

Australian Government Civil Aviation SafetyAuthority

Civil Aviation Advisory Publication

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This publication is advisory but is a CASA preferred method for complying with the Civil Aviation Regulations 1988 (CARs 1988).

It is not the only method, but experience has shown that if you follow this method you will comply with the Civil Aviation Regulations.

Always read this advice together with the appropriate regulation and any Civil Aviation Order(s).

Contents

See Page 2

Multi-Crew Pilot Licence

The relevant regulations and other references

Civil Aviation Regulations 1988 (CAR) 5.08, 5.40, 5.40(1)(a)(i), 5.41(1)(3)(4)(7), 5.104(1), 5.115, and 5.172, 5.216

International Civil Aviation Organization (ICAO) Annex 1 (Personnel Licensing)

Civil Aviation Order (CAO) 40.0 – Pilot Licences and Ratings

Civil Aviation Order 40.1.8

Civil Aviation Order 40.2.1

Civil Aviation Order 82.3

Civil Aviation Order 82.5

ICAO Doc 9868 – PANS-TRG

Who this Civil Aviation Advisory Publication (CAAP) applies to

The information in this CAAP is intended for those persons wishing to obtain the Multi-crew Pilot Licence (MPL), and persons and organisations who will be providing training leading to the issue of the MPL.

Why this publication was written

This CAAP has been written to provide guidance on the aeronautical knowledge, flying training, assessment, and testing/examining requirements for the grant of a Multi-crew Pilot Licence (MPL).

Status of this CAAP

This is the first CAAP written for the MPL and becomes effective on 23 December 2008.

For further information

For application and policy advice contact Roger Crosthwaite, the Flight Crew Licensing Section at CASA on 131 757.

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1. Abbreviations	ADF		Automatic Direction Finding Equ	1
	AFR	U	Aerodrome Frequency Response	Unit
	AGL		Above Ground Level	· •
	AIP I	LINK	Aeronautical Information Publica route Supplement	ation – En-
	AOC		Air Operator's Certificate	
	APU		Auxiliary Power Unit	
	ATC		Air Traffic Control	
	ATIS		Automatic Terminal Information	Service
	ATPI		Air Transport Pilot Licence	
	ATP((A)L	Air Transport Pilot (Aeroplane) L	icence
	ATSI		Australian Transport Safety Burea	
	CAA		Civil Aviation Advisory Publicati	
	CAR		Civil Aviation Regulations (1988))
	CASA		Civil Aviation Safety Authority	
	CASI	K	Civil Aviation Safety Regulation	
	CFI CPI		Chief Flying Instructor Commercial Pilot Licence	
	CPL CTA		Control Area	
	CTA		Common Traffic Advisory Freque	encv
	CTR	-	Control Zone	
	DA		Decision Altitude	
	DAP		Departure and Approach Procedur	res
	DH		Decision Height	
	DME	1	Distance Measuring Equipment	

ETA	Estimated Time of Arrival		
ETI	Estimated Time Interval		
ETP	Equi Time Point		
FDS	Flight Director System		
FMS	Flight Management System		
FRMS	Fatigue Risk Management System		
FROL	Flight Radio Operator Licence		
FSTD	Flight Simulation Training Device		
GPS	Global Positioning System (see GNSS)		
GPWS	Ground Proximity Warning System		
GS	Ground Speed		
HF	Human Factors		
IAL	Instrument Approach and Landing Chart		
IAS	Indicated Air Speed		
ICAO	International Civil Aviation Organization		
IFR	Instrument Flight Rules		
IMC	Instrument Meteorological Conditions (other		
	than VMC)		
IOE	Initial Operational Experience		
IMC	Instrument Meteorological Conditions (other		
	than VMC)		
IOE	Initial Operational Experience		
IREX	Instrument Rating Examination		
	Aviation Authority)		
KDR	Knowledge Deficiency Report		
LAHSO	Land and Hold Short Operations		
LLZ	Localiser		
LSALT	Lowest Safe Altitude		
MAPT	Missed Approach Point		
MBZ	Mandatory Broadcast Zone		
MDA	Minimum Descent Altitude		
MEL	Minimum Equipment List		
MMO	Maximum Operating Limit Mach Number		
MOS	Manual of Standards		
MPL	Multi-crew Pilot Licence		
MSA	Minimum Sector Altitude		
NDB	Non-directional Radio Beacon		
NM	Nautical Miles		
NOTAM	Notice to Airmen		
OM	Operations Manual		
PAL	Pilot Activated Lighting		
PANS-TRG	Procedures for Air Navigation Services -		
	Training		
PAPI	Precision Approach Plan Indicator		
РОН	Pilot Operating Handbook		
PPL	Private Pilot Licence		
QNH	Altimeter Sub-scale Setting to Obtain		
-	Elevation or Altitude		
R/T	Radio Telephone		
RAIM	Receiver Autonomous Integrity Monitoring		

SAR	Search and Rescue		
SARWATCH	Search and Rescue Watch		
SIDs	Standard Instrument Departure		
SOPs	Standard Operating Procedures		
SRD	Standard Radar Departure		
STAR	Standard Arrival Route		
TEM	Threat and Error Management		
VASI	Visual Approach Slope Indicator		
VFR	Visual Flight Rules		
VMC	Visual Meteorological Condition		
VMCA	Minimum Control Airspeed Airborne		
VTOSS	Take-off Safely Speed		
VX	Best Angle of Climb Speed		
VXSE	Single-engine Angle of Climb Speed		
VY	Best Rate of Climb Speed		
VYSE	Best Single-engine Rate of Climb Speed		
	(Blue line speed)		
WPT	Way Point		
WV	Wind Velocity		

2. Definitions

Initial Operational Experience (IOE) means the operational experience a newly qualified co-pilot accrues on-line operations as a member of the operating crew and under the supervision of a training or checking captain. The conclusion of IOE is marked by passing a proficiency check with a check captain and being 'released' or 'checked' to normal line operations.

