

- (G) collision avoidance system;
- (H) TAWS;
- (I) HUMS;
- (J) weather radar system, best practices for optimum use, interpretation of displayed information.

[...]

**AMC1 FCL.735.A; FCL.735.H; FCL.735.As Multi-crew cooperation (MCC) training course**

**CERTIFICATE OF COMPLETION FORM**

CERTIFICATE OF COMPLETION OF MCC			
Last name(s):		First name(s):	
Type of licence:		Number:	State:
ME/IR training completed		OR	ME/IR validity date: ME/IR skill test date:
Issued on:		passed on:	
	Signature of applicant:		

**AMC1 FCL.740.A(b)(1)(ii) Revalidation of class and type ratings**

**CONTENT OF THE REFRESHER TRAINING**

Training flight items should be based on the exercise items of the proficiency check, as deemed relevant by the instructor, and depending on the experience of the candidate. The briefing should include a discussion on TEM with special emphasis on decision-making when encountering adverse meteorological conditions or unintentional IMC, as well as on navigation flight capabilities.

**SUBPART I — ADDITIONAL RATINGS**

**AMC1 FCL.800 Aerobatic rating**

**THEORETICAL KNOWLEDGE AND FLYING TRAINING**

[...]

(c)

[...]

(3) [...]

- (i) air speed limitations (aeroplane, ~~helicopter~~, TMG and sailplane, as applicable);

- (d) 'Attempt': a try to pass a specific paper.
- (e) 'Sitting': a period of time established by the competent authority within which a candidate can take an examination. This period should not exceed 10 consecutive days. Only one attempt at each examination paper is allowed in one sitting.

## AMC1 FCL.050 Recording of flight time

### GENERAL

[...]

- (c) Format of the record:

- (1) details of flights flown under commercial air transport may be recorded in an **electronic** ~~computerised~~ format maintained by the operator.

In this case an operator should make the records of all flights operated by the pilot, including differences and familiarisation training, available upon request to the flight crew member concerned;

- (2) for other types of flights **in aeroplanes, helicopters and powered-lift aircraft**, the pilot should record the details of the flights flown in the following logbook format, **which may be kept in electronic format. All data set out in (a) should be included.**

- (3) **For sailplanes** ~~and~~, **balloons and airships**, a suitable format, **which may be electronic**, should be used. **That format should** contain the relevant items mentioned in (a) and additional information specific to the type of operation.

[...]

### INSTRUCTIONS FOR USE

[...]

- (e) Flight crew logbook entries should be made as soon as practicable after any flight undertaken. All entries in the **flight crew** logbook should ~~be made~~ **comply with the following:**

- (1) **in case of paper records, they should be made** in ink or indelible pencil; **or**

- (2) **in case of electronic records, they should be made and kept in a way to be readily available at the request of a competent authority, and contain all relevant items that are mentioned in (a), certified by the pilot, and in a format acceptable by the competent authority.**

[...]

## AMC1 FCL.055 Language proficiency

### GENERAL

- (a) The **method of assessment of the language proficiency level** (hereinafter: **assessment**) ~~assessment~~ should be designed to reflect a range of tasks undertaken by pilots but with specific focus on language rather than operational procedures.

[...]

**AMC1 FCL.810(a) Night rating****AEROPLANE NIGHT RATING COURSE**

- (a) The aim of the course is to qualify holders of Part-FCL licences with privileges to fly aeroplanes or TMGs to exercise their privileges at night.
- (b) The ATO or DTO should issue a certificate of satisfactory completion of the instruction that can be used for licence endorsement.

**(c) Theoretical knowledge**

The theoretical knowledge syllabus should cover the revision or explanation of:

- (1) night VMC minima;
- (2) rules about airspace control at night and facilities available;
- (3) rules about aerodrome ground, runway, and obstruction lighting;
- (4) aircraft navigation lights and collision avoidance rules;
- (5) physiological aspects of night vision and orientation;
- (6) dangers of disorientation at night;
- (7) dangers of weather deterioration at night;
- (8) instrument systems or functions and errors;
- (9) instrument lighting and emergency cockpit lighting systems;
- (10) map marking for use under cockpit lighting;
- (11) practical navigation principles;
- (12) radio navigation principles;
- (13) planning and use of safety altitude; and
- (14) danger from icing conditions, as well as from avoidance and escape manoeuvres.

