MOZAMBIQUE CIVIL AVIATION

TECHNICAL STANDARDS

INSTITUTO DA AVIAÇÃO CIVIL DE MOÇAMBIQUE

MOZCATS PART 71

AIRSPACE ORGANIZATION AND MANAGEMENT

Effective as from 14 November 2013 AIRAC Date

INDEX

30 September 2013

LIST OF EFFECTIVE PAGES

The list of effective pages below will be used to assist in keeping track of revisions and updates to the Mozambique Civil Aviation Technical Standards (MOZ-CATS). The list shows the number of the last revision for each page of the Mozambique Civil Aviation Technical Standards . Accordingly, with each revision to the Mozambique Civil Aviation Technical Standards a new list of effective pages will be published and distributed to all Mozambique Civil Aviation Technical Standards holders.

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APPROVAL PAGE

The Instituto de Aviação Civil de Moçambique (IACM) - the Civil Aviation Authority of the Republic of Mozambique. approves this Mozambique Civil Aviation Technical Standard (MOZ-CATS Part 71) for the use and guidance of the Airspace Users and Air Navigation Service Providers to comply with the requirements of MOZCAR Part 71, but also to IACM staff in the performance of their duties.

The detailed characteristics of the airspace organization and classification shall be published in the Aeronautical information Publication AIP Moçambique, chapter Enroute.

Comments and suggestions for amendments to this publication should be forwarded to the Director of Air Navigation, IACM:

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Maputo, 30 September 2013

The Chairman of the Board and CEO

Capt João Martins de Abreu

71.01.1 GENERAL

Decree 21 of 2001 empowers the CEO of the Civil Aviation Authority of the Republic of Mozambique IACM to issue technical standards for civil aviation on the matters prescribed by regulation. MOZCAR part 71 establishes the regulations applicable for the Organization and Management of the Airspace.

71.01.2 PURPOSE AND REFERENCES

a) Document MOZCATS 65 contains the standards, rules, requirements, methods, specifications, characteristics and procedures, which are applicable in respect of ATS personnel licensing.

b) References

- ICAO Annex 11
- ICAO Doc 7030 Regional supplementary procedures
- Republic of Mozambique, Air Law 21/2009
- MOZCAR Part 71 Airspace Organisation and Management
- MOZCAR Part 91 Flight Operations

71.01.3 NOTIFICATION OF AIRSPACE DESIGNATION OR CLASSIFICATION

(1) The lateral limits of each area of designated airspace shall be

defined by- (a) geographical co-ordinates-

(i) for a flight information region, in degrees and minutes;

(ii) for a control area or control zone in degrees, minutes and

seconds; (b) Any combination of the following:

(i) prominent geographical line features;

(ii) a circle or any part of a circle of specified radius around a geographical co-ordinate;

(iii) a great circle line between two points, except when following a parallel of latitude in which case it shall be a rhumb line.

(2) The vertical limits of each area of designated airspace shall be defined by

altitudes or flight levels. ,

(3) Unless otherwise specified, the expression *to an altitude* or *to a flight level,* includes that altitude or flight level.

(4) Controlled airspace shall be-

(a) identified by the name of the air traffic control unit having primary jurisdiction over the airspace.

(5) Special use designated airspace such as Restricted Areas, Prohibited Areas, and Danger Areas shall be-

(a) identified by an alphanumeric desiqnator (FQR- , FQP-, FQD-) that is not duplicated for the identification of any other area desiqnated under this Part and in accordance with the numbering system stated in MOZ-CATS-71.01.4 to 71.01.10 inclusive;

(b) each alphanumeric desiqnator used to identify an area of airspace designated under this Part shall not be re-used for a period of at least 1 year after it ceases to be used to identify that area of airspace.

(6) Application for the designation of airspace shall be made to the CEO of the IACM in the form shown at Annexure A including the following details:

(a) orqanisational details: including departmental details if a part of an organisation and a person is intended to be the accountable manager and compliance officer for the activity;

(b) reason for the application: specify the activity, event or air traffic control unit requiring the designation;

(c) responsible body- using agency or air traffic control unit: specify who is to be the controlling authority;

(d) requested designation, dimensions and period of activity: state the requested designation in terms of this Part, FIR, controlled airspace, visual reporting point, restricted area, prohibited area, danger area, low flying area, parachute dropping zone, aerodrome traffic zone or general aviation area; state whether temporary or permanent; state the time of the activity and any alternate activity times due weather, confirm if UTC or local time; if dimensions are given in latitude or longitude, confirm the data [WGS84 or other]; confirm if the vertical dimensions are AGL or AMSL; and

(e) provide written evidence of consultation undertaken with other airspace users affected by the proposal and with all local property owners who may be affected by noise or any potential hazard caused by the activity.

