arrangement, JP8 Oil: NIL
3	Fuelling facilities/capacity	ET A1 & AVGAS 100LL from Bowser; contract off base vehicle required; JP 8 from on base Bowser
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	Available in emergency; small aircraft only
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

#### OBBS AD 2.5 PASSENGER FACILITIES

1	Hotels	In Manama
2	Restaurants	NIL; food available in emergency
3	Transportation	Available from BDF in emergency
4	Medical facilities	First aid; Ambulance; Hospitals in Manama
5	Bank and Post Office	In Manama
6	Tourist Office	In Manama
7	Remarks	NIL

### OBBS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 7
2	Rescue equipment	4RB (20) available from Coastguard
3	Capability for removal of disabled aircraft	Limited
4	Remarks	NIL

### OBBS AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

#### OBBS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron designation, surface and strength	MAIN: Concrete, PCN 49 / F / B / X / T
2	Taxiway designation, width, surface and strength	PARALLEL /30M/ REMAINDER: Asphalt, PCN 46 / F / B / X / T
3	Altimeter checkpoint location and elevation	Holding point RWY 33R: 24 FT Holding point RWY 15L: 135 FT
4	VOR checkpoints	VOR: NIL
5	INS checkpoints	Holding Point RWY 33R 255408.40N 0503551.60E THR RWY 33R 255410.69N 0503556.38E Holding Point RWY 15L 255600.36N 0503451.36E THR RWY 15L 255601.55N 0503456.12E 255601.55N: NW corner 255459.28N 0503509.12E SW corner 255448.72N 0503516.32E SE corner 255451.36N 0503522.08E NE corner 255502.52N 0503516.80E
6	Remarks	NIL

### OBBS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at all intersections with TWY and RWY at all holding positions Guide lines at APRON
2	RWY and TWY markings	RWY: designation, THR, edge, end as appropriate TWY: holding positions at all TWY / RWY intersections
3	Stop bars	Stop bars where appropriate.
4	Remarks	NIL

#### OBBS AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling area and at AD		Remarks
1				2	
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
а	b	с	а	b	
NIL			Water Tower 285 FT YES	255550.24N 0503417.84E	NIL
			North Antenna 294 FT YES	255456.22N 0503453.38E	NIL
			South Antenna 263 FT YES	255425.74N 0503509.95E	NIL

#### OBBS AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	BAHRAIN / ISA MET
2	Hours of service MET Office outside hours	SUN - THU 04:15 - 10:30 or by prior arrangement BAHRAIN MWO
3	Office responsible for TAF preparation Periods of validity	BAHRAIN MWO As required
4	Trend forecast Interval of issuance	NIL
5	Briefing/consultation provided	Detailed TAFs, route forecasts, etc. can be obtained from BAHRAIN MWO at six hours notice
6	Flight documentation Language(s) used	NIL English
7	Charts and other information available for briefing or consultation	NIL
8	Supplementary equipment available for providing information	Facsimile; Automatic sensing and display of W / V; TT; DP; QNH
9	ATS units provided with information	ISA AIRBASE TOWER, ISA AIRBASE APPROACH RADAR
10	Additional information (limitation of service, etc.)	NIL

### OBBS AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
15L	154° / 152°	3800 x 45	73 / F / B / X / T Centre por- tion 56 / R / B / X / T Con- crete first 416 M, Asphalt	255601.55N 0503456.12E	136 FT
33R	334° / 332°	3800 x 45	73 / F / B / X / T Centre por- tion 56 / R / B / X / T Con- crete first 416 M, Asphalt	255410.69N 0503556.38E	29 FT
15R	154° / 152°	3678 x 30	46 / F / B / X / T / Asphalt / 47 / R / B / W / T / Concrete	2555.950N 05034.841E 2556.009N 05034.807E	139 FT

Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
33L	334° / 332°	3678 x 30	46 / F / B / X / T / Asphalt / 47 / R / B / W / T / Concrete	2554.163N 05035.813E 2554.101N 05035.844E	28 FT

