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KINGDOM OF SAUDI ARABIA

GENERAL AUTHORITY OF CIVIL AVIATION
SAUDI AIR NAVIGATION SERVICES
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AIP SUP AIP SUP 26/25 26 JUN 2025

Simultaneous Operations on Parallel Instrument Runways in Riyadh / King Khaled International Airport (Trial Operation)

1. Purpose

The purpose of this AIP SUP is to provide information on the Simultaneous Operations on Parallel Instrument Runways in Riyadh/King Khaled International Airport.

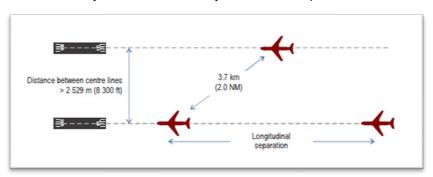
The SOIR will be used to minimize the workload of controllers during peak operational hours, increase the airport capacity under visual meteorological conditions (VMC) for aircraft under instrument flight rules (IFR), reduce potential delays and maintain a safe, orderly and expeditious flow of traffic.

2. Independent Parallel Runway Operations Procedures

At OERK, simultaneous parallel runway operations are in use, both for departures and for arrivals. Simultaneous Parallel Departures can be conducted from any of the two parallel instrument runways. Simultaneous parallel approaches according to the traffic imbalance or to mode of operations, can be conducted as Dependent Parallel Approaches or Independent Parallel Approaches.

3. Dependent Parallel Approaches (Mode 2)

Dependent Parallel Approaches are simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway center lines are prescribed.



During Dependent Parallel Approaches operations (Mode 2), in the final Approach Sector, the minimum surveillance separation of 1,000 ft vertical or 5.0 NM horizontal is required until aircraft are established on the final approach tracks.

During Dependent Parallel Approaches operations, a 2 NM diagonal shall be provided between inbound aircraft established on the final approach tracks.

The applicable instrument approach procedures for Simultaneous Dependent Parallel Approaches at Riyadh king Khaled International Airport are as follows:

OERK ILS Z RWY 33L	OERK ILS Z RWY 33R
OERK ILS Y RWY 33L	OERK ILS Y RWY 33R
OERK ILS Z RWY 15L	OERK ILS Z RWY 15R
OERK ILS Y RWY 15L	OERK ILS Y RWY 15R

Note: RNP approaches are not applicable to be operated simultaneously during Mode 2.

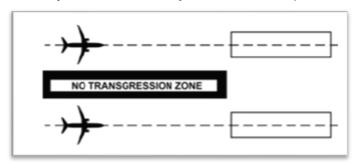
Each pair of parallel approaches has a "high side" and a "low side" to provide vertical separation until the aircraft are both established inbound on their respective instrument approach procedures. The flights need to be established at the "high side"/"low side" altitude before receiving vectors for the ILS localizer course.

The operational trial may be suspended subject to operational needs, or any other conditions that affect the safe conduct of Simultaneous Dependent Parallel Approaches.

Dependent Parallel Approaches operations will be notified to pilots via ATIS during an active period.

4. Independent Parallel Approaches (Mode 1)

Independent parallel approaches are simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway center lines are not prescribed.



During Independent Parallel Approaches operations (Mode 1), in the final Approach Sector, the minimum surveillance separation of 1,000 ft vertical or 5.0 NM horizontal is required until aircraft are established on the final approach tracks

When Independent Parallel Approaches are in operation, pilots must advise in the initial contact with Riyadh Approach Control, if they are unable to participate.

When Independent Parallel Approaches are in operation, all arrival traffic within 25 NM from KIA DVORTAC must select the final approach monitoring controller frequency 125.600MHz, until landed.

The applicable instrument approach procedures for Simultaneous Independent Parallel Approaches at Riyadh king Khaled International Airport are as follows:

OERK ILS Z RWY 33L	OERK ILS Z RWY 33R
OERK ILS Y RWY 33L	OERK ILS Y RWY 33R
OERK ILS Z RWY 15L	OERK ILS Z RWY 15R
OERK ILS Y RWY 15L	OERK ILS Y RWY 15R

Note: RNP approaches are not applicable to be operated simultaneously during Mode 1.

Each pair of parallel approaches has a "high side" and a "low side" to provide vertical separation until the aircraft are both established inbound on their respective instrument approach procedures. The flights need to be established at the "high side"/"low side" altitude before receiving vectors for the ILS localizer course.

The operational trial may be suspended subject to operational needs, or any other conditions that affect the safe conduct of Simultaneous Independent Parallel Approaches.

