EAA Euro Aviation Academy

Operations Manual

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Amendment and Revisions

T	Issue	Revision	Highlights	Done by	Valid from	Valid until
S	1	0	Complete new EASA proposal	GRO	04.04.2014	
S	2	0	Austro Control review	KUS	18.04.2014	

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List of effective Chapters

Chapter	Revision
ALL	0

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A Operations Manual A

A.1 List and description of all volumes in the operations manual

See OMM: 2.1 Overview of the Organisation Documentation

A.2 Introduction

A.2.1 General

The Operations Manual is issued in accordance with EASA Aircrew Regulation. It complies with Part-FCL, Part-ORA, Part-ARA and with the terms and conditions in the Approved Training Organisation Certificate. It also contains the applicable national rules and regulations as well as relevant ICAO standards and procedures for Air Navigation Services. It reflects policies, regulations and procedures used by the ATO.

The rules and regulations contained in the Operations Manual shall be adhered to at all times but nothing herein shall limit operations personnel from acting on their own best judgment during any irregularity or emergency for which the Operations Manual gives no provisions. The PIC shall, in an emergency situation that requires immediate decision and action; take any action he considers necessary and deviate from rules and operational procedures in the interest of safety.

No person involved in flight operations shall take part in any act of recklessness or negligence so as to neither endanger an aeroplane or persons therein nor act so as to permit an aeroplane to endanger any person or property.

A.2.1.1 Access and Distribution of controlled Documents

All Flight Instructors shall have a personal copy of the Operation Manual, as it is relevant to their duties. All instructors shall have full access to a complete copy of the Operation Manual kept in the briefing room. CTKI is responsible for that copy of the manual. All nominated post holders and the ACAA have also their copy of the complete OM. Every holder of the Operation Manual is responsible to keep his manual up to date and organized.

The organisation keeps a distribution list for the various parts of the Operations Manual up-to-date. The Operations Manual, its applicable parts and the revisions shall be distributed as expeditiously as possible.

A.2.1.2 Distribution List:

#	Manual	
01	ACAA	latest app.

02	AM	latest app.
03	HT	latest app.
04	CMM	latest app.
05	CFI	latest app.
05	CTKI	latest app.
07e	BRIEFING ROOM	latest app.

A.2.1.3 Contents of Operations Manual

The Operations Manual is divided into following parts:

- Part A General
- Part B Technical
- Part C Route
- Part D Staff Training

The Operations Manual contains non-type related operational policies, instructions and procedures required for a safe operation. It covers duties and responsibilities of all operations personnel under the jurisdiction of the Head of Training and their interrelationship to the operation as a whole.

The current parts of the Operations Manual relevant to the duties of the crew shall be carried on each flight. The Pilot Operating Handbook shall be carried onboard each aeroplane.

A.2.1.4 Definition of Terms

The following terms shall have the meaning outlined below:

- ”Shall” or an action verb in the imperative sense such as “must” implies that the application of a rule or procedure or provision is mandatory;
- ”Should” means that the application of a procedure or provision is recommended;
- ”May” means that the application of a procedure or provision is optional;
- ”The Authority” means “Austro Control GmbH”, the Civil Aviation Administration - Austria (ACAA), or the civil aviation administration of another country, as appropriate.
- When the expressions “the School”, “the Operator”, “the ATO Holder” or “EAA Aviation Academy” are used throughout this entire text, all shall be referenced to:

EAA Aviation Academy Gmbh

Wilhelm-Spazier-Straße 2a

A-5020 Salzburg, Austria

For simplification and brevity the pronoun “he” is used throughout this manual although references in the text apply to both male and female Flight Instructor/Student and other operations personnel. Where appropriate the pronoun “she” should be inferred or assumed.

A.2.2 System of Amendment and Revision

see OMM: 2 Organisation Documentation, System of Amendment and Revision

A.2.2.1 Page Marking and Identification

The header of each page contains the company logo and the full title and the abbreviated name of the manual and the respective name of the level one chapter in different colour for better readability.

The footer of each page contains the abbreviated name of the manual, the issue and revision number and the level one chapter and page number.

An updated List of Effective Chapters shall be issued with each normal revision to the Operations Manual. This will enable the user to check whether his manual is up-to-date. The following revision identifications may appear on the List of Effective Chapters:

* Revised with this revision

A Added with this revision

D Deleted with this revision

In order to identify changes, additions or deletions, a vertical line, on the right-hand side of the page shall be used to outline revised or newly published paragraphs. In addition a Revision Letter will identify the revised chapter and briefly describe the reason for their revision. All personnel are required to carefully take note of the changes.

A.2.2.2 Temporary Revisions

Revisions which may be urgently required in the interest of flight safety or which are supplementary to any instructions/procedures in any of the manuals comprising the Operations Manual may be issued directly to the personal mailboxes.

Information of permanent character will normally be incorporated in the Operations Manual with the next amendment.

A.3 Administration (Function and Management)

See OMM: Organisational Structure, Duties, Responsibilities and Accountabilities

A.4 Responsibilities (all Management and Administrative Staff)

See OMM: Duties, Responsibilities and Accountabilities

A.5 Student Discipline and Disciplinary Action

A.5.1 General

Each student is expected to conduct his studies in accordance with all relevant procedures set out in this manual.

All theoretical courses have internal and external testing. Internal tests are called progress checks. There are three progress checks during the course, where progress check 3 is the final test. All external testing are exams held by the ACAA.

- Any disciplinary or conduct problem within the organisation has to be referred to the HT and will be handled through a management meeting of the post-holders.
- The instructor involved, shall exercise caution, sound judgment and objectivity to the situation. He shall document the situation and problem and then communicate with the CFI/CTKI by providing evidence of the problem encountered.
- The CFI/CTKI shall assess the situation including possible instructor – student incompatibility situation and whenever possible, interview the student.
- The CFI/CTKI shall then refer to the HT for evaluation
- In certain cases, the CFI or the HT may fly with the student involved for assessment. A change of instructor assignment is an option
- Any student or instructor disciplinary decision shall be taken at the level of the management meeting and action taken by the AM.

A.5.2 Cheating

Any student who has committed an act considered as cheating, will be automatically suspended from further testing and all training suspended. The organisation will not accept the student for any other training at the ATO and will notify the ACAA if this occurred during external testing.

A.5.3 Falsification

Falsification, reproduction or alteration of applications, certificates, logbooks, reports or records will result in immediate suspension for further training at the ATO and will be treated in the same way as cheating mentioned above.

A.5.4 Grounding

Students may be restricted from participation in certain flight-related activities for administrative, financial, operational, disciplinary or medical reasons. This restricted status is referred to as “grounding”.

A.5.5 Alcohol

The participation in flight operation is forbidden to all personnel standing under the influence of alcohol, or whose capability appears to be reduced by preceding intensive consumption of alcohol.

In case of any doubt, both the flight instructors and student pilots can be requested to get, at their own expenses, a medical check from an Aero-Medical Examiner. Repeated consumption of alcohol, in connection with aeronautical training can involve a cancellation of their contract without prior notice on behalf of the management.

A.6 Approval or Authorisation of Flights

A.6.1 General

Only those students, approved for training and duty scheduled by the organisation are allowed to train on airplanes, either in dual instruction as part of established syllabi and training plans, or as PIC for experience building.

Unauthorized training is considered as a breach of contract and may lead to immediate dismissal at the sole responsibility of the student involved.

A.6.2 Solo Flight

All solo flights during flight training must be checked and cleared for flight by a flight instructor on the appropriate form, after the student has successfully passed the progress checks foreseen in the TM. This checks shall include pilots and airplane documents and airplane preparation. Appropriate form for solo flight authorization and validation are found in the respective manual.

A.7 Preparation of Flying Programs

A.7.1 General

The flying program is conducted in such way that safety always comes first. All training flights are to be conducted within acceptable weather conditions and forecast and in no case below legal requirements.

The flight instructor is responsible that, for the intended flight program, all required stage and progress checks have been passed according to the associated TM.

Students shall present 60 minutes before planned flight for briefing and allow for 30 minutes after the flight for debriefing. Whenever a student shows up unprepared the flight may be cancelled.

Training activities may be restricted and flights may by cancelled by weather, ATC, slots, NOTAMs etc. The instructor is responsible to comply with those restrictions imposed on the training activity and shall have a conservative approach at all times

Students are required to carry out a full flight planning for their intended flight in advance and carry all required documentation on board for the entire flight. Including:

- Operational flight plan
- ATC flight plan
- Airport charts
- Weather briefing
- NOTAMs
- Customs notification
- Mass and balance and performance calculation

A.7.2 Maximum Numbers of Aircraft

If the weather in each training area is “marginal VFR”, which is defined as ceiling between 1000 feet and 3000 feet AGL and visibility between 5 KM and 8 KM., the maximum number of aircraft operating in each area is 5.

The minimum ceiling for to conduct close circuit training is 1500 feet AGL, unless local restrictions dictate otherwise. If ceiling is below 2000 feet AGL and the visibility lower than 8 km, the maximum number of aircraft operating in close circuit is 3. Each airport may impose restriction on how many aircraft can operate in the traffic pattern. The Pilot-in-command should familiarise himself of any local restrictions. If the number of aircraft operating in the traffic pattern at a controlled airport, has been

exceeded, the Tower will advise of the situation. It can mean that pilots wishing to practice touch and goes will have to divert to another airport for their practice.

A.7.3 Weather Restrictions – General

Following are some weather related restrictions that apply to flight operations. The intent of each restriction, although necessarily broad, is to provide pilots with guidance concerning flight department philosophy on selected weather situations.

Flight may not be attempted through known or suspected icing conditions for which the aircraft is not properly equipped and certified.

Non-instrument rated pilots, and those instrument rated pilots that are not current, may not operate VFR-Over-The-Top.

Instrument approaches may not be initiated to airports knowingly below applicable approach chart minimums.

A.7.4 Flight Restrictions

The following restrictions apply to all pilots flying an aircraft:

- No aerobatic flight manoeuvres unless stated in the TM.
- No formation flying.
- No operation of aircraft in a careless or reckless manner.
- No operation of an aircraft as close to another as to create a collision hazard.
- All flights must depart with at least fuel for estimated flight time plus 45 minutes flying time (reserve).
- No practice of aborted take-offs to a touchdown after rotation.
- Cross-controlled stalls may be practised only on dual flights for FI and CPL students.
- All aircraft take-off and landings are limited to the airports listed in OM-C (route).

A.7.5 Altitude Restrictions

Except in the case of an actual emergency or for the purpose of take-offs or landings at an approved airport, no person may operate an aircraft below the following altitudes:

Anywhere – An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

Over Congested Areas – Over any congested area of a city, town or settlement or over any open assembly of persons, an altitude of 1000 feet above the highest obstacle within a horizontal radius of 600 meters of the aircraft.

Over Other Than Congested Areas – An altitude of 500 feet above the surface and no closer than 500 feet to any person, vessel, vehicle or structure.

No flight practice will be conducted in the proximity of any houses or persons so as to be a source of annoyance or concern. Alternate your fields during ground reference manoeuvres to reduce the possibility of annoyance.

No pilot may fly any aircraft above 12.500 feet unless the aircraft is equipped with oxygen.

A.7.6 Noise Sensitive Areas

The area around Salzburg Airport is a noise sensitive area. Pilots must be constantly aware of the noise their aircraft produces on the ground below the path of flight and take reasonable action to minimize the effects of that noise. When the sound of an aircraft causes an annoyance on the ground below, and the people on the ground complain, we as pilots all suffer. Pilots should be aware of all noise sensitive areas and appropriate procedures. Failure to comply will cause noise complaints with further restrictions to follow. Use of ground reference fields should be alternated, and continuous flight directly over housing areas should be avoided.

In the area around Salzburg Airport comply with noise abatement procedures set out in AIP. Reduce to climb power as soon as feasible

A.7.7 Solo Local Operation

- Carrying of passengers on solo training flights is prohibited by the organisation and by regulations. The pilot will be subject to dismissal from training as well as possible discipline by the ACAA.
- All local solo practice is confined to the local practice area.
- Local solo flight lengths are limited to two hours with a one-hour rest in between.
- No over water operations beyond gliding distance of shore.
- No spins.
- No practice of stalls below 3000 feet AGL.
- No simulated forced landings.
- No VFR over the top.
- No “Special VFR” operations.
- No first solo flights with more than 5 knots crosswind component.

A.7.8 Solo Cross-Country

- Solo en-route operations are limited to the approved cross-country routes.
- The Flight Instructor must approve all solo en-route operations.
- No solo day operations before sunrise or after sunset (as specified in AIP), except with the specific permission of the Flight Instructor.
- No instrument approaches.
- No flight manoeuvres or operations utilising a “hood” or other view-limiting device.
- No IFR operations.

A.7.9 Instrument Training Operations.

No instrument operations may be conducted unless in the judgement of the instructor the operation (manoeuvre/procedure) can be performed safely.

When conducting practice approaches and not on an IFR flight clearance, VFR aircraft are not automatically authorised to execute a missed approach. The pilot must specifically request one.

When operating on an IFR flight plan, either local or cross-country, all pilots must ensure compliance with alternate airport and total fuel requirements. Instrument training flights will not depart if the visibility at the departure airport is below the published take-off minima for that airport. In case of no published take-off minima, flights shall not depart if visibility is below 1600 meters and/or ceiling below the lowest approach minima for that airport.

All pilots are prohibited from commencing instrument approaches to airports which are knowingly below landing minimums or which are reporting ceiling that is below the MDA or DH.

A.7.10 Night Operations

Appropriate external lighting will be illuminated during all night operations.

- When entering an active runway, the pilot must turn on landing lights and strobe lights to reduce collision hazards,
- Aircraft will taxi on open, approved and well lit taxiways and runways only.
- No practice of unusual attitudes during night operations.
- All night landings will be made to a full stop.
- All night take-offs must allow for use of the full length of the runway.
- Solo night flights are restricted to the LOWS and LOWL traffic patterns.
- Simulated single-engine operations at night, in multiengine aircraft, will be limited to practice instrument approaches and holding patterns in VMC conditions only.

A.8 Command of Aircraft

A.8.1 General

The Pilot-in-command has the final authority of the aircraft. The PIC shall follow all ACAA regulations and rules as stated in this manual.

If the PIC finds himself in a position where a certain rule(s) must be broken to ensure a safe flight, he should do so.

The instructor is responsible to carry out the objectives of the lesson and may deviate from those and adapt them to the overall training objectives if circumstances requires.

On Solo-Flights the instructor is responsible to verify the student's preparation.

The Role of the PIC is assigned to:

- the flight instructor during training flights
- the examiner of FI during check-flights
- the student pilot during solo-flights

At all times the PIC must be appropriately rated in the aircraft except for student solo flights when authorised by a flight instructor.

A student pilot shall carry his flight time record logbook with him on all solo cross-country flights as evidence of the required instructor authorisation.

For SPIC and PICUS flight hours the flight instructor or type rating instructor will be still pilot-in-command.

A student pilot may only log SPIC hours as student-pilot-in command provided that such SPIC times are countersigned by the flight instructor.

A.9 Responsibilities of Pilot in Command

A.9.1 General

The PIC shall be responsible for compliance with the instruction issued by air traffic control units or the instruction issued by military flight operations offices.

He shall comply with the legal regulations of aviation law and the regulations/directives announced within the responsibility of air traffic control of the air navigation services.

However the PIC has the final authority on regard to the operation of the aircraft.

A.9.2 During Flight

The commander is responsible for:

The Safety of his airplane, proper servicing of the airplane and maintenance of airworthiness while executing his flight within the instructions and limitations of the relevant parts of the OM

The safe, comfortable, economic and timely operation during duty in accordance with the company operating policies and common practice of good airmanship.

He has the overall authority as to the execution of his flight with regards to crew, passengers, airplane and third party safety.

And has the overall authority over all crew members, including students on duty.

He has the overall authority over passengers during flight.

The discipline and order on board of the airplane under his command.

To maintain safety and good order, the commander may temporarily remove a crewmember from his duty or off the airplane. If deemed necessary, the commander may refuse passengers for transportations if after several requests they still do not follow the given orders. Persons obviously intoxicated with alcohol drugs or narcotics shall be refused carriage on board of and airplane.

He is responsible that all normal, abnormal and emergency procedures and regulations are adhered to by all members of his crew during duty.

