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THE CIVIL AVIATION ACT

(No. 21 of 2013)

THE CIVIL AVIATION (AERONAUTICAL SEARCH AND  
RESCUE) REGULATIONS, 2018

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## THE CIVIL AVIATION ACT

(No. 21 of 2013)

IN EXERCISE of powers conferred by section 82 of the Civil Aviation Act, 2013 the Cabinet Secretary for Transport, Infrastructure, Housing and Urban Development makes the following Regulations—

## CIVIL AVIATION (AERONAUTICAL SEARCH AND RESCUE) REGULATIONS, 2018

## PART I—PRELIMINARY

1. These Regulations may be cited as the Civil Aviation (Aeronautical Search and Rescue) Regulations, 2018.

Citation.

2. In these Regulations, unless the context otherwise requires—

Interpretation.

“accident” means an occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked or in the case of unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which—

- (a) a person is fatally or seriously injured as a result of—
  - (i) being in the aircraft; or
  - (ii) direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or
  - (iii) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- (b) the aircraft sustains damage or structural failure which—
  - (i) adversely affects the structural strength, performance or flight characteristics of the aircraft; and
  - (ii) would normally require major repair or replacement of the affected component;

except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or

- (c) the aircraft is missing or is completely inaccessible;

“Aeronautical Information Publication, (AIP)” means a publication issued by or with the Kenya Civil Aviation Authority and containing aeronautical information of a lasting character essential to air navigation;

“Aeronautical Rescue Coordination Centre, (RCC)” means a unit responsible for promoting efficient organization of Aeronautical Search and Rescue services and for coordinating the conduct of Aeronautical Search and Rescue operations within a Aeronautical Search and Rescue region ;

“Aeronautical Rescue Sub-Centre, (RSC)” means a unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities ;

“Aeronautical Search” means an operation normally coordinated by a rescue coordination centre or rescue sub-centre using available personnel and facilities to locate persons in distress;

“Aeronautical Search and Rescue aircraft” means an aircraft provided with specialized equipment suitable for the efficient conduct of Aeronautical Search and Rescue missions ;

“Aeronautical Search and Rescue facility” means any mobile resource, including designated Aeronautical Search and Rescue units, used to conduct Aeronautical Search and Rescue operations;

“Aeronautical Search and Rescue service” means the performance of distress monitoring, communication, coordination and Aeronautical Search and Rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations;

“Aeronautical Search and Rescue region (SRR)” means an area of defined dimensions, associated with a rescue coordination centre, within which Aeronautical Search and Rescue services are provided;

“Aeronautical Search and Rescue unit” means a mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of Aeronautical Search and Rescue operations;

“aircraft” means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface;

“alerting post” means any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue sub-centre;

“alert phase” means a situation wherein apprehension exists as to the safety of an aircraft and its occupants;

“Authority” means the Kenya Civil Aviation Authority established under section 4 of the Act;

“Cabinet Secretary” means the Cabinet Secretary responsible for matters relating to Civil Aviation;

“Convention” means the Convention on International Civil Aviation adopted at Chicago on the 7<sup>th</sup> December, 1944;

“COSPAS-SARSAT” means the Space System for the Search of Vessels in Distress-Aeronautical Search and Rescue Satellite Aided Tracking;

“Director Air Navigation Services” means the Director for the time being responsible for air navigations services provided by the Authority;

“Director-General” means the Director-General of Kenya Civil Aviation Authority;

“distress phase” means a situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance;

“ditching” means the forced landing of an aircraft on water;

“emergency phase” is a generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase;

“EPIRB” means Emergency Position Indicating Radio Beacon;

“flight information region” means an airspace of defined dimensions within which flight information service and alerting service are provided;

“IBRD” means International Beacon Registration Database;

“incident” means an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation;

“International Civil Aviation Organization” means the specialized agency of the United Nations responsible for formulating standards and recommended practices for the purposes of civilian international air transport, established in Chicago on 7<sup>th</sup> December 1944;

“Joint Rescue Coordination Centre (JRCC)” means a rescue coordination centre responsible for both aeronautical and maritime Aeronautical Search and Rescue operations;

“operator” means a person, organization or enterprise engaged in or offering to engage in an aircraft operation;

“person” means any institution or organization equipped to assist in a Aeronautical Search and Rescue operation, an organ of state, a government and an agency of the government of a foreign country;

“pilot-in-command” means 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;

“PLB” means Personnel Locator Beacon;

“rescue” means an operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety;

“State of Registry” means the State on whose register the aircraft is entered;

“uncertainty phase” means a situation wherein uncertainty exists as to the safety of an aircraft and its occupants; and

“vessel” means any water-navigable craft of any type, whether self-propelled or not.

3. These Regulations shall apply to all aircraft requiring Aeronautical Search and Rescue services and to persons or organizations responsible for the maintenance and operation of Aeronautical Search and Rescue services in Kenya and in areas over the high seas to which Kenya has been given responsibility under the regional air navigation plan.

Application.

## PART II—AERONAUTICAL SEARCH AND RESCUE ORGANIZATION

4. (1) The Director of Air Navigation Services is the designated Aeronautical Search and Rescue agency for Aeronautical Search and Rescue operations in Kenya.

Provision of Aeronautical Search and Rescue services.

(2) The designated Aeronautical Search and Rescue agency shall be responsible to the Director-General for coordinating and directing the prompt provision of Aeronautical Search and Rescue services within Kenya, including portions of the high seas as determined on the basis of regional air navigation agreements, to ensure that assistance is rendered to persons in distress.

(3) The designated Aeronautical Search and Rescue agency shall in coordination with the Authority—

- (a) determine the type and degree of Aeronautical Search and Rescue services to be provided within the Aeronautical Search and Rescue region, and shall coordinate such services in accordance with these Regulations;
- (b) establish a system for reporting occurrences and the conduct of Aeronautical Search and Rescue operations to the Authority; and
- (c) ensure the availability of sufficient resources and facilities to coordinate the Aeronautical Search and Rescue operations at any one time.

(4) The Authority in coordination with the designated Aeronautical Search and Rescue agency shall ensure availability of resources, communication facilities and a skilled manpower to coordinate and provide the Aeronautical Search and Rescue functions.

(5) The designated Aeronautical Search and Rescue agency shall establish processes to improve service provision, including the aspects of planning domestic and international cooperative arrangements and training.

(6) In providing assistance to aircraft in distress and to survivors of aircraft accidents, the designated Aeronautical Search and Rescue agency shall do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.

(7) Aeronautical Search and Rescue units and other available facilities shall be used to assist any aircraft or its occupants that are or appear to be in a state of emergency.

(8) Where separate aeronautical and maritime rescue coordination centres serve the same area, the designated Aeronautical Search and Rescue agency shall ensure the closest possible cooperation and coordination between the relevant aeronautical, maritime and military emergency response services.

(9) The designated Aeronautical Search and Rescue agency shall facilitate consistent and cooperative engagement between aeronautical and maritime Aeronautical Search and Rescue services.

(10) The designated Aeronautical Search and Rescue agency may cooperate in establishment of joint rescue coordination centres to coordinate aeronautical and maritime Aeronautical Search and Rescue operations where practical.

5. The Aeronautical Search and Rescue region within which Aeronautical Search and Rescue services shall be provided, will be coincident to the national boundary of Kenya including portions of the high seas as determined on the basis of regional air navigation agreements.

Aeronautical Search and Rescue region.

6. (1) The designated Aeronautical Search and Rescue agency shall establish and publish in the AIP, a rescue coordination centre, equipped with appropriate facilities and personnel to—

Establishment of Aeronautical Rescue coordination centre and rescue sub centres.

- (a) facilitate efficient organization of Aeronautical Search and Rescue services; and
- (b) coordinate the conduct of Aeronautical Search and Rescue operations within the Aeronautical Search and Rescue region.

(2) The designated Aeronautical Search and Rescue agency may establish and publish in the AIP search and rescue sub centres, subordinate to the rescue coordination centre, where this is considered to improve the efficiency of Aeronautical Search and Rescue services within Kenya.

(3) The rescue coordination centre, and as appropriate, rescue sub centre, shall be staffed 24 hours a day by trained personnel proficient in the use of English language used for radiotelephony communications.

(4) The rescue coordination centre personnel involved in the conduct of radiotelephony communications shall be proficient in the use of the English language.

(5) The designated Aeronautical Search and Rescue agency shall make formal arrangements for cooperative and appropriate use of public and private Aeronautical Search and Rescue units that are suitably located, equipped and crewed for Aeronautical Search and Rescue operations throughout the Aeronautical Search and Rescue region.

(6) The designated Aeronautical Search and Rescue agency shall maintain an accurate and complete database of Aeronautical Search and Rescue Units and other Aeronautical Search and Rescue facilities and resources within the Aeronautical Search and Rescue region and make arrangements for the timely advice to the Rescue Coordination Centre of any change in their readiness or capability.

(7) In areas where telecommunications facilities would not permit persons observing an aircraft in emergency to notify the rescue coordination centre concerned directly and promptly, suitable units of public or private services shall be designated and such units shall be published in the AIP as alerting posts.

7. (1) The designated Aeronautical Search and Rescue agency shall ensure that the rescue coordination centre shall have means of rapid and reliable two way communication with—

Aeronautical Search and Rescue communications.

- (a) associated air traffic services units;
- (b) associated rescue sub-centres;
- (c) appropriate direction-finding and position-fixing stations;
- (d) where appropriate, coastal radio stations capable of alerting and communicating in the region;
- (e) the headquarters of Aeronautical Search and Rescue units in the region;
- (f) all maritime rescue coordination centres in the region and aeronautical, maritime or joint rescue coordination centres in adjacent regions;
- (g) a designated meteorological office or meteorological watch office;
- (h) Aeronautical Search and Rescue units;
- (i) alerting posts; and
- (j) the COSPAS-SARSAT Mission Control Centre servicing the Aeronautical Search and Rescue region.