Independent Parallel Approaches operations will be notified to pilots via ATIS during an active period.

5. Normal Operating Zone (NOZ)

An airspace of defined dimensions extending to either side of a published instrument approach procedure final approach course or track. Only half of the normal operating zone adjacent to a no transgression zone (NTZ) is taken into account in independent parallel approaches.

6. No Transgression Zone (NTZ)

In the context of independent parallel approaches, a corridor of airspace of defined dimensions is located centrally between the two extended runway center lines, where a penetration by an aircraft requires an ATCO intervention to maneuver any threatened aircraft on the adjacent approach.

7. Break-Out Maneuvers

If the ATC surveillance system display indicates that an aircraft will penetrate the NTZ, an advisory broadcast will be issued to the aircraft, the phraseology will be: "(call sign), radar indicates you are deviating (left/right) of the final approach path".

If any aircraft is committing an NTZ infringement, the final Approach monitoring controller will provide a break-out instruction to the aircraft under their responsibility to protect it from the threat. Break-out maneuvers consist of heading and altitude instructions.

The final approach monitoring controller will issue a break-out maneuver on the monitor control frequency of 125.600 MHZ or will override the relevant tower frequency when issuing a break-out maneuver because of the infringement of the NTZ from the adjacent approach path.

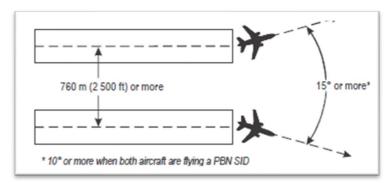
BREAK-OUT phraseology will be:

BREAK-OUT Alert, (callsign), turn (Left or Right), Immediately Heading (3 digits), Climb (or descend) to (altitude).

No break-out maneuvers will be issued when aircraft is below 400ft AGL.

8. Independent Parallel Departures (Mode 3)

The design of RNAV SIDs permits Simultaneous Independent Parallel Departures in compliance with DOC 9613 requirements.



During the activating of Simultaneous Independent Parallel Departures, Mode 3 will be conducted via RNAV SIDs from runways 33R & 33L, or 15R & 15L as follows:

RWY 33L	RWY 33R
GOBMO 1C	TORKI 1D
IVONU 1C	ALTAV 1D
KUNLO 1C	TAKTI 1D
UMASU 1C	OTALI 1D
MERVI 1C	RAPMA 1D
MUNTO 1C	AMBAG 1D

RWY 15R	RWY 15L
RESAL 1B	OTALI 1E
MUNTO 1B	TAKTI 1E
MERVI 1B	ALTAV 1E
DURMA 1B	TORKI 1E
IVONU 1B	GOBMO 1E

Pilots must adhere strictly to the published RNAV SIDs initial segments.

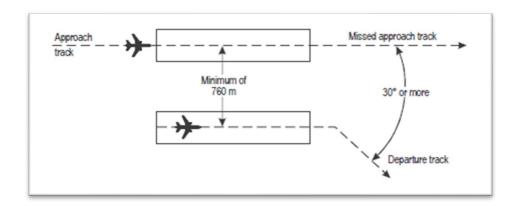
The operational trial may be suspended subject to operational needs, or any other conditions that affect the safe conduct of Simultaneous Independent Parallel Departures.

Independent Parallel Departures operations will be notified to pilots via ATIS during an active period.

9. Segregated Operations on Parallel Runways (Mode 4)

Segregated Operations on Parallel Runways (Mode 4) is utilized 24 hours at OERK as follows:

#	RWY 15R/33L	RWY 15L/33R
1	All arrival traffic	All departure traffic
2	Royal departure traffic	General Aviation Arrival traffic



The following SIDs and ILS approaches are to be utilized for segregated operations (Mode4) at King Khaled International Airport:

- SID RNAV RWY 33R & ILS Z RWY 33L
- SID RNAV RWY 33R & ILS Y RWY 33L
- SID RNAV RWY 33L & ILS Z RWY 33R
- SID RNAV RWY 33L & ILS Y RWY 33R
- SID RNAV RWY 15R & ILS Z RWY 15L
- SID RNAV RWY 15R & ILS Y RWY 15L
- SID RNAV RWY 15L & ILS Z RWY 15R
- SID RNAV RWY 15L & ILS Y RWY 15R

RNAV SIDs RWY 33R with two approach procedures ILS Z 33L and ILS Y 33L:

The followings are the restricted list of SIDs and approach procedures on both RWYs to be used simultaneously and authorized as segregated operations.