Coordination and attribution at his own discretion of the duties to be various crew members with due regard to the composition of the actual crew and their licenses.

He delegates at his own discretion, but in a clear manner, parts of his responsibility during duty to the authorized ground staff or his crew members.

Instructing and correcting all crew members and give those full benefit of his experience.

A.9.3 After Flight

After flight, the Commander ensures that the Flight Log is completed.

He prohibits erosion of data recorded on a flight data recorder and a cockpit voice recorder in the event of an accident or incident having occurred which may be subject to mandatory reporting (if installed).

He hands over the airplane to the next crew or to the maintenance personnel, respectively, or parks, closes or seals (if required) the airplane properly.

At aerodrome other that base aerodromes he shall have the airplane's security ensured.

He files written occurrence (and accident) reports as prescribed in OM, communicating also by telephone or facsimile if the urgency of the matter warrants.

He directs the attention of appropriate personnel to technical and operational particulars and problems encountered.

The Commander shall ensure that the airplane file, airplane log is turned in to dispatch by the student immediately upon completion of the flight or series of flights in Salzburg.

The airplane file, airplane log serves as cover for the various papers/documents which must be assembled and kept during flight, e.g., WX-briefing document, NOTAMs, mass and balance documents.

A.10 Carriage of Passengers

A.10.1 General

A clear distinction is made between students and passengers.

Anyone involved in ground or flight training is considered as a student. Students and passengers may be on board during training flights under the following conditions:

Student:

- the instructor has agreed to it after due consideration for the training activity to be performed
- the student undergoing training has agreed of having a student as observer
- the lesson objectives and safety are not jeopardized
- Abnormal / Emergency procedures may be performed with students as observers provided the airplane stays within its certified limits
- Observer may be used to bring the airplane to MTOW for training purposes

Passenger:

- The instructor has agreed to it after due consideration for the training activity to be performed
- The trainee has agreed to it
- The lesson objectives and safety are not jeopardized
- No Abnormal / Emergency training will be performed
- The passengers may be a prospective student or interested person

A.11 Aircraft documentation

For all flights the following airplane documentation must be on board and checked prior to departure:

- Certificate of Registration
- Certification of Airworthiness
- Insurance Certificate
- Airplane Radio Licence
- Mass and Balance
- Noise Certificate
- Airplane Journey Log
- Pilots Operating Handbook
- If applicable, Avionic User Guides (GNS 430, G1000, etc.)

A.12 Retention of Documents

A.12.1 General

The airplane documentation, instructor files, student files and training files must be kept for five years after the end of training.

A separate room for archiving will be available at the organisational premises.

All documents are retained in the secretary. The personal data is stored digitally with specified access rules.

A.12.2 Instructor File

A file for each instructor is kept, recording qualification and other endorsement, duty times and other instruction activities.

A.12.3 Student Training Folder

A student folder will be opened for each student at the beginning of training. Proof of all theoretical and aeronautical training received so far will kept in this file, together with all other correspondence and documentation concerning the student. The student has the right to consult his personal file at any time during his training.

A.12.3.1 Attendance Record

An individual record must be kept of each student's attendance in theory classes. Test results must be noted on participant's list and details kept in the student's file. Each student is also responsible for keeping a personal record of his progress. Each lesson is documented in an Attendance Record with the following contents

- Subject
- Date
- Begin
- End
- Class Room No.
- Class
- Topics
- Signature of class representatives and instructors

The Attendance record is to prove the lessons performed, it may be administered in electronic format only.

This file will be checked periodically (at least once quarterly) by the CTKI.

A.12.3.2 Flight Training and Synthetic Flight

Flight training and synthetic training must be recorded in the student's personal training record. The result of progress checks according to the TM are to be recorded on the Grade Sheet, as well as in the student's training file.

A.12.3.3 Logbook

The student's flight training is to be documented in the student's personal logbook in accordance with company guidelines. The logbook must be carried on each training flight.

A.13 Flight Crew Qualification Records (License and Ratings)

A.13.1 General

The organization is working in close relation with the Authority to achieve a high standard of safe training operation.

The organization shall exercise operational control and establish and maintain a method of supervision of flight training approved by the ACAA.

The company shall ensure that all Flight Instructors remain competent, proficient and qualified. By properly instructing all personnel directly involved in training operations. Monitoring through the quality system ensures their awareness of their responsibilities and their duties to the operation as a whole.

To maintain the safety standards set by the ATO and the ACAA, a monitoring system of operations and performance in accordance with the compliance quality system, will be enforced. The CFI and the CTKI will supervise and control the activities within their departments.

In co-operation with their respective managers, the Head of Training, monitors and re-evaluates procedures and personnel qualifications to improve operation.

A.13.2 License and Qualification Validity

Each license holder is entitled to exercise the privilege of his license as long as it remains valid. It is therefore of the utmost importance that all required training, flight checks and medical exams are completed in time, either by the organisation, by the ACAA or by approved third parties.

It is the responsibility of the Chief Flight Instructor that no Flight Instructor is schedule for flight duty without a valid license.

Therefore, he shall keep an up-to-date list of all Flight Instructors.

It must still be realized that the final responsibility for retaining license validity rests with its holder.

It is also the responsibility of the pilot to notify the organisation if he does not hold the appropriate qualification at time.

A.13.3 Competence of Operations Personnel

For organisational operation, image and success, it is of the utmost importance to maintain the highest level of personnel proficiency, competence and skills.

In order to ensure continues proficiency each Flight Instructor undergoes proficiency checks to demonstrate his competence in carrying out normal and emergency procedures.

Each Flight Instructor undergoes emergency and safety equipment training. The use of all emergency and safety equipment is part of refresher- and recurrent training.

In accordance with the requirements of the Operations Manual the Chief Flight Instructor conducts, in addition to the routine checks, ad hoc inspection flights in order to confirm the level of competence within his department.

Before employment it shall be established that:

- All Flight Instructors are able to communicate in the German and English language.
- All operations personnel are able to understand the language of the Operation Manual

A.14 Revalidation (validity of medical certificates and ratings)

Revalidation of medical certificates and ratings is the sole responsibility of the instructor / pilot / student pilot.

Any change must be notified to organisational secretary with a copy of the relevant document to be inserted into the instructor / student file.

A.15 Flight and Duty Period and Flight Time Limitations (flying instructor)

A.15.1 Limitations - Flight Instructors

A.15.1.1 Block Times

Flight Instructors shall ensure that the total block times of the flight on which they are assigned as a Flight Instructors do not exceed:

- 900 hours in any 12 consecutive months; and
- 100 hours in any 28 consecutive days.
- Flight Instructors shall ensure that the maximum uninterrupted block time to which they are assigned to in one flight duty period does not exceed 6 hours.

A.15.1.2 Flight Duty Periods

The allowable flight duty period per day shall not exceed 10 hours.

Reporting Times

Flight Instructors shall report for duty at a time that reflects the time required for pre-flight duties but not less than 15 minutes prior to the beginning of the planned block off time.

A.15.1.2.1.1 Split Duty

Not in effect

A.15.1.2.1.2 Standby

Not in effect

A.15.1.3 Records of Flight, Duty and Rest Periods

The Flight Instructor shall maintain record of his flight duty, duty and rest periods containing:

Block times for Flight Instructors:

- Daily;
- 28 consecutive days; and
- 12 consecutive months.

Duty times for Flight Instructors:

- The start, duration and end of each duty or flight duty period
- The duration of each rest period
- Dates of days off
- The duty; for 7 consecutive days, 28 consecutive days and 12 consecutive month period.

Additionally, the above mentioned records shall include copies of all reports of increased flight duty and reduced rest periods following unforeseen circumstances in actual flight operations.

A Flight Instructor working on a freelance or private basis requiring a professional pilot license, shall maintain an individual record, as appropriate, of his:

- Block times;
- Flight duty periods;
- Duty periods; and
- Rest periods and days free of all duties, which must be presented to Scheduling before he commences a flight duty period.

A.16 Flight and Duty Period and Flight Time Limitations (Student)

A.16.1 General

If, for any reason, actual block time, flight duty period or rest period deviate from scheduled limits, such deviations must not exceed the limits set in this chapter.

Duty rosters shall be published in advance to provide sufficient time for students to plan adequate rest.

The rules listed below shall apply to all students enrolled in a flight training program, when they are scheduled for flight training. The rules do not apply to students when scheduled for theoretical instruction.

A student shall not operate on an aeroplane if he feels not fit to fly or suffers from fatigue.

A.16.2 Terminology

Actual flight operation - Actual flight operation starts at the reporting time and ends when the student goes off duty.

Adequate facilities - A quiet and comfortable place not open to the public.

Block time - The time between an aeroplane first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position or until all engines are stopped.

Break - A period free of all duties, which counts as duty, being less than a rest period.

Day - A 24 hour period commencing at 0000 UTC.

Duty - Any task that a student is required to carry out as part of his flight training.

Duty period - A period which starts when the student is required to report for a duty and ends when the student is free from all duties.

Flight duty period (FDP) - A period which commences when a student is required to report for a duty period that includes a flight and which finishes at the end of the block time on the final flight on which the student is operating.

Local day - A 24 hour period commencing at 0000 local time.

Reporting time - The time at which a student is required to report for any duty.

Rest period - An uninterrupted and defined period of time during which a student is free of all duties and/or standby.

Split duty - A flight duty period which consists of two duties separated by a break.

Standby - A defined period of time during which a student has not been assigned to any flight training duty, but during which he is required to be available to receive an assignment for duty without an intervening rest period.

Time difference - The number of hours separating local standard time at two locations (disregarding "daylight saving time").

A.16.2.1 Limitations - Students

A.16.2.1.1.1 Block Times

Flight Instructor shall ensure that the total block times of the flight on which an individual student is assigned as a student do not exceed:

- 900 hours in any 12 consecutive months; and
- 100 hours in any 28 consecutive days.
- Flight Instructor shall ensure that the maximum uninterrupted block time to which a student is assigned in one flight duty period does not exceed 6 hours.

A.16.2.1.1.2 Duty Periods

The allowable duty period per day shall not exceed 8 hours.

A.16.2.1.1.3 Reporting Times

Flight Instructor shall specify reporting times that reflects the time required for pre-flight duties of not less than 60 minutes prior to the beginning of the planned block off time.

A.16.2.1.1.4 Split Duty

Not in effect

A.16.2.1.1.5 Standby

Not in effect

A.17 Rest Periods (Flight Instructor)

Scheduling shall ensure that:

- Before the start of flight duty period a Flight Instructor has completed a rest period at least as long as the preceding duty period, or 8 hours, whichever is greater.
- The minimum rest period following a flight duty period in which split duty credit has been used is at least as long as the total flight duty period including the break.

Note: Scheduling may reduce the rest period calculated in accordance with sub-paragraph (1) above by 6 hours but to not less than to a minimum of 8 hours.

A.18 Rest Periods (Student)

Flight Instructor shall ensure that:

- Before the start of flight duty period a student has completed a rest period at least as long as the preceding duty period, or 8 hours, whichever is greater.
- a minimum rest period of 36 hours every 6 consecutive days
- The minimum rest period following a flight duty period in which split duty credit has been used is at least as long as the total flight duty period including the break.

Note: Flight Instructor may reduce the rest period calculated in accordance with sub-paragraph (1) above by 6 hours but to not less than to a minimum of 8 hours.

A.18.1 Pilot's Log Books

A.18.1.1 General

The details of all flights flown as a pilot shall be kept in a reliable record in a logbook format acceptable to the Authority.

A.18.1.2 Training Time and Aeronautical Experience

Every pilot shall document his time flown in a record to prove:

- Training and aeronautical experience used to meet the requirements for license, rating or flight review.
- The aeronautical experience required for meeting the recent flight experience requirements and license renewal.

A.18.1.3 Logbook Entries

The logbook shall contain personal details such as name and address of the holder of the logbook.

For the purposes of meeting the requirements stated in this Section, each Flight Instructor and student must enter the following information for each flight or lesson logged (if required):

Flight Data

- Date (day, month, year)
- Type and registration of aircraft SEP, MEP
- The name of Instructor or safety pilot, if required for the flight
- Location where the aircraft departed and arrived
- Total flight time or Total Block time for training flights
- Pilot function Pilot-in-command (including solo, SPIC), Second Pilot
- Conditions of flight Night, IFR

For each simulator or FNPT session

- Date (day, month, year)
- Total time of session
- Simulated Type of training device (for example MET or MEP)
- Certificate number of training device

A.18.1.4 Logging of Time

Logging Pilot-in-Command Flight Time

A student pilot may log Pilot-in-command time only when the student pilot:

- is the sole occupant of the aircraft,
- has a current solo flight license and
- is involved in training for a pilot license

A private or commercial pilot may log his flying times as Pilot-in-command only if he is the designated PIC.

All Student Pilot-in-command SPIC logbook entries shall be countersigned by the Flight Instructor.

The holder of an instructor rating may log his flying times as Pilot-in-command every time he acts as an instructor in an aeroplane.

The holder of an examiner's authorisation may log his flying times as Pilot-in-command all flight time he occupies a pilot seat and acts as an examiner in an aeroplane.

Logging of Second in Command (Instruction Time)

All times logged for flight instruction shall only be made by the flight instructor who gives that instruction. The training time must be entered in a logbook and shall:

- Be endorsed in legible manner by the instructor; and
- Including a description of the training, length of training, instructor's signature and license number

Logging of Night Time

Every flight time conducted between Sunset and Sunrise.

Logging of Instrument Time

Every flight time an IFR flight-plan has been filed and conducted under Instrument Flight Rules.

Presentation of Flight Time Record

Flight instructors and students must present their pilot license, medical certificate, logbook, or any other record required for inspection upon request by:

- ACAA;
- The Air Investigation Safety Board Or
- Local law enforcement officer

Student pilot must carry the following items in the aircraft on all solo cross-country flights, as evidence of the required Flight Instructor authorizations:

- Crew Card
- Any other record deemed necessary by the organisation

Flight crew logbook entries should be made as soon as practicable after completion of a flight. All entries in the logbook shall be made in ink or indelible pencil.

Note: Flight time is the total time from the moment that an aircraft first moves under its own or external power for the purpose of taking off until the moment it comes to rest at the end of the flight.

Note. Block time is the time between an aeroplane first moving from its paring position for the purpose of taking off until it comes to a rest on the designated parking position or until all engines are stopped.

All flight times conducted as training flights to gain a licence according to EU-FCL shall be logged as block times.

A.19 Flight Planning (General)

A.19.1 General

This section contains additional rules and procedures that must be followed by pilots when operating outside of the local practice area. All local operating rules continue to be applicable.

Cross-country training will enable the student to practice the flight planning and navigation skills necessary to efficiently operate an aircraft during cross-country operations. These skills will be necessary for later use as a professional pilot.

Success in navigation skill and accuracy comes only through preparation and various tools, which help students effectively, prepare. For example, a good checklist is an invaluable tool to ensure complete cross-country planning. The navigation log permits careful tracking of the planned flight and allows for accurate and timely correction if necessary. Practice planning and navigation skills on every flight are the key to successful cross-country planning.

A.19.2 Cross-Country Routes and Airports

Approved cross-country airports are listed in OM-C and approved cross-country routes are OM-C. The cross-country routes listed have been carefully selected so that minimum hours, distance, and facility requirements of the appropriate lesson and course of the JAA Approved Course can be easily met. The airports listed have been checked to ensure that appropriate services are available and that the landing surface is acceptable considering aircraft performance, limitations and safety.

Seasonal changes may affect runway condition at airports without hard surface. Conditions of the airports must be checked before dispatch.

All dual and solo cross-country training flights are limited to this list of approved routes. Students that deviate from the list are in danger of not meeting specific cross-country hours and distance requirements for the issuance of their pilot licenses. Students and instructors forced to deviate from an approved route are responsible for assuring that the route flown meets the applicable lesson requirements. The cross-country training flight will be re-flown if lesson requirements have not been met.

A.19.3 Cross-Country Pre-flight Planning.

All pre-flight planning must be reviewed and authorised by the instructor. The instructor has reviewed the route for compliance with lesson objectives, ensures that the student completely understands the route and communication requirements, has checked the charts, navigation logs and aerodrome sketches and checked all appropriate documents (licenses etc.).

