

## AERONAUTICAL CIRCULAR CIVIL AVIATION AUTHORITY – MACAO, CHINA

**SUBJECT:** *Approved Training Organization*

**EFFECTIVE DATE:**

15 April 2011

**CANCELLATION:**

AC/PEL/006R00

**GENERAL:**

The President of Civil Aviation Authority – Macao, China, in exercise of his power under Paragraph 89 of the Air Navigation Regulation of Macao (ANRM) and Article 35 of the Statutes of Civil Aviation Authority, approved by the Decree-Law 10/91/M, established this AC.

### **1 Introduction**

In accordance with International Civil Aviation Organization (ICAO) *Annex 1 – Personnel Licensing* requirements, an approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training and the approval of a training organization by a State shall be dependent upon the applicant demonstrating compliance with the requirements of Appendix 2 of Annex 1.

The Eighth Schedule to the ANRM establishes the various requirements, categories, ratings and privileges prescribed by AACM for granting, validating and using licenses related to flight crew of aircraft in Macao. In paragraph 3 of this schedule, AACM may, on a discretionary basis, authorize a certified person or organization to perform the examinations which are required by the ANRM.

This AC introduces requirements for applying to be an approved training organization.

**2 Applicability**

These requirements are applicable to any flight training organization in Macao or foreign flight training organization based abroad and utilized by a Macao operator.

- *END* -

**1 Issue of Approval****1.1 Approved training organization (ATO)**

1.1.1 An ATO is an organization staffed, equipped, and operated in a suitable environment offering flight crew training, and/or synthetic flight instruction and, if applicable, theoretical knowledge Instruction for specific flight training programs approved by AACM.

**1.2 Application for an ATO approval**

The application proposal will cover the following:

- Organizational structure;
- Designated accountable manager;
- Qualifications of instructors and key personnel;
- Description of facilities, for example, classrooms, briefing rooms and operations facilities;
- Maintenance facilities (where appropriate);
- List of aircraft types and/or synthetic training devices;
- Description of training programs including manuals, curricula, outlines and courseware;
- Procedures and documentation;
- Availability of training equipment and facilities;
- Renewal procedures;
- Description of Quality Assurance System;
- Description of Safety Management System (as applicable);
- Copy of proposed ATO Training and Procedures Manual; and
- Listing of sites or airports where training flight may commonly originate.

**1.3 AACM's review and approval process**

1.3.1 AACM will review the application proposal. Once it is assessed as satisfactory, AACM will conduct a site visit prior to final approval. Upon successful completion of the process, AACM will issue the approval. This will consist of an approval certificate and additional documentation specifying the terms of the approval.

**1.4 Nature of the approval given to a training organization**

1.4.1 The granting of the approval by AACM authorizes the ATO to conduct the training courses specified in the terms of approval document.

**2 Training and procedures manual****2.1 Introduction**

2.1.1 The training organization shall provide a training and procedures manual for the use and guidance of personnel concerned. The Training and Procedures Manual describes the way the organization conducts its activities. As such it is a document which is essential for the

organization as it provides the management and line personnel with clear guidance on the policy of the organization as well as the procedures and processes which are used to provide training. It is also an essential document for AACM. During the approval process, it allows AACM to assess whether the way the organization is planning to operate is in line with the existing requirements and accepted practices. Once the training organization is functioning, a large part of the surveillance activities of AACM will be to ensure that the organization is functioning as specified in the Training and Procedures Manual.

## **2.2 Content**

2.2.1 The Training and Procedures Manual may be issued in separate parts and shall contain at least the following information:

- a) a general description of the scope of training authorized under the organization's terms of approval;
- b) the content of the training programs offered including the courseware and equipment to be used;
- c) a description of the organization's quality assurance system in accordance with Quality Assurance System;
- d) a description of the organization's Safety Management System (as applicable);
- e) a description of the organization's facilities;
- f) the name, duties and qualification of the person designated as responsible for compliance with the requirements of the approval in Personnel;
- g) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training in Personnel;
- h) a description of the procedures used to establish and maintain the competence of instructional personnel as required by Personnel;
- i) a description of the method used for the completion and retention of the training records required by Records;
- j) a description, when applicable, of additional training needed to comply with an operator's procedures and requirements;
- k) when the training organization seeks to be authorized to conduct the testing required for the issuance of a license or rating, a description of the selection, role and duties of the authorized personnel, as well as the applicable requirements established by AACM.

## **2.3 Organizing the manual**

2.3.1 The Training and Procedures Manual shall be organized according to criteria relating to information, importance and use. The information shall be structured and sequenced so that operational personnel can access it easily. These principles will help determine whether to

issue the manual as a single document or in separate parts. When the Training and Procedures Manual is organized in separate parts, it shall include a master index to help locate information included in more than one part. The master index shall be placed in the front of each document.

- 2.3.2 The manual shall be internally consistent with the training organization's philosophies, policies, procedures and processes.

## **2.4 Design**

- 2.4.1 The structure of the manual shall be easy to understand, appropriate for the information documented and clearly identified through headings and other formatting devices. The document structure shall be identified at its beginning by explaining organizing elements such as headings, the numbering scheme, main parts of the document and other sources of coding or grouping.
- 2.4.2 Precise language shall be used wherever possible. Consistent terms for common items and actions shall be maintained throughout the manual. Terms must be clear and easily understood.
- 2.4.3 Writing style, terminology, formatting, and use of graphics and symbols shall be consistent throughout the document. This includes the location of specific types of information and consistent use of units of measurement and codes.
- 2.4.4 The manual shall include a glossary of terms, acronyms, abbreviations and associated definitions. The glossary shall be updated on a regular basis to ensure access to the most recent terminology.
- 2.4.5 The revision process should be considered when designing the manual for ease of amendment and distribution.
- 2.4.6 The Training and Procedures Manual shall comply with the requirements of the training organization's quality assurance system.