The application must be forwarded to the CEO of the IACM 90 days prior to the event so that the matter can be considered and if necessary promulgated in the AIP or by NOTAM.

71.01.4 FLIGHT INFORMATION REGION

(1) The Beira FIR/UIR comprises-

(a) all that airspace bounded by a line joining

S 11 34 00.0, E 034 58 00, - the northern international border to

S 102500.0, E 040 30 00, - S 11 0000.0 E 041

3000, - S 15 00 00.0, E 043 00 00, - S 20 00 00.0, E

040 00 00, - S 30 28 34.0, E 040 00 00, - S 26 50

00.0, E 032 52 00, - the southern and western

international border to

the Zambia and Malawi international border to

S 143650.0, E 03341 00, - S 1551 25.0, E 034 04 20,-

arc of circle of 50 nautical miles radius centered at S 15 40 16, E 034 55 00 (Chileka VOR/DME) to

S 160641.0, E 0363907, then along the international border to

S 132900.0, E 034 52 00, - the lake coastline to

S 11 34 00.0, E 034 58 00; and

(b) has an unlimited upper limit; and

(c) has the surface of the earth as the lower limit.

71.01.5 CONTROLLED AIRSPACE DESIGNATION

I. Control areas

(1) A control area may be designated as-,-

(a) a terminal control area, at the confluence of ATS routes in the vicinity of one or more aerodromes; or

(b) an upper control area, where it extends to the upper limit of controlled airspace; or

(c) an oceanic control area, normally over the high seas.

(2) The upper limit of a control area shall not exceed flight level 460.

(3) The lower limit of a control area shall -

(a) be at least 500 feet below the flight paths of IFR flights that are required by the IACM to be provided with an air traffic control service; and

(b) be established at-

(i) the highest practical altitude; and

(ii) not less than 700 feet above the surface of the earth; and

(c) when the lower limit of a control area is above 3000 feet AMSL, coincide with a VFR cruising altitude or flight level as prescribed in MOZ-CAR 91.

.(4) The lateral limits of a control area shall reflect the capabilities of the navigation systems normally used in the area.

(5) If an area below a control area is designated as another control area, the upper limit of the lower control area shall extend to the lower limit of the upper control area.

(6) Sectors within a control area or terminal control area may be designated and promulgated for the purpose of efficient air traffic management.

II. Control zones

(1) A control zone shall be established around each aerodrome where-

(a) it is determined by the CEO of the IACM that an Air Traffic Control service shall be provided;

(2) A control zone shall be as small as practical consistent with the need to protect the flight paths of IFR flights arriving at and departing from the aerodrome.

(3) The lateral limits of a control zone shall-

(a) encompass at least those portions of the airspace that are not within a terminal control area containing the paths of IFR flights arriving at and departing from the aerodrome under instrument approach or departure procedures;

(b) extend to at least 5 nm from the centre of the aerodrome in the directions from which instrument approaches may be made; and

(C) take into account the category of IFR aircraft using the aerodrome, and the areas of airspace that need to be protected for those IFR flights.

(4) Prominent geographical features shall be used, where practical, to define the

lateral limits of control zones and visual entry points.

(5) If a control zone is below a control area, the upper limit of the control zone shall extend to the lower limit of the control area.

(6) The upper limit of control zone above 3000 feet AMSL shall coincide with a VFR cruising altitude or flight level prescribed in MOZ-CAR 91.

(7) Sectors within a control zone may be designated and promulgated for the purpose of efficient air traffic management.

71.01.6 TRANSITION ALTITUDE, TRANSITION LEVEL AND MINIMUM FLIGHT LEVEL

a) The IACM shall define the transition altitude for the areas and zones within the FIR Beira,
b) The ATS unit concerned shall define the minimum Flight Level based on current and actual meteorological data
   - *The lowest usable flight level will provide a terrain clearance of at least 300m (1000 ft)*
   - *MET offices shall inform ATS units when, in abnormal conditions, pressure goes below the minimum climatological value, in order that appropriate steps can be taken to cancel temporarily the use of the lowest flight level or levels that would not ensure the minimum terrain clearance.*
c) Based on current and anticipated atmospheric pressure distribution, area control centres shall coordinate, when required the lowest flight level to be used.
d) The table below should be used when necessary when determining the transition level. This table shows the transition level directly as a function of the transition altitude of the aerodrome and of the current QNH altimeter setting value.

Example: for an aerodrome with a TA of 5200 ft and a QNH of 1012, the flight level immediately above the TA is FL 55. For a transition layer of 500ft, the transition level will be FL60, for a transition layer of 1000 ft, the TL will be FL 65.

