



Civil Aviation Authority of Singapore

Manual of Standards - Licensing of Air Traffic Control Personnel

Version 1.4: 31 August 2015

Civil Aviation Authority of Singapore

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AMENDMENT RECORDS

The amendments listed below have been incorporated into this copy of the Manual of Standards – Licensing of ATC Personnel.

Amendment no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date
	1.0	Original version	ICAO Annex 1 incorporating Amendment 168	All	AAR (20 Apr 2009)	DH (AAR) (25 Apr 2009)	1 May 2009
1	1.1	Table of Contents Foreword Definitions and Abbreviations Introduction – General Provisions General rules concerning licences Recency requirements Minimum experience and qualification requirements for on-the-job training instructors and check controllers	ICAO Annex 1 incorporating Amendment 169 and arising from ongoing review of MOS-PEL	Pg iii to v Pg viii Pg ix to xii 1.1 1.2.1.2, 1.2.3.2, 1.2.3.3 2.2.7.3, 2.2.7.4 3.1	AAR (6 May 2010)	DH (AAR) (6 May 2010)	6 May 2010

Amendment no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date
1	1.1	Medical requirements Decrease in medical fitness and reporting procedures Class 3 medical examination and medical fitness requirements Instructors' qualifications in Approved Training Organisation Recommended syllabus for on-the-job training instructor course	ICAO Annex 1 incorporating Amendment 169 and arising from ongoing review of MOS-PEL	4.1.2.1 4.1.3.1, 4.1.3.2 Appendix 1 5.3 Appendix 2 Appendix 6	AAR (6 May 2010)	DH (AAR) (6 May 2010)	6 May 2010
2	1.2	Table of Contents Medical fitness Authorised Check Controller	ICAO Annex 1 (incorporating Amendment 169-B and from ongoing review of MOS-PEL)	Pg iv 1.2.2.1, 1.2.2.2 3.1, 3.1.2, 3.1.2.1, 3.1.4, 3.1.4.1 to 3.1.4.7	AAR (15 Mar 2011)	Chief Executive (13 Apr 2011)	14 Apr 2011

Amendment no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date
3	1.3	Table of Contents Foreword Definitions and Abbreviations General Provisions General rules concerning licence Requirements for the issue of a licence Requirements for Air Traffic Control Rating On-the-job training instructors and Authorised Check Controllers Class 3 Medical Assessment SPECIFICATIONS FOR ATC LICENCE Approved Training Organisation(Appendix 2)	Internal policy and rule review	Pg iv, v Pg viii Pg x, xii 1.17, 1.18, 1.1.11(c) 1.2.8.1, 1.2.8.2 2.1.1.2, 2.1.4.1, 2.1.5.2 2.2.4.3, 2.2.8.1 3.1.1.2, 3.1.3.4, 3.1.4.7 4.1.3.1 Chapter 5 deleted 2.1, 4.1, 6.1, 7.1, 8.1, 9.1	SPL (8 Dec 2011)	Chief Executive (5 Jan 2012)	16 Jan 2012

Amendment no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date
3	1.3	Application for an ATC Licence(Appendix 5)	Internal policy and rule review	Appendix 5A, 5B and 5C	SPL (8 Dec 2011)	Chief Executive (5 Jan 2012)	16 Jan 2012
4	1.4	Table of Contents Foreword Definitions and Abbreviations Requirements for the issue of the licence Requirements for Air Traffic Control Rating On-the-job training instructors, Authorised Check Controllers and Senior Authorised Check Controllers	Internal policy and rule review	Pg iv Pg xi Pg xii, xiii 2.1.1.3 2.2.1.1, 2.2.4.2, 2.2.5.2, 2.2.7.1, 2.2.7.2, 2.2.7.3 3.1.1.1, 3.1.1.2, 3.1.2, 3.1.2.1, 3.1.3.3, 3.1.4, 3.1.4.1, 3.1.4.2, 3.1.4.3, 3.1.4.7, 3.1.5.1, 3.1.5.2, 3.1.5.3, 3.1.5.4	SPL (31 Aug 2015)	Chief Executive (31 Jul 2015)	31 Aug 2015

Amendment no.	Version no.	Subject	Source	Sections affected	Entered by (Date)	Approved by (Date)	Effective date
4	1.4	Air Traffic Control Training Organisation (Appendix 2) Application for Approval of an ATC Training Organisation (Attachment A) Application for an Air Traffic Controller Licence (Attachment B1) Application for the Renewal of an Air Traffic Controller Licence (Attachment B2) Application for the Replacement of an Air Traffic Controller Licence (Attachment B3)	Internal policy and rule review	2.1, 2.3, 2.4, 8.2 Deleted Deleted Deleted Deleted	SPL (1 Sep 2015)	Chief Executive (31 Jul 2015)	31 Aug 2015

FOREWORD

The Safety Policy and Licensing Division of the Civil Aviation Authority of Singapore (CAAS) administers the licensing of air traffic controllers and approval of training organisations for air traffic controllers.

Pursuant to paragraph 62A of the Singapore Air Navigation Order, the Manual of Standards – Licensing of Air Traffic Control Personnel is published by the Director-General of Civil Aviation (DGCA). This Manual spells out the standards and requirements to be met for issuing air traffic control licenses and associated ratings and endorsements, and the requirements for approving training organisations for air traffic controllers.

The standards and requirements in this Manual are based mainly on standards and recommended practices stipulated in Annex 1 (entitled “Personnel Licensing”) to the Chicago Convention on International Civil Aviation (as in force and amended from time to time by the Council of the International Civil Aviation Organisation), and with such modifications as may be determined by the DGCA to be applicable in Singapore.

Readers should refer to the applicable provisions in the Singapore Air Navigation Order, together with this Manual, to ascertain the requirements of, and the obligations imposed by or under, Singapore civil aviation legislation.