Arrival RWY	Type of Approach	Departure RWY	RNAV SIDs	Remarks
			TORKI 1D	
	ILS Z RWY 33L		ALTAV 1D	All departures and approaches are separated.
RWY 33L		RWY 33R	TAKTI 1D	·
	ILS Y RWY 33L		OTALI 1D	Segregated operations are applicable.
			RAPMA 1D	''
			AMBAG 1D	

RNAV SIDs RWY 33L with two approach procedures ILS Z 33R and ILS Y 33R:

The followings are the restricted list of SIDs and approach procedures on both RWYs to be used simultaneously and authorized as segregated operations.

Arrival RWY	Type of Approach	Departure RWY	RNAV SIDs	Remarks
			AMBAG1C	
			RAPMA1C	
			OTALI 1C	
	ILS Z RWY 33R		TAKTI1C	
RWY 33R		RWY 33L	ALTAV1C	All departures and approaches
			TORKI1C	are separated.
	ILS Y RWY 33R		GOBMO1C	Segregated operations are
			IVONU1C	applicable.
			KUNLO1C	
			UMASU1C	
			MERVI1C	
			MUNTO1C	

RNAV SIDs RWY 15L with two approach procedures ILS Z 15R and ILS Y 15R:

The followings are the restricted list of SIDs and approach procedures on both RWYs to be used simultaneously and authorized as segregated operations.

Arrival RWY	Type of Approach	Departure RWY	RNAV SIDs	Remarks
			GOBMO 1E	
			TORKI 1E	
	ILS Z RWY 15R		ALTAV 1E	
		- RWY 15L	TAKTI 1E	All departures and approaches
DWV 15D			OTALI 1E	are separated.
RWY 15R	ILS Y RWY 15R		RESAL 1E	Segregated operations are
			MUNTO 1E	applicable.
			MERVI 1E	
			DURMA 1E	
			IVONU 1E	

RNAV SIDs RWY 15R with two approach procedures ILS Z 15L and ILS Y 15L:

The followings are the restricted list of SIDs and approach procedures on both RWYs to be used simultaneously and authorized as segregated operations.

Arrival RWY	Type of Approach	Departure RWY	RNAV SIDs	Remarks
			RESAL 1B	
	ILS Z RWY 15L		MUNTO 1B	All departures and approaches
RWY 15L		RWY 15R	MERVI 1B	are separated.
	ILS Y RWY 15L	DURMA 1B	Segregated operations are applicable.	
			IVONU 1B]

However, during the segregated operations on parallel runways (Mode 4), TWR controllers will ensure that minimum separation exists between all departures and missed approach flights from the same RWY or from different RWYs and will not transfer to Riyadh APP until clear of all conflicts.

10. ATS Communication Facilities

Service Designation	Call Sign	Frequency	Hours Of Operation	SATVOICE	Logon Address	Remarks
		124.100 MHZ DOC 150 NM/60000 FT	H24			Riyadh Control Area South/Primary VHF
		126.000 MHZ DOC 150 NM/60000 FT	H24			Riyadh Control Area North/Primary VHF
		128.500 MHZ DOC 150 NM/60000 FT	H24			Riyadh Control Area North& South /Secondary VHF
	Riyadh Control	385.100 MHZ DOC 150 NM/60000 FT	H24	NIL	NIL	Riyadh Control Area North& South /Primary UHF
		342.600 MHZ DOC 150 NM/60000 FT	H24			Riyadh Control Area North& South /Secondary UHF
		121.500 MHZ	H24			Emergency VHF
		243.000 MHZ	H24			Emergency UHF
		120.000 MHZ DOC 75 NM/28000 FT	H24			Riyadh Terminal Control Area/Primary VHF
	Riyadh Approach -	120.600 MHZ DOC 75 NM/28000 FT	H24	NIL	NIL NIL	Riyadh Terminal Control Area/Secondary VHF
		340.600 MHZ / DOC 75 NM/28000 FT	H24			Riyadh Terminal Control Area/Primary UHF
APP		277.150 MHZ DOC 75 NM/28000 FT	H24			Riyadh Terminal Control Area/Secondary UHF
		121.500 MHZ	H24			Emergency VHF
		243.000 MHZ	H24			Emergency UHF
	Riyadh Final East	119.750 MHZ DOC 60 NM/28000FT As directed by ATC	H24			Riyadh Final approach East Sector/Primary VHF
	Riyadh Final West	120.450 MHZ DOC 60 NM/28000 FT As directed by ATC	H24			Riyadh Final approach West Sector/Primary VHF
	Riyadh Monitor Control	125.600 MHZ DOC 60 NM/28000 FT As directed by ATC	H24			NIL
		120.600 MHZ DOC 75 NM/28000 FT As directed by ATC	H24	NIL	NIL NIL	Riyadh Final approach West & East Sector/Secondary VHF
	Discoult E	343.400 MHZ DOC 60 NM/28000 FT	H24			Riyadh Final approach West & East Sector/ Primary UHF
	Riyadh Final	121.500 MHZ	H24			Emergency VHF
		243.000 MHZ	H24			Emergency UHF

