



Thailand Civil Aviation Regulation - Personnel Licensing
Acceptable Means of Compliance and
Guidance Material to TCAR PEL Part - ATCO.OR
(AMC/GM to TCAR PEL Part - ATCO.OR)

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THAILAND CIVIL AVIATION REGULATION (TCAR)

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INTRODUCTION AND APPLICABILITY

In this publication the word 'should' is used to indicate that the Organisation, Owner or Operator has a degree of latitude in adhering to the requirement, particularly where the nature of the operation - or proposed operation - affects their ability to achieve the necessary degree of compliance with the requirement; provided that an acceptable level of safety is achieved.

If the Organisation's/owner's/operator's response is deemed to be inadequate by the Director General, a specific requirement or restriction may be applied as a condition of the appropriate instrument to be issued under Thailand Civil Aviation Regulations. This publication includes associated means of compliance and interpretative material wherever possible and, unless specifically stated otherwise, clarification will be based on this material or other relevant CAAT documentation.

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COVER REGULATION

GM1 Article 2(2) Compliance with the requirements and procedures

AIR TRAFFIC CONTROLLER TRAINING ORGANISATION CERTIFICATION

For the purpose of ensuring that all organisations referred to in Article 1(2) comply with the technical requirements and administrative procedures of Article 2(2), air navigation service providers providing training to air traffic controllers are subject to the requirements applicable to air traffic controller training organisations set out in this Regulation and are subject to certification in accordance with this Regulation

REQUIREMENTS FOR AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

GM1 ATCO.OR.B.001(C)(2) Application for a training organisation certificate

The requirement to add the list of ATC units is not relevant in the case of training organisations which provide initial training only.

AMC1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

- (a) Training organisations should inform CAAT of any relevant changes to personnel that may affect the certificate or the training approval attached to it.
- (b) Training organisations should send to CAAT each management system documentation amendment. Where the amendment requires CAAT's approval, the training organisation should receive it in writing.

GM1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

- (a) Examples of changes that may affect the certificate or the terms of approval of the training organisation or the training organisation's management system are listed below:
 - (1) the name of the training organisation;
 - (2) change of legal entity;
 - (3) the training organisation's principal place of operation;
 - (4) the training organisation's type(s) of training;
 - (5) additional locations of the training organisation;
 - (6) the accountable manager;
 - (7) any of the persons referred to in Part ATCO.OR;
 - (8) the training organisation's documentation as required by Subpart ATCO.OR.B on safety policy and procedures;
 - (9) the facilities.
- (b) Prior approval by CAAT is required for any changes to the training organisation's procedure describing how changes not requiring prior approval will be managed and notified to CAAT.

GM2 ATCO.OR.B.015 Changes to the training organisation

CHANGE OF NAME

A change of name requires the training organisation to submit a new application as a matter of urgency. Where this is the only change to report, the new application can be accompanied by a copy of the documentation previously submitted to CAAT under the previous name, as a means of demonstrating how the training organisation complies with the applicable requirements.

GM1 ATCO.OR.B.030(a);(b) Findings

CORRECTIVE ACTION PLAN AND ROOT CAUSE

- (a) Corrective action is the action to eliminate the root cause of a non-compliance in order to prevent its recurrence.
- (b) Determination of the root cause is crucial for defining effective corrective actions.

GM1 ATCO.OR.B.040 Occurrence reporting

The training organisation's report should focus on occurrences taking place during on-the-job training with regard to the training aspects involved. The report may be submitted together with or as an integral part of the report prepared by the air navigation service provider.

SUBPART C

MANAGEMENT OF AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

GM1 ATCO.OR.C.001 Management system of training organisations

The requirements for the management system of training organisations may be satisfied if the air navigation service provider's management system/safety management system (SMS) specifically covers the requirements of this Regulation.