(2) The designated Aeronautical Search and Rescue agency shall ensure that each rescue sub centre have means of rapid and reliable two-way communication with—

- (a) adjacent rescue sub centres;
- (b) a meteorological office or meteorological watch office;
- (c) Aeronautical Search and Rescue units; and
- (d) alerting posts.

8. The designated Aeronautical Search and Rescue agency shall—

Aeronautical Search and Rescue operations.

- (a) publish in the AIP, as Aeronautical Search and Rescue units, elements of public or private services suitably located and equipped for Aeronautical Search and Rescue operations;



- (b) publish in the AIP, as parts of the Aeronautical Search and Rescue plan of operation, elements of public or private services that do not qualify as Aeronautical Search and Rescue units but are able to participate in Aeronautical Search and Rescue operations; and
- (c) have equipment capable of communicating any distress information with the designated Mission Control Centre (MCC).

9. (1) All ELTs on board aircraft and all PLBs used during aviation sports activities shall be registered in the National IBRD.

Registration of ELTs & PLBs.

(2) The Director-General of the Authority shall maintain the National IBRD.

10. (1) The designated Aeronautical Search and Rescue agency shall ensure that—

Aeronautical Search and Rescue equipment.

- (a) Aeronautical Search and Rescue units are provided with equipment for locating promptly, and for providing adequate assistance at the scene of an accident;
- (b) Aeronautical Search and Rescue units have means of rapid and reliable two-way communication with other Aeronautical Search and Rescue facilities engaged in the same operation;
- (c) Aeronautical Search and Rescue aircraft are equipped to be able to communicate on the aeronautical distress and on-scene frequencies and on such other frequencies as may be determined by the Authority;
- (d) Aeronautical Search and Rescue aircraft are equipped with a device for homing on distress frequencies;
- (e) Aeronautical Search and Rescue aircraft, when used for Aeronautical Search and Rescue over maritime areas, are equipped to be able to communicate with vessels;
- (f) each Aeronautical Search and Rescue aircraft, when used for Aeronautical Search and Rescue over maritime areas, carry a copy of the International Code of Signals to enable it to overcome language difficulties that may be experienced in communicating with ships;
- (g) at least one of the aircraft participating in an Aeronautical Search and Rescue operation, carries droppable survival equipment, unless it is known that there is no need to provide supplies to survivors by air.

(2) The designated Aeronautical Search and Rescue agency shall ensure that appropriate survival equipment, suitably packed for dropping by aircraft are located at aerodromes.

### PART III—COOPERATION AND CO-ORDINATION OF AERONAUTICAL SEARCH AND RESCUE SERVICES

11. (1) The designated Aeronautical Search and Rescue agency shall in its operations—

Cooperation and coordination with other States and agencies.

- (a) ensure that the Aeronautical Search and Rescue organization is coordinated with those of neighbouring States where these operations are proximate to adjacent Aeronautical Search and Rescue regions; and
- (b) develop common search and rescue plans and procedures to facilitate coordination of search and rescue operations with those of neighboring States.

(2) The Authority, through the rescue coordination centre shall—

- (a) request from other rescue coordination centres such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- (b) grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory; and
- (c) make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

(3) The rescue coordination centre shall when requested, provide assistance to other rescue coordination centres and coordinate any assistance required by those centres in the form of aircraft, vessels, persons or equipment.

(4) The designated Aeronautical Search and Rescue agency shall make arrangements for—

- (a) joint training exercises involving its Aeronautical Search and Rescue units, those of other States and operators, in order to promote Aeronautical Search and Rescue efficiency; and
- (b) periodic liaison visits by personnel of its rescue coordination centres and sub-centre to the centres of neighboring States.

12. (1) The designated Aeronautical Search and Rescue agency in coordination with the Authority and relevant government authorities shall establish letters of agreement with Aeronautical Search and Rescue service providers within the State and with all Aeronautical Search and Rescue agencies of contiguous States, to strengthen Aeronautical Search and Rescue cooperation and coordination.

Aeronautical Search and Rescue letters of agreement.

(2) Subject to sub-regulation (1), the designated Aeronautical Search and Rescue agency shall set forth in the agreements, the conditions for entry of each other's Aeronautical Search and Rescue units into respective territories and ensure that these agreements also provide for expediting entry of such units with the least possible formalities.

13. (1) The Director-General shall in coordination with relevant government authorities and subject to such conditions as may be prescribed by such authorities, permit immediate entry into the Kenyan territory, Aeronautical Search and Rescue units of other States for the

Entry into the territory of Kenya by other States' parties.

purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.

(2) Other States parties, who wish their Aeronautical Search and Rescue units to enter the territory of Kenya for Aeronautical Search and Rescue purposes shall transmit a request, giving full details of the projected mission and the need for it, to the Director-General.

(3) Subject to sub-regulation (2), the Director General shall—

- (a) acknowledge the receipt of such a request; and
- (b) in coordination with relevant State agencies, as soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken.

14. (1) All aircraft, vessels and local services and facilities, which do not form part of the Aeronautical Search and Rescue organization shall cooperate fully with the latter in Aeronautical Search and Rescue and extend any possible assistance to the survivors of aircraft accidents.

Cooperation with other services not forming part of the Aeronautical Search and Rescue organization.

(2) Close coordination between relevant aeronautical and maritime authorities shall be maintained to provide for the most effective and efficient Aeronautical Search and Rescue services.

(3) The designated Aeronautical Search and Rescue agency shall ensure that its Search and Rescue services cooperate with those agencies responsible for investigating accidents and with those responsible for the care of those who suffer from the accidents.

(4) To facilitate accident investigation, rescue units shall, when practicable, be accompanied by persons qualified in the conduct of aircraft accident and incident investigations.

(5) The Authority shall designate a search and rescue point of contact for the receipt of COSPAS-SARSAT distress data.

15. (1) The Cabinet Secretary shall in coordination with the relevant government departments, establish an Aeronautical Search and Rescue Committee to ensure a coordinated and effective Aeronautical Search and Rescue service within Kenya.

Establishment of Aeronautical Search and Rescue Committee.

(2) The Aeronautical Search and Rescue Committee shall comprise representatives from—

- (a) the Ministry responsible for civil aviation;
- (b) the Authority ;
- (c) air traffic services;
- (d) aircraft operators;
- (e) Kenya Defence Forces;
- (f) the Kenya Maritime Authority;
- (g) National Police Service;

- (h) the Meteorological Services;
- (i) Kenya Airports Authority;
- (j) Airline Pilots Association;
- (k) Accident Investigation Bureau;
- (l) the Disaster Management Unit; and
- (m) such other persons as may be determined by the Cabinet Secretary.

(3) The Cabinet Secretary shall appoint the chairperson of the committee from among the members, whose role shall be to coordinate the functions of the committee with the assistance of a secretary appointed by the committee from among its members.

(4) The committee shall in coordination with the designated Aeronautical Search and Rescue agency ensure the effective delivery of Aeronautical Search and Rescue services within the Aeronautical Search and Rescue region in accordance with these Regulations.

(5) Notwithstanding sub-regulation (4), the committee shall in coordination with the designated Aeronautical Search and Rescue agency, be responsible for—

- (a) developing and recommending the national strategic Aeronautical Search and Rescue policy;
- (b) coordination of administrative and operational matters regarding Aeronautical Search and Rescue of aircraft;
- (c) providing an interface between the national and other regional and international organizations involved in Aeronautical Search and Rescue operations;
- (d) overseeing the implementation of the Aeronautical Search and Rescue plan for Kenya and of procedures contained in the Aeronautical Search and Rescue Manual;
- (e) coordinating arrangements for Aeronautical Search and Rescue training and exercises required by the Aeronautical Search and Rescue plan including follow-up of actions recommended following the conduct of Aeronautical Search and Rescue exercises;
- (f) promoting effective use of all available facilities for Aeronautical Search and Rescue;
- (g) serving as a co-operative forum to exchange information and develop positions and policies of interest to Parties involved in the Plan;
- (h) promoting close co-operation and co-ordination between civilian and military authorities and organizations for the provision of effective Aeronautical Search and Rescue services;
- (i) improving co-operation among aeronautical, maritime and land Aeronautical Search and Rescue communities for the

provision of effective Aeronautical Search and Rescue services;

- (j) coordinating Aeronautical Search and Rescue exercises as necessary;
- (k) ensuring the availability of appropriately packed, droppable life support equipment that is securely positioned and maintained at strategic locations throughout the Aeronautical Search and Rescue region and readily available for rapid loading onto Aeronautical Search and Rescue Units;
- (l) determining other ways to enhance the overall effectiveness and efficiency of Aeronautical Search and Rescue services within Kenya and to standardize Aeronautical Search and Rescue procedures and equipment where practicable; and
- (m) conduct a post mortem following an Aeronautical Search and Rescue exercise or activity and advise the Director-General of its findings and recommendations.

(6) The Committee shall meet at least twice a year to discuss matters related to its functions pursuant to sub-regulation (5) and to make any necessary recommendations to the Director-General on matters affecting aeronautical Search and Rescue services in Kenya.

(7) The chairperson of the committee may at any time and in coordination with the designated Aeronautical Search and Rescue agency, call a special meeting of the committee when circumstances so require at a time and place to be determined and shall notify the members of the committee in writing.

16. (1) The designated Aeronautical Search and Rescue agency shall—

Dissemination of information.

- (a) publish in the Kenya AIP the Aeronautical Search and Rescue point of contact for the receipt of COSPAS-SARSAT distress data;
- (b) publish in the AIP the arrangements and information necessary for the entry into Kenya of Aeronautical Search and Rescue units of other States for the purpose of Aeronautical Search and Rescue of aircraft;
- (c) make available, through the rescue coordination centres or other agencies, information regarding Aeronautical Search and Rescue plans of operation.

(2) The Authority shall, to the extent desirable and practicable, disseminate information to the general public and emergency response authorities regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become cause for public concern or require a general emergency response.

