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2. Ngarkohet Drejtoria e Standardeve të Fluturimit, të sigurojë shpërndarjen dhe përdorimin e këtij manuali tek operatorët.

3. Ky vendim hyn në fuqi menjëherë.

DREJTOR EKZEKUTIV

Maksim Et'hemaj

REPUBLIC OF ALBANIA

ALBANIAN CIVIL AVIATION AUTHORITY

GUIDANCE MATERIAL FOR OPERATIONAL CONTROL CENTER

ACAA-DFS-GM6-OCC
Issue: 01, Revision 00
Date: 01.11.2024

Approved by:
Maksim Et'hemaj
Executive Director of Albanian Civil Aviation Authority

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0.1 Record of Amendments

The table below describes the dates and reasons for the different amendments of the current procedure. A vertical black line on the left-hand side of the page identifies the changes with the previous version.

Issue No.	Revision No	Date	Amended by	Reason
01	00	01/11/2024		Initial Issue

In case of major amendment, a new issue will be released to replace the existing procedure. In that case, all the page will identify with a new issue and the revision will set back to zero. For a minor amendment to some provisions, when only a few pages are modified a vertical black line on the left-hand margin of the page identifying the change of the existing version. Users can focus their attention to the changes identified.

0.2 Approval List

Action	Name and position	Date	Signature
Prepared by:	Mr. Nuno Miguel, Specialist of SFO	28.10.24	
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Approved by:	Mr. Maksim Et'hemaj, Executive Director	01.11.24	

0.3 Revision table

Page #	Issue No.	Revision No.	Date	Edited by

0.4 Distribution List

Control #	Responsible Person	Type of Document
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Note: In case of interested party involved in ACAA activities, access rights shall be given on case-by-case basis by the concerned Directorate/ Sector (s).

0.5 Definitions & Acronyms

When the following terms are used in GM, they have the meanings indicated below.

Term	Definition
Flight operations officer/Flight dispatcher	A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.
NOTAM	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.
Operational Control	The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.
Pilot-in-command	The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

0.6 Abbreviations and Acronyms

Abbreviation or Acronym	Meaning
ACAA	Albanian Civil Aviation Authority
AOC	Air Operator Certificate
ATC	Air Traffic Control
CDL	Configuration Deviation List
EASA	European Union Aviation Safety Agency
FC	Flight Crew
FD	Flight Dispatcher
FOO	Flight Operations Officer
GM	Guidance Material
ICAO	International Civil Aviation Organisation
ISP	Internet Service Provider

IT	Information Technology
LAN	Local Area Network
NOTAM	Notice to Airmen
OCC	Operations Control Center
OM	Operations Manual
PIC	Pilot in Command
SATCOM	Satellite Communications
SOP	Standard Operating Procedures
TEM	Threat and Error Management
UPS	Uninterruptible Power Supply
VoIP	Voice over Internet Protocol
MEL	Minimum Equipment List
IRF	Instrument Flight Rules

1. Introduction

1.1 Background

Guidance Material for Operations Control Center (OCC) is issued by the Executive Director of the Albanian Civil Aviation Authority (ACAA) to provide practical guidance or certainty in respect of the statutory requirements for aviation safety.

1.2 Purpose

The purpose of this publication is to enhance operators' knowledge about the importance of establishing an OCC, addressing the requirements and procedures to be followed by them in order to promote an effective communication between both their Flight Crew (FC) and Flight Operations Officers (FOO)/Flight Dispatcher (FD).

For the purpose of this GM a FOO, or FD, means a person designated by the operator to engage in the control and supervision of flight operations, who is suitably qualified, who supports, briefs or assists, or both, the pilot-in-command in the safe conduct of the flight.

It is worth pointing out that, and following European Union Aviation Safety Agency (EASA) guidelines, although an OCC enhances safety operations it does not mean joint responsibility between the Pilot in Command (PIC) and the FOO/FD.

1.3 Applicability

All aircraft operators conducting operations under Albanian Minister Order No. 80/2023 and their respective FC and FOO/FD shall meet the requirements set forth in this GM.

1.4 References

1. Air Code of Republic of Albania No. 96/2020.
2. Decision of Council of Minister No.1095, 24.12.2020 "Common Rules in the Field of Civil Aviation".
3. Minister Order No. 80/2023 "Technical requirements for air operations in Albania".