3. Who Should Read This CAAP?

3.1 Why you should read this CAAP

3.1.1 This Civil Aviation Advisory Publication (CAAP) should be read by those interested in developing and conducting a course of training for the Multi-crew Pilot Licence (MPL). It should also be used by trainers involved in the training of MPL students and by airlines intending to hire MPL qualified pilots.

3.1.2 The CAAP provides information and guidance on the conduct of training for the MPL.

4. Background

4.1 What is the purpose of this CAAP?

4.1.1 This CAAP provides guidance on the measures that should be taken to facilitate the safe and efficient delivery of training for the MPL.

4.2 What is the Multi-crew Pilot Licence?

4.2.1 The MPL was established by the International Civil Aviation Organization (ICAO) in November 2006. It is prescribed in Section 2.5 of Annex 1 of the Convention on International Civil Aviation (Annex 1).

4.2.2 The MPL is aimed at the training and licensing requirements of pilots flying, as the co-pilot of a multi-pilot crew:

in large, high performance, complex aeroplanes; and

operating in all weather conditions according to the Instrument Flight Rules (IFR).

4.2.3 The MPL is an alternative training and licensing pathway to becoming an airline co-pilot. It complements, but does not replace, the existing ways of qualifying as a co-pilot of an aeroplane operated with more than one pilot. (See diagram 1 at Appendix A of this CAAP).

4.2.4 MPL training and licensing standards prescribed by ICAO allow for greater use of modern training devices such as Flight Simulation Training Devices (FSTD) in all stages of training.

4.2.5 The prerequisites for flight crew licences include age, aeronautical knowledge, competency/skill, aeronautical experience, and training. Apart from the MPL, aeronautical experience standards for flight crew licences are broken down into components by stating a minimum number of hours of flying such as pilot-in-command, navigation, night and instrument flying.

4.2.6 The ICAO aeronautical experience standard for the MPL is not broken down into components. The standard specifies a minimum total number of 240 hours of actual or simulated flight hours including the minimum hours to obtain a private pilot licence.

4.2.7 The move away from specific components of aeronautical experience for the MPL reflects the greater attention given by Annex 1 to the competency standards prescribed for the licence. Competency standards are already prescribed for each Australian flight crew licence. Competency standards have been developed for the MPL and are set out in CAO 40.1.8.

4.3 What does the MPL authorise?

4.3.1 A person holding an MPL is authorised to perform the duties of a co-pilot of at least one type of turbine-powered aeroplane which is required to be operated with more than one pilot.

4.3.2 Transfer training and qualification requirements must be met before the holder of an MPL may operate a single-pilot aircraft or exercise the privileges of another type of licence such as the private or commercial pilot licence.

4.3.3 Transition from the MPL to the Private Pilot (aeroplane) Licence (PP(A)L), Commercial Pilot Aeroplane Licence (CP(A)L) or Air Transport Pilot (Aeroplane) Licence (ATP(A)L) is subject to the requirements contained in Civil Aviation Regulations (CAR) 1988.

4.4 What is expected of MPL training?

4.4.1 The MPL requires a person to complete a course of approved training, which may only be conducted by authorised training organisations. According to Annex 1, approved training involves training which is "closely supervised, systematic and continuous, and conforms to a planned syllabus or curriculum."

4.4.2 An MPL training programme needs to integrate the knowledge and skill development elements of training using various training media such as in-classroom, flight procedures trainers, computer-based training systems, and various levels of simulator and aeroplanes. The media used for any particular element in the training should be suitable, appropriate and effective.

4.4.3 MPL courses need to be competency-based. One of the attributes of competency-based training, as defined in the ICAO publication, Procedures for Air Navigation Services – Training (PANS-TRG), is the use of a continuous evaluation process to ensure the effectiveness of training and its relevance to line operations. This aspect of continuous evaluation is especially important given the nature of the MPL.

4.4.4 The level of competency expected from MPL holders has been defined by ICAO in Annex 1. ICAO has also provided competency units, competency elements and performance criteria for the MPL in Appendix 2 of Chapter 3 in the PANS-TRG. In broad terms, the MPL holder is expected to be able to complete an airline's initial operational experience (IOE) stage of training with a high probability of success, and within the timeframe normally allowed for that stage.

4.4.5 CAO 40.1.8 contains the competency standards including competency elements and performance criteria for the grant of an Australian MPL. These competency standards are based on ICAO standards.

4.4.6 Training organisations involved in an MPL programme need to be able to demonstrate, to the satisfaction of the Civil Aviation Safety Authority (CASA), that their training will produce a graduate with a level of competency in multi-crew operations at least equivalent to what is currently expected from graduates of ab-initio training programmes who have completed type rating training for a multi-pilot aeroplane.

5. Organisational Requirements

5.1 Overview

5.1.1 Training for the MPL may only be conducted by organisations approved by CASA to conduct MPL training and the training programme must be approved by CASA.

5.1.2 An appropriate arrangement between all the training providers and the airline which will be employing the graduates of the course is required to ensure the following outcomes:

theory and practical course content is integrated throughout the training programme regardless of which organisation conducts the training;

an effective in-training and post-training evaluation system will be used throughout the programme;

corrective action is taken if in-training or post-training evaluation indicates a need to do so;

procedures and practices learnt in the training programme are relevant and applicable to the airline's operation;

graduates from the course are fully prepared for the airline's IOE; and

one organisation is accountable for the courseware, effective coordination and oversight of the programme to ensure it is delivered in accordance with the training programme that was approved by CASA, quality assurance, and reporting to CASA.

5.2 Training organisations

5.2.1 Training organisations delivering MPL training must hold applicable approvals, have suitable facilities and resources and engage appropriately qualified personnel. Training organisations need to satisfy CASA that they have the capability to deliver the course (or their component of the course in the case of a consortium of organisations participating in a programme).

5.2.2 CASA would accept a consortium of training organisations collaborating to deliver an MPL course. For example, an organisation which specialises in ab initio training could collaborate with another organisation which specialises in airline type rating training to deliver an MPL package.

Where a programme is to be delivered by a consortium of training organisations, one organisation must be nominated as the accountable organisation.

