

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	



**Brunei Department of Civil Aviation**  
**Brunei Darussalam**  
[www.mtic.gov.bn/dca](http://www.mtic.gov.bn/dca)

## **Brunei Aviation Requirements**

# **BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material**

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Table of Contents

Table of Contents	2
Control of this Document	5
Subpart GEN – General Requirements	8
Section I - General	8
GM1 ARA.GEN.105 Definitions	8
GM1 ARA.GEN.120 Means of compliance	9
Section II – Management	9
AMC1 ARA.GEN.200(a) Management system	9
GM1 ARA.GEN.200(a) Management system	10
AMC1 ARA.GEN.200(a)(1) Management system	11
AMC1 ARA.GEN.200(a)(2) Management system	11
AMC2 ARA.GEN.200(a)(2) Management system	12
GM1 ARA.GEN.200(a)(2) Management system	12
AMC1 ARA.GEN.210(d) Management system	14
GM1 ARA.GEN.205 Allocation of tasks to qualified entities	15
AMC1 ARA.GEN.220(a) Record-keeping	15
AMC1 ARA.GEN.220(a)(1);(2);(3) Record-keeping	16
AMC1 ARA.GEN.220(a)(4) Record-keeping	16
GM1 ARA.GEN.220(a)(4) Record-keeping	16
AMC1 ARA.GEN.220(a)(5) Record-keeping	16
AMC1 ARA.GEN.220(a)(7) Record-keeping	17
GM1 ARA.GEN.220 Record-keeping	18
Section III - Oversight, Certification and Enforcement	18
AMC1 ARA.GEN.300(a);(b);(c) Oversight	18
GM1 ARA.GEN.300(a);(b);(c) Oversight	19
GM1 ARA.GEN.300(d) Oversight	19
AMC1 ARA.GEN.305(b) Oversight programme	19
AMC1 ARA.GEN.305(b)(1) Oversight programme	20
AMC2 ARA.GEN.305(b)(1) Oversight programme	20
AMC1 ARA.GEN.305(b);(c) Oversight programme	20
AMC1 ARA.GEN.305(c) Oversight programme	21
AMC2 ARA.GEN.305(c) Oversight programme	21
AMC1 ARA.GEN.305(d) Oversight programme	22
AMC1 ARA.GEN.310(a) Initial certification procedure - organisations	22

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

AMC1 ARA.GEN.315(a) Procedure for issue, revalidation, renewal or change of licences, ratings or certificates persons.....	22
AMC1 ARA.GEN.330 Changes – organisations.....	23
GM1 ARA.GEN.330 Changes - organisations.....	23
GM1 ARA.GEN.350 Findings and corrective actions - organisations .....	23
GM1 AMC1-ARA.GEN.355(e) Findings and enforcement measures – persons .....	23
Subpart FCL - Specific Requirements Relating to Flight Crew Licensing	25
Section II - Licences, Ratings and Certificates .....	25
AMC1 ARA.FCL.205 Monitoring of examiners .....	25
Section III – Theoretical Knowledge Examinations.....	25
AMC1 ARA.FCL.300 Examination procedures .....	25
AMC1 ARA.FCL.300(b) Examination procedures.....	26
AMC2 ARA.FCL.300(b) Examination procedures.....	36
Subpart CC – Specific Requirements Relating to Cabin Crew	40
Section II – Organisations Providing Cabin Crew Training or Issuing Cabin Crew Attestations	40
AMC1 ARA.CC.200(b)(2) Approval of organisations to provide cabin crew training or to issue cabin crew attestations .....	40
Subpart ATO – Specific Requirements Related to Approved Training Organisations (ATOs)	41
Section I – General .....	41
AMC1 ARA.ATO.105 Oversight programme .....	41
AMC1 ARA.ATO.120 Record-keeping .....	41
Subpart FSTD – Specific Requirements Related to the Qualification of Flight Simulation Training Devices (FSTDs)	42
AMC1 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	42
AMC2 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	43
AMC3 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	43
AMC4 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	44
AMC5 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	45
Brunei DCA FSTD Evaluation Report	45
GM1 ARA.FSTD.100(a)(1) Initial evaluation procedure.....	51
AMC1 ARA.FSTD.100(a)(3) Initial evaluation procedure.....	51
GM1 ARA.FSTD.100(a)(3) Initial evaluation procedure.....	53
AMC1 ARA.FSTD.110 Issue of a FSTD qualification certificate .....	53
AMC1 ARA.FSTD.115 Interim FSTD qualification .....	54
GM1 ARA.FSTD.115 Interim FSTD qualification .....	56
AMC1 ARA.FSTD.120 Continuation of a FSTD qualification .....	56
AMC2 ARA.FSTD.120 Continuation of a FSTD qualification .....	56
AMC1 ARA.FSTD.130 Changes .....	57

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

GM1 ARA.FSTD.130 Changes .....	58
AMC1 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate.....	58
AMC2 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate.....	58
AMC3 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate.....	59
Subpart MED - Specific Requirements Relating to Aero-Medical Certification .....	60
Section I - General .....	60
AMC1 ARA.MED.120 Medical assessors.....	60
AMC2 ARA.MED.120 Medical assessors.....	60
AMC1 ARA.MED.125 Referral to Brunei DCA.....	60
AMC1 ARA.MED.130 Medical certificate format.....	61
AMC1 ARA.MED.135(a) Aero-medical forms.....	62
AMC1 ARA.MED.135(b);(c) Aero-medical forms.....	67
GM1 ARA.MED.135 (b);(c) Aero-medical forms.....	72
AMC1 ARA.MED.150 Record-keeping.....	78
Section II – Aero-Medical Examiners (AMEs).....	78
AMC1 ARA.MED.200 Procedure for the issue, revalidation, renewal or change of an AME certificate.....	78
Section III – Medical Certification .....	78
AMC1 ARA.MED.315(a) Review of examination reports.....	78

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Control of this Document

### DC.1 Introduction

DC.1.1 Pursuant to Civil Aviation Order 2006 and the Civil Aviation Regulations 2006, the following requirements are hereby established for compliance by all persons concerned, the Director of Civil Aviation is empowered to adopt and amend Brunei Aviation Requirements. In accordance herewith, the following requirement is hereby established for compliance by all persons concerned. This requirement shall be known as BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material and any reference to this title shall mean referring to these governing the requirements to be met for the certification of personnel licensing.

### DC.2 Authority for this Regulation

DC.2.1 This BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material is issued on the authority of the Director of Civil Aviation.

### DC.3 Applicability

DC.3.1 This BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material is applicable to the aviation industry of the Brunei Darussalam.

### DC.4 Scope

DC.4.1 BAR 1 Personnel Licensing Acceptable Means of Compliance and Guidance Material contains the acceptable means of compliance and guidance material for the personnel licensing regulations and shows compliance with ICAO Annex 1. The AMC & GM are separated into the following parts with cross references between parts where applicable.

- **Part ARA Authority Requirements for Aircrew AMC & GM**
- Part ORA Organisational Requirements for Aircrew AMC & GM
- Part FCL Flight Crew Licensing AMC & GM
- Part CC Cabin Crew AMC & GM
- Part FOO/FD Flight Operation Officer and Flight Dispatcher AMC & GM
- Part MED Medical AMC & GM
- Part 66 Aircraft Maintenance Licence AMC & GM
- Part 147 Approved Training Organisations AMC & GM
- Part ATCO Air Traffic Control Officer AMC & GM

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## DC.5 Definitions

DC.5.1 Terms not defined shall have the meaning given to them in the relevant legal instruments or international legal instruments in which they appear, especially as they appear in the Convention and its Annexes.

BRUNEL DCA

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material**

BRUNEL DCA

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Subpart GEN – General Requirements

### Section I - General

#### GM1 ARA.GEN.105 Definitions

The following provides a list of abbreviations and acronyms used throughout this Annex:

(A)	aeroplane
(H)	helicopter
A/C	aircraft
ACAS	airborne collision avoidance system
AeMC	aero-medical centre
ALARP	as low as reasonably practicable
AMC	Acceptable Means of Compliance
AME	aero-medical examiner
APU	auxiliary power unit
ARA	authority requirements for aircrew
ATO	approved training organisation
ATPL	airline transport pilot licence
BITD	basic instrument training device
bpm	beats per minute
CAT	category
CC	cabin crew
cm	centimetres
CPL	commercial pilot licence
CS	Certification Specification
CS-FSTD(A)	Certification Specifications for aeroplane flight simulation training devices
CS-FSTD(H)	Certification Specifications for helicopter flight simulation training devices
dB	decibel
DH	decision height
DPATO	defined point after take-off
DPBL	decision point before landing
EC	European Community
ECG	electrocardiogram
ENT	ear, nose and throat
EOG	electrooculography
ETOPS	extended range operations with twin-engined aeroplanes
FANS	future air navigation system
FD	flight director
FEV1	forced expiratory volume in 1 second
FFS	full flight simulator
FMECA	failure mode, effects and criticality analysis
FMGC	flight management and guidance computer
FMS	flight management system
FNPT	flight navigation and procedures trainer
FSTD	flight simulation training device
FTD	flight training device
FTE	full time equivalent
ft	feet
FVC	forced vital capacity
GM	Guidance Material
GPS	global positioning system



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

HF	human factors
Hg	mercury
HUD/HUGS	head-up display / head-up guidance system
Hz	Hertz
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IGE	in ground effect
ILS	instrument landing system
IOS	instructor operating station
IR	Implementing Rule
IR	instrument rating
kg	kilogram
LDP	landing decision point
LVTO	low visibility take-off
m	metre
mm	millimetre
OGE	out of ground effect
ORA	organisation requirements for aircrew
ORO	organisation requirements for air operations
OSD	operational suitability data
QTG	qualification test guide
POM	proof of match
ROD	rate of descent
RVR	runway visual range
TDP	take-off decision point
VDR	validation data roadmap

## **GM1 ARA.GEN.120 Means of compliance**

### **General**

Alternative means of compliance used by Brunei DCA or by organisations under its oversight may be used only if processed in accordance with ARA.GEN.120 (d) and (e).

## **Section II – Management**

### **AMC1 ARA.GEN.200(a) Management system**

#### **General**

- (a) All of the following should be considered when deciding upon the required organisational structure:
- (1) the number of certificates, attestations, authorisations and approvals to be issued;
  - (2) the number of certified persons and organisations exercising an activity within the Brunei Darussalam, including persons or organisations certified by other States;
  - (3) the possible use of qualified entities and of resources of other competent authorities to fulfil the continuing oversight obligations;
  - (4) the level of civil aviation activity in terms of:
    - (i) number and complexity of aircraft operated;
    - (ii) size and complexity of the Brunei Darussalam's aviation industry;

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (5) the potential growth of activities in the field of civil aviation.
- (b) The set-up of the organisational structure should ensure that the various tasks and obligations of Brunei DCA do not rely solely on individuals. A continuous and undisturbed fulfilment of these tasks and obligations of Brunei DCA should also be guaranteed in case of illness, accident or leave of individual employees.

## **GM1 ARA.GEN.200(a) Management system**

### **General**

- (a) Brunei DCA should be organised in such a way that:
  - (1) there is specific and effective management authority in the conduct of all relevant activities;
  - (2) the functions and processes described in the applicable requirements of the Civil Aviation Regulations 2006, BARs, AMCs, Certification Specifications (CSs) and Guidance Material (GM) may be properly implemented;
  - (3) Brunei DCA's organisation and operating procedures for the implementation of the applicable regulations of BARs are properly documented and applied;
  - (4) all Brunei DCA personnel involved in the related activities are provided with training where necessary;
  - (5) specific and effective provision is made for the communication and interface as necessary between Brunei DCA and the competent authorities of other States; and
  - (6) all functions related to implementing the applicable regulations are adequately described.
- (b) A general policy in respect of activities related to the applicable BARs should be developed, promoted and implemented by the manager at the highest appropriate level; for example the manager at the top of the functional area of Brunei DCA that is responsible for such activities.
- (c) Appropriate steps should be taken to ensure that the policy is known and understood by all personnel involved, and all necessary steps should be taken to implement and maintain the policy.
- (d) The general policy, whilst also satisfying additional national regulatory responsibilities, should in particular take into account:
  - (1) the provisions of the Civil Aviation Regulations 2006;
  - (2) the provisions of the applicable BARs and their AMCs, CSs and GM;
  - (3) the needs of aviation industry; and
  - (4) the needs of the Brunei DCA.
- (c) The policy should define specific objectives for key elements of the organisation and processes for implementing related activities, including the corresponding control procedures and the measurement of the achieved standard.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.GEN.200(a)(1) Management system**

### **Documented Policies and Procedures**

- (a) The various elements of the organisation involved with the activities related to the the Civil Aviation Regulations 2006 and BARs should be documented in order to establish a reference source for the establishment and maintenance of this organisation.
- (b) The documented procedures should be established in a way that facilitates their use. They should be clearly identified, kept up-to-date and made readily available to all personnel involved in the related activities.
- (c) The documented procedures should cover, as a minimum, all of the following aspects:
  - (1) policy and objectives;
  - (2) organisational structure;
  - (3) responsibilities and associated authority;
  - (4) procedures and processes;
  - (5) internal and external interfaces;
  - (6) internal control procedures;
  - (7) training of personnel;
  - (8) cross-references to associated documents;
  - (9) assistance from other competent authorities (where required).
- (d) It is likely that the information is held in more than one document or series of documents, and suitable cross-referencing should be provided. For example, organisational structure and job descriptions are not usually in the same documentation as the detailed working procedures. In such cases it is recommended that the documented procedures include an index of cross-references to all such other related information, and the related documentation should be readily available when required.

## **AMC1 ARA.GEN.200(a)(2) Management system**

### **Qualification and Training - General**

- (a) The Brunei DCA should ensure appropriate and adequate training of its personnel to meet the standard that is considered necessary to perform the work. To ensure personnel remain qualified, arrangements should be made for initial and recurrent training as required.
- (b) The basic capability of the Brunei DCA's personnel is a matter of recruitment and normal management functions in selection of personnel for particular duties. Moreover, the Brunei DCA should provide training in the basic skills as required for those duties. However, to avoid differences in understanding and interpretation, all personnel should be provided with further training specifically related to the Civil Aviation Regulations 2006, BARs and related AMCs, CSs and GM, as well as related to the assessment of alternative means of compliance.
- (c) The Brunei DCA may provide training through its own training organisation with qualified trainers or through another qualified training source.
- (d) When training is not provided through an internal training organisation, adequately experienced and qualified persons may act as trainers, provided their training skills have been assessed. If required, an individual training plan should be established

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

covering specific training skills. Records should be kept of such training and of the assessment, as appropriate.

## **AMC2 ARA.GEN.200(a)(2) Management system**

### **Qualification and Training - Inspectors**

#### **(a) Initial training programme:**

The initial training programme for inspectors should include, as appropriate to their role, current knowledge, experience and skills in at least all of the following:

- (1) aviation legislation organisation and structure;
- (2) the Chicago Convention, relevant ICAO Annexes and documents;
- (3) the applicable regulations, requirements and procedures;
- (4) management systems, including auditing, risk assessment and reporting techniques;
- (5) human factors principles;
- (6) rights and obligations of inspecting personnel of the Brunei DCA;
- (7) 'on-the-job' training;
- (8) suitable technical training appropriate to the role and tasks of the inspector, in particular for those areas requiring approvals.

#### **(b) Recurrent training programme:**

The recurrent training programme should reflect, at least, changes in aviation legislation and industry. The programme should also cover the specific needs of the inspectors and the Brunei DCA.

## **GM1 ARA.GEN.200(a)(2) Management system**

### **Sufficient Personnel**

(a) This GM on the determination of the required personnel is limited to the performance of certification and oversight tasks, excluding personnel required to perform tasks subject to any national regulatory requirements.

(b) The elements to be considered when determining required personnel and planning their availability may be divided into quantitative and qualitative elements:

#### **(1) Quantitative elements:**

- (i) the estimated number of initial certificates to be issued;
- (ii) the number of organisations certified by the Brunei DCA;
- (iii) the number of persons to whom the Brunei DCA has issued a licence, certificate, rating, authorisation or attestation;
- (iv) the estimated number of persons and organisations exercising their activity within the Brunei Darussalam and established or residing in another State.