2. General

2.1 Contextualisation

According to point ORO.GEN.110 (c), Minister Order No.80/2023 – addressing organisation requirements for air operations – the operator shall establish and maintain a system for exercising operational control over any flight operated under the terms of its certificate.

2.2 Operational Control

The organisation and methods established to exercise operational control, flight monitoring and flight watch should be included in the operations manual and should cover at least a description of responsibilities

concerning the initiation, continuation and termination or diversion of each flight.

Point ORO.GEN.110(c) does not imply a requirement for licensed flight operations officers/flight dispatchers.

If the operator uses FOO/FD in conjunction with a method of operational control, training for that personnel should be based on the relevant parts of ICAO Annex 1 and ICAO Documents 10106 and 9868. This training should be described in the Operations Manual (OM).

3. Operations Control Center (OCC) Functions

3.1 OCC and Operations Control Procedures

There are two core concepts and one recommendation that define an effective OCC and enhanced operations control procedures:

- Written Standard Operating Procedures (SOP)
  The first core concept is the development and implementation of documented SOP that are used to guide training and to standardize operations performance. The process of developing SOP requires critical thinking and review of established procedures. If this process is conducted with personnel who serve in the OCC, the organisation will likely discover differences in how individuals perform certain tasks or processes, and best practices can be identified and implemented. Standardization of written operations control procedures reflects the same concerns that mandate the use of checklists on the flight deck. These SOP may be contained in the OM or be standalone documents.

- Leveraging Technology and Communication
  The other core concept of OCC and enhanced operations control procedures is to leverage technology and communication to enhance safety and efficiency. This includes providing an enhanced level of situational awareness to the PIC, FOO/FD, and other individuals. An OCC can leverage technology to provide communication and safety benefits to flight operations. For example, an OCC may be able to acquire weather information for situational awareness purposes from non-aviation locations which do not feed into the national weather service database. This information may come from a variety of weather feeds available at the OCC, including non-aviation sources such as telephone calls, local TV stations, etc. These non-standard weather sources should be used to enhance situational awareness, and "No-Go" decision-making only. Such sources may not be used for "Go" decisions.

- Provision of Situational Awareness Information
  In addition to the regulatory requirements, the operator should establish and document procedures for acquiring and providing situational awareness information to the PIC via the FOO/FD and other individuals and capabilities as appropriate. This is an example of the use of leveraging technology and communications to reduce risk in air operations.

3.2 OCC Models

OCC may take on many possible physical configurations depending on the size and scope of the operator. The OCC provides a physical location where the FOO/FD and any other personnel can access information technologies to assist the PIC.

Locations
Some OCC may be co-located with a communications center that normally receives flight requests, passes the flight request to the pilot, performs flight monitoring, etc. Other OCC may be located at one location and have one or more remotely sited communications centers that communicate flight information to the OCC through various means.

Communication
Several key concepts should be considered regardless of the physical relationship between the OCC and communications centers:

- Direct communications capabilities between the OCC and the PIC, through the communications centre, if necessary, is essential. This allows the FOO/FD to receive early notification of a pending flight and begin processes such as reviewing weather in the proposed flight area as part of the risk analysis concurrence requirement. The FOO/FD must provide two-way communication with the pilot. This may be direct communication, or through established procedures, via relay through the communications center.
- The FOO/FD must have the means available to immediately communicate hazards such as deteriorating weather to the FC. The FOO/FD must also possess a means of verifying risk analysis data for flight diversions that may have been considered at the beginning of any flight.

3.3 OCC Facilities

Hardware and Software Resources
A well-functioning OCC should have available the following hardware and software resources:

- Enabling technologies (to include Local Area Network (LAN), internet access, and digital signature capabilities for form completion);
- Database for determining pilot currency, qualifications, and rest and duty status to be used during pre-flight risk analysis;
- Aircraft situational displays depicting the status of all AOC holder aircraft;
- Aviation weather analysis tools (to include textual, graphical, and geographic information system;
- Notice to Airmen (NOTAM) tools (both textual and graphical);
- Air traffic flow tools (to include temporary flight restrictions, special use airspace, special areas of operation, military operations airspace, high density and congested airspace, warning areas, and weather watch boxes);
- Communication tools (to include telephones, email, datalink, radio (aircraft and first responders, including Voice over Internet Protocol (VoIP) capabilities), satellite communications (SATCOM) and advanced communication consoles);
- Non-aviation situational awareness tools, such as internet capable of accessing weather cams, or TV capable of receiving cable news channels. These types of tools should be only used for situational awareness and for making a "No-Go" decision; and

- In the event of a national security emergency or local disaster, news, Web sites, and phone lines (both landlines and mobile phones) may become inoperative due to the sheer volume of people trying to simultaneously access these resources. Therefore, a TV may be the best means of acquiring information regarding where to send aircraft, where not to send aircraft, and where an accident is located if it is one of the operator's own aircraft.