5.2.3 An MPL course will only be approved if an airline is involved. The airline would be the one which is expected to use the MPL graduates. The airline's involvement is required to ensure the students are trained in the airline's operating procedures and the instructors are familiar with the airline's operation. The airline is expected to at least:

support the training of instructors used in the Intermediate and Advanced Stages of the course;

provide its operational manuals for instructors and students to use in the Intermediate and Advanced Stages of the course; and

participate in the selection of the students.

5.3 Training organisations to hold AOC

5.3.1 An organisation conducting flight training in aircraft must hold an Air Operator's Certificate (AOC) which was issued by CASA and authorises the organisation to conduct MPL flying training.

5.3.2 An AOC is a permission granted by CASA under Section 27 of the Civil Aviation Act 1988 to conduct commercial activities prescribed in Regulation 206 of the <u>Civil</u> <u>Aviation Regulations (CARs)</u>. Flying training conducted in an aircraft is a commercial activity. Therefore, it is unlawful to conduct MPL flying training without an AOC.

5.3.3 Information relating to AOCs for flying schools may be read on CASA's website at the following link - http://www.casa.gov.au/aoc/aoc_app/initial.htm.

5.3.4 An organisation which is delivering MPL training other than in aircraft, and is not the end-user airline, is not required to hold an AOC. However, the organisation is expected to satisfy the same organisational requirements that apply to the holder of an AOC.

5.4 Training organisations to have operations manual

5.4.1 Flight training organisations need to have an operations manual (OM) which is provided for the use and guidance of the operator's staff and students. The OM needs to contain such information, procedures and instructions with respect to the flight operation of all types of aircraft and FSTD operated by the operator as are necessary to ensure the safe conduct of flight operations (CAR 215(2)).

5.4.2 Organisations conducting MPL training are also expected to have an effective Safety Management System which is relevant to their operation.

5.4.3 The OM represents the core of an organisation's operation and is provided by the organisation for the use and guidance of all operational personnel. Accordingly, the manual needs to be written in a manner that will encourage staff and students to use the manual as the primary reference for all matters relating to the conduct of training, the operation of the organisation, and the operation of its training devices and aircraft. The contents of the OM should be sufficiently clear and detailed to ensure that all personnel working in the organisation understand all relevant policies and procedures.

5.4.4 If the organisation intends the OM to give a direction for an action to be carried out, then the person or appointment holder required to carry out the action should be named. It may also be relevant to state how the action is to be carried out. If it is intended that discretion is permitted then guidance should be given on just what discretion is allowed, and how it should be applied. Organisations should note that while the format of the manual is flexible they do need to ensure that all aspects of their operation are addressed. Advice and guidance on the preparation of operations manuals is available in CAAP 215-1 (0) 'Guide to the Preparation of Operations Manuals'.

5.5 Training provider's organisation

5.5.1 In order to be recognised as 'approved trainers', organisations delivering training for the issue of an MPL will need to provide a structure which promotes communication between staff, establishes unambiguous lines of responsibility for the delivery of training and includes clear and functional supervision for both staff and students.

Overall control of training should be vested in one person (such as a Head of Training) who has the authority to communicate with CASA on all training related matters.

5.5.2 A suitable organisational structure is one which:

identifies the key positions within the organisation and describes how individual responsibilities will be allocated;

clearly indicates how supervision will be conducted for both staff and students;

provides a description of the supervisory structure of the organisation;

describes how the supervision of students will be achieved; and

gives a clear description of how junior instructors will be supervised and how their progress will be monitored and recorded.

5.5.3 Large organisations need to consider the number of staff necessary for the safe conduct and supervision of their operation.

5.5.4 Organisations need to take into consideration the workload (staff numbers) required to monitor any training delivered by third parties (as applicable).

5.6 Facilities

5.6.1 The facilities required to conduct training will vary according to the size and complexity of the individual organisation. However the following facilities should be considered a minimum:

training rooms that are;

- furnished in a manner such that each student has access to a reasonable study/work area (a chair and a desk or flat surface suitable for writing on), and
- free from outside distractions (i.e. not part of the general public areas of the organisation);

training aids that are appropriate to the content of the course being conducted; and

a general briefing area suitable for the briefing/debriefing of students before and after training flights or FSTD sessions. This area should be free from distractions, quiet and equipped with some means of presenting information in a visual format, such as a white board.

5.7 Training aircraft

5.7.1 Training organisations should only use aircraft that are equipped in a manner which will enhance the delivery of flight training and ensure the objectives of the course are realised, consistent with the requirements of an MPL.

5.7.2 The configuration of the training aircraft must be orientated to the particular stage of training. When aircraft are used for multi-crew operations, the aircraft needs to be configured for realistic multi-crew operations, including duplicated instrument panels and engine/propeller controls, such that neither pilot is required to use instruments or controls that are not on 'their' side of the aircraft.

5.8 Training devices

5.8.1 Training devices used in the MPL course should be approved for that purpose. The devices should conform to the standards specified in PANS-TRG.

5.9 Base training

5.9.1 The final element of an MPL course requires the students to complete base training in an aircraft of the same type which was used during the final stage of the course.

5.9.2 The number of take-offs and landings required to be flown by a student during base training is twelve. This number can be reduced by CASA but in any case not less than six, based on evidence of experience gained with MPL implementation and only where the airline can demonstrate the effectiveness of a particular MPL training programme.

6. Course Approval

6.1 Overview

6.1.1 MPL training courses need to be approved by CASA. The process for approving a training course is available from CASA's website <u>www.casa.gov</u>.

6.2 Course content and structure

6.2.1 The requirements for a course of training are set out in CAO 40.1.8. The structure of an MPL course should be consistent with the content and structure model prescribed in Annex 1 and PANS-TRG as they apply to the MPL. The ICAO model for the MPL is attached as Appendix B to this CAAP.