11. Timescales for Operational Trial

The purpose of the operational trial is to ensure smooth and efficient operations before going live operation. Its primary goal is to minimize disruptions, maintain continuity, and ensure that all aspects of the operation are carefully managed and executed.

Simultaneous Operations on Parallel Instrument Runways in Riyadh is scheduled to become operational in two phases as follows:

Phases	Trail date
Phase 1: Mode 2 and Mode 4 only	26 June 2025 to 31 August 2025
Phase 2: Mode 1, Mode 2, Mode 3 and Mode 4	Active by NOTAM

12. Riyadh Approach Final Director (APF)

The Riyadh Approach Final Director (APF) vertical and lateral dimensions are as follows.

Riyadh Final Director East (APF-E):

RWY 33R in use:

250449.53N 0465714.29E

245731.88N 0464152.35E

242243.92N 0470344.87E

242959.09N 0471903.01E

Vertical limit from ALT 700 FT AGL to 11000FT AMSL excluding Riyadh CTR

RWY 15L in use:

253933.85N 0463509.06E

253214.73N 0461945.25E

245731.88N 0464152.35E

250449.53N 0465714.29E

Vertical limit from ALT 700 FT AGL to 11000FT AMSL excluding Riyadh CTR

Riyadh Final Director West (APF-W):

RWY 33L in use:

245731.88N 0464152.35E

245013.25N 0462633.59E

241527.47N 0464829.17E

242243.92N 0470344.87E

Vertical limit from ALT 700 FT AGL to 11000FT AMSL excluding Riyadh CTR

RWY 15R in use:

253214.73N 0461945.25E

252454.17N 0460423.70E

245013.25N 0462633.59E

245731.88N 0464152.35E

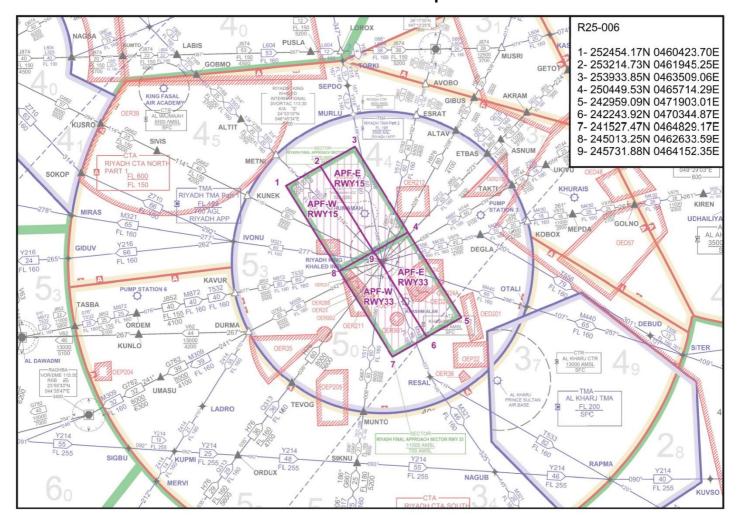
Vertical limit from ALT 700 FT AGL to 11000FT AMSL excluding Riyadh CTR

13. CONTACTS

For further information or to send your feedback, please contact Airspace Management via E-mail: asm@sans.com.sa