## **2.5 Validation**

- 2.5.1 The Training and Procedures Manual will be reviewed and tested under realistic conditions before its use. The validation process will include using the critical aspects of the information contained in the manual to verify its effectiveness. Routine interaction among groups within the organization shall be included in the validation process.
- 2.5.2 A final review of the manual will ensure that all required topics have been addressed with an appropriate level of detail for users. The final review shall also confirm compliance with safety regulations, manufacturers' recommendations and the organization's philosophy, policies, procedures and processes.

## **2.6 Deployment and feedback**

- 2.6.1 The training organization shall monitor use of the Training and Procedures Manual after its release. This will ensure appropriate and realistic use of the manual, based on the operational environment, in a way that is operationally relevant and beneficial to the

personnel for whom it is intended. This monitoring shall include a formal feedback system to obtain input from principal users of the manual and other persons who would be affected by a new or revised policy, procedure or process.

## **2.7 Amendment**

2.7.1 The training organization shall develop an effective information gathering, reviewing, distribution and revision control system to process information obtained from all sources relevant to the organization. Sources include, but are not limited to AACM, manufacturers and equipment vendors.

*Note. - Manufacturers provide information for the operation of specific aircraft that emphasizes the aircraft systems and procedures under conditions that may not fully match the requirements of the training organization. Training organizations shall ensure that such information meet their specific needs and those of AACM.*

2.7.2 The training organization shall develop an information review, distribution and revision control system to process information resulting from changes that originate within the organization. This includes changes to:

- a) the organization's policies, procedures and practices;
- b) response to operating experience;
- c) the scope of training provided;
- d) the content of training programs;
- e) results from the installation of new equipment;
- f) an approval document or operating certificate; and
- g) the purpose of maintaining standardization.

2.7.3 The Training and Procedures Manual shall be reviewed in association with other operational documents that form the organization's flight safety documents system:

- a) on a regular basis (at least once a year);
- b) after major events such as mergers, acquisitions, rapid growth, downsizing, etc.;
- c) after technology changes, e.g.: the introduction of new equipment; and
- d) after changes in safety regulations.

2.7.4 Permanent changes to the Training and Procedures Manual shall be communicated through a formal amendment process. The manual shall be amended or revised as necessary to ensure that the information contained is kept up-to-date.

2.7.5 Distribution of amendments and revisions shall include a tracking system. The tracking system shall include some form of log combined with a procedure to ensure that all amendments are furnished promptly to all organizations or persons to whom the manual has been issued.

### **3 Quality Assurance System**

#### **3.1 Objective of a quality assurance system**

3.1.1 The objective of a quality assurance system is to ensure the achievement of results that conforms to the standards set out in the ATO's manuals and in requirements and documents issued by AACM, thus promoting continual improvement of the quality of training provided.

3.1.2 Quality is an outcome of a number of processes: establish standards; planning activities and documenting procedures to support such standards; training the personnel involved before implementing the documented procedures, and to measure the outcomes of the activities to ensure that they meet standards and expected results. If any non-conformities are found, corrective actions are taken to improve processes and procedures.

3.1.3 The instructions and information contained in the following paragraphs provide guidance on the quality assurance system that each ATO shall establish a quality assurance system, acceptable to AACM granting the approval, which ensures that training and instructional practices comply with all relevant requirements.

#### **3.2 Elements of a quality assurance system**

3.2.1 In a quality assurance system of an ATO, the following elements shall be clearly identifiable:

- a) the organization's training policy;
- b) the training and flight safety standards;
- c) the allocation of responsibility;
- d) the resources, organization and operational processes;
- e) the system to ensure conformance of training with the policy and flight safety standards;
- f) the system for identifying deviations from policy and standards and taking corrective action; and
- g) the evaluation and analysis of experiences and trends concerning policy, training and flight safety standards, in order to provide feedback into the system for the continual improvement of the quality of training.

#### **3.3 The quality assurance system of the ATO**

3.3.1 Details on the contents of a quality assurance system for an approved training organization can be found in Appendix 3 to this AC.

## **4 Safety Management System**

**4.1 An Approved Training Organization that is exposed to safety risks during the provision of its services shall implement a safety management system acceptable to AACM that, as a minimum:**

- a) identifies safety hazards;
- b) ensures the implementation of remedial action necessary to maintain agreed safety performance;
- c) provides for continuous monitoring and regular assessment of the safety performance; and
- d) aims at a continuous improvement of the overall performance of the safety management system.

*Note: Guidance on defining safety performance is contained in the Safety Management Manual (SMM) (ICAO Doc 9859).*

**4.2 A safety management system shall clearly define lines of safety accountability throughout the approved training organization, including a direct accountability for safety on the part of senior management.**

*Note1: The general Macao Safety Management System Requirements are contained in Aeronautical Circular AC/GEN/005.*

*Note2: Guidance on the framework for the implementation and maintenance of safety management systems are contained in the Safety Management Manual (SMM) (ICAO Doc 9859) and AC/GEN/005.*

## **5 Facilities**

### **5.1 Facilities needed by an ATO**

5.1.1 The facilities and working environment shall be appropriate for the task to be performed and acceptable to AACM.

5.1.2 The training organization shall have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.

5.1.3 Synthetic training devices shall be qualified according to requirements established by the State and their use shall be approved by AACM to ensure that they are appropriate to the task.