The instructor will consider time required for pre-flight preparation, the time required for the entire route and any required stops when submitting a schedule request for the cross-country flight.

It is imperative that students are prepared to go when scheduled so their aircraft is not reassigned.

Students will ensure that the route selected can be accomplished within the time allowed on the schedule. The Operations Manager may approve additional time after receiving aircraft availability for the remainder of the day.

Each leg of the cross-country flight will be planned on a separate flight plan and will be filed, opened and closed separately.

In addition to local weather, a check must be made of the en-route weather that may affect the flight. Weather information shall be obtained via phone from the Met Office. NOTAMs can be obtained from flight desk.

Unexpected changes in the weather can and do occur. In addition to the pre-flight weather check, the prudent pilot periodically checks weather while in-flight by calling ATC for update.

A cross-country equipment checklist should be utilized to ensure that nothing has been forgotten. This checklist should include at least the following items:

- Navigation Logs which includes ACG Flight Plan
- Solo certificate, License and Medical
- Appropriate and Current Charts
- Plotter and Flight Computer
- Pencils
- Aerodrome Sketches
- Appropriate clothing.
- Sufficient Cash or Personal Charge Cards for food or to cover unexpected overnight expenses
- Flashlight for possible night operations.
- Wristwatch.

Aircraft must depart on extended cross-country flights with maximum allowable fuel and within one quart of maximum allowable oil.

Solo cross-country flights must have landed 30 minutes before official sunset. Should en-route delays make it impossible or improbable for the flight to arrive before that time, the flight will remain overnight at the last airport of intended departure, or if airborne, at the nearest suitable airport. The ATO must be notified as soon as possible.

A.20 Safety (General)

A.20.1 General

This section contains policies and guidelines for pilots involved in aircraft operation. It should be noted that it is the pilot's responsibility to comply with any ramp procedures of the airport being visited as well as those policies and guidelines listed here.

A.20.2 Equipment

All buildings are equipped with fire detectors and fire extinguishers. All aircraft operated are equipped with required firefighting equipment.

A.20.3 Fire and Fire Drill Procedures

The following procedures shall be followed for both an actual fire and for fire drill except that the fire department shall not be notified in the case of a fire drill.

- Office staff. – Turn in a fire alarm to the local fire department, by telephone or by any other means available. Specify the location and type of fire. After the fire brigade has been informed in, supervise the evacuation and securing of the building.
- Instructors – Assist in the evacuation of the students. Assist in securing the building by turning off lights and electrical applications and closing all doors and windows as the building is evacuated. If feasible, fight the fire until arrival of the fire brigade and evacuate the building to the parking lot for accounting.
- Students – Evacuate the building as expeditiously and orderly as possible by the nearest exit, or as directed by the school staff. Proceed to the parking lot for accounting.

A.20.4 Ramp Safety

Ramp areas are potentially hazardous. Considerable activity results from aircraft being taxied on and off the ramp, fuel and maintenance trucks driving around and pilots and mechanics performing pre-flight and repair operations. Safety must therefore be a prime consideration when operating on and around ramp areas. Remember, no running on the ramp. People walking on the ramp are strongly advised to remain near the tail end of parked aircraft so as to avoid danger from starting or moving aircraft.

A.20.5 Smoking

Smoking is not allowed in any aircraft or on the ramp. This also applies to all buildings, except in designated areas.

A.20.6 Boarding and Disembarking

No one is permitted to approach, board, or exit the aircraft with the engine(s) running.

Propeller Danger Area

Any area within 2 meters of a propeller arc should be considered a hazardous area whether the engine is running or static. Inspection of the propeller, propeller hub, nose section etc. should be made visually. If it is considered necessary for any reason to touch the propeller it should be handled with care at all times as the engine could start at any time.

A.20.7 Starting of Aircraft

The starting of all aircraft shall be in accordance with the appropriate checklists and established procedures, and the following general precautions:

- On the pre-flight walk-around ascertain that the propeller area and the taxi area are clear of all loose objects and debris such as chocks, tow bars, etc. If necessary, reposition the aircraft so that a brake failure on start will not cause the aircraft to roll into an area where collision damage could occur before the engine(s) could be shut down.
- Before engaging the starter ensure that the parking brake is set, turn on the rotating beacon to warn nearby personnel that the engine is about to be started and visually check the area in all directions to clear the propeller arc area as well as the prop blast area behind the aircraft. The engine(s) may not be started if the aircraft on either side is being refuelled.
- Cold weather operations may require different starting procedures. Strict adherence to the proper procedure will reduce the risk of engine fire during start. Use of engine preheat is recommended any time OAT is below –5°C.
- All students and employees are prohibited from hand starting any aircraft while participating in any flight or ground handling activity. Use auxiliary power or jumper cables by personnel authorised by the CFI.

A.20.8 Fuelling and Line Service

Aircraft must depart on extended cross-country flights with maximum allowable fuel, and must have within one quart of maximum allowable oil as specified.

No one shall be on board the aircraft while refuelling takes place. During pre-flight the pilot must observe the safety procedure of the fuel truck operator. The fuel truck operator should connect the static discharge ground wire to the aircraft and to a grounding source. The Pilot-in-command must notify CFI if any line service procedures are not followed.

No aircraft shall be started when parked immediately next to an aircraft being refuelled.

Before each flight the PIC shall ensure that the fuel on board his aircraft is of the correct type. The PIC shall also drain each fuel drain installed on the aircraft.

A.20.9 Taxiing and Parking

At the beginning of taxiing the operation of brakes should be checked. This should be accomplished in smooth manner without “hitting the brakes”.

The speed limit of a safe taxi operation always depends on the situation. It may vary from walking up to jogging speed. The Pilot-in-command is solely responsible for the safety of the aircraft from the time he enters it for flight, until it is shut down and secured.

While line personnel and others may assist a taxiing aircraft in close quarters, the responsibility remains with the Pilot-in-command. If in doubt, STOP. Extra care must be taken when taxiing in the proximity of fuel trucks or any other vehicles on the ramp. No attempt should be made to taxi around any vehicles.

A sterile cockpit shall be maintained while taxiing on the ramp. This means no unnecessary conversation should take place unless the aircraft has been brought to a complete stop.

Taxiing with the nose wheel on the yellow taxi-line will clear the aircraft of all normal obstacles. Departure from the taxi-line line should be done only to avoid obstacles or to clear other aircraft or vehicles.

Use extreme caution when taxiing behind large (over 5700-kg) propeller driven aircraft and jets.

Under no circumstances are aircraft to be taxied into or out of hangers.

During bad weather conditions such as cold, high winds, and when the ramp is congested, the instructor will accomplish the initial starting and taxiing.

After shutdown pilots must insure the control locks are installed, the aircraft’s main wheels are chocked (do not chock the nose wheel), windows closed and if applicable, tie downs attached if available. The tie down should be tightened in such a manner as to firmly secure the aircraft but not to over stress it.

A.20.10 Aircraft Fires

The subject of aircraft engine and cabin fires is a part of every individual checkout in the aircraft. Follow the procedures outlined in the checklist and take action according to the situation with good judgement. This is also covered in the training manual.

In the event of a fire on the ground attempt to call for assistance on any radio frequency available and do not hesitate to evacuate the aircraft immediately if fire is not controllable. Procedures established in appropriate POH should be followed. Keep the following in mind regarding aircraft fire:

- Exercise extreme caution around all fires.
- Keep the wind at your back.
- Stop the aircraft if it is moving, with the wind blowing away from the aircraft.
- Evacuate on the upwind side if possible.
- Beware of toxic fumes.
- Always fight fire at its base.
- Use fire extinguishers on board; never use water on an electrical fire.
- Do not risk personal injury to save the aircraft. Leave the area if the fire is not brought under control immediately.

In the event of an uncontrollable fire in flight, land as soon as possible. Unless in extreme emergencies DO NOT attempt to restart an engine that has had experienced a fire. After landing contact ATO office as soon as possible by any means available.

In the event of a controllable fire in flight, land at the nearest suitable airport and contact ATO office for instructions.

A.20.11 Fuel Reserves

IFR dual training flights proceeding on flight plans filed with ATC shall comply with current regulations.

VFR local dual training flights shall be planned and executed so as to arrive at the base of operations with a minimum of 30 minutes of fuel on board, computed at normal cruising altitudes and power settings.

VFR solo cross country training flights shall be planned to arrive at the next point of intended landing with a minimum of 45 minutes of fuel, computed at normal cruising altitudes and power settings.

Remember! Fuel starvation is the number one reason for engine failure.

A.20.12 Simulated Emergencies

The Flight Instructor on dual flights shall conduct all simulated emergencies practice. Pilots on solo practice flights shall not practice simulated emergencies.

Simulated emergency landing practice shall not be conducted over any congested area like city, town or settlement.

In any event, no simulated emergency landing shall be carried to a height of less than 500 feet above the surface.

Engine out procedures in a twin engine aircraft shall be carried to a height of not less than 200 feet above the surface or DH if on instrument approach.

Engine out procedures in a twin engine aircraft shall not be carried to actual shutdown and feathering below an altitude of 3000 feet above ground level. At lower altitudes engine out simulation should only be conducted by using zero thrust power-setting.

Prior to actually shutting down an engine for single engine demonstration or practice, always check the generator/alternator output of the remaining engine to ensure sufficient electrical power supply.

A.20.13 Radio Listening Watch

Proper radio technique is taught at classes. Radio communication requires quick and precise communication with transmission containing all the information necessary for the controller or other air traffic.

Always listen on the frequency before you transmit, when the frequency is very busy pilots try to “jump in” at the same

Make sure that your transmit switch and volumes are set properly and if the speed of communication is too fast for you let the controller know that you are a student pilot.

A.20.14 Uncontrolled Airport / Airspace

When operating at an uncontrolled airport inbound, outbound or over-flying a good listening skill and forming a mental traffic picture from what you hear is of great importance.

Following is a guideline for proper radio work in the vicinity of an airport.

- Before taxiing pilots shall listen to and write down appropriate ATIS information for the airport they are to depart from.
- Before requesting taxi instructions from Ground Control, listen and then use the 4 Ws format (Whom are you calling, Who are you, Where are you, What do you want).
- Pilots should use the 4 W´s format at all times during initial contact with a new ATC facility.
- In the training area monitor tower frequency and use proper see and avoid technique. Aircraft equipped with dual Com. should monitor emergency frequency 121.5 MHz.
- When about 10 nm from an uncontrolled airport of intended landing the pilot should transmit blindly on the assigned frequency for that airport, using the 4 Ws format. Operations at non-

controlled airports require great vigilance since some aircraft may be flying without operational radio. Reliance on radio to obtain traffic information should be avoided.

- When about 10 min from Class D airport, a VFR pilot should listen to and write down the appropriate ATIS information if available. The Tower should be called about 5 min from the reaching the control zone, airspace D or the airport.
- Any time the pilot wants to operate in or through a Class C airspace the appropriate Control facility shall be called and two way radio communications shall be established before entering the airspace.
- Students and Flight Instructors should note that the area outside designated taxiways and runways at Salzburg Airport is a manoeuvring area and is outside ATC control.
- At airports with designated Clearance frequency, the pilot shall receive his/her ATC clearance before calling Ground Control for taxi clearance.

A.20.15 Hazards

A hazard is any situation where the safe operation of the aircraft is in doubt. Most POH refer to dangerous situations as an emergency.

Each pilot is responsible for accomplishing emergency checklist items as specified in the POH.

The following is a guideline and policies for pilots involved in various emergency situations. These guidelines may not intend to supersede those emergency procedures stated in appropriate POH.

It should be emphasised that above anything else, the PIC has the final authority how an emergency situation will be handled. The pilot shall use all available resources such as ATC or other pilots listening.

A.20.15.1 Weather Hazards

No flight shall be continued in bad or marginal weather conditions when other routings provide greater safety margins.

A.20.15.1.1.1 VFR Flights

Deteriorating weather conditions require immediate action. Pilots are reminded that one of the primary rules of thumb in flight is to do things in the following order, 1. Aviate, 2. Navigate and 3. Communicate. Some more guidelines to consider:

- Remain calm.
- Maintain aircraft control.
- React thoughtfully.
- If time permits, obtain assistance.

Inadvertent entry into instrument conditions should be considered as an emergency situation, which must be handled with the utmost care. If the pilot is not instrument rated or the aircraft not appropriately equipped, aircraft control should be maintained and an emergency shall be declared.

If the pilot is instrument rated and the aircraft is appropriately equipped, an emergency should be declared and an immediate IFR clearance requested.

Emergency assistance may be required when pilots encounter wind conditions in excess of personal or aircraft capabilities. Normally another runway, which is better aligned with the wind, is all that is needed. A different airport may also offer better conditions.

Assistance may be required in the event students on solo flights find that the weather at Salzburg has fallen below VFR minimums. Students must remain in VFR conditions outside of Class C airspace.

A.20.15.1.1.2 IFR Flights

Inadvertent entry into hazardous weather conditions while on an instrument clearance requires the same carefully carried out actions as mentioned for VFR flights. Immediate assistance is usually available from ATC and should be requested.

A.20.15.1.1.3 Thunderstorms

Even though thunderstorms are rare in Austria, they occur, usually in the summertime. All aircraft are prohibited from operating in the vicinity of thunderstorms. Encounters with thunderstorms are extremely dangerous. Should an aircraft inadvertently encounter a thunderstorm the crew is expected to take immediate action as by leaving the area.

A.20.15.1.1.4 Icing Encounter

Aircraft operated are not equipped for flight into known icing. Should a flight encounter icing conditions while operating IFR, great consideration should be used to avoid icing conditions. If possible make a 180° turn or change the altitude to return to non-icing conditions. A slight accumulation of ice on the aircraft can greatly affect flight characteristics.

Operation in forecasted or reported icing condition is prohibited, unless the aircraft is certified for flights in icing condition. If icing condition is encountered in-flight pilots should take every measure to leave the icing conditions.

A.20.15.1.1.5 Mountain waves / Turbulence

Pilots should be aware of airflow across mountains. As wind speed increases so does the turbulence created by mountains. Signs of mountain waves or turbulence are cumulus clouds formed lee side of

a mountain and lenticular or rotor clouds on the downwind side of mountain. Pilots should avoid flying in area of known or expected mountain waves. When flying in valleys surrounded by mountains, try to remain on the upwind side of the mountain.

Operation in an area of forecasted or reported mountain waves and/or turbulence should be avoided. When strong winds are aloft, flights on the lee side of mountainous area should be avoided due to the possibility of strong mountain waves or severe turbulence. If a strong mountain wave or severe turbulence is inadvertently encountered in-flight, the pilot should take action to leave the area immediately and conduct the flight in that way to minimise the stress on the aeroplane by adjusting the airspeed of the aeroplane so that manoeuvring speed can be maintained.

The policy is to "avoid" hazardous weather conditions. If avoidance is not possible, the flight should be terminated as soon as practicable, the aircraft secured and office notified. Re-dispatch (see Section 1.5.15) shall only occur after weather conditions have improved. Pilots should remember to close flight plan to ATC.

A.20.16 Medical Emergencies

Any type of medical situation even so minor as a headache may have the potential to adversely affect pilots' performance and must be carefully considered.

Following are some in-flight illness emergency guidelines.

- Evaluate the situation.
- Decide how quickly a landing must be made.
- Obtain assistance by radio, if required.
- Delegate flight duties as appropriate.

A.20.17 Air Sickness

Pilots are responsible for ensuring that an airsick bag is on board prior to flight. In the event that a pilot or passenger fails to use an airsick bag, that person should clean the aircraft upon return. If for any reason that person fails to clean the aircraft, they will be charged 100 Euro cleaning fee. Cleaning materials are available at aircraft maintenance.

A.20.18 Communication Failure

A.20.18.1 Communication Failure on Ground

At a controlled airport ATC´s attention may be obtained by flashing the landing light. An attempt should be made to remain clear of movement areas while waiting for a light gun signal response. The flight is

normally directed to return to the ramp area. Communication failure at uncontrolled airports requires that the flight be terminated at that airport and ATO shall be contacted as soon as possible.

A.20.18.2 Communication Failure within the practice area

A landing at an appropriate uncontrolled airport should be considered. When considering which airport to use, traffic should be evaluated. Choose an airport with the least traffic situation. If decision is made to fly to LOWS then fly the most likely arrival route and enter proper downwind squawking 7600 on the transponder. Keep a good lookout for light signals and be alert for all other traffic. Consider using your mobile phone, but light signals are still required for clearances.