#### **(2) Qualitative elements:**

- (i) the size, nature and complexity of activities of certified organisations and FSTD qualification certificate holders (cf. AMC1 ORA.GEN.200 (b)), taking into account:

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (A) privileges of the organisation;
    - (B) type of approval, scope of approval, multiple certification;
    - (C) possible certification to industry standards;
    - (D) types of aircraft / flight simulation training devices (FSTDs) operated;
    - (E) number of personnel; and
    - (F) organisational structure, existence of subsidiaries;
  - (ii) the safety priorities identified;
  - (iii) the results of past oversight activities, including audits, inspections and reviews, in terms of risks and regulatory compliance, taking into account:
    - (A) number and level of findings;
    - (B) timeframe for implementation of corrective actions; and
    - (C) maturity of management systems implemented by organisations and their ability to effectively manage safety risks; and
  - (iv) the size and complexity of the Brunei Darussalam's aviation industry and the potential growth of activities in the field of civil aviation, which may be an indication of the number of new applications and changes to existing certificates to be expected.
- (c) Based on existing data from previous oversight planning cycles and taking into account the situation within the Brunei Darussalam's aviation industry, the Brunei DCA may estimate:
- (1) the standard working time required for processing applications for new certificates (for persons, organisations and FSTD qualification);
  - (2) the number of new certificates to be issued for each planning period; and
  - (3) the number of changes to existing certificates to be processed for each planning period.
- (d) In line with the Brunei DCA's oversight policy, the following planning data should be determined specifically for each type of organisation certified by the Brunei DCA (approved training organisation (ATO) and aero-medical centres (AeMC)) and for FSTD qualification certificate holders:
- (1) standard number of audits to be performed per oversight planning cycle;
  - (2) standard duration of each audit;
  - (3) standard working time for audit preparation, on-site audit, reporting and follow-up, per inspector;
  - (4) standard number of ramp and unannounced inspections to be performed;
  - (5) standard duration of inspections, including preparation, reporting and follow-up, per inspector;
  - (6) minimum number and required qualification of inspectors for each audit/inspection.
- (e) Standard working time could be expressed either in working hours per inspector or in working days per inspector. All planning calculations should then be based on the same unit (hours or working days).

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (f) It is recommended to use a spreadsheet application to process data defined under (c) and (d), to assist in determining the total number of working hours/days per oversight planning cycle required for certification, oversight and enforcement activities. This application could also serve as a basis for implementing a system for planning the availability of personnel.
- (g) For each type of organisation certified by the Brunei DCA and for FSTD qualification certificate holders the number of working hours/days per planning period for each qualified inspector that may be allocated for certification, oversight and enforcement activities should be determined, taking into account:
  - (1) purely administrative tasks not directly related to oversight and certification;
  - (2) training;
  - (3) participation in other projects;
  - (4) planned absence; and
  - (5) the need to include a reserve for unplanned tasks or unforeseeable events.
- (h) The determination of working time available for certification, oversight and enforcement activities should also consider:
  - (1) the possible use of qualified entities; and
  - (2) possible cooperation with other competent authorities for approvals involving more than one State.
- (i) Based on the elements listed above, the Brunei DCA should be able to:
  - (1) monitor dates when audits and inspections are due and when they have been carried out;
  - (2) implement a system to plan the availability of personnel; and
  - (3) identify possible gaps between the number and qualification of personnel and the required volume of certification and oversight.

Care should be taken to keep planning data up-to-date in line with changes in the underlying planning assumptions, with particular focus on risk-based oversight principles.

## **AMC1 ARA.GEN.210(d) Management system**

### **Procedures Available to the Brunei DCA**

- (a) Procedures related to the Brunei DCA's management system and their amendments should provide at least the following information:
  - (1) Regarding continuing oversight functions undertaken, the Brunei DCA's organisational structure with description of the main processes. This information should demonstrate the allocation of responsibilities within Brunei DCA, and that it is capable of carrying out the full range of tasks regarding the size and complexity of the Brunei Darussalam's aviation industry. It should also consider overall proficiency and authorisation scope of Brunei DCA personnel.
  - (2) For personnel involved in oversight activities, the minimum professional qualification requirements and experience and principles guiding appointment (e.g. assessment).

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (3) How the following are carried out: assessing applications and evaluating compliance, issuance of certificates, performance of continuing oversight, follow-up of findings, enforcement measures and resolution of safety concerns.
  - (4) Principles of managing exemptions and derogations.
  - (5) Processes in place to disseminate applicable safety information for timely reaction to a safety problem.
  - (6) Criteria for planning continuing oversight (oversight programme), including adequate management of interfaces when conducting continuing oversight (air operations, flight crew licensing, continuing airworthiness management for example).
  - (7) Outline of the initial training of newly recruited oversight personnel (taking future activities into account), and the basic framework for continuation training of oversight personnel.
- (b) Information related to the Brunei DCA's management system may be maintained in electronic format.

## **GM1 ARA.GEN.205 Allocation of tasks to qualified entities**

### **Certification Tasks**

The tasks that may be performed by a qualified entity on behalf of the Brunei DCA include those related to the initial certification and continuing oversight of persons and organisations as defined in the Regulations, with the exclusion of the issuance of certificates, licences, ratings or approvals.

## **AMC1 ARA.GEN.220(a) Record-keeping**

### **General**

- (a) The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organised in a way that ensures traceability and retrievability throughout the required retention period.
- (b) Records should be kept in paper form or in electronic format or a combination of both media. Records stored on microfilm or optical disc form are also acceptable. The records should remain legible and accessible throughout the required retention period. The retention period starts when the record has been created.
- (c) Paper systems should use robust material, which can withstand normal handling and filing. Computer systems should have at least one backup system, which should be updated within 24 hours of any new entry. Computer systems should include safeguards against unauthorised alteration of data.
- (d) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data and in an environment that ensures they remain in good condition. When hardware- or software-changes take place, special care should be taken that all necessary data continue to be accessible at least through the full period specified in the relevant Subpart or by default in ARA.GEN.220 (c).

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.GEN.220(a)(1);(2);(3) Record-keeping**

### **The Brunei DCA Management System**

Records related to the Brunei DCA's management system should include, as a minimum and as applicable:

- (a) the documented policies and procedures;
- (b) the personnel files of the Brunei DCA personnel, with supporting documents related to training and qualifications;
- (c) the results of the Brunei DCA's internal audit and safety risk management processes, including audit findings and corrective actions; and
- (d) the contract(s) established with qualified entities performing certification or oversight tasks on behalf of the Brunei DCA.

## **AMC1 ARA.GEN.220(a)(4) Record-keeping**

### **Organisations**

Records related to an organisation certified by the Brunei DCA should include, as appropriate to the type of organisation:

- (a) the application for an organisation approval;
- (b) the documentation based on which the approval has been granted and any amendments to that documentation;
- (c) the organisation approval certificate including any changes;
- (d) a copy of the continuing oversight programme listing the dates when audits are due and when such audits were carried out;
- (e) continuing oversight records including all audit and inspection records;
- (f) copies of all relevant correspondence;
- (g) details of any exemption and enforcement actions;
- (h) any report from other competent authorities relating to the oversight of the organisation; and
- (i) a copy of any other document approved by the Brunei DCA.

## **GM1 ARA.GEN.220(a)(4) Record-keeping**

### **Organisations - Documentation**

Documentation to be kept as records in support of the approval include the management system documentation, including any technical manuals, such as the operations manual, and training manual, that have been submitted with the initial application, and any amendments to these documents.

## **AMC1 ARA.GEN.220(a)(5) Record-keeping**

### **Persons**

Records related to personnel licences, certificates, ratings, authorisations or attestations issued by the Brunei DCA should include, as a minimum:



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (a) the application for a licence, certificate, rating, authorisation or attestation or change to a licence, certificate, rating, authorisation or attestation;
- (b) documentation in support of the application for a licence, certificate, rating, authorisation or attestation or change to a licence, certificate, rating, authorisation or attestation, covering as applicable:
  - (1) theoretical examination(s);
  - (2) skill test(s);
  - (3) proficiency check(s); and
  - (4) certificates attesting required experience;
- (c) a copy of the licence or certificate including any changes;
- (d) all relevant correspondence or copies thereof;
- (e) details of any exemption;
- (f) details of any enforcement action(s); and
- (g) any report from other competent authorities relating to personnel licences, certificates, ratings, authorisations or attestations issued by the Brunei DCA.

#### **AMC1 ARA.GEN.220(a)(7) Record-keeping**

##### **Activities Performed in The Territory of the Brunei Darussalam by Persons or Organisations Established or Residing in another State**

- (a) Records related to the oversight of activities performed in the Brunei Darussalam by persons or organisations established or residing in another State should include, as a minimum:
  - (1) oversight records including all audit and inspection records and related correspondence;
  - (2) copies of all relevant correspondence to exchange information with other competent authorities relating to the oversight of such persons/organisations;
  - (3) details of any enforcement measures and penalties; and
  - (4) any report from other competent authorities relating to the oversight of these persons/organisations, including any notification of evidence showing non-compliance with the applicable requirements.
- (b) Records should be kept by the competent authority having performed the audit or inspection and should be made available to other competent authorities at least in the following cases:
  - (1) serious incidents or accidents;
  - (2) findings through the oversight programme where organisations certified by another competent authority are involved, to determine the root cause;
  - (3) an organisation being certified or having approvals in several States.
- (c) When records are requested by another competent authority, the reason for the request should be clearly stated.
- (d) The records can be made available by sending a copy or by allowing access to them for consultation.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## GM1 ARA.GEN.220 Record-keeping

### General

Records are required to document results achieved or to provide evidence of activities performed. Records become factual when recorded. Therefore, they are not subject to version control. Even when a new record is produced covering the same issue, the previous record remains valid.

## Section III - Oversight, Certification and Enforcement

### AMC1 ARA.GEN.300(a);(b);(c) Oversight

#### Evaluation of Approved Training Organisations' Operational Safety Risk Assessment

As part of the initial certification or the continuing oversight of an ATO, the Brunei DCA should normally evaluate its safety risk assessment processes related to hazards identified by the ATO as having an interface with its operations. These safety risk assessments should be identifiable processes of the ATO's management system.

As part of its continuing oversight, the Brunei DCA should also remain satisfied as to the effectiveness of these safety risk assessments.

(a) General methodology for operational hazards,

The Brunei DCA should establish a methodology for evaluating the safety risk assessment processes of the ATO's management system.

When related to operational hazards, the Brunei DCA's evaluation under its normal oversight process should be considered satisfactory if the ATO demonstrates its competence and capability to:

- (1) understand the hazards identified and their consequences on its operations;
- (2) be clear on where these hazards may exceed acceptable safety risk limits;
- (3) identify and implement mitigations including suspension of operations where mitigation cannot reduce the risk to within safety risk limits;
- (4) develop and execute effectively, robust procedures for the preparation and the safe operation of the flights subject to the hazards identified;
- (5) assess the competence and currency of its staff in relation to the duties for the intended operations and implement any necessary training; and
- (6) ensure sufficient numbers of qualified and competent staff for such duties.

The Brunei DCA should take into account:

- (1) the ATO's recorded mitigations for each unacceptable risk identified are in place;
- (2) the operational procedures specified by the ATO with the most significance to safety appear to be robust; and
- (3) that the staff on which the ATO depends in respect of those duties necessary for the intended operations are trained and assessed as competent in the relevant procedures.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **Evaluation of Approved Training Organisations Volcanic Ash Safety Risk Assessment**

In addition to the general methodology for operational hazards, the Brunei DCA's evaluation under its normal oversight process should also assess the ATO's competence and capability to:

- (1) choose the correct information sources to use to interpret the information related to volcanic ash contamination forecast and to resolve correctly any conflicts among such sources; and
- (2) take account of all information from its type certificate holders (TCHs) concerning volcanic ash-related airworthiness aspects of the aircraft it operates, and the related pre-flight, in-flight and post flight precautions to be observed;

### **GM1 ARA.GEN.300(a);(b);(c) Oversight**

#### **Volcanic Ash Safety Risk Assessment – Additional Guidance**

Further guidance on the assessment of an ATO volcanic ash safety risk assessment is given in ICAO Doc. 9974 (Flight safety and volcanic ash – Risk management of flight operations with known or forecast volcanic ash contamination).

### **GM1 ARA.GEN.300(d) Oversight**

#### **Activities within the Territory of the Brunei Darussalam**

- (a) Activities performed in the territory of the Brunei Darussalam by persons or organisations established or residing in another State include:
  - (1) activities of organisations certified by the Brunei DCA or any other State;
  - (2) activities of persons holding a licence, certificate, rating, or attestation issued by the Brunei DCA or any other State; and
  - (3) activities of persons making declarations to the competent authority of any other State.
- (b) Audits and inspections of such activities, including ramp and unannounced inspections, should be prioritised towards those areas of greater safety concern, as identified through the analysis of data on safety hazards and their consequences in operations.

### **AMC1 ARA.GEN.305(b) Oversight programme**

#### **Specific Nature and Complexity of the Organisation, Result of Past Oversight**

- (a) When determining the oversight programme for an organisation the Brunei DCA should consider in particular the following elements, as applicable:
  - (1) the implementation by the organisation of industry standards, directly relevant to the organisation's activity subject to this Regulation;
  - (2) the procedure applied for and scope of changes not requiring prior approval;
  - (3) specific approvals held by the organisation;
  - (4) specific procedures implemented by the organisation related to any alternative means of compliance used.
- (b) For the purpose of assessing the complexity of an organisation's management system, AMC1 ORA.GEN.200 (b) should be used.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (c) Regarding results of past oversight, the Brunei DCA should also take into account relevant results of ramp inspections of organisations it has certified that were performed in other States in accordance with BAR 6 ARO.RAMP.

### **AMC1 ARA.GEN.305(b)(1) Oversight programme**

#### **Audit**

- (a) The oversight programme should indicate which aspects of the approval will be covered with each audit.
- (b) Part of an audit should concentrate on the organisation's compliance monitoring reports produced by the compliance monitoring personnel to determine if the organisation is identifying and correcting its problems.
- (c) At the conclusion of the audit, an audit report should be completed by the auditing inspector, including all findings raised.

### **AMC2 ARA.GEN.305(b)(1) Oversight programme**

#### **Ramp Inspections**

When conducting a ramp inspection of aircraft used by organisations under its regulatory oversight the Brunei DCA should, in as far as possible, comply with the requirements defined in BAR 6 ARO.RAMP.

### **AMC1 ARA.GEN.305(b);(c) Oversight programme**

#### **Industry Standards**

- (a) For organisations having demonstrated compliance with industry standards, the Brunei DCA may adapt its oversight programme, in order to avoid duplication of specific audit items.
- (b) Demonstrated compliance with industry standards should not be considered in isolation from the other elements to be considered for the Brunei DCA's risk-based oversight.
- (c) In order to be able to credit any audits performed as part of certification in accordance with industry standards, the following should be considered:
- (1) the demonstration of compliance is based on certification auditing schemes providing for independent and systematic verification;
  - (2) the existence of an accreditation scheme and accreditation body for certification in accordance with the industry standards has been verified;
  - (3) certification audits are relevant to the regulations defined in Part-ORA and other Parts to these Regulations as applicable;
  - (4) the scope of such certification audits can easily be mapped against the scope of oversight in accordance with Part-ORA;
  - (5) audit results are accessible to the Brunei DCA and open to exchange of information in accordance with the Civil Aviation Regulations 2006; and
  - (6) the audit planning intervals of certification audits in accordance with industry standards are compatible with the oversight planning cycle.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.GEN.305(c) Oversight programme**

### **Oversight Planning Cycle**

- (a) When determining the oversight planning cycle and defining the oversight programme the Brunei DCA should assess the risks related to the activity of each organisation and adapt the oversight to the level of risk identified and to the organisation's ability to effectively manage safety risks.
- (b) The Brunei DCA should establish a schedule of audits and inspections appropriate to each organisation. The planning of audits and inspections should take into account the results of the hazard identification and risk assessment conducted and maintained by the organisation as part of the organisation's management system. Inspectors should work in accordance with the schedule provided to them.
- (c) When the Brunei DCA, having regard to an organisation's safety performance, varies the frequency of an audit or inspection it should ensure that all aspects of the organisation's activity are audited and inspected within the applicable oversight planning cycle.
- (d) The section(s) of the oversight programme dealing with ramp inspections should be developed based on geographical locations, taking into account aerodrome activity, and focusing on key issues that can be inspected in the time available without unnecessarily delaying the operations.