*Note.— The Manual of Criteria for the Qualification of Flight Simulators (Doc 9625) provides guidance on the approval of flight simulators.*



5.1.4 An ATO shall have access to facilities appropriate to the size and scope of the intended operations provided in an environment conducive to learning. Typically these will include:

Flight operations

- Flight operations room or area
- Flight planning room or area
- Adequate briefing room(s)
- Facilities for instructors

Knowledge instruction

- Classrooms
- Suitable demonstration equipment
- Library
- Radio-telephone and language training and testing area (if appropriate)

## 6 Personnel

### 6.1 ATO staffing

6.1.1 The training organization shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organization.

6.1.2 The organization shall employ the necessary personnel to plan, perform and supervise the training to be conducted.

6.1.3 The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to AACM.

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

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

6.1.5 Each ATO shall have an accountable executive and key personnel. Depending on the size and scope of the organization and the requirements of AACM, some of the key positions may be combined as illustrated in the organizational charts in Appendix 4 to this AC. Typical key positions include:

- Accountable manager
- Head of training
- Chief ground instructor
- Chief flight instructor
- Maintenance manager
- Instructors ground and flight (synthetic or aircraft)
- Quality manager

6.1.6 Examples of organizational charts for different sizes of organizations are in Appendix 4.

## 7 Records

### 7.1 Record-keeping

7.1.1 Accurate and complete record-keeping is an important aspect of complying with the approval. It is also an essential tool for the ATO to ensure the continuity and consistency of its training.

7.1.2 The record keeping system of an ATO shall have the following characteristics:

- a) **Completeness.** The records kept by the training organization shall be sufficient to provide documentary evidence of each training action and allow the reconstruction of the training history of each student or instructor in the organization.
- b) **Integrity.** It is important to maintain the integrity of records in ensuring that they are not removed or altered. A backup system of the records is also necessary to ensure continuity in case of a major disaster.

7.1.3 Each training organization shall also establish rules on archiving personal records that are non-active.

7.1.4 The training organization shall retain detailed student records to show that all requirements of the training course have been met as agreed by AACM.

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

7.1.6 The records required by 6.1.4 shall be kept for a minimum period of two years after completion of the training. The records required by 6.1.5 shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a function for the training organization.

## 8 Oversight

### 8.1 Requirement for Oversight

8.1.1 Oversight is required to ensure that the ATO is operating in compliance with the applicable regulations and the conditions of the approval. It includes a review of the ATO's quality assurance system, its administrative, technical and training records, as well as its operational activities. Oversight is an on-going function which can consist of results monitoring, records review, on-site inspections, and/or audit.

8.1.2 The main elements of the ATO activities that are subject to AACM's oversight are the following:

- Staff adequacy in terms of number and qualifications;
- Instructors' validity of licenses and ratings;
- Logbooks;

- Training aircraft registration, associated documents and maintenance records;
- Synthetic flight trainers qualification and approval
- Facilities adequate for the courses to be conducted and for the number of students on each course;
- Documentation: documents related to the courses, updating systems, training and operations manuals;
- Training records and checking forms;
- Flight instructions including pre-flight briefing, actual flight de-briefing;
- Flight instructor training arrangements;
- Quality assurance system;
- Evaluation and checking.

The Training and Procedures Manual shall include the following elements as far as they are appropriate to the type of the training to be provided.

### 1 General

- 1.1 Preamble relating to use and authority of the manual.
- 1.2 Table of contents.
- 1.3 Amendment, revision and distribution of the manual:
  - a) procedures for amendment;
  - b) amendment record page;
  - c) distribution list; and
  - d) list of effective pages.
- 1.4 Glossary of significant terms and definitions.
- 1.5 Description of the structure and layout of the manual, including:
  - various parts, sections, their contents and use; and
  - the paragraph numbering system
- 1.6 Description of the scope of training authorized under the organization's terms of approval.
- 1.7 Organization (chart of the management organization).
- 1.8 Qualifications, responsibilities and succession of command of management and key operational personnel, including but not limited to:
  - a) Accountable manager;
  - b) Head of training;
  - c) Chief flight instructor;
  - d) Chief ground instructor;
  - e) Maintenance manager;
  - f) Quality manager, and
  - g) Instructors — ground, flight and flight simulation training device.
- 1.9 Policies:
  - a) policy regarding approval of flights;

- b) responsibilities of the pilot-in-command;
- c) flight planning procedures — general;
- d) policy regarding carriage of passengers;
- e) operational control system;
- f) policy regarding safety, including hazards, accidents and incidents reporting and safety management systems;
- g) flying duty period and flight time limitations for flying staff and students; and
- h) rest periods for flying staff and students.

1.10 Description of the facilities available, including:

- a) the number and size of classrooms;
- b) training aids provided; and
- c) flight simulation training devices and training aircraft.

## **2 Aircraft Operating Information**

2.1 Certification and operating limitations.

2.2 Aircraft handling, including:

- a) performance limitations;
- b) use of checklists; and
- c) aircraft maintenance procedures.