6.2.3 A course of training may only be approved if it contains all the elements prescribed by ICAO in PANS-TRG, satisfies the relevant requirements of CAR 1988 and accords with the guidance provided in this CAAP. 6.2.4 The theory requirements for the course are set out in CAO 40.1.8 and cover a set of examinations that make up the MP(A)L theory examination. To prepare students for the examination, the course should cover the syllabus content prescribed by CASA for the following qualifications.

The syllabus content is published in CAO 40.1.8.

Flight Radio Operator Licence (FROL);

Instrument Rating (Aeroplane);

Type Rating for the aircraft to be used in the final stage of the course and as the aircraft in which the student is expected to operate during IOE;

Air Transport Pilot (Aeroplane) Licence (ATP(A)L); and

Relevant content in the Commercial Pilot (Aeroplane) Licence (CP(A)L) Day VFR Syllabus.

6.3 Resources

6.3.1 The training plan needs to show what resources are to be used in delivering the course, such as training devices, computer based training systems, FSTDs and aircraft.

6.3.2 The OM needs to cover maintenance requirements for training systems and devices and what training and assessment arrangements are to be used for staff required to use the particular type of training resources.

7. Conduct of Training

7.1 Overview

7.1.1 Training for the MPL should be conducted using competency-based training methods. Guidance material on how to establish and deliver a training course using these methods is available from CASA's website <u>www.casa.gov</u>.

7.1.2 ICAO has published information about competency based training in its publication PANS-TRNG, document number 9868.

7.2 Students - selection

7.2.1 Students enrolled in an MPL course are expected to have been selected for the course based on their suitability for the role of co-pilot of a multi-crew airline operation and their ability to successfully undertake the course.

7.2.2 The selection process should involve the end-user airline.

7.2.3 To ensure students are fully engaged in their course, they should be informed about the requirements of the MPL. Information should include the prerequisites for obtaining an MPL, the scope and content of the course, the competency standards they will be trained for and assessed to, the course schedule and the requirements imposed on holders of an MPL that apply post qualification.

7.3 Training plans

7.3.1 To obtain an MPL a person must demonstrate competency by achieving the prescribed flight standards. The standards provide a basis for the design of a training strategy or plan that will allow the transfer of skills and knowledge from the instructor to the student in a clear, logical and systematic manner. As a component of this process of transferring knowledge, instructors will continuously be assessing the progress of a student and then, if required, modifying training methods. These formative assessments should be structured and based on evidence of appropriate performance towards consistent achievement of competency, and they must be recorded.

7.3.2 Training plans need to address each flight standard. The training plan produced by a training organisation should show in what lesson(s) the performance criteria will be taught and state the desired outcomes.

7.3.3 Some of the criteria for each element may be taught over a number of lessons. Where this occurs, it should be identified in the lesson plan. When criteria are spread out over a number of lessons, the assessment of competency and certification of competency cannot take place until the student has demonstrated competency in all the criteria specified for the element.

7.3.4 The competency standards for the MPL are prescribed in CAO 40.1.8.

7.4 Training records

7.4.1 Accurate, and current, planning and recording is the core of any competency-based training programme. Examples of suitable training plans and records are available on the CASA website at <www.casa.gov.au/seminars/cbt/intro.htm>.

7.4.2 The standard for training records is prescribed in CAO 40.1.8. Training records should incorporate the content of the sample in the CAO.

7.5 Integrated training

7.5.1 Integrated training is a key attribute of MPL training. It is achieved where the training plan blends the delivery of aeronautical knowledge with the acquisition of practical flying skills. Correctly planned and implemented integrated training will allow the student to consolidate their theoretical knowledge through practical application wherever this is appropriate. Threat and Error Management (TEM) is an essential element in all training including the MPL, and so will need to be integrated throughout the training programme.

7.5.2 A training course specified critical and integration milestones. The minimum milestones are prescribed in CAO 40.1.8. Training organisations are encouraged to ascertain any other additional milestones they believe are essential to the conduct of their course.

7.6 Achievement records

7.6.1 Training organisations are encouraged to develop achievement records according to their own requirements. An acceptable form of achievement records, listing the units and elements of competency for each stage of training, is provided in CA) 40.1.8.

7.6.2 Achievement should be assessed on a scale which has at least four levels.

7.6.3 Before being allowed to progress to the next stage of training, or recommended for a flight assessment, a student must be assessed and certified as competent in each element listed in the appropriate Achievement Record. In addition to the Flying Instructor's certification, the student must certify on the Achievement Record that the specified training has been completed. To avoid the requirement for duplicate certifications in successive stages of training, any element which has been listed in the same standard in a previous stage is not repeated, unless there is a need for the student to achieve the competency at a higher level.

7.6.4 The standard specified in each Achievement Record is the minimum required for the particular stage but, if a student can consistently achieve a higher standard, then the element may also be certified in the achievement records for any or all higher levels. However it should be noted that certification for elements at the next stage must not be made until all elements in the current stage have been completed and certified.

7.6.5 The Achievement Record must be checked by the person conducting a flight assessment/test, as having been completed for all items required in that stage of training.

8. Assessment

8.1 Overview

8.1.1 MPL training requires continuous assessment (refer to the section on Achievement Records).

8.2 Aeronautical knowledge examinations

8.2.1 MPL pilots are expected to have at least the same aeronautical knowledge as the holder of an ATP(A)L.

8.2.2 CASA's examination system assesses aeronautical knowledge progressively from PPL through the CPL to the ATPL. CASA does not have a dedicated MPL examination.

8.2.3 Until a dedicated MPL examination is written, candidates for the MPL will be required to successfully complete the following CASA aeronautical knowledge examinations. This list is prescribed in CAO 40.1.8.