AIP SUP 24/25 hereby replaced

Final Director Shape



INSTRUMENT **APPROACH CHART - ICAO**

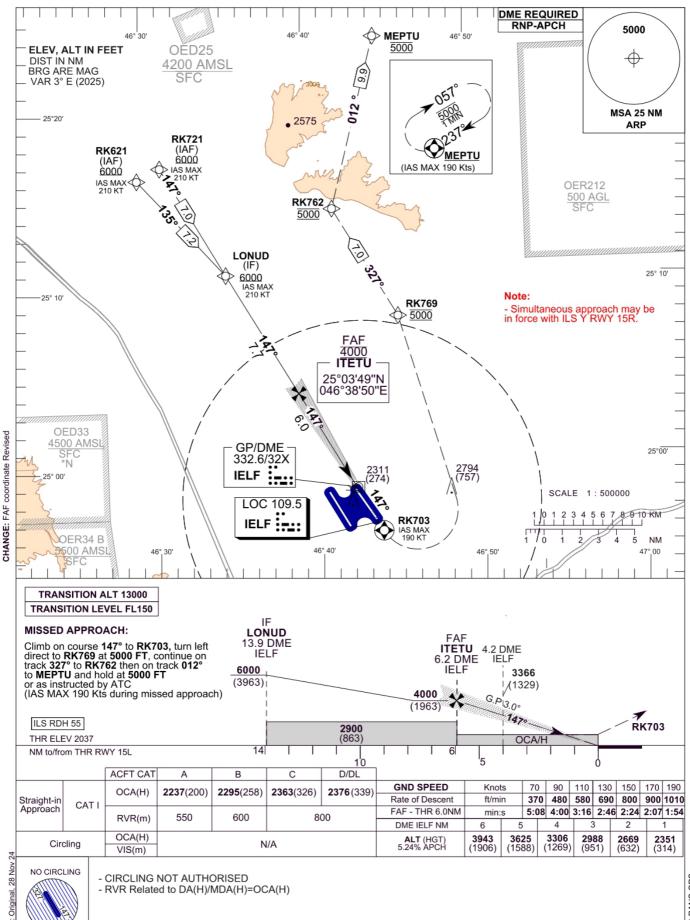
AERODROME ELEV 2053 ft

HEIGHTS RELATED TO THR RWY 15L - ELEV 2037 ft

APP :120.0 128.5 Final :120.6 119.75 TWR:118.6(E) 118.8(W) 118.3 ATIS:127.15

RIYADH/King Khaled Intl (OERK)