2.3 Instructions for aircraft loading and securing of load.

2.4 Fuelling procedures.

2.5 Emergency procedures

## **3 Routes**

3.1 Performance criteria, e.g.: take-off, route, landing, etc.

3.2 Flight planning procedures including:

- a) fuel and oil requirements;
- b) minimum safe altitudes; and
- c) navigation equipment.

3.3 Weather minima for all instructional training flights during day, night, VFR and IFR operations.

3.4 Weather minima for all student training flights at various stages of training.

3.5 Training routes and practice areas.

#### **4 Staff Training**

4.1 Persons responsible for standards and competency of instructional personnel.

4.2 Details of the procedures to determine competency of instructional personnel as required by paragraph 5.3 of Appendix 2 to ICAO Annex 1.

4.3 Details of the training program for instructional personnel as required by paragraph 5.4 of Appendix 2 to ICAO Annex 1.

4.4 Procedures for proficiency checks and upgrade training.

#### **5 Training Plan**

5.1 Aim of the course in the form of a statement of what the student is expected to do as a result of the training, the level of performance, and the training constraints observed.

5.2 Pre-entry requirements, including:

- a) minimum age;
- b) education requirements;
- c) medical requirements; and
- d) linguistic requirements.

5.3 Credits for previous experience, which shall be obtained from AACM before the training commences.

5.4 Training curricula, including the:

- a) flying curriculum (single engine);
- b) flying curriculum (multi-engine);
- c) theoretical knowledge curriculum; and
- d) flight simulation training curriculum.

5.5 The general arrangements of daily and weekly programs for flying training, ground training and flight simulation training.

5.6 Training policies in terms of:

- a) bad weather constraints;
- b) maximum student training times — flying, theoretical knowledge and synthetic flight training, per day/week/month;
- c) restrictions in respect of training periods for students;
- d) duration of training flights at various stages;
- e) maximum student flying hours in any day or night period;
- f) maximum number of student training flights in any day or night period; and
- g) minimum rest periods between training periods.

5.7 Policy for the conduct of student evaluation, including:

- a) procedures for flying progress checks and skill tests;
- b) procedures for knowledge progress tests and knowledge tests;
- c) procedures for authorization for tests;
- d) procedures for refresher training before retest;
- e) test reports and records;
- f) procedures for knowledge test preparation, type of questions and assessments, standards required for a pass;
- g) procedures for question analysis and review and issuing replacement exams; and
- h) knowledge test re-write procedures.

5.8 Policy regarding training effectiveness, including:

- a) individual student responsibilities;
- b) liaison procedures between training departments;
- c) procedures to correct unsatisfactory progress;
- d) procedures for changing instructors;
- e) maximum number of instructor changes per student;
- f) internal feedback system for detecting training deficiencies;
- g) procedures for suspending a student from training;
- h) requirements for reporting and documentation; and
- i) completion standards at various stages of training to ensure standardization.

## **6 Flight Training Syllabus**

- 6.1 Detailed statement of the content specifications of all air exercises to be taught, arranged in the sequence to be flown with main and sub-titles.
- 6.2 Flight lesson reference list in the form of an abbreviated list of the above exercises giving only main and sub-titles for quick reference in a form to facilitate daily use by instructors.
- 6.3 Statement of how the course will be divided into phases, indicating how the phases will be arranged to ensure completion in the most suitable learning sequence and that essential or emergency exercises are repeated at the proper frequency.
- 6.4 Syllabus hours for each phase and for groups of lessons within each phase and when progress tests are to be conducted.
- 6.5 Statement of the standard of proficiency required before progressing from one phase of training to the next. Include minimum experience requirements in terms of hours and satisfactory exercise completion before undertaking significant lessons, such as night flying.
- 6.6 Requirements for instructional methods, particularly with respect to pre-flying and post-flying briefings, adherence to syllabi and training specifications, and authorization of solo flights.
- 6.7 Instruction in respect to the conduct and documentation of all progress checks.
- 6.8 Instruction, where applicable, given to all examining staff in respect to the conduct of tests.

## **7 Flight Simulation Training Syllabus**

- 7.1 Syllabus for flight simulation training shall be structured generally as in paragraph 6 of this Appendix.

## **8 Theoretical Knowledge Syllabus**

- 8.1 The syllabus for theoretical knowledge instruction shall be structured generally as in paragraph 6 of this Appendix but with a training specification and objective for each subject.

## **9 Tests and Checks Conducted for the Issuance of a License or a Rating**

- 9.1 When the training organization seeks to be authorized to conduct the testing required for the issuance of a license or rating in accordance with the Training and Procedures Manual, it shall include:
  - a) name(s) of the personnel with testing authority and scope of the authority;
  - b) role and duties of the authorized personnel;
  - c) if the school has been given authority to appoint personnel to conduct the testing



required for the issuance of a license or rating, the minimum requirement for appointment as well as the selection and appointment procedure; and

- d) applicable requirements established by AACM such as:
  - procedures to be followed in the conduct of checks and tests; and
  - methods for completion and retention of testing records as required by AACM.

## **10 Records**

Policy and procedures regarding:

- a) attendance records;
- b) student training records;
- c) staff training and qualification records;
- d) person responsible for checking records and student personal logs;
- e) nature and frequency of record checks;
- f) standardization of record entries;
- g) personal log entries; and
- h) security of records and documents.

