



International Virtual Aviation Organisation

Approach Controller (APC) exam

Briefing Guide and Exam Standards

Version 1.1.5
(20-oct-2011)

Training Director / assistant director: Michael Hansohm, Hervé Sors

ATC exams working group: Agustin Reche, Babis Delagrammatikas, Christian Koehler,

International Virtual Aviation Organisation Training Department, 2011

Note: Left vertical revision marks indicate changes from previous version

1. Requirements

- *Previous rating requirements:* have your aerodrome controller rating (ADC, previously C1) and at least 100 hours of logged time on IVAN as an ATC (pilot hours are not taken into account),
- *Theoretical exam:* complete the APC online test (45 minutes to answer 20 questions randomly chosen in the database),
- *Practical exam:* examiner will check your theoretical knowledge and your proficiency in approach exercises

2. Applying for the exam

The theoretical exam can be requested on the [Training Department page](#) of the IVAO site by using the [Upgrade / Request Exam] menu or by directly accessing your [exam status page](#). After your successful theoretical exam, you can apply for the practical part of the exam with no delay. Unlike the theoretical exam, which is automated and general, the practical exam is done at a divisional level. If you are not a member of an active division, or your division doesn't have a competent examiner, the exam system will assign one automatically. Once your exam is registered, the examiner will contact you via your e-mail address given on your details page. *Before requesting the exam, check that this e-mail is valid since it is the only way for the examiner to get in touch with you.*

3. Validation of the exam

After the approach test your examiner will send his evaluation to the training director who will assign a validator ; the validator will verify the marking based on the comments and marking sheet of the examiner. If your exam is validated as a success your rating will be updated at 1200z the following day.

4. Approach Controller exam

The Approach exam (APC) contains a series of tasks to verify good ATC theoretical knowledge and controlling skills.

[We expect you to have practical training in your division prior to applying for an approach exam.](#)

4.1 IVAO software and communication modes

You can use any IVAO approved client for the exam. Visit the [IVAO virtual ATC client page](#) (IvAc) for a complete list (the page also includes a link to the [IvAc manuals](#)).

The examiner will check your ability to correctly use the main functions of the software, mainly:

- establish a text and/or voice communication with pilots,
- fill out a correct ATIS,
- be able to transmit by text on the your ATC frequency and privately,
- retrieve a distant station METAR and TAF

4.2 Theoretical knowledge for the approach exam

- Decode METAR / TAF
- Ability to explain the charts for APP operation
- Good knowledge of VFR rules, SVFR, Night VFR and controlled VFR. (as applicable in the division)
- Explain Y and Z flight plans including procedures for giving the appropriate clearances
- Knowledge of airspace set up in the TMA and FIR around the airport including classifications, also related from the point of view of separation, information, responsibilities pilot / controller
- Knowledge TRL/TA, QNH, QFE, QDM, QDR, wake turbulence separations according a/c mass, important aerodrome MET- phenomena (wind shear) and how to inform the pilot about it
- Procedural control
- Knowledge of the approach procedures (ILS, published VOR and NDB approach, holdings, performance at low speeds)
- Knowledge of MCA, MRVA and SRA (surveillance radar approach) and relevance between different ILS categories, missed approach

4.3 Practical performance during the exam

4.3.1 General requirements

The Approach exam (APC) contains a series of tasks to verify good ATC theoretical knowledge and controlling skills

1.1 - The examinee has to log on as an approach controller. To check the examinee's coordination skills we recommend that a relevant Area controller is online. The APC exam does not test the controllers ADC capabilities, so a tower controller should be online as well. If no ACC is available, the examiner may act as an ACC but only for coordination (do not control a/c).

1.2 - The examiner will usually be connected as X_APP for the exam. It is recommended that an exam does not take place on the Approach and Tower positions at the same time

1.3 - The airport where the exam will take place must have IFR procedures available.

1.4 - Using IVAO approved software is required.

1.5 - Should a PC crash occur which is out of the applicants control, the exam will have to start again or will be delayed to take place on another day, the decision being up to the examiner.

1.6 - The examinee will be expected to find the necessary charts himself. However, in countries where charts are not easily and freely available, it is the responsibility of the examiner/division to provide the necessary material and/or links so that both examiner and examinee can work on the same charts.

1.7 - To evaluate an approach controller exam, the minimum traffic required is as follows:

- a)** at least eight (8) departing IFR aircraft (with or without SID),
- b)** a minimum of ten (10) arriving IFR aircraft successfully vectored onto final approach (ILS, VOR, NDB, Visual Approach, etc...),

Note: Local traffic counts for each approach/departure (e.g. one aircraft doing 5 approaches means, that there were 5 approaches at point b).