## **AMC2 ARA.GEN.305(c) Oversight programme**

### **Oversight Planning Cycle**

- (a) For each organisation certified by the Brunei DCA and each FSTD qualification certificate holder all processes should be completely audited at periods not exceeding the applicable oversight planning cycle. The beginning of the first oversight planning cycle is normally determined by the date of issue of the first certificate. If the Brunei DCA wishes to align the oversight planning cycle with the calendar year, it should shorten the first oversight planning cycle accordingly.
- (b) The interval between two audits for a particular process should not exceed the interval of the applicable oversight planning cycle.
- (c) Audits should include at least one on-site audit within each oversight planning cycle. For organisations exercising their regular activity at more than one site, the determination of the sites to be audited should consider the results of past oversight, the volume of activity at each site, as well as main risk areas identified.
- (d) For organisations holding more than one certificate, the Brunei DCA may define an integrated oversight schedule to include all applicable audit items. In order to avoid duplication of audits, credit may be granted for specific audit items already completed during the current oversight planning cycle, subject to four conditions:
  - (1) the specific audit item should be the same for all certificates under consideration;
  - (2) there should be satisfactory evidence on record that such specific audit items were carried out and that all corrective actions have been implemented to the satisfaction of the Brunei DCA;
  - (3) The Brunei DCA should be satisfied that there is no reason to believe standards have deteriorated in respect of those specific audit items being granted a credit;

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (4) the interval between two audits for the specific item being granted a credit should not exceed the applicable oversight planning cycle.

## **AMC1 ARA.GEN.305(d) Oversight programme**

### **Persons Holding a Licence, Certificate, Rating or Attestation**

The oversight of persons holding a licence, certificate, rating or attestation should normally be ensured as part of the oversight of organisations. Additionally, the Brunei DCA should verify compliance with applicable requirements when endorsing or renewing ratings.

To properly discharge its oversight responsibilities, the Brunei DCA should perform a certain number of unannounced verifications.

## **AMC1 ARA.GEN.310(a) Initial certification procedure - organisations**

### **Verification of Compliance**

- (a) In order to verify the organisation's compliance with the applicable requirements, the Brunei DCA should conduct an audit of the organisation, including interviews of personnel and inspections carried out at the organisation's facilities.
- (b) The Brunei DCA should only conduct such audit after being satisfied that the application shows compliance with the applicable requirements.
- (c) The audit should focus on the following areas:
  - (1) detailed management structure, including names and qualifications of personnel required by ORA.GEN.210 and adequacy of the organisation and management structure;
  - (2) personnel:
    - (i) adequacy of number and qualifications with regard to the intended terms of approval and associated privileges;
    - (ii) validity of licences, ratings, certificates or attestations as applicable;
  - (3) processes for safety risk management and compliance monitoring;
  - (4) facilities – adequacy with regard to the organisation's scope of work;
  - (5) documentation based on which the certificate should be granted (organisation documentation as required by Part-ORA, including technical manuals, such as operations manual or training manual).
- (d) In case of non-compliance, the applicant should be informed in writing of the corrections that are required.
- (e) In cases where an application for an organisation certificate is refused, the applicant should be informed of the right of appeal as exists under national law.

## **AMC1 ARA.GEN.315(a) Procedure for issue, revalidation, renewal or change of licences, ratings or certificates persons.**

### **Verification of Compliance**

- (a) In order to verify that the applicant meets the requirements, the Brunei DCA should review the application and any supporting documents submitted, for completeness and compliance with applicable requirements.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.GEN.330 Changes – organisations**

### **General**

(a) Changes in nominated persons:

The Brunei DCA should be informed of any changes to personnel specified in Part-ORA that may affect the certificate or terms of approval/approval schedule attached to it. When an organisation submits the name of a new nominee for any of the persons nominated as per ORA.GEN.210 (b), The Brunei DCA should require the organisation to produce a written résumé of the proposed person's qualifications. The Brunei DCA should reserve the right to interview the nominee or call for additional evidence of his/her suitability before deciding upon his/her acceptability.

- (b) A simple management system documentation status sheet should be maintained, which contains information on when an amendment was received by the Brunei DCA and when it was approved.
- (c) The organisation should provide each management system documentation amendment to the Brunei DCA, including for the amendments that do not require prior approval by the Brunei DCA. Where the amendment requires Brunei DCA approval, the Brunei DCA, when satisfied, should indicate its approval in writing. Where the amendment does not require prior approval, the Brunei DCA should acknowledge receipt in writing within 10 working days.
- (d) For changes requiring prior approval, in order to verify the organisation's compliance with the applicable requirements, the Brunei DCA should conduct an audit of the organisation, limited to the extent of the changes. If required for verification, the audit should include interviews and inspections carried out at the organisation's facilities.

## **GM1 ARA.GEN.330 Changes - organisations**

### **Change of Name of the Organisation**

- (a) On receipt of the application and the relevant parts of the organisation's documentation as required by Part-ORA, the Brunei DCA should re-issue the certificate.
- (b) A name change alone does not require the Brunei DCA to audit the organisation, unless there is evidence that other aspects of the organisation have changed.

## **GM1 ARA.GEN.350 Findings and corrective actions - organisations**

### **Training**

For a level 1 finding it may be necessary for the Brunei DCA to ensure that further training by the organisation is carried out and audited by the Brunei DCA before the activity is resumed, dependent upon the nature of the finding.

## **GM1 AMC1-ARA.GEN.355(e) Findings and enforcement measures – persons**

This provision is necessary to ensure that enforcement measures will be taken also in cases where the Brunei DCA may not act on the licence, certificate or attestation.

It covers two cases:

- (a) persons subject to the requirements laid down in the Civil Aviation Regulations 2006 and BARs who are not required to hold a licence, certificate or attestation; and

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (b) persons who are required to hold a licence, rating, certificate or attestation, but who do not hold the appropriate licence, rating, certificate or attestation as required for the activity they perform.

BRUNEL DCA



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Subpart FCL - Specific Requirements Relating to Flight Crew Licensing

### Section II - Licences, Ratings and Certificates

#### AMC1 ARA.FCL.205 Monitoring of examiners

##### Qualification of Inspectors

Inspectors of the Brunei DCA supervising examiners should ideally meet the same requirements as the examiners being supervised. However, it is unlikely that they could be so qualified on the large variety of types and tasks for which they have a responsibility and, since they normally only observe training and testing, it is acceptable if they are qualified for the role of an inspector.

### Section III – Theoretical Knowledge Examinations

#### AMC1 ARA.FCL.300 Examination procedures

##### General

- (a) The Brunei DCA should provide suitable facilities for the conduct of examinations.
- (b) The content of the examination papers should retain a confidential status until the end of the examination session.
- (c) The identity of the applicant should be confirmed before an examination is taken.
- (d) Examination applicants should be seated in a way so that they cannot read each other's examination papers. They should not speak to any person other than the invigilators.
- (e) All examination papers, associated documents and additional papers handed out to the applicants for the examination should be handed back to the invigilator at the end of the examination.
- (f) Only the examination paper, specific documentation and tools needed for the examination should be available to the applicant during the examination.
- (g) Applicants may use the following equipment during an examination:
  - (1) a scientific, non-programmable, non-alphanumeric calculator without specific aviation functions;
  - (2) mechanical navigation slide-rule (DR calculator);
  - (3) protractor;
  - (4) compasses and dividers;
  - (5) ruler.
- (h) Applicants may use a translation dictionary at the discretion of the Brunei DCA.
- (i) Except equipment specified above, applicant(s) should not use any electronic equipment during the examination(s).

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## AMC1 ARA.FCL.300(b) Examination procedures

### Theoretical Knowledge Examinations for Professional Licences and Instrument Ratings

With regard to the IR(A), this table applies to theoretical knowledge examinations for applicants who have completed a modular training course for the IR(A) according to Appendix 6 section A.

Subject: 010 - AIR LAW						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:00	0:45	1:00	0:45	0:45	0:45
Distribution of questions with regard to the topics of the syllabus						
010 01	3	2	3	3	2	XX
010 02	2	2	2	2	2	XX
010 03	1	1	1	1	1	XX
010 04	2	2	2	2	2	1
010 05	8	8	8	8	8	8
010 06	7	4	7	3	4	7
010 07	5	3	5	3	3	5
010 08	2	2	2	2	2	2
010 09	6	4	6	4	4	6
010 10	2	1	2	1	1	XX
010 11	2	2	2	2	2	XX
010 12	2	1	2	1	1	XX
010 13	2	1	2	1	1	XX
Total questions	44	33	44	33	33	29

Subject: 021 – AIRCRAFT GENERAL KNOWLEDGE – AIRFRAME/SYSTEMS/POWER PLANT						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	2:00	1:30	2:00	2:00	1:30	XX
Distribution of questions with regard to the topics of the syllabus						
021 01	04	02	04	04	02	XX
021 02	04	04	04	04	02	XX
021 03	05	02	04	04	03	XX
021 04	05	06	04	04	02	XX
021 05	07	04	06	06	03	XX
021 06	05	04	04	04	02	XX
021 07	04	04	02	02	02	XX

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 021 – AIRCRAFT GENERAL KNOWLEDGE – AIRFRAME/SYSTEMS/POWER PLANT						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
021 08	06	04	04	04	04	XX
021 09	06	06	06	06	04	XX
021 10	06	14	06	06	08	XX
021 11	20	06	20	20	13	XX
021 12	04	02	02	02	02	XX
021 13	04	02	XX	XX	XX	XX
021 14	XX	XX	01	01	01	XX
021 15	XX	XX	04	04	03	XX
021 16	XX	XX	06	06	05	XX
021 17	XX	XX	03	03	04	XX
Total questions	80	60	80	80	60	XX

Subject: 022 - AIRCRAFT GENERAL KNOWLEDGE - INSTRUMENTATION						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:30	1:00	1:30	1:30	1:00	0:30
Distribution of questions with regard to the topics of the syllabus						
022 01	08	08	08	08	08	XX
022 02	08	06	08	08	06	06
022 03	04	04	04	04	04	04
022 04	04	05	06	06	05	04
022 05	05	XX	03	03	XX	XX
022 06	08	06	XX	XX	XX	XX
022 07	XX	XX	14	14	08	XX
022 08	03	02	XX	XX	XX	XX
022 09	02	XX	XX	XX	XX	XX
022 10	02	XX	XX	XX	XX	XX
022 11	04	XX	04	04	XX	XX
022 12	06	04	06	06	04	03

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 022 - AIRCRAFT GENERAL KNOWLEDGE - INSTRUMENTATION						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
022 13	04	04	05	05	04	03
022 14	01	XX	01	01	XX	XX
022 15	01	XX	01	01	XX	XX
Total questions	60	39	60	60	39	20

Subject: 031 - FLIGHT PERFORMANCE AND PLANNING - MASS AND BALANCE						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:00	1:00	1:00	1:00	1:00	XX
Distribution of questions with regard to the topics of the syllabus						
031 01	03	03	03	03	03	XX
031 02	05	05	05	05	05	XX
031 03	05	05	05	05	05	XX
031 04	05	05	05	05	05	XX
031 05	05	05	05	05	05	XX
031 06	02	02	02	02	02	XX
Total questions	25	25	25	25	25	XX

Subject: 032 - FLIGHT PERFORMANCE AND PLANNING - PERFORMANCE (AEROPLANES)						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed	1:00	0:45	XX	XX	XX	XX

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

(hours)						
Distribution of questions with regard to the topics of the syllabus						
032 01	05	05	XX	XX	XX	XX
032 02	10	10	XX	XX	XX	XX
032 03	10	10	XX	XX	XX	XX
032 04	10	XX	XX	XX	XX	XX
Total questions	35	25	XX	XX	XX	XX

Subject: 033 - FLIGHT PERFORMANCE AND PLANNING - FLIGHT PLANNING AND MONITORING						
Theoretical knowledge examination						
Exam length, total number of questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	2:00	1:30	2:00	1:30	1:30	1:30
Distribution of questions with regard to the topics of the syllabus						
033 01	05	05	05	05	05	XX
033 02	10	XX	10	XX	XX	10
033 03	10	10	10	10	10	05
033 04	08	08	08	08	08	08
033 05	05	05	05	05	05	05
033 06	05	05	05	05	05	05
Total questions	43	33	43	33	33	33

Subject: 034 - FLIGHT PERFORMANCE AND PLANNING - PERFORMANCE (HELICOPTERS)						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	XX	XX	1:00	1:00	0:45	XX
Distribution of questions with regard to the topics of the syllabus						

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 034 - FLIGHT PERFORMANCE AND PLANNING - PERFORMANCE (HELICOPTERS)						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
034 01	XX	XX	15	15	15	XX
034 02	XX	XX	05	05	05	XX
034 03	XX	XX	05	05	XX	XX
034 04	XX	XX	10	10	XX	XX
Total questions	XX	XX	35	35	20	XX

Subject: 040 - HUMAN PERFORMANCE						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:00	0:45	1:00	1:00	0:45	0:45
Distribution of questions with regard to the topics of the syllabus						
040 01	02	01	02	02	01	01
040 02	33	26	33	33	26	26
040 03	13	09	13	13	09	09
Total questions	48	36	48	48	36	36

Subject: 050 - METEOROLOGY						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	2:00	1:30	2:00	2:00	1:30	1:30
Distribution of questions with regard to the topics of the syllabus						

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 050 - METEOROLOGY						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
050 01	11	09	11	11	09	09
050 02	11	06	11	11	06	06
050 03	04	04	04	04	04	04
050 04	07	06	07	07	06	06
050 05	03	03	03	03	03	03
050 06	07	07	07	07	07	07
050 07	06	02	06	06	02	02
050 08	08	03	08	08	03	03
050 09	11	09	11	11	09	09
050 10	16	14	16	16	14	14
Total questions	84	63	84	84	63	63

Subject: 061 - GENERAL NAVIGATION						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	2:00	1:30	2:00	2:00	1:30	XX
Distribution of questions with regard to the topics of the syllabus						
061 01	12	07	12	12	07	XX
061 02	04	04	04	04	04	XX
061 03	14	12	14	14	12	XX
061 04	16	11	16	16	11	XX
061 05	14	11	14	14	11	XX
Total questions	60	45	60	60	45	XX

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

**Subject: 062 - RADIO NAVIGATION**

Theoretical knowledge examination

Exam length, total questions and distribution of questions

	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:30	0:30	1:30	1:00	0:30	1:00
Distribution of questions with regard to the topics of the syllabus						
062 01	07	04	07	05	04	02
062 02	21	12	21	15	12	23
062 03	12	02	12	08	02	05
062 04	XX	XX	XX	XX	XX	XX
062 05	15	XX	15	XX	XX	10
062 06	11	04	11	06	04	04
Total questions	66	22	66	34	22	44

**Subject: 070 - OPERATIONAL PROCEDURES**

Theoretical knowledge examination

Exam length, total questions and distribution of questions

	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:15	0:45	1:00	1:00	0:45	XX
Distribution of questions with regard to the topics of the syllabus						
071 01	25	18	18	18	14	XX
071 02	20	12	14	14	12	XX
071 03	XX	XX	06	06	04	XX
Total questions	45	30	38	38	30	XX

**Subject: 081 - PRINCIPLES OF FLIGHT (AEROPLANES)**

Theoretical knowledge examination



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	1:00	0:45	XX	XX	XX	XX
Distribution of questions with regard to the topics of the syllabus						
081 01	17	14	XX	XX	XX	XX
081 02	06	XX	XX	XX	XX	XX
081 03	XX	XX	XX	XX	XX	XX
081 04	06	06	XX	XX	XX	XX
081 05	04	03	XX	XX	XX	XX
081 06	03	03	XX	XX	XX	XX
081 07	04	03	XX	XX	XX	XX
081 08	04	04	XX	XX	XX	XX
Total questions	44	33	XX	XX	XX	XX

Subject: 082 - PRINCIPLES OF FLIGHT (HELICOPTERS)						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	XX	XX	1:00	1:00	1:00	XX
Distribution of questions with regard to the topics of the syllabus						
082 01	XX	XX	05	05	05	XX
082 02	XX	XX	03	03	03	XX
082 03	XX	XX	01	01	01	XX
082 04	XX	XX	12	12	12	XX
082 05	XX	XX	10	10	10	XX
082 06	XX	XX	05	05	05	XX
082 07	XX	XX	05	05	05	XX
082 08	XX	XX	03	03	03	XX

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 082 - PRINCIPLES OF FLIGHT (HELICOPTERS)						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Total questions	XX	XX	44	44	44	XX

Subject: 091 - VFR COMMUNICATION						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	00:30	00:30	00:30	00:30	00:30	XX
Distribution of questions with regard to the topics of the syllabus						
091 01	05	05	05	05	05	XX
091 02	11	11	11	11	11	XX
091 03	02	02	02	02	02	XX
091 04	02	02	02	02	02	XX
091 05	02	02	02	02	02	XX
091 06	02	02	02	02	02	XX
Total questions	24	24	24	24	24	XX

Subject: 092 - IFR COMMUNICATION						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
Time allowed (hours)	00:30	XX	00:30	XX	XX	00:30
Distribution of questions with regard to the topics of the syllabus						
092 01	05	XX	05	XX	XX	05
092 02	11	XX	11	XX	XX	11

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 092 - IFR COMMUNICATION						
Theoretical knowledge examination						
Exam length, total questions and distribution of questions						
	ATPL(A)	CPL(A)	ATPL(H)/IR	ATPL(H)	CPL(H)	IR(A) & (H)
092 03	02	XX	02	XX	XX	02
092 04	02	XX	02	XX	XX	02
092 05	02	XX	02	XX	XX	02
092 06	02	XX	02	XX	XX	02
092 07	XX	XX	XX	XX	XX	XX
Total questions	24	XX	24	XX	XX	24

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## AMC2 ARA.FCL.300(b) Examination procedures

**Theoretical Knowledge Examinations for The En-Route Instrument Rating (EIR) and The Instrument Rating (IR) for the en-route instrument rating (EIR) and the instrument rating (IR) obtained through the competency based modular training course.**

The following tables contain the number of questions, the distribution of questions related to the different syllabus topics and the time allowed for the theoretical knowledge examination.