From time to time, the DGCA may wish to supplement the standards and requirements in this Manual in the form of Safety Directives, Safety Publications or Information Circulars. Where appropriate, such directives, publications or circulars will be incorporated into this Manual by amendment.

DEFINITIONS and ABBREVIATIONS

Definitions

Aerodrome Control Service

Air traffic control service for aerodrome traffic.

Air Traffic

All aircraft in flight or operating on the manoeuvring area of an aerodrome.

Air Traffic Controller Licence

An air traffic controller licence granted or renewed under paragraph 62A (4) of the Air Navigation Order.

Air Traffic Control Service

A service provided for the purpose of:

- a) preventing collisions:
 - i) between aircraft, and
 - ii) on the manoeuvring area between aircraft and obstructions; and
- b) expediting and maintaining an orderly flow of air traffic.

Air Traffic Service

A generic term meaning variously flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Approach Control Service

Air traffic control service for arriving or departing controlled flights.

Approved Training

Training conducted under special curricula and supervision approved by the DGCA.

Approved Training Organisation

An organisation approved by and operating under the supervision of the DGCA in accordance with the requirements of ICAO Annex 1, MOS-PEL 1.2.8.2 and Appendix 2 to perform training.

Area Control Service

A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

Competency

A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

Designated Medical Examiner

A person who –

- a) is qualified and licensed to practice medicine in Singapore or elsewhere;
- b) has received training in the practice of aviation medicine and has demonstrated adequate competency in aviation medicine;
- c) possesses the practical knowledge and experience of the aviation environment; and
- d) is appointed by the DGCA to conduct a medical examination of and report on the fitness of an applicant for a licence or rating for which medical requirements are prescribed in the Fourteenth Schedule of the Air Navigation Order.

Flight Information Service

A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Human Performance

Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations

Manoeuvring Area

Part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, but does not include aprons.

Rated Air Traffic Controller

An air traffic controller holding a licence and valid rating appropriate to the privileges to be exercised.

Rating

An authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

Abbreviations

ANO	Air Navigation Order
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATS	Air Traffic Services
CAMB	Civil Aviation Medical Board
DME	Designated Medical Examiner
ICAO	International Civil Aviation Organisation
OJTIs	On-The-Job Training Instructors
SPL	Safety Policy and Licensing

Chapter 1 – INTRODUCTION

Section 1.1 – General provisions

- 1.1.1 This Manual of Standards – Licensing of Air Traffic Control Personnel (MOS-PEL) contains the standards, requirements and procedures pertaining to the licensing and rating requirements of air traffic control personnel and the approval of an ATC training organisation. In this Manual, the term service provider refers to the air navigation service provider (ANSP) and/or the ATC training organisation
- 1.1.2 This Manual is based mainly on compliance with ICAO Annex 1 – Personnel Licensing.
- 1.1.3 The service provider shall ensure that the services they provide are in conformity with the provisions in this Manual.
- 1.1.4 Where there is a difference between a standard in this Manual and that of ICAO Annex 1, the standard in this Manual shall prevail.
- 1.1.5 Differences, where they exist, between the standards in this Manual and those contained in the ICAO Annex 1 shall be published in section GEN 1.7 of the Singapore Aeronautical Information Publication and also notified to ICAO.
- 1.1.6 In this Manual, standards are preceded by the word “shall”, whereas recommended practices are preceded by the word “should”. The service provider shall comply with all standards at all times and should endeavour to comply with all recommended practices.
- 1.1.7 When the service provider is not able to comply with any standards specified or referenced in this Manual, the service provider shall apply to the DGCA for exemption or deviation from the relevant standards. Applications shall be supported in writing with the reasons for such exemption or deviation including any safety assessment or other studies undertaken and where appropriate, an indication of when compliance with the current standards can be expected.
- 1.1.8 When the service provider is not able to comply with any recommended practices specified or referenced in this Manual, the service provider shall notify the DGCA of the non-compliance or deviation with the supporting reason including any safety assessment or other studies undertaken, and where appropriate, an indication of when compliance with the current recommended practices can be expected.
- 1.1.9 Any exemption or deviation granted to the service provider shall also be recorded in the appropriate service provider’s operations manual. These manuals shall also contain the details of the exemption or deviation, such as the reason that the exemption or deviation was requested and any resultant limitations or conditions imposed.

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- 1.1.10 The service provider shall ensure that the units of measurement as specified in the Manual of Standards – Units of Measurement to be used in Air and Ground Operations are used for the provision of services.
- 1.1.11 In addition to the Manual of Standards, the following may also be issued as and when required to supplement the Manual of Standards:
- (a) Safety Directive – this is a mandatory requirement to be complied by the service provider. It is published for purposes of immediate promulgation of local standards and recommended practices in response to, but not limited to, amendments to ICAO Annexes. The Safety Directives will be incorporated into subsequent amendments of the Manual of Standards.
 - (b) Safety Publication – this is published for purposes of promulgating supplementary guidance materials to the standards and recommended practices in the Manual of Standards. The publications are intended to provide recommendations and guidance to illustrate a means, but not necessarily the only means, of complying with the Manual of Standards. Safety Publications may explain certain regulatory requirements by providing interpretive and explanatory materials.
 - (c) Information Circular – this is published for purposes of bringing to the attention of the service provider educational materials related to aviation safety. The publications could be initiated as a result of ICAO State letters which do not require immediate changes to local regulations, new safety initiatives or international best practices. The service provider is encouraged to review and adopt the material if practicable. Where appropriate, the material in the publications may be incorporated into subsequent amendments of the Manual of Standards.