## **11 Quality Assurance System**

- 11.1 Provide a brief description of the quality assurance system, as required by paragraph 3 of Appendix 2 to ICAO Annex 1, with reference to a separate quality assurance manual or include the full quality assurance system in the Training and Procedures Manual.

## **12 Appendices**

- 12.1 As required:
  - a) sample progress test forms;
  - b) navigation logs, test reports and records; and
  - c) a copy of the approved training organization approval document.

**1 Quality Policy and Strategy**

- 1.1 The ATO shall describe how the organization formulates, deploys and reviews its policy and strategy and turns it into plans and actions applicable to all levels of the organization. A formal written quality policy statement shall be prepared, establishing a commitment by the head of the training organization as to the goals of the quality assurance system. The quality policy shall reflect the achievement and continued compliance with relevant parts of Appendix 2 to ICAO Annex 1, together with any additional standards specified by the ATO.
- 1.2 The accountable manager of the training organization will have the overall responsibility for the quality assurance system including the frequency, format and structure of the internal management review and analysis activities and may delegate the responsibility for the tasks defined under paragraph 2 of this Appendix to a quality manager. Depending on the size and scope of the organization and the requirements of AACM, the accountable manager and quality manager may interact in different ways as illustrated in the organizational charts in Appendix 4.

**2 Quality Manager**

- 2.1 The primary role of the quality manager is to verify, by monitoring activities in the field of training, that the standards as established by the ATO and any additional requirements of AACM are being carried out properly.
- 2.2 The quality manager shall be responsible for ensuring that the quality assurance system is properly implemented, maintained and continuously reviewed and improved.
- 2.3 The quality manager shall:
  - a) have direct access to the accountable manager; and
  - b) have access to all parts of the ATO.
- 2.4 The quality manager shall be responsible for ensuring that personnel training relating to the quality assurance system is conducted.

**3 Quality Assurance System**

- 3.1 The quality assurance system of the ATO shall ensure compliance with requirements, conformity with standards and adequacy of the training activities conducted.
- 3.2 Every process that assists the ATO to achieve its results shall be identified and the activities and procedures documented.
- 3.3 The ATO shall specify the basic structure of the quality assurance system applicable to all training activities conducted.

## **4 Feedback System**

- 4.1 The quality assurance system shall include a feedback system to ensure that corrective actions are both identified and promptly addressed. The feedback system shall also specify who is required to rectify discrepancies and non-conformity in each particular case and the procedure to be followed if corrective action is not completed within an appropriate timescale.

## **5 Documentation**

- 5.1 Relevant documentation includes the part(s) of the Training and Procedures Manual which may be included in a separate quality manual.
- 5.2 In addition, relevant documentation shall also include the following:
- a) quality policy;
  - b) terminology;
  - c) specified training standards;
  - d) a description of the organization;
  - e) the allocation of duties and responsibilities; and
  - f) training procedures to ensure regulatory compliance.
- 5.3 The quality assurance audit program documentation shall reflect:
- a) the schedule of the monitoring process;
  - b) audit procedures;
  - c) reporting procedures;
  - d) follow-up and corrective action procedures;
  - e) the recording system; and
  - f) document control.

## **6 Quality Assurance Audit Program**

- 6.1 The quality assurance audit program shall include all planned and systematic actions necessary to provide confidence that all training is conducted in accordance with all applicable requirements, standards and procedures.

## **7 Quality Inspection**

- 7.1 The primary purpose of a quality inspection is to observe a particular

event/action/document, etc., in order to verify whether established training procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

7.2 Typical subject areas for quality inspections could be:

- a) actual flight and ground training;
- b) maintenance;
- c) technical standards; and
- d) training standards.

## **8 Audit**

8.1 An audit is a systematic and independent comparison between the way in which training is being conducted and the way in which the published training procedures say it shall be conducted.

8.2 Audits shall include at least the following quality procedures and processes:

- a) an explanation of the scope of the audit;
- b) planning and preparation;
- c) gathering and recording evidence; and
- d) analysis of the evidence.

8.3 The various techniques that make up an effective audit are:

- a) interviews or discussions with personnel;
- b) a review of published documents;
- c) the examination of an adequate sample of records;
- d) the witnessing of the activities which make up the training; and
- e) the preservation of documents and the recording of observations.

## **9 Auditors**

9.1 The ATO shall decide, depending on the complexity of the training, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team shall have relevant training and/or operational experience.

9.2 The responsibilities of the auditors shall be clearly defined in the relevant documentation.

## **10 Auditor's Independence**

10.1 Auditors shall not have any day-to-day involvement in the area of the operation or maintenance activity that is to be audited. An ATO may, in addition to using the services of

full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities through the use of part-time auditors.

- 10.2 An ATO whose structure and size does not justify the establishment of full-time auditors may undertake the audit function by the use of part-time personnel from within its own organization or from an external source under the terms of an agreement acceptable to AACM.
- 10.3 In all cases the ATO shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist be familiar with the type of training conducted by the ATO.
- 10.4 The quality assurance audit program of the ATO shall identify the persons within the organization who have the experience, responsibility and authority to:
  - a) perform quality inspections and audits as part of ongoing quality assurance;
  - b) identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings;
  - c) initiate or recommend solutions to concerns or findings through designated reporting channels;
  - d) verify the implementation of solutions within specific timescales; and
  - e) report directly to the quality manager.