8.2.4 Examinations required at the CPL level:

CNAV – Navigation

CMET - Meteorology

CHUF - Human Factors

CLWA – Flight Rules & Air Law

CADA - Aerodynamics-Aeroplane

8.2.5 Examinations required at the ATP(A)L level:

AFPA – Flight Planning-Aeroplane

APLA – Performance & Loading-Aeroplane

AASA - Aerodynamics & Aircraft Systems-Aeroplane

ANAV - Navigation-Aeroplane & Helicopter

AMET – Meteorology-Aeroplane & Helicopter

AHUF – Human Factors-Aeroplane & Helicopter

AALW – Air Law-Aeroplane & Helicopter

8.2.6 Examination for the Instrument Rating:

IREX – Instrument Rating Examination

8.2.7 Examinations required for the grant of a type rating (note, this examination may be conducted by the flight training organisation if it has been approved by CASA for that purpose):

Type Rating examination for the multi-crew turbine powered aeroplane type on which the training course is based. 8.2.8 Aeronautical knowledge training should be programmed to accord with sound integrated training practice and to maximise the transfer of knowledge to the practical training. Examinations should be scheduled at appropriate times in the course.

8.2.9 Students are expected to acquire adequate aeronautical knowledge to be able to operate those aircraft used in the training programme and to conduct the flights safely and effectively.

8.2.10 The ATP(A)L and IREX examinations should not be attempted prior to the start of the intermediate stage of the course.

8.3 Pass mark

8.3.1 The pass mark for CASA aeronautical knowledge examinations is prescribed in CAO 40.1.8 and is set at 70%. Irrespective of a pass mark being achieved in an examination, a knowledge deficiency report (KDR) will be issued in respect of any question to which the candidate gives a wrong answer. The training organisation is required to test a candidate on all items on the KDR issued with the examination results before the flight test is undertaken. The candidate must demonstrate understanding of all items noted on the KDR.

8.4 Flight assessments

8.4.1 Assessment of the student's competency at the completion of each of the Core, Basic, Intermediate and Advanced stages is an integral aspect of the MPL training programme. These assessments provide the opportunity for both the student and the training organisation to evaluate the efficacy of the training, and to identify any shortcomings or discrepancies in the training programme.

8.4.2 Any deficiencies identified in these assessments should be reported back to the training organisation and to CASA for corrective action purposes.

Where appropriate, changes should be made to the training programme to ensure subsequent courses do not experience the same deficiencies.

8.4.3 Before each flight assessment, the student must have:

received training appropriate to the stage of the course;

gained any minimum aeronautical experience which is specified in the curriculum;

the level of aeronautical knowledge specified in the curriculum; and

been recommended for the assessment by an instructor.

8.4.4 The flight assessment should cover all the items listed on the Flight Assessment Form provided in CAO 40.1.8.

8.4.5 The student must demonstrate competency in all the units and elements of competency specified in the applicable Achievement Record. If the student fails the flight assessment (is assessed as not yet competent) a re-training programme structured to address the particular areas identified must be conducted, with re-assessment to occur only on a further recommendation from the instructor responsible for the re-training.

8.4.6 The course assessment plan should include an assessment of competency at the end of each stage of the course.

8.5 MPL flight test

8.5.1 The Advanced stage of the course includes a final MPL flight test and base training. The MPL flight test covers the elements contained in a type rating and an instrument rating flight test.

8.5.2 The flight test should include at least 2 flight sectors and separate segments of the flight operating as pilot flying and pilot monitoring.

8.5.3 The test is to cover the following:

co-pilot duties as pilot flying and duties of pilot monitoring in normal and non-normal operations;

instrument navigation and terminal procedures; and

normal and non-normal operations.

8.6 MPL flight test prerequisites

8.6.1 Before a flight test for the MPL may be undertaken, a candidate must:

receive training appropriate to the competency standards prescribed for the MPL including those applicable to the particular aircraft type which will be flown during IOE;

pass the aeronautical knowledge examinations prescribed for the MPL;

satisfy all the testing requirements prescribed in the approved training programme;

possess the minimum aeronautical experience applicable; and

be recommended for the test by a Head of Training or Chief Flying Instructor (CFI).

8.6.2 MPL flight tests will be conducted by CASA Flight Operations Inspectors (FOI) unless specific approval is given to an Approved Testing Officer to conduct the test. The flight test is to cover all the items listed on the Flight Test Form which is prescribed in CAO 40.1.8.

8.6.3 The candidate must demonstrate to the testing officer competency in all the units and elements of competency specified for the MPL. If the candidate fails the flight test (is assessed as not yet competent), the testing officer needs to notify the candidate, CASA and the flight training organisation of the reason for the failure (to achieve competency).

8.7 Re-testing

8.7.1 When a candidate fails to demonstrate competency during a flight test, the testing officer will need to notify the candidate and the training organisation of the reason for the failure, and advise what further training is to be undertaken to rectify identified weaknesses. The candidate may then re-apply for a further test after certification from a Flying Instructor that remedial training has been completed and the applicant is prepared for the flight test. The Head of Training or CFI must recommend the applicant for another flight test.

8.7.2 The re-training plan and records should be reviewed by the testing officer prior to the re-test and should be attached to the flight test report which is to be sent to CASA for licensing purposes.

9. English Language

9.1 English language proficiency required for training and licensing

9.1.1 Language proficiency is essential to effective learning. Also, standards have been set for language proficiency for flight crew licensing and the operation of aircraft.

9.1.2 The requirements for language proficiency are set out in CAR 5.09(1)(a) and in Civil Aviation Order (CAO) 40.0 English is the language to be used in Australia.

9.1.3 Training providers need to carefully consider language proficiency particularly if the students are not native English speakers. The training environment for the MPL involves multicrew concepts and practice and presents an additional factor in the design and delivery of training and the competencies of flight instructors conducting training compared to single pilot instruction.

10. Initial Operating Experience

10.1 Initial operating experience (IOE)

10.1.1 Following graduation, MPL pilots are expected to be used as co-pilots by the airline which was involved in the training. The airline's IOE plan is expected to be incorporated into the overall training plan.

10.1.2 Where the graduates are to be used by an airline which does not operate in Australia, suitable arrangements need to be made between CASA and the oversighting regulatory authority for the purposes of post-training evaluation and feedback to the training providers and to meet ICAO's MPL programme implementation requirements.