Section 1.2 – General rules concerning licences

1.2.1 Air traffic controller licence

- 1.2.1.1 An air traffic controller licence shall be issued in accordance with the requirements in the Singapore Air Navigation Order and this Manual of Standards – Licensing of ATC Personnel.
- 1.2.1.2 All qualified ATCOs shall be in possession of a valid air traffic controller licence before they can provide any air traffic service. A person shall not provide an air traffic control service unless he holds an air traffic control licence with a valid rating and a current medical certificate.

1.2.2 Medical fitness

- 1.2.2.1 The ANSP shall not permit a trainee air traffic controller to receive instruction in an operational environment unless the trainee air traffic controller holds a current Class 3 Medical Assessment.
- 1.2.2.2 The applicant for an air traffic controller licence shall hold a Class 3 Medical Assessment issued in accordance with the provisions contained in Section 4.1 of this manual.

1.2.3 Privileges of the holder of a licence

- 1.2.3.1 An air traffic control licence authorises the holder to exercise the privileges of any current air traffic controller ratings and validations held.
- 1.2.3.2 No person shall:
- (a) act as an air traffic controller;
 - (b) hold himself out, whether by use of radio call sign or otherwise, as an air traffic controller or
 - (c) supervise or train any person to act as an air traffic controller,
- unless he holds an air traffic controller licence granted or renewed under this paragraph stipulating the appropriate rating.
- 1.2.3.3 Notwithstanding paragraph 1.2.3.2 above, a person who is undergoing on-the-job training to act as an air traffic controller shall be entitled to hold himself out, whether by use of radio call sign or otherwise, as an air traffic controller, if he holds a current Class 3 medical assessment and if he is directly supervised by a person –
- (a) who holds an air traffic controller licence; and
 - (b) whose air traffic controller licence stipulates the appropriate rating.

1.2.3.4 The air traffic controller licence shall be retained by the person to whom it has been issued and be available for presentation on demand whenever the privileges of the licence are being exercised.

1.2.4 Roles and responsibilities

1.2.4.1 An air traffic controller licence holder who provides an air traffic control service shall be responsible for ensuring he:

- (a) is competent to provide the air traffic control services for which he/she holds valid rating(s);
- (b) complies with the requirements for maintaining currency;
- (c) is not fatigued to an extent that may endanger the safety of aircraft to which he/she is providing an air traffic control service;
- (d) complies with any conditions associated with that medical certificate;
- (e) signs his licence in ink with his/her normal signature.

1.2.5 Validity of licence

1.2.5.1 The validity of the air traffic controller licence shall coincide with the validity of the medical certification, unless otherwise stated.

1.2.5.2 An air traffic controller shall not be authorised to exercise the privileges of any rating if the period of validity of his licence has expired.

1.2.5.3 An air traffic controller shall not be authorised to exercise the privileges of any rating unless he maintains competency and meets the requirements for recent experience as stated in paragraph 2.2.7.

1.2.6 Decrease in medical fitness

1.2.6.1 The holders of an air traffic controller licence shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

1.2.7 Use of psychoactive substances

- 1.2.7.1 The holders of an air traffic controller licence shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.
- 1.2.7.2 The holders of an air traffic controller licence shall not at any time engage in a problematic use of substances.

1.2.8 Approved training and approved training organisation

- 1.2.8.1 Pursuant to paragraph 62A (3) of the Singapore Air Navigation Order, an organisation providing training for air traffic controllers shall meet the requirements contained in Appendix 2 of this Manual and shall be approved by the DGCA.
- 1.2.8.2 The ATC training courses, tests and examinations conducted at an approved training organisation shall be approved by the DGCA. Air traffic controllers shall undergo on-the-job training as necessary in the appropriate ATC units.
- 1.2.8.3 The approved training organisation shall ensure that the training courses provide air traffic controllers with the necessary skills and knowledge to a level of competence that will prepare them for on-the-job training at the ATC operational units.
- 1.2.8.4 The approved training organisation shall set up and maintain a programme to conduct the training, testing and examination required for the issuance of an ATC rating.

1.2.9 Language proficiency

- 1.2.9.1 Air traffic controllers shall demonstrate the ability to speak and understand the language used for radiotelephony communications to the level specified in the language proficiency requirements in Appendix 3 of this Manual.
- 1.2.9.2 The language proficiency of air traffic controllers who demonstrate proficiency below the Expert Level (Level 6) shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level, as follows:
- (a) those demonstrating language proficiency at the Operational Level (Level 4) should be evaluated at least once every three years; and
 - (b) those demonstrating language proficiency at the Extended Level (Level 5) should be evaluated at least once every six years.

Chapter 2 – AIR TRAFFIC CONTROLLER LICENCE

Section 2.1 – Requirements for the issue of the licence

2.1.1 Requirements for the issue of the licence

2.1.1.1 To be eligible for an air traffic controller licence, a person shall:

- (a) be at least 21 years of age;
- (b) have completed an approved training course (see Appendix 4) and not less than three months' satisfactory service engaged in the actual control of air traffic under the supervision of an appropriately rated air traffic controller. The experience requirements specified for air traffic controller ratings in paragraph 2.2.2.1 (b) may be credited as part of the experience specified in this paragraph;
- (c) have demonstrated a level of knowledge appropriate to the holder of an air traffic controller licence, in at least the following subject areas:
 - i) Air law: Rules and regulations relevant to the air traffic controller
 - ii) Air traffic control equipment: Principles, use and limitations of equipment used in air traffic control
 - iii) General aircraft knowledge: Principles of flight; principles of operation and functioning of aircraft, powerplants and systems; aircraft performances relevant to air traffic control operations
 - iv) Human performance and limitations: Human performance including principles of threat and error management
 - v) Language: The language nationally designated for use in air traffic control and ability to speak such language without accent or impediment which would adversely affect radio communication
 - vi) Meteorology: Aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry

- vii) Navigation: Principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids
 - viii) Operational procedures: Air traffic control, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight
- (d) have met the training, experience, and assessment requirements for at least one air traffic controller rating issued under paragraph 2.2.1; and
- (e) hold a current Class 3 Medical Assessment.
- 2.1.1.2 An application for the grant, renewal or replacement of a licence shall be made to the DGCA on the relevant published forms.
- 2.1.1.3 The experience specified in 2.1.1.1(b) shall have been completed in the 6-month period preceding application for an ATC licence.
- 2.1.2 Signature required**
- 2.1.2.1 An air traffic controller licence shall be signed by the successful applicant upon the grant, renewal or replacement of the licence in the presence of an authorised officer from the ANSP.
- 2.1.3 Grant, renewal and validity of an air traffic controller licence**
- 2.1.3.1 An air traffic controller licence may be granted or renewed for a period of:
- (a) 48 months from the date the licence is granted or renewed, if the applicant is below 40 years of age on that date;
 - (b) 24 months from the date the licence is granted or renewed, if the applicant is 40 years of age or more but less than 50 years of age on that date; or
 - (c) 12 months from the date the licence is granted or renewed, if the applicant is 50 years of age or more on that date.
- 2.1.3.2 The validity of the air traffic controller licence shall coincide with the validity of the medical certification, unless otherwise stated.
- 2.1.3.3 The maintenance of an air traffic controller licence shall be the responsibility of the licence holder. Each applicant shall meet the requirements set out in paragraph 62A(4) (a) to (c) of the Singapore Air Navigation Order, before a grant or renewal of the licence is made.

2.1.4 Replacement of an air traffic controller licence

2.1.4.1 Where an air traffic controller licence has been lost or defaced before its expiry, the holder of the licence may apply to the DGCA for the issue of a replacement air traffic controller licence.

2.1.5 Revocation and suspension of an air traffic controller licence

2.1.5.1 Pursuant to paragraph 60 of the Singapore Air Navigation Order, an air traffic controller licence may be provisionally suspended pending an investigation into the case.

2.1.5.2 On sufficient ground being shown after due inquiry, an air traffic controller licence may be revoked or suspended. The holder of the air traffic controller licence shall surrender it to the DGCA within a reasonable time after being required to do so.

Section 2.2 – Requirements for Air Traffic Control Ratings

2.2.1 Categories of air traffic controller ratings

2.2.1.1 Air traffic controller ratings shall comprise the following categories:

- (a) Aerodrome control rating (Changi);
- (b) Aerodrome control rating (Seletar);
- (c) Approach control surveillance rating (Arrival)
(combined surveillance and procedural);
- (d) Approach control surveillance rating (Terminal)
(combined surveillance and procedural);
- (e) Area control procedural rating; and
- (f) Area control surveillance rating.

Air traffic controller licences issued with aerodrome control rating and approach control surveillance rating will no longer be valid after 31 December 2017.

2.2.2 Requirements for air traffic controller ratings

2.2.2.1 To be eligible for an air traffic controller rating and an initial validation of that rating a person shall:

- (a) have satisfactorily completed a training course relevant to the rating and validation, in the following subject areas:
 - i) Aerodrome control rating: Aerodrome layout; physical characteristics and visual aids; airspace structure; applicable rules, procedures and source of information; air navigation facilities; air traffic control equipment and its use; terrain and prominent landmarks; characteristics of air traffic; weather phenomena; and emergency and search and rescue plans.
 - ii) Approach control surveillance rating: Airspace structure; applicable rules, procedures and source of information; air navigation facilities; air traffic control equipment and its use; terrain and prominent landmarks; characteristics of air traffic and traffic flow; weather phenomena; emergency and search and rescue plans; principles, use and limitations of radar, other surveillance systems and associated equipment; and procedures for the provision of approach radar

control service including procedures to ensure appropriate terrain clearance.

- iii) Area control procedural rating: Airspace structure; applicable rules, procedures and source of information; air navigation facilities; air traffic control equipment and its use; terrain and prominent landmarks; characteristics of air traffic and traffic flow; weather phenomena; and emergency and search and rescue plans.
- iv) Area control surveillance rating: Airspace structure; applicable rules, procedures and source of information; air navigation facilities; air traffic control equipment and its use; terrain and prominent landmarks; characteristics of air traffic and traffic flow; weather phenomena; emergency and search and rescue plans; principles, use and limitations of radar, other surveillance systems and associated equipment; and procedures for the provision of area radar control service including procedures to ensure appropriate terrain clearance.

- (b) have provided, satisfactorily, under the supervision of an appropriately rated air traffic controller, the control service at the unit for which the rating is sought. The experience requirements shall be a period of not less than one month for an aerodrome control rating, and not less than three months for the approach control surveillance rating, area control procedural rating and area control surveillance rating.

2.2.2.2 The applicant shall have demonstrated, at a level appropriate to the privileges being granted, the skill, judgement and performance required to provide a safe, orderly and expeditious control service.

2.2.3 **Concurrent issuance of two air traffic controller ratings**

2.2.3.1 When two air traffic controller ratings are sought concurrently, the applicable requirements shall not be less than those of the more demanding rating.

2.2.3.2 The approach control surveillance rating shall be a concurrent issuance of the approach control procedural rating and the approach control surveillance rating.

2.2.3.3 The issuance of an approach control surveillance rating shall require the controller to be current in procedural operations. The controller shall maintain currency in approach control procedural operations in a simulated working environment, at least once every 6 months.