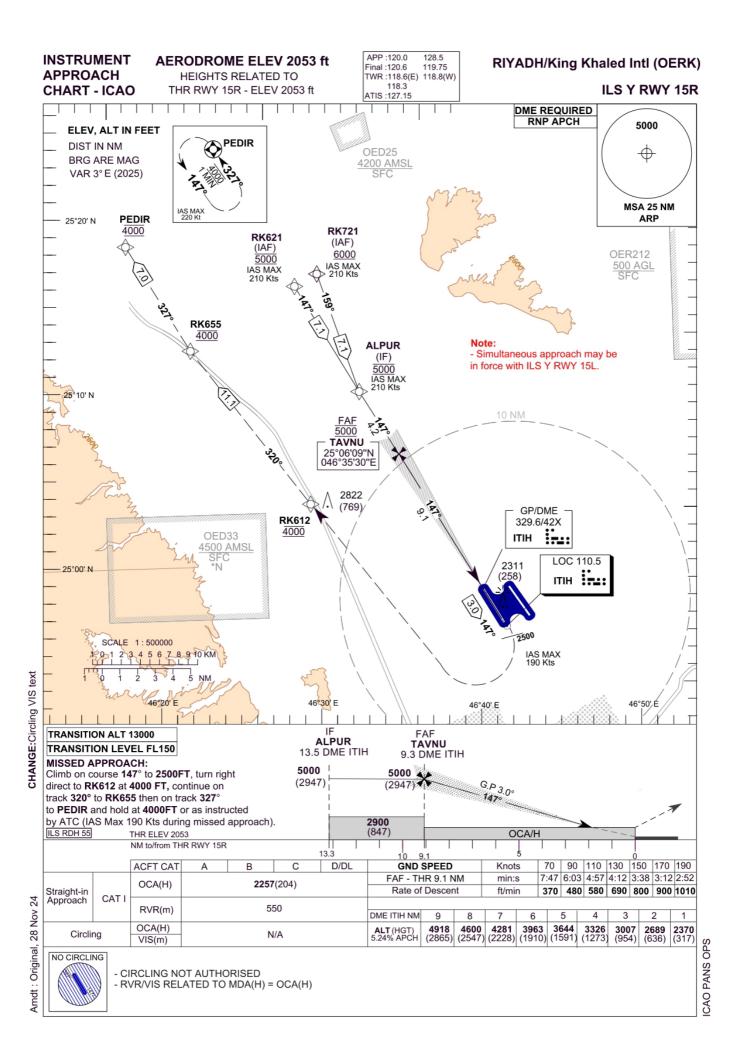
ILS Y RWY 15L

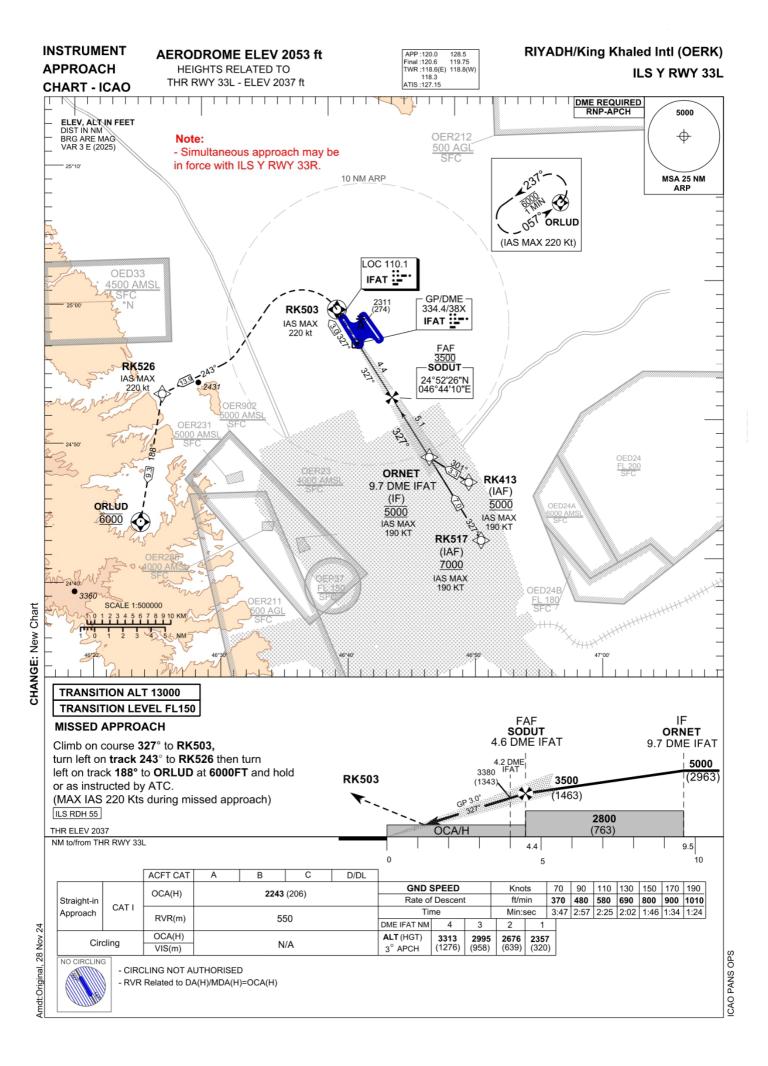


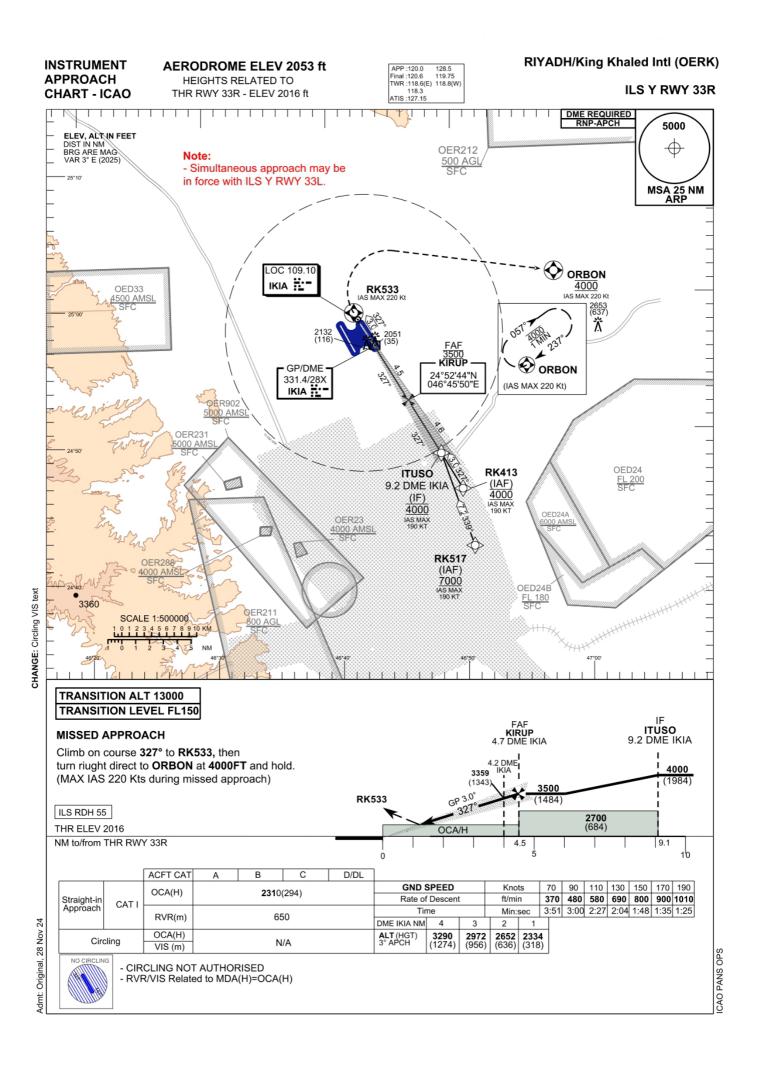
NO CIRCLING

- CIRCLING NOT AUTHORISED

- RVR Related to DA(H)/MDA(H)=OCA(H)