Subject: 010 — AIR LAW	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:30
Distribution of questions with regard to the topics of the syllabus	
010 04	01
010 05	05
010 06	06
010 07	03
010 08	01
010 09	02
Total questions	18

Subject: 022 — AIRCRAFT GENERAL KNOWLEDGE — INSTRUMENTATION	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:20
Distribution of questions with regard to the topics of the syllabus	
022 02	05
022 04	04
022 13	03
Total questions	12

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 033 — FLIGHT PERFORMANCE AND PLANNING — FLIGHT PLANNING AND MONITORING	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:40
Distribution of questions with regard to the topics of the syllabus	
033 02	10
033 03	4
033 04	7
033 05	5
Total questions	26

Subject: 040 — HUMAN PERFORMANCE	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:20
Distribution of questions with regard to the topics of the syllabus	
040 01	01
040 02	07
040 03	04
Total questions	12

Subject: 050 — METEOROLOGY	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:50
Distribution of questions with regard to the topics of the syllabus	

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 050 — METEOROLOGY	
050 01	05
050 02	03
050 03	01
050 04	05
050 05	03
050 06	05
050 08	01
050 09	07
050 10	05
Total questions	35

Subject: 062 — RADIO NAVIGATION	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:40
Distribution of questions with regard to the topics of the syllabus	
062 02	15
062 03	03
062 05	05
062 06	01
Total questions	24

Subject: 092 — IFR COMMUNICATION	
Theoretical knowledge examination	
Exam length and total questions	
	EIR FCL.825 & IR(A) Appendix 6 Aa
Time allowed	0:30

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

Subject: 092 — IFR COMMUNICATION	
Distribution of questions with regard to the topics of the syllabus	
092 01	05
092 02	10
092 03	02
092 04	02
092 05	02
092 06	02
Total questions	23

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **Subpart CC – Specific Requirements Relating to Cabin Crew**

### **Section II – Organisations Providing Cabin Crew Training or Issuing Cabin Crew Attestations**

#### **AMC1 ARA.CC.200(b)(2) Approval of organisations to provide cabin crew training or to issue cabin crew attestations**

##### **Personnel Conducting Examinations**

For any element being examined for the issue of a cabin crew attestation as required in Part-CC, the person who delivered the associated training or instruction should not also conduct the examination. However, if the organisation has appropriate procedures in place to avoid conflict of interest regarding the conduct of the examination and/or the results, this restriction need not apply.



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Subpart ATO – Specific Requirements Related to Approved Training Organisations (ATOs)

### Section I – General

#### AMC1 ARA.ATO.105 Oversight programme

##### General

- (a) The audit or inspection of an ATO should be conducted on the basis of checking the facility for compliance, interviewing personnel and sampling any relevant training course for its conduct and standard.
- (b) In addition to the items required in AMC1 ARA.GEN.310 (a), such an audit or inspection should focus on:
  - (1) information on flight instructors, validity of licences, certificates, ratings and log books;
  - (2) evidence of sufficient funding;
  - (3) training aircraft in use, including their registration, associated documents and maintenance records;
  - (4) aerodromes, operating sites and associated facilities;
  - (5) facilities with regard to their adequacy to the courses being conducted and number of students;
  - (6) FSTDs, including their qualification certificates, associated documents and maintenance records;
  - (7) documentation, in particular documents related to courses, information on the updating system, and training and operations manual(s);
  - (8) training records and checking forms; and
  - (9) flight instruction, including pre-briefing, actual flight and debriefing.

#### AMC1 ARA.ATO.120 Record-keeping

##### FSTDs

Records relating to FSTDs should include, as a minimum:

- (a) the application for a FSTD qualification;
- (b) the FSTD qualification certificate including any changes;
- (c) a copy of the evaluation programme listing the dates when evaluations are due and when evaluations were carried out;
- (d) initial and recurrent evaluation records;
- (e) copies of all relevant correspondence;
- (f) details of any exemption and enforcement actions; and
- (g) any report from other competent authorities relating to initial and recurrent evaluations.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Subpart FSTD – Specific Requirements Related to the Qualification of Flight Simulation Training Devices (FSTDs)

### AMC1 ARA.FSTD.100(a)(1) Initial evaluation procedure

#### Assessment Process Leading to the Issue of a FSTD Qualification

- (a) FSTDs require evaluation leading to qualification. The required process should be accomplished in two distinct steps. First, a check should be made to determine whether or not the FSTD complies with the applicable requirements. When making this check, the Brunei DCA should ensure that accountability for the issue of a FSTD qualification is clearly defined. In all cases an individual department manager of the Brunei DCA should be appointed under whose personal responsibility the issue of a FSTD qualification is to be considered. The second step should be the grant (or refusal) of a FSTD qualification.
- (b) When checking compliance with the applicable requirements, the Brunei DCA should ensure that the following steps are taken:
  - (1) Once a FSTD is contracted to be built, the organisation that is to operate the FSTD should ensure that the regulatory standard upon which the FSTD will eventually be qualified against is acceptable to the Brunei DCA. This should be the current applicable version of CS-FSTD(A) or CS-FSTD(H) at the time of application.
  - (2) A written application for an FSTD qualification should be submitted, in a format according to ORA.FSTD.200, at least 3 months before the date of intended operation. However, the qualification test guide (QTG) may be submitted later, but not less than 30 days before the date of intended evaluation. The application form should be printed in English and any other language(s) of the Brunei DCA's choosing.
  - (3) An individual should be nominated by the department manager of the Brunei DCA to oversee, and become the focal point for, all aspects of the FSTD qualification process, and to coordinate all necessary activity. The nominated person should be responsible to the department manager for confirming that all appropriate evaluations/inspections are made.
  - (4) The ability of the applicant to secure, in compliance with the applicable requirements and certification specifications, the safe and reliable operation and proper maintenance of the FSTD should be assessed.
  - (5) The applicant's proposed compliance monitoring system should be scrutinised with particular regard to the allocated resources. Care should be taken to verify that the system is comprehensive and likely to be effective.
  - (6) The Brunei DCA should inform the applicant of its final decision concerning the qualification within 14 days of completion of the evaluation process irrespective of any temporary qualification issued.
  - (7) On completion of the evaluation process, the application, together with a written recommendation and evidence of the result of all evaluations or assessments, should be presented to the nominated person responsible for FSTD qualification. The presentation should be made by the person with overall responsibility, nominated in accordance with (b)(3).
  - (8) The department manager of the Brunei DCA should only issue an FSTD qualification certificate if he/she is completely satisfied that all requirements

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

have been met. If he/she is not satisfied, the applicant should be informed in writing of the improvements that are required in order to satisfy the Brunei DCA.

- (9) If an application for a FSTD qualification is refused, the applicant should be informed of such rights of appeal as exist under national regulations.

## **AMC2 ARA.FSTD.100(a)(1) Initial evaluation procedure**

### **General**

- (a) During initial and recurrent FSTD evaluations it should be necessary for the Brunei DCA to conduct an appropriate sample of the objective and subjective tests described in Part-ORA and detailed in CS-FSTD(A) and CS-FSTD(H), as applicable. There may be occasions when all tests cannot be completed – for example during recurrent evaluations on a convertible FSTD – but arrangements should be made for all tests to be completed within a reasonable time.
- (b) Following an evaluation, it is possible that a number of defects are identified. Generally, these defects should be rectified and the Brunei DCA notified of such action within 30 days. Serious defects, which affect flight crew training, testing and checking, could result in an immediate downgrading of the qualification level I. If any defect remains unattended without good reason for a period greater than 30 days, subsequent downgrading may occur or the FSTD qualification could be revoked.
- (c) For the evaluation of a FSTD the standard form as mentioned in AMC5 ARA.FSTD.100 (a)(1) should be used.

## **AMC3 ARA.FSTD.100(a)(1) Initial evaluation procedure**

### **Initial Evaluation**

- (a) The main focus of objective testing is the QTG. Well in advance of the evaluation date, the aircraft manufacturer and the Brunei DCA should agree on the content and acceptability of the validation tests contained in the QTG data package. This will ensure that the content of the QTG is acceptable to the Brunei DCA and avoid time being wasted during the initial qualification. The acceptability of all tests depends upon their content, accuracy, completeness and recency of the results.
- (b) Much of the time allocated to objective tests depends upon the speed of the automatic and manual systems set up to run each test and whether or not special equipment is required. The Brunei DCA should not necessarily warn the organisation operating a FSTD of the sample validations tests which should be run on the day of the evaluation, unless special equipment is required.
- (c) The FSTD cannot be used for subjective tests while part of the QTG is being run. Therefore, sufficient time (at least 8 consecutive hours) should be set aside for the examination and running of the QTG.
- (d) The subjective tests for the evaluation can be found in CS-FSTD(A) or CS-FSTD(H), and a suggested subjective test profile is described in AMC1 ARA.FSTD.100(a)(3). Essentially, 1 working day should be required for the subjective test routine, which effectively denies use of the FSTD for any other purpose.
- (e) To ensure adequate coverage of subjective and objective tests and to allow for cost effective rectification and re-test before departure of the inspection team, adequate time (up to 3 consecutive days) should be dedicated to an initial evaluation of a FSTD.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## AMC4 ARA.FSTD.100(a)(1) Initial evaluation procedure

### Composition of the Evaluation Team

- (a) The Brunei DCA should appoint a technical team to evaluate an FSTD in accordance with a structured routine to gain a qualification level. The team should normally consist of at least the following personnel:
  - (1) A technical FSTD inspector of the Brunei DCA, or an accredited inspector from another competent authority, qualified in all aspects of flight simulation hardware, software and computer modelling or, exceptionally, a person designated by the Brunei DCA with equivalent qualifications; and
  - (2) One of the following:
    - (i) a flight inspector of the Brunei DCA, or an accredited inspector from another competent authority, who is qualified in flight crew training procedures and holds a valid type rating on the aeroplane/helicopter (or for flight navigation procedures trainer (FNPT) and basic instrument training device (BITD), class rated on the class of aeroplane/type of helicopter) being simulated; or
    - (ii) a flight inspector of the Brunei DCA who is qualified in flight crew training procedures, assisted by a type rating instructor holding a valid type rating on the aeroplane/helicopter (or for FNPT and BITD, class rated on the class of aeroplane/type of helicopter) being simulated; or, exceptionally,
    - (iii) a person designated by the Brunei DCA who is qualified in flight crew training procedures and holds a valid type rating on the aeroplane/helicopter (or for FNPT and BITD, class rated on the class of aeroplane/type of helicopter) being simulated and sufficiently experienced to assist the technical team. This person should fly out at least part of the functions and subjective test profiles.
  - (3) Where a designee is used as a substitute for one of the Brunei DCA's inspectors, the other person shall be a properly qualified inspector of the Brunei DCA or an accredited inspector from another State's competent authority.
- (b) For a flight training device (FTD) level 1 and FNPT Type I, one suitably qualified inspector may combine the functions in (a)(1) and (a)(2).
- (c) For a BITD this team should consist of an inspector from the Brunei DCA and one from another competent authority, including the manufacturer's competent authority, if applicable.
- (d) Additionally, the following persons should be present:
  - (1) for a full flight simulator (FFS), FTD and FNPT a type or class rated instructor from the ATO operating an FSTD or from the main FSTD user;
  - (2) for all types, sufficient FSTD support staff to assist with the running of tests and
  - (3) operation of the instructor's station.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## AMC5 ARA.FSTD.100(a)(1) Initial evaluation procedure

### Brunei DCA FSTD Evaluation Report

- (a) Date of the report : [date]  
(b) Report issue number : Issue [revision]  
(c) Brunei Darussalam ID Code : [device code]  
(d) EASA FSTD ID Code : [device code]  
(e) FSTD operator name : [operator name]  
(f) Aircraft Type, Class and/or Variant : [aircraft]  
(g) Engine fit(s) Simulated : [engines]

#### 1. Flight Simulation Training Device (FSTD) Characteristics

#### 2. Evaluation Details

#### 3. Supplementary Information

#### 4. Training, Testing and Checking Considerations

#### 5. Classification of Items

#### 6. Results

#### 7. Summary

#### 8. Evaluation Team

This report is **[PROVISIONAL / FINAL]**\* (\*DELETE AS APPLICABLE)

The conclusions presented are those of the evaluation team. The Brunei DCA reserves the right to change these after internal review.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## 1. Flight Simulation Training Device (FSTD)

(a)	FSTD Operator: [Details in bold font]
(b)	FSTD Location: [Details in bold font]
(c)	FSTD Identification (Brunei Darussalam FSTD code / EASA FSTD code): [Details in bold font]
(d)	FSTD Manufacturer and FSTD serial number: [Details in bold font]
(e)	First entry into service (month / year): [Details in bold font]
(f)	Visual system (manufacturer and type): [Details in bold font]
(g)	Motion system (manufacturer and type): [Details in bold font]
(h)	Aircraft type and variant: [Details in bold font]
(i)	Engine fit(s): [Details in bold font]
(j)	Engine instrumentation: [Details in bold font]
(k)	Flight instrumentation: [Details in bold font]

## 2. Evaluation Details

(a)	Date of evaluation: [Details in bold font]
(b)	Date of previous evaluation: [Details in bold font]
(c)	Type of evaluation: <input type="checkbox"/> initial <input type="checkbox"/> recurrent <input type="checkbox"/> special
(d)	<p>FSTD Qualification level recommended:</p> <p>FFS <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> AG <input type="checkbox"/> BG <input type="checkbox"/> CG <input type="checkbox"/> DG <input type="checkbox"/> SC</p> <p>FTD <input type="checkbox"/> 1 <input type="checkbox"/> 2</p> <p>FNPT <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> MCC</p> <p>BITD <input type="checkbox"/></p>
(e)	Technical criteria primary reference document: [Details in bold font]
(f)	Validation Data Roadmap (VDR) ID-No.: [Details in bold font]

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

### 3. Supplementary Information

(a) Company representative(s) (FSTD Operator, Main FSTD user):	
(b) FSTD seats available:	
(c) Visual databases used during evaluation:	
(d) Other	

### 4. Training, Testing and Checking Considerations

(a) CAT I	RVR [XXX]m DH [XXX]ft	[YES/NO/N/A]
(b) CAT II	RVR [XXX]m DH [XXX]ft	[YES/NO/N/A]
(c) CAT III (lowest minimum)	RVR [XXX]m DH [XXX]ft	[YES/NO/N/A]
(d) LVTO	RVR [XXX]m	[YES/NO/N/A]
(e) Recency		[YES/NO/N/A]
(f) IFR-Training / check		[YES/NO/N/A]
(g) Type rating		If FTD only –[Yes, selective training only - see section 7 Summary] [YES/NO/N/A]
(h) Proficiency checks		[YES/NO/N/A]
(i) Autocoupled approach		[YES/NO/N/A]
(j) Autoland / roll out guidance		[YES/NO/N/A]
(k) ACAS I / II		[YES/NO/N/A]
(l) Windshear profiles available		[YES/NO/N/A]
(m) Windshear warning system / predictive windshear		[YES/NO/N/A]
(n) WX-radar		[YES/NO/N/A]
(o) HUD / HUGS		[YES/NO/N/A]
(p) FANS		[YES/NO/N/A]
(q) GPWS / EGPWS		[YES/NO/N/A]
(r) GPS		[YES/NO/N/A]
(s) ETOPS capability		[YES/NO/N/A]
(t) Other (describe)		[YES/NO/N/A]

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## 5. Guidance material

### 5.1. Classification of Items

#### **UNACCEPTABLE**

An item which fails to comply with the required standard and therefore affects the level of qualification or the qualification itself.

