

COVER SHEET TO AMENDMENT 46.

INTERNATIONAL STANDARDS

RULES OF THE AIR

ANNEX 2

**TO THE CONVENTION ON INTERNATIONAL CIVIL
AVIATION**

TENTH EDITION — JULY 2005

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Checklist of Amendments to Annex 2		
	<i>Effective date</i>	<i>Date of applicability</i>
Tenth Edition (incorporates Amendments 1 to 38)	11 July 2005	24 November 2005
Amendment 39 (adopted by the Council on 20 February 2006)	17 July 2006	23 November 2006
Amendment 40 (adopted by the Council on 26 February 2007)	16 July 2007	22 November 2007
Amendment 41 (adopted by the Council on 10 March 2008)	20 July 2008	20 November 2008
Amendment 42 (adopted by the Council on 4 March 2009)	20 July 2009	19 November 2009
Amendment 43 (adopted by the Council on 7 March 2012)	16 July 2012	15 November 2012
Amendment 44 (adopted by the Council on 25 February 2013)	15 July 2013	13 November 2014
Amendment 45 (adopted by the Council on 22 February 2016)	11 July 2016	10 November 2016
Amendment 46 (adopted by the Council on 7 March 2018) Replacement pages (xii), 1-7, APP 4-1 and APP 4-2	16 July 2018	8 November 2018

Amendment 46
to the
International Standards

RULES OF THE AIR

(Annex 2 to the Convention on International Civil Aviation)

1. Insert the following replacement pages in Annex 2 (Tenth Edition) to incorporate Amendment 46 which becomes applicable on 8 November 2018:

- | | |
|------------------------------|--------------|
| a) Page (<i>xii</i>) | — Foreword |
| b) Page 1-7 | — Chapter 1 |
| c) Pages APP 4-1 and APP 4-2 | — Appendix 4 |

2. Record the entry of this amendment on page (ii).

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
32	Air Navigation Commission	Note related to carriage requirements of airborne collision avoidance systems.	19 February 1996 19 February 1996 —
33	Air Navigation Commission	Communication failure procedures.	26 February 1997 21 July 1997 6 November 1997
34	Automatic Dependent Surveillance Panel, Fourth Meeting (1996); Review of the General Concept of Separation Panel, Ninth Meeting (1996); consequential to Amendment 162 to Annex 1	Definitions; automatic dependent surveillance systems and procedures; data interchange between automated ATS systems; ATS applications for air-ground data links; problematic use of psychoactive substances.	19 March 1998 20 July 1998 5 November 1998
35	Air Navigation Commission; Visual Aids Panel, Thirteenth Meeting (1997)	ATS airspace classifications; visual meteorological conditions clearance; runway-holding position.	10 March 1999 19 July 1999 4 November 1999
36	Consequential as a result of Amendment 40 to Annex 11; Amendments 23 and 25 to Annex 6, Part I; Amendments 20 and 7 to Annex 6, Parts II and III, respectively; and Amendment 72 to Annex 3	Revised definitions of “air traffic control unit”, “approach control unit”, “alternate aerodrome” “flight crew member”, “pilot-in-command” and “visibility”; editorial amendments.	12 March 2001 16 July 2001 1 November 2001
37	Separation and Airspace Safety Panel (SASP)	Pilot procedures in the event of unlawful interference; editorial amendments.	28 February 2003 — —
38 (10th Edition)	Secretariat	Definitions; marshalling signals; communication failure procedures; interception manoeuvres; editorial amendments.	23 February 2005 11 July 2005 24 November 2005
39	Secretariat	Restructuring of text to emphasize the responsibility of the pilot-in-command for the avoidance of collisions.	20 February 2006 17 July 2006 23 November 2006
40	Air Navigation Commission	Definitions and associated procedures for ADS-B, ADS-C and ADS-C agreement; pilot procedures in the event of unlawful interference.	26 February 2007 16 July 2007 22 November 2007
41	Secretariat with the assistance of the Required Navigation Performance and Special Operational Requirements (RNPSOR) Study Group	Amendment to a definition and Standard to align required navigation performance (RNP) and area navigation (RNAV) terminology with the performance-based navigation (PBN) concept.	10 March 2008 20 July 2008 20 November 2008

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject(s)</i>	<i>Adopted/approved Effective Applicable</i>
42	Recommendation 8/1 of the seventh meeting of the Operations Panel (OPSP/7); Secretariat with the assistance of the APANPIRG task force on RVSM	Amendments to standard emergency hand signals for emergency communications between aircraft rescue and firefighting personnel and flight and/or cabin crews; and harmonization of cruising levels.	4 March 2009 20 July 2009 19 November 2009
43	Secretariat; Separation and Airspace Safety Panel (SASP); Unmanned Aircraft Systems Study Group (UASSG)	Amendment to definitions; speed variations; and remotely piloted aircraft.	7 March 2012 16 July 2012 15 November 2012
44	Secretariat; Approach Classification Task Force (ACTF)	Definitions related to instrument approach operations.	25 February 2013 15 July 2013 13 November 2014
45	Separation and Airspace Safety Panel (SASP)	Speed variation procedures	22 February 2016 11 July 2016 10 November 2016
46	Fifth and sixth meetings of the Remotely Piloted Aircraft Systems Panel (RPASP/5 and RPASP/6), and the thirteenth meeting of the Instrument Flight Procedures Panel (IFPP/13)	Regulatory structure for the issuance of remote pilot licences and the provision of a global framework for the regulation of remotely piloted aircraft systems (RPAS) licensing; and amendment of references.	7 March 2018 16 July 2018 8 November 2018

Note.— Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board equipment are considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFAs, refer to PANS-OPS (Doc 8168) Volume I, Part II, Section 5.

Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B.

Note.— Refer to Annex 6 for instrument approach operation types.

Instrument meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Note.— The specified minima for visual meteorological conditions are contained in Chapter 4.

Landing area. That part of a movement area intended for the landing or take-off of aircraft.

Level. A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Manoeuvring area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

Operator. A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Note.— In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Pressure-altitude. An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.*

* As defined in Annex 8.

Problematic use of substances. The use of one or more psychoactive substances by aviation personnel in a way that:

- a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or
- b) causes or worsens an occupational, social, mental or physical problem or disorder.

Prohibited area. An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.

Psychoactive substances. Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

Radiotelephony. A form of radiocommunication primarily intended for the exchange of information in the form of speech.

Remote pilot. A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

Remote pilot station. The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

Remotely piloted aircraft (RPA). An unmanned aircraft which is piloted from a remote pilot station.

Remotely piloted aircraft system (RPAS). A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

Repetitive flight plan (RPL). A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

Reporting point. A specified geographical location in relation to which the position of an aircraft can be reported.

Restricted area. An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

RPA observer. A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

Runway. A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position. A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note.— In radiotelephony phraseologies, the expression “holding point” is used to designate the runway-holding position.

Safety-sensitive personnel. Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

Signal area. An area on an aerodrome used for the display of ground signals.

Special VFR flight. A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

Taxiing. Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

Taxiway. A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

a) Aircraft stand taxilane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

APPENDIX 4. REMOTELY PILOTED AIRCRAFT SYSTEMS

(Note.— See Chapter 3, 3.1.9 of the Annex)

Note.— The Manual on Remotely Piloted Aircraft Systems (RPAS) (Doc 10019) contains explanatory information related to remotely piloted aircraft systems.

1. General operating rules

1.1 A remotely piloted aircraft system (RPAS) engaged in international air navigation shall not be operated without appropriate authorization from the State from which the take-off of the remotely piloted aircraft (RPA) is made.

1.2 An RPA shall not be operated across the territory of another State without special authorization issued by each State in which the flight is to operate. This authorization may be in the form of agreements between the States involved.

1.3 An RPA shall not be operated over the high seas without prior coordination with the appropriate ATS authority.

1.4 The authorization and coordination referred to in 1.2 and 1.3 shall be obtained prior to take-off if there is reasonable expectation, when planning the operation, that the aircraft may enter the airspace concerned.

1.5 An RPAS shall be operated in accordance with conditions specified by the State of Registry, the State of the Operator, if different, and the State(s) in which the flight is to operate.

1.6 Flight plans shall be submitted in accordance with Chapter 3 of this Annex or as otherwise mandated by the State(s) in which the flight is to operate.

1.7 RPAS shall meet the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.

2. Certificates and licensing

Note 1.— Assembly Resolution A38-12 Appendix C resolves that pending the coming into force of international Standards respecting particular categories, classes or types of aircraft, certificates issued or rendered valid, under national regulations, by the Contracting State in which the aircraft is registered shall be recognized by other Contracting States for the purposes of flight over their territories, including landings and take-offs.

Note 2.— Certification Standards are not yet developed. Thus, in the meantime, any certification need

not be automatically deemed to comply with the SARPs of the related Annexes, including Annexes 6 and 8, until such time as the related RPAS SARPs are developed.

Note 3.— Notwithstanding Assembly Resolution A38-12, Article 8 of the Chicago Convention assures each Contracting State of the absolute sovereignty over the authorization for RPA operations over its territory.

2.1 An RPAS shall be approved, taking into account the interdependencies of the components, in accordance with national regulations and in a manner that is consistent with the provisions of related Annexes. In addition:

- a) an RPA shall have a certificate of airworthiness issued in accordance with national regulations and in a manner that is consistent with the provisions of Annex 8; and
- b) the associated RPAS components specified in the type design shall be certificated and maintained in accordance with national regulations and in a manner that is consistent with the provisions of related Annexes.

2.2 An operator shall have an RPAS operator certificate issued in accordance with national regulations and in a manner that is consistent with the provisions of Annex 6.

2.3 Until 2 November 2022, remote pilots shall be licensed, or have their licences rendered valid, in accordance with national regulations and in a manner that is consistent with the provisions of Annex 1.

2.3 As of 3 November 2022, remote pilots shall be licensed, or have their licences rendered valid, in accordance with the provisions of Annex 1.

3. Request for authorization

3.1 The request for authorization referred to in 1.2 above shall be made to the appropriate authorities of the State(s) in which the RPA will operate not less than seven days before the date of the intended flight unless otherwise specified by the State.

3.2 Unless otherwise specified by the State(s), the request for authorization shall include the following:

- a) name and contact information of the operator;
- b) RPA characteristics (type of aircraft, maximum certificated take-off mass, number of engines, wing span);
- c) copy of certificate of registration;
- d) aircraft identification to be used in radiotelephony, if applicable;
- e) copy of the certificate of airworthiness;
- f) copy of the RPAS operator certificate;
- g) copy of the remote pilot(s) licence;
- h) copy of the aircraft radio station licence, if applicable;

i) description of the intended operation (to include type of operation or purpose), flight rules, visual line-of-sight (VLOS) operation if applicable, date of intended flight(s), point of departure, destination, cruising speed(s), cruising level(s), route to be followed, duration/frequency of flight;

j) take-off and landing requirements;

k) RPA performance characteristics, including:

1) operating speeds;

2) typical and maximum climb rates;

3) typical and maximum descent rates;