A.20.18.3 Communication Failure during VFR Cross-Country Flights

A landing should be made at an appropriate uncontrolled airport, and the ATO called for assistance. Pilots are reminded to update the affected flight plan with ATC.

A.20.18.4 Communication Failure during IFR Cross-Country

The procedures established in regulations should be followed and the appropriate transponder code used. After landing at airports other than home base, the ATO must be notified.

A.20.19 Electrical System Malfunctions.

Pilots should use the procedures set out in appropriate Pilot's Operating Handbook.

A.20.20 Imminent Engine Failure

A.20.20.1 General

Imminent engine failure is a situation where an engine is still producing power but engine instruments or engine sound indicate that a seizure is imminent if no action is taken. The steps in this manual are guidelines only. Sound judgement and strict adherence to POH recommendations shall always be used.

A.20.20.2 Single-Engine Aircraft

If indications are that engine failure on a single engine aircraft is imminent, the pilot should proceed immediately to the nearest suitable aerodrome and land while continuing to monitor the engine conditions. If temperatures indicate redline the pilot should be prepared for possible engine seizure. It may be considered to perform an off-field precautionary landing before the engine actually stops.

A.20.20.3 Multi Engine Aircraft

If indications are that failure of an engine on a multi-engine aircraft is imminent the pilot should proceed immediately to the nearest suitable airport and attempt to confirm all abnormal engine indications. If the temperatures indicate redline the pilot should consider to feather and secure the

engine in accordance with recommended procedures, and continue to the nearest appropriate airport. The Pilot-in-command shall also declare an emergency.

A.20.21 Off Airport Landing

In the event that a forced landing becomes necessary, it is likely that the landing will be in a relatively remote area. Unless the exact ground position is known, and reaching civilization is reasonably assured the pilot and passengers should stay with the aircraft. Staying with the aircraft affords shelter and a larger target for search and rescue personnel to observe from the air. All aircraft are equipped with an ELT helping search and rescue personnel to locate the landing site.

A.20.22 Ditching

Not in effect

A.20.23 Landing Gear Malfunctions

Any landing gear malfunction should be treated as if the gear were not down and locked and the appropriate emergency procedures followed. The pilot shall not recycle the landing gear if an irregular landing gear indication is experienced with the gear locked in the extended position.

If outside the local operations area, every attempt should be made to utilize all available resources to help verify gear position. If weather and fuel permit, a landing at an airport with crash and fire rescue may be appropriate.

If a landing is made with an unsafe gear indication, use of brakes and turns should be minimized, and the engine(s) shut down on the runway. Maintenance personnel will check the aircraft and lock the gear in place if necessary. The aircraft will then be moved as directed by maintenance personnel and ATC.

If the landing gear malfunction takes place during take-off and the landing gear fails to retract when the gear handle is put in the “up” position, the pilot will return the gear handle to the down position, confirm that it is down and locked, notify ATC if practical, and return for landing. Make no further attempt to raise the gear – leave it down.

A.20.24 Loss of Orientation

A.20.24.1 General

Following are some guidelines to consider in the event of becoming lost.

- Don’t be distracted from maintaining basic aircraft control.
- Maintain situational awareness. Use charts as well as electronic navigational aids. Also make sure the magnetic compass and the directional gyro match.

- Climb if able, to get better view over landmarks and be in better radio range.
- Communicate, try to reach ATC facility and get assistance, if unable to reach ATC, squawk 7700 and transmit “in blind” on 121.5 MHz to obtain assistance.
- Confess, don’t try to “beat around the bushes”, tell people that you are lost and need assistance.
- Comply, with instructions you receive from ATC or other pilots who are able to reach you.
- Carefully monitor the amount of fuel and make a precautionary landing, preferably at an airport BEFORE exhausting the fuel supply.

A.20.25 Accidents and Incidents

A.20.25.1 General

The following procedures have been established to govern the handling of emergency situations by both ground and flight personnel. These procedures shall be applied unless the circumstances of an emergency situation require deviations there from. It must be understood that it is impossible to establish rules covering every type of emergency. Personnel is therefore expected to act according to their best judgement in each individual situation.

Emergency operating procedures for the various types of aeroplanes are outlined in the respective AOM.

Emergency action by ground personnel shall be initiated in the event information received from any reliable source, or lack of information from an aeroplane, indicates that an aeroplane may have encountered an emergency.

Emergency Authority of the Pilot-in-Command

In emergency situations requiring immediate decision and action the Commander is authorised to deviate from the procedures established by, or instruction received from, the appropriate authority (ATC) to the extent required by the situation.

Testimony by Flight Instructor / Student

In the event of an aeroplane accident the police authority is likely to approach the Flight Instructor or student to request their statements or testimony as witness. During possible subsequent proceedings, any such statement or testimony may in turn be used as evidence against the flight crew, even though the police may initially have heard the flight crew member as a witness only.

It is, therefore, advisable to refrain from any statement, except as to the personal identity, while still under the immediate impression of an accident, but to submit any requested information, verbally or in writing, at a later date, and, if deemed necessary, after obtaining legal advice.

A.20.25.2 Applicability

This instruction is applicable to accidents of all operated aeroplanes, involving:

- Death or serious injury to any person.
- Substantial damage to the aeroplane.

A.20.25.3 General Policy

In the event of an aeroplane accident it is the organisational policy to:

- Fulfil its obligations towards students and employees.
- Co-operate with appropriate authorities of the State where the accident has occurred and with those of the operating country (Civil Aviation Authorities, Police Authorities etc.)
- Release to news agencies accurate information regarding the accident as promptly as possible.

Execution of this general policy shall be covered by the procedures laid down in this instruction as far as they are applicable. No provision herein shall, however, prevent Company personnel in case of an accident, from acting in accordance with their best judgement according to the basic policies stated above.

NOTE: Employees shall avoid any statement to persons outside of the organisation concerning an accident, liability, insurance conditions, etc. and shall refer any enquiry's relative thereto to the Head of Training.

Action at Scene of Accident

Based on the general policy outlined in VERWEIS it is essential that everyone serving within the organisation, must be aware that if any accident occurs it is of the greatest importance to:

- Take care of all injured persons and obtain medical assistance.
- Attempt to stop or minimize further damage either to persons or property.
- There should, if possible, always be one Flight Instructor guarding damaged aeroplane and keeping a log showing actions taken after the accident.
- Inform the local police.
- In the event of an accident, incident, forced landing or precautionary landing, the Pilot-in-command shall in accordance with current regulations notify the appropriate Investigation

Board and ATC. In addition, Operations Manager should be notified by the quickest available means and the following information relayed.

- Aeroplane type and registration markings.
- Pilot-in-Command's name.
- Number of persons on board.
- Date and time of accident.
- Place of last departure and next intended landing of aeroplane.
- Position of aeroplane given in latitude and longitude or with reference to a well-known geographical landmark.
- Number of person's deceased, and number seriously injured.
- Present state of aeroplane.

After Hours

If contact is attempted after normal working hours, the pilot must relay the above information to one of the organisation's management personnel.

The number at which the pilot can be reached should be relayed as well. If still airborne, the instructor should contact ATC, explaining the situation and requesting to notify ATO.

Fault or Blame

Pilots must not admit fault or blame to anyone other than officials. No statements or comments shall be made to members of the press.

Information to relatives and press

The Operations Manager shall immediately after receiving a report of a mishap notify the Head of Training and the Chief Flying Instructor. Any information is considered confidential and should not be discussed with other than the above mentioned persons.

In case of personal injury, the Head of Training will notify relatives of the persons involved. The Head of Training will coordinate with police, rescue centre and other professionals as deemed necessary by him.

The only person authorised to make statements to the press is the Accountable Manager.

Paperwork

Persons involved in any aircraft incident or accident will:

- Contact the HT immediately;
- Fill out a preliminary report of the aircraft mishap on an Accident/Incident Report form;
- Submit to drug testing as outlined in this manual;
- In the case of an accident or incident involving aircraft damage, be examined by a physician;
- Fill out an Accident Investigation Safety Incident Report.

Emergency Phases

General

The three emergency phases, distinguished by ICAO in the application of alerting service are contained in the ICAO Annex II Air Traffic Services, as follows:

Uncertainty phase

When no communication has been received from an aeroplane within a period of thirty minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aeroplane was first made, whichever is the earlier; or

An aeroplane fails to arrive within thirty minutes of the estimated time of arrival last notified to or estimated by air traffic services units, whichever is the later, except when no doubt exists as to the safety of the aeroplane and its occupants.

Alert phase

When following the uncertainty phase, subsequent attempts to establish communication with the aeroplane or inquiries to the other relevant sources have failed to reveal any news of the aeroplane; or

An aeroplane has been cleared to land and fails to land within five minutes of the estimated time of landing and communication has not been re-established with the aeroplane; or

Information has been received which indicates that the operating efficiency of the aeroplane has been impaired, but not to the extent that a forced landing is likely, except when evidence exists that would allay apprehension as to the safety of the aeroplane and its occupants.

Distress phase

When following the alert phase further unsuccessful attempts to establish communication with the aeroplane and more widespread unsuccessful inquiries point to the probability that the aeroplane is in distress; or

The fuel on board is considered to be exhausted, or to be insufficient to enable the aeroplane to reach safety; or

Information is received which indicates that the operating efficiency of the aeroplane has been impaired to the extent that a forced landing is likely; or

Information is received or it is reasonably certain that the aeroplane is about to make or has made a forced landing.

Except when there is reasonable certainty that the aeroplane and its occupants are not threatened by grave and imminent danger and do not require immediate assistance. Declaration of any of the above phases will be made only by ATS.

Action to be taken

In the event of an operational emergency, the flight instructor shall take the following action:

Uncertainty phase

Advise Head of Training and Chief Flying Instructor;

Confirm from the ATC authority that the uncertainty phase is in operation, and gather the latest information;

Confirm that appropriate action is being taken to establish communication with the aeroplane;

Review the progress of the flight from the messages and position reports received at the time of the last communication and try to:

Estimate the airplane's present position;

Anticipate its future progress in flight of the latest known conditions;

Assemble all data on alternate and emergency aerodromes and route facilities that may have to be used.

Prepare a detailed list of:

The emergency and survival equipment carried on the aeroplane;

The types and frequencies of the survival radio equipment carried on the aeroplane (including any emergency locator beacons);

Any other information ATC requires or is likely to require regarding the flight; and

Maintain close liaison with all appropriate ATC authorities until the phase has terminated.

Alert phase

Case 1

Ensure that all information required by rescue co-ordination centre authorities and by ATC authorities has been assembled and passed to those authorities

Maintain continuous liaison with the local ATC authority (it is advisable to do so at this stage directly from within the ATC centre); and

Maintain communication with the Head of Training and Chief Flying Instructor.

Case 2

Contact ATC to ascertain latest information.

Assemble and provide all information called for by ATC and rescue co-ordination centre authorities.

If possible stand by in, or keep an open line to, the control tower in order to maintain direct liaison with ATC;

Maintain communication with the Head of Training and Chief Flying Instructor.

Case 3

Contact aeroplane where necessary to gain fuller information on the situation.

Inform the Head of Training and Chief Flying Instructor and consult with them on any advice it may be thought necessary to give; and

Carry out sequence of the last three steps of the Uncertainty Phase listed above.

Distress phase

Confirm that all steps have been taken to alert and advise all agencies and authorities capable of rendering assistance.

->Advise all personnel listed

Stand by to supply any advice or information called for by ATC and rescue co-ordination centre authorities or by the PIC.

Safety Pilots.

Safety pilots are required for flights where the PIC is operating the aircraft solely by reference to flight instruments. The responsibility of the safety pilot is detailed in Section 1.6 of this manual under the title “Observer”.

A pilot, who is practicing his/her instrument skills to meet the recent instrument experience requirements, is required to have a safety pilot on board.

The logging of instrument flight time, to meet the recent instrument experience requirements, where a safety pilot is required should contain the following information:

- the location and type of each instrument approach accomplished and
- the name of the safety pilot.

The safety pilot cannot log the time he/she is an observer/safety pilot as mentioned above, unless he/she is an authorised Flight Instructor.

B Operations Manual B

B.1 Aeroplane Descriptive Notes

EAA uses different airplanes and one FSTD for different phases of the training, in all cases the airplanes POH (pilot operating handbook) is used as standard source for its technical description, limitations, its handling and operation.

B.1.1 FNPT II

Certificate Number	AT-3A-1003
Type	FNPT II Ascent Flight Trainer – Generic Multi Engine Piston „PA-34“
Serial No.	SN-FFT-2114
Manufacturer	Mechtronix Systems INC., Montreal
Operator	EAA Aviation Academy GmbH
Simulated type of aircraft	Generic Multi Engine Piston
STD Qualification Level	JAR FSTD A FNPT II
Visual system:	Rasterflite TM, 3-channel cylinder projection 150° x 37,5° FoV
Motion system	None
Engines	Generic Piston Engines
Instruments	ASI, ADI/FD, ALT, TBI, HIS, VSI, RMI, CDI/GS, Bendix KDI 572 DME
TCAS	None
Windshear	None
Additional Capabilities	Autopilot
Limitations	None

B.1.2 FNPT II MCC

Certificate Number	AT-3A-1031
Type	FNPT II – MCC Ascent Flight Trainer – Generic ME Turboprop “BE 200”
Serial No.	SN-FFT-2114
Manufacturer	Mechtronix Systems INC., Montreal
Operator	EAA Aviation Academy GmbH
Simulated type of aircraft	Generic Multi Engine Turboprop
STD Qualification Level	JAR FSTD A FNPT II
Visual system:	Rasterflite TM, 3-channel cylinder projection 150° x 37,5° FoV
Motion system	None

Engines	Generic Turboprop Engines
Instruments	Bendix EFS50, ASI, ALT, TBI, VSI, RMI, CDI/GS, Bendix KDI 572 DME
TCAS	None
Windshear	None
Additional Capabilities	Autopilot
Limitations	None

B.1.3 Single-Engine VFR

Callsign	D-EJFT
Type	DA 20-C1
Serial No.	C0025
Manufacturer	Diamond Aircraft Industries Inc.
Operator	EAA Aviation Academy GmbH
Owner	EAA Aviation Academy GmbH
Instruments	ASI, ADI, ALT, VSI, DG, TBI, MC, Bendix NAV/COM, GPS NAV/COM, CDI/GS, XPDR C, ELT
Engine	Continental O-240-B
Year of manufacture	1998
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day VFR only
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	n/a
Approaches	n/a
LVTO	n/a

Callsign	D-EKDC
Type	DA 20-C1
Serial No.	C0194
Manufacturer	Diamond Aircraft Industries Inc.
Operator	EAA Aviation Academy GmbH

Owner	EAA Aviation Academy GmbH
Instruments	ASI, ADI, ALT, VSI, DG, TBI, MC, GNS430 NAV/COM, CDI/GS, XPDR S, ELT
Engine	Continental O-240-B
Year of manufacture	2002
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day VFR only
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	n/a
Approaches	n/a
LVTO	n/a

B.1.4 Single-Engine IFR

Callsign	OE-KLJ
Type	172 S
Serial No.	172S10240
Manufacturer	Cessna Aircraft Company, USA
Operator	EAA Aviation Academy GmbH
Owner	EAA Aviation Academy GmbH
Instruments	G1000, ASI, ADI, ALT, XPDR S, KAP 140 Autopilot, ADF, ELT
Engine	Textron Lycoming IO-360-L2A
Year of manufacture	2006
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day/Night VFR/IFR
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	G1000
Approaches	n/a

LVTO	n/a
Year of manufacture	
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day/Night VFR/IFR
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	G1000
Approaches	n/a
LVTO	n/a

B.1.5 Multi-Engine IFR

Callsign	OE-FPH
Type	DA 42 NG
Serial No.	42.180
Manufacturer	Diamond Aircraft Industries GmbH – Österreich
Operator	EAA Aviation Academy GmbH
Owner	VOLARE Aircraft Charter GmbH & Co KG
Instruments	G1000, ASI, ADI, ALT, XPDR S, KAP-140 Autopilot, ADF, ELT
Engine	2 x Austro Engine AE 300 (168 HP)
Additional information	Anti-Ice-System
Year of manufacture	2006
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day/Night VFR/IFR
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	G1000
Approaches	n/a

LVTO	n/a

Callsign	OE-FCS
Type	DA 42 NG
Serial No.	42.287
Manufacturer	Diamond Aircraft Industries GmbH – Österreich
Operator	Flight Charter Linz GmbH
Owner	Flight Charter Linz GmbH
Instruments	G1000, ASI, ADI, ALT, XPDR S, KAP-140 Autopilot, Oxygen, Synthetic Vision
Engine	2 x Austro Engine AE 300 (168 HP)
Additional information	Anti-Ice-System
Year of manufacture	2007
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day/Night VFR/IFR
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	G1000
Approaches	n/a
LVTO	n/a

Callsign	OE-FCL
Type	DA 42 NG
Serial No.	42.060
Manufacturer	Diamond Aircraft Industries GmbH – Österreich
Operator	Flight Charter Linz GmbH
Owner	Flight Charter Linz GmbH
Instruments	G1000, ASI, ADI, ALT, XPDR S, KAP-140 Autopilot, ADF, ELT
Engine	2 x Austro Engine AE 300 (168 HP)

Additional information	Anti-Ice-System
Year of manufacture	2006
Crew composition	1 rated pilot and no cabin crew
Performance Class	A
Commercial	Not approved for commercial air transport
VFR / IFR	Day/Night VFR/IFR
Known icing	Not certified for known icing conditions
MNPS	n/a
RVSM	n/a
Area NAV	G1000
Approaches	n/a
LVTO	n/a

B.2 Aeroplane Handling (checklist, limitations, technical log,…)

B.2.1 General

The operation of any aircraft shall at all times be in accordance with applicable POH and this manual. Sound judgement must be used is situation not covered by these manuals.