2.2.4 Grant of air traffic controller ratings

- 2.2.4.1 The ANSP shall establish and maintain a system to evaluate the operational competency of an air traffic controller to ensure that the grant of air traffic controller ratings are in accordance with the standards and requirements of this Manual.
- 2.2.4.2 The evaluation of the operational competency of an air traffic controller should include, but not limited to:
- (a) Validation (Rating) Assessment;
 - (b) Re-validation Assessment; and
 - (c) Twelve-monthly Proficiency Check
- 2.2.4.3 Following the evaluation, the ANSP shall notify the DGCA of the results of the validation/re-validation assessment as soon as possible. The results and reports of the proficiency checks of air traffic controllers shall be submitted to the DGCA regularly.

2.2.5 Privileges and limitations

- 2.2.5.1 Before exercising the privileges indicated in paragraph 2.2.5.2 below, the licence holder shall be familiar with all pertinent and current information.
- 2.2.5.2 The privileges of the holder of an air traffic controller licence endorsed with one or more of the under-mentioned ratings shall be:
- (a) Aerodrome control rating (Changi): It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of aerodrome control service at Changi Aerodrome;
 - (b) Aerodrome control rating (Seletar): It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of aerodrome control service at Seletar Aerodrome;
 - (c) Approach control surveillance rating (Arrival): It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of approach control service to arriving aircraft for an approach sequence within the airspace or portion thereof, under his jurisdiction for which the holder is rated;
 - (d) Approach control surveillance rating (Terminal): It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of approach control

service including flow management to aircraft within the airspace or portion thereof, under his jurisdiction for which the holder is rated;

- (e) Area control procedural rating: It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of area control procedural service;
- (f) Area control surveillance rating: It shall authorise the holder of the air traffic controller licence to provide and supervise the provision of area control surveillance service.

2.2.6 Validity of ratings

2.2.6.1 A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period exceeding six months. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.

2.2.7 Recency requirements

2.2.7.1 A licence holder shall be deemed to have satisfied the requirements for recent experience in relation to a valid rating at a particular time if he has exercised the privileges associated with that rating, for a minimum of 60 hours within the previous 90 days.

2.2.7.2 If a licence holder has two ratings, he shall exercise the privileges of those ratings for a minimum of 60 hours within the previous 90 days for each rating to satisfy the recency requirement.

2.2.7.3 A licence holder who does not satisfy the recency requirement at a particular time in relation to an endorsement shall be taken to satisfy that requirement at a later time, after he has undergone any retraining required by the ANSP and has been assessed by the ANSP as competent in performing the function and duties required by the relevant rating(s), or he has performed the relevant function and duties at the aerodrome or in relation to the airspace to which the endorsement relates under supervision for a period of time deemed necessary and appropriate by the ANSP. Following a period of supervision, the controller shall be subject to an assessment of his competence before returning to operational duties.

2.2.7.4 The ANSP shall set up and maintain a system to ensure that the licence holder satisfies the recency requirement in relation to air traffic controller ratings. The ANSP shall ensure that those who do not satisfy the recency requirement undergo appropriate retraining, supervision and assessment programmes.

2.2.8 Termination of service

- 2.2.8.1 The air traffic controller licence shall automatically become invalid when the holder ceases to be employed by the ANSP. When the air traffic controller licence is revoked by the DGCA, the licence shall be invalidated and returned to the DGCA.

Chapter 3 – MINIMUM EXPERIENCE AND QUALIFICATION REQUIREMENTS FOR ON-THE-JOB TRAINING INSTRUCTORS, AUTHORISED CHECK CONTROLLERS AND SENIOR AUTHORISED CHECK CONTROLLERS

Section 3.1 – On-the-job training instructors, Authorised Check Controllers and Senior Authorised Check Controllers

3.1.1 Responsibility to ensure air traffic controllers continue to meet the licensing requirements

3.1.1.1 ICAO requires air traffic controllers carrying out instruction in an operational environment to be authorised by the State licensing authority. Such controllers shall meet the prescribed requirements by the DGCA before they can be allowed to discharge their responsibilities. The objective is to ensure that trainee air traffic controllers at the operational air traffic control units receive proper on-the-job training under the supervision of suitably qualified air traffic controllers.

3.1.1.2 In addition, air traffic controllers shall demonstrate continued competence in their duties to the desired standards as part of the licensing requirements in order to exercise the privileges of their ratings. This responsibility to ensure air traffic controllers continue to meet the licensing requirements through evaluations and proficiency checks are conducted by Authorised Check Controllers (ACCs) authorised by the DGCA.

3.1.2 Minimum experience and qualification requirements for on-the-job- training instructors, Authorised Check Controllers and Senior Authorised Check Controllers

3.1.2.1 Air traffic controllers carrying out instruction in an operational environment are known as on-the-job training instructors (OJTIs), and air traffic controllers involved in the conduct of evaluations and proficiency checks are known as Authorised Check Controllers (ACCs). An ACC who conducts checks on another ACC's competency for evaluations and proficiency checks are known as Senior Authorised Check Controllers (SACCs). Both ACCs and SACCs shall meet the prescribed minimum experience and qualification requirements before they can be authorised to carry out their respective duties.

3.1.3 On-The-Job Training Instructor (OJTI)

3.1.3.1 ICAO Annex 1, Chapter 4, Paragraph 4.5.3.3 requires the DGCA to authorise an air traffic controller before he can carry out instruction in an operational environment as an OJTI.

3.1.3.2 Essentially, the OJTI is responsible:

- (a) for the safety of the air traffic control service that the trainee air traffic controller is providing under his supervision;
- (b) to ensure that trainee air traffic controllers are competent in the use of new standards, procedures, techniques, facilities and equipment identified as essential to task performance;
- (c) to determine and report on the training progress;
- (d) to identify any deficiencies in knowledge or skill and recommending remedial training;
- (e) to recommend trainee air traffic controllers as being at an appropriate level of competence where they should be successful at a rating or validation assessment;
- (f) to supervise air traffic controllers who have had their rating(s) suspended; and
- (g) to review, monitor and propose changes to the training.