If these items are not resolved or clarified within a given time limit (see 5.2) the Brunei DCA, may have to suspend, vary, restrict, or revoke the FSTD qualification.

#### **RESERVATION**

An item where compliance with the required standard is not clearly proven and the issue will be reserved for a later decision. Resolution of these items will require either:

- (i) A Brunei DCA policy ruling or
- (ii) Additional substantiation

#### **UNSERVICEABILITY**

A device, which is temporarily inoperative or performing below its normal level.

#### **LIMITATION**

An item which prevents the full usage of the FSTD according to the training, testing and checking considerations due to unusable devices, systems or parts thereof.

#### **RECOMMENDATION FOR IMPROVEMENT**

An item which meets the required standard but where considerable improvement is strongly recommended.

#### **COMMENT**

Self explanatory.

#### **Period of Rectification**

Reference: AMC2 ARA.FSTD.100(a)(1) Initial evaluation procedure point (b) - General

Following an evaluation, it is possible that a number of defects may be identified. Generally these defects should be rectified and the competent authority notified of such action within 30 days. Serious defects, which affect flight crew training, testing and checking, could result in an immediate downgrading of the qualification level, or if any defect remains unattended without good reason for period greater than 30 days, subsequent downgrading may occur or the FSTD Qualification could be revoked.



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## 6. Results

### 6.1. Subjective / Functional

#### A Unacceptable

1	
---	--

#### B Reservation

1	
---	--

#### C Un-serviceability

1	
---	--

#### D Limitation

1	
---	--

#### E Recommendation for Improvement

1	
---	--

#### F Comment

1	
---	--

### 6.2. Objective

#### A Unacceptable

1	
---	--

#### B Reservation

1	
---	--

#### E Recommendation for Improvement

1	
---	--

#### F Comment

1	
---	--

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

### 6.3. Management System (MS) / Compliance Monitoring System (CMS)

Note: This section of the report contains an optional (not all sections require completion) record of assurance that Management and Compliance Monitoring Systems are in place and effective, together with any specific compliance issues identified during the evaluation.

**This section does not constitute a formal CMS audit (as required by the regulations).**

1	The most recent CMS audit of this FSTD operator was carried out by the [NAA] on [Date]. A total of [Number] findings were raised during this audit, and this evaluation has confirmed that [Number] of these findings currently remain Open. Of these Open findings, [Number] are level 1 and [Number] are level 2.
2	Top level summary of FSTD Operator Internal Audit Status
3	High Level Performance Metrics Summary
4	Open Defects Status
5	High level summary of Function & Subjective fly outs
6	Any planned upgrades / updates
7	Health & Safety (if anything notable)

## 7. Summary

Retain in report for FTDs only – [The device is suitable for selective system management credits (except for pilot manual control handling skills and procedures that require non-automatic flight) as part of the Airbus / Boeing / Other approved conversion / transition course and recurrent systems training of these elements].

Subject to the above, the evaluation team conclude that this FSTD is compliant with the requirements of the Qualification Basis specified in section 2e of this report and recommend that qualification continues to the level indicated in section 2d.

## 8. Evaluation Team

Name	Position	Organisation	Signature
	Technical Inspector or person designated by the Brunei DCA	Brunei DCA	
	Flight Inspector or person designated by the Brunei DCA	Brunei DCA	
		[FSTD Operator]	
		[FSTD User]	

Approved for the Brunei DCA: .....

Name: [Mr X XXX, Head of FSTD Standards & Flight Test]

Date of Signature .....

**ON BEHALF OF THE DIRECTOR OF CIVIL AVIATION**

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **GM1 ARA.FSTD.100(a)(1) Initial evaluation procedure**

### **Initial Evaluation**

A useful explanation of how the validation tests should be run is contained in the 'RAeS Aeroplane Flight Simulator Evaluation Handbook' (February 1995 or as amended) produced in support of the ICAO Doc 9625, 'Manual of Criteria for the Qualification of Flight Simulators'.

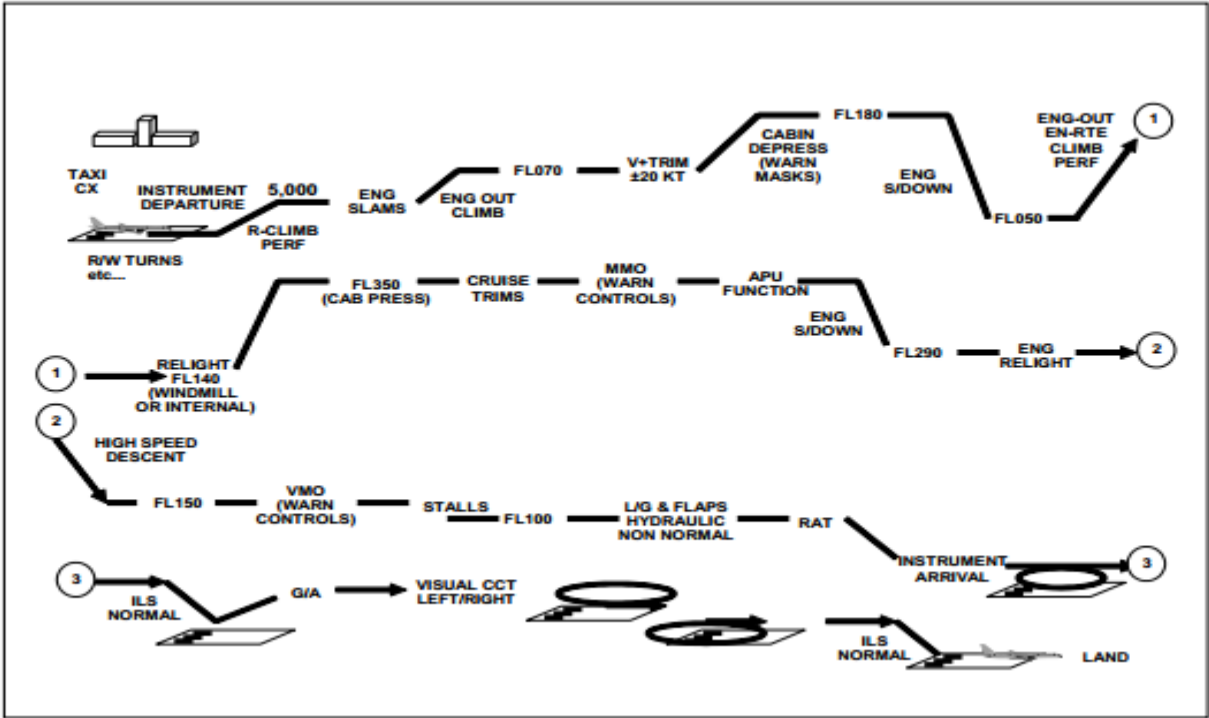
## **AMC1 ARA.FSTD.100(a)(3) Initial evaluation procedure**

### **Functions and Subjective Tests – Suggested Test Routine**

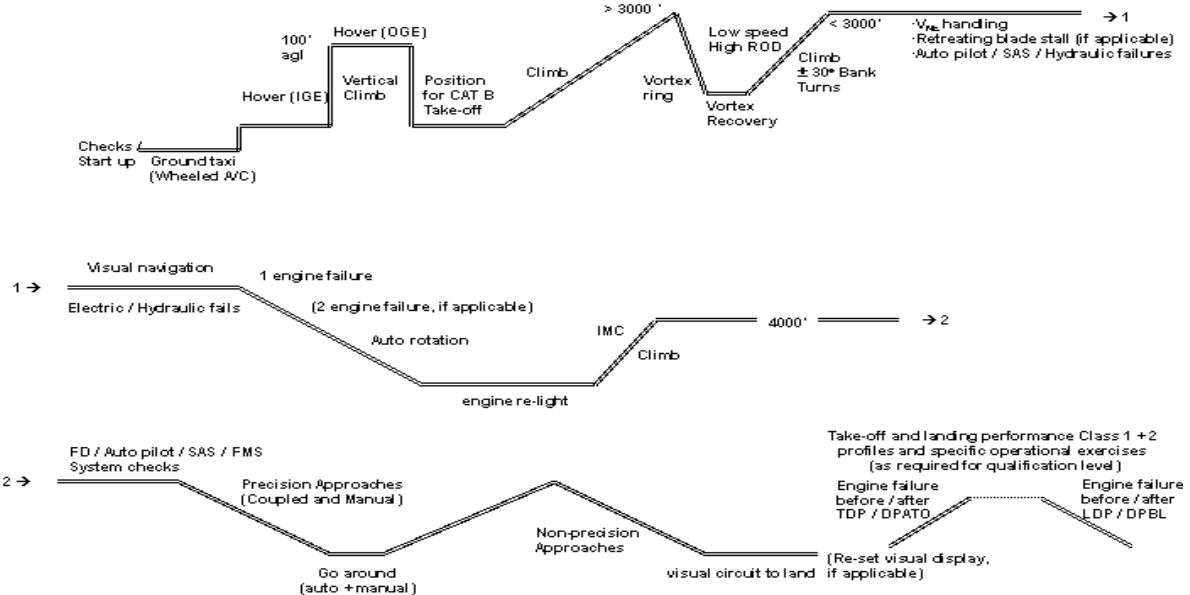
- (a) During initial and recurrent evaluations of an FSTD, the Brunei DCA should conduct a series of functions and subjective tests that together with the objective tests complete the comparison of the FSTD with the aircraft, the class of aeroplane or type of helicopter.
- (b) Functions tests verify the acceptability of the simulated aircraft systems and their integration. Subjective tests verify the fitness of the FSTD in relation to training, checking and testing tasks.
- (c) The FSTD should provide adequate flexibility to permit the accomplishment of the desired and required tasks while maintaining an adequate perception by the flight crew that they are operating in a real aircraft environment. Additionally, the instructor operating station (IOS) should not present an unnecessary distraction from observing the activities of the flight crew whilst providing adequate facilities for the tasks.
- (d) It is important that both the Brunei DCA and the organisation operating an FSTD understand what to expect from the routine of FSTD functions and subjective tests. Part of the subjective tests routine for an FSTD should involve an uninterrupted fly-out (except for FTD level 1) comparable with the duration of typical training sessions in addition to assessment of flight freeze and repositioning. An example of such a profile is to be found under points (f) and (g) (for BITD point (h)).
- (e) The Brunei DCA, and organisations operating FSTD, who are unfamiliar with the evaluation process should contact the competent authority of another State with adequate expertise in this field.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

(f) Typical test profile for a FSTD aeroplane:



(g) Typical test profile for an FSTD helicopter:



(h) Typical subjective test profile for BITDs (approximately 2 hours) – items and altitudes, as applicable:

- (1) instrument departure, climb performance,
- (2) level-off at 4 000 ft,

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (3) fail engine (if applicable),
- (4) engine out climb to 6 000 ft (if applicable)
- (5) engine out cruise performance (if applicable), restart engine,
- (6) all engine cruise performance with different power settings,
- (7) descent to 2 000 ft,
- (8) all engine performance with different configurations, followed by instrument landing system (ILS) approach,
- (9) all engine go-around,
- (10) non-precision approach,
- (11) go-around with engine failure (if applicable),
- (12) engine out ILS approach (if applicable),
- (13) go-around engine out (if applicable),
- (14) non-precision approach engine out (if applicable), followed by go-around,
- (15) restart engine (if applicable),
- (16) climb to 4 000 ft
- (17) manoeuvring,
- (18) normal turns left and right,
- (19) steep turns left and right,
- (20) acceleration and deceleration within operational range,
- (21) approaching to stall in different configurations,
- (22) recovery from spiral dive,
- (23) auto flight performance (if applicable),
- (24) system malfunctions,
- (25) approach.

### **GM1 ARA.FSTD.100(a)(3) Initial evaluation procedure**

#### **General**

A useful explanation of functions and subjective tests and an example of subjective test routine checklist may be found in the 'RAeS Airplane Flight Simulator Evaluation Handbook' Volume II (February 1995 or as amended) produced in support of ICAO Doc 9625, 'Manual of Criteria for the Qualification of Flight Simulators'.

### **AMC1 ARA.FSTD.110 Issue of a FSTD qualification certificate**

Basic Instrument Training Device (BITD)

- (a) The Brunei DCA should only grant a BITD qualification for the BITD model to a BITD manufacturer following satisfactory completion of an evaluation.
- (b) This qualification should be valid for all serial numbers of this model without further technical evaluation.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (c) The BITD model should be clearly identified by a BITD model number. A running serial number should follow the BITD model identification number.
- (d) The Brunei DCA should establish and maintain a list of all BITD qualifications it has issued, containing the number of the BITD model with a reference to the hardware and software configuration.

## **AMC1 ARA.FSTD.115 Interim FSTD qualification**

### **New Aircraft FFS/FTD Qualification – Additional Information**

- (a) Aircraft manufacturers' final data for performance, handling qualities, systems or avionics are seldom available until well after a new or derivative aircraft has entered service. Because it is often necessary to begin flight crew training and certification several months prior to the entry of the first aircraft into service, it may be necessary to use aircraft manufacturer-provided preliminary data for interim qualification of FSTDs. This is consistent with the possible interim approval of operational suitability data (OSD) relative to FFS in the type certification process under Part-21.
- (b) In recognition of the sequence of events that should occur and the time required for final data to become available, the Brunei DCA may accept the use of certain partially validated preliminary aircraft and systems data, and early release ('red label') avionics in order to permit the necessary programme schedule for training, certification and service introduction.
- (c) Organisations seeking qualification based on preliminary data should, however, consult the Brunei DCA as soon as it is known that special arrangements will be necessary, or as soon as it is clear that preliminary data will need to be used for FSTD qualification. Aircraft and FSTD manufacturers should also be made aware of the needs and agree on the data plan and FSTD qualification plan. There should be periodic meetings to keep the interested parties informed of the project's status.
- (d) The precise procedure to be followed to gain Brunei DCA acceptance to use preliminary data should vary from case to case and between aircraft manufacturers. Each aircraft manufacturer's new aircraft development and test programme is designed to suit the needs of the particular project and may not contain the same events or sequence of events as another manufacturer's programme or even the same manufacturer's programme for a different aircraft. Hence, there cannot be a prescribed invariable procedure for acceptance to use preliminary data. Instead there should be a statement describing the final sequence of events, data sources, and validation procedures agreed by the FSTD operator, the aircraft manufacturer, the FSTD manufacturer and the competent authority. The approval by the Brunei DCA of the definition of scope of the aircraft validation source data to support the objective qualification as part of the OSD can also be an interim approval in case of preliminary data. The preliminary data to be used should be based on this interim approval.
- (e) There should be assurance that the preliminary data are the manufacturer's best representation of the aircraft and reasonable certainty that final data will not deviate to a large degree from these preliminary, but refined, estimates. First of all there should be an interim approval of OSD relative to flight simulators in the type certification process under Part-21. Furthermore, the data derived from these predictive or preliminary techniques should be validated by available sources including, at least, the following:
  - (1) Manufacturer's engineering report. Such reports explain the predictive method used and illustrate past successes of the method on similar projects. For example, the manufacturer could show the application of the method to an

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

earlier aircraft model or predict the characteristics of an earlier model and compare the results to final data for that model.

- (2) Early flight tests results. Such data will often be derived from aircraft certification tests, and should be used to maximum advantage for early FSTD validation. Certain critical tests, which would normally be done early in the aircraft certification programme, should be included to validate essential pilot training and certification manoeuvres. These include cases in which a pilot is expected to cope with an aircraft failure mode, including engine failures. The early data available will, however, depend on the aircraft manufacturer's flight test programme design and may not be the same in each case. However it is expected that the flight test programme of the aircraft manufacturer includes provisions for generation of very early flight tests results for FSTD validation.
- (f) The use of preliminary data is not indefinite. The aircraft manufacturer's final data should be available within 6 months after the aircraft's first 'service entry' or as agreed by the Brunei DCA, the organisation and the aircraft manufacturer, but usually not later than 1 year. When an organisation applies for an interim qualification using preliminary data, the organisation and the Brunei DCA should agree upon the update programme. This should normally specify that the final data update will be installed in the FSTD within a period of 6 months following the final data release unless special conditions exist and a different schedule agreed. The FSTD performance and handling validation would then be based on data derived from flight tests. Initial aircraft systems data should be updated after engineering tests. Final aircraft systems data should also be used for FSTD programming and validation.
- (g) FSTD avionics should stay essentially in step with aircraft avionics (hardware and software) updates. The permitted time lapse between aircraft and FSTD updates is not a fixed time but should be minimal. It may depend on the magnitude of the update and whether the QTG and pilot training and certification are affected. Permitted differences in aircraft and FSTD avionics versions and the resulting effects on FSTD qualification should be agreed between the organisation and the Brunei DCA. Consultation with the FSTD manufacturer is desirable throughout the agreement of the qualification process.
- (h) The following describes an example of the design data and sources which might be used in the development of an interim qualification plan:
  - (1) The plan should consist of the development of a QTG based upon a mix of flight test and engineering simulation data. For data collected from specific aircraft flight tests or other flights, the required designed model and data changes necessary to support an acceptable proof of match (POM) should be generated by the aircraft manufacturer.
  - (2) In order that the two sets of data are properly validated, the aircraft manufacturer should compare their simulation model responses against the flight test data, when driven by the same control inputs and subjected to the same atmospheric conditions as were recorded in the flight test. The model responses should result from a simulation where the following systems are run in an integrated fashion and are consistent with the design data released to the FSTD manufacturer:
    - (i) propulsion,
    - (ii) aerodynamics,
    - (iii) mass properties,
    - (iv) flight controls,

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (v) stability augmentation,
- (vi) brakes and landing gear.
- (i) For the qualification of FSTD of new aircraft types, it may be beneficial that the services of a suitably qualified test pilot are used for the purpose of assessing handling qualities and performance evaluation.