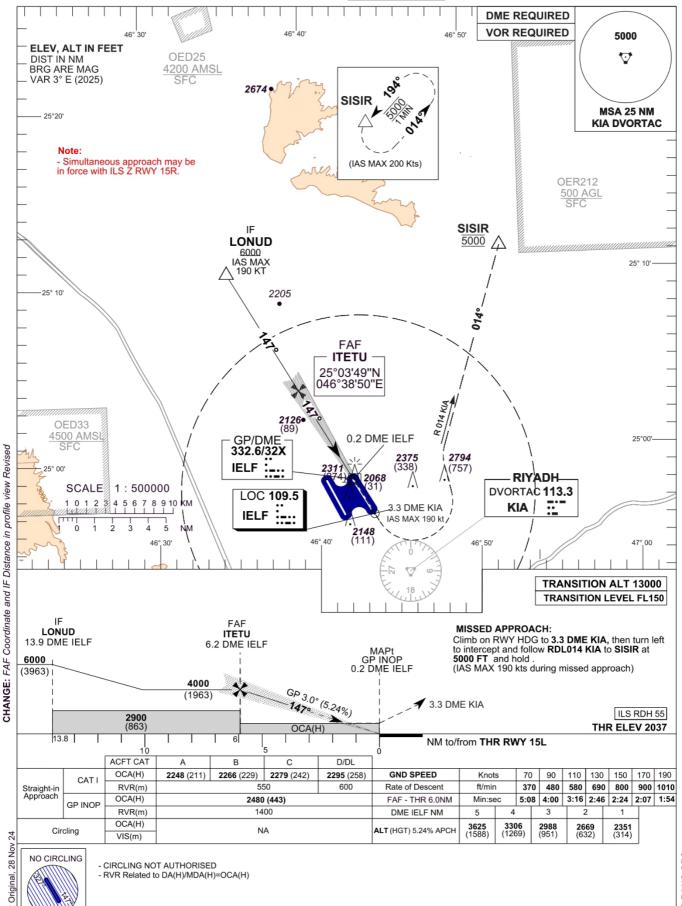
INSTRUMENT **APPROACH CHART - ICAO**

AERODROME ELEV 2053 ft

HEIGHTS RELATED TO THR RWY 15L - ELEV 2037 ft APP:120.0 128.5 Final :120.6 119.75 TWR:118.6(E) 118.8(W) 118.3 ATIS :127.15

