



FOCA GM/INFO

Guidance Material / Information

Electronic Flight Bag

This GM/INFO shall provide guidelines and explanations regarding an operational approval or a change of an existing approval for EFBs.



Scope	Guidance to receive an approval or change of an approval for EFBs
Applies to	Part-CAT Operators
Valid from	01 October 2019
Purpose	Guidance / Information

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07.06.2018	2	1	GM 1, change of Form 44.20
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List of Effective Chapters

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Ch. 0	ISS 3 / REV 0 / 01.10.2019
Ch. 0.1	ISS 3 / REV 0 / 01.10.2019
Ch. 0.2	ISS 3 / REV 0 / 01.10.2019
Ch. 0.3	ISS 3 / REV 0 / 01.10.2019
Ch. 0.4	ISS 3 / REV 0 / 01.10.2019
Ch. 0.5	ISS 3 / REV 0 / 01.10.2019
Ch. 0.6	ISS 3 / REV 0 / 01.10.2019
Ch. 1	ISS 3 / REV 0 / 01.10.2019
Ch. 1.1	ISS 3 / REV 0 / 01.10.2019
Ch. 1.2	ISS 3 / REV 0 / 01.10.2019
Ch. 1.3	ISS 3 / REV 0 / 01.10.2019
Ch. 2	ISS 3 / REV 0 / 01.10.2019

List of Abbreviations

LoA ISS 3 / REV 0 / 01.10.2019

The following abbreviations are within this GM/INFO:

Abbreviation	Definition		
AFM	Aircraft Flight Manual	OSPFI	Own-Ship Position In Flight
AMC	Acceptable Means of Compliance	OEM	Original Equipment Manufacturer
AMC-20	General Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances	OM	Operations Manual
AMMD	Airport Moving Map Display	OPS	Operations
AOC	Air Operator Certificate	OPS SPECS	Operations Specifications
ARO	Authority Requirements for Air Operations	ORO	Organisation Requirements for Air Operations
CAA	Civil Aviation Authority	PED	Portable Electronic Device
CAT	Commercial Air Transport	PRA	Proposed Revision / Amendment
CL	Compliance List	SB	Service Bulletin
COTS	Commercial Of-The-Shelf	SMS	Safety Management System
C-PED	Controlled Portable Electronic Device	SPA	Specific Approvals
EASA	European Aviation Safety Agency	SPO	Specialised Operations
EC	European Commission	STC	Supplemental Type Certificate
ED	Executive Director	TC	Type Certificate
EFB	Electronic Flight Bag	T-PED	Transmitting Portable Electronic Device
EMI	Electromagnetic Interference		
EU	European Union		
FOCA	Federal Office of Civil Aviation		
GM/INFO	Guidance Material / Information		
HMI	Human Machine Interface		
ICA	Instructions for Continued Airworthiness		
ICAO	International Civil Aviation Organization		
IFW	In-Flight Weather		
MEL	Minimum Equipment List		
MLR	Manuals, Logs and Records		
NCC	Non-Commercial Air Operations with Complex Motor-Powered Aircraft		
NCO	Non-Commercial Air Operations with other than Complex, Motor-Powered Aircraft		

Table of Contents (ToC)

ToC ISS 3 / REV 0 / 01.10.2019

0	Introduction	1
0.1	Legal References	1
0.2	Purpose of this GM/INFO	1
0.3	Scope.....	2
0.4	Terms and Conditions	2
0.5	Organisation / Operator Responsibilities	2
0.6	Definition EFB	3
1	Operational Approval.....	4
1.1	Formal Application.....	4
1.2	Airworthiness.....	4
1.3	OPS SPECS	5
2	Evaluation Process	6

0 Introduction

Ch. 0 ISS 3 / REV 0 / 01.10.2019

All Guidance Material / Information (GM/INFO) are intended to assist the organisation/operator in administrative matters. The administrative requirements and processes will facilitate liaising with the Federal Office of Civil Aviation (FOCA). It is to be considered a tool for the organisation/operator in order to ease processes of obtaining required and defined approvals and authorisations issued by the Federal Office of Civil Aviation (FOCA). Using the GM/INFO will be conducive to establishing compliance with FOCA requirements and will lead through the respective certification or variation process in regard to administrative tasks.

