

## ENR 1.3 INSTRUMENT FLIGHT RULES

### 1. GENERAL

For IFR flights aircraft shall be equipped with required instrument and navigation equipment to perform en-route flights and approach procedures in bad weather condition.

IFR flights in a controlled airspace are performed at assigned flight levels. Defined flight mode and ATS route shall be strictly kept. Appropriate ATC units are responsible for the provision of established intervals between aircraft and for assigning a safe flight level. Flight level change is carried out under the instruction of the ATC unit.

Aircraft operating flights on RNAV routes in the FIR-s of Astana, Almaty, Shymkent and Aktobe shall be equipped by area navigation equipment. This equipment shall be certified at least in accordance with the requirements to RNAV 5 and aircraft crew shall be approved to use it. Flight operations on RNAV 5 ATS routes by aircrafts without operational approval for RNAV 5 flights are allowed, if secondary radar control is provided and aircraft has secondary surveillance radar transponder. In this case, letter «R» is not specified in field 10 of flight plan and flight shall be operated with dead reckoning using autonomic onboard navigation equipment and ground navigation aids.

If any threat to flight safety at assigned level (dangerous meteorological phenomena, failures of equipment, etc.) the pilot-in-command changes the flight level (altitude) independently with an immediate report to the appropriate ATC unit.

In this case, the pilot-in-command shall:

- before changing the flight level, turn away normally to the right 30° from the airway center line; and
- after flying 10 NM resume the previous heading simultaneously changing the altitude in accordance with the level selected; and
- report to the ATC unit about flight maneuver execution.

In case of emergency, descending shall be carried out immediately after turning away within flight manual limits. After reaching new flight level (altitude) the pilot-in-command shall return the aircraft to the airway in coordination with ATC unit.

Transition from IFR to VFR shall be carried out only by permission of the ATC controller.

IFR flights shall be operated at levels, which are not below the minimum true safe height (altitude), shown in the following table (except takeoff, landing and when authorized by the appropriate authority):

Within CTR, aerodrome movement area or pattern	
Flight speed (instrument), km/h (knots)	Safe flight height (true), m (feet)
260 (140) and below	300 (1000)
More than 260 (140)	300 (1000)
In the airspace of the airfield area and the control area	
a) above plain, hilly terrain and water surface:	
260 (140) and below	300 (1000)
At night	300 (1000)
From 261-463 (140 – 250)	300 (1000)
More than 463 (250)	300 (1000)
b) Above mountainous terrain (height up to 2000 m):	
463 (250) and below	600 (2000)
More than 463 (250)	600 (2000)
c) Above mountainous terrain (height 2000 m and more):	
463 (250) and below	600 (2000)
More than 463 (250)	600 (2000)
In the airspace of class "G" above plain, hilly terrain and water surface	
260 (140) and below	300 (1000)
At night	
From 261-463 (140 – 250)	300 (1000)
Above mountainous terrain (height up to 2000 m)	
463 (250) and below	600 (2000)
Above mountainous terrain (height 2000 m and more)	
463 (250) and below	600 (2000)
<b>Note:</b> 1. The width of area considered for terrain elevation and obstacle clearance, when minimum obstacle clearance altitude was calculated by the aircraft operator within CTR, aerodrome movement area or pattern, is set when flying along the IFR - is 5 NM (9.25 kilometers) to both sides of the route center line. The specified values of the true safe altitudes are observed before start of the exit to intermediate approach area during instrument approach or before entrance to the visual maneuvering zone during visual approach. 2. Consideration of terrain and obstacle clearance, when minimum obstacle clearance altitude was calculated by the aircraft operator within CTR, controlled airspace and on IFR route are established by the aircraft operator in accordance with the provisions of the ICAO document "Aircraft Flight Operations" (Doc 8168 OPS/611 Tom II (PANS-OPS), and published in aeronautical information document. 3. The PIC is responsible for providing altitude reserves over obstacles, with the exception of IFR flight performed in the vector mode.	

The width of area considered for terrain elevation and obstacle clearance, when minimum obstacle clearance altitude was calculated, is 5 NM to both sides of the route center line.

While operating IFR flight a crew must continuously monitor air and meteorological conditions visually and using onboard radio equipment.

During IFR flight the aircraft crew shall:

- a. maintain SID route, assigned FL (altitude) and flight route, the descent and approach patterns, the

assigned flight paths and flight parameters;

- b. provide accurate and timely information on actual aircraft position, altitude and flight conditions;
- c. execute the ATC instructions accurately and timely.

ATC controller directly controlling the IFR flight shall:

- a. assign the flight level (altitude) correctly;
- b. provide assigned vertical and horizontal separation intervals;
- c. control over the flight route keeping by the crew, terminal area exit pattern, descent and approach patterns with the availability of radar control;
- d. inform the crews timely and correctly about meteorological conditions, deviations from the designated flight paths upon availability of radar control, and if necessary about air and ornithological conditions;
- e. give reasonable instructions and recommendations to aircraft crews.

When entering a control area, the crew shall:

- a. report to the ATC controller the entry time, the entry point and flight level (altitude);
- b. receive the flight conditions;
- c. report to the ATC controller, when exiting his area of responsibility, the time of exit, the flight level (altitude) and obtain clearance for end of communication.

ATC controller assigns «a secondary radar control» mode to some definite aircrafts in order to reduce compulsory radio communication sessions under stable control over aircraft using secondary radar information. In this mode crews report about passing the appropriate compulsory reporting points and exiting ATC area (region) only by ATC controller instruction (request). If it necessary to change flight level (altitude), such changing shall be carried out after crew request and ATC controller clearance or by ATC instruction.

The crew shall report to the ATC controller:

- a. passing of every compulsory reporting point, if ATC clearance obtained;
- b. beginning and end of maneuvers for flight level changing;
- c. time of transition to a flight by new flight plan, in the case of change of flight plan.

When passing compulsory reporting point, the aircraft crew shall report:

- a. fly-over time;
- b. flight level (altitude);
- c. information about meteorological conditions dangerous to flight (if any).

At the point of safe departing to alternate aerodrome in controlled area, aircraft crew shall inform about estimated time of passing this point and chosen alternate aerodrome.

## **2. IFR FLIGHTS WITHIN CONTROLLED AIRSPACE**

IFR flights within controlled airspace shall be operated according to p. 3.6 of Annex 2 to the Convention on international civil aviation.

IFR flight in cruise mode in controlled airspace is operated at cruising level according to the table of cruising levels contained in ENR 1.7.

If the flight plan states that initial stage of the flight will be controlled and the following part - uncontrolled, the ATC permission is issued to aircraft crew to fly to the border of the controlled airspace, where the controlled flight ends.

If the flight plan states that initial stage of the flight will be uncontrolled and the following part - controlled, the aircraft crew should obtain permission from the ATC unit, in which area of responsibility the controlled flight starts, at 5 minutes prior to estimated time of entry into the controlled airspace.

### **3. IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE**

IFR flight in uncontrolled airspace of G class shall be operated at cruising flight level considering route direction, in the table of flight levels contained in ENR 1.7, unless ATC unit provides other instructions for flights at 900 meters (3000 feet) AMSL or below.

An appropriate channel monitoring of voice communication «air — ground» is carried out for IFR flights in uncontrolled airspace of G class. Normally, ATS requires a flight plan provision for such flights. If necessary, two-way radio communication with ATC unit can be established and aircraft position reports are provided.

For IFR flights outside controlled airspace, including flights operating below the lower limit of controlled airspace, the determination of the lowest usable altitude is the responsibility of the pilot-in-command. Current or forecast QNH and temperature values should be taken into account.