#### PART IV—PREPARATORY MEASURES

17. (1) The designated Aeronautical Search and Rescue agency shall make readily available, at all times, up to-date information

Preparatory information.

concerning the following in respect of its Aeronautical Search and Rescue region, Aeronautical Search and Rescue units, rescue sub-centres and alerting posts, and air traffic services units—

- (a) means of communication that may be used in Aeronautical Search and Rescue operations;
- (b) addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and
- (c) any other public and private resources including medical and transportation facilities that are likely to be useful in Aeronautical Search and Rescue.

(2) The designated Aeronautical Search and Rescue agency shall ensure that the rescue coordination centre has readily available all other information of interest to Aeronautical Search and Rescue, including information regarding—

- (a) the locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of Aeronautical Search and Rescue operations;
- (b) the locations and hours of watch of services keeping radio watch, and the frequencies guarded;
- (c) locations where supplies of droppable emergency and survival equipment are stored; and
- (d) objects which it is known might be mistaken for unallocated or unreported wreckage, particularly if viewed from the air.

(3) The rescue coordination centre shall coordinate with the marine Aeronautical Search and Rescue units to have ready access to information regarding the positions, course and speed of ships within areas that may be able to provide assistance to aircraft in distress and information on how to contact such ships.

(4) The designated Aeronautical Search and Rescue agency shall in cooperation with other States and the maritime authority arrange communication links with Anvers or regional ship reporting systems to facilitate Aeronautical Search and Rescue operations at sea.

(5) The designated Aeronautical Search and Rescue agency shall provide relevant information on the availability of Aeronautical Search and Rescue Units within the Aeronautical Search and Rescue region for publication in the AIP.

18. (1) The designated Aeronautical Search and Rescue agency shall prepare detailed plans of operation for the conduct of Aeronautical Search and Rescue operations within the Aeronautical Search and Rescue region.

(2) Aeronautical Search and Rescue plan of operations shall be developed jointly with representatives of the operators and other public or private services that may assist in providing Aeronautical Search and

Aeronautical Search  
and Rescue plan of  
operation.

Rescue services or benefit from them, taking into account that the number of survivors could be large.

(3) The plans of operation shall specify arrangements for the servicing and refueling, to the extent possible, of aircraft, vessels and vehicles employed in Aeronautical Search and Rescue operations, including those made available by other States.

(4) The Aeronautical Search and Rescue plans of operation shall contain details regarding actions to be taken by those persons engaged in Aeronautical Search and Rescue, including—

- (a) the manner in which Aeronautical Search and Rescue operations are to be conducted in the Aeronautical Search and Rescue region;
- (b) the use of available communication systems and facilities;
- (c) the actions to be taken jointly with other rescue coordination centres;
- (d) the methods of alerting en-route aircraft and ships at sea;
- (e) the duties and prerogatives of persons assigned to Aeronautical Search and Rescue;
- (f) the possible redeployment of equipment that may be necessitated by meteorological or other conditions;
- (g) the methods for obtaining essential information relevant to Aeronautical Search and Rescue operations, such as weather reports, forecasts and appropriate NOTAM;
- (h) the methods for obtaining, from other rescue coordination centres, such assistance, including aircraft, vessels, persons or equipment, as may be needed;
- (i) the methods for assisting distressed aircraft being compelled to ditch to rendezvous with surface craft;
- (j) the methods for assisting Aeronautical Search and Rescue operation or other aircraft to proceed to aircraft in distress; and
- (k) cooperative actions to be taken in conjunction with air traffic services units and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.

(5) Aeronautical Search and Rescue plans of operation shall be integrated with airport emergency plans to provide for rescue services in the vicinity of aerodromes including, for coastal aerodromes and areas of water.

(6) Aeronautical Search and Rescue plans for operation shall be integrated with emergency response plans developed by the air operators in accordance with the provisions of the Civil Aviation (Operation of Aircraft) Regulations.

(7) To facilitate the implementation of the Aeronautical Search and Rescue plan, the designated Aeronautical Search and Rescue agency shall prepare and keep updated an Aeronautical Search and Rescue manual containing the necessary procedures for Aeronautical Search and Rescue operations and matters connected therewith.

19. The designated Aeronautical Search and Rescue agency shall ensure that each Aeronautical Search and Rescue unit—

Aeronautical Search and Rescue units.

- (a) is cognizant of all parts of the plans of operation described in regulation 14 that are necessary for the effective conduct of its duties;
- (b) keeps the rescue coordination centre informed of its preparedness;
- (c) maintains readiness and the required number of Aeronautical Search and Rescue facilities; and
- (d) maintains adequate supplies of rations, medical stores, signaling devices and other survival and rescue equipment.

20. The designated Aeronautical Search and Rescue agency shall provide for regular training of its Aeronautical Search and Rescue personnel and arrange appropriate Aeronautical Search and Rescue exercises to achieve and maintain maximum efficiency in Aeronautical Search and Rescue operations.

Training and exercises.

21. The Cabinet Secretary shall ensure that wreckage resulting from aircraft accidents within Kenya or, in the case of accidents on the high seas, within the Aeronautical Search and Rescue regions, is removed, obliterated or charted following completion of the accident investigation, if its presence might constitute a hazard or confuse subsequent Aeronautical Search and Rescue operations.

Procedure at the scene of accidents.

#### PART V—OPERATING PROCEDURES

22. (1) The rescue coordination centre shall immediately be given all available information concerning an aircraft believed to be in an emergency by the authority or any element of the search and rescue organization.

Information concerning emergencies.

(2) The rescue coordination centre shall, immediately upon receipt of information concerning aircraft in emergency, evaluate such information and assess the extent of the operation required.

(3) When information concerning aircraft in emergency is received from other sources than air traffic services units, the rescue coordination centre shall determine to which emergency phase the situation corresponds and apply the procedures applicable to that phase.

23. (1) The rescue coordination centre shall upon the occurrence of an uncertainty phase, cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.

Procedures for rescue coordination centre during emergency phases.

(2) The rescue coordination centre shall upon the occurrence of an alert phase, immediately alert Aeronautical Search and Rescue units and initiate any necessary action.



(3) The rescue coordination centre shall upon the occurrence of a distress phase—

- (a) immediately initiate action by Aeronautical Search and Rescue units in accordance with the appropriate plan of operation;
- (b) ascertain the position of the aircraft, estimate the degree of uncertainty of this position, and, on the basis of this information and the circumstances, determine the extent of the area to be searched;
- (c) notify the operator, where possible, and keep the operator informed of developments;
- (d) notify other rescue coordination centres, the help of which seems likely to be required, or which may be concerned in the operation;
- (e) notify the associated air traffic services unit, when the information on the emergency has been received from another source;
- (f) request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to—
  - (i) maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or ELT 406Mhz;
  - (ii) assist the aircraft in distress as far as practicable; and
  - (iii) inform the rescue coordination centre of any developments;
- (g) from the information available, draw up a detailed plan of action for the conduct of the search or rescue operation required and communicate such plan for the guidance of the authorities immediately directing the conduct of such an operation;
- (h) amend as necessary, in the light of evolving circumstances, the detailed plan of action;
- (i) notify the appropriate accident investigation authorities; and
- (j) notify the State of Registry of the aircraft.

(4) Subject to sub-regulations (1), (2), and (3), the order in which the actions are described shall be followed unless circumstances dictate otherwise.

(5) In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more Aeronautical Search and Rescue regions, the following shall apply—

- (a) when a rescue coordination centre is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with these regulations and confer with neighboring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility forthwith;
- (b) unless otherwise decided by common agreement of the rescue coordination centres concerned, the rescue coordination centre to coordinate Aeronautical Search and Rescue action shall be the centre responsible for—
  - (i) the region in which the aircraft last reported its position;
  - (ii) the region to which the aircraft was proceeding when its last reported position was on the line separating two Aeronautical Search and Rescue regions;
  - (iii) the region to which the aircraft was destined when it was not equipped with suitable two-way radio communication or not under obligation to maintain radio communication; or
  - (iv) the region in which the distress site is located as identified by the COSPAS-SARSAT system;
- (c) after declaration of the distress phase, the rescue coordination centre with overall coordination responsibility shall inform all rescue coordination centres that may become involved in the operation of all the circumstances of the emergency and subsequent developments;
- (d) all rescue coordination centres becoming aware of any information pertaining to the emergency shall inform the rescue coordination centre that has overall responsibility.

(6) The rescue coordination centre responsible for Aeronautical Search and Rescue action shall forward to the air traffic services unit serving the flight information region in which the aircraft is operating, information of the Aeronautical Search and Rescue action initiated when passing information to aircraft in respect of which an emergency phase has been declared.

24. Where the conduct of operations over the entire Aeronautical Search and Rescue region is the responsibility of more than one rescue coordination centre, each involved rescue coordination centre shall take action in accordance with the relevant plan of operations when so requested by the rescue coordination centre of the region.

25. The authorities immediately directing the conduct of Aeronautical Search and Rescue operations in the field or any part thereof shall—

- (a) give instructions to the units under their direction and inform the rescue coordination centre of such instructions; and

Procedures where responsibility for operations extends to two or more Rescue Coordination Centres (RCCs).

Procedures for authorities in the field.

- (b) keep the rescue coordination centre informed of any developments.

26. (1) Aeronautical Search and Rescue operations shall continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.

Procedures for rescue coordination centre- termination and suspension of operations.

(2) The rescue coordination centre shall be responsible for determining when to discontinue Aeronautical Search and Rescue operations.

(3) When an Aeronautical Search and Rescue operation has been successful or when a rescue coordination centre considers, or is informed, that an emergency no longer exists, the emergency phase shall be cancelled and the Aeronautical Search and Rescue operation terminated and any authorities, facilities or services that had been activated or notified, be promptly informed.