3.1.3.3 An OJTI shall meet the following minimum requirements:

- (a) holds a valid air traffic controller licence;
- (b) has successfully completed an OJTI training course (see Appendix 6 for recommended course contents); and
- (c) has held a valid rating for a period of at least 2 years in the rating discipline in which he will instruct.

Note — The two-year period in sub-paragraph (c) above represents an absolute minimum experience level that may need to be significantly extended in certain more complex operational environments.

3.1.3.4 To meet the ICAO requirement mentioned in paragraph 3.1.3.1, an air traffic controller shall be deemed to be authorised by the DGCA to carry out instruction in an operational environment if he satisfies the above-mentioned requirements in paragraph 3.1.3.3. It shall be the responsibility of the ANSP to ensure that these requirements are adhered to when assigning OJTI duties to air traffic controllers.

3.1.4 Authorised Check Controllers

- 3.1.4.1 The DGCA may authorise air traffic controllers within the ANSP as Authorised Check Controllers. The authorisation is valid up to a period of 2 years, subject to the renewal of authorisation criteria stated in para 3.1.4.3.
- 3.1.4.2 Authorised Check Controller nominees shall meet the following requirements for authorisation:
- (a) hold an ATC licence;
 - (b) have 2 valid ratings with a minimum of 2 years of experience in each rating;
 - (c) have at least 2 years of experience as an OJTI or as an instructor in an ATC Training Organisation;
 - (d) have successfully completed an ACC Training Programme submitted by the ANSP and approved by the DGCA comprising of at least:
 - i) scope of assessment;
 - ii) practical training on the conduct of pre and post-assessment briefings; and
 - iii) qualifying check by the DGCA or SACC.
 - (e) have successfully completed an ACC Induction Training conducted by the DGCA.
- 3.1.4.3 Authorised Check Controllers shall meet the following requirements prior to the renewal of authorisation:
- (a) continue to hold an ATC licence and 2 valid ratings;
 - (b) have conducted at least 12 assessments (Validation Assessment/Re-validation Assessment/Proficiency Check) during the authorisation term, with at least 2 assessments conducted in every 180-day period commencing from the start date of authorisation;
 - (c) have successfully completed the ACC Recurrent Training conducted by the DGCA to be updated with current information on the roles and responsibilities; and
 - (d) have successfully passed the ACC Surveillance Check conducted either by a SACC or the DGCA, not more than 6 months prior to the expiry date of the ACC authorisation.

- 3.1.4.4 The Authorised Check Controller shall be responsible to conduct an evaluation of the trainee air traffic controllers through a validation or re-validation assessment when the reports by the OJTIs indicate that they are ready. During the conduct of proficiency checks, the Authorised Check Controller is responsible to monitor the air traffic controller's performance and examine any area of his performance that should be improved.
- 3.1.4.5 If an air traffic controller's performance is found to be unsatisfactory, the ANSP shall ensure that he does not provide air traffic control service associated with that rating until the controller's ability to exercise the privileges of the rating has been reestablished.
- 3.1.4.6 The Authorised Check Controller is authorised to endorse the issuance of subsequent control ratings on the air traffic controller licence, after the latter has:
- (a) successfully completed an approved course of ATC training in that rating;
 - (b) successfully completed OJT at the unit; and
 - (c) successfully completed validation (rating) check.
- 3.1.4.7 The ANSP shall establish and implement a system to maintain the defined standards for continuing assessment of controllers' competency. Such a system shall be subject to periodic audits and inspections by the DGCA.

3.1.5 Senior Authorised Check Controllers

- 3.1.5.1 The DGCA may authorise ACCs as Senior Authorised Check Controllers. The authorisation is valid up to a period of 2 years, subject to renewal of authorisation criteria as stated in para 3.1.5.3.
- 3.1.5.2 Senior Authorised Check Controller nominees shall meet the following requirements for authorisation:
- (a) hold an ATC licence with valid ratings;
 - (b) have served as an ACC for at least 3 years;
 - (c) have conducted at least 12 checks as an ACC in the preceding 12 months;
 - (d) have successfully completed the SACC Induction Training conducted by the DGCA on the roles, responsibilities and tasks of a SACC; and

-
- (e) have successfully completed a qualifying check conducted by the DGCA to assess his suitability to act as a SACC.
- 3.1.5.3 Senior Authorised Check Controller shall meet the following requirements prior to the renewal of authorisation:
- (a) continue to hold an ATC licence with valid ratings;
 - (b) continue to hold an ACC authorisation;
 - (c) have conducted at least 4 checks on ACCs during the authorisation period, with at least 1 check conducted in every 180-day period commencing from the date of authorisation to demonstrate currency;
 - (d) have successfully completed the SACC Recurrent Training conducted by the DGCA to ensure familiarity with the latest requirements and standards; and
 - (e) have successfully passed the SACC Surveillance Check conducted by the DGCA not more than 6 months prior to the expiry date of the SACC authorisation.
- 3.1.5.4 Senior Authorised Check Controller shall not exercise the privileges of their SACC authorisation if their Authorised Check Controller authorisation is not valid.