QNH / TA m	TA ft	From 949.1 to 966.5	From 966.6 to 984.2	From 984.3 to 1 002.2	From 1 002.3 to 1 020.5	From 1 020.6 to 1 039.1	From 1 039.2 to 1 057.9
1 560	5 200	70	65	60	55	50	45

Table 1. Method to determine the transition level which will at least coincide with the flight level corresponding to the transition altitude

TA m	TA ft	From 942.2 to 959.4	From 959.5 to 977.1	From 977.2 to 995.0	From 995.1 to 1 013.2	From 1 013.3 to 1 031.6	From 1 031.7 to 1 050.3
450	1 500	35	30	25	20	15	10
600	2 000	40	35	30	25	20	15
750	2 500	45	40	35	30	25	20
900	3 000	50	45	40	35	30	25
1 050	3 500	55	50	45	40	35	30
1 200	4 000	60	55	50	45	40	35
1 350	4 500	65	60	55	50	45	40
1 500	5 000	70	65	60	55	50	45
1 650	5 500	75	70	65	60	55	50
1 800	6 000	80	75	70	65	60	55
1 950	6 500	85	80	75	70	65	60
2 100	7 000	90	85	80	75	70	65

TA m	TA ft	From 945.6 to 963.0	From 963.1 to 980.7	From 980.8 to 998.6	From 998.7 to 1 016.8	From 1 016.9 to 1 035.3	From 1 035.4 to 1 054.1
480	1 600	40	35	30	25	20	15
630	2 100	45	40	35	30	25	20
780	2 600	50	45	40	35	30	25
930	3 100	55	50	45	40	35	30
1 080	3 600	60	55	50	45	40	35
1 230	4 100	65	60	55	50	45	40
1 380	4 600	70	65	60	55	50	45
1 530	5 100	75	70	65	60	55	50
1 680	5 600	80	75	70	65	60	55
1 830	6 100	85	80	75	70	65	60
1 980	6 600	90	85	80	75	70	65
2 130	7 100	95	90	85	80	75	70

TA m	TA ft	From 949.1 to 966.5	From 966.6 to 984.2	From 984.3 to 1 002.2	From 1 002.3 to 1 020.5	From 1 020.6 to 1 039.1	From 1 039.2 to 1 057.9
510	1 700	40	35	30	25	20	15
660	2 200	45	40	35	30	25	20
810	2 700	50	45	40	35	30	25
960	3 200	55	50	45	40	35	30
1 110	3 700	60	55	50	45	40	35
1 260	4 200	65	60	55	50	45	40
1 410	4 700	70	65	60	55	50	45
1 560	5 200	75	70	65	60	55	50
1 710	5 700	80	75	70	65	60	55
1 860	6 200	85	80	75	70	65	60
2 010	6 700	90	85	80	75	70	65
2 160	7 200	95	90	85	80	75	70

TA m	TA ft	From 952.6 to 970.0	From 970.1 to 987.8	From 987.9 to 1 005.9	From 1 006.0 to 1 024.2	From 1 024.3 to 1 042.8	From 1 042.9 to 1 061.7
540	1 800	45	40	35	30	25	20
690	2 300	50	45	40	35	30	25
840	2 800	55	50	45	40	35	30
990	3 300	60	55	50	45	40	35
1 140	3 800	65	60	55	50	45	40
1 290	4 300	70	65	60	55	50	45
1 440	4 800	75	70	65	60	55	50
1 590	5 300	80	75	70	65	60	55
1 740	5 800	85	80	75	70	65	60
1 890	6 300	90	85	80	75	70	65
2 040	6 800	95	90	85	80	75	70
2 190	7 300	100	95	90	85	80	75

TA m	TA ft	From 956.1 to 973.5	From 973.6 to 991.4	From 991.5 to 1 009.5	From 1 009.6 to 1 027.9	From 1 028.0 to 1 046.6	From 1 046.7 to 1 065.5
570	1 900	50	45	40	35	30	25
720	2 400	55	50	45	40	35	30
870	2 900	60	55	50	45	40	35
1 020	3 400	65	60	55	50	45	40
1 170	3 900	70	65	60	55	50	45
1 320	4 400	75	70	65	60	55	50
1 470	4 900	80	75	70	65	60	55
1 620	5 400	85	80	75	70	65	60
1 770	5 900	90	85	80	75	70	65
1 920	6 400	95	90	85	80	75	70
2 070	6 900	100	95	90	85	80	75
2 220	7 400	105	100	95	90	85	80

71.01.7 AIRSPACE CLASSIFICATION

The following airspace classes apply in the FIR/UIR Beira

I. Class A airspace

That controlled airspace where the CEO of the IACM considers it necessary in the interests of aviation safety that-

(a) separation is required between all flights; and
(b) VFR flights are not permitted.