(4) If an Aeronautical Search and Rescue operation becomes impracticable and the rescue coordination centre concludes that there might still be survivors, the centre shall suspend on-scene activities pending further developments and promptly inform any agency, facility or service which has been activated or notified.

(5) Relevant information subsequently received shall be evaluated and Aeronautical Search and Rescue operations resumed when justified and practicable.

27. (1) The rescue coordination centre or rescue sub-centre shall designate one or more units on scene to coordinate all actions to help ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements when multiple facilities are engaged in Aeronautical Search and Rescue operations on scene.

Procedures at the scene of an accident.

(2) A pilot-in-command who observes that either another aircraft or a surface craft is in distress, shall, if possible and unless considered unreasonable or unnecessary—

- (a) keep the craft in distress in sight until compelled to leave the scene or advised by the rescue coordination centre that it is no longer necessary;
- (b) determine the position of the craft in distress;
- (c) as appropriate, report to the rescue coordination centre or air traffic services unit as much of the following information as possible —
  - (i) type of craft in distress, its identification and condition;
  - (ii) its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
  - (iii) time of observation expressed in hours and minutes Coordinated Universal Time (UTC);

- (iv) number of persons observed;
- (v) whether persons have been seen to abandon the craft in distress;
- (vi) on-scene weather conditions;
- (vii) apparent physical condition of survivors;
- (viii) apparent best ground access route to the distress site; and
- (ix) act as instructed by the rescue coordination centre or the air traffic services unit.

(3) If the first aircraft to reach the scene of an accident is not an Aeronautical Search and Rescue aircraft, it shall take charge of on-scene activities of all other aircraft subsequently arriving until the first Aeronautical Search and Rescue aircraft reaches the scene of the accident.

(4) Subject to sub-regulation (3), if such aircraft is unable to establish communication with the appropriate rescue coordination centre or air traffic services unit, it shall, by mutual agreement hand over to an aircraft capable of establishing and maintaining such communications until the arrival of the first Aeronautical Search and Rescue aircraft.

(5) When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is not available, it shall, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message.

(6) When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in sub-regulation (5) or, if this is not practicable, by making the appropriate visual signal.

(7) When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal and if no radio communication can be established, the aircraft shall make the appropriate visual signal.

28. Whenever a distress transmission is intercepted by a pilot-in-command of an aircraft, the pilot shall, if feasible —

- (a) acknowledge the distress transmission;
- (b) record the position of the craft in distress if given;
- (c) take a bearing on the transmission;
- (d) inform the appropriate rescue coordination centre or air traffic services unit of the distress transmission, giving all available information; and
- (e) at the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

Procedures for a pilot-in-command intercepting a distress transmission.

29. (1) The air-to-surface and surface-to-air visual signals described in the Schedule shall, when used, have the meaning indicated therein and shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.

Aeronautical Search and Rescue signals.

(2) Upon observing any of the signals, aircraft shall take such action as may be required by the interpretation of the signal given in the Schedule.

30. (1) The rescue coordination centre shall keep a record of the operational efficiency of the Aeronautical Search and Rescue organization in the region.

Maintenance of records, appraisals and information sharing.

(2) The rescue coordination centre shall prepare appraisals of actual Aeronautical Search and Rescue operations in the region and the reports shall include any pertinent remarks on the procedures used and on the emergency and survival equipment, and any suggestions for improvement of those procedures and equipment.

(3) The appraisals which are likely to be of interest to other States shall be submitted to ICAO for information and dissemination as appropriate.

#### PART VI— GENERAL PROVISIONS

31. (1) The Cabinet Secretary may for purposes of any aeronautical Search and Rescue operation—

Requisition of aircraft or vessel.

- (a) make requisition for any civil aircraft or vessel;
- (b) request the assistance of any military aircraft or vessel; or
- (c) request any holder of a Kenya aircraft flight crew license or the master of a vessel to assist in the operation.

(2) Where the Cabinet Secretary contemplates requisitioning a civilian aircraft or vessel or requesting a civilian holder of a Kenyan aircraft flight crew license or the master of a vessel, the Cabinet Secretary may do so only if—

- (a) human life is in immediate and grave danger; and
- (b) there are no other means available to conduct the operation.

32. (1) If any Aeronautical Search and Rescue operation is undertaken in connection with any occurrence caused by the unlawful act or omission of any person, the Cabinet Secretary may recover from that person the whole or any portion of the expenses incurred in connection with that operation.

Recovery of certain expenses.

(2) The Cabinet Secretary may, after having recovered the expenses contemplated in sub-regulation (1), compensate any person who has incurred any loss or damage as a result of the operation.

(3) Subject to sub-regulations (1) and (2), the Cabinet secretary shall determine and notify in writing the expenses to be recovered depending on the nature of the unlawful act or omission.

33. The designated Aeronautical Search and Rescue agency shall retain all data relating to every Aeronautical Search and Rescue action

Record keeping by the designated Aeronautical Search

undertaken by the rescue coordination centre in an orderly and easily accessible manner for a period of at least twelve calendar months.

and Rescue agency.

34. (1) Any person who fails to comply with any direction or instructions given to him or her under these Regulations shall be deemed for the purpose of these Regulations to have contravened that provision.

Failure to comply with direction or instructions.

(2) Any person who becomes aware of a violation of the provisions of any of these Regulations, rules or orders issued thereunder, shall without delay report it to the Authority.

(3) The Authority shall upon being notified of a violation, determine the nature and type of investigation or enforcement action that need to be taken.

35. A person aggrieved with the decision of the Authority under these Regulations may within twenty one days of such decision appeal to the Tribunal.

Appeals to the Tribunal.

36. (1) Any person carrying out any activities prescribed in these Regulations immediately before the coming into operation of these Regulations shall, within twelve months from the coming into force thereof, take all necessary measures to ensure full compliance with these Regulations.

Transition provision.

(2) A license, certificate, approval or any other document issued prior to the commencement of these Regulations shall continue in force as if it was issued under these Regulations until it expires or is cancelled by the Authority.

## SCHEDULE

(r. 29(1)&(2))

### AERONAUTICAL SEARCH AND RESCUE SIGNALS

#### 1. Signals with surface craft

1.1. The following maneuvers performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress—

- (a) circling the surface craft at least once;
- (b) crossing the projected course of the surface craft close ahead at low altitude, but not -
- (c) lower than 500 ft above ground level, and
  - (i) rocking the wings;
  - (ii) opening and closing the throttle; or
  - (iii) Changing the propeller pitch

Note —Due to high noise level on board surface craft, the sound signals in (ii) and (iii) may be less effective than the visual signal in (i) and are regarded as alternative means of attracting attention.

- (d) heading in the direction in which the surface craft is to be directed.

Note—Repetition of such maneuvers has the same meaning.

1.2. The following maneuvers by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required—

- (a) crossing the wake of the surface craft close astern at a low altitude and—
  - (i) rocking the wings;
  - (ii) opening and closing the throttle; or
  - (iii) changing the propeller pitch.

Note: The following replies may be made by surface craft to the signal in 1.1 —

- (b) for acknowledging receipt of signals—
  - (i) the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);
  - (ii) the flashing of a succession of “T’s” by signal lamp in the Morse code;
  - (iii) the changing of heading to follow the aircraft;
- (c) for indicating inability to comply—
  - (i) the hoisting of the international flag “N” (a blue and white checkered square);
  - (ii) the flashing of a succession of “N’s” in the Morse code.



Note.— See Note following 1.1 b), 3).

## 2. Ground-air visual signal code

### 2.1 Ground-air visual signal code for use by survivors

No.	Message	Code symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	↑

## 2.1. Ground-air visual signal code for use by rescue units.

No.	Message	Code symbol
1	Operation completed	LLL
2	We have found all personnel	<u>LL</u>
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	XX
5	Have divided into two groups. Each proceeding in direction indicated	
6	Information received that aircraft is in this direction	
7	Nothing found. Will continue to search	NN

2.2. Symbols shall be at least 2.5 metres (8 feet) long and shall be made as conspicuous as possible.

Note 1.—Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping, or staining with oil.

Note 2. — Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.

## Air-to-ground signals

3.1. The following signals by aircraft mean that the ground signals have been understood—

- (a) during the hours of daylight by rocking the aircraft's wings;
- (b) during the hours of darkness—
  - (i) flashing on and off twice the aircraft's landing lights or,
  - (ii) if not so equipped, by switching on and off twice its navigation lights.

3.2. Lack of the above signal indicates that the ground signal is not understood.

Made on the 9th May, 2018.

JAMES W. MACHARIA,  
Cabinet Secretary for Transport, Infrastructure,  
Housing and Urban Development.



LEGAL NOTICE NO. 120

THE CIVIL AVIATION ACT, 2013

(No. 21 of 2013)

THE CIVIL AVIATION (UNITS OF MEASUREMENT TO BE  
USED IN AIR AND GROUND OPERATIONS) REGULATIONS,  
2018

ARRANGEMENT OF REGULATIONS

*Regulation.*

PART I—PRELIMINARY PROVISIONS

1. Citation.
2. Interpretation.
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4. SI Units.
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6. Non-SI alternative units permitted for temporary use with  
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7. Application of Specific Units.
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SCHEDULE

STANDARD APPLICATION OF UNITS OF MEASUREMENT

## THE CIVIL AVIATION ACT, 2013

(No. 21 of 2013)

IN EXERCISE of the powers conferred by section 82 of the Civil Aviation Act, 2013, the Cabinet Secretary for Transport, Infrastructure, Housing and Urban Development makes the following Regulations—

## THE CIVIL AVIATION (UNITS OF MEASUREMENT TO BE USED IN AIR AND GROUND OPERATIONS) REGULATIONS, 2018

## PART I—PRELIMINARY

1. These Regulations may be cited as the Civil Aviation (Units of Measurement to be used in Air and Ground Operations), Regulations 2018. Citation.