**(d) Flying training**

The exercises of the night rating flight syllabus should be repeated as necessary until the student achieves a safe and competent standard.

- (1) In all cases, exercises 4 to 7 of the night rating flight syllabus should be completed in an aeroplane or TMG.
- (2) For exercises 1 to 3, up to 50 % of the required flight training may be completed in an FSTD(A). However, each item of exercises 1 to 3 should be completed in an aeroplane or TMG in flight.
- (3) Starred items (\*) should be completed in simulated IMC and may be completed in daylight.

(4) The flying exercises should comprise:

(i) exercise 1:

(A) revise basic manoeuvres when flying by sole reference to instruments\*;

(B) explain and demonstrate transition from visual flight to instrument flight\*;  
and

(C) explain and revise recovery from unusual attitudes by sole reference to instruments\*;

(ii) exercise 2:

explain and demonstrate the use of radio navigation aids when flying by sole reference to instruments, to include position finding and tracking\*;

(iii) exercise 3:

explain and demonstrate the use of radar assistance\*;

(iv) exercise 4:

(A) explain and demonstrate night take-off techniques;

(B) explain and demonstrate night circuit techniques;

(C) explain and demonstrate night approaches with or without visual approach aids; and

(D) practise take-offs, circuits, as well as approaches and landings;

(v) exercise 5:

explain and demonstrate night emergency procedures including:

(A) simulated engine failure (to be terminated with recovery at a safe altitude);

(B) simulated engine failure at various phases of flight;

(C) simulated inadvertent entry to IMC (not on base leg or final approach);

(D) internal and external lighting failure; and

(E) other malfunctions and emergency procedures, as required by the AFM;

(vi) exercise 6:

solo night circuits; and

(vii) exercise 7:

(A) explain and demonstrate night cross-country techniques; and

(B) practise night cross-country dual flight and optionally supervised solo to a satisfactory standard.

	[...]				
	<b>Human overload and underload</b>				
	Arousal	x		x	
	Stress: (a) definition(s); (b) anxiety and stress; (c) effects of stress.	x		x	
	Fatigue and stress management: (a) types, causes and symptoms of fatigue; (b) effects of fatigue; (c) coping strategies; (d) management techniques; (e) health and fitness programmes;	x		x	
	[...]				
<b>3.</b>	<b>METEOROLOGY</b>				
	[...]				
	Effects of convergence and divergence				
	<b>General global circulation</b>				
	General circulation around the globe	x		x	
	<b>Local winds</b>				
	Anabatic and katabatic winds, mountain and valley winds, Venturi effects, land and sea breezes	x		x	
	<b>Mountain waves (standing waves, lee waves)</b>				
	Origin and characteristics	x		x	
	<b>Turbulence</b>				
	Description and types of turbulence	x		x	
	Formation and location of turbulence	x		x	
	<b>THERMODYNAMICS</b>				
	<b>Humidity</b>				
	Water vapour in the atmosphere	x		x	
	Mixing ratio	x		x	
	Temperature/dew point, relative humidity	x		x	
	<b>Change of state of aggregation</b>				
	Condensation, evaporation, sublimation, freezing and melting, latent heat	x		x	
	<b>Adiabatic processes</b>				