AMC1 ATCO.OR.C.001(b) Management system of training organisations

SAFETY POLICY

The safety policy should:

- (a) be endorsed by the accountable manager;
- (b) clearly identify safety as the highest organisational priority over commercial, operational, environmental or social pressures;
- (c) include a commitment to:
 - (1) improve towards the highest safety standards;
 - (2) comply with all applicable legal requirements, meet all applicable standards and consider best practices;
 - (3) provide appropriate resources; and
 - (4) enforce safety as the primary responsibility of all managers and staff;
- (d) be communicated, with visible endorsement, throughout the organisation;
- (e) include safety reporting and just culture principles;
- (f) enhance and embed safety culture and safety awareness; and
- (g) be periodically reviewed to ensure it remains relevant and appropriate to the training organisation.

AMC1 ATCO.OR.C.001(c) Management system of training organisations

IDENTIFICATION OF AVIATION SAFETY HAZARDS

For training organisations not providing on-the-job training, the hazard identification process may be limited to a demonstration that there are no hazards directly identified. However, the training should be designed so as to ensure future safe operations.

AMC1 ATCO.OR.C.001(d) Management system of training organisations

PERSONNEL

A training organisation should demonstrate that:

- (a) a list of activities with relevant needed competence has been established;
- (b) their personnel have the relevant competence needed to fulfil the activities they are required to perform;

- (c) their personnel maintain a level of competence through training as appropriate;
- (d) their theoretical and practical instructors are qualified in accordance with Part ATCO, Subpart C of this Regulation;
- (e) their practical instructors either hold an OJTI certificate or an STDI certificate;
- (f) their assessors hold an assessor certificate; and
- (g) their synthetic training device instructors and assessors demonstrate knowledge of and receive refresher training in current operational practices.

AMC1 ATCO.OR.C.001(e) Management system of training organisations

PROCESSES

Training organisations should demonstrate that the management system:

- (a) policies, processes and procedures are monitored to ensure they are current and subject to periodic review and amendment, when necessary, to maintain their continued accuracy and suitability;
- (b) allows for the impromptu recognition and initiation of improvements to policies, processes and procedures between periodic reviews;
- (c) controls, records and tracks changes to all of the management system policy, process and procedure documents;
- (d) includes a master record index that lists all the policies, processes and procedures; and
- (e) includes as a minimum the following:
 - (1) master record index;
 - (2) training provider certificate;
 - (3) management structure;
 - (4) staff role profiles including accountabilities and responsibilities;
 - (5) training manuals, plans and courses;
 - (6) evidence of regulatory compliance;
 - (7) change control process;
 - (8) safety management manual;
 - (9) course design documents;
 - (10) instructor/assessor qualification and competence records.

AMC1 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

- (a) The implementation and use of a compliance monitoring function should enable the training organisation to monitor compliance with the relevant requirements of this Regulation.
- (b) Training organisations should specify the basic structure of the compliance monitoring function applicable to the activities conducted.

- (c) The compliance monitoring function should be structured according to the activities of the training organisation to be monitored.

GM1 ATCO.OR.C.001(f) Management system of training organisations

EXAMPLE OF COMPLIANCE MONITORING SYSTEM

- (a) Training organisations may monitor compliance with the procedures they have designed to ensure safe activities. In doing so, they may, as a minimum, and, where appropriate, monitor:
- (1) the organisational structure;
 - (2) the plans and objectives;
 - (3) the privileges of the organisation;
 - (4) the manuals, logs and records;
 - (5) the training standards;
 - (6) the management system.
- (b) Organisational set-up
- (1) To ensure that the training organisation continues to meet the requirements of this Regulation, the accountable manager may designate a person responsible for the compliance monitoring function whose role is to verify, by monitoring the activities of the organisation, that the standards required by this Regulation and any additional requirements as established by the organisation are met under the supervision of the relevant head of the functional area. For small training organisations, these identified functions can be fulfilled by the same person.
 - (2) The person designated for the compliance monitoring function should be responsible for ensuring that the compliance monitoring programme is properly implemented, maintained and continually reviewed and improved.
 - (3) The designated person responsible for the compliance monitoring function should:
 - (i) have direct access to the accountable manager; and
 - (ii) have access to all parts of the training organisation and, as necessary, to any contracted organisation.
- (c) Compliance monitoring documentation
- (1) Relevant documentation could include the relevant part(s) of the training organisation management system documentation.
 - (2) In addition, relevant documentation could also include the following:
 - (i) terminology;
 - (ii) specified activity standards;
 - (iii) description of the organisation;
 - (iv) allocation of duties and responsibilities;
 - (v) procedures to ensure regulatory compliance;
 - (vi) compliance monitoring programme, reflecting:
 - (A) schedule of the monitoring programme;