11. Data Collection and Reporting

11.1 Data collection and reporting

11.1.1 ICAO has published data collection and reporting requirements for organisations conducting MPL training and airlines using MPL pilots. The purpose of collecting and reporting this data is to help ICAO to monitor the implementation of the new MPL.

11.1.2 Training organisations delivering MPL training should submit information to CASA in line with the ICAO documents attached to State letter AN 12/50-07/37 – refer to CAO 40.1.8. It is a condition on an approval of a course that the training organisation provides this information to CASA.

11.1.3 The accountable organisation will be responsible for collecting the data and providing to CASA the reports that satisfy the ICAO requirements.

11.1.4 The accountable organisation needs to conduct a review of training at the end of each stage of the course and produce a post-stage report which includes a critique of the objectives of the stage of the course under review, deficiencies found and corrective actions to be taken to remedy those deficiencies.

12. Instructors

12.1 Competencies and experience

12.1.1 Training outcomes depend heavily on the quality of the instruction given and that is reliant on the competence of the instructors. ICAO has specified the required competencies of instructors in PANS-TRG.

12.1.2 MPL training strongly emphases multi-crew operations and relies heavily on the use of FSTDs. Also, a thorough understanding of competency-based training methods is required by MPL instructors because MPL licensing standards are largely based on competency standards. As such, MPL instructors need to have a wider set of competencies, compared to instructors involved in single pilot licence training.

12.1.3 MPL training extends from basic ab initio training through to type rating and multi-crew operational training. Due to this span of training, the skill set of a particular MPL instructor needs to be relevant to their assigned training tasks.

12.1.4 Organisations planning to deliver MPL training have a responsibility to either ensure that their instructors have, or provide a means by which the instructors can achieve, the following qualifications and competencies. The organisation is required to state in its training plan what criteria it would use to engage instructors for an MPL course.

12.1.5 For all instructors engaged in training for the MPL:

for flying instructors engaged in training for the Core and Basic Stages:

- competencies set out in Appendix C to this CAAP;
- completion of a course in the delivery of competency based training;
- completion of an operator's crew resource management (CRM) course;
- completion of human factors/threat and error management (HF/TEM) training for instructors with particular emphasis on its application to multi-crew operations;
- understanding of the philosophy of multi-crew operations;
- use of a multi-crew flight check system; and
- use of operator specific standard operating procedures (SOPs).

for flying instructors engaged in training for the Core and Basic Stages:

- applicable competencies set out in Appendix C to this CAAP;
- current Flight Instructor Rating*;
- current Command Instrument Rating*;
- management of multiple students;
- successful completion of an operator's multi-crew operations course; and
- multi-engine training approval for instructors conducting training in multi-engine training sequences (FSTD or aircraft);

for flying instructors engaged in training for the Intermediate and Advanced Stages:

- applicable competencies set out in Appendix C to this CAAP;
- hold, or have held, a Command (Multi-engine) Aeroplane Instrument Rating;
- hold, or have held, a Flight Instructor Rating; be authorised to conduct the training;
- hold, or have held, a Multi-engine Training Approval or approval to give training for the grant of a multi-engine aeroplane type rating;
- hold appropriate type rating for the advanced stage; and
- have suitable experience in multi-pilot operations or have received appropriate training in multi-crew cooperation training in a suitable multi-crew FSTD and undertaken observations of multi-crew line operations with a suitable airline.
- * Ratings only need to be current for those instructors involved in training in aircraft.

12.2 Induction

12.2.1 The standardisation of instructors is essential for any MPL training organisation. Induction training, which covers the following elements, will provide a suitable level of initial standardisation:

structure and management chain of responsibility:

- This should provide the new instructor with a clear understanding of the hierarchy of the organisation and the lines of communication and responsibility; and
- Instructor and student duties and responsibilities, with particular attention given to the conduct of inflight procedures such as;
 - multi-crew operations, and
 - emergency and non-normal procedure training.

multi-crew operations:

 Particular attention should be given to ensuring that instructors are cognisant of the differences in multi-crew training, and are familiar with the specific requirements of the organisation with respect to multi-crew training.

course specific training:

- Complete training to proficiency in delivering training in those elements of the course to which the instructor will be assigned.

threat and Error Management (TEM):

- Clearly address the need for TEM;
- Ensure that all instructors clearly understand the importance of applying TEM in training;
- Ensure that instructors understand how to deliver TEM training; and
- Ensure that instructors are competent in the assessment of TEM.

supervision:

- Address the need for supervision and the individual responsibilities of instructors; and
- Operations Manual;
 - Instructors should be left in no doubt as to the need for them to conduct all operations in accordance with the procedures laid down in the operations manual;
 - Pre- and post-flight briefings procedures; and
 - In addition to addressing the policy on briefings, instructors should be given the opportunity to review and refresh their individual briefing techniques.

training procedures:

- Address the Operations Manual provisions on training including the use of Training Plans, Achievement Records etc;
- Recording procedures; and
- Instructors should be given the opportunity to gain familiarity with the organisation's recording methods. In particular, attention should be given to the need for accurate Training Records, and the need to maintain up to date Achievement Records.

12.2.2 The training organisation should keep detailed records of all induction training including evaluations of the training.

12.3 Recurrent training

12.3.1 Recurrent training represents the ongoing aspect of standardisation and should reinforce many of the topics addressed during induction training. Accordingly, the following topics need to be part of any recurrent training programme:

instructor and student duties and responsibilities;

organisational/operational changes;

supervision for those involved in supervising other instructors;

pre- and post-flight briefings procedures;

use of training devices (tips and tricks);

training procedures; and

recording procedures.

12.3.2 Provision should be made for each instructor (under the guidance and supervision of senior staff) to evaluate their own flight instructional techniques and procedures to identify any weaknesses or deviations from the requirements of the OM.

12.3.3 The training organisation should keep detailed records of all recurrent training including evaluations of the training.

12.4 Duty roster systems

12.4.1 The requirements for instructor rostering will vary according to the size and complexity of the individual training organisation. For small organisations a suitable rostering system need be no more complex than a simple whiteboard showing instructional and other duties with provision for the display of rest periods. Larger organisations will need to take a more detailed approach to instructor rostering, and may need to make use of a computerised system. Regardless of size, organisations will need to ensure that the rostering system makes provision for the inclusion of standardisation/recurrent training undertaken by instructors.