B.2.2 Aircraft Preflight Inspection

Aircraft pre-flight inspection must be accomplished in accordance with the approved checklist in the POH and the OM. The pilot-in-command shall certify this by signing his appropriate box of the Maintenance log.

B.2.3 Checklists

Checklists in each type of aircraft operated are in accordance with the OM and the aircraft flight manual / pilots operating handbook. Both instructor pilots and students are expected to be familiar with the checklist for the aircraft they are flying, and adhere to them.

Students while flying their own aircraft in training program must furnish a checklist suitable to the aircraft and acceptable to ATO requirements.

B.2.4 Limitations

Handling of aircraft operated may in no circumstances exceed the limitations stated in the OM and the aircraft flight manual.

B.2.5 Aeroplane maintenance- and technical logs/program

Aeroplane maintenance- and technical logs/program are in accordance with and covered by.

B.2.5.1 Maintenance

Austrian Aircraft Corporation

Österreichische Luftfahrzeug GesmbH

Flughafenstraße 1

4063 Hörsching

B.2.5.2 CAMO

Luftfahrzeugtechnik Zell am See e.U.

Kapruner-Straße 15

5700 Zell am See

Part-145 certified technical department and the Organisation’s OM.

B.3 Emergency Procedures

Emergency procedures for each type of aircraft are in compliance with as stated in the POH and the OM. Operation of an ATO aircraft shall at all times be in accordance with those procedures.

In situations of such nature that are not covered in the above-mentioned manuals, a sound judgement should be exercised.

B.4 Radio and Radio Navigation Aids

Each aircraft shall be equipped with at least all radios and radio navigation aids in accordance with relevant regulations and as stated in the OM regarding to the limitations of operation in accordance with the certificate of airworthiness for each aircraft.

B.5 Allowable Deficiencies (based on MMEL)

It is ATO policy to operate aircraft, which are to the highest standards. Equipment in each aircraft: radios, radio navigation aids, instruments, emergency equipment etc. which is defined as minimum equipment in that aircraft in accordance with relevant regulations. Otherwise the airplane will not be operated until the above items have been fixed by an authorized technician.

C Operations Manual C

C.1 Performance (legislation, take-off, route, landing, etc.)

C.1.1 General

All operations of aeroplanes shall be conducted in accordance with ACAA regulations and the appropriate Pilot Operating Handbook.

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C.1.2 Preparations of flight

The Pilot-in-command exercises the final authority as to the operation of the aeroplane.

The Pilot-in-command shall take all measures required to ensure that standard operating procedures and other instructions or regulations as laid down by the ATO and the Authority are complied with during preparation and conduct of each flight.

C.1.3 Take-off

The Pilot-in-command shall ensure that the take-off mass does not exceed the maximum take-off mass specified in the Pilot Operating Handbook for the pressure altitude and the ambient temperature at the aerodrome at which the take-off is to be made.

The Pilot-in-command shall ensure that the un-factored take-off distance, as specified in the Pilot Operating Handbook does not exceed:

- When multiplied by a factor of 1.25, the take-off run available; or
- When stopway and/or clearway is available, the following:
- The take-off run available;
- When multiplied by a factor of 1.15, the take-off distance available; and
- When multiplied by a factor of 1.3, the accelerate-stop distance available.

When showing compliance with sub-paragraph (2) above, an operator shall take account of the following:

- The mass of the aeroplane at the commencement of the take-off run;
- The pressure altitude at the aerodrome;
- The ambient temperature at the aerodrome;
- The runway surface condition and the type of runway surface (Take-Off Performance Correction Factors);
- The runway slope in the direction of take-off (See Runway Slope); and

- Not more than 50% of the reported head-wind component or not less than 150% of the reported tail-wind component.

C.1.4 Takeoff – Runway Slope

Unless otherwise specified in the Aeroplane Flight Manual, or other performance or operating manuals from the manufacturers, the take-off distance should be increased by 5% for each 1% of upslope except that correction factors for runways with slopes in excess of 2% require the acceptance of the Authority.

C.1.5 Take-Off Performance Correction Factors

Unless otherwise specified in the Pilot Operating Handbook or other performance or operating manuals from the manufacturers, the variables affecting the take-off performance and the associated factors to be applied to the Pilot Operating Handbook data are shown in the table below. They should be applied in addition to the factor (x 1.25) as prescribed in Take off (2).

Surface type	Condition	Factor
Grass (on firm soil) up to 13 cm long	Dry	1.20
	Wet	1.30
Paved	Wet	1.00

Note: The soil is firm when there are wheel impressions but no rutting.

C.1.6 En-route multi engine aeroplane

The Pilot-in-command shall ensure that the aeroplane is capable of continuing flight the at or above the relevant minimum altitudes in VMC conditions expected for the flight, in the event of the failure of one engine, with the remaining engines operating within the maximum continuous power conditions specified.

C.1.7 En-route single engine aeroplane

The Pilot-in-command shall ensure that the aeroplane is capable of reaching a place at which a safe forced landing can be made in VMC conditions expected for the flight, and in the event of engine failure.

Landing dry runway

The Pilot-in-command shall ensure that the landing mass of the aeroplane at the estimated time of landing allows a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination aerodrome and at any alternate aerodrome.

When showing compliance with sub-paragraph above, an operator shall take account of the following:

- The altitude at the aerodrome;

- Not more than 50% of the head-wind component or not less than 150% of the tail-wind component.
- The runway surface condition and the type of runway surface (See Landing Distance Correction Factors);
- The runway slope in the direction of landing (Runway Slope)

C.1.8 Landing – Wet and Contaminated Runways

The Pilot-in-command shall ensure that when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is equal to or exceeds the required landing distance, determined in accordance with Landing dry runway, multiplied by a factor of 1.15.

C.1.9 Landing - Runway Slope

Unless otherwise specified in the Pilot Operating Handbook, or other performance or operating manuals from the manufacturers, the landing distance should be increased by 5% for each 1% of down-slope except that correction factors for runways with slopes in excess of 2% require the acceptance of the Authority.

C.1.10 Landing Distance Correction Factors

Unless otherwise specified in the Pilot Operating Handbook, or other performance or operating manuals (from the manufacturers), the variable affecting the landing performance and the associated factor that should be applied to the Pilot Operating Handbook data is shown in the table below. It should be applied in addition to the operational factors as prescribed in Landing dry runway.

Surface type	Factor
Grass (on firm soil) up to 20 cm long	1.15

C.2 Flight Planning

C.2.1 General

Basically a custom excel sheet with all flight planning

C.2.2 Minimum Flight Altitudes

Except when necessary for take-off or landing aeroplanes shall not be operated below the minimum altitudes described in the following paragraphs for VFR and IFR flights.

C.2.2.1 VFR Flights

VFR operations shall not be conducted below 500 ft above the ground or water unless authorised by the appropriate authority, except for the purpose of take-off and landing. When flying over congested areas of cities, towns or settlements or over an open-air assembly of persons, VFR flights shall not be conducted below 1000 ft above the highest obstacle within a radius of 600 meters from the aeroplane.

For operations in classified ATS airspace, VFR flights must be conducted in accordance with the following table for Minimum Visibility for VFR Operations:

<table>
<tr><td rowspan="2">Airspace class</td><td rowspan="2">B</td><td rowspan="2">C, D, E, F</td><td colspan="2">G</td></tr>
<tr><td>Above 3000 feet AMSL or above 1000 feet above terrain, whichever is higher</td><td>At and below 3000 feet AMSL or 1000 feet above terrain, whichever is higher</td></tr>
<tr><td>Distance from cloud</td><td>Clear of cloud</td><td colspan="2">1500 m horizontally
1000 feet vertically</td><td>Clear of cloud and in sight of the surface</td></tr>
<tr><td>Flight visibility</td><td colspan="3">8 km at and above 10000 feet AMSL
5 km below 10000 feet AMSL</td><td>5 km or
1,5 km below 1000 ft AGL</td></tr>
</table>

Note 1: When the height of the transition altitude is lower than 10000 ft AMSL, FL 100 should be used instead of 10 000ft.

Note 2: Cat A and B aeroplanes may be planned in flight visibility down to 3000 m, provided the appropriate ATS authority permits use of a flight visibility less than 5 km, and the circumstances are such, that the probability of encounters with other traffic is low, and the IAS is 140 KTS or less.

C.2.2.2 IFR Flights

IFR operations shall not be conducted at a level, which is below the minimum flight altitude established by the Authority whose territory, is over flown, or where no such minimum flight altitude has been established:

- Over high terrain or mountainous areas, at a level which is at least 2000 ft (600 m) above the highest obstacle within a radius at 8 km from the estimated position of the aeroplane; or
- Elsewhere, at a level, that is at least 1000 ft (300 m) above, the highest obstacle located within a radius of 8 km from the estimated position of the aeroplane.

C.2.2.3 Terminology

For the practical application of those basic requirements the following terminology is used:

Minimum En-route IFR Altitude - (MEA)

The lowest published altitude between radio fixes that meets obstacle clearance requirements between those fixes and in many countries assures acceptable navigational signal coverage.

The published MEAs provide a terrain clearance of at least 1000 ft (over high terrain 2000 ft) over the highest obstacle within the normal airway width (5 NM each side of the airway centre line). On the En-route charts, the MEA is given without any suffix (except as a “m” if given in metric).

Minimum Off-Route Altitude - (MORA)

MORA provides reference point clearance within 10 NM of the route centre line (regardless of the route width and end fixes). The MORA is followed by a small letter “a” (5000 a) for its identification.

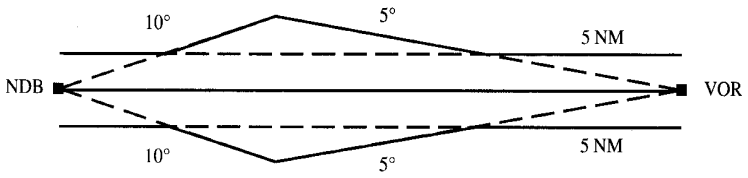
Grid MORA

A Grid MORA altitude provides reference point clearance within the section outlined by latitude and longitude lines. MORA values clear all reference points by 1000 ft in areas where the highest reference points are 5000 ft MSL or lower. MORA values clear all reference points by 2000 ft in areas where the highest reference points are 5001 ft MSL or higher. When MORA is shown along a route as “unknown” or within a grid as “unassured”, a MORA is not shown due to incomplete or insufficient information.

Minimum Flight Altitudes in Austria

The minimum flight altitudes on the ATS routes in Austria have been determined so as to ensure at least 2000 ft (600 m) vertical clearance above the highest obstacle within 5 NM on either side of the centre line of the route. However, where the angular divergence of the navigational aid signal in combination with the distance between the navigational aids could result in the aeroplane being more

than 5 NM either side of the centre line as illustrated below. The 10 NM protection limit is increased by the extent to which the divergence is more than 5 NM from the centre line.



Minimum Safe Altitude (MSA)

The minimum safe altitude (MSA), depicted on an instrument approach chart and a SID or STAR chart, will provide 1000-ft obstacle clearance within a 25 NM radius from the navigational facility upon which the MSA is predicated. If the radius limit is other than 25 NM, it is stated. This altitude is for Emergency Use only and does not necessarily guarantee navigational aid reception.

Minimum Sector Altitude

When the MSA is divided into sectors, with each sector a different altitude, the altitudes in these sectors are referred to as “minimum sector altitudes”.

En-route Operations

For flight planning and conduct of actual flight for enroute operations MEA, MORA or GRID MORA may be used as the Minimum Basic Altitude.

Altitude Corrections

In order to ensure adequate terrain clearance, the minimum basic altitudes or flight levels must be corrected for wind, temperature and QNH.

Wind Correction

When operating within 20 NM of terrain, whose maximum elevation exceeds 2000 ft AMSL, the minimum basic altitude shall be increased by the amounts given in the following table, according to the wind speed over the route:

Terrain Elevation:	Wind Speed in Knots:			
	0-30	31-50	51-70	> 70

2000-8000 ft	+500 ft	+1000 ft	+1500 ft	+2000 ft
More than 8000 ft	+1000 ft	+1500 ft	+2000 ft	+2500 ft

Temperature Correction

When the surface ambient temperature en-route is well below the ISA value the minimum basic altitude shall be adjusted by 4% of the nominal value for each 10°C below standard. Minimum altitudes associated with approach procedures, such as MSA, Minimum Descent Altitude (MDA) or Decision Altitude (DA) and minimum climb altitudes associated with departure or missed approach procedures shall be corrected as follows:

Reported OAT at Aerodrome	Altitude Increase
-10°C - -35°C	10% of height above aerodrome
Below -35°C	20% of height above aerodrome

ATC clearances to altitudes below such corrected minimum altitudes shall not be accepted.

Low temperature may be the reason for differences noted between published G/S altitudes and indicated altitudes.

QNH Correction

When converting the minimum basic altitude into a minimum flight level, the QNH difference from standard shall be accounted for as follows.

QNH of Nearest Station	Correction	QNH of Nearest Station	Correction
1050	+1000 ft	1005	-220 ft
1045	+860 ft	1000	-380 ft
1040	+720 ft	995	-510 ft
1035	+590 ft	990	-630 ft
1030	+460 ft	985	-780 ft
1025	+320 ft	980	-920 ft
1020	+180 ft	975	-1080 ft
1015	+50 ft	965	-1380 ft
1013	------	955	-1700 ft
1010	-80 ft	945	-2000 ft

Minimum Altitudes

The MEA, MORA and GRID MORA published on enroute charts, corrected as appropriate for wind and/or deviations from standard atmosphere, are used as minimum altitudes for safe obstacle clearance but shall not be used during normal operations unless under radar control.

Descent below MEA

The operational flight plan and airway charts indicate minimum safe altitudes. Lower vertical separation standards are authorised when following standard arrival routes and approach procedures are published in the Route Manual.

Descent below MEA or departure from an approved arrival route is authorised when the aeroplane's position has been positively established within the appropriate sector of the MSA circle and the ground and surrounding terrain are clearly visible or the aeroplane is under positive radar control.

During radar vectoring continuous monitoring of position and height is required and the flight crew must be ready to immediately assure responsibility for terrain clearance. The contour values and contour lines on selected charts are of special value and should be used for monitoring when accepting radar vectors in IMC.

Additional MSA Considerations

The following are additional requirements, which should be considered in conjunction with minimum safe altitudes:

- Except for take-off or landing, the minimum height shall be at least 2000 ft above any congested area or assembly of people.
- The MSA must provide adequate terrain clearance in the event of engine failure.

MSA Precautions

When planning flights over mountainous terrain, mountain wave conditions must be taken into account, particularly if frontal conditions exist.