Adapting OCC Facilities and Capabilities to Smaller Operators

Smaller operators are not required by regulation to have an OCC staffed by an FOO/FD. However, regardless of the size of the organisation, operations control concepts should be carefully planned and implemented to avoid unintended gaps or errors that may result in actions or omissions that would be detrimental to safety.

The following guidelines are provided to assist the operator in avoiding such failures. If an OCC is not required and the operator chooses to voluntarily implement a similar capability or function, the operator's applicable governing policies and procedures (and details of training specialists in operations control subject matter) should be established and documented by the operator in their OM or other permissible forms of documentation. This documentation system must be acceptable to the ACAA just as any other process or procedure documented in the operator's manual system.

- The operator must demonstrate that operational control and PIC responsibility and authority is maintained, and safety is not compromised as a result of the delegation of duties and responsibilities to the non-required individuals staffing that non-regulatory function.
- Smaller operators may choose to incorporate this function within their operations control organisation. Staff members providing FOO/FD-type services within such an organisation should receive the training required.
- Create SOP appropriate for the size and complexity of the operation. A small operator, using SOP that are founded in the concepts used within larger organisations, may increase the safety of their flight operations with minimal expense.

3.4 OCC Physical Space Design Considerations

The following human factors and physical space considerations should be taken into account when designing the layout of an OCC:

Physical Room Layout
Interpersonal communication, visual lines of sight, and the auditory profile of a room are key considerations when designing the physical layout of an OCC.

Size of Room
The room should be small enough for individuals to be able to see and hear discussions within the room for situational awareness. However, the room should not be so loud as to hamper communication.

Visual Lines of Sight
Personnel should be able to see their colleagues. Walls that segregate personnel are undesirable.

Pods
Pod-type workstation areas, where one to four OCC personnel work in small work groups, easily provide for the interactions and load shedding that may be necessary when abnormal or emergency situations develop.

Physical Workstation Areas
Because OCC personnel often work long shifts and sit for extended periods of time, the design of physical workstation areas is important.

Chairs
Chairs should be comfortable. High-backed chairs that rock, swivel, and have wheels are preferable.

Main Desk Surface Area
The main horizontal surface plan of the desk or workstation should not be too high or too low. Workstations that are adjustable to allow for sitting and standing are ideal. There should be ample desk surface area to comfortably spread-out work materials.

Shelving and Storage
There should be ample shelving to aid in keeping items off the desk surface area. There should also be ample enclosed filing and storage capacity. This will allow for ease of accessibility to SOP, the post-accident/incident plan, etc. Shelving and filing containing items such as these should be centrally located and clearly labelled.

3.5 OCC Technology and Design Considerations

Failure and Redundancy Considerations for both Systems and Processes

As technology increasingly becomes an essential part of flight operations, failure becomes a greater concern. For example, the temporary failure of an OCC's LAN may render most of an OCC's functionality inoperative (e.g., phone system, communication console, email, internet access, weather systems, data link, radios, etc.).

Thus, it is important to plan for technology failures and design redundant systems and processes to ensure that the end results provided by contingency systems remain the same. In addition to planning for temporary or less-severe failures and outages, severe technology failures should also be expected and prepared for by the development of an OCC Information Technology (IT) disaster recovery plan. This plan should be documented, and OCC staff should periodically practice contingency operations so they are prepared for such an eventuality.

Common Technology Interruptions

Common technology interruptions that should be planned for when developing, implementing, and integrating an OCC include:

- Electrical power outages (localized to the building, the local area, or to a broader geographic area);
- LAN outages; and
- Internet Service Provider (ISP) or ISP connectivity outages.