12.4.2 Relevant information on fatigue risk management system (FRMS) standards and accommodating FSTD training duties is available from the Federal Aviation Administration (FAA) Part 142 and Joint Aviation Requirements (JAR).

13. Examiners

13.1 Flight examiners

13.1.1 ICAO has prescribed competencies for MPL flight examiners in PANS-TRG (refer to Attachment to Chapter 4 of PANS-TRG).

13.1.2 Only certain Approved Testing Officers and CASA Flight Operations Inspectors will be authorised to act as flight examiners for the purpose of conducting Assessment flights and the MPL flight test. These individuals will need to satisfy the following criteria:

have achieved the competencies set out in the table at Appendix D of this CAAP; and

have the following minimum qualifications:

- ATP(A)L,
- Training and Checking experience in an airline, and
- Type Rating on the aircraft to be used for the flight test.

14. Security and Access

14.1 Records management

14.1.1 Organisations need to ensure that all staff, student and test/examination records are kept secure, and that access is suitably restricted.

14.1.2 The level of security will depend on the nature of the storage medium and organisations would be expected to provide regular back-up (at least weekly) and secure off-site storage for any electronic record-keeping system. Hardcopy records should be stored in secure fire-proof containers.

14.1.3 Access to records (hard or soft copy) should be restricted according to the following guidelines:

student records - student, applicable instructor and supervisor(s), CFI and Head of Training (or other nominee). Other instructors/staff should only have access where approved by the Head of Training (or other nominee);

staff records - individual staff member, supervisor(s), Head of Training, CFI plus (where appropriate) Human Resource staff; and

examination records - appropriate instructors, supervisor(s), CFI, Head of Training (or other nominee) and examiner where applicable.

14.1.4 Where an organisation keeps records electronically the integrity of the records, in particular the sign-off, needs to be ensured at all times. Also organisations need to ensure that any data added after 'sign-off' is clearly identified. There are an increasing number of means to achieve the necessary level of integrity, including:

password control;

identity/key card entry control;

locked data entry after 'sign-off';

date and time marking of entries; and

highlighted amendments.

14.2 Currency of records

14.2.1 Currency is an issue which organisations must address if their records are to be of any value to students and instructors. Organisations need to ensure that they achieve at least the following (whether they use hard or soft copy recording):

licences, ratings, medicals etc (students and instructors) – latest issue on record, from date of issue plus one (1) week;

student records – recorded within 24 hours of flight/event;

debriefing records (students) – recorded within 24 hours of flight/event;

instructor records (except standardisation and/or proficiency check) – recorded within one (1) week of flight/event; and

instructor standardisation and/or proficiency check – recorded within 24 hours of flight/event.

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APPENDIX A TO CAAP 5.216(0)



ICAO MPL Licensing Pathway

Diagram 1

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APPENDIX B TO CAAP 5.216(0)

MPL Training Scheme					
Minimum 240 hours of training including PF and PNF*					
Phase of training		Training items	Flight and simulated flight training media - Minimum level requirement		Ground training media
	Advanced Type rating training within an airline-orientated environment	CRM Landing training All weather scenarios Abnormal procedures Normal procedures	Aeroplane: Turbine Multi-engine Multi-crew certified FSTD: Type IV	12 take-offs and landings as PF PF/PNF	CBT
Integrated TEM principles	Intermediate Application of multi-crew operations in a high- performance, multi-engine turbine aeroplane	CRM LOFT Abnormal procedures Normal procedures Multi-crew Instrument flight	FSTD: Type III	PF/PNF	E-learning Part-task trainer Classroom
Integrated T	Basic Introduction of multi-crew operations and instrument flight	CRM Pf/PNF complement IFR cross-country Upset recovery Night flight Instrument flight	Aeroplane: Single or multi-engine FSTD: Type II	PF/PNF	
	Core Flying Skills Specific basic single pilot training	CRM VFR cross-country Solo flight Basic instrument flight Principles of flight Cockpit procedures	Aeroplane: Single or multi-engine FSTD: Type I	PF	

ICAO MPL Training Scheme

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APPENDIX C TO CAAP 5.216(0)

Instructor Competency Standards

Competence	Performance	Knowledge
Demonstrate knowledge of the competency-based approach to training	 Demonstrates appropriate knowledge 	 Integration of operators and organisations providing MPL training The philosophy of a competency-based approach to training Regulatory framework, instructor qualifications and competencies Introduction to Instructional Systems Design methodologies Application of threat and error management (TEM) and appropriate countermeasures developed in CRM The purpose and conduct of assessments and evaluations
Prepare resources	 Ensures adequate facilities Prepares briefing material Manages available tools 	 Understand objectives Available tools Competency based training methods
Create a climate conducive to learning	 Establishes credentials, role models appropriate behaviour Clarifies roles States objectives Ascertains and supports students needs 	 Barriers to learning Learning styles
Present knowledge	 Communicates clearly Creates and sustains realism Looks for training opportunities 	♦ Teaching methods
Integrate threat and error management and CRM	Uses human factors technical training	 Human performance limitations, including the principle of threat and error management and CRM
Manage time to achieve training objectives	 Allocates time appropriate to achieving competency objective 	Syllabus time allocation
Facilitate learning	 Encourages student participation Motivating, patient, confident, assertive manner Conducts one-to-one coaching Encourages mutual support 	 Facilitation How to give constructive feedback How to encourage students to ask questions and seek advice
Assesses student performance	 Assesses and encourages student self assessment of performance against competency standards Makes assessment decision and provides clear feedback Observes CRM behaviour 	 Observation techniques Methods for recording observations