## **GM1 ARA.FSTD.115 Interim FSTD qualification**

### **New Aircraft FFS/FTD Qualification – Additional Information**

- (a) A description of aircraft manufacturer-provided data needed for flight simulator modelling and validation is to be found in the IATA Document Flight Simulator Design and Performance Data Requirements (Edition 6 2000 or as amended).
- (b) The proof of match should meet the relevant tolerances in AMC1 CS-FSTD(A).300 respectively AMC1 CS-FSTD(H).300.

## **AMC1 ARA.FSTD.120 Continuation of a FSTD qualification**

### **General**

- (a) Objective Testing. During recurrent evaluations, the Brunei DCA should wish to see evidence of the successful running of the QTG between evaluations. The Brunei DCA should select a number of tests to be run during the evaluation, including those that may be cause for concern. Again adequate notification would be given when special equipment is required for the test.
- (b) Essentially the time taken to run the objective tests depends upon the need for special equipment, if any, and the test system, and the FSTD cannot be used for subjective tests or other functions whilst testing is in progress.
- (c) For a modern FSTD incorporating an automatic test system, four hours would normally be required. FSTDs that rely upon manual testing may require a longer period of time.
- (d) Subjective Testing. Essentially the same subjective test routine should be flown as per the profile described in AMC1 ARA.FSTD.100(a)(3) with a selection of the subjective tests taken from CS-FSTD(A) or CS-FSTD(H), as appropriate.
- (e) Normally, the time taken for recurrent subjective testing is about 4 hours, and the FSTD should not perform other functions during this time.
- (f) To ensure adequate coverage of subjective and objective tests during a recurrent evaluation, a total of 8 hours should be allocated, (4 hours for a BITD). However, it should be remembered that any FSTD deficiency that arises during the evaluation could necessitate the extension of the evaluation period.

## **AMC2 ARA.FSTD.120 Continuation of a FSTD qualification**

### **Composition of The Evaluation Team**

- (a) The composition of the evaluation team for a recurrent evaluation should be the same as for the initial evaluation (see AMC4 ARA.FSTD.100(a)(1).

On a case-by-case basis (except for BITD), when a specific FSTD in operation by a specific organisation is being evaluated, the competent authority may reduce the evaluation team to:

- (1) The Brunei DCA's flight inspector; and



Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (2) a type rated instructor (or class rated instructor for FNPT) from a main FSTD user.
- (b) Evaluations with a reduced evaluation team in line with (a) may only take place if:
  - (1) this composition is not being used prior to the second recurrent evaluation;
  - (2) such an evaluation is followed by an evaluation with a full Brunei DCA evaluation team;
  - (3) The Brunei DCA's flight inspector performs some spot checks in the area of objective testing;
  - (4) no major change or upgrading has been applied since the directly preceding evaluation;
  - (5) no relocation of the FSTD has taken place since the last evaluation;
  - (6) a system is established enabling the Brunei DCA to monitor and analyse the status of the FSTD on a continuous basis; and
  - (7) the FSTD hardware and software has been working reliably for the previous years. This should be reflected in the number and kind of discrepancies (technical log entries) and the results of the compliance monitoring system audits.
- (c) In the case of a BITD, the recurrent evaluation may be conducted by one suitably qualified flight inspector only, in conjunction with the inspection of any ATO, using the BITD.

## **AMC1 ARA.FSTD.130 Changes**

### **General**

- (a) The organisation operating an FSTD who wishes to modify, upgrade, de-activate or re-locate its FSTD should notify the Brunei DCA. When considering applications for a change of the existing FSTD qualification level, the Brunei DCA should ensure that accountability for the change is clearly defined.
- (b) An individual department manager of the Brunei DCA should be appointed under whose personal authority a FSTD qualification may be changed.
- (c) The written application for a change, including appropriate extracts from the qualification test guide indicating proposed amendments should be submitted in a format and manner as specified by the Brunei DCA. This application should be submitted no later than 30 days before the date of intended change, unless otherwise agreed with the Brunei DCA.
- (d) On receipt of an application for a change of the existing FSTD qualification level, the Brunei DCA should conduct such evaluations and inspections as are necessary to ensure that the full implications of the request have been addressed by the organisation operating the FSTD.
- (e) During the processing of a change request, the continued adequacy of the compliance monitoring should be reviewed.
- (f) When the request has been considered and examined, the Brunei DCA should decide on the depth of inspection of the FSTD that is required.
- (g) The department manager, if satisfied that the organisation operating the FSTD remains competent and the qualification level of the FSTD can be maintained, should issue revised FSTD qualification documentation, as appropriate.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (h) The Brunei DCA should inform the organisation operating the FSTD of its decision within 30 days of receipt of all documentation where no evaluation is required, or within 14 days of any subsequent evaluation.
- (i) Such documentation includes the appropriate extracts from the QTG amended, when necessary, to the Brunei DCA's satisfaction.

## **GM1 ARA.FSTD.130 Changes**

### **Qualification of New Technology or Systems of New Technology or Systems**

Where an update to an FSTD involves a change of technology or the addition of a new system or equipment that is not covered by the qualification basis used for the existing qualification, an evaluation of such changes may not be possible using this original qualification basis. For these cases, the specific changes can be qualified by using newer Certification Specifications, new AMCs or alternative means of compliance, that apply to these changes, without affecting the overall qualification of the FSTD. This approach should be documented.

### **AMC1 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate**

#### **General**

- (a) The Brunei DCA's inspection and monitoring process should confirm the Brunei DCA's continued confidence in the effectiveness of the compliance monitoring system of the organisation operating a FSTD, and its ability to maintain an adequate standard.
- (b) If the Brunei DCA is not satisfied, the organisation operating a FSTD should be informed in writing of the details of the conduct of its operation which are causing the Brunei DCA concern. The Brunei DCA should require corrective action to be taken within a specified period (see AMC2 ARA.FSTD.100 (a)(1) point (b)).
- (c) In the event that an organisation operating an FSTD fails, in spite of warning and advice, to satisfy the Brunei DCA's concerns, a final written warning should, whenever possible, be given to the organisation together with a firm date by which specified action to satisfy the Brunei DCA should be taken. It should be made clear that failure to comply may result in enforced limitation or suspension of the FSTD's qualification.
- (d) Circumstances may, however, preclude recourse to the process described under (a) to (c). In such cases the Brunei DCA's duty to preserve quality of training, testing and checking is of paramount importance and therefore the Brunei DCA may immediately limit or suspend any FSTD qualification which it has issued.

### **AMC2 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate**

#### **Suspension and Limitation**

- (a) When a decision has been taken to suspend, or limit, an FSTD qualification certificate, the organisation operating an FSTD should be informed immediately by the quickest available means.
- (b) In the event of full suspension of an FSTD qualification certificate, the organisation operating an FSTD should be instructed that the FSTD concerned cannot be used for any credited training, testing or checking. The "quickest available means" will in most situations mean the use of a facsimile or email message.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

- (c) This should be followed by a formal letter giving notice of suspension, or limitation, restating the requirement to cease operations as applicable, and also setting out the conditions on which suspension may be lifted.
- (d) If it becomes apparent to the Brunei DCA that all operations have ceased over a period in excess of 6 months, the Brunei DCA should consider opening the warning process described in AMC1 ARA.FSTD.135, points (a) to (d).
- (e) The FSTD qualification certificate should not remain suspended indefinitely. Further steps may be taken by the organisation operating an FSTD to reinstate the FSTD qualification or, in default, should be taken by the Brunei DCA to revoke the FSTD qualification certificate. Should an organisation operating an FSTD wish to dispute the suspension of its FSTD's qualification certificate, it should be informed of such rights of appeal as exist under national regulations. If an appeal is lodged, the FSTD qualification may remain suspended until the appeal process is complete.
- (f) Suspension of a FSTD qualification certificate may be lifted on appeal or if the organisation operating a FSTD restores the FSTD to its previously acceptable standard.
- (g) In neither case should operations be permitted to restart until it has been demonstrated that the cause of the suspension or limitation has been rectified. The Brunei DCA may require a special evaluation depending on the severity of the problem.
- (h) The Brunei DCA should issue a formal notice of the lifting of suspension before the organisation operating an FSTD is permitted to resume use of a FSTD.

### **AMC3 ARA.FSTD.135 Findings and corrective actions - FSTD qualification certificate**

#### **Revocation**

- (a) The Brunei DCA should give the organisation operating a FSTD notice that it intends to revoke the FSTD qualification followed by a formal letter of revocation.
- (b) Should an organisation operating a FSTD wish to dispute this revocation, it should be informed of such rights of appeal as exist under applicable regulations. Once revoked, there can be no further activities under the terms of the FSTD qualification.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Subpart MED - Specific Requirements Relating to Aero-Medical Certification

### Section I - General

#### AMC1 ARA.MED.120 Medical assessors

##### Experience and Knowledge

Medical assessors should:

- (a) have considerable experience of aero-medical practice and have undertaken a minimum of 200 class 1 medical examinations or equivalent; and
- (b) maintain their medical professional competence in aviation medicine. The following should count towards maintaining medical professional competence:
  - (1) undertaking regular refresher training;
  - (2) participating in international aviation medicine conferences;
  - (3) undertaking research activities, including publication of results of the research.

#### AMC2 ARA.MED.120 Medical assessors

##### Tasks

Medical assessors should:

- (a) provide lectures in basic, advanced and refresher training courses for aero-medical examiners (AMEs) and aero-medical centres (AeMCs);
- (b) carry out supervision and audits of AeMCs, AMEs and AME training facilities; and
- (c) perform the aero-medical assessment of applicants for, or holders of, medical certificates after referral to the Brunei DCA.

#### AMC1 ARA.MED.125 Referral to Brunei DCA

##### Referral to Brunei DCA

- (a) The Brunei DCA should supply the AeMC or AME with all necessary information that led to the decision on aero-medical fitness.
- (b) The Brunei DCA should ensure that unusual or borderline cases are evaluated on a common basis.

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.MED.130 Medical certificate format**

### **Standard Medical Certificate Format**

The format of the medical certificate should be as shown below.

[to insert]

BRUNEL DCA

## **AMC1 ARA.MED.135(a) Aero-medical forms**

### **Application Form for a Medical Certificate**

The form referred to in ARA.MED.135 (a) should reflect the information indicated in the following form and corresponding instructions for completion.



## Brunei DCA

### Application Form for a Medical Certificate

### Medical in Confidence

Complete this page fully and in block capitals - Refer to instructions for completion.

(1) State of licence issue:		(2) Medical certificate applied for: class 1 <input type="checkbox"/> class 2 <input type="checkbox"/> class 3 <input type="checkbox"/> LAPL <input type="checkbox"/>	
(3) Surname:	(4) Previous surname(s):	(12) Application: Initial <input type="checkbox"/> Revalidation/Renewal <input type="checkbox"/>	
(5) Forename(s):	(6) Date of birth (dd/mm/yyyy):	(7) Sex: Male <input type="checkbox"/> Female <input type="checkbox"/>	(13) Reference number:
(8) Place and country of birth:	(9) Nationality:	(14) Type of licence applied for:	
(10) Permanent address:  Country: Telephone No: Mobile No: E-mail:	(11) Postal address (if different):  Country: Telephone No:	(15) Occupation (principal):	
		(16) Employer:	
		(17) Last medical examination: Date: Place:	
(18) Licence(s) held (type): Licence number: State of issue:	(19) Any limitations on licence(s)/medical certificate held No <input type="checkbox"/> Yes <input type="checkbox"/> Details:		
(20) Have you ever had a medical certificate denied, suspended or revoked by any licensing authority?  No <input type="checkbox"/> Yes <input type="checkbox"/> Date: Country: Details:	(21) Flight time total:	(22) Flight time since last medical:	
	(23) Aircraft class/type(s) presently flown:		
(24) Any aviation accident or reported incident since last medical examination?  No <input type="checkbox"/> Yes <input type="checkbox"/> Date: Place: Details:	(25) Type of flying intended:		
	(26) Present flying activity: Single pilot <input type="checkbox"/> Multi pilot <input type="checkbox"/>		
(27) Do you drink alcohol? No <input type="checkbox"/> Yes <input type="checkbox"/> Amount:	(28) Do you currently use any medication? No <input type="checkbox"/> Yes <input type="checkbox"/> State medication, dose, date started and why:		
(29) Do you smoke tobacco? No, never <input type="checkbox"/> No <input type="checkbox"/> date stopped: Yes <input type="checkbox"/> , state type and amount:			

General and medical history: Do you have, or have you ever had, any of the following? (Please tick). If yes, give details in remarks section (30).

	Yes	No		Yes	No		Yes	No		Yes	No
101 Eye trouble/eye operation			112 Nose, throat or speech disorder			123 Malaria or other tropical disease			170 Heart disease		
102 Spectacles and/or contact lenses ever worn			113 Head injury or concussion			124 A positive HIV test			171 High blood pressure		
			114 Frequent or severe headaches			125 Sexually transmitted disease			172 High cholesterol level		
103 Spectacle/contact lens prescriptions change since last medical exam.			115 Dizziness or fainting spells			126 Sleep disorder/apnoea syndrome			173 Epilepsy		
			116 Unconsciousness for any reason			127 Musculoskeletal illness/impairment			174 Mental illness		
104 Hay fever, other allergy			117 Neurological disorders; stroke, epilepsy, seizure, paralysis, etc.			128 Any other illness or injury			175 Diabetes		
105 Asthma, lung disease						129 Admission to hospital			176 Tuberculosis		
106 Heart or vascular trouble			118 Psychological/psychiatric trouble of any sort			130 Visit to medical practitioner since last medical examination			177 Allergy/asthma/eczema		
107 High or low blood pressure									178 Inherited disorders		
108 Kidney stone or blood in urine			119 Alcohol/drug/substance abuse			131 Refusal of life insurance			179 Glaucoma		
109 Diabetes, hormone disorder			120 Attempted suicide			132 Refusal of flying licence			<b>Females only:</b>		
110 Stomach, liver or intestinal trouble			121 Motion sickness requiring medication			133 Medical rejection from or for military service			150 Gynaecological, menstrual problems		
111 Deafness, ear disorder			122 Anaemia/sickle cell trait/other blood disorders			134 Award of pension or compensation for injury or illness			151 Are you pregnant?		
(30) Remarks: If previously reported and no change since, so state.											
<p>(31) Declaration: I hereby declare that I have carefully considered the statements made above and to the best of my belief they are complete and correct and that I have not withheld any relevant information or made any misleading statements. I understand that, if I have made any false or misleading statements in connection with this application, or fail to release the supporting medical information, the licensing authority may refuse to grant me a medical certificate or may withdraw any medical certificate granted, without prejudice to any other action applicable under national law.</p> <p>CONSENT TO RELEASE OF MEDICAL INFORMATION: I hereby authorise the release of all information contained in this report and any or all attachments to the AME and, where necessary, to the medical assessor of the Brunei DCA, recognising that these documents or electronically stored data are to be used for completion of a medical assessment and will become and remain the property of Brunei DCA, providing that I or my physician may have access to them according to national law. Medical confidentiality will be respected at all times.</p>											
Date	Signature of applicant					Signature of AME/Medical Assessor					



## Instructions for Completion of the Application Form for a Medical Certificate

This application form and all attached report forms will be transmitted to the Brunei DCA. Medical confidentiality shall be respected at all times.