0.1 Legal References

Ch. 0.1 ISS 3 / REV 0 / 01.10.2019

Basic Regulation (EC) No 2018/1139:

- Common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency

Commission Regulation (EU) No 965/2012 (Air Operations):

- Technical requirements and administrative procedures related to air operations
- Annex I: DEF; Annex II: Part-ARO; Annex IV: Part-CAT; Annex V: Part-SPA; Annex VI: Part-NCC; Annex VII: Part-NCO; Annex VIII: Part-SPO

Commission Regulation (EU) No 748/2012 (Initial Airworthiness):

- Laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances

ED Decision 2019/008/R:

- Transposition of provisions on Electronic Flight Bags from ICAO Annex 6

AMC-20 Amendment 16, AMC 20-25A:

- Airworthiness consideration for Electronic Flight Bags (EFBs)

ICAO Doc 10020:

- Manual on Electronic Flight Bags (EFBs)

ICAO Annex 6, Part I, II & III:

- Operation of aircraft

ICAO Doc 7030:

- Regional Supplementary Procedures

0.2 Purpose of this GM/INFO

Ch. 0.2 ISS 3 / REV 0 / 01.10.2019

With the Commission Implementing Regulation (EU) 2018/1975 of 14 December 2018 amending regulation (EU) 965/2012, the ICAO regulations regarding essential requirements for the use of EFBs were taken into account by the European Union.

The corresponding AMCs and GMs were developed on the basis of the operational aspects of Amendment 12 to AMC-20 (AMC 20-25, airworthiness consideration for Electronic Flight Bags) and implemented with the Executive Director (ED) Decision 2019/008/R. According to Air Ops CAT.GEN.MPA.141(b) a Part-CAT operator shall not use a type B EFB application unless it is approved by the competent authority in accordance with SPA.EFB.100.

Part-CAT operators acquiring the Specific Approval (SPA) for the use of type B EFB applications must be in compliance with the requirements concerning initial and continuing airworthiness, operational procedures and training of all involved personnel. The process of approval includes the adoption of all parts of the operations manual system in the respective chapters as well as the amendment of affected maintenance documentation, procedures and tasks.

This GM/INFO was developed in accordance with the current legal requirements and provides basic support for the operator when applying for an extension of their Operations Specifications within the AOC by adopting their operations manuals and maintenance documents in order to get an operational approval or a change of an existing approval for EFB operations.

0.3 Scope

Ch. 0.3 ISS 3 / REV 0 / 01.10.2019

This GM/INFO covers all aspects of EFB operation and shall assist the applicant to be compliant with these requirements.

Note: This GM/INFO contains useful information for Part-NCC, Part-NCO, and Part-SPO operators, which are at this time not required to make an application for a Specific Approval for the use of type B EFB applications.

0.4 Terms and Conditions

Ch. 0.4 ISS 3 / REV 0 / 01.10.2019

When used throughout the GM/INFO the following terms shall have the meaning as defined below:

Term	Meaning	Reference
<i>shall, must, will</i>	These terms express an obligation, a positive command.	EC English Style Guide, Edition 2.19, Chapter 10
<i>may</i>	This term expresses a positive permission.	
<i>shall not, will not</i>	These terms express an obligation, a negative command.	
<i>may not, must not</i>	These terms express a prohibition.	
<i>need not</i>	This term expresses a negative permission.	
<i>should</i>	This term expresses an obligation when an acceptable means of compliance should be applied .	EASA Acceptable Means of Compliance publications FOCA policies and requirements
<i>could</i>	This term expresses a possibility.	http://oxforddictionaries.com/definition/english/could
<i>ideally</i>	This term expresses a best possible means of compliance and/or best experienced industry practice.	FOCA recommendation

Note: To highlight information or an editorial note a specific note box is used.

- The use of the male gender should be understood to include male and female persons.