Competence	Performance	Knowledge
Monitor and review progress	 Compares individual outcomes to defined objectives Identifies individual differences in learning rates Applies appropriate corrective action 	 Learning styles Strategies for training adaptation to meet individual needs
Evaluate training sessions	 Elicits feedback from students Tracks training session processes against competence criteria Keeps appropriate records 	 Competency unit and associated elements Performance criteria
Report outcome	Reports accurately using only observed actions and events	 Stage training objectives Individual versus systemic weaknesses

APPENDIX D TO CAAP 5.216(0)

Flight Examiner Competencies

	Elements	Performance Criteria	Evidence
1.	Plan a flight test	 Identifies the flight test to be conducted and accesses the CASA Flight Test application and Flight Test forms. 	Identify the flight test to be conducted and access the CASA Flight Test application and Flight Test forms.
		2. Confirms the suitability of candidate to undertake the flight test.	Inspect and assess pilot's log book, medical certificate,
		 Identifies competency standards that must be assessed and plans methods of gathering evidence. 	training records, licences and CFI's recommendation to ensure applicant fulfils all requirements to undertake flight test.
		4. Plans evidence-gathering activities to provide sufficient, reliable, valid and fair evidence of competency.	Identify competency standards that must be assessed and plan methods of gathering evidence.
		 Refers to knowledge deficiency report (KDR) and formulates questions to assess candidates corrected knowledge when appropriate. 	Plan evidence-gathering activities to provide sufficient, reliable, valid and fair evidence of competency
			Refer to knowledge deficiency report (KDR) and formulate questions to assess candidates corrected knowledge when appropriate.
2.	Prepare applicant	1. Ensures the health, fitness and level of anticipation of the candidate is	Identify the applicant.
	for flight test	appropriate to undertake the flight test.	Ensure the health, fitness and level of anticipation of the
		2. Explains and confirms the context, purpose and content of the flight test.	candidate is appropriate to undertake the flight test.
		 Explains and confirms the assessment procedure and expected performance requirements. 	Explain and confirm the context, purpose and content of the flight test.
		4. Explains and confirms the function of the flight examiner including role- playing, simulation and procedures in the event of an actual emergency.	Explain and confirm the assessment procedure and expected performance requirements.
		 Identifies and provides any special needs of the candidate, and any allowable adjustments are made to the assessment procedure. 	Explain and confirm the function of the flight examiner including role-playing, simulation and procedures in the
		6. Explains and confirms action to be taken by the Flight Examiner in the	event of an actual emergency.
		event of failure to achieve competency.	Identify and provide any special needs of the candidate,
		 Conveys information using language and interactive strategies and techniques to communicate effectively with the person being assessed. 	and any allowable adjustments are made to the assessment procedure.
			Explain and confirm the action to be taken by the Flight Examiner in the event of failure to achieve competency.
L			

	Elements	Performance Criteria	Evidence
			Convey information using language and interactive strategies and techniques to communicate effectively with the person being assessed.
3.	Conduct flight test	 Uses clear, logical, systematic and unambiguous explanations to convey information to the applicant to ensure the effective conduct of the flight test. 	Use clear, logical, systematic and unambiguous explanations to convey information to the applicant to ensure the effective conduct of the flight test.
		2. Limits flight examiner intervention to ensuring effective conduct of the flight test and management of contingencies, and abnormal or emergency situations.	Intervention is limited to ensuring effective conduct of the flight test and management of contingencies, and abnormal or emergency situations.
		 Monitors and assesses candidate's performance and maintains a comprehensive record of events. 	Monitor and assess candidate's performance and maintain a comprehensive record of events.
		4. Ensures <u>safe</u> completion of flight test and maintains <u>situation awareness</u> .	Ensure safe completion of flight test
			Elements of Airmanship
			Maintain lookout using a systematic scan technique at a rate determined by traffic density, visibility or terrain.
			Maintain situation awareness.
4.	Make assessment decision	 Evaluates the evidence of the candidate's performance in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standards. 	Evaluate evidence of the candidate's performance in terms of validity, authenticity, sufficiency, currency and consistent achievement of the specified standards.
		2. Evaluates the evidence of the candidate's performance using a holistic procedure that ensures competency when conducting tasks, managing tasks and contingencies, operating in a flight environment and transferring skills and knowledge to new situations and contexts.	Evaluate evidence of the candidate's performance using a holistic procedure that ensures competency when conducting tasks, managing tasks and contingencies, operating in a flight environment and transferring skills
		 Makes the assessment decision in accordance with the Assessment of Standards specified in MOS Part 61. 	and knowledge to new situations and contexts. Make the assessment decision in accordance with the Assessment of Standards specified in MOS Part 61.
5.	Conduct post flight test briefing	1. Advises candidate of achievement of competency or failure to achieve competency.	Advise candidate of achievement of competency or failure to achieve competency.
	U U	 Provides clear and constructive feedback about performance to candidate using appropriate language and strategies including guidance on further training if appropriate. 	Provide clear and constructive feedback about performance to candidate using appropriate language and strategies including guidance on further training if appropriate.
		 Explores opportunities for overcoming any gaps in competency as revealed by the assessment with the candidate. 	Explore opportunities for overcoming any gaps in competency as revealed by the assessment with the candidate.

Elements		Performance Criteria	Evidence
		 Advises candidate of reassessment procedures and the appeals mechanism if the assessment decision is challenged. 	Advise the candidate of reassessment procedures and the appeals mechanism if the assessment decision is challenged.
6.	Conduct post flight test briefing with training organisation	 Advises trainer and/or training organisation of flight test results, positive and negative aspects of the candidate's performance including any information that could result in improved training methods. 	Advise trainer and/or training organisation of flight test results, positive and negative aspects of the candidate's performance including any information that could result in improved training methods.
7.	Complete administrative requirements	 Completes Flight Test application and appropriate Flight Test forms in accordance with Civil Aviation Safety Regulations. Completes student training records. Forwards Flight Test application form and Flight Test form to CASA in accordance with Civil Aviation Safety Regulations. 	Complete Flight Test application and appropriate Flight Test forms in accordance with Civil Aviation Safety Regulations. Complete student training records. Forward Flight Test application form and Flight Test form to CASA in accordance with Civil Aviation Safety Regulations.