	Slope of RWY-SWY     SWY     CWY     Strip dimensions       dimensions     (M)     (M)     (M)		Strip dimensions (M)	OFZ	Remarks	
7		8	9	10	11	12
15L	0.502% first 915 M then 0.726 % next 100 M then 1.000% next 2785 M	150 x 45	NIL	4100 x 105	Yes	Load bearing shoulder 30 M
33R	1.000% first 2785 M then 0,726% next 100 M then 0,502% next 915 M	150 x 45	NIL	4100 x 105	Yes	Load bearing shoulder 30 M
15R	NIL	NIL	NIL	3678 x 30	No	NIL
33L	NIL	NIL	NIL	3678 x 30	No	NIL

#### OBBS AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks				
1	2	3	4	5	6				
15L	3800	3800	3950	3800	NIL				
33R	3800	3800	3950	3800	NIL				
15R	3678	3678	3799	3678	NIL				
33L 3678 3678 3800 3678 NIL									
Landing THR rur	Landing THR runway 15R permanently displaced by 122M and 33L by 121M.								

## OBBS AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
15L	NIL	Green	PAPI RIGHT 3° 75 FT	NIL	NIL	3800 M omnidi- rectional White LIH	Red	NIL	Illuminat- ed dis- tance to go boards every 1000 FT
33R	ICAO CAT I precision approach lighting system and Strobe sequence lights	Green	PAPI LEFT 3° 77 FT	NIL	NIL	3800 M omnidi- rectional White LIH	Red	NIL	Illuminat- ed dis- tance to go boards every 1000 FT

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
15R	NIL	Green		NIL	NIL	NIL	Red	NIL	NIL
J3L     NIL     Green     PAPI LEFT 3°     NIL     NIL     NIL     Red     NIL     NIL       Note:									

Runway Marking: Runway edge line, runway end line, dashed centre-line THR, TDZ and designators markings.

Runway 15R/33L turning head:

Dimension: 28.5 M wide, turning circle radius 14.25 M

painted guideline for turning manoeuvre not lit at night.

#### OBBS AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	NIL
3	TWY lighting	NIL
4	Secondary power supply/switch-over time	NIL
5	Remarks	NIL

#### **OBBS AD 2.16 HELICOPTER LANDING AREA**

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	As directed by ATC

#### **OBBS AD 2.17 ATS AIRSPACE**

1	Designation and lateral limits	The area bounded by an arc of 10 NM radius centred on SIA VORTAC (255518.60N 0503525.82E) from 360° anti-clockwise to 250°, and that part of an arc of 15 NM radius from 250° anti-clockwise to 360° which is within the military airspace described in ENR 2.2.
2	Vertical limits	SFC - 8000 FT
3	Airspace classification	В
4	ATS unit call sign Language(s)	ISA AIRBASE TOWER, ISA AIRBASE APPROACH RADAR English
5	Transition altitude	13000 FT
6	Hours of applicability	НО

7	Remarks	QNH is used. Vertical positions expressed in FT
8	Note	RBAF authorities are responsible for Air Traffic Services within Bahrain territorial airspace East of Jeddah FIR, West of Doha TMA and south of line. 255405N 0505543E - 260457N 0503655E - 260457N 0501615E This line is commonly referred to as referred to as "OBSOBI" line.

### **OBBS AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Channel	Hours of operation	Remarks
1	2	3	4	5
APP / TAR	ISA AIRBASE APPROACH RADAR	124.95 MHZ	SUN - THU 04:15 - 10:30 or by prior arrangement	NIL
		358.15 MHZ	SUN - THU 04:15 - 10:30 or by prior arrangement	NIL
TWR	ISA AIRBASE TOWER	125.45 MHZ	SUN - THU 04:15 -10:30 or by prior arrangement	NIL
		364.15 MHZ	SUN - THU 04:15 -10:30 or by prior arrangement	NIL
VOLMET	BAHRAIN VOLMET	128.8MHZ	H24	Bahrain Civil

#### OBBS AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates		Elevation of DME transmitting antenna	Remarks
MLS, give declination)							
1	2	3	4		5	6	7
VORTAC (2°E / 1996)	SIA	117.6MHZ CH 123 X	H24	255518.60N	0503525.82E	136FT	NIL
L (2°E / 1996)	SI	343 KHZ	H24	255339.46N	0503613.34E		152° MAG 0.6 NM FM THR RWY 33R
ILS LOC RWY 33R CAT I NIL	ISIB	110.15MHZ	H24	255608.84N	0503452.16E		332° MAG 2.2 NM FM THR RWY 33R
GP RWY 33R		334.25 MHZ	H24	255420.22N	0503554.41E		3°, RDH 55 FT
ILS_DME 33R	ISIB	38Y	H24	255419.70N	0503554.46E	56FT	Co-located with GP
MM RWY 33R	-	75 MHZ	H24	255340.05N	0503613.02E		152° MAG 0.57 NM FM THR RWY 33R
APP / TAR	ISA AIRBASE APPROACH RADAR						In an emergency an IFR approach to RWY 15L can be made following Ra- dar vectors and alti- tudes to a point 3 NM from touchdown on the final approach track at 1000 FT (QNH). At this point a Visual Approach may be completed or a missed approach ex- ecuted.