Chapter 4 – ATC Medical Assessment

Section 4.1 – Class 3 Medical Assessment

4.1.1 Assessment issue and renewal

- 4.1.1.1 An applicant for an air traffic controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.
- 4.1.1.2 The applicant for a medical assessment shall provide the DME with a personally certified statement of the medical facts concerning personal, familial and hereditary history. Applicants for air traffic controller licences or ratings for which medical fitness is prescribed shall state whether they have previously undergone such an examination and, if so, the date, place and result of the last examination. They shall indicate to the DME whether a medical assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.
- 4.1.1.3 The applicant shall be made aware of the necessity for giving a statement that is as complete and accurate as the applicant's knowledge permits. Any false declaration to a DME made by an applicant for a licence or rating shall be reported to the DGCA for such action as may be considered appropriate.
- 4.1.1.4 Holders of air traffic controller licences shall have their Class 3 Medical Assessment renewed at intervals not exceeding those specified in paragraph 2.1.3.1.

Note — In accordance with ICAO Annex 1 on “Personnel Licensing”, Class 3 Medical Assessment applies to applicants for, and holders of air traffic controller licences.

4.1.2 Medical requirements

- 4.1.2.1 The holder of an air traffic controller licence shall not exercise the privileges of that licence unless that person:
- (a) holds a current Class 3 Medical Assessment in accordance with the requirements for medical fitness found in Singapore Air Safety Publication (SASP) Part 9; and
 - (b) complies with all medical endorsements on that medical assessment.

4.1.3 Decrease in medical fitness and reporting procedures

- 4.1.3.1 The holder of an air traffic control licence granted in part on the basis of medical fitness shall not be entitled to perform any of the functions to which his licence relates if he knows or has reason to believe that his physical condition renders him temporarily or permanently unfit to perform such functions. He shall inform the DGCA and the DME / CAMB in writing, as soon as possible, if he:
- (a) knows or has reason to believe that he is unfit or is suffering from any personal injury which affects his capacity to provide any air traffic service specified in any rating in his licence;
 - (b) suffers from any illness which affects his capacity to provide any air traffic service specified in any rating in his licence throughout a period of more than 20 days;
 - (c) knows or has reason to believe that she is pregnant;
 - (d) requires continued treatment with prescribed medication; or
 - (e) has received medical treatment requiring hospitalisation.
- 4.1.3.2 A holder of an air traffic controller licence shall not provide any air traffic service on receipt of information of the circumstances set out in paragraph 4.1.3.1 (a) to (e). If under any doubt, the licence holder shall consult the DME on whether he is fit to provide the air traffic service as specified in his licence.
- 4.1.3.3 To enable the DME to make the assessment on the medical fitness, the licence holder shall submit the medical report from his doctor to the DME as soon as possible. The report shall include the type of medication prescribed if the treatment is continuous or prolonged.
- 4.1.3.4 A holder of an air traffic controller licence shall not provide any air traffic service if he knows or has reason to believe that he is suffering from or is likely to suffer from fatigue which may render him unable to provide the air traffic service in a safe and proper manner.
- 4.1.3.5 A holder of an air traffic controller licence shall not provide any air traffic service if he is under the influence of any psychoactive substance which may render him unable to provide the air traffic service in a safe and proper manner.

APPENDIX 1

This section is reserved

APPENDIX 2

AIR TRAFFIC CONTROL TRAINING ORGANISATION

1. Issue of approval

1.1 The issuance of an approval for a training organisation and the continued validity of the approval shall depend upon the training organisation being in compliance with the requirements of this Appendix.

1.2 The approval document shall contain at least the following:

- a) organisation's name and location;
- b) date of issue and period of validity (where appropriate);
- c) terms of approval.

2. Training and procedures manual

2.1 The training organisation shall, provide to the DGCA for approval, a training and procedures manual for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information:

- (a) a general description of the scope of training authorised under the organisation's terms of approval;
- (b) the content of the training programmes offered including the courseware and equipment to be used;
- (c) a description of the organisation's quality assurance system in accordance with paragraph 3;
- (d) a description of the organisation's facilities;
- (e) the name, duties and qualification of the person designated as responsible for compliance with the requirements of the approval in paragraph 5.1;
- (f) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in paragraph 5.2;
- (g) a description of the procedures used to establish and maintain the competence of instructional personnel as required by paragraph 5.3;

- (h) a description of the method used for the completion and retention of the training records required by paragraph 6;
 - (i) a description, when applicable, of additional training needed to comply with an operator's procedures and requirements; and
 - (j) a description of the selection, role and duties of the authorised personnel to conduct the testing required for the issuance of a licence or rating, as well as the applicable requirements established by the DGCA.
- 2.2 The training organisation shall regularly review and amend as necessary the training and procedures manual to keep the information contained therein up to date. The training organisation shall submit the proposed changes to the manual to the DGCA for approval prior to amending the manual.
- 2.3 All changes and the reasons for change shall be recorded and tracked by the training organisation in the manual.
- 2.4 Copies of all amendments to the training and procedures manual shall be furnished promptly to all organisations or persons to whom the manual has been issued.
- 3. Quality assurance system**
- 3.1 The training organisation shall establish a quality assurance system, acceptable to the DGCA granting the approval, which ensures that training and instructional practices comply with all relevant requirements.
- 4. Facilities**
- 4.1 The facilities and working environment shall be appropriate for the task to be performed and be acceptable to the DGCA.
- 4.2 The training organisation shall have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.
- 5. Personnel**
- 5.1 The training organisation shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organisation.
- 5.2 The organisation shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

5.3 ATS instructors shall be air traffic controllers holding valid ATC licences. They shall be either air traffic control managers or senior air traffic controllers with at least 7 years operational experience performing ATC duties relevant to their course of instruction. They shall also be qualified on-the-job training instructors with at least 5 years of experience in conducting OJT.

5.4 The training organisation shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training programme established by the training organisation shall include training in knowledge and skills related to human performance.

Note — Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (ICAO Doc 9683).

6. Records

6.1 The training organisation shall retain detailed student records to show that all requirements of the training course have been met as agreed by the DGCA.

6.2 The training organisation shall maintain a system for recording the qualifications and training of instructional and examining staff, where appropriate.