If mountain wave conditions are forecast or reported:

- Do not attempt to penetrate or approach rotor clouds or rotor zones in the lee of mountains.
- Allow at least 5000-ft flight clearance over mountains up to 5000 ft higher than the surrounding terrain. Allow an additional flight clearance of at least equal to the height of a mountain, which is more than 5000 ft higher than the surrounding terrain.
- Be prepared for icing in clouds associated with standing wave and rotor conditions.

When flying in an area in which mountain wave conditions are suspected be prepared for turbulence, even in clear air, and take the necessary precautions.

C.2.2.4 Determination of the Quantities of Fuel and Oil

Fuel Planning

Based on the appropriate consumption, figures for the stage of flight as contained in the POH for the specific type. Fuel on board at the start of each flight must be sufficient for the planned operation and reserves to cover deviations from the planned operation. The fuel policy is based on the planning criteria listed in the following paragraphs taking into account the anticipated mass expected meteorological conditions and any Air Traffic Services procedures or restrictions.

IFR Flights

Taxi Fuel

Taxi fuel shall not be less than the amount expected to be used prior to take-off. For planning purposes, the standard amount of fuel is included to cover engine start and ground manoeuvres until start of take-off run can be found in POH.

Trip Fuel

Trip fuel shall include:

- Fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing;
- Fuel from top of climb to top of descent, including any step climb/descent.
- Fuel from top of descent to the point where the approach is initiated, taking into account the expected arrival procedure; and
- Fuel for approach and landing at the destination aerodrome.

Additional fuel

Contingency fuel

Usually a minimum of 5 % of the trip fuel shall be taken into account.

Reserve Fuel

(1) Alternate Fuel

Alternate fuel shall be sufficient for:

- A missed approach from the applicable MDA/DH at the destination aerodrome to missed approach altitude, taking into account the complete missed approach procedure;
- A climb from missed approach altitude to cruising level/altitude.
- The cruise from top of climb to top of descent,
- Executing an approach and landing at the destination alternate aerodrome

(2) Final reserve fuel for 45 minutes of cruise in the planed cruise altitude.

Extra Fuel

On all flights extra fuel is recommended. It is the responsibility of the Pilot-in-command to decide the amount of extra fuel if any.

VFR Flights

Taxi Fuel

Taxi fuel shall not be less than the amount expected to be used prior to take-off. For planning purposes, the standard amount of fuel is included to cover engine start and ground manoeuvres until start of take-off can be found in the POH.

Trip Fuel

Trip fuel shall include:

- Fuel for take-off and climb from aerodrome elevation to initial cruising level/altitude, taking into account the expected departure routing;
- Fuel from top of climb to top of descent, including any step climb/descent.
- Fuel from top of descent to the point where the approach is initiated, taking into account the expected arrival procedure; and
- Fuel for approach and landing at the destination aerodrome.

Extra Fuel

On all flights extra fuel is recommended. It is the responsibility of the Pilot-in-command to decide the amount of extra fuel if any.

Usually 30 min for dual flights and 45 min for solo flights are applicable.

Oil

The engine oil contents must be sufficient to cover the same elements as those for the fuel. Before flight, the Pilot-in-command shall ensure that the engine oil contents have been checked and serviced in accordance with the manufacturer's recommendations, and between flights, that no excess oil consumption has taken place.

C.3 Loading (load sheet, mass, balance and limitations)

C.3.1 General

During any phase of operation, the loading, mass and centre of gravity of the aeroplane shall comply with the limitations specified in the POH, or the Operations Manual if more restrictive.

The main objectives of the load control system are the following:

Ascertain that the load is such that the take-off mass of the aeroplane does not exceed:

- The maximum certified take-off mass and the zero fuel limits shown in the POH; and
- The mass at which performance requirements can be met for the flight concerned.

Ensure that the distribution of the load is such that:

- The structural loading limitations are not exceeded, including the load per running metre; and
- The limitations on location of the centre of gravity of the loaded aeroplane, as laid down in the relevant POH, are satisfied.

Ascertain that the storage of the load is such that:

- It is secure and can not shift or break loose;
- It can not damage the aeroplane or otherwise endanger its operation; and
- Ensure that the number of persons on board does not exceed the maximum allowed for the aeroplane concerned.

Ensure that the load and its distribution on board is correctly recorded on the appropriate documents.

When calculating masses for fuel, crew members and passengers the standard values listed below shall be used, except in the case when the actual mass of fuel, crew and/or passengers is known.

Standard mass values for fuel

When entering the mass figures for the take-off fuel and trip fuel the correct specific gravity should be used to convert the volume into the mass value. As this is often not practicable, the following typical specific gravity values may be used provided no other values are published in the relevant POH:

- AVGAS 100LL 0,719 kg/litre
- JET A-1 0,796 kg/litre

Standard Mass Values for Passengers and Baggage

Mass to be used for instructor and a student can either be an actual weight, or standard weight for crew members, see table below:

Crew position	Standard mass including hand baggage
Flight crew	85 kg or 170 lbs

Passengers

When computing the mass of passengers and baggage the following standard mass values are used:

Passengers seats	1-5	6-9
Male	104 kg	96 kg
Female	86 kg	78 kg
Children	35 kg	35 kg

The standard masses indicated above include hand baggage and the mass of any infant carried on a lap. Infants occupying a passenger seat shall be considered as children when computing the mass of passengers.

On flights where no hand baggage is carried in the cabin or where hand baggage is accounted for separately, 6 kg may be deducted from the above male and female masses. Articles such as an overcoat, an umbrella, a small handbag or purse, reading material or a small camera are not considered as hand baggage for the purpose of this sub-paragraph.

C.4 Weather Minima (flight instructors)

C.4.1 General

Pilots preparing for any flight should carefully consider the prevailing and expected weather conditions in order to determine whether the route can be flown safely or not. This preliminary weather check is normally accomplished by referencing the weather information available in the Briefing Room.

The briefing room weather information must not be considered official. The required official briefing may be obtained from meteorological office.

In conjunction with weather checks, Notices to Airmen (NOTAMS) and Pilot Reports (PIREPS) should be checked.

Flight planned in accordance with Visual Flight Rules (VFR)

Wind and Visibility Limitations

Solo fights and S/PIC flights may not be dispatched when weather conditions are below those set in the following table.

Minimum ceiling and visibility	
Visibility equal or greater than 10 km	Minimum required ceiling Traffic Pattern Alt+300 ft Or 2000ft above highest Obstacle en-route
Maximum wind on airfield	
Student pilots up to PPL stage	20 kts
Student pilots up to CPL	30 kts
Maximum x wind component	
Student pilots up to PPL stage	12 kts
Student pilots up to CPL	18 kts
Maximum winds aloft below 6000´	
Student pilots up to PPL stage	35 kts
Student pilots up to CPL	50 kts

For aircraft rentals use CPL wind limitations.

No solo flights may be dispatched regardless of weather conditions at the base of operations, if weather forecast for that area is to go below basic VFR minimums within the contemplated time of the flight plus 1 hour.

Night Operations

Solo operation at night is limited to lesson plan requirements only.

Special VFR

No flight may be planned to operate in special VFR condition, except for training purposes with a Flight Instructor within the control zone of LOWS.

Dual Flights

Dual flights may not be dispatched when weather conditions are outside those set in the following table.

Minimum ceiling and visibility	Visibility equal or greater than 5 km Minimum required ceiling 1000 feet
Maximum wind on airfield	35 kts
Maximum x wind component	20 kts
Maximum winds aloft below 6000´	50 kts

Night Operations

During hours of night no dual flight may be dispatched when weather condition are outside those set in the following table.

Maximum wind on airfield	25 kts
Maximum x wind component	15 kts
Maximum winds aloft below 6000´	45 kts
Minimum visibility	8 km
Minimum ceiling	
When operating within 15 Nm from lighted aerodrome.	Ceiling at least 2000 feet above highest obstacle in the area of operation, as measured by Met office.
When operating between lighted aerodromes which lie 30 Nm apart.	Ceiling at least 2000 feet above highest obstacle in the area of operation, as measured by Met office.
All other flights outside the area described above	Ceiling at least 2000 feet above highest obstacle in the area of operation and cloud cover 4/8 or less, as measured by Met office.

En-route Operating Minima for VFR Flights or VFR Portions of a Flight

Except operating as a special VFR flight, VFR flights shall be conducted so that the aeroplane is flown in conditions of visibility and distance from clouds equal to or greater than those specified in 3.2.2.

Flight Planned in Accordance with Instrument Flight Rules (IFR)

Planning Minima for Destination Aerodromes

An aerodrome shall not be selected as a destination aerodrome unless the appropriate weather reports or forecasts, or any combination thereof. Indicating that, during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above:

- RVR/Visibility in accordance with published landing minima; and
- For non-precision approach or circling approach, the ceiling must be at or above MDH.

Planning Minima for Destination Alternate Aerodromes

At least one destination alternate for each IFR flight shall be selected.

The Pilot in Command must select two destination alternates when the appropriate weather reports or forecasts for the destination, or any combination thereof, indicate that:

- During a period commencing 1 hour before and ending 1 hour after the estimated time of arrival the weather conditions will be below the applicable planning minima; or
- When no meteorological information are available.

Any required alternate(s) shall be specified in the operational flight plan.

An aerodrome shall not be selected as a destination alternate aerodrome unless the appropriate weather reports or forecasts, or any combination thereof, indicate that, during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above the planning minima in accordance with the following table:

Planning Minima – Destination Alternates

Type of approach	Planning Minima
CAT I	Non-precision (Notes 1 & 2)
Non-precision	Non-precision (Notes 1 & 2) plus 200 ft/1000 m
Circling	Circling

Note 1: RVR

Note 2: The ceiling must be at or above MDH

Operating Minima

Take-off Minima

Multi engine aeroplanes

Departure weather minima at an aerodrome shall no be lower than Category I minimum or the applicable higher non-precision approach minima for that aerodrome. Minimum RVR/Visibility for take-off is 1200 meters.

Single engine aeroplanes

Departure weather minima at an aerodrome shall not be lower than Category I minimum plus 800 feet, or the applicable higher non-precision approach minima plus 800 feet, for that aerodrome. Minimum RVR/Visibility for take-off is 1500 meters.

Non-precision Approach

Minimum Descent Height

The minimum descent height on a Non-precision approach shall never be lower than either the Obstacle Clearance Height (OCH) (or Obstruction Clearance Limit (OCL)) for the Category of aeroplane.

Visual Reference

A pilot may not continue an approach below MDA/MDH unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

- Elements of the approach light system;
- The threshold;
- The threshold markings;
- The threshold lights;
- The threshold identification lights;
- The visual glide slope indicator;
- The touchdown zone or touchdown zone markings;
- The touchdown zone lights;
- Runway edge lights; or
- Other visual references accepted by the Authority.

Required runway visual range (RVR)

The minimum RVR for a Non-precision approach depends on the MDH and on the facilities (full, intermediate, basic or nil) i.e. approach lighting and runway lighting/marking available as indicated in the following four tables:

Non-precision approach minima. Full facilities (Notes 1, 5, 6 and 7)	
MDH	RVR/Aeroplane Category A

250 ft – 299 ft	800 meters
300 ft – 449 ft	900 meters
450 ft – 649 ft	1000 meters
650 ft and above	1200 meters

Non-precision approach minima. Intermediate facilities (Notes 2, 5, 6 and 7)	
MDH	RVR/Aeroplane Category A
250 ft – 299 ft	1000 meters
300 ft – 449 ft	1200 meters
450 ft – 649 ft	1400 meters
650 ft and above	1500 meters

Non-precision approach minima. Basic facilities (Notes 3, 5, 6 and 7)	
MDH	RVR/Aeroplane Category A
250 ft – 299 ft	1200 meters
300 ft – 449 ft	1300 meters
450 ft – 649 ft	1500 meters
650 ft and above	1500 meters

Non-precision approach minima. Nil approach light facilities (Notes 4, 5, 6 and 7)	
MDH	RVR/Aeroplane Category A
250 ft – 299 ft	1500 meters
300 ft – 449 ft	1500 meters
450 ft – 649 ft	1500 meters

650 ft and above	1500 meters

Note 1: Full facilities comprise runway markings, 720 m or more of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise runway markings, 420-719 m of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 3: Basic facilities comprise runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.

Note 5: The tables are only applicable to conventional approaches with a nominal descent slope of not greater than 4º. Greater descent slopes will usually require that visual glide slope guidance (e.g. PAPI) is also visible at the Minimum Descent Height.

Note 6: The above figures are either reported RVR or meteorological visibility converted to RVR as in sub-paragraph 3.4.4.4.6 (RVR/VIS Convert) below.

Note 7: The MDH mentioned in the tables above refer to the initial calculation of MDH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, e.g. conversion to MDA.

Night operations

For night operations at least runway edge, threshold and runway end lights must be on.

Precision Approach - Category I Operations

A Category I operation is a Precision instrument approach and landing using ILS with a decision height (DH) not lower than 200 ft and with a runway visual range (RVR) not less than 550 meters.

Decision Height

The decision height (DH) to be used for a Category I precision approach shall not be lower than:

- The minimum decision height specified in the Aeroplane Flight Manual (AFM), if stated;
- The minimum height to which the precision approach aid can be used without the required visual reference;
- The OCH/OCL for the category of aeroplane; or

- 200 ft.
- Visual Reference

A pilot may not continue an approach below the Category I decision height, determined in accordance with sub-paragraph (Decision height) above, unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

- Elements of the approach light system;
- The threshold;
- The threshold markings;
- The threshold lights;
- The threshold identification lights;
- The visual glide slope indicator;
- The touchdown zone or touchdown zone markings;
- The touchdown zone lights; or
- Runway edge lights.
- Required Runway Visual Range (RVR)

Note: Precision approach minimums for renters are set forth in 1.5.4.2.

Required Runway Visual Range (RVR)

The minimum RVR for a Category I approach depend on the DH and on the facilities (full, intermediate, basic or nil) i.e. approach lighting and runway lighting/marking available as indicated in the table below:

RVR for CAT I Approach vs. Facilities and DH:

Category I minima				
	Facilities/RVR (Note 5)			
Decision height (Note 7)	Full (Notes 1 and 6)	Intermediate (Notes 2 and 6)	Basic (Notes 3 and 6)	Nil (Notes 4 and 6)
200 ft	550 meters	700 meters	800 meters	1000 meters

201 ft –250 ft	600 meters	700 meters	800 meters	1000 meters
251 ft – 300 ft	650 meters	800 meters	900 meters	1200 meters
301 ft and above	800 meters	900 meters	1000 meters	1200 meters

Note 1: Full facilities comprise runway markings, 720 m or more of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise runway markings, 420-719 m of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 3: Basic facilities comprise runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.

Note 5: The above figures are either the reported RVR or meteorological visibility converted to RVR in accordance with paragraph 3.4.4.4.6 (RVR/VIS Convert).

Note 6: The Table is applicable to conventional approaches with a glide slope angle up to and including 4°

Note 7: The DH mentioned in the table above refer to the initial calculation of DH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, (e.g. conversion to DA).

Night Operations

For night operations at least runway edge, threshold and runway end lights must be on.

Visual Manoeuvring (Circling)

Visual manoeuvring (circling) is the term used to describe the visual phase of an instrument approach required to position an aeroplane for landing on a runway which is not suitably located for a straight-in-approach. The lowest minima to be used for circling are:

Visibility and MDH for Circling

Aeroplane category A

MDH	400 feet
Minimum meteorological visibility	1500 meters

Circling with prescribed tracks is an accepted procedure within the meaning of this paragraph.

Visual Approach

When either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain under the control of an air traffic control facility.

The minimum RVR for a visual approach shall be at least 800m.

Conversion of Reported Meteorological Visibility to

RVR

The following table may be used to convert reported meteorological visibility into RVR values.

Conversion of Visibility to RVR:

Lighting elements in operation	RVR = Reported Meteorological Visibility x	
	Day	Night
HI approach and runway lighting	1,5	2,0
Any type of lighting installation other than above	1,0	1,5
No lighting	1,0	Not applicable

Conversion of meteorological visibility into RVR values is not allowed when calculating take-off minima.

C.5 Weather Minima (students, various stages of training)

C.5.1 General

Pilots preparing for any flight should carefully consider the prevailing and expected weather conditions in order to determine whether the route can be flown safely or not. This preliminary weather check is normally accomplished by referencing the weather information available in the Briefing Room.