### **OBBS AD 2.20 LOCAL AERODROME REGULATIONS**

OBBS AD 2.21 NOISE ABATEMENT PROCEDURES

### **OBBS AD 2.22 FLIGHT PROCEDURES**

**OBBS AD 2.23 ADDITIONAL INFORMATION** 

### OBBS AD 2.24 CHARTS RELATED TO AN AERODROME

Chart name

IAC - OBBS VOR DME ILS RWY 33R ALL ACFT CAT - ICAO

AD 2-OBBS-13

Page


### **OBKH AD 2.1 AERODROME LOCATION INDICATOR AND NAME**

#### **OBKH - BAHRAIN / SAKHIR AIRBASE**

#### **OBKH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	ARP coordinates and site at AD	260205N 0503128E Mid - point of RWY on CL	
2	Direction and distance from (city)	12 NM SW of Manama	
3	Elevation/Reference temperature	76 FT / 39°C	
4	Geoid undulation at AD ELEV PSN	NIL	
5	MAG VAR/Annual change	2.56 E (2021) / 0°3' per year	
6	AD operator, address, telephone, telefax, e-mail address, AFS and website address	Royal Bahrain Air Force Air Operations Centre P.O. Box 245 Kingdom of Bahrain TEL: +973 17894474 Telefax:+973 17620926 AFS: RBAF HQ & OPS OBBSYWYX, RBAF ATC OBBSZTZX, RBAF MET OBBSYMYX	
7	Types of traffic permitted (IFR/VFR)	IFR/VFR	
8	Remarks	Military Airbase; Traffic otherwise strictly PPR	

#### **OBKH AD 2.3 OPERATIONAL HOURS**

1	AD Operator	SUN - THU 0415 - 1030	
2	Customs and immigration	НО	
3	Health and sanitation	НО	
4	AIS Briefing Office	НО	
5	ATS Reporting Office (ARO)	SUN - THU 0415 - 1030	
6	MET Briefing Office	SUN - THU 0415 - 1030	
7	ATS	SUN - THU 0415 - 1030	
8	Fuelling	НО	
9	Handling	НО	
10	Security	H24	
11	De-icing	NIL	
12	Remarks	NIL	

## OBKH AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL	
2	Fuel/oil types	Fuel: Jet A1 by prior arrangement, AVGAS 100 LL by prior arrangement, JP8 Oil: NIL	
3	Fuelling facilities/capacity	Jet A1 and AVGAS 100LL from bowser; contract off base vehicle required; JP 8 from on base bowser	
4	De-icing facilities	NIL	
5	Hangar space for visiting aircraft	NIL	
6	Repair facilities for visiting aircraft	NIL	

7 Remarks

NIL

#### **OBKH AD 2.5 PASSENGER FACILITIES**

1	Hotels	In Manama	
2	Restaurants	NIL; food available in emergency	
3	Transportation	Available from BDF in emergency	
4	Medical facilities	First aid; Ambulance; Hospitals in Manama	
5	Bank and Post Office	In Manama	
6	Tourist Office	In Manama	
7	Remarks	NIL	

#### **OBKH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	Up to CAT 9 O / R
2	Rescue equipment	4 RB (20) available from coastguard
3	Capability for removal of disabled aircraft	Limited
4	Remarks	NIL

### OBKH AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

#### OBKH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron designation, surface and strength	MAIN NORTH: Concrete, PCN 74 / R / A / W / T MAIN SOUTH: Asphalt, PCN 60 / F / A / W / T
2	Taxiway designation, width, surface and strength	TWY A, TWY B, TWY C, TWY D: 23 M TWY A, TWY B, TWY D: Asphalt, PCN 52 / F / /A / X / T TWY C: Asphalt, PCN 52 / F / A / X / T south of TWY D and Asphalt, PCN 40 / F / A / X / T north of TWY D
3	Altimeter checkpoint location and elevation	Holding Point RWY 17: Hold A 63 FT, Hold B 61 FT
4	VOR checkpoints	NIL
5	INS checkpoints	Holding Point A 63 FT 260255.88N 05031280.11E , Holding Point B 61 FT 260245.67N 0503128.82E Parking Ramp: NIL Stands: On request
6	Remarks	NIL