Adiabatic processes, stability of the atmosphere	x		x	
<b>CLOUDS AND FOG</b>				
<b>Cloud formation and description</b>				
Cooling by adiabatic expansion and by advection	x		x	
Cloud types and cloud classification	x		x	
Influence of inversions on cloud development	x		x	
<b>Fog, mist, haze</b>				
General aspects	x		x	
Radiation fog	x		x	
Advection fog	x		x	
Steaming fog	x		x	
Frontal fog	x		x	
Orographic fog (hill fog)	x		x	
<b>PRECIPITATION</b>				
<b>Development of precipitation</b>				
Processes of development of precipitation	x		x	
<b>Types of precipitation</b>				
Types of precipitation, relationship with cloud types	x		x	
<b>AIR MASSES AND FRONTS</b>				
<b>Air masses</b>				
Description, classification and source regions of air masses	x		x	
Modifications of air masses	x		x	
<b>Fronts</b>				
General aspects	x		x	
Warm front, associated clouds, and weather	x		x	
Cold front, associated clouds, and weather	x		x	
Warm sector, associated clouds, and weather	x		x	
Weather behind the cold front	x		x	
Occlusions, associated clouds, and weather	x		x	
Stationary front, associated clouds, and weather	x		x	
Movement of fronts and pressure systems, life cycle	x		x	
Changes of meteorological elements at a frontal wave	x		x	
<b>PRESSURE SYSTEMS</b>				
<b>Anticyclone</b>				

Anticyclones, types, general properties, cold and warm anticyclones, ridges and wedges, subsidence	x		x	
<b>Non-frontal depressions</b>				
Thermal, orographic and polar depressions, troughs	x		x	
<b>CLIMATOLOGY</b>				
<b>Climatic zones</b>				
General seasonal circulation in the troposphere	x		x	
<b>Typical weather situations in the mid-latitudes</b>				
Westerly situation	x		x	
High-pressure area	x		x	
Flat-pressure pattern	x		x	
<b>Local winds and associated weather</b>				
e.g. <i>Foehn</i>	x		x	
<b>FLIGHT HAZARDS</b>				
<b>Icing</b>				
Conditions for ice accretion	x		x	
Types of ice accretion	x		x	
Hazards of ice accretion, avoidance	x		x	
<b>Turbulence</b>				
Effects on flight, avoidance	x		x	
<b>Wind shear</b>				
Definition of wind shear	x		x	
Weather conditions for wind shear	x		x	
Effects on flight, avoidance	x		x	
<b>Thunderstorms</b>				
Conditions for, and process of, development, forecast, location, type specification	x		x	
Structure of thunderstorms, life cycle, squall lines, electricity in the atmosphere, static charges	x		x	
Electrical discharges	x		x	
Development and effects of downbursts	x		x	
Thunderstorm avoidance	x		x	
<b>Inversions</b>				
Influence on aircraft performance	x		x	
<b>Hazards in mountainous areas</b>				

	Influence of terrain on clouds and precipitation, frontal passage	x		x	
	Vertical movements, mountain waves, wind shear, turbulence, ice accretion	x		x	
	Development and effect of valley inversions	x		x	
	<b>Visibility-reducing phenomena</b>				
	Reduction of visibility caused by precipitation and obscuration	x		x	
	Reduction of visibility caused by other phenomena	x		x	
	<b>METEOROLOGICAL INFORMATION</b>				
	<b>Observation</b>				
	Surface observations	x		x	
	Radiosonde observations	x		x	
	Satellite observations	x		x	
	Weather radar observations	x		x	
	Aircraft observations and reporting	x		x	
	<b>Weather charts</b>				
	Significant weather charts	x		x	
	Surface charts	x		x	
	<b>Information for flight planning</b>				
	Aviation weather messages	x		x	
	Meteorological broadcasts for aviation	x		x	
	Use of meteorological documents	x		x	
	Meteorological warnings	x		x	
	<b>Meteorological services</b>				
	World area forecast system (WAFS) and meteorological offices	x		x	
[...]					
		<b>Aeroplane</b>		<b>Helicopter</b>	
		PPL	Bridge course	PPL	Bridge course
<b>7.</b>	<b>FLIGHT PERFORMANCE AND PLANNING</b>				
[...]					
<b>9.</b>	<b>NAVIGATION</b>				
[...]					