Key Redundancy Considerations for Hardware and Infrastructure

The following considerations should be taken into account when designing redundancy into OCC systems:

ISP Connectivity
Software applications used by OCC are increasingly becoming Web-based. This means that if an OCC loses its connectivity to the internet, any Web based applications become inoperative. Therefore, ACAA recommends that an OCC maintain at least two wholly independent connections to the internet. The physical connections should enter the facility at physically opposite ends of the building, and they should be provided by two wholly independent companies. For example, two connections from the local telecommunications service providers will both become unavailable if the local telephone company's network switch goes down. Ideally, these connections should also be load-balanced with automatic failover.

Server Location
Ideally, OCC servers should be located in a secure data center that is hardened to protect against potential threats (e.g., flooding, hurricanes, tornados, etc.). If a hardened data center is not economically viable, then servers should be located in a secure location, preferably temperature controlled and shielded from fire sprinkler systems.

Servers
Ideally, servers should be redundant with automatic failover.

Workstations
Workstations should be standardized for full interoperability so that any staff member can perform their duties at any workstation. For example, an FOO/FD should be able to comfortably work at the same workstation on alternate shifts. Additionally, an OCC should maintain at least one "hot spare" workstation for immediate use, in case one of the workstations normally in use becomes inoperative.

Uninterruptible Power Supply (UPS)

All workstations, servers, switches, and other key infrastructure should have UPS batteries in the power supply chain. The sustainable uptime of various UPS configurations is a cost consideration: the longer the time, the higher the cost. A good middle ground approach may be to install stronger UPS units on vital infrastructure and lighter UPS units on less critical infrastructure. As an example, a good plan may be to install three-hour UPS units on key servers and two workstations, and then install 30-minute UPS units on remaining workstations. It is also worthwhile discussing interruption restoration priorities with the utility companies so they are aware of the critical nature of the flight operation and could plan restoration priorities accordingly.

Note: Ensure all staff members and supervisors are aware of VoIP system redundancy characteristics, including whether or not the phone system is operational when the local ISP network is inoperative.

Key Redundancy Considerations – Processes

OCC SOP should include alternate processes that provide an equivalent level of safe operations during abnormal conditions. For example, if an OCC LAN or local workstation fails, then phone numbers and radio frequencies that are accessed electronically may become unavailable. Therefore, a key process for which redundancy is required is an alternate means of accessing phone numbers. The following are basic core processes for which alternate (redundant) processes should be developed. While the list below may look as if it is hardware centric, the list is actually process centric; many processes are now hardware-dependent.

Phones and Communication
Mobile phones may provide a temporary workaround for inoperative main phone systems and radios.

Phone Numbers
A hard copy set of all phone numbers should be kept at each workstation. If the LAN or local workstation fails, all phone numbers that are generally accessed electronically may become inaccessible.

Internet Access
Laptop computers with cellular data modems may provide temporary internet connectivity while primary connectivity is down.

Flight Monitoring
Flight monitoring processes often rely on electronic applications such as ASDs or specialized communication gear (radio, data link, SATCOM, etc.). In turn, these specialized flight monitoring technologies often rely on internet and/or LAN connectivity somewhere in the data chain to transmit the aircraft location information to personnel responsible for flight monitoring functions. Therefore, it is important that an operator identifies alternate flight locating procedures in the event that the primary flight monitoring application and procedures become inoperative. Alternate flight monitoring processes generally call for alternate means of communication to track the aircraft (e.g., communication with outstations, hospitals, law enforcement, other aircraft, Air Traffic Control (ATC), etc.).

IT Support Staff and Processes
An OCC's technology infrastructure requires IT support staff for ongoing maintenance and support.

3.6 Emergency and Abnormal Operations

Operators should prepare in advance procedures that most effectively leverage OCC resources during abnormal or emergency operations.

Partial or Full Loss of Function of an OCC
These procedures should address how to effectively manage the partial or full shutdown of an OCC and operational control procedures during partial shutdown events such as power failure, loss of connectivity with the primary ISP, or a complete OCC shutdown event that requires evacuation of the OCC or renders the OCC inaccessible (e.g., fire, earthquake, tornado, flood, etc.).

Total Shutdown of an OCC
In the event of a total shutdown of the OCC, alternate locations for relocation of the OCC should be pre

planned and "go-kits" containing laptop computers and other essential equipment should be immediately available for the FOO/FD to "grab and go" should an emergency evacuation be necessary.