The applicant should personally complete, in full, all questions (sections) on the application form. Writing should be legible and in block capitals, using a ball-point pen. Completion of this form by typing/printing is also acceptable. If more space is required to answer any questions, a plain sheet of paper should be used, bearing the applicant's name and signature, and the date of signing. The following numbered instructions apply to the numbered headings on the application form for a medical certificate.

Failure to complete the application form in full, or to write legibly, may result in non-acceptance of the application form. The making of false or misleading statements or the withholding of relevant information in respect of this application may result in criminal prosecution, denial of this application and/or withdrawal of any medical certificate(s) granted.

<b>1. LICENSING AUTHORITY:</b> State name of country this application is to be forwarded to.	<b>17. LAST APPLICATION FOR A MEDICAL CERTIFICATE:</b> State date (day, month, year) and place (town, country) Initial applicants state 'NONE'.
<b>2. MEDICAL CERTIFICATE APPLIED FOR:</b>  Tick appropriate box. Class 1: Professional Pilot Class 2: Private Pilot Class 3 : ATC LAPL	<b>18. LICENCE(S) HELD (TYPE):</b>  State type of licence(s) held. Enter licence number and State of issue. If no licences are held, state 'NONE'.
<b>3. SURNAME:</b> State surname/family name.	<b>19. ANY LIMITATIONS ON THE LICENCE(S)/MEDICAL CERTIFICATE:</b>  Tick appropriate box and give details of any limitations on your licence(s)/medical certificate, e.g. vision, colour vision, safety pilot, etc.
<b>4. PREVIOUS SURNAME(S):</b> If your surname or family name has changed for any reason, state previous name(s).	<b>20. MEDICAL CERTIFICATE DENIAL, SUSPENSION OR REVOCATION:</b>  Tick 'YES' box if you have ever had a medical certificate denied, suspended or revoked, even if only temporary. If 'YES', state date (dd/mm/yyyy) and country where it occurred.
<b>5. FORENAME(S):</b> State first and middle names (maximum three)	<b>21. FLIGHT TIME TOTAL:</b> State total number of hours flown
<b>6. DATE OF BIRTH:</b> Specify in order dd/mm/yyyy.	<b>22. FLIGHT TIME SINCE LAST MEDICAL:</b> State number of hours flown since your last medical examination.
<b>7. SEX:</b> Tick appropriate box.	<b>23. AIRCRAFT CLASS/TYPE(S) PRESENTLY FLOWN:</b> State name of principal aircraft flown, e.g. Boeing 737, Cessna 150, etc.
<b>8. PLACE AND COUNTRY OF BIRTH:</b> State town and country of birth.	<b>24. ANY AVIATION ACCIDENT OR REPORTED INCIDENT SINCE LAST MEDICAL EXAMINATION:</b>  If 'YES' box ticked, state date (dd/mm/yyyy) and country of accident/incident.

<b>9. NATIONALITY:</b> State name of country of citizenship.	<b>25. TYPE OF FLYING INTENDED:</b> State whether airline, charter, single-pilot, commercial air transport, carrying passengers, agriculture, pleasure, etc.
<b>10. PERMANENT ADDRESS:</b> State permanent postal address and country. Enter telephone area code as well as telephone number.	<b>26. PRESENT FLYING ACTIVITY:</b> Tick appropriate box to indicate whether you fly as the SOLE pilot or not.
<b>11. POSTAL ADDRESS (IF DIFFERENT):</b> If different from permanent address, state full current postal address including telephone number and area code. If the same, enter 'SAME'.	<b>27. DO YOU DRINK ALCOHOL?</b> Tick applicable box. If yes, state weekly alcohol consumption e.g. 2 litres beer.
<b>12. APPLICATION:</b> Tick appropriate box.	<b>28. DO YOU CURRENTLY USE ANY MEDICATION?:</b> If 'YES', give full details - name, how much you take and when, etc. Include any non-prescription medication.
<b>13. REFERENCE NUMBER:</b> State reference number allocated to you by the licensing authority Initial applicants enter 'NONE'.	<b>29. DO YOU SMOKE TOBACCO?</b> Tick applicable box. Current smokers state type (cigarettes, cigars, pipe) and amount (e.g. 2 cigars daily; pipe – 1 oz. weekly)
<b>14. TYPE OF LICENCE APPLIED FOR:</b> State type of licence applied for from the following list: Aeroplane Transport Pilot Licence Multi-Pilot Licence Commercial Pilot Licence/Instrument Rating Commercial Pilot Licence Private Pilot Licence/Instrument Rating Private Pilot Licence Sailplane Pilot Licence only. Balloon Pilot Licence Light Aircraft Pilot Licence And whether Fixed Wing / Rotary Wing / Both Other – Please specify	<b>GENERAL AND MEDICAL HISTORY</b> All items under this heading from number 101 to 179 inclusive should have the answer 'YES' or 'NO' ticked. You should tick 'YES' if you have ever had the condition in your life and describe the condition and approximate date in the (30) remarks section. All questions asked are medically important even though this may not be readily apparent. Items numbered 170 to 179 relate to immediate family history, whereas items numbered 150 to 151 should be answered by female applicants only If information has been reported on a previous application form for a medical certificate and there has been no change in your condition, you may state 'Previously reported; no change since'. However, you should still tick 'YES' to the condition. Do not report occasional common illnesses such as colds
<b>15. OCCUPATION (PRINCIPAL):</b> Indicate your principal employment.	<b>31. DECLARATION AND CONSENT TO OBTAINING AND RELEASING INFORMATION:</b> Do not sign or date these declarations until indicated to do so by the AME who will act as witness and sign accordingly.
<b>16. EMPLOYER:</b> If principal occupation is pilot, then state employer's name or if self-employed, state 'self'.	



## MEDICAL EXAMINATION REPORT

(13) Reference number:

(201) Examination Initial <input type="checkbox"/> Revalidation <input type="checkbox"/> Renewal <input type="checkbox"/>	(202) Height cm	(203) Weight kg	(204) Eye Colour	(205) Hair Colour	(206) Blood Pressure – seated mmHg Systolic      Diastolic	(207) Pulse – resting Rate(bpm)      Rhythm Reg <input type="checkbox"/> Irreg <input type="checkbox"/>
--	--------------------	--------------------	---------------------	----------------------	--	--

Clinical examination: Check each item      Normal      Abnormal      Normal      Abnormal

(208) Head, face, neck, scalp			(218) Abdomen, hernia, liver, spleen		
(209) Mouth, throat, teeth			(219) Anus, rectum		
(210) Nose, sinuses			(220) Genito-urinary system		
(211) Ears, drums, eardrum motility			(221) Endocrine system		
(212) Eyes - orbit & adnexa; visual fields			(222) Upper & lower limbs, joints		
(213) Eyes - pupils and optic fundi			(223) Spine, other musculoskeletal		
(214) Eyes - ocular motility; nystagmus			(224) Neurologic - reflexes, etc.		
(215) Lungs, chest, breasts			(225) Psychiatric		
(216) Heart			(226) Skin, identifying marks and lymphatics		
(217) Vascular system			(227) General systemic		

(228) Notes: Describe every abnormal finding. Enter applicable item number before each comment.

(228a) Identifying marks, scars etc

## Visual acuity

(229) Distant vision at 5m/6m      Glasses      Contact lenses

	Uncorrected		Corrected to		
Right eye			Corrected to		
Left eye			Corrected to		
Both eyes			Corrected to		

(230) Intermediate vision	Uncorrected	Corrected
N14 at 100 cm	Yes      No	Yes      No
Right eye		
Left eye		
Both eyes		

(231) Near vision	Uncorrected	Corrected
N5 at 30–50 cm	Yes      No	Yes      No
Right eye		
Left eye		
Both eyes		

(232) Glasses	(233) Contact lenses
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Type:	Type:
Refraction	Sph      Cyl      Axis      Add
Right Eye	
Left Eye	

(313) Colour perception	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>
Pseudo-isochromatic plates	Type: Ishihara (24 plates)
No of plates:	No of errors

(234) Hearing (when 241 not performed)	Right ear	Left ear
Conversational voice test at 2 m back turned to examiner	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Audiometry				
Hz	500	1000	2000	3000
Right				
Left				

(235) Urinalysis	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>
Glucose      Protein	Blood      Other

## (249) AME declaration:

I hereby certify that I/my AME group have personally examined the applicant named on this medical examination report and that this report with any attachment embodies my findings completely and correctly.

(250) Place and date:	Examiner's Name and Address: (Block Capitals)	AME certificate number:
Aeromedical Examiner's signature:	E-mail: Telephone No.: Telefax No.:	

## (236) Pulmonary function

FEV <sub>1</sub> /FVC	%	
Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>	(unit)	Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>
Accompanying Reports	Normal	Abnormal/Comment
(238) ECG		
(239) Audiogram		
(240) Ophthalmology		
(241) ORL (ENT)		
(243) Blood lipids		
(244) Pulmonary function		
(246) Other (What?)		

## (247) AME recommendation:

Name of applicant:	Date of birth:
<input type="checkbox"/> Fit class	
<input type="checkbox"/> Medical certificate issued by undersigned (copy attached) for class	
<input type="checkbox"/> Unfit class	
<input type="checkbox"/> Referred for further evaluation. If yes, why and to whom?	
(248) Comments, limitations:	

## Instructions for Completion of the Medical Examination Report Forms

The AME performing the examination should verify the identity of the applicant.

All questions (sections) on the medical examination report form should be completed in full. If an otorhinolaryngology examination report form is attached, then questions 209, 210, 211, and 234 may be omitted. If an ophthalmology examination report form is attached, then questions 212, 213, 214, 229, 230, 231, 232, and 233 may be omitted.

Writing should be legible and in block capitals using a ball-point pen. Completion of this form by typing/printing is also acceptable. If more space is required to answer any question, a plain sheet of paper should be used, bearing the applicant's name, the AME's name and signature, and the date of signing. The following numbered instructions apply to the numbered headings on the medical examination report form.

Failure to complete the medical examination report form in full, as required, or to write legibly, may result in non-acceptance of the application in total and may lead to withdrawal of any medical certificate issued. The making of false or misleading statements or the withholding of relevant information by an AME may result in criminal prosecution, denial of an application or withdrawal of any medical certificate(s) granted.

**Shaded areas do not require completion for the medical examination report form for the LAPL.**

201 EXAMINATION CATEGORY– Tick appropriate box.

Initial – Initial examination for either LAPL, class 1 or 2; also initial examination for upgrading from LAPL to class 2, or class 2 to 1 (notate 'upgrading' in box 248).

Renewal/Revalidation – Subsequent ROUTINE examinations.

Extended Renewal/Revalidation – Subsequent ROUTINE examinations, which include comprehensive ophthalmological and otorhinolaryngology examinations.

202 HEIGHT – Measure height, without shoes, in centimetres to nearest cm.

203 WEIGHT – Measure weight, in indoor clothes, in kilograms to nearest kg.

204 COLOUR EYE – State colour of applicant's eyes from the following list: brown, blue, green, hazel, grey, multi.

205 COLOUR HAIR – State colour of applicant's hair from the following list: brown, black, red, fair, bald.

206 BLOOD PRESSURE – Blood pressure readings should be recorded as Phase 1 for Systolic pressure and Phase 5 for Diastolic pressure. The applicant should be seated and rested. Recordings in mm Hg.

207 PULSE (RESTING) – The pulse rate should be recorded in beats per minute and the rhythm should be recorded as regular or irregular. Further comments if necessary may be written in section 228, 248 or separately.

208 to 227 inclusive constitute the general clinical examination, and each of the boxes should be marked (with a tick) as normal or abnormal.

208 HEAD, FACE, NECK, SCALP – To include appearance, range of neck and facial movements, symmetry, etc.

209 MOUTH, THROAT, TEETH – To include appearance of buccal cavity, palate motility, tonsillar area, pharynx and also gums, teeth and tongue.

210 NOSE, SINUSES – To include appearance and any evidence of nasal obstruction or sinus tenderness on palpation.

211 EARS, DRUMS, EARDRUM MOTILITY – To include otoscopy of external ear, canal, tympanic membrane. Eardrum motility by valsalva manoeuvre or by pneumatic otoscopy.

- 212 EYES – ORBIT AND ADNEXA; VISUAL FIELDS – To include appearance, position and movement of eyes and their surrounding structures in general, including eyelids and conjunctiva. Visual fields check by campimetry, perimetry or confrontation.
- 213 EYES – PUPILS AND OPTIC FUNDI – To include appearance, size, reflexes, red reflex and fundoscopy. Special note of corneal scars.
- 214 EYES – OCULAR MOTILITY, NYSTAGMUS – To include range of movement of eyes in all directions; symmetry of movement of both eyes; ocular muscle balance; convergence; accommodation; signs of nystagmus.
- 215 LUNGS, CHEST, BREASTS – To include inspection of chest for deformities, operation scars, abnormality of respiratory movement, auscultation of breath sounds. Physical examination of female applicant's breasts should only be performed with informed consent.
- 216 HEART – To include apical heartbeat, position, auscultation for murmurs, carotid bruits, palpation for trills.
- 217 VASCULAR SYSTEM – To include examination for varicose veins, character and feel of pulse, peripheral pulses, evidence of peripheral circulatory disease.
- 218 ABDOMEN, HERNIA, LIVER, SPLEEN – To include inspection of abdomen; palpation of internal organs; check for inguinal hernias in particular.
- 219 ANUS, RECTUM – Examination only with informed consent.
- 220 GENITO-URINARY SYSTEM – To include renal palpation; inspection palpation male/female reproductive organs only with informed consent.
- 221 ENDOCRINE SYSTEM – To include inspection, palpation for evidence of hormonal abnormalities/imbalance; thyroid gland.
- 222 UPPER AND LOWER LIMBS, JOINTS – To include full range of movements of joints and limbs, any deformities, weakness or loss. Evidence of arthritis.
- 223 SPINE, OTHER MUSCULOSKELETAL – To include range of movements, abnormalities of joints.
- 224 NEUROLOGIC – REFLEXES ETC. To include reflexes, sensation, power, vestibular system – balance, romberg test, etc.
- 225 PSYCHIATRIC – To include appearance, appropriate mood/thought, unusual behaviour.
- 226 SKIN, IDENTIFYING MARKS AND LYMPHATICS – To include inspection of skin; inspection, palpation for lymphadenopathy, etc. Briefly describe scars, tattoos, birthmarks, etc. which could be used for identification purposes.
- 227 GENERAL SYSTEMIC – All other areas, systems and nutritional status.
- 228 NOTES – Any notes, comments or abnormalities to be described – extra notes if required on separate sheet of paper, signed and dated.
- 229 DISTANT VISION AT 5/6 METRES – Each eye to be examined separately and then both together. First without correction, then with spectacles (if used) and lastly with contact lenses, if used. Record visual acuity in appropriate boxes. Visual acuity to be tested at either 5 or 6 metres with the appropriate chart for the distance.
- 230 INTERMEDIATE VISION AT 100 CM – Each eye to be examined separately and then both together. First without correction, then with spectacles if used and lastly with contact lenses if used. Record visual acuity in appropriate boxes as ability to read N14 at 100 cm (Yes/No).
- 231 NEAR VISION AT 30-50 CM. – Each eye to be examined separately and then both together. First without correction, then with spectacles if used and lastly with contact lenses, if used. Record visual acuity in appropriate boxes as ability to read N5 at 30-50 cm (Yes/No).

Note: Bifocal contact lenses and contact lenses correcting for near vision only are not acceptable.