2. In these Regulations, unless the context otherwise requires— Interpretation

“ampere (A)” means that constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in a vacuum, would produce between these conductors a force equal to  $2 \times 10^{-7}$  newton per metre of length;

“becquerel (Bq)” means the activity of a radionuclide having one spontaneous nuclear transition per second;

“candela (cd)” means the luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square metre of black body at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre;

“celsius temperature (t°C)” means the Celsius temperature is equal to the difference  $t^{\circ}\text{C} = T - T_0$  between two thermodynamic temperatures  $T$  and  $T_0$  where  $T_0$  equals 273.15 Kelvin;

“coulomb (C)” means the quantity of electricity transported in 1 second by a current of 1 ampere;

“degree celsius (°C)” means the special name for the unit Kelvin for use in stating values of Celsius temperature;

“farad (F)” means the capacitance of a capacitor between the plates of which there appears a difference of potential of 1 volt when it is charged by a quantity of electricity equal to 1 coulomb;

“foot (ft)” means the length equal to 0.3048 metre exactly;

“gray (Gy)” means the energy imparted by ionizing radiation to a mass of matter corresponding to 1 joule per kilogram;

“henry (H)” means the inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current in the circuit varies uniformly at a rate of 1 ampere per second;

“hertz (Hz)” means the frequency of a periodic phenomenon of which the period is 1 second;

“human performance” means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

“joule (J)” means the work done when the point of application of a force of 1 Newton is displaced a distance of 1 metre in the direction of the force;

“kelvin (K)” means a unit of thermodynamic temperature which is the fraction  $1/273.16$  of the thermodynamic temperature of the triple point of water;

“kilogram (kg)” means the unit of mass equal to the mass of the international prototype of the kilogram;

“knot (kt)” means the speed equal to 1 nautical mile per hour;

“International System of Units (SI)” means a complete, coherent system which includes three classes of unit’s base units, supplementary units; and derived units;

“litre (L)” means a unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimeter;

“lumen (lm)” means the luminous flux emitted in a solid angle of 1 steradian by a point source having a uniform intensity of 1 candela;

“lux (lx)” means the illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square metre;

“metre (m)” means the distance travelled by light in a vacuum during  $1/299\,792\,458$  of a second;

“mole (mol)” means the amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon-12;

“nautical mile (NM)” means the length equal to 1,852 metres exactly;

“newton (N)” means the force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 metre per second squared;

“Ohm ( $\Omega$ )” means the electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, this conductor not being the source of any electromotive force;

“pascal (Pa)” means the pressure or stress of 1 newton per square metre;

“radian (rad)” means the plane angle between two radii of a circle which cut off on the circumference an arc equal in length to the radius;

“second (s)” means the duration of  $9\,192\,631\,770$  periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom;

“siemens (S)” means the electric conductance of a conductor in which a current of 1 ampere is produced by an electric potential difference of 1 volt;

“sievert (Sv)” means the unit of radiation dose equivalent corresponding to 1 joule per kilogram;

“steradian (sr)” means the solid angle which, having its vertex in the centre of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere;

“tesla (T)” means the magnetic flux density given by a magnetic flux of 1 weber per square metre;

“tonne (t)” means the mass equal to 1 000 kilograms;

“volt (V)” means the unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt;

“watt (W)” means the power which gives rise to the production of energy at the rate of 1 joule per second;

“weber (Wb)” means the magnetic flux which, linking a circuit of one turn, produces in it an electromotive force of 1 volt as it is reduced to zero at a uniform rate in 1 second.

3. These Regulations shall apply to all aspects of civil aviation air and ground operations. Application.

#### PART II—STANDARD APPLICATION OF UNITS OF MEASUREMENT

4. (1) The International System of Units developed and maintained by the General Conference of Weights and Measures (CGPM) shall, subject to regulations 5 and 6, be used as the standard system of units of measurement for all aspects of civil aviation air and ground operations. SI units.

(2) The prefixes and symbols listed in Table 1 of the Schedule shall be used to form names and symbols of the decimal multiples and submultiples of SI units.

5. The non-SI units listed in Table 3 of the First Schedule shall be permitted for temporary use as alternative units of measurement but only for those specific quantities listed in Table 4. Non-SI alternative units permitted for temporary use with the SI.

6. (1) The application of units of measurement for certain quantities used in civil aviation air and ground operations shall be in accordance with Table 4 of the first schedule of these regulations. Application of specific units.

(2) In instances where the mole is used, the elementary entities shall be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.

7. The means and provisions for design, procedures and training shall be established for operations in environments involving the use of standard and non-SI alternatives of specific units of design, procedures and training

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measurement, or the transition between environments using different units, with due consideration to human performance.

8. The use in civil aviation operations of the alternative non-SI units (Knot, Nautical Mile and foot) shall be terminated on the dates to be established by International Civil Aviation.

Use of alternative non-SI units.

9. Any violation to these Regulations shall be subject to the general penalty provisions as provided in section 80 of the Civil Aviation Act.

Offence .

## SCHEDULE

Table 1. SI unit prefixes

<i>Multiplication factor</i>	<i>Prefix</i>	<i>Symbol</i>
1 000 000 000 000 000 000 = $10^{18}$	exa	E
1 000 000 000 000 000 = $10^{15}$	peta	P
1 000 000 000 000 = $10^{12}$	tera	T
1 000 000 000 = $10^9$	giga	G
1 000 000 = $10^6$	mega	M
1 000 = $10^3$	kilo	k
100 = $10^2$	hecto	h
10 = $10^1$	deca	da
0.1 = $10^{-1}$	deci	d
0.01 = $10^{-2}$	centi	c
0.001 = $10^{-3}$	milli	m
0.000 001 = $10^{-6}$	micro	$\mu$
0.000 000 001 = $10^{-9}$	nano	n
0.000 000 000 001 = $10^{-12}$	pico	p
0.000 000 000 000 001 = $10^{-15}$	femto	f
0.000 000 000 000 000 001 = $10^{-18}$	atto	a

Table 2. Non-SI units for use with the SI

<i>Specific quantities in Table 3-4 related to</i>	<i>Unit</i>	<i>Symbol</i>	<i>Definition (in terms of SI units)</i>
mass	tonne	t	1 t = $10^3$ kg
plane angle	degree	$^\circ$	$1^\circ = (\pi/180)$ rad
	minute	'	$1' = (1/60)^\circ = (\pi/10\ 800)$ rad
	second	"	$1'' = (1/60)' = (\pi/648\ 000)$ rad
temperature	degree Celsius	$^\circ\text{C}$	1 unit $^\circ\text{C} = 1$ unit $\text{K}^{\text{a}}$
time	minute	min	1 min = 60 s
	hour	h	1 h = 60 min = 3 600 s
	day	d	1 d = 24 h = 86 400 s
	week, month, year	—	
volume	litre	L	1 L = $1\ \text{dm}^3 = 10^{-3}\ \text{m}^3$

Table 3. Non-SI units for temporary use with the SI			
<i>Specific quantities in Table 3-4 related to</i>	<i>Unit</i>	<i>Symbol</i>	<i>Definition (in terms of SI units)</i>
distance (long)	nautical mile	NM	1 NM = 1 852 m
distance (vertical) <sup>a)</sup>	foot	ft	1 ft = 0.304 8 m
speed	knot	kt	1 kt = 0.514 444 m/s

a) altitude, elevation, height, vertical speed.

Table 4. Standard application of specific units of measurement			
<i>Ref. No.</i>	<i>Quantity</i>	<i>Primary unit (symbol)</i>	<i>Non-SI alternative unit (symbol)</i>
<b>1. Direction/Space/Time</b>			
1.1	altitude	m	ft
1.2	area	m <sup>2</sup>	
1.3	distance (long) <sup>3)</sup>	km	NM
1.4	distance (short)	m	
1.5	elevation	m	ft
1.6	endurance	h and min	
1.7	height	m	ft
1.8	latitude	° ' "	
1.9	length	m	
1.10	longitude	° ' "	
1.11	plane angle (when required, decimal subdivisions of the degree shall be used)	°	
1.12	runway length	m	
1.13	runway visual range	m	
1.14	tank capacities (aircraft) <sup>b)</sup>	L	

1.15	time	s min h d week month year
1.16	visibility <sup>e)</sup>	km
1.17	volume	m <sup>3</sup>
1.18	wind direction (wind directions other than for a landing and take-off shall be expressed in degrees true; for landing and take-off wind directions shall be expressed in degrees magnetic)	°
<b>2. Mass-related</b>		
2.1	air density	kg/m <sup>3</sup>
2.2	area density	kg/m <sup>2</sup>
2.3	cargo capacity	kg
2.4	cargo density	kg/m <sup>3</sup>
2.5	density (mass density)	kg/m <sup>3</sup>
2.6	fuel capacity (gravimetric)	kg
2.7	gas density	kg/m <sup>3</sup>
2.8	gross mass or payload	kg t
2.9	hoisting provisions	kg
2.10	linear density	kg/m
2.11	liquid density	kg/m <sup>3</sup>
2.12	mass	kg
2.13	moment of inertia	kg · m <sup>2</sup>
2.14	moment of momentum	kg · m <sup>2</sup> /s
2.15	momentum	kg · m/s



**3. Force-related**

3.1	air pressure (general)	kPa
3.2	altimeter setting	hPa
3.3	atmospheric pressure	hPa
3.4	bending moment	kN · m
3.5	force	N
3.6	fuel supply pressure	kPa
3.7	hydraulic pressure	kPa
3.8	modulus of elasticity	MPa
3.9	pressure	kPa
3.10	stress	MPa
3.11	surface tension	mN/m
3.12	thrust	kN
3.13	torque	N · m
3.14	vacuum	Pa