Airspace class A shall apply for the upper airspace FL ~~195~~ 145 and above.

II. Class C airspace

That controlled airspace where the CEO of the IACM considers it necessary in the interests of aviation safety that-

(a) separation is required

between-·

(i) IFR flights; and

(ii) IFR and VFR flights; and

(b) traffic information is required for VFR flights about other VFR flights; and
(c) traffic avoidance advice is provided to VFR flights on request.
(d) An entry clearance is required for VFR flights

Airspace class C shall apply in the TMAs.

III. Class E airspace

That controlled airspace where the CEO of the IACM considers it necessary in the interests of aviation safety that-

a) Separation is required between IFR flights
b) Traffic avoidance advice is provided on request as far as practicable
c) Flight information and Alerting service are provided to flights having filed a flight plan or otherwise known to ATS
d) Two-way radio contact is compulsory for IFR flights.

Airspace class E shall apply in the lower ATS routes (up to FL ~~195~~ 145), and in any other portion of airspace defined by the CEO of IACM for safety reasons.

IV. Class G airspace

The CEO of the IACM may classify as Class G airspace an uncontrolled airspace, where-

(a) The provision of Air Traffic Services is not required
(b) Flight information and Alerting service can be provided as far as practicable
(c) Radio contact is not compulsory, position reports and listening watch recommended for all flights.

71.07.8 RVSM Airspace

The entire airspace of the UIR Beira from FL 290 to FL 410 inclusive is declared RVSM airspace. It can be used exclusively by acft that are RVSM-certified. SUAs (Special Use Areas) within that airspace and exemptions to the carriage of RVSM-certified equipment can be approved by the CEO of the IACM.

71.01.9 VISUAL REPORTING POINTS

(1) Visual reporting points shall be identified by names or

designators that

(a) are easily recognisable in voice communications;

(b) are easy to identify visually on the ground;

(c) are free of ambiguity with those of other reporting points in the same general area; and

(d) do not create confusion with other communications exchanged between air traffic services and pilots.

71.01.10 RESTRICTED AREA

(1) For each restricted area notification shall-

(a) specify the type of activity for which it is

designated; (b) specify the controlling authority

applicable to it; and

(c) identify it by the letters FQR followed by a number, except that on maps and charts the letter R followed by the number may be used.

(2) The controlling authority specified under paragraph (1)(b)

shall- (a) Control the entry and operation within the

area; and

(b) When the restricted area is to be made effective by NOTAM, provide at least
24 hours advance notice to the NOTAM office of the restricted area becoming effective, except in the case of emergencies.

71.01.11 PROHIBITED AREAS

Each prohibited area shall be identified by the letters FQP followed by a number, except that on maps and charts the letter P followed by the number may be used.

71.01.12 DANGER AREAS

(1) The letters FQD followed by a number shall identify each danger area, except that on maps and charts the letter D followed by the number may be used.

(2) When a danger area is to be made effective by NOTAM, the using agency shall provide at least 24 hours advance notice to the NOTAM office of the danger area becoming effective, except in the case of emergencies.

71.01.13 LOW FLYING AREAS

(1) Low flying areas shall be classified, published and managed as restricted areas

(2) A low flying area shall not be effective during night.

(3) The vertical limits of a low flying area shall extend from the surface of the earth to a height of 500 ft.

71.01.14 PARACHUTE DROP AREAS

Parachute drop zones shall be classified, published and managed as restricted areas.

Annex-A

APPLICATION FOR DESIGNATED AIRSPACE UNDER MOZCAR PART 71

(a) **Organisation Details**

Person completing

application:

Name of Organisation:

Division of

department: Postal

Address:

(Address for service)

Telephone: Email:

(b) Reason for Application

Activity or Event

Annex-A

APPLICATION FOR DESIGNATED AIRSPACE UNDER MOZCAR PART 71, p 2

(c) **Proposed Responsible Agency**

Responsible Agency:

Accountable person and Compliance Officer:

Contact details:

Annex-A

APPLICATION FOR DESIGNATED AIRSPACE UNDER MOZCAR PART 71, p3

(d) Requested Designation, Dimensions and Period of Operation

Requested Airspace Designation:

Permanent or Temporary Status:

Time of Activation:

Location of Airspace:

Lateral dimensions:

[use significant points or latitude and longitude~

Vertical Dimensions:

Requested radio frequency:

(e) Consultation

Provide evidence of consultation and conditions or agreements made with affected airspace users or ground parties:,

The completed application must be submitted to the CEO of the IACM at least 90 days prior to the proposed activity.