## **11 Audit Scheduling**

- 11.1 A quality assurance audit program shall include a defined audit schedule and a periodic review cycle. The schedule shall be flexible and allow unscheduled audits when negative trends are identified. The quality manager shall schedule follow-up audits when necessary to verify that corrective action was carried out and that it was effective.
- 11.2 An ATO shall establish a schedule of audits to be completed during a specific calendar period. All aspects of the training shall be reviewed within a period of twelve months in accordance with the program.
- 11.3 When an ATO defines the audit schedule, it shall take into account significant changes to the management, organization, training or technologies, as well as changes to the standards and requirements.

## **12 Monitoring and Corrective Action**

- 12.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby ensure that defined policy and training standards are continuously complied with. Monitoring and corrective action functions fall under the responsibilities of the quality manager. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The ATO shall establish and publish a quality procedure to

monitor compliance with requirements and conformity with standards on a continuing basis. This monitoring activity shall be aimed at eliminating the causes of unsatisfactory performance.

- 12.2 Any non-conformity identified as a result of monitoring shall be communicated by the quality manager to the manager responsible for taking corrective action or, if appropriate, the head of the training organization (i.e. accountable manager). Such non-conformity shall be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective and preventive action.
- 12.3 The quality assurance audit program shall include procedures to ensure that corrective and preventive actions are developed in response to findings. Personnel implementing these procedures shall monitor such actions to verify their effectiveness and ensure that they have been completed. Organizational responsibility and accountability for the implementation of corrective action resides with the department where the finding was identified. The head of the training organization (accountable manager) will have the ultimate responsibility for ensuring, through the quality manager(s), that corrective action has re-established conformity with the standard required by the ATO and any additional requirements established by AACM or the ATO.
- 12.4 The ATO shall identify internal and external customers and monitor their satisfaction by measurement and analysis of feedback.

### **13 Management Review and Analysis**

- 13.1 Management shall accomplish a comprehensive, systematic documented review and analysis of the quality assurance system, training policies and procedures, and shall consider:
  - a) the results of quality inspections, audits and any other indicators;
  - b) the overall effectiveness of the management organization in achieving stated objectives; and
  - c) the correction of trends, and prevention, where applicable, of future non-conformities.
- 13.2 Conclusions and recommendations made as a result of the review and analysis shall be submitted in writing to the responsible manager for action. The responsible manager shall be an individual who has the authority to resolve issues and take action. The head of the training organization shall decide upon the frequency, format and structure of internal review and critical analysis meetings.

### **14 Recording**

- 14.1 Accurate, complete and readily accessible records documenting the result of the quality assurance audit program shall be maintained by the ATO. Records are essential data to enable an ATO to analyze and determine the root causes of non-conformity so that areas of non-compliance can be identified and subsequently addressed.

14.2 Records shall be retained at least for a period of three years. The relevant records include:

- a) Audit schedules;
- b) quality inspection and audit reports;
- c) responses to findings;
- d) corrective and preventive action reports;
- e) follow-up and closure reports; and
- f) management review and analysis reports.

## **15 Quality Assurance Responsibility for Satellite ATOS**

15.1 An ATO may decide to subcontract certain activities to external organizations subject to the approval of AACM.

15.2 The ultimate responsibility for the training provided by the satellite ATO always remains with the ATO. A written agreement shall exist between the ATO and the satellite ATO clearly defining the safety-related services to be provided and the level of quality to be assured. The satellite ATO's safety-related activities relevant to the agreement shall be included in the ATO's quality assurance audit program.

15.3 The ATO shall ensure that the satellite ATO has the necessary authorization/approval when required and commands the resources and competence to undertake the task. If the ATO requires the satellite ATO to conduct activity that exceeds the satellite ATO's authorization/approval, the ATO is responsible for ensuring that the satellite ATO's quality assurance takes account of such additional requirements.

## **16 Quality Assurance System Training**

16.1 Correct and thorough training is essential to optimize quality in every organization. In order to achieve significant outcomes of such training, the ATO shall ensure that all staff understand the objectives as laid out in the quality manual.

16.2 Those responsible for managing the quality assurance system shall receive training covering:

- a) concept of quality assurance and associated systems;
- b) quality management;
- c) quality manuals;
- d) audit techniques; and
- e) reporting and recording.