**4. Mechanics**

4.1	airspeed <sup>d)</sup>	km/h
4.2	angular acceleration	rad/s <sup>2</sup>
4.3	angular velocity	rad/s
4.4	energy or work	J
4.5	equivalent shaft power	kW
4.6	Frequency	Hz
4.7	groundspeed	km/h
4.8	Impact	J/m <sup>2</sup>
4.9	kinetic energy absorbed by brakes	MJ
4.10	linear acceleration	m/s <sup>2</sup>
4.11	Power	kW
4.12	rate of trim	°/s
4.13	shaft power	kW
4.14	Velocity	m/s
4.15	vertical speed	m/s

<b>5. Flow</b>		
5.1	engine airflow	kg/s
5.2	engine waterflow	kg/h
5.3	fuel consumption (specific)	
	piston engines	kg/(kW · h)
	turbo-shaft engines	kg/(kW · h)
	jet engines	kg/(kN · h)
5.4	fuel flow	kg/h
5.5	fuel tank filling rate (gravimetric)	kg/min
5.6	gas flow	kg/s
5.7	liquid flow (gravimetric)	g/s
5.8	liquid flow (volumetric)	L/s
5.9	mass flow	kg/s
5.10	oil consumption	
	gas turbine	kg/h
	piston engines (specific)	g/(kW · h)
5.11	oil flow	g/s
5.12	pump capacity	L/min
5.13	ventilation airflow	m <sup>3</sup> /min
5.14	viscosity (dynamic)	Pa · s
5.15	viscosity (kinematic)	m <sup>2</sup> /s
<b>6. Thermodynamics</b>		
6.1	coefficient of heat transfer	W/(m <sup>2</sup> · K)
6.2	heat flow per unit area	J/m <sup>2</sup>
6.3	heat flow rate	W
6.4	humidity (absolute)	g/kg
6.5	coefficient of linear expansion	°C <sup>-1</sup>
6.6	quantity of heat	J
6.7	temperature	°C

<b>7. Electricity and magnetism</b>		
7.1	capacitance	F
7.2	conductance	S
7.3	conductivity	S/m
7.4	current density	A/m <sup>2</sup>
7.5	electric current	A
7.6	electric field strength	C/m <sup>2</sup>
7.7	electric potential	V
7.8	electromotive force	V
7.9	magnetic field strength	A/m
7.10	magnetic flux	Wb
7.11	magnetic flux density	T
7.12	power	W
7.13	quantity of electricity	C
7.14	resistance	Ω
<b>8. Light and related electromagnetic radiations</b>		
8.1	illuminance	lx
8.2	luminance	cd/m <sup>2</sup>
8.3	luminous exitance	lm/m <sup>2</sup>
8.4	luminous flux	lm
8.5	luminous intensity	cd
8.6	quantity of light	lm · s
8.7	radiant energy	J
8.8	wavelength	m
<b>9. Acoustics</b>		
9.1	frequency	Hz
9.2	mass density	kg/m <sup>3</sup>
9.3	noise level	dB <sup>e)</sup>
9.4	period, periodic time	s
9.5	sound intensity	W/m <sup>2</sup>
9.6	sound power	W
9.7	sound pressure	Pa
9.8	sound level	dB <sup>f)</sup>
9.9	static pressure (instantaneous)	Pa
9.10	velocity of sound	m/s
9.11	volume velocity (instantaneous)	m <sup>3</sup> /s
9.12	wavelength	m

**10. Nuclear physics and ionizing radiation**

10.1	absorbed dose	Gy
10.2	absorbed dose rate	Gy/s
10.3	activity of radionuclides	Bq
10.4	dose equivalent	Sv
10.5	radiation exposure	C/kg
10.6	exposure rate	C/kg · s

- a) As used in navigation, generally in excess of 4 000 m.
- b) Such as aircraft fuel, hydraulic fluids, water, oil and high pressure oxygen vessels.
- c) Visibility of less than 5 km may be given in m.
- d) Airspeed is sometimes reported in flight operations in terms of the ratio MACH number.
- e) A conversion of 1 kt = 0.5 m/s is used in ICAO Annexes for the representation of wind speed.
- f) The decibel (dB) is a ratio which may be used as a unit for expressing sound pressure level and sound power level. When used, the reference level must be specified.

Dated the 9th May, 2018.

**JAMES MACHARIA,**  
*Cabin Secretary for Transport, Infrastructure, Housing and Urban Development.*

LEGAL NOTICE NO. 121

THE CIVIL AVIATION ACT, 2013

(No. 21 of 2013)

THE CIVIL AVIATION (CONSTRUCTION OF VISUAL AND  
INSTRUMENT FLIGHT PROCEDURES) REGULATIONS, 2018

ARRANGEMENT OF REGULATIONS

*Regulation*

PART I — PRELIMINARY PROVISIONS

- 1—Citation and Commencement.
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- 10— Procedure design data and information acquisition.
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- 15— Competency of flight validation pilots.
- 16— Approval of instrument flight procedures.
- 17— Instrument Flight Procedure Design publication.
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PART III—EXEMPTIONS

- 21— Requirements for application for exemption.
- 22— Review and publication.

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- 24— Validity of an exemption.
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## THE CIVIL AVIATION ACT

(No. 21 of 2013)

IN EXERCISE of the powers conferred by section 82 of the Civil Aviation Act, 2013, the Cabinet Secretary for Transport, Infrastructure, Housing and Urban Development makes the following Regulations—

## PART I—PRELIMINARY

1. These Regulations may be cited as the Civil Aviation (Construction of Visual and Instrument Flight Procedures) Regulations, 2018.

Citation.

2. In these Regulations, unless the context otherwise requires—

Interpretation

“Act” means the Civil Aviation Act, 2013;

“aerodrome operating minima” means the limits of usability of an aerodrome for—

- (a) take-off, expressed in terms of runway visual range or visibility and, if necessary, cloud conditions;
- (b) landing in precision approach and landing operations, expressed in terms of visibility or runway visual range and decision altitude or height as appropriate to the category of the operation;
- (c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude or height; and
- (d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude or height and, if necessary, cloud conditions;

“aerodrome reference point” means the certificated geographical location of an aerodrome;

“aeronautical chart” means a representation of a portion of the earth, its culture and relief, specifically certificated to meet the requirements of air navigation;

“aeronautical data” means a representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing;

“aeronautical information” means information resulting from the assembly, analysis and formatting of aeronautical data;

“Aeronautical Information Circular (AIC)” means a notice containing information that does not qualify for the origination of a Notice To Air Men or for inclusion in the Aeronautical Information Publication, but which relates to flight safety, air navigation, technical, administrative or legislative matters;

“aeronautical information publication means a publication issued by or with the authority of a state and containing aeronautical information of a lasting character essential to air navigation;

“aeronautical information service means a service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation;

“aeronautical information publication amendment” means permanent change to information contained in the aeronautical information publication;

“aeronautical information publication supplement” means temporary changes to the information contained in the aeronautical information publication which are published by means of special pages;

“air navigation services” means the following services provided for air navigation—

- (a) air traffic services or air traffic management;
- (b) instrument flight procedure design services;
- (c) aeronautical information services or aeronautical information management;
- (d) aeronautical cartographic services;
- (e) aeronautical telecommunication services; and
- (f) aeronautical search and rescue;

“air navigation services provider” means an independent entity established for the purpose of providing one or more of the air navigation services as defined in these Regulations;

“area navigation” means a method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these;

“arrival routes” means routes identified in an instrument approach procedure by which aircraft may proceed from the en-route phase of flight to an initial approach fix;

“air traffic service route” means a specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services;

“Authority” means Kenya Civil Aviation Authority;

“certificate” means the certificate for the provision of air navigation services issued by the Authority under Part II of these Regulations;

“flight procedure design” means either Instrument Flight Procedures or Visual Flight Procedures;

“instrument approach procedure” means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a



landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply;

“instrument flight procedure design service” means a service established for the design, documentation, validation, maintenance and periodic review of instrument flight procedures necessary for the safety, regularity and efficiency of air navigation;

“integrated aeronautical information product” means aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media and includes—

- (a) aeronautical information publication, including amendments and supplements;
- (b) aeronautical information circulars;
- (c) aeronautical charts;
- (d) notice to air men; and
- (e) digital data sets;

“integrity (aeronautical data)” means a degree of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorized amendment;

“integrity classification (aeronautical data)” means classification based upon the potential risk resulting from the use of corrupted data classified as—

- (a) routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;
- (b) essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and
- (c) critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

“missed approach point” means that point in an instrument approach procedure at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed;

“missed approach procedure” means that procedure to be followed if the approach cannot be continued;

“nautical mile” means the length equal to 1 852 metres exactly;

“navigation specification” means a set of aircraft and flight crew requirements needed to support performance-based navigation

operations within a defined airspace and here are two kinds of navigation specifications—

- (a) area Navigation specification — a navigation specification based on area navigation that does not include the requirement for on-board performance monitoring and alerting, certificated by the prefix RNAV; and
- (b) required navigation performance specification — a navigation specification based on area navigation that includes the requirement for on-board performance monitoring and alerting, certificated by the prefix RNP;

“obstacle” means all fixed (whether temporary or permanent) and mobile objects, or parts thereof, that—

- (a) are located on an area intended for the surface movement of aircraft;
- (b) extend above a defined surface intended to protect aircraft in flight; or
- (c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation;

“obstacle clearance altitude or obstacle clearance height” means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria;

“obstacle free zone” means the airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes;

“obstacle or terrain data collection surface” means a defined surface intended for the purpose of collecting obstacle or terrain data;

“operator” means a person, organization or enterprise engaged in or offering to engage in an aircraft operation;

“operations manual” means a manual prepared by a service provider or a person applying for approval;

“Performance Based Navigation” means area navigation based on performance requirements for aircraft operating along an air traffic service route, on an instrument approach procedure or in a certificated airspace;

“precision approach procedure” means an instrument approach procedure utilizing azimuth and glide path information provided by an Instrument landing system or precision approach radar;

“procedure altitude or height” means a specified altitude/height flown operationally at or above the minimum altitude/height and established to accommodate a stabilized descent at a prescribed descent gradient/angle in the intermediate or final approach segment;