### OBKH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs. Guide lines at apron.
2	RWY and TWY markings	RWY: Designation, THR, edge, end as appropriate TWY: Edge, holding positions at all TWY / RWY Intersections
3	Stop bars	NIL

4 Remarks

Holding position markings and guard lights

### OBKH AD 2.10 AERODROME OBSTACLES

	In approach/TKOF	areas	In circling area and at AD		Remarks
1			2		3
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
а	b	c	а	b	
17 DEP	Tower 290 FT YES Tower 320 FT YES	1.9 NM FM DER 17 RIGHT OFFSET 700 M 255914.71N 0503117.60E 2.3 NM DER 17 LEFT OFFSET 107 M 255854.48N 0503147.77E	NIL	NIL	NIL
35 DEP	Water Tower 270 FT YES Spire 260 FT YES Flagpole 540 FT YES	1.5 NM FM DER 35 LEFT OFFSET 400 M 260423.87N 0503100.93E 1.3 NM FM DER 35 RIGHT OFFSET 530 M 260416.58N 0503136.52E 4 NM FM DER 35 RIGHT NIL OFFSET 260654.16N 0503104.25E			

#### **OBKH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED**

1	Associated MET Office	BAHRAIN / ISA MET		
2	Hours of service MET Office outside hours	SUN - THU 0415 - 1030 BAHRAIN MWO		
3	Office responsible for TAF preparation Periods of validity	BAHRAIN MWO As required		
4	Trend forecast Interval of issuance	N/A N/A		
5	Briefing/consultation provided	Detailed TAFs, route forecasts, etc. can be obtained from BAHRAIN MWO at six hours notice		
6	Flight documentation Language(s) used	NIL English		
7	Charts and other information available for briefing or consultation	NIL		
8	Supplementary equipment available for providing information	Facsimile: Automatic sensing and display of W / V; TT; DP; QNH; QFE.		
9	ATS units provided with information	SAKHIR TOWER		
10	Additional information (limitation of service, etc.)	NIL		

<b>OBKH AD 2.12</b>	RUNWAY PHYSICAL	CHARACTERISTICS
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Designation s RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
17	175° / 173°	3200 x 45	52 / F / A / X /T Asphalt	Landing THR: 260256.553N 0503123.907E RWY end: 260256.554N 0503123.908E -9.96 M	57FT / 17.36 M
35	355 / 353	3200 x 45	52 / F / A / X /T Asphalt	Landing THR: 260122.594N 0503131.857E RWY end: 260112.932N 0503132.674E -4.43 M	76FT / 23.28 M

Slope of RWY-SWY		SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
	7	8	9	10	11	12
0%	NIL	NIL	NIL	3320 x 300	NIL	Load bearing shoulders 7.5 M either side of run- way with an additional 15 M non - load bearing surface stabilization as- phalt
0%	NIL	NIL	NIL	3320 x 300	NIL	Load bearing shoulders 7.5 M either side of run- way with an additional 15 M non - load bearing surface stabilization as- phalt

## OBKH AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
17	3200	3200	3200	3200	NIL
35	3200	3200	3200	2900	NIL

OBKH AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
17	Simple approach lighting system 420 M	Green	PAPI LEFT 3° 75 FT	NIL	NIL	3200 M 60 M omnidirectional White LIH	Red	NIL	NIL

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
35	ICAO CAT I precision approach lighting sys- tem 900 M	Green	PAPI LEFT 3° 77 FT	NIL	NIL	3200 M 60 M om- nidirectional White LIH	Red	NIL	NIL

## OBKH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and operational hours	NIL
2	LDI location and LGT Anemometer location and LGT	NIL W THR 35 & E THR 17, LGT
3	TWY lighting	Blue Edge, holding position Guard lights, Runway intersections
4	Secondary power supply/switch-over time	10 sec
5	Remarks	Blue Apron edge lights

