

Instrument Flight Rules (IFR)



WHAT'S IFR?

IFR means Instrument Flight Rules. It's a type of flight in which the pilot must be able to fly the aircraft in reference to his instruments only. He must be able to navigate and know his position only by using instruments. It's the reason why aircraft flying through bad weather conditions are most likely to file an IFR flight plan. They can't see outside the window. This doesn't mean that an IFR aircraft cannot fly in good weather conditions. In fact, most commercial airplanes are flying IFR all the time, even in good weather. However, pilot must use instruments to navigate. Separation from other aircraft is managed by ATC, most of the time. But again, it all depends of the class of airspace the aircraft is in.

WEATHER

An IFR flight can be flown in all weather conditions, in clouds with a visibility of 0 or in a cloud free sky with unlimited visibility. However, some minimums exist for specific flight phases, like takeoff and approach. See appropriate IFR charts for minimums.

ALTITUDE

IFR flights must be cruising at appropriate altitudes according to their direction of flight (westbound: even altitude, eastbound: odd altitudes), at a thousand feet interval, starting at 1000 feet.

It is prohibited to fly above cities at less than 1000 feet AGL. It is mandatory to always fly at 500 feet or above from ground. These rules don't apply for special flights (police, etc.) as well as during takeoff / landing phases of flight

SEPARATION AND CLEARANCE

The distance by which an aircraft avoids obstacles or other aircraft is termed separation. The most important concept of IFR flying is that separation is maintained regardless of weather conditions. In controlled airspace, Air Traffic Control (ATC) separates IFR aircraft

from obstacles and other aircraft using a flight clearance based on route, time, distance, speed, and altitude.

Despite the protection offered by flight in controlled airspace under IFR, the ultimate responsibility for the safety of the aircraft rests with the pilot in command, who can refuse clearances.

FLIGHT PLAN

Filing a flight plan is a mandatory procedure on IVAO for all IFR flights, even when doing circuits. In the Route section, add IFR NAVAIDs and/or fixes with airways. That's the route you are planning to follow, however ATC might change it before your flight or even while in flight for various reasons.

IFR Flight Communication

The following is a transcript of an IFR flight, RJA111, from Amman Queen Alia Airport (OJAI) to Riyadh King Khalid airport (OERK), with full ATC along the way:

RJA111:

Queen Ground, RJA111 at south apron gate S4 Request IFR clearance to Riyadh Airport with FL350, information Golf on board.

OJAI_GND:

RJA111, information Golf is correct, cleared to Riyadh as filed FL350, Qatraneh 4D Departure, Runway 26L, Squawk 0755.

RJA111:

Cleared to Riyadh as filed FL350 , Qatraneh 4D Departure, Runway 26L, Squawk 0755. RJA111

OJAI_GND:

RJA111, Read back is correct, start-up and pushback approved, facing east

RJA111:

Start and push approved, facing east, RJA111

RJA111:

Ground, RJA111 Request taxi

OJAI_GND:

RJA111, taxi to holding point rwy 26L via E – A, QNH 1014.

RJA111:

Taxi to holding point rwy 26L via E-A,QNH 1014, RJA111

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RJA111:

Ground, RJA111 at holding point rwy 26L ready for departure.

OJAI_GND:

RJA111, contact Queen Tower on 119.800

RJA111:

switching to Tower 119.800, RJA111

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RJA111:

Queen Tower , RJA111 holding point Rwy 26L ready for departure.

OJAI_TWR:

RJA111, line up and wait runway 26L

RJA111:

Line-up and wait runway 26L, RJA111

OJAI_TWR:

RJA111, Cleared for take off rwy 26L, wind 340 degrees, 6 knots, when airborne contact Amman Approach on 128.900

RJA111:

cleared for take off rwy 26L, airborne 128.900, RJA111

RJA111:

Amman Approach, RJA111 airborne runway 26L, passing 3,200ft, proceeding QTR4D

OJAI_APP

RJA111, Amman Approach, identified, climb and maintain flight level 150, fly direct Qatraneh (QTR)

RJA111:

Climb and maintain flight level 150, direct Qatraneh, RJA111
(Before Reaching Flight Level 150)

OJAI_APP

RJA111, contact Amman center on frequency 128.500

RJA111:

Amman center on 128.500, RJA111

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RJA111:

Amman Center, RJA111 with you at FL150, inbound QTR

OJAC_CTR:

RJA111 Radar contact, climb and maintain final FL350.

RJA111:

Climb FL350, RJA111

(Amman Center is handing off the traffic to Jeddah Control as it's leaving the Jordanian Airspace)

OJAC_CTR:

RJA111 Contact Jeddah Control on 134.3, bye!

RJA111:

Contacting Jeddah on 134.3, RJA111

RJA111:

Jeddah Control Salam Alikoum, RJA111 with you at FL350 proceeding GRY

OEJD_CTR:

RJA111, Alikoum Asslama, Jeddah Control, Identified FL350, Continue as filed

OEJD_CTR:

RJA111, Report when ready for descent

RJA111:

Roger, will report when ready for descent, RJA111

RJA111:

Jeddah control, RJA111 ready for initial descent

OEJD_CTR:

RJA111, initially descend and maintain FL230, report reaching

RJA111:

Descend FL230, and will report reaching, RJA111

RJA111:

Jeddah, RJA111 is at FL230

OEJD_CTR:

RJA111, Roger, contact Riyadh approach on 120.00

RJA111:

contact Riyadh approach on 120.00, RJA111

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RJA111:

Riyadh approach, RJA111 with you at FL230 inbound KIA

OERK_APP

RJA111, radar contact, descend FL150 proceed direct RIY VOR, expect radar vectors for ILS approach rwy 33R

RJA111:

Descend FL150, direct RIY VOR, expecting vectors for ILS app rwy 33r, RJA111

OERK_APP

RJA11, Continue descent 7000ft, QNH1017

RJA111:

Descend 7000ft, QNH1017, RJA111

OERK_APP

RJA111, Leave RIY VOR on heading 060, descend 5000ft

RJA111:

Leave RIY VOR on heading 060, descend 5000ft

OERK_APP

RJA111, turn left heading 350, cleared to intercept ILS rwy 33R, report established

RJA111:

Left heading 350, cleared ils app rwy 33R, will report established, RJA111

RJA111:

Riyadh approach, RJA111 established ILS rwy 33R

OERK_APP

RJA111, continue approach 33R, contact Khalid tower on 118.600

RJA111:

Continue approach, contact Khalid tower on 118.600, RJA111

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RJA111:

Khalid tower, RJA111 ILS rwy 33R, 8 miles

OERK_TWR:

RJA111, wind 310 degrees at 8 knots, rwy 33R, cleared to land

RJA111:

Cleared to land rwy 33R, RJA111

RJA111:

Tower, RJA111 vacated rwy 33R via G5

OERK_TWR::

RJA111, contact ground on 121.700

RJA111:

Khalid ground on 121.700,RJA111

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RJA111:

Khalid Ground, RJA111 vacated runway 33R via G5

OERK_GND:

RJA111, taxi to gate 24 via R

RJA111:

Taxi to gate 24 via R, RJA111

RJA111:

Reaching gate 24 ,RJA111

OERK_GND:

RJA111, frequency change approved

RJA111:

frequency change approved, RJA111