0.5 Organisation / Operator Responsibilities

Ch. 0.5 ISS 3 / REV 0 / 01.10.2019

The evaluation of an EFB may have both, an airworthiness and an operational aspect. Therefore, a complete evaluation of an EFB system may be required.

The operator has to ensure that all parts of the operations manual system are revised in a manner as to be compliant with the requirements relevant for EFB operations. All initial and continuing airworthiness requirements must be fulfilled.

The following subjects must be covered:

- Evidence of the certification status of the affected aircraft has to be provided to FOCA (AFM, TC, SB, STC)
- Standard operating procedures (OM A, OM B), regional specific operational procedures and information (OM C) as well as the training programmes (OM D) must be defined and implemented in the OM System.
- Occurrence reporting procedures have to be established and described accordingly (OM A, SMS)

Note: Any operator already holding a specific approval for the use of type B EFB applications does not need to re-apply unless the operator is modifying or changing the actual EFB system (hardware or software) to a degree that it is required to inform the competent authority (AMC2 SPA.EFB.100(b)). This includes the extension of the use of an EFB system, for which the operator already holds an approval, to another aircraft type of the operator's fleet. The operator shall apply the change management procedure.

0.6 Definition EFB

Ch. 0.6 ISS 3 / REV 0 / 01.10.2019

«Electronic Flight Bag (EFB)» means an electronic information system, comprised of equipment and applications for flight crew, which allows for storing, updating, displaying, and processing of EFB functions to support flight operations or duties.

«EFB system» means the hardware equipment (including any battery, connectivity provisions, input/output components), and software (including databases and the operating system) needed to support the intended EFB application.

EFB hardware are classified in two categories:

- **Portable** - A portable EFB is a portable EFB host platform, used on the flight deck, which is not part of the certified aircraft configuration. These EFBs are considered as C-PEDs.
- **Installed** - An installed EFB means a host platform that is installed in the aircraft and is considered as an aircraft part, covered, thus, by the aircraft airworthiness approval.

EFB application are classified in two categories:

- **Type A EFB application** - Type A applications are EFB applications whose malfunction or misuse have no safety effect
- **Type B EFB application** - Type B applications are EFB applications whose malfunction or misuse is classified as minor failure condition or below; and which neither replaces nor duplicates any system or functionality required by airworthiness regulations, airspace requirements, or operational rules

1 Operational Approval

Ch. 1 ISS 3 / REV 0 / 01.10.2019

A reference to the related chapter in the Operations Manual (OM) where a list of type B EFB applications is available must be provided by the competent authority (FOCA) on the Operations Specifications (OPS SPECS, EASA Form 139) as required by EASA, according to Commission Regulation (EU) 965/2012 Part-ARO Appendix II, Operations Specification for Type B EFB applications.

Specific approvals:	Yes	No	Specification	Remarks
ETOPS <input type="checkbox"/> N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Maximum diversion time: 180min. or 1230 NM	
AR navigation specifications for PBN operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Minimum navigation performance specification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NAT HLA RSP 180 RCP 240	
Operations of single-engined turbine aeroplane at night or in IMC (SET-IMC)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Helicopter operations with the aid of night vision imaging systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Helicopter hoist operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Helicopter emergency medical service operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Helicopter offshore operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Cabin crew training	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Issue of CC attestation	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Use of type B EFB applications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	according to OM-A 8.9	

1.1 Formal Application

Ch. 1.1 ISS 3 / REV 0 / 01.10.2019

A Part-CAT operator wishing to introduce an EFB system or to modify an existing specific approval for the use of type B EFB applications shall apply for this approval by means of FOCA Form 44.20 Operations Application. This form is available on the FOCA website, under the portal for specialists.

As an integrated part of the formal application, there is a specific approval checklist, which assists the applicant in determining compliance with the applicable regulations regarding operational use of an EFB system. The reference number of the completed checklist has to be entered on Form 44.20 and has to be sent to FOCA as part of the application package.