## **OBKH AD 2.16 HELICOPTER LANDING AREA**

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	As directed by ATC

## OBKH AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	SAKHIR AIRBASE CTR; centered at ARP (260205N 0503128E) and orientated parallel to RWY (353 / 173 degrees magnetic) extending 7.0 NM in length and 4 NM wide defined by Coordinates 255901N 0502932E - 260446N 0503128E0502857E following an arc of radius 3.5 NM centered on 260205N 0503128E (ARP) to 260508N 0503323E - 255923N 0503358E following an arc of 3.5 NM radius centered on 260205N 0503128E (ARP) to Origin.
2	Vertical limits	SFC - 2500 FT
3	Airspace classification	D
4	ATS unit call sign Language(s)	SAKHIR TOWER English
5	Transition altitude	13000 FT
6	Hours of applicability	НО
7	Remarks	QNH is used. Vertical positions expressed in FT

### **OBKH AD 2.18 ATS COMMUNICATION FACILITIES**

Service designation	Call sign	Channel	Hours of operation	Remarks
1	2	3	4	5
APP / TAR	ISA AIRBASE AP- PROACH RADAR	124.95 MHZ	SUN - THU 0415 - 1030	NIL
		358.15 MHZ	SUN - THU 0415 - 1030	
TWR	SAKHIR TOWER	118.15 MHZ	SUN - THU 0415 - 1030	NIL
		317.25 MHZ	SUN - THU 0415 - 1030	
VOLMET	BAHRAIN VOLMET	128.8 MHZ	H24	Bahrain Civil

## OBKH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
ILS LOC RWY 35 CAT I (2°E / 2011)	кн	110.75MHZ	H24	260302.191N 0503123.429E		NIL
GP RWY 35		330.05 MHZ	H24	260134.614N 0503126.536E		3°, 56FT / RDH 16.9 M
DME RWY 35	IKH	44Y	H24	260134.61N 0503126.54E	126FT / 50 FT AGL	Co - located with GP

## **OBKH AD 2.20 LOCAL AERODROME REGULATIONS**

NIL

### **OBKH AD 2.21 NOISE ABATEMENT PROCEDURES**

Avoid overflight of OBP42 area to North of OBKH. RWY 35 MA turn at 3.0 DME. Minimum angle of bank 020°, maximum IAS 185 KT.

#### OBKH AD 2.22 FLIGHT PROCEDURES

#### ARRIVALS RWY 35 VIA EAST COAST OF BAHRAIN:

Plan arrival via OBBI. Expect radar vectors for JALYD (260002.0N 0504513.0E) thence KH35E (255001.38N 0503742.78E) to intercept of OBKH LOC or continue using RNAV GNSS approach.

#### ARRIVALS RWY 17

RWY 17 approaches will be utilized only in the event that adverse winds preclude the use of RWY 35. In the event that RWY 17 is used, aircraft will be radar vectored to north of BAHRAIN INTERNATIONAL airport and positioned for a straight - in approach to RWY 17 either by Visual approach or RNAV GNSS approach.

#### DEPARTURE RWY 35:

Track 353 DEG MAG At 3.0 DME Turn right MIN AoB 020 DEG MAX IAS 185 KT Track DCT JALYD (260002.0N 0504513.0E) Climb to 4000 FT, or as advised by ATC.

#### DEPARTURE RWY 17:

Track 173 DEG MAG Climb to 700 FT Turn left but not before DER Climb to 4000 FT Track to JALYD (260002.0N 0504513.0E). Or as advised by ATC.

#### **OBKH AD 2.23 ADDITIONAL INFORMATION**

Preferred operations: RWY 35 arrivals, RWY 17 departures.

Page

### **OBKH AD 2.24 CHARTS RELATED TO AN AERODROME**

### Chart name

AERODROME GROUND MOVEMENT CHART-OBKH	AD 2-OBKH-13
OBKH - Standard Departure Chart - Instrument (SID) - ICAO	AD 2-OBKH-15
IAC RNAV (GNSS) RWY 17 OBKH - ICAO	AD 2-0BKH-17
IAC - OBKH ILS DME RWY 35 - ICAO	AD 2-OBKH-19
IAC RNAV (GNSS) RWY 35 OBKH - ICAO	AD 2-OBKH-21
OBKH- RWY17-35 IFP WAYPOINTS	AD 2-OBKH-23















### AD 3. HELIPORTS

NIL