- 232 SPECTACLES – Tick appropriate box signifying if spectacles are or are not worn by applicant. If used, state whether unifocal, bifocal, varifocal or look-over.
- 233 CONTACT LENSES – Tick appropriate box signifying if contact lenses are or are not worn. If worn, state type from the following list; hard, soft, gas-permeable or disposable.
- 313 COLOUR PERCEPTION – Tick appropriate box signifying if colour perception is normal or not. If abnormal; state number of plates of the first 15 of the pseudo-isochromatic plates (Ishihara 24 plates) have not been read correctly.
- 234 HEARING – Tick appropriate box to indicate hearing level ability as tested separately in each ear at 2 m.
- 235 URINALYSIS – State whether result of urinalysis is normal or not by ticking appropriate box. If no abnormal constituents, state NIL in each appropriate box.
- 236 PULMONARY FUNCTION – When required or on indication, state actual FEV1/FVC value obtained in % and state if normal or not with reference to height, age, sex and race.
- 237 HAEMOGLOBIN – Enter actual haemoglobin test result and state units used. Then state whether normal value or not, by ticking appropriate box.
- 238 to 244 inclusive: ACCOMPANYING REPORTS – One box opposite each of these sections must be ticked. If the test is not required and has not been performed, then tick the NOT PERFORMED box. If the test has been performed (whether required or on indication) complete the normal or abnormal box as appropriate. In the case of question 244, the number of other accompanying reports must be stated.
- 247 AME RECOMMENDATION – The applicant's name, date of birth and reference number, should be entered here in block capitals. The applicable class of medical certificate should be indicated by a tick in the appropriate box. If a fit assessment is recommended and a medical certificate has been issued, this should be indicated in the appropriate box. An applicant may be recommended as fit for a lower class of medical certificate (e.g. class 2), but also be deferred or recommended as unfit for a higher class of medical certificate (e.g. class 1). If an unfit recommendation is made, applicable Part-MED paragraph references should be entered. If an applicant is deferred for further evaluation, the reason and the doctor or licensing authority to whom the applicant is referred should be indicated.
- 248 COMMENTS, LIMITATIONS, ETC. – The AME's findings and assessment of any abnormality in the history or examination, should be entered here. The AME should also state any limitation required.
- 249 AME DETAILS – The AME should sign the declaration, complete his/her name and address in block capitals, contact details and lastly stamp the relevant section with his/her designated AME stamp incorporating his/her AME number. The GMP identification no. is the number provided by the national medical system.
- 250 PLACE AND DATE – The place (town or city) and the date of examination should be entered here. The date of examination is the date of the general examination and not the date of finalisation of the form. If the medical examination report is finalised on a different date, the date of finalisation should be entered in section 248 as 'Report finalised on .....'.

## **GM1 ARA.MED.135 (b);(c) Aero-medical forms**

### **Ophthalmology and Otorhinolaryngology Examination Report Forms**

The ophthalmology and otorhinolaryngology examination report forms may be used as indicated in the following forms and corresponding instructions for completion.



# OPHTHALMOLOGY EXAMINATION REPORT FORM

Complete this page fully and in block capitals-Refer to instructions for completion

Applicant's details

MEDICAL IN CONFIDENCE

(3) Surname:	(4) Previous surname(s):	Title	(13) Reference number (if applicable)
(5) Forenames:	(6) Date of birth:	(7) Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	(12) Application Initial <input type="checkbox"/> Revalidation/Renewal <input type="checkbox"/>
(1) State applied to:	(2) Medical certificate applied for class 1 <input type="checkbox"/> class 2 <input type="checkbox"/>		
<p>(301) Consent to release medical information: I hereby authorise the release of all information contained in this report and any or all attachments to the AME and, where necessary, to the medical assessor of the licensing authority, recognising that these documents or electronically stored data, are to be used for completion of a medical assessment and will become and remain the property of the licensing authority, providing that I or my physician may have access to them according to national law. Medical Confidentiality will be respected at all times.</p>			
Date: _____		Signature of the applicant: _____	
		Signature of AME: _____	

(302) Examination Category	(303) Ophthalmological history:	Current spectacles	SPH	CYL	AXIS	VA
Initial <input type="checkbox"/>		Right eye				
Renewal / Revalidation <input type="checkbox"/>		Left eye				
Special referral <input type="checkbox"/>						

Clinical examination		Normal	Abnormal
Check each item			
(304) Eyes, external & eyelids			
(305) Eyes, Exterior (slit lamp, ophth.)			
(306) Eye position and movements			
(307) Visual fields (confrontation)			
(308) Pupillary reflexes			
(309) Fundi (Ophthalmoscopy)			
(310) Convergence	cm		
(311) Accommodation	D		

(312) Ocular muscle balance (in prisms dioptres)	
Distant at 5m/6m	Near at 30/50 cm
Ortho	Ortho
Eso	Eso
Exo	Exo
Hyper	Hyper
Cyclo	Cyclo
Tropia Yes <input type="checkbox"/> No <input type="checkbox"/>	Phoria Yes <input type="checkbox"/> No <input type="checkbox"/>
Fusional reserve testing Not performed <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>	

(313) Colour perception	
Pseudo-isochromatic plates	Type:
No. of plates:	No. of errors:
Advanced colour perception testing indicated	Yes <input type="checkbox"/> No <input type="checkbox"/>
Method:	
Colour SAFE <input type="checkbox"/>	Colour UNSAFE <input type="checkbox"/>

Visual acuity		Spectacles	Contact lenses
(314) Distant vision at 5 m/6 m			
Uncorrected	Corrected to		
Right eye			
Left eye			
Both eyes			

(315) Intermediate vision at 1 m		Spectacles	Contact lenses
Uncorrected			
Corrected to			
Right eye			
Left eye			
Both eyes			

(316) Near vision at 30-50 cm		Spectacles	Contact lenses
Uncorrected			
Corrected to			
Right eye			
Left eye			
Both eyes			

(317) Refraction	Sph	Cylinder	Axis	Near (add)
Right eye				
Left eye				
Actual refraction examined Spectacles prescription based				

(318) Spectacles	(319) Contact lenses
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Type:	Type:

(320) Intra-ocular pressure	
Right (mmHg)	Left (mmHg)
Method:	
Normal <input type="checkbox"/> Abnormal <input type="checkbox"/>	

(321) Ophthalmic remarks and recommendations:
(Remarks)

(322) Examiner's declaration:		
I hereby certify that I/my AME Group have personally examined the applicant named on this medical examination report and that this report with any attachment embodies my findings completely and correctly.		
(323) Place and date:	Ophth. Examiner's Name and Address: (Block Capitals)	AME or Specialist Stamp with No.:
AME signature:	Telephone No.:	
	Telefax No.:	

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Instruction for Completion of the Ophthalmology Examination Report Form

Writing should be legible and in block capitals using a ball-point pen. Completion of this form by typing or printing is also acceptable. If more space is required to answer any question, a plain sheet of paper should be used, bearing the applicant's name, the name and signature of the AME or ophthalmology specialist performing the examination and the date of signing. The following numbered instructions apply to the numbered headings on the ophthalmology examination report form.

Failure to complete the medical examination report form in full, as required, or to write legibly may result in non-acceptance of the application in total and may lead to withdrawal of any medical certificate issued. The making of false or misleading statements or the withholding of relevant information by an examiner may result in criminal prosecution, denial of an application or withdrawal of any medical certificate granted.

The AME or ophthalmology specialist performing the examination should verify the identity of the applicant. The applicant should then be requested to complete the sections 1, 2, 3, 4, 5, 6, 7, 12 and 13 on the form and then sign and date the consent to release of medical information (section 301) with the examiner countersigning as witness.

**302 EXAMINATION CATEGORY** – Tick appropriate box.

Initial – Initial examination for either class 1 or 2; also initial examination for upgrading from class 2 to 1 (notate 'upgrading' in section 303).

Renewal/Revalidation – Subsequent comprehensive ophthalmological examinations (due to refractive error).

Special referral – NON-ROUTINE examination for assessment of an ophthalmological symptom or finding.

**303 OPHTHALMOLOGICAL HISTORY** – Detail here any history of note or reasons for special referral.

**304 to 309 inclusive: CLINICAL EXAMINATION** – These sections together cover the general clinical examination and each of the sections should be marked (with a tick) as normal or abnormal. Any abnormal findings or comments on findings should be entered in section 321.

**310 CONVERGENCE** – Enter near point of convergence in cm, as measured using RAF near point rule or equivalent. Tick whether normal or abnormal. Any abnormal findings or comments on findings should be entered in section 321.

**311 ACCOMMODATION** – Enter measurement recorded in dioptres using RAF near point rule or equivalent. Tick whether normal or abnormal. Any abnormal findings or comments on findings should be entered in section 321.

**312 OCULAR MUSCLE BALANCE** – Ocular muscle balance is tested at distant 5 or 6 m and near at 30-50 cm and results recorded. Presence of tropia or phoria must be entered accordingly and also whether fusional reserve testing was NOT performed and if performed whether normal or not.

**313 COLOUR PERCEPTION** – Enter type of pseudo-isochromatic plates (ishihara) as well as number of plates presented with number of errors made by examinee. State whether advanced colour perception testing is indicated and what methods used (which colour lantern or anomaloscopy) and finally whether judged to be colour safe or unsafe. Advanced colour perception testing is usually only required for initial assessment, unless indicated by change in applicant's colour perception.

**314–316 VISUAL ACUITY TESTING AT 5 m/6 m, 1 m and 30-50 cm** – Record actual visual acuity obtained in appropriate boxes. If correction not worn nor required, put line through

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

corrected vision boxes. Distant visual acuity to be tested at either 5 m or 6 m with the appropriate chart for that distance.

317 REFRACTION – Record results of refraction. Indicate also whether for class 2 applicants, refraction details are based upon spectacle prescription.

318 SPECTACLES – Tick appropriate box signifying if spectacles are or are not worn by applicant. If used, state whether unifocal, bifocal, varifocal or look-over.

319 CONTACT LENSES – Tick appropriate box signifying if contact lenses are or are not worn. If worn, state type from the following list; hard, soft, gas-permeable, disposable.

320 INTRA-OCULAR PRESSURE – Enter intra-ocular pressure recorded for right and left eyes and indicate whether normal or not. Also indicate method used – applanation, air etc.

321 OPHTHALMOLOGICAL REMARKS AND RECOMMENDATION – Enter here all remarks, abnormal findings and assessment results. Also enter any limitations recommended. If there is any doubt about findings or recommendations, the examiner may contact the AMS for advice before finalising the report form.

322 OPHTHALMOLOGY EXAMINER'S DETAILS – The ophthalmology examiner must sign the declaration, complete his/her name and address in block capitals, contact details and lastly stamp the report with his/her designated stamp incorporating his/her AM E or specialist number.

323 PLACE AND DATE – Enter the place (town or city) and the date of examination. The date of examination is the date of the clinical examination and not the date of finalisation of form. If the ophthalmology examination report is finalised on a different date, enter date of finalisation on section 321 as 'Report finalised on .....'.  
BRUNEL

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## OTORHINOLARYNGOLOGY EXAMINATION REPORT

Complete this page fully and in block capitals-Refer to instructions for completion

Applicant's details

MEDICAL IN CONFIDENCE

(3) Surname:	(4) Previous surname(s):	Title	(13) Reference number
(5) Forename(s):	(6) Date of birth:	(7) Sex Male <input type="checkbox"/> Female <input type="checkbox"/>	(12) Application Initial <input type="checkbox"/> Revalidation /Renewal <input type="checkbox"/>
(1) State applied to:	(2) Medical certificate applied for class 1 <input type="checkbox"/> class 2 <input type="checkbox"/>		
(401) <b>Consent to release medical information:</b> I hereby authorise the release of all information contained in this report and any or all attachments to the AME and, where necessary, the Medical Assessor of the licensing authority, recognising that these documents, or any electronically stored data, are to be used for completion of a medical assessment and will become and remain the property of the licensing authority, providing that I or my physician may have access to them according to national law. Medical confidentiality will be respected at all times.			
Date: _____ Signature of the applicant: _____ Signature of AME: _____			

(402) Examination Category Initial <input type="checkbox"/> Special referral <input type="checkbox"/>	(403) Otorhinolaryngology history:
---	------------------------------------

### Clinical examination

Check each item	Normal	Abnormal
(404) Head, face, neck, scalp		
(405) Buccal cavity, teeth		
(406) Pharynx		
(407) Nasal passages and naso-pharynx (incl. anterior rhinoscopy)		
(408) Vestibular system incl. Romberg test		
(409) Speech		
(410) Sinuses		
(411) Ext acoustic meati, tympanic membranes		
(412) Pneumatic otoscopy		
(413) Impedance tympanometry including Valsalva manoeuvre (initial only)		

Additional testing (if indicated)	Not performed	Normal	Abnormal
(414) Speech audiometry			
(415) Posterior rhinoscopy			
(416) EOG; spontaneous and positional nystagmus			
(417) Differential caloric test or vestibular autorotation test			
(418) Mirror or fibre laryngoscopy			

### (421) Otorhinolaryngology remarks and recommendation:

Remarks
---------

### (419) Pure tone audiometry dB HL (hearing level)

Hz	Right ear	Left ear
250		
500		
1000		
2000		
3000		
4000		
6000		
8000		

### (420) Audiogram

(220) Audiogram									
dB/HL	o = Right					----- = air			
	x = Left					..... = bone			
-10									
0									
10									
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
Hz	250	500	1000	2000	3000	4000	6000	8000	

### (422) Examiner's declaration:

I hereby certify that I/my AME group have personally examined the applicant named on this medical examination report and that this report with any attachment embodies my findings completely and correctly.

(423) Place and date:	ORL examiner's name and address: (block capitals)	AME or specialist stamp with no.:
AME signature:	Telephone No.: Telefax No.:	

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## Instructions for Completion of the Otorhinolaryngology Examination Report Form

Writing should be legible and in block capitals using a ball-point pen. Completion of this form by typing or printing is also acceptable. If more space is required to answer any question, a plain sheet of paper should be used, bearing the applicant's name, the name and signature of the AME or otorhinolaryngology specialist performing the examination and the date of signing. The following numbered instructions apply to the numbered headings on the otorhinolaryngology examination report form.

Failure to complete the medical examination report form in full, as required, or to write legibly may result in non-acceptance of the application in total and may lead to withdrawal of any medical certificate issued. The making of false or misleading statements or the withholding of relevant information by an examiner may result in criminal prosecution, denial of an application or withdrawal of any medical certificate granted.

The AME or otorhinolaryngology specialist performing the examination should verify the identity of the applicant. The applicant should then be requested to complete the sections 1, 2, 3, 4, 5, 6, 7, 12 and 13 on the form and then sign and date the consent to release of medical information (section 401) with the examiner countersigning as witness.

**402 EXAMINATION CATEGORY** – Tick appropriate box.

Initial – Initial examination for class 1; also initial examination for upgrading from class 2 to 1 (notate upgrading in section 403)

Special Referral – NON-ROUTINE examination for assessment of an ORL symptom or finding

**403 OTORHINOLARYNGOLOGICAL HISTORY** – Detail here any history of note or reasons for special referral.

**404-413 inclusive: CLINICAL EXAMINATION** – These sections together cover the general clinical examination and each of the sections should be marked (with a tick) as normal or abnormal. Any abnormal findings or comments on findings should be entered in section 421.

**414-418 inclusive: ADDITIONAL TESTING** – These tests are only required to be performed if indicated by history or clinical findings and are not routinely required. For each test one of the boxes must be completed – if the test is not performed then tick that box – if the test has been performed then tick the appropriate box for a normal or abnormal result. All remarks and abnormal findings should be entered in section 421.

**419 PURE TONE AUDIOMETRY** – Complete figures for dB HL (hearing level) in each ear at all listed frequencies.

**420 AUDIOGRAM** – Complete audiogram from figures as listed in section 419.

**421 OTORHINOLARYNGOLOGY REMARKS AND RECOMMENDATION** – Enter here all remarks, abnormal findings and assessment results. Also enter any limitations recommended. If there is any doubt about findings or recommendations the examiner may contact the AMS for advice before finalising the report form.

**422 OTORHINOLARYNGOLOGY EXAMINER'S DETAILS** – The otorhinolaryngology examiner must sign the declaration, complete his/her name and address in block capitals, contact details and lastly stamp the report with his/her designated stamp incorporating his/her AME or specialist number.

**423 PLACE AND DATE** – Enter the place (town or city) and the date of examination. The date of examination is the date of the clinical examination and not the date of finalisation of form. If the ORL examination report is finalised on a different date, enter date of finalisation in section 421 as 'Report finalised on .....

Document	BAR 1 Part ARA Authority Requirements for Aircrew - Acceptable Means of Compliance and Guidance Material	
Version	01	

## **AMC1 ARA.MED.150 Record-keeping**

### **Release of Aero Medical Records**

In accordance with the Brunei Darussalam data protection law, aero-medical records may also be released:

- (a) upon written request of the applicant, to management of the Brunei DCA, for review in response to a complaint;
- (b) to research institutes for the purpose of scientific research, with assurance of de-identification prior to publication;
- (c) to any investigation body (accident, security, police), when required under national law; and
- (d) for any other circumstances, as required under national law.

## **Section II – Aero-Medical Examiners (AMEs)**

### **AMC1 ARA.MED.200 Procedure for the issue, revalidation, renewal or change of an AME certificate**

#### **Inspection of The AME Practice**

Before issuing the AME certificate, the Brunei DCA should conduct an inspection of the AME practice to verify compliance with ARA.MED.200 (a).

## **Section III – Medical Certification**

### **AMC1 ARA.MED.315(a) Review of examination reports**

#### **General**

- (a) The process to review examination and assessment reports received from AeMCs and AMEs should aim to check all reports received.
- (b) The Brunei DCA should take account of the proportion of inconsistencies or errors found in the assessment process and adapt the sample size accordingly and to review all reports if necessary.