“procedure turn” means a manoeuvre in which a turn is made away from a certificated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the certificated track;

“quality” means a degree to which a set of inherent characteristics fulfils requirements;

“quality assurance” means part of quality management focused on providing confidence that quality requirements will be fulfilled;

“quality control” means part of quality management focused on fulfilling quality requirements;

“quality management” means coordinated activities to direct and control an organization with regard to quality;

“quality system” means the organisational structure, procedures, processes and resources needed to implement quality management;

“reliability” means the probability that the service will perform its function or functions without failure for a specified period;

“resolution” means a number of units or digits to which a measured or calculated value is expressed and used;

“safety management system” means a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures;

“significant point” means a specified geographical location used in defining an air traffic service route or the flight path of an aircraft and for other navigation and air traffic service purposes;

“state safety programme” means an integrated set of regulations and activities aimed at improving safety;

“terminal arrival altitude” means the lowest altitude that will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an arc of a circle defined by a 46 km (25 NM) radius centred on the initial approach fix, or where there is no initial approach fix on the intermediate approach fix, delimited by straight lines joining the extremity of the arc to the Intermediate Fix. The combined Terminal Arrival Altitudes associated with an approach procedure shall account for an area of 360 degrees around the Intermediate Fix;

“terminal control area” means a control area normally established at the confluence of air traffic services routes in the vicinity of one or more major aerodromes;

“terrain” means the surface of the Earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles;

“touchdown and lift-off area” means a load bearing area on which a helicopter may touch down or lift off;

“touchdown zone” means the portion of a runway, beyond the threshold, where it is intended landing aeroplanes first contact the runway;

“transition altitude” means the altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes;

“visual approach procedure” means a series of predetermined manoeuvres by visual reference, from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, a go-around procedure can be carried out;

“waypoint” means a specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation identified as either—

- (a) “fly-by waypoint” meaning a waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or
- (b) “flyover waypoint” meaning a waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

3. These Regulations shall apply to a person providing Flight Procedure Design Services within certificated airspaces and at aerodromes for civil aviation purposes.

Application.

#### PART II — REQUIREMENTS

4. A person shall not provide an Instrument Flight Procedure Design Service within Kenya unless—

Requirements for the provision of an Instrument Flight Procedure Design Service.

- (a) that person holds a certificate issued under the Civil Aviation (Certification of Air Navigation Services Provider) Regulations; and
- (b) the services are provided in accordance with—
  - (i) the requirements prescribed in these Regulations or any other publications issued by the Authority; and
  - (ii) the procedures specified in the service providers’ Manual of Air Navigation Service Operations .

5. (1) A person shall not design, maintain, review, amend, adapt or publish flight procedures for use in Kenya unless certificated by the Authority and in accordance with these Regulations.

Designation of Instrument Flight Procedure Design Service Provider.

(2) An Instrument Flight Procedure Design Services Provider certificated by the Authority shall—

- (a) follow an instrument flight procedure process that encompasses acquisition of data, design and promulgation of procedures;
- (b) ensure that the quality and safety of the procedure design product are assured through review, verification, coordination and validation of the procedure at appropriate points in the process; and
- (c) ensure that the units of measurement, as specified in the Civil Aviation (units of measurement to be used in air and ground operations) regulations are used in the design of instrument flight procedure.

6. (1) The certificated Instrument Flight Procedures Design Service Provider shall—

Instrument Flight Procedure Design Operational requirements.

- (a) maintain an appropriate instrument design office to enable the Instrument Flight Procedure designers to carry on design work in Instrument flight Procedures in accordance with these Regulations;
- (b) ensure that the designs of instrument flight procedure are in accordance with—
  - (i) requirements in these Regulations;
  - (ii) the criteria prescribed by the Authority; and
- (c) make provisions for person(s) trained in Instrument Flight Procedure design to check and verify independently the plans of each instrument flight procedure designed.

7. (1) The certificated service provider shall develop and maintain an operations manual which shall serve to demonstrate compliance with the requirements set out in these Regulations.

Instrument Flight Procedure Design Service Provider Operations Manual.

(2) The contents of the operations manual shall include but not limited to the following—

- (a) the information required of the certificated Instrument Flight Procedures Design service provider as mentioned in these Regulation; and
- (b) a description of the instrument flight procedure design Service Provider's office that shows the role, responsibilities and job functions of the Flight Procedure Design office personnel who are responsible for ensuring the compliance of the organization with the requirements in sub-paragraph (a).

(3) The certificated service provider shall—

- (a) keep the operations manual in a readily accessible form;
- (b) ensure that the instrument flight procedure designer has ready access to the operations manual; and
- (c) amend the operations manual whenever necessary to keep its content up to date.

(4) The certificated service provider shall submit a copy of the most current operations manual to the Authority for approval.

8. The certificated instrument flight procedure design organization shall—

Employment of personnel.

- (a) employ, contract, or engage sufficient personnel to plan, design, verify, and maintain the instrument flight procedures; and
- (b) develop job descriptions for its Procedure design technical staff.

9. (1) The certificated service provider shall ensure that a person designing or amending a flight instrument procedure demonstrates required competency level for flight procedure design.

Instrument Flight Procedure designer training, experience and approval.

(2) The personnel to be recruited as Instrument Flight Procedure Designer shall have a high level of aviation experience gained from different domains in the aviation industry (Air Traffic Management, Engineers, Aeronautical technicians and pilots or any other equivalent profession).

(3) Instrument Flight Procedure designers shall acquire and maintain this competency level through training and supervised on-the-job training.

(4) The certificated service provider shall ensure that the instrument flight procedure designer is able to demonstrate a basic level of competency through initial and recurrent training at periodic intervals that includes at least the following elements—

- (a) knowledge of information contained in manuals pertaining to the design of instrument flight procedures as prescribed by the Authority;
- (b) enhancement of knowledge and skills in the design of procedures; and
- (c) competency as outlined in the competency framework for flight procedures designers as prescribed by the Authority.

(5) The certificated service provider shall—

- (a) develop and implement training programme and a training plan that is commensurate to the technical competence required by its staff; and
- (b) shall maintain training records for their instrument flight procedure designers.

(6) Only designers approved by the Authority shall undertake the design, review, validation of Instrument Flight Procedures for operational use.

(7) A person seeking approval as required in sub-regulation (6) shall—

- (a) provide proof of successful completion of the International Civil Aviation Organization PANS-OPS training course applicable to the approval being requested based on the International Civil Aviation Organization PANS-OPS criteria;
- (b) demonstrate practical application of theoretical knowledge through the design of two instrument flight procedures under supervision of a qualified designer; and
- (c) demonstrate ability to maintain a documented quality assurance process for procedure design.

(8) An approved procedure designer shall only design Instrument Flight Procedures within the scope of their approval.

10. (1) The certificated service provider shall ensure that the quality characteristics of data acquired for the Flight Procedure Design process are known and adequate, or that, in the case where the data's quality characteristics are unknown or inadequate, that appropriate data verification occurs prior to use.

Procedure design data and information acquisition.

(2) In the obstacle survey for procedure design, the instrument flight procedure designer shall consider that—

- (a) all obstacles be accounted for and items such as trees and heights of tall buildings shall be accounted for either by physical examination of the site or by addition of a suitable margin above terrain contours; and
- (b) the accuracy of the vertical and horizontal data obtained may be adjusted by adding an amount equal to the specified survey error to the height of all measured obstructions and by making a corresponding adjustment for specified horizontal error.

(3) The procedure design data and information acquisition shall be coordinated with all relevant stakeholders and integrated into Kenya's airspace design process, taking into account air traffic flows, separation issues, airspace user requirements, infrastructure and legal environmental considerations.

11. The certificated service provider shall establish and implement a quality assurance process for all instrument flight procedure design functions.

Quality assurance.

12. (1) A certificated service provider shall provide and maintain adequate facilities for carrying on design work on instrument flight procedures under the procedure design certificate, including—

Procedure design facility and resource requirements.

- (a) providing premises and equipment appropriate for the design, design verification, flight validation, and maintenance of applicable types of instrument flight procedures;
- (b) access to relevant and current data including, but not limited to, aeronautical data, land contour data, and obstacle data for the design, design verification, flight validation, and maintenance of the instrument flight procedure;
- (c) the data referred to in paragraph (b) is current, traceable, and meets the required level of accuracy for the design, design verification, flight validation, and maintenance of instrument flight procedures;
- (d) access to copies of relevant documentation comprising technical standards, practices, and instructions, and any other documentation that may be necessary for the design, design verification, flight validation, and maintenance of the types of instrument flight procedure;
- (e) establish a procedure for controlling all documentation required by sub regulation (d) to ensure that—

- (i) the documentation is reviewed and authorized by an appropriate person before issue and use;
- (ii) current versions of relevant documentation are available to personnel;
- (iii) every obsolete document is promptly removed from every point of use; and
- (iv) the current version of every item of documentation can be identified to prevent the use of superseded material;
- (f) ensuring that Instrument Flight Procedure designers have access to all necessary data for designing the procedures including—
  - (i) accurate and current databases or charts detailing terrain and obstacle information; and
  - (ii) accurate and current navigation aid coordinate data; and
  - (iii) accurate and current aerodrome reference point and threshold data; and
- (g) ensuring that if an aeronautical database and aeronautical data are required for designing instrument flight procedure under its certificate, have, and put into effect, procedures to ensure the integrity of the database and the data.

(2) The certificated service provider shall ensure that if an aeronautical database and aeronautical data are required for designing instrument flight procedure under its certificate, have, and put into effect, procedures to ensure the integrity of the database and the data.

13. The certified service provider shall —

- (a) establish and put into effect, a system for controlling documents and records relating to the instrument flight procedure and visual flight procedure on which the designer carries on design work, including the policies and procedures for making, amending, preserving and disposing of those documents and records; and
- (b) at Authority's request, make the documents and records, or copies of them or extracts from them, available for inspection.