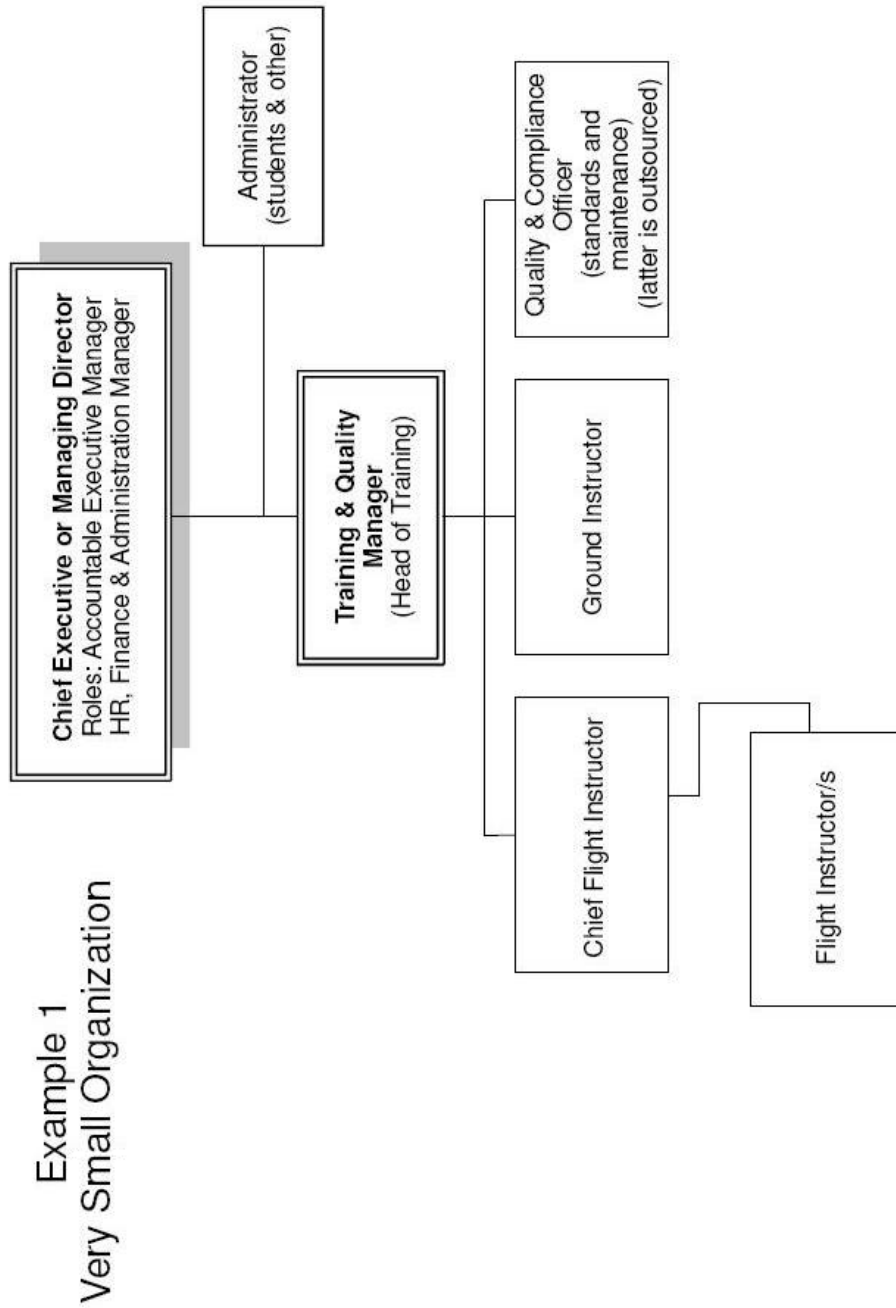
## **17 The Functioning of the Quality System in the ATO**

- 17.1 Time shall be provided to train every individual involved in quality assurance and to brief the remainder of the employees. The allocation of time and resources shall be governed by the size and complexity of the operation concerned.