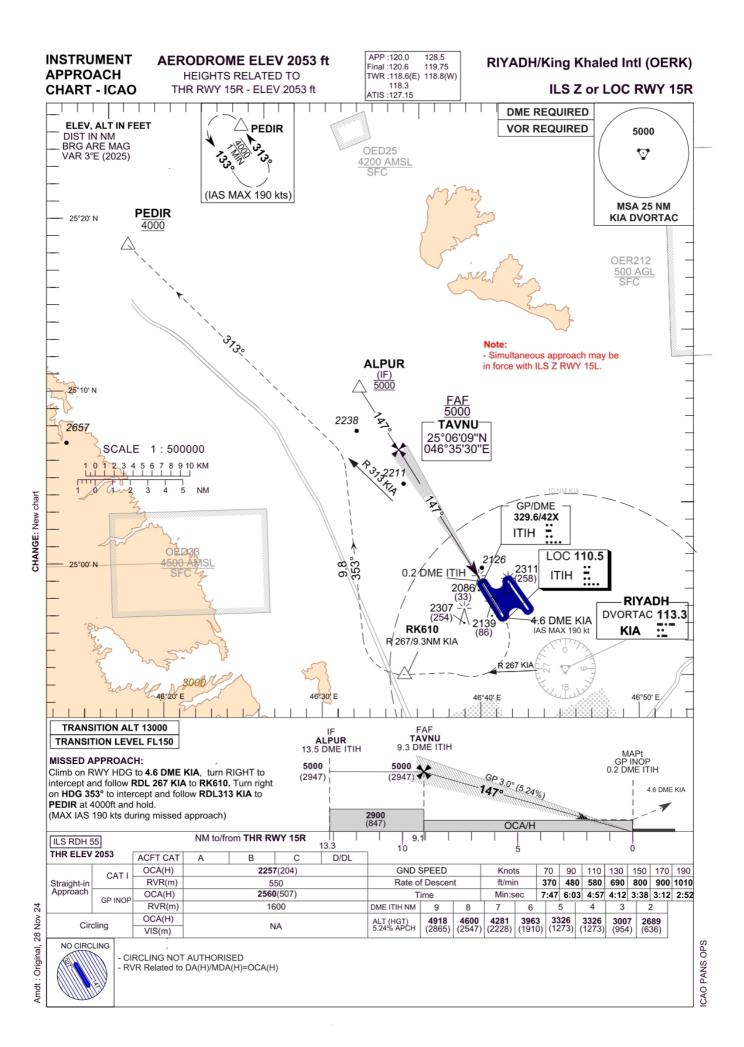
RIYADH/King Khaled Intl (OERK)

ILS Z or LOC RWY 15L



NO CIRCLING

- CIRCLING NOT AUTHORISED - RVR Related to DA(H)/MDA(H)=OCA(H)



INSTRUMENT **AERODROME ELEV 2053 ft** RIYADH/King Khaled Intl (OERK) APP :120.0 128.5 Final :120.6 119.75 TWR :118.6(E) 118.8(W) 118.3 **APPROACH** HEIGHTS RELATED TO **CHART - ICAO** THR RWY 33L - ELEV 2037 ft ILS Z or LOC RWY 33L ATIS :127.15 DME REQUIRED ELEV, ALT IN FEET DIST IN NM BRG ARE MAG VAR 3 E (2025) VOR REQUIRED 5000 Note: OER212 Ø - Simultaneous approach may be in force with ILS Z RWY 33R. 25°10'N MSA 25 NM KIRUL KIA DVORTAC 7000 5500 KIRUL \triangle _2211 10 NM KIA (IAS MAX 200 Kt) OC 110.1 OED33 4500 AMSL SFC IFAT GP/DME -334.4/38X IFAT 7.5 DME KIÁ IAS MAX 220 kt RIYADH 0.2 DME IFAT DVORTAC 113.3 FAF SODUT 24°52'26"N 046°44'10"E OER231 OED24 ORNET FL 200 SFC (IF) 5000 IAS MAX 190kt changed to RVR ØED24B 3360 180 SCALE 1:500000 NOP В **TRANSITION ALT 13000** IF ORNET TRANSITION LEVEL FL150 9.7 DME IFAT MISSED APPROACH Climb on RWY HDG to 7.5 DME KIA 5000 MAPt GP INOP 0.2 DME IFAT turn left to intercept and follow RDL309 KIA to (2963)KIRUL between 5500 and 7000 and hold. (MAX IAS 220 Kts during missed approach) GP 3.0° (5.24%) 7.5 DME KIA 32T ILS RDH 55 2800 (763) THR ELEV 2037 OCA/H NM to/from THR RWY 33L 4.4 9.5 10 5 ACFT CAT D/DL OCA(H) 2243(206) **GND SPEED** 90 | 110 | 130 | 150 | 170 | 190 Knots 70 CATI 370 480 580 690 800 900 1010 550 RVR(m) Straight-in Approach Rate of Descent ft/min 2370 (333) 3:47 2:57 2:25 2:02 1:46 1:34 1:24 OCA(H) Min:sec GP INOP RVR (m) 800 DME IFAT NM 4 2 OCA(H) **3313** (1276) **2995** (958) **2676** (639) **2357** (320) Amdt:Original, 28 Nov ALT (HGT) Circling N/A VIS(m) 3°(5.24%) APCH ICAO PANS OPS

- CIRCLING NOT AUTHORISED - RVR RELATED to DA(H)/MDA(H)=OCA(H)