- (B) audit procedures;
 - (C) reporting procedures;
 - (D) follow-up and corrective action procedures; and
 - (E) recording system;
 - (vii) training elements referred to in paragraph 4(b); and
 - (viii) document control.
- (d) Training
- (1) Correct and thorough training is essential to optimise compliance in every training organisation. In order to achieve significant outcomes of such training, the training organisation needs to ensure that all personnel understand the objectives laid down in the organisation's manual.
 - (2) Those responsible for managing the compliance monitoring function should receive training in this task. Such training could cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting and recording.
 - (3) Time needs to be provided to train all personnel involved in compliance management and for briefing the rest of the personnel.
 - (4) The allocation of time and resources needs to be governed by the activities covered by the training organisation.

AMC2 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

The person designated for the compliance monitoring function should be responsible for the review and continuous improvement of the established management system's policies, processes and procedures.

The following tools are essential to the ongoing continuous improvement process:

- (a) organisational risk profile;
- (b) risk management plan;
- (c) coherence matrix;
- (d) corrective and preventive action reports; and
- (e) inspection and audit reports.

GM2 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

- (a) These tools and processes related to the compliance monitoring function are interrelated and help define the continuous improvement efforts of the organisation. For example, any corrective or preventive action report could identify a deficiency or an opportunity for improvement. The person responsible for the compliance monitoring function would then be required to ensure the identified issue was addressed and the corrective or preventive action effectively implemented. The same would be true if the discovery of an issue was identified during an inspection or audit.
- (b) The effective implementation of change and the subsequent validation that the change did result in the desired outcome is critical to the continuous improvement process. Simply introducing a

well-meaning suggestion for improvement into the organisation without carefully managing that change could have undesirable consequences. It is, therefore, the responsibility of the person in charge of the compliance monitoring function to introduce, monitor and validate improvement efforts.

- (c) A simple but effective process to use in managing continuous improvement is known as the plan-do-check-act, or PDCA, approach:
- (1) plan — map out the implementation of the recommended change, identifying at least:
 - (i) those people who will be affected by the change;
 - (ii) the required measures necessary to mitigate risk; and
 - (iii) the desired outcome and its intended consequences.
 - (2) do — execute the implementation plan once all affected groups have accepted the proposal and understand their role in ensuring its success;
 - (3) check — apply sufficient quality control ‘stage’ checks throughout the implementation phase to ensure any unintended deviations in the execution are identified and addressed without delay; and
 - (4) act — analyse the results and take appropriate action as necessary.

AMC1 ATCO.OR.C.005 Contracted activities

- (a) Training organisations may decide to contract certain parts of their activities to external organisations.
- (b) A written agreement should exist between the training organisation and the contracted organisation clearly defining the contracted activities and the applicable requirements.
- (c) The contracted safety-related activities relevant to the agreement should be included in the training organisation’s compliance monitoring programme.
- (d) Training organisations should ensure that the contracted organisation has the necessary authorisation or approval when required, and commands the resources and competence to undertake the task.

GM1 ATCO.OR.C.005 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

- (a) Regardless of the approval status of the contracted organisation, the contracting organisation is responsible to ensure that all contracted activities are subject to hazard identification and risk management as required by ATCO.OR.C.001(c) and to compliance monitoring as required by ATCO.OR.C.001(f).
- (b) When the contracted organisation is itself certified to carry out the contracted activities, the organisation’s compliance monitoring should at least check that the approval effectively covers the contracted activities and that it is still valid.

GM1 ATCO.OR.C.010(b);(c) Personnel requirements

- (a) Training organisations may nominate the person responsible for training and a person or persons subordinate to him or her as chief training instructor(s)/unit responsible training officer(s).