1.2 Airworthiness

Ch. 1.2 ISS 3 / REV 0 / 01.10.2019

Installed resources such as an installed remote display, a control device or a docking station require an airworthiness approval. The same applies for the EFB mounting device and an installed power outlet. If applicable, evidence, such as a service bulletin (issued by OEM), a STC including any ICAs and if applicable the limitation section of the corresponding AFM has to be provided as part of the application package. More information about airworthiness aspects related to EFB operations can be found in AMC-20 Amendment 16, AMC 20-25A.

1.3 OPS SPECS

Ch. 1.3 ISS 3 / REV 0 / 01.10.2019

As mentioned in chapter 1, Operational Approval, a reference on EASA Form 139, OPS SPECS, has to be provided. According to AMC3 ORO.MLR.100 'Operational manual – general', this reference shall point to OM A Chapter 8.9 'Procedures related to the use of type B EFB applications', where the list of type B EFB applications can be found.

List of Type B EFB Applications

The information to be provided in the list of type B EFB applications are the following:

- Name of application
- Provider of application
- Type of application (The list of AMC3 CAT.GEN.MPA.141(b) should be used)

The list shall be aircraft type specific and include the information about the hardware on which the application is hosted.

Example:

Aircraft Type: A3XX		Hardware Model: Surface Pro	
Type of application	Name of application	Provider of application	
Document browser	FlySmart OLB	Airbus SAS	
Document browser	EFB Docunet	Vistair	
Aeronautical chart application	Lido eRM	Lufthansa Systems	
Airport moving map display	Lido AMMD	Lufthansa Systems	
Aircraft performance calculation	FlySmart Takeoff	Airbus SAS	
Aircraft performance calculation	FlySmart Inflight	Airbus SAS	
Aircraft performance calculation	FlySmart Landing	Airbus SAS	
Mass and balance	FlySmart Loadsheet	Airbus SAS	
In-flight weather	eWAS	GTD	

Note: All type A EFB applications, which might be as well hosted on the EFB, should not be listed as they are not on the scope of the operational approval.

2 Evaluation Process

Ch. 2 ISS 3 / REV 0 / 01.10.2019

The process is designed to lead to specific approval EFB for Part-CAT operators. Elements of this process are to be understood as guidelines and may also be used in instances where specific approval is not required, i.e. Part-NCC, Part-NCO and Part-SPO operators.

The different phases of the process do not necessarily have to be followed in chronological order. It is strongly recommended that the assigned inspector is informed as early as possible by the operator in order to discuss the phases of the evaluation process.

Phase	Topic	Aim
Phase 1	Kick-off meeting	<ul style="list-style-type: none"> • During this phase, the assigned inspector and the operator reach a common understanding of the following: <ol style="list-style-type: none"> a. Required forms and documents/manuals b. Required airworthiness approvals, if applicable c. Steps of the evaluation process, including the operational evaluation test
Phase 2	Application	<ul style="list-style-type: none"> • The application shall be submitted by means of the Form 44.20 and shall cover the following information: • Specific approval checklist and introduction concept of the EFB system • EFB hardware specifications • EFB operator policy, procedures and manuals including MEL (PRA & CL) • Evidence of airworthiness, if applicable (TC, STC, SB, AFM) • EFB training programme • EASA EFB evaluation report (if available) • EFB risk assessment • Final operational report
Phase 3	FOCA review	<ul style="list-style-type: none"> • Document evaluation of the application, the manuals and submitted reports from the operator • Review of corrective action from the operator • Issue of the signed PRA & CL
Phase 4	Operational evaluation test according to AMC3 SPA.EFB.100(b)	<ul style="list-style-type: none"> • An operational evaluation test should be performed by operators seeking an operational approval for the use of a type B EFB application. The operator should perform an operational evaluation test which should enable verification that the relevant requirements of SPA.EFB have been satisfied before a final decision is made on the operational use of the EFB. • The operator should notify FOCA of its intention to conduct an operational evaluation by sending a project plan. A receipt of this notification must be kept in the aircraft during the test period. • The final operational report has to be sent to FOCA.
Phase 5	Issue of the OPS SPEC	<ul style="list-style-type: none"> • Issue of the Operations Specification 'Use of type B EFB applications'