The briefing room weather information must not be considered official. The required official briefing may be obtained from meteorological office.

In conjunction with weather checks, Notices to Airmen (NOTAMS) and Pilot Reports (PIREPS) should be checked.

C.5.2 Flight planned in Accordance with Visual Flight Rules (VFR)

C.5.2.1 Wind and Visibility Limitations

Solo fights and S/PIC flights may not be dispatched when weather conditions are below those set in the following table.

Minimum ceiling and visibility	
Visibility equal or greater than 10 km	Minimum required ceiling 2000 ft
Visibility equal or greater than 5 km	Minimum required ceiling 3000 ft
Maximum wind on airfield	
Student pilots up to PPL stage	20 kts
Student pilots up to CPL	30 kts
Maximum x wind component	
Student pilots up to PPL stage	12 kts
Student pilots up to CPL	18 kts
Maximum winds aloft below 6000´	
Student pilots up to PPL stage	35 kts
Student pilots up to CPL	50 kts

For aircraft rentals use CPL wind limitations.

No solo flights may be dispatched regardless of weather conditions at the base of operations, if weather forecast for that area is to go below basic VFR minimums within the contemplated time of the flight plus 1 hour.

C.5.2.2 Night Operations

Solo operation at night is limited to lesson plan requirements only.

During hours of night no dual flight may be dispatched when weather condition are outside those set in the following table.

Maximum wind on airfield	25 kts
Maximum x wind component	15 kts
Maximum winds aloft below 6000´	45 kts
Minimum visibility	8 km
Minimum ceiling	
When operating within 15 Nm from lighted aerodrome.	Ceiling at least 2000 feet above highest obstacle in the area of operation, as measured by Met office.
When operating between lighted aerodromes which lie 30 Nm apart.	Ceiling at least 2000 feet above highest obstacle in the area of operation, as measured by Met office.
All other flights outside the area described above	Ceiling at least 2000 feet above highest obstacle in the area of operation and cloud cover 4/8 or less, as measured by Met office.

C.5.2.3 Special VFR

No flight may be planned to operate in special VFR condition, except for training purposes with a Flight Instructor within the control zone of LOWS.

C.5.2.4 Dual Flights

Dual flights may not be dispatched when weather conditions are outside those set in the following table.

Minimum ceiling and visibility	Visibility equal or greater than 5 km Minimum required ceiling 1000 feet

Maximum wind on airfield	35 kts
Maximum x wind component	20 kts
Maximum winds aloft below 6000´	50 kts

C.5.2.5 En-route Operating Minima for VFR Flights or VFR Portions of a Flight

Except operating as a special VFR flight, VFR flights shall be conducted so that the aeroplane is flown in conditions of visibility and distance from clouds equal to or greater than those specified in 3.2.2.

C.5.3 Flight Planned in Accordance with Instrument Flight Rules (IFR)

C.5.3.1 Planning Minima for Destination Aerodromes

An aerodrome shall not be selected as a destination aerodrome unless the appropriate weather reports or forecasts, or any combination thereof. Indicating that, during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above:

- RVR/Visibility in accordance with published landing minima; and
- For non-precision approach or circling approach, the ceiling must be at or above MDH.

Planning Minima for Destination Alternate Aerodromes

At least one destination alternate for each IFR flight shall be selected.

The Pilot in Command must select two destination alternates when the appropriate weather reports or forecasts for the destination, or any combination thereof, indicate that:

- During a period commencing 1 hour before and ending 1 hour after the estimated time of arrival the weather conditions will be below the applicable planning minima; or
- When no meteorological information are available.

Any required alternate(s) shall be specified in the operational flight plan.

An aerodrome shall not be selected as a destination alternate aerodrome unless the appropriate weather reports or forecasts, or any combination thereof, indicate that, during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above the planning minima in accordance with the following table:

Planning Minima – Destination Alternates

Type of approach	Planning Minima

CAT I	Non-precision (Notes 1 & 2)
Non-precision	Non-precision (Notes 1 & 2) plus 200 ft/1000 m Circling

Note 1: RVR

Note 2: The ceiling must be at or above MDH

Operating Minima

Take-off Minima

Multi engine aeroplanes

Departure weather minima at an aerodrome shall no be lower than Category I minimum or the applicable higher non-precision approach minima for that aerodrome. Minimum RVR/Visibility for take-off is 1200 meters.

Single engine aeroplanes

Departure weather minima at an aerodrome shall not be lower than Category I minimum plus 800 feet, or the applicable higher non-precision approach minima plus 800 feet, for that aerodrome. Minimum RVR/Visibility for take-off is 1500 meters.

Non-precision Approach

Minimum Descent Height

The minimum descent height on a Non-precision approach shall never be lower than either the Obstacle Clearance Height (OCH) (or Obstruction Clearance Limit (OCL)) for the Category of aeroplane.

Visual Reference

A pilot may not continue an approach below MDA/MDH unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

- Elements of the approach light system;
- The threshold;
- The threshold markings;
- The threshold lights;
- The threshold identification lights;

- The visual glide slope indicator;
- The touchdown zone or touchdown zone markings;
- The touchdown zone lights;
- Runway edge lights; or
- Other visual references accepted by the Authority.

Required runway visual range (RVR)

The minimum RVR for a Non-precision approach depends on the MDH and on the facilities (full, intermediate, basic or nil) i.e. approach lighting and runway lighting/marking available as indicated in the following four tables:

Non-precision approach minima. Full facilities (Notes 1, 5, 6 and 7)

MDH	RVR/Aeroplane Category A
250 ft – 299 ft	800 meters
300 ft – 449 ft	900 meters
450 ft – 649 ft	1000 meters
650 ft and above	1200 meters

Non-precision approach minima. Intermediate facilities (Notes 2, 5, 6 and 7)

MDH	RVR/Aeroplane Category A
250 ft – 299 ft	1000 meters
300 ft – 449 ft	1200 meters
450 ft – 649 ft	1400 meters
650 ft and above	1500 meters

Non-precision approach minima. Basic facilities (Notes 3, 5, 6 and 7)

MDH	RVR/Aeroplane Category A
250 ft – 299 ft	1200 meters
300 ft – 449 ft	1300 meters
450 ft – 649 ft	1500 meters
650 ft and above	1500 meters

Non-precision approach minima. Nil approach light facilities (Notes 4, 5, 6 and 7)

MDH	RVR/Aeroplane Category A

250 ft – 299 ft	1500 meters
300 ft – 449 ft	1500 meters
450 ft – 649 ft	1500 meters
650 ft and above	1500 meters

Note 1: Full facilities comprise runway markings, 720 m or more of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise runway markings, 420-719 m of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 3: Basic facilities comprise runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.

Note 5: The tables are only applicable to conventional approaches with a nominal descent slope of not greater than 4º. Greater descent slopes will usually require that visual glide slope guidance (e.g. PAPI) is also visible at the Minimum Descent Height.

Note 6: The above figures are either reported RVR or meteorological visibility converted to RVR as in sub-paragraph 3.4.4.4.6 (RVR/VIS Convert) below.

Note 7: The MDH mentioned in the tables above refer to the initial calculation of MDH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, e.g. conversion to MDA.

Night operations

For night operations at least runway edge, threshold and runway end lights must be on.

Precision Approach - Category I Operations

A Category I operation is a Precision instrument approach and landing using ILS with a decision height (DH) not lower than 200 ft and with a runway visual range (RVR) not less than 550 meters.

Decision Height

The decision height (DH) to be used for a Category I precision approach shall not be lower than:

- The minimum decision height specified in the Aeroplane Flight Manual (AFM), if stated;

- The minimum height to which the precision approach aid can be used without the required visual reference;
- The OCH/OCL for the category of aeroplane; or
- 200 ft.
- Visual Reference

A pilot may not continue an approach below the Category I decision height, determined in accordance with sub-paragraph (Decision height) above, unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

- Elements of the approach light system;
- The threshold;
- The threshold markings;
- The threshold lights;
- The threshold identification lights;
- The visual glide slope indicator;
- The touchdown zone or touchdown zone markings;
- The touchdown zone lights; or
- Runway edge lights.
- Required Runway Visual Range (RVR)

Note: Precision approach minimums for renters are set forth in 1.5.4.2.

Required Runway Visual Range (RVR)

The minimum RVR for a Category I approach depend on the DH and on the facilities (full, intermediate, basic or nil) i.e. approach lighting and runway lighting/marking available as indicated in the table below:

RVR for CAT I Approach vs. Facilities and DH:

Category I minima

Facilities/RVR (Note 5)

Decision height (Note 7)	Full (Notes 1 and 6)	Intermediate (Notes 2 and 6)	Basic (Notes 3 and 6)	Nil (Notes 4 and 6)
200 ft	550 meters	700 meters	800 meters	1000 meters
201 ft –250 ft	600 meters	700 meters	800 meters	1000 meters
251 ft – 300 ft	650 meters	800 meters	900 meters	1200 meters
301 ft and above	800 meters	900 meters	1000 meters	1200 meters

Note 1: Full facilities comprise runway markings, 720 m or more of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise runway markings, 420-719 m of HI/MI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 3: Basic facilities comprise runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, runway edge lights, threshold lights and runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.

Note 5: The above figures are either the reported RVR or meteorological visibility converted to RVR in accordance with paragraph 3.4.4.4.6 (RVR/VIS Convert).

Note 6: The Table is applicable to conventional approaches with a glide slope angle up to and including 4°

Note 7: The DH mentioned in the table above refer to the initial calculation of DH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, (e.g. conversion to DA).

Night Operations

For night operations at least runway edge, threshold and runway end lights must be on.

Visual Manoeuvring (Circling)

Visual manoeuvring (circling) is the term used to describe the visual phase of an instrument approach required to position an aeroplane for landing on a runway which is not suitably located for a straight-in-approach. The lowest minima to be used for circling are:

Visibility and MDH for Circling

Aeroplane category A

MDH	400 feet
Minimum meteorological visibility	1500 meters

Circling with prescribed tracks is an accepted procedure within the meaning of this paragraph.

Visual Approach

When either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain under the control of an air traffic control facility.

The minimum RVR for a visual approach shall be at least 800m.

Conversion of Reported Meteorological Visibility to

RVR

The following table may be used to convert reported meteorological visibility into RVR values.

Conversion of Visibility to RVR:

Lighting elements in operation	RVR = Reported Meteorological Visibility x	
	Day	Night
HI approach and runway lighting	1,5	2,0
Any type of lighting installation other than above	1,0	1,5
No lighting	1,0	Not applicable

Conversion of meteorological visibility into RVR values is not allowed when calculating take-off minima.

C.6 Training Routes and Areas

Local Operations

General

This section contains procedures for operations in the Salzburg area, the local practice area, and authorised local practice airports. Salzburg airport is defined as home airport for all flights.

Local Airports

A local airport is defined as an airport within a 50 NM range from Salzburg airport. All airports falling under this category are listed in the table below with their respective airport classification.

Airport	ICAO Code	Category	Remarks
Salzburg	LOWS	B	High Speed Traffic
Zell am See	LOWZ	A	Asphalt
St. Johann	LOIJ	A	Asphalt
Ried Kirchheim	LOLK	A	Asphalt
Schärding	LOLS	A	Asphalt
Mauterndorf	LOSM	B	Gravel / Grass

Local Practice Area

The organisation considers the whole airspace outside of the Salzburg CTR / CTA as a local practice area. When operating within the local practice area pilots are reminded to monitor Salzburg tower (118.10 MHz), unless another frequency is needed for communications with Flight Operations or other traffic.

Additional all pilots must be aware of possible strong arriving/departing traffic in and out of Salzburg CTR.

Local Routes

VFR routes have been set up for VFR traffic transiting in and out of Salzburg Airport. A diagram of the routes can be seen on illustration in Austrians AIP AD. Pilots wishing to deviate from those published routes could do so, but only after being cleared to do so by Salzburg tower.

Cross Country Routes

Listed below are the only cross-country routes that are authorised for use on solo and dual cross country flights conducted under EU-FCL approved curriculum. Routes may be flown in the direction indicated, or in the opposite direction. Routes can also be connected. One leg of an authorised route may be selected is a very short flight is required. However, care must be taken when selecting a route so as to insure it meets the minimum requirements of the flight course lesson being flown.

Cross country routes for: PPL, IR and CPL

PPL cross country routes:

1. Salzburg - Schärding - Linz - Salzburg
2. Salzburg - Niederöblarn - Schärding - Salzburg
3. Salzburg – St.Johann - Innsbruck - Salzburg
4. Salzburg - Bad Vöslau - Punitz - Salzburg
5. Salzburg - Lienz - Klagenfurt - Salzburg
6. Salzburg – Zell am See - Innsbruck - Salzburg
7. Salzburg - Innsbruck - Hohenems - Salzburg
8. Salzburg - Graz - Punitz - Salzburg

PPL Night cross-country:

1. Salzburg - Linz - Salzburg
2. Salzburg - Wien - Salzburg

CPL cross-country routes:

1. Salzburg – Portoroz - Salzburg
2. Salzburg - Pula - Salzburg

Note: Consult CFI for further information on course requirements.

New destinations may be added with CFI approval.

Cross Country Airports

The ATO has established three different aerodrome categories. Named Categories A, B and C, for the purpose facilitating the preparation and planning for each training flight. The same categorisation applies to the rental of aeroplanes.

Category A aerodrome

Category A aerodromes are unrestricted to both solo and dual flights. No special briefings are required before operating to such an aerodrome.

Category B aerodrome

Category B aerodromes could be an aerodrome which does not satisfy the category A aerodrome requirements or requires extra considerations due to:

- Non-standard approach aids or approach procedures;
- Unusual local meteorological characteristics;
- Surface type i.e. soft gravel or grass;
- Any other relevant considerations including obstructions, physical layout, traffic density, etc.

Prior to operating to a category B aerodromes, the student pilot and Flight Instructor shall undergo a special briefing i.e. check NOTAM for aerodrome condition, take special care when checking the actual and forecasted weather, go through the arrival procedures, etc. Solo flights shall not be conducted on to that aerodrome until the student pilot has either been there on a dual flight or landed on an aerodrome with similar characteristics.

Category C aerodrome

Category C aerodromes may only be uses on dual flights. After a special briefing, as described for category B aerodrome. No solo flights may be planed to that aerodrome, except for the purpose of over flying the aerodrome.

List of Categorised Aerodromes

The following list of aerodromes describes the category for each aerodrome and any special remarks. Aerodromes not listed below may not be used for any aeroplane.

Airport	ICAO Code	Cate-gory	Remarks

Austrian Airports			
Salzburg	LOWS	B	2750x45 Concrete
Linz	LOWL	B	3000x60 Asphalt
Innsbruck	LOWI	B	2000x45 Asphalt
Graz	LOWG	B	3000x45 Concrete
Klagenfurt	LOWK	B	2720x45 Concrete
Wien	LOWW	B	
Austrian Aerodromes			
Kirchheim	LOLK	A	743x18 Asphalt
Schärding	LOLS	A	800x21 Asphalt
Gmunden	LOLU	A	550x18 Asphalt
Wels	LOLW	A	1390x30 Asphalt
Zell am See	LOWZ	A	660x18 Asphalt
Niederöblarn	LOGO	A	730x30 Asphalt
Trieben	LOGI	A	785x18 Asphalt
Mauterndorf	LOSM	B	820x25 Grass
Seitenstetten	LOLT	A	830x25 Grass
Krems	LOAG	A	742x18 Asphalt
St. Johann	LOIJ	A	750x18 Asphalt
Aerodromes abroad			
Eggenfelden	EDME	B	1300x23 Asphalt
Vilshofen	EDMV	A	1257x20 Asphalt
Portoroz	LJPZ	A	1200x30 Asphalt
Pula	LDPL	B	2950x45 Asphalt

Trieste	LIPQ	B	3000x45 Asphalt
San Nicolo	LIPV	A	1060x25 Grass

C.7 Navigation Procedures

C.7.1 General

It is the general policy that all flights shall be planned and conducted along airways, air routes, RNAV routes and advisory routes. When this is not possible or when it leads to excessive operational penalties, all factors such as communications, air traffic services, navigational facilities, weather, etc. must be carefully considered before selecting a different routing.