6.3 The records required by paragraph 6.1 shall be kept for a minimum period of two years after completion of the training. The records required by paragraph 6.2 shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a function for the training organisation.

7. Evaluation and checking

7.1 When an approved training organisation conducts the testing required for the issuance of a licence or rating, the testing shall be conducted by personnel designated by the training organisation in accordance with criteria approved by the DGCA.

8. Application for the approval of ATC training organisation

8.1 An application for the grant of an approved ATC training organisation shall include:

- (a) an application form duly completed and signed by the person responsible for the organisation or a nominated accountable manager;

- (b) a copy of the training and procedures manual for approval;
- (c) a copy of relevant standard operating procedures in support of the training and procedures manual, if applicable.

8.2 The training organisation shall seek the DGCA's approval for changes to the terms of approval provided for in the approval document before the changes are brought into effect. The DGCA may carry out evaluations, including inspections, as necessary to assess the proposed changes.

APPENDIX 3**REQUIREMENTS FOR PROFICIENCY IN
LANGUAGES USED FOR RADIOTELEPHONY COMMUNICATIONS****1. General**

- 1.1 To meet the language proficiency requirements contained in Chapter 1, paragraph 1.1.9.2, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the DGCA, compliance with the holistic descriptors and with the ICAO Operational Level (Level 4) of the ICAO Language Proficiency Rating Scale (see Appendix 3A and 3B).

2. Holistic descriptors

- 2.1 Proficient speakers shall:

- (a) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
- (b) communicate on common, concrete and work-related topics with accuracy and clarity;
- (c) use appropriate communicative strategies to exchange messages and to recognise and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or work-related context;
- (d) handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
- (e) use a dialect or accent which is intelligible to the aeronautical community.

APPENDIX 3A

ICAO LANGUAGE PROFICIENCY RATING SCALE

1.1 Expert, extended and operational levels

LEVEL	<i>PRONUNCIATION</i> <i>Assumes a dialect and/or accent intelligible to the aeronautical community.</i>	<i>STRUCTURE</i> <i>Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task.</i>	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
Expert 6	Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.	Both basic and complex grammatical structures and sentence patterns are consistently well controlled.	Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register.	Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues and responds to them appropriately.
Extended 5	Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.	Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work-related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.	Comprehension is accurate on common, concrete, and work-related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Responses are immediate, appropriate, and informative. Manages the speaker/ listener relationship effectively.
Operational 4	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work-related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	Comprehension is mostly accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.	Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.

Levels 1, 2 and 3 are on subsequent page.

APPENDIX 3B

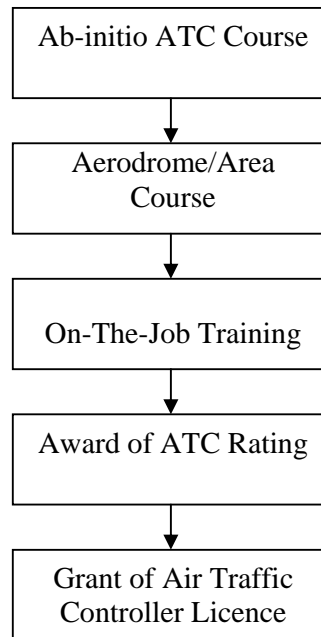
1.2 Pre-operational, elementary and pre-elementary levels

LEVEL	PRONUNCIATION <i>Assumes a dialect and/or accent intelligible to the aeronautical community.</i>	STRUCTURE <i>Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task.</i>	VOCABULARY	FLUENCY	COMPREHENSION	INTERACTIONS
<i>Levels 4, 5 and 6 are on preceding page.</i>						
Pre-operational 3	Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.
Elementary 2	Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding.	Shows only limited control of a few simple memorized grammatical structures and sentence patterns.	Limited vocabulary range consisting only of isolated words and memorized phrases.	Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.
Pre-elementary 1	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.	Performs at a level below the Elementary level.

Note.— The Operational Level (Level 4) is the minimum required proficiency level for radiotelephony communication. Levels 1 through 3 describe Pre-elementary, Elementary, and Pre-operational levels of language proficiency, respectively, all of which describe a level of proficiency below the ICAO language proficiency requirement. Levels 5 and 6 describe Extended and Expert levels, at levels of proficiency more advanced than the minimum required Standard. As a whole, the scale will serve as benchmarks for training and testing, and in assisting candidates to attain the ICAO Operational Level (Level 4).

APPENDIX 4**APPROVED TRAINING PROGRAMME FOR
AIR TRAFFIC CONTROLLER LICENCE**

The grant of an air traffic controller licence shall be based on successful completion of the approved courses for the respective rating as shown in the chart.



Note: Grant of an air traffic controller licence is subject to a valid medical certification.

APPENDIX 5

This section is reserved

APPENDIX 6**RECOMMENDED SYLLABUS FOR
ON-THE-JOB TRAINING INSTRUCTOR COURSE**

For the OJT course to be adequate, it should include the following broad areas:

- 1 TRAINING ORGANISATION**
 - (a) Content and Training Objectives for ATCOs and Unit Training
 - (b) Unit Training Plan
 - (c) Unit Training Structure
 - (d) Regulation

- 2 HUMAN FACTORS**
 - (a) Teaching and learning
 - (b) Teams and Interactions within Teams
 - (c) Communication
 - (d) On-the-Job-Training Instructor (OJT) - Professional and Personal Profile
 - (e) Stress

- 3 TRAINING TECHNIQUES**
 - (a) Briefing
 - (b) Demonstration
 - (c) Talk Through
 - (d) Monitoring
 - (e) Debriefing

- 4 ASSESSMENT METHODS AND REPORT WRITING**
 - (a) Assessment
 - (b) Report Writing