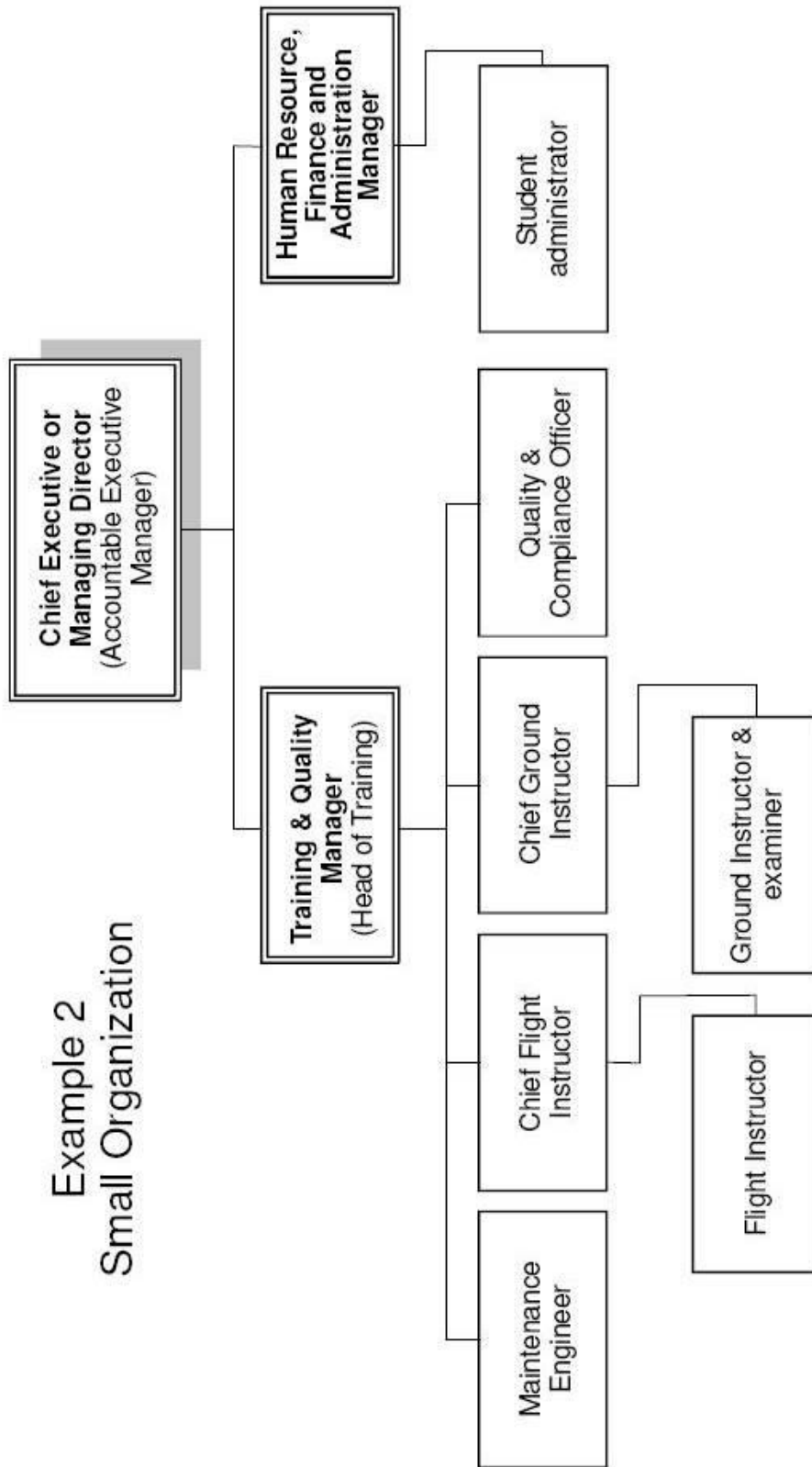
## **18 Sources of Personal Training**

- 18.1 Quality assurance courses are available from the various national or international standards institutions, and an ATO shall consider whether to offer such courses to those likely to be involved in the management of the quality assurance system. Organizations with sufficient appropriately qualified staff shall consider the possibility of carrying out in-house training.

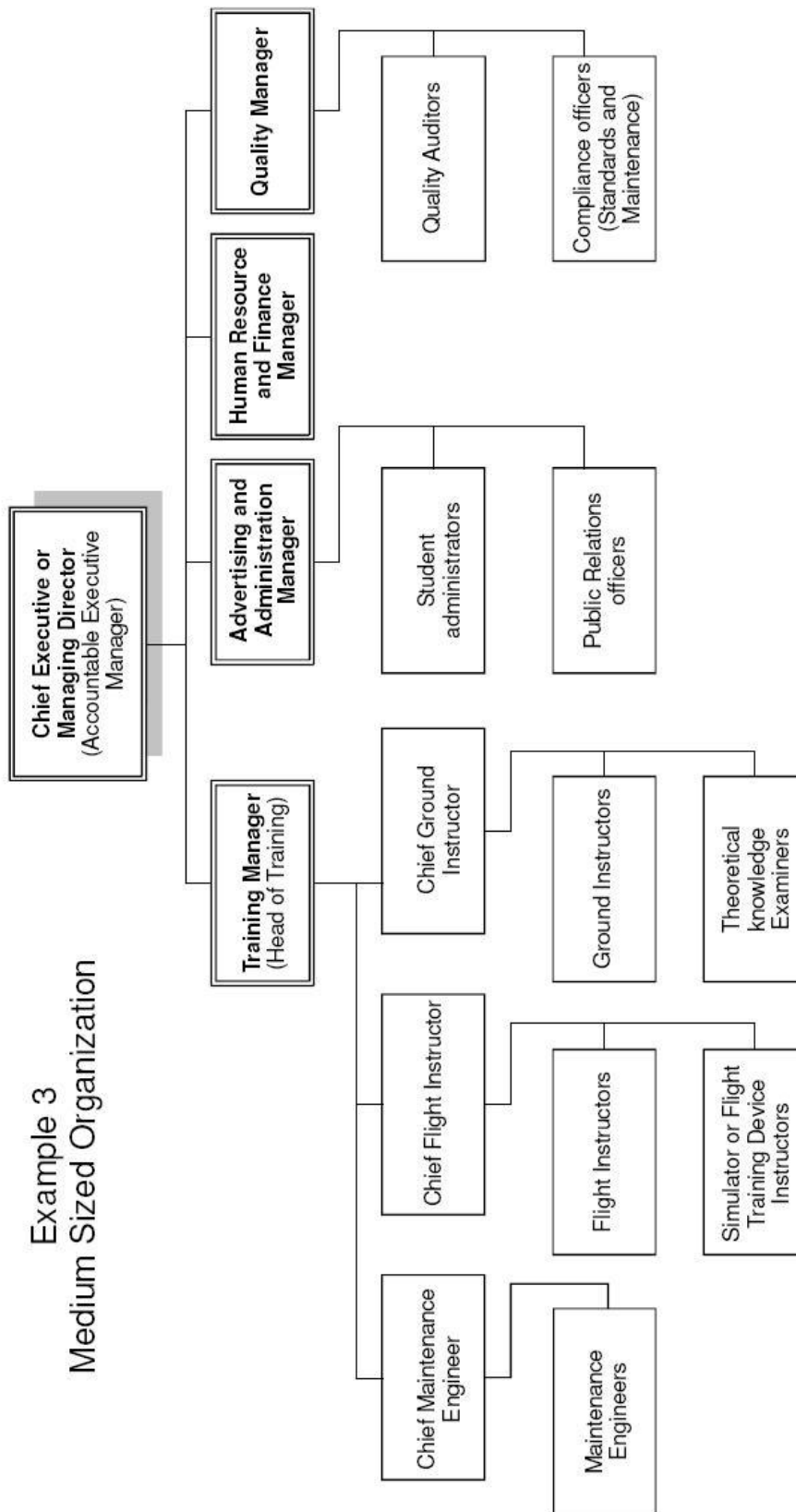




Example 2  
Small Organization



Example 3  
Medium Sized Organization



Example 4  
Large Organization