Optimum use of radio aids is essential to good navigation. When a radio aid is manually selected the other pilot must be informed of the selection and whether the radio aid is identified. Liaison between pilots is vital.

Radio navigation receivers shall be referred to as relevant to the aeroplane type, e.g. “No. 1 ADF identified”, “Salzburg identified on No. 2 VOR”, and “ILS identified”. Any manually selected radio aids must be identified before they are used. For any instrument approach both pilots must identify the primary radio aids to be used. On all approaches optimum use shall be made of all available radio aids. It is vital to ensure the appropriate positioning of the ADF/VOR selectors for both pilots’ RMIs/RDMIs and that the correct VOR radial or ILS front course is selected.

Where any procedure requires the use of the marker receiver, both pilots shall be able to hear them through the overhead speaker.

C.7.2 Selection and Monitoring of Radio Aids

(1) Cross Monitoring Possible: When cross monitoring of radio aids is possible, i.e. the ability to use one radio aid to cross check the information from another when multiple aids are available such as ILS with NDB/VOR etc. All radio aids are to be identified by at least one pilot and both pilots shall identify the primary radio aid.

(2) No Cross Monitoring Possible: When one radio aid alone is used both pilots must identify it and the call sign monitored or re-identified as follows:

ILS: The call sign must be re-identified:

- When the aeroplane is established on the localiser;
- Whenever warming flags have appeared and cleared; and
- Whenever indications are in doubt.

Note: Presence of an ILS call sign does not confirm the integrity of the glide slope signal.

VOR: The call sign must be re-identified:

- When established on the inbound radial or when on final approach;
- Whenever warming flags have appeared and cleared including passing an indicated overhead; and
- Whenever indications are in doubt.

NDB: The call sign shall be monitored by one of the operating pilots throughout the approach, and missed approach when relevant.

- Operational Precautions when using NDB

Continuous monitoring of NDB signals during departure, en-route and approach may determine to what extent an unstable bearing can be referred to static noise or static bursts or other interfering signals. A positive NDB overhead check should imply continuous monitoring of the NDB signals and observation of ADF needle reversal within the ETO time frame.

- NDB Approach

Only one NDB in the Terminal Area: When approaching the NDB serving the terminal area both ADFs (if installed) shall be turned to that station and continuous monitoring of the NDB signals maintained on one of the ADFs. Before initiation of the final approach a positive overhead check must be accomplished. A final approach shall not be initiated unless a normal overhead check and ADF needle reversal is observed.

- More than one NDB in the Terminal Area

When two or more NDB facilities are used for the published approach procedure a continuous monitoring of the NDB signal from the station being used for navigation and positive overhead checks shall be accomplished during the initial and final approach segments. A final approach shall not be initiated unless a normal overhead check and ADF needle reversal is observed.

- Selection of No. 1 or No. 2 ADF (if installed)

Prior to take-off, No. 2 ADF should be tuned to a suitable radio aid for tracking or monitoring the departure and No. 1 ADF to a radio aid usable for approach should an immediate return become necessary. When two ADFs are required for the departure the sequential use of ADFs shall be at the Pilot-in-command discretion.

During NDB approaches and other non-precision or precision approaches where published approach procedures are based on the use of more than one NDB. The final approach course should be tracked or monitored using ADF No. 1 whereas No. 2 ADF (if installed) should be tuned to other stations suitable for the approach and, when relevant, the missed approach.

C.8 Altimeter Setting Procedures

C.8.1 General

The procedures herein describe the method intended for use in providing adequate vertical separation and terrain clearance during all phases of flight.

Where reference is made to “Standard” altimeter setting the barometric subscale is set to 1013 hPa or 29.92” Hg.

Since the altimeter subscales are designed to accommodate whole millibar/hectopascal settings only, no attempt must be made to apply a setting to the half hectopascals, but the figure as received from ATC must, if necessary, be rounded down to the nearest whole hectopascal and this setting applied. Unless this is done it will not be possible to crosscheck as and when appropriate.

Care should be taken to ensure that the altimeter setting as heard from ATC is properly understood. Common errors in communication are omission of the decimal e.g. saying “niner niner five” but meaning 999.5 rather than 995.0 hPa. Giving the setting in inches Hg. in such a way, it can be confused with hectopascals, e.g. saying “niner niner five”, but meaning 29.95” Hg rather than 995.0 hPa.

C.8.2 Verbal Crosschecks

Operating procedures require certain verbal altimeter crosschecks to be made. It is particularly important that these should be by challenge and response, i.e. the questioner should challenge: “Altimeters and receive a response “One Zero One Three (or “Standard One Zero One Three) Through One Five Zero Now”. Or while on the ground during pre-flight checks “Niner Eight Niner, Twenty Feet” and during flight when referenced to QNH “Niner Eight Niner, Six Thousand Two Hundred Now”. Following the response from the other pilot, the challenger shall cross check the values with his altimeter and respond “Niner Eight Niner; Six Thousand Three Hundred; Checked”.

C.8.3 Definitions

The following ICAO definitions have been established:

Altitude: The vertical distance of a level, a point or an object considered as a point, measured from mean sea level.

Height: The vertical distance of a level, a point or an object considered as a point measured from a specified datum.

Elevation: The vertical distance of a point or a level on or affixed to the surface of the earth measured from mean sea level.

Flight level: Surface of constant atmospheric pressure, which is related to a specific pressure datum, 1013.2 hPa. Flight levels are separated by specific pressure intervals.

Transition Altitude: The altitude in the vicinity of an aerodrome at or below which the vertical position of an aeroplane is controlled by reference to altitudes.

Transition Level: The lowest flight level available for use above the transition altitude.

Transition Layer: The airspace between the transition altitude and the transition level.

Note: A pressure type altimeter calibrated in accordance with the standard atmosphere:

- When set to QNH, will indicate altitude.
- When set to QFE, will indicate height above the QFE reference datum.
- When set to 1013.2 hPa, may be used to indicate flight levels.

Altimeter Settings in Use

The QNH and the standard setting of 1013.2 hPa are the altimeter settings normally used in civil aviation.

The QNH is the pressure at aerodrome level converted to mean sea level using the standard atmosphere values. If this pressure value is set on the sub-scale, the altimeter will indicate the airfield elevation after landing. It should be realised that at altitudes higher (or lower) than the elevation of the aerodrome for which the QNH is valid, the altimeter does not indicate correctly, except when the atmosphere below the aeroplane conforms to standard atmosphere conditions. The QNH is normally used for take-off or landing for the determination of terrain clearance and to establish and maintain vertical separation.

The 1013.2 hPa setting is the pressure at mean sea level in the standard atmosphere. If this pressure value is set on the sub-scale, the altimeter may be used to indicate flight levels. This setting is recommended by ICAO for use by en-route traffic above the transition altitude, in order to establish and maintain vertical separation.

QNH Procedures

The QNH is used for take-off and landing, for terrain clearance purposes and for vertical separation of aeroplanes. In flight the pilot must compare the true altitude of his aeroplanes with the elevation of ground obstacles. In order to convert (corrected) indicated altitude to true altitude, a further correction for temperature must be applied.

Sufficient QNH reporting stations are available in those regions where they are required. Details concerning the transfer of one QNH setting to another are given in the Route Manuals.

Pilots should recognise the problems connected with the transition of one QNH setting to another. A large change of altitude is necessary when large differences in successive QNH settings prevail. Prior to landing the pilot must always obtain the QNH for the airfield concerned.

Standard Altimeter Setting Procedure

Principle of Operation

The standard altimeter setting procedure is based on the principle that the transition from en route standard altimeter setting (1013.2 hPa) to a landing altimeter setting (QNH) takes place during descent and from a take-off QNH to an en route standard setting (1013.2 hPa) during climb. This concept enables aeroplanes operating well above critical terrain to operate along continuous isobaric surfaces, without the necessity for frequent altimeter adjustments, which often necessitate large altitude adjustments and upset previously established vertical separation.

However, the procedure requires adequate precautions in determining usable, i.e. safe flight levels over high terrain.

ATC ensures that the lowest flight level in use will provide at least 1000-ft terrain clearance.

● All flights operating level at or above the transition level shall be flown at flight levels and maintain vertical separation by reference to an altimeter set to 1013.2 hPa.

● All flights operating level at or below the transition altitude shall be flown at altitudes and maintain vertical separation by reference to an altimeter set to the QNH valid for the aerodrome or area concerned.

● All flights passing through the transition layer shall have their altimeter set to 1013.2 hPa when climbing, and to the QNH valid for the aerodrome or area concerned when descending. Level flight in the transition layer is normally not allowed.

Transition Altitude

A transition altitude shall be specified for each aerodrome by the State in which the aerodrome is situated and shall be published and depicted on instrument approach charts.

The height of the transition altitude shall be as low as operationally possible but never less than 1500 ft above aerodrome elevation.

From the above it is evident that a transition altitude always has a fixed value.

Transition Level

The transition level has no fixed value but varies with the QNH value of the aerodrome or area concerned. It is periodically established by ATS and passed to aeroplanes in routine approach and landing or take-off instructions.

Transition Layer

The transition layer, being the airspace between the transition altitude and the transition level has no fixed thickness. The thickness varies with the QNH value of the aerodrome or area concerned.

The transition layer shall normally occupy an area in the vicinity of an aerodrome only.

Note: Although no longer required under the ICAO procedures, certain States prescribe a minimum thickness of 1000 ft for the transition layer. In that case the application of the standard altimeter setting procedure automatically provides for at least 1000 ft vertical separation between aeroplanes flying on QNH (at or below the transition altitude) and aeroplanes flying on 1013.2 hPa (at or above the transition altitude). Where States do not prescribe a minimum thickness for the transition layer; the minimum required vertical separation of 1000 ft is obtained by instructing aeroplanes concerned to maintain specific flight levels or altitudes ensuring such separation.

Altimeter Setting Changes

Take-off and initial climb is executed on the valid aerodrome QNH. While passing through the transition altitude the altimeter is set to the standard setting of 1013.2 hPa.

Descent and landing

Descent is executed on the standard setting 1013.2 hPa until:

- Reaching the transition level.
- Instructed by ATC.

Further descent and landing is executed on the valid aerodrome QNH.

Note: In cases where more than one aerodrome are in close proximity, ATC procedures may involve the use of a common QNH setting for control purpose aerodrome QNH values would then be used only for take-off, initial climb, approach and landing.

Checking of Terrain Clearance

The cruising flight level/altitude shall always be equal to or higher than the basic minimum safe enroute altitude. When selecting cruising levels the following factors shall be taken into account:

(1 hPa = 30 ft; 10°C below ISA = 4% altitude)

Example:

FL 160 OAT -30°C

MEA 12000 ft

QNH 977 hPa

Step 1: Temperature Correction

ISA FL 160 = -17°C

OAT FL 160 = -30°C

ISA Deviation = -13°C = ca 5% alt.

12000 + 5% = 12600

Step 2: QNH Correction

1013 - 977 = 36 hPa

12600 + (36x30) = 13680

Lowest usable Flight Level is FL 140. FL 160 is acceptable.

Altimeter pre-flight checks

During cockpit preparation before engine start the setting mechanisms may be checked by making an arbitrary alteration, e.g. 10 hPa, and noting that the altimeter readings alter by an appropriate amount (in the example above by 300 ft).

Before engine start and during take-off both primary and standby altimeters shall be set to local QNH and the readings checked to be within the prescribed POH limitations. Any deviation noted from the desired indication during pre-flight cockpit check, which is within the tolerances specified in the POH, shall be ignored during flight, and no adjustment of the indication shall be made at any stage of the flight.

When engaging automatic flight after take-off, pilots must ensure that the controlling altimeter's subscale for autopilot altitude control corresponds to the clearance issued, i.e. the controlling subscale must be set to QNH when cleared to an altitude and 1013 hPa when cleared to a FL.

Altimeters - Take-Off and Departure

On passing the Transition Altitude (TA) during climb both primary altimeters shall be set to 1013 hPa. The Pilot-in-command may, at his discretion, after clearance to a Flight Level has been received, require both primary altimeters to be set to 1013 hPa before TL has been passed. The standby altimeter should be set to 1013 hPa as a procedure in preparation for the after take-off checklist. Verbal crosschecks in accordance with 3.2.13.2 shall be complied with.

Altimeters - Cruise and En-route Climb

All altimeters shall be set to standard setting above transition altitude and verbal checking as in 3.2.15.

Altimeters - Descent and Approach

During initial descent both pilots' altimeters will remain at Standard setting. Standby altimeters as installed should normally remain at standard setting but may at the Pilot-in-command's discretion be referenced to QNH at this stage of flight.

When cleared by ATC to leave a flight level and descent to an altitude below the Transition Level (TL), and provided no passing FL checks are required, all altimeters shall be set to QNH and cross-checked for agreement.

Altimeters - Missed Approach

Both pilots' altimeters remain on QNH.

D Operations Manual D

D.1 Appointments of Persons Responsible for Standards/Competence of Flying Staff

Please refer to OMM 9: Management System Training

D.2 Initial Training

Please refer to OMM 9: Management System Training

D.3 Refresher Training

Please refer to OMM 9: Management System Training

D.4 Standardisation Training

Please refer to OMM 9: Management System Training

D.5 Proficiency Checks

Please refer to OMM 9: Management System Training

D.6 Upgrading Training

Please refer to OMM 9: Management System Training

D.7 ATO Personnel Standards Evaluation

Please refer to OMM 9: Management System Training

D.8 Instructors for Flight Training

Please refer to OMM 9: Management System Training

D.9 Standards/Evaluation

Please refer to OMM 9: Management System Training

E Appendix

E.1.1 General

When scheduling Flight Instructors for duty by the Chief Theoretical Knowledge Instructor, the organisation is obliged to honour the existing working agreements between the organisation and the individual Flight Instructor. Scheduling according to those agreements must not exceed the limits set in this chapter.

If, for any reason, actual block time, flight duty period or rest period deviate from scheduled limits, such deviations must not exceed the limits set in this chapter.

The rules listed below shall apply to all Flight Instructors employed by the ATO and its students when they are scheduled for flight training. The rules do not apply to students when scheduled for theoretical instruction.

A Flight Instructor shall not operate on an aeroplane if he feels not fit to fly or suffers from fatigue.

Salzburg, Austria is the nominated home base for all Flight Instructors.

E.1.2 Terminology

Actual flight operation - Actual flight operation starts at the reporting time and ends when the Flight Instructor goes off duty.

Adequate facilities - A quiet and comfortable place not open to the public.

Block time - The time between an aeroplane first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position or until all engines are stopped.

Break - A period free of all duties, which counts as duty, being less than a rest period.

Day - A 24 hour period commencing at 0000 UTC.

Duty - Any task that a Flight Instructor is required to carry out.

Duty period - A period which starts when the Flight Instructor is required to report for a duty and ends when the Flight Instructor is free from all duties.

Flight duty period (FDP) - A period which commences when a Flight Instructor is required to report for a duty period that includes a flight and which finishes at the end of the block time on the final flight on which the Flight Instructor is operating.

Home base - The place nominated by the operator to the Flight Instructor from where the Flight Instructor normally starts and ends a duty period or a series of duty periods and at which place, under normal conditions, the ATO is not responsible for the accommodation of the Flight Instructor concerned.

Local day - A 24 hour period commencing at 0000 local time.

Notification time - The period of time allowable between the time a Flight Instructor on standby receives a call requiring him to report for duty and the time he is required to report for that duty.

Positioning - The transferring of a Flight Instructor from place to place, excluding "travelling" as defined in sub-paragraph (v) below, at the behalf of the ATO.

Reporting time - The time at which a Flight Instructor is required to report for any duty.

Rest period - An uninterrupted and defined period of time during which a Flight Instructor is free of all duties and/or standby.

Split duty - A flight duty period which consists of two duties separated by a break.

Standby - A defined period of time during which a Flight Instructor has not been assigned to any duty, but during which he is required to be available to receive an assignment for duty without an intervening rest period.

Suitable accommodation - A suitably furnished bedroom, with single occupancy if required by the Flight Instructor, which is subject to minimum noise, is well ventilated and should have the facility to control the levels of light and temperature.

Time difference - The number of hours separating local standard time at two locations (disregarding "daylight saving time").

Travelling - All reasonably planned travelling time spent by a Flight Instructor in transit between his place of rest provided and the place of duty and vice versa.