Control of Documents and records.

14. (1) Instrument flight procedures shall be designed in accordance with these Regulations, and Procedures prescribed by the Authority.

Instrument flight procedure design (IFPD).

(2) Coordination with all concerned parties shall continue throughout the procedure design and validation process to ensure that the procedure meets the needs of the user community.

(3) The certificated service provider shall ensure that—

- (a) each new or revised procedure is verified by a qualified procedure designer other than the one who designed the procedure;



- (b) published procedures are subject to periodic review at intervals not exceeding five years to ensure that they continue to comply with changing criteria and user requirements;
- (c) designers develop and maintain instrument flight procedures design documentation that includes—
  - (i) information required for publication in the Aeronautical Information Publication;
  - (ii) details and assumptions made by the instrument flight procedure designer, such as—
    - (aa) controlling obstacle for each segment of the procedure;
    - (ab) effect of environmental considerations on the design of the procedure;
    - (ac) infrastructure assessment;
    - (ad) airspace constraints;
    - (ae) for modifications or amendments to existing procedures, the reasons for any changes;
    - (af) for any deviation from existing standards, the reasons for such a deviation and details of the mitigations applied to assure continued safe operations; and
    - (ag) the results of the final verification for accuracy and completeness prior to validation and publication.
- (d) the design records are retained for a period not less than the operational lifetime of the procedure;
- (e) all calculations and results of calculations are presented in a manner that enables the reader to follow and trace the logic and resultant output;
- (f) records of all calculations in paragraph (e) are kept in order to prove compliance to or variation from the standard criteria;
- (g) all documentation undergo a final verification for accuracy and completeness prior to validation and publication;
- (h) all documentation are retained for a period of not be less than the operational lifetime of the procedure to assist in recreating the procedure in the future in the case of incidents and for periodic review and maintenance;
- (i) ground validation is undertaken by a qualified flight procedure designer with appropriate knowledge of validation issues;
- (j) Flight validation is conducted whenever the following conditions exist—

- (i) the fly ability of a procedure cannot be determined by other means;
- (ii) the procedure requires mitigation for deviations from design criteria;
- (iii) the accuracy or integrity of obstacle and terrain data cannot be determined by other means;
- (iv) new procedures differ significantly from existing procedures; and
- (v) for helicopter pins procedures.

15. (1) The certificated service provider shall ensure that a person conducting flight validation including simulator evaluation is a qualified and experienced flight validation pilot.

Competency of flight validation pilots.

- (2) The qualifications for Flight Validation Pilot shall include—
  - (a) at least a commercial pilot licence with instrument rating;
  - (b) a requirement that the licence held by the Flight Validation Pilot shall be for the aircraft category appropriate for the procedure to be validated; and
  - (c) meet all the experience requirements for the airline transport pilot licence in the relevant category of aircraft as described in personnel licensing regulations except that the Flight Validation Pilot does not have to be the pilot-in-command of the validation flight nor is he required to have the type rating on the aircraft used for the validation flight.

(3) The instrument flight procedures designer shall provide all data required to conduct a flight validation, flight inspection, and flight simulator evaluation to the entity conducting the exercise.

16. (1) An instrument flight procedure for use by civil aircraft within Kenya shall not be published unless the instrument flight procedure is approved by the Authority.

Approval of instrument flight procedures.

(2) The Authority shall only accept instrument flight procedures for approval, submitted by approved procedure designers.

(3) For Instrument Flight Procedures designed by approved procedure designers independently outside the certificated organization the submission of approval shall be in line with these regulations.

17. (1) The certificated service provider shall ensure that instrument flight procedures designs or charts, are provided to the aeronautical information service provider for publication in the Aeronautical Information Publication.

IFPD publication.

(2) The IFP shall be accompanied by a narrative, which describes the procedure in textual format.

18. (1) The certificated service provider using an automated flight procedure design tool shall ensure that such tool is validated.

Use of automation in procedure design and flight validation.

(2) Validation of the software shall be in accordance with the requirements prescribed by the Authority.

(3) The scope of validation shall include compliance with the criteria set out by the Authority.

(4) The flight validation tools required under this section shall include the use of equipment that—

- (a) has the precision, and accuracy traceable to appropriate standards, that are necessary for the validation being performed;
- (b) has known measurement uncertainties including, but not limited to, the software, firmware and crosswind uncertainties;
- (c) records the actual flight path of the validation aircraft;
- (d) is checked before being released for use, and at intervals not exceeding the calibration intervals recommended by the manufacturer, to establish that the system is capable of verifying the integrity of the instrument flight procedure; and
- (e) is operated in accordance with flight validation system procedures and criteria by persons who are competent and current on the system used.

19. (1) The certificated service provider providing an instrument flight procedure service shall establish procedures for recording, investigating, correcting, and reporting, any identified error, and any identified non-conformance or suspected non-conformance with these Regulations.

Errors in published instrument flight procedures.

(2) The procedure required by sub regulation (1) shall require that—

- (a) an instrument flight procedure is immediately withdrawn from operational use if the error or non-conformance affects, or may affect, the safety of an aircraft operation; and
- (b) the error or non-conformance is corrected, and certified by a senior person who is appropriately authorized by the service provider;
- (c) the correction required by paragraph (b) is clearly identified and promulgated by the most appropriate means relative to the operational significance of the error or non-conformance;
- (d) the source of the error or non-conformance is identified, and—
  - (i) if possible, eliminated to prevent a recurrence; and
  - (ii) preventive action is taken to ensure that the source of the error or non-conformance has not affected the integrity of any other instrument flight procedure; and
  - (iii) the Authority is immediately notified, of a promulgated information incident relating to an error or non-conformance referred to in subparagraph (i) above.

20. (1) The requirements for aerodrome operating minima are as specified in the Civil Aviation (Operation of Aircraft) Regulations.

Aerodrome operating minima.

(2) The procedures for the establishment of the aerodrome operating minima shall be prescribed by the Authority.

## PART III—EXEMPTIONS

21. (1) A person may apply to the Authority for an exemption from any provision of these Regulations.

Requirements for application for exemption.

(2) Unless in case of emergency, a person requiring exemptions from any of these regulations shall make an application to the Authority at least sixty days prior to the proposed effective date, giving the following information—

- (a) name and contact address including electronic mail and fax if any;
- (b) telephone number;
- (c) a citation of the specific requirement from which the applicant seeks exemption;
- (d) justification for the exemption;
- (e) a description of the type of operations to be conducted under the proposed exemption;
- (f) the proposed duration of the exemption;
- (g) an explanation of how the exemption would be in the public interest;
- (h) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
- (i) a safety risk assessment carried out in respect of the exemption applied for;
- (j) an indication whether the exemption would contravene any provision of the Standards and Recommended Practices of the International Civil Aviation Organization ; and
- (k) any other information that the Authority may require.

(3) Where the applicant seeks emergency processing of an application for exemption, the application shall contain supporting facts and reasons for not filing the application within the time specified in sub regulation (2) and satisfactory reason for deeming the application an emergency.

(4) The Authority may in writing, decline an application made under sub regulation (3), where in the opinion of the Authority, the reasons given for emergency processing are not satisfactory.

(5) The application for exemption shall be accompanied by fee prescribed by the Authority.

22. (1) The Authority shall review the application for exemption made under these regulations for accuracy and compliance and if the application is satisfactory, the Authority shall publish a detailed summary of the application for comments, within a prescribed time, in either—

Review and publication.

- (a) the Kenya Gazette;

- (b) aeronautical information circular; or
- (c) a daily newspaper with national circulation.

(2) Where application requirements have not been fully complied with, the Authority shall request the applicant in writing, to comply prior to publication or making a decision under sub regulation (3).

(3) If the request is for emergency relief, the Authority shall publish the decision as soon as possible after processing the application.

23. (1) Where the application requirements have been satisfied, the Authority shall conduct an evaluation of the request to include—

Evaluation of the request.

- (a) determination of whether an exemption would be in the public interest;
- (b) a determination, after a technical evaluation of whether the applicant's proposal would provide a level of safety equivalent to that established by the regulation, although where the Authority decides that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis;
- (c) a determination of whether a grant of the exemption would contravene these Regulations; and
- (d) a recommendation based on the preceding elements, of whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

(2) The Authority shall notify the applicant in writing, the decision to grant or deny the request and publish a detailed summary of its evaluation and decision.

(3) The summary referred to in sub-regulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) If the exemption affects a significant population of the aviation community in Kenya, the Authority shall publish the summary in aeronautical information circular.

24. The validity of any exemption issued under these regulations shall be dependent on the air navigation service provider complying with any condition that Authority may specify in the exemption as being necessary in the interests of safety of air navigation.

Validity of an exemption.

25. An air navigation service provider shall comply with any condition specified by the Authority in the exemption.

Compliance with conditions of the exemption.

#### PART IV—OFFENCES AND PENALTIES

26. A person who contravenes any provision of these Regulations may have his certificate or exemption cancelled or suspended.

Contravention of Regulations.

27. (1) A person who contravenes any provision of these Regulations, orders, notices or proclamations made thereunder shall,

Penalties.

upon conviction, be liable to a fine or imprisonment or both, and in the case of a continuing contravention, each day of the contravention shall constitute a separate offence.

(2) Any person who contravenes any provision of these Regulations shall upon conviction be subject to the penalty provisions provided in the Act.

(3) If it is proved that an act or omission of any person, which would otherwise have been a contravention by that person of a provision of these Regulations, orders, notices or proclamations made there under was due to any cause not avoidable by the exercise of reasonable care by that person, the act or omission shall be deemed not to be a contravention by that person of that provision.

28. A person aggrieved by any order made under these Regulations may, within twenty one days of such order being made, appeal against the order to a court of law with competent jurisdiction.

Dated the 9th May , 2018.

JAMES MACHARIA,  
*Cabinet Secretary for Transport, Infrastructure,  
Housing and Urban Development.*