Unavailable Facilities
The operator should consider situations where no local facilities are available for re-location of the OCC. In such cases, procedures should be available for maintaining flight monitoring and other processes assigned to the OCC involving flights already airborne, and if mitigation measures to recover functionality fail, the operator should consider invoking a temporary moratorium on launching any new flights during an event that requires temporary shutdown of the OCC. This might include the temporary transfer of OCC duties to other OCC facilities or to mobile resources until an alternate OCC facility is established.

4. FOO/FD Training Programme

4.1. General

When an operator uses flight monitoring or flight watch as functions of a system for exercising operational control, FOO/FD should perform those functions.
The commercial air transport operator should develop a training programme, based on the relevant parts of ICAO Annex 1, ICAO Documents 10106 and 9868, for FOO/FD that perform those functions.
The training programme specified above should be detailed in the OM of the operator and should be delivered by an instructor for operational control personnel.

4.2. Initial Training

The initial training should include, where relevant to the intended operation, the following elements that should be tailored to the specific duties assigned to each person:
1. Air law: rules and regulations relevant to the task assignment, appropriate ATS practices and procedures;
2. Aircraft general knowledge:
    a. Principles of operation of aeroplane engines/systems/instruments;
    b. Operating limitations of aeroplanes and engines; and
    c. MEL and Configuration Deviation List (CDL);
3. Flight performance calculation, planning procedures, and loading:
    a. Effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;
    b. Operational flight planning; fuel consumption and endurance calculations; alternate aerodrome selection procedures; en-route cruising control; extended range operation;
    c. Preparation and filing of ATS flight plans; and
    d. Basic principles of computer-assisted planning systems.
4. Human performance: human performance related to operational control duties, including principles of Threat and Error Management (TEM); guidance material on how to design training programmes on human performance, including on TEM, is provided in ICAO Doc 9683 Human Factors Training Manual.
5. Meteorology:
    a. Aeronautical meteorology; movement of pressure systems; structure of fronts; origin and

characteristics of significant weather phenomena that affect take-off, en-route, and landing conditions;

    b. Interpretation and application of aeronautical meteorological reports, charts, and forecasts; codes and abbreviations; use of, and procedures for, obtaining meteorological information;

    c. Effects of meteorological conditions on aircraft operation and on radio reception in the aircraft that is used by the operator; and

    d. All-weather operations.

6. Navigation:

    a. Principles of air navigation with particular reference to IFR; and

    b. Navigation and radio equipment in the aircraft that is used by the operator.

7. Operational procedures:

    a. Use of aeronautical documentation and SOP;

    b. Procedures for operations beyond 60 minutes from an adequate aerodrome, including, if applicable,

    c. Operational procedures for the carriage of cargo and dangerous goods;

    d. De-icing/anti-icing;

    e. Procedures related to aircraft accidents and incidents; emergency flight procedures; and

    f. Security procedures related to unlawful interference and sabotage of aircraft.

8. Principles of flight: principles of flight related to the appropriate category of aircraft;

9. Radio communications: procedures for communicating with other aircraft and ground stations; and

10. Special aerodromes;

11. Rules of the air, communication and air traffic management;

12. Use of MEL/configuration deviation list (CDL);

13. Transport of dangerous goods by air;

14. Security procedures;

15. Emergency response plan;

16. Flight observation.

4.3. Operator Specific Training

In addition to the initial training, FOO/FD should receive training in the specific duties, responsibilities, and tools that are associated with the operational control system of the operator.

4.4. Recurrent Training

When the recurrent training is conducted within the last 12 months of a 36-month validity period, the next 36-month validity period should be calculated from the original expiry date of the previous assessment.

Notwithstanding the 36-month interval, recurrent training may also be performed at shorter intervals and adjusted to the needs identified after an assessment of the training needs conducted by the operator.

4.5. Knowledge, Skills and Qualifications for Instructors of Operational Control Personnel

Unless otherwise required by the relevant national regulations, instructors for operational control personnel should:

1 Be able to prove that they are current in the subjects covered by the training programme for FOO/FD,

including the operator-specific elements, or otherwise successfully complete an FOO/FD training programme;

2   Have adequate instructional skills or attend instructor training; if more than 24 months have passed since the delivery of the last FOO/FD course, they should attend recurrent instructor training before delivering the next course; and

3   Have relevant work experience in the areas of the training that they provide.

The operator should include in the OM the required knowledge, skills, and qualifications of the instructors for operational control personnel.