- c) at least 3 IFR inbounds simultaneously,
- d) at least 1 emergency which starts whilst under the control of the examinee
- e) at least one missed approach

Note: Emergencies and/or radio-communication failures during the exam will ONLY be done on request of the examiner

- f) at least one text only aircraft

1.8 - We strongly recommend voice communication on all exams. We do not recommend a 'text-text' or 'text-voice' communication method due to the increased level of difficulty and incompatibilities with certain tasks.

Should a member be unable to use voice or the voice / text method, please contact the HQ Training Department before requesting the exam in order to establish an individual procedure. For some exercises, the examinee possibly has to transmit in text mode.

1.9 - Should the examinee fail to arrive for the exam at the time organised, the examiner should wait for 15 minutes. After that period, the examiner can log off the network. The examinee then has 48 hours to provide a valid reason for the failure to attend by email. If no email is received in time, the exam will be marked as failed (0/100) – which means a delay of 90 days before applying again.

4.3.2 Practical performance

Good knowledge regarding approach tasks will be checked during the whole exam.

- Fill out ATIS correctly
- Suitable and sufficient coordination with adjacent ATC units in all necessary situations
- Suitable and sufficient traffic information and traffic management
- Handle miscellaneous emergency situations
- Good SSR identification procedures
- Observance of MRVA, MSA, MEA during radar vectoring and direct routes
- Ability to provide radar vectors
- Ability to monitor and assist pilots, if they ask for information
- Use of holding stacks and passing of EATs
- Radar separation and expeditious traffic flow
- In some countries procedural control is used to ensure safe separation
- Have a good overview (also in stressful situations)
- Correct phraseology and English proficiency

5. Evaluation and marking method

The examiner will score separately **all** required tasks (including both theoretical questions and practical exercises) on a dedicated marking sheet.

Each score will reflect the exactness and range of your knowledge (for theoretical data) and your ability to accurately execute the exercises (and your performance for doing so).

Some special situations may result in an **automatic exam failure**:

NOTE: The exam will still be continued for the regular time, even if one of these events occur

- Vectoring below MRVA/MSA (*In those airports where the MRVA is not available (not published in real life) the MSA should be considered as the reference for radar vectoring. As the MSA could be different depending on the chosen approach plate, both examiner and examinee should agree which MSA is going to be used during the exam. From the TD we know that the MSA is not a real parameter to be used on radar vectoring but it is the only value we consider to be feasible for virtual purposes*),
- Loss of separation,
- Any automatic failures listed in ADC briefing guide if applicable

In those cases the score of the exam will be 51/100 or less depending on the total result of the exam

An exam is considered as failed and the practical part will not be performed if:

- No charts available (only if they are offered by IVAO) (49/100)
- No theoretical knowledge (35/100)
- Violation against IVAO R+R (0/100)
- Examinee does not turn up for the exam and a valid reason is not given within 48 hours. This will cause the exam to be considered as failed (0/100)

Your overall score will be calculated by your examiner. The maximum score is 100 points. The pass mark is 75/100. In all cases, your examiner will give you the detailed results during the debriefing, so you can identify your errors and correct them in case the exam is failed.

APPENDIX

Training materials

GENERAL:

- Rules of the Air. General Rules. Right of way. [ACAD 66- ACAD 245](#)
- Airspace classification. [ACAD 39](#)
- Approach control service. [ACAD 36- ACAD 38](#)
- Air traffic control clearances [ACAD 37](#)
- Departure and arrival procedures. SIDs and STARs. MEA. [ACAD 293-ACAD81](#)
- Wake turbulence categories. Indication of heavy wake turbulence category. [ACAD 277](#)
- Altimetry. [ACAD 339- ACAD 303](#)
- Advanced MET/TAF decoding. [ACAD 42](#)
- Approach Plates (MSA). Circling. [ACAD 282-ACAD 84](#)
- Emergencies. [ACAD 90-ACAD 92-ACAD 93](#)
- COMFAIL [ACAD 276](#)

RADAR:

- SSR identification procedures. [ACAD 73](#)
- Separation Methods. Radar separation minima. [ACAD 169-ACAD 291](#)
- Radar vectoring (MRVA). Delaying actions. Holdings. [ACAD 88-ACAD 285-ACAD 418](#)
- Vectoring to pilot-interpreted final approach aid. [ACAD 418](#)
- Vectoring for visual approach. [ACAD 106, ACAD 418](#)
- Navigation assistance included Assistance to VFR flights. [ACAD193- ACAD 418](#)
- Collision hazard information. ACAS procedures included official ICAO phraseology in case of RA. [ACAD 132- ACAD 418](#)
- Radar phraseology (APP). [ICAO 9432 doc](#)

Note: The Training Department of your division may also publish some recommended material on its web site (either in English or in your own language) and will include the necessary links in the localized version of this document.