- (b) Usually, training organisations nominate only one person responsible for training.
- (c) Prerequisites, typical function and responsibilities of the person responsible for training may be:
 - (1) to have extensive experience in instructing for all types of ATC training and possess sound managerial capability;
 - (2) to have overall responsibility for ensuring satisfactory integration of all training provided and for supervising the progress of the persons undertaking training;
 - (3) to be responsible for coordinating and delegating the contact to CAAT in training-related issues; and
 - (4) to be ultimately responsible to the accountable manager.
- (d) Prerequisites, typical functions and responsibilities of the chief training instructor(s)/unit responsible training officer(s) may be:
 - (1) to have extensive experience in instructing for all types of ATC training and possess sound managerial capability;
 - (2) to have responsibility for ensuring satisfactory training is provided and for supervising the progress of the persons undertaking training in the areas that have been delegated by the person responsible for training; and
 - (3) to report to the person responsible for training.

AMC1 ATCO.OR.C.015(a) Facilities and equipment

- (a) General areas

A training organisation should have access to facilities appropriate to the size and scope of the intended operations provided in an environment conducive to learning.
- (b) Training areas

For training organisations providing theoretical training, the facilities should also include sufficient suitably equipped classroom areas.

GM1 ATCO.OR.C.015(a) Facilities and equipment

- (a) General areas

These facilities should include general areas, which consist of sufficient:

 - (1) office space for managerial and administrative as well as training staff;
 - (2) rooms for study and testing;
 - (3) library facilities; and
 - (4) storage areas, including secure areas for training and personnel records.
- (b) Training areas

For training organisations providing practical training, the facilities should also include sufficient:

 - (1) rooms for briefing and debriefing; and
 - (2) suitably equipped rooms for practical training.

AMC1 ATCO.OR.C.015(b) Facilities and equipment

SPECIFICATIONS FOR SYNTHETIC TRAINING DEVICES

(a) Synthetic training devices classifications

Synthetic training devices used for training should be classified according to one of the following classifications:

- (1) simulator (SIM);
- (2) part-task trainer (PTT).

(b) Synthetic training device (STD) criteria

If an STD is used for training, it should be approved by CAAT as part of the course approval process for any training plan. Training organisations should demonstrate how the STD will provide adequate support for the intended training, in particular, how the STD will meet the stated objectives of the practical training exercises and enable the performance objectives to be assessed to the level determined in the training programme. This demonstration and the related documentation should include the following relevant criteria:

- (1) the general environment, which should provide an environment in which STD exercises may be run without undue interference from unrelated activities;
- (2) the STD layout;
- (3) the equipment provided;
- (4) the display presentation, functionality, and updating of operational information;
- (5) data displays, including strip displays, where appropriate;
- (6) coordination facilities;
- (7) aircraft performance characteristics, including the availability of manoeuvres, e.g. holding or instrumental landing system (ILS) operation, required for a particular simulation;
- (8) the availability of real-time changes during an exercise;
- (9) the processes by which the training organisation can be assured that staff associated with the training conducted with the use of an STD are competent;
- (10) the degree of realism of any voice recognition system associated with the STD; and
- (11) where a simulator is an integral part of an operational ATC system, the processes by which the training organisation is assured that interference between the simulated and operational environments is prevented. The extent to which the STD achieves the above criteria will be used to determine the adequacy of the STD for the proposed use. As a general principle, the greater the degree of replication of the operational position being represented, the greater the use will be possible for any particular training.

(c) STD used for pre-on-the-job training

When an STD is used for pre-on-the-job training and the training time is counted as operational training, the STD classification should be a full-size replica of a working position, including all equipment, and computer programmes necessary to represent the full tasks associated with that position, including realistic wind at all levels to facilitate SRA. In the case of a working position at a tower unit, it includes an out-of-the-tower view.

AMC1 ATCO.OR.C.020(a);(b) Record keeping

Training organisations should maintain the following records:

- (a) Records of persons undertaking training:
 - (1) personal information;
 - (2) details of training received including the starting date of the training, as well as the results of the examinations and assessments;
 - (3) detailed and regular progress report forms;
 - (4) certificate of completion of training courses.
- (b) Records of instructors and assessors:
 - (1) personal information;
 - (2) qualification records;
 - (3) records of refresher training for instructors and assessors;
 - (4) assessment reports;
 - (5) instructional and/or assessment time records.

Training organisations should submit training records and reports to CAAT as required.