

Phone: 966 12 671 7717  
Ext. 1755 & 1717  
Fax: 966 12 640 5622  
AFS: OEJDYAYX  
URL: <http://www.gaca.gov.sa>  
E-mail: [ais@gaca.gov.sa](mailto:ais@gaca.gov.sa)

**KINGDOM OF SAUDI ARABIA**  
**GENERAL AUTHORITY OF CIVIL AVIATION**  
**AIR NAVIGATION SERVICE**  
**AERONAUTICAL INFORMATION SERVICE**  
P. O. BOX 929, JEDDAH – 21421

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## **Implementation of New Instrument Flight Procedures at OEJN**

### **1. Purpose**

- 1.1. The purpose of this Circular is to provide information regarding the implementation of new Instrument Flight Procedures serving King Abdulaziz International Airport - OEJN.
- 1.2. With the anticipated growth in traffic at King Abdulaziz International Airport, GACA is conducting a major airport development program, which includes relocation of the current DVORTAC, redefinition of Jeddah CTA/TMA, re-design of Instrument Flight Procedures (IFPs) based on ICAO PANS-OPS and all associated ATS Route network.
- 1.3. Whilst the re-design of IFPs is covering conventional and PBN procedures, the purpose of this Circular is to alert airspace users on the effective date of the new Conventional IFPs and associated ATS routes serving Jeddah CTA/TMA.

### **2. Background**

- 2.1. The development of King Abdulaziz International Airport – OEJN includes the largest and most ambitious airspace change program covering re-design of the inbound and outbound procedures serving OEJN, redefinition of CTA/TMA airspace structure and introduction of efficient conventional and PBN IFPs. The redesign of terminal procedures including Instrument Approach Procedures (IAPs), Standard Instrument Departures (SIDs), Standard Instrument Arrival Routes (STARs) and Transitions to final Approach.
- 2.2. The route structure in Jeddah CTA has evolved incrementally around the current location of DVORTAC. Frequent route interactions create high levels of workload for pilots and air traffic controllers. Holds are used by air traffic control to pool inbound traffic as it bunches on arrival. Outbound traffic on departure routes from OEJN is kept lower for longer to avoid the arrival routes and holds.
- 2.3. To systemize the ATS route serving OEJN, the re-design of IFPs has also covered the route structure allowing systematic de-conflict and optimization. All major ATS routes serving Jeddah CTA are designed as uni-directional route complying with applicable standard separation.
- 2.4. As part of air traffic system improvement, required holds in the north and in the south were designed and optimized to serve all arrival flights and ensure safe and easy access to OEJN RWYs. These holds will be used for conventional and PBN STARs.

### **3. Introduction of new IFPs and associated changes.**

- 3.1. To allow safe transition to the new IFPs and associated changes serving OEJN, GACA-ANS decided to implement the airspace changes using phased approach:

- 1) **Phase one: Implementation of Conventional Instrument Approach Procedures (IAPs), Standard Instrument Departures (SIDs), Standard Instrument Arrival Routes (STARs) and Transitions to final Approach.** This phase includes also all changes to ATS route network from/to Jeddah CTA/TMA.

- 2) **Phase Two: Implementation of PBN Instrument Approach Procedures (IAPs), PBN Standard Instrument Departures (SIDs), PBN Standard Instrument Arrival Routes (STARs) and Transitions to final Approach.** This phase includes also design of PBN route network from/to Jeddah CTA/TMA.
- 3) **Phase Three: Introduction of simultaneous approaches.**

#### 4. Conventional IFPs and timescale

4.1. The phase one includes all airspace changes associated with the re-location of DVORTAC. The new location is 1.5 Km West from the current location of DVORTAC, which requires the re-definition of Jeddah CTA/TMA.

4.2. The phase one covers also re-design of the following conventional IFPs:

- OEJN APCH ILS RWY 16L, 16C and 16R;
- OEJN APCH ILS RWY 34L, 34C and 34R;
- OEJN APCH VOR/DME RWY 16R;
- OEJN APCH VOR/DME RWY 34L, 34C
- OEJN SID CONV. RWY 16L, 16C and 16R;
- OEJN SID CONV. RWY 34L, 34C and 34R;
- OEJN STAR CONV. RWY 16L, 16C, 16R;
- OEJN STAR CONV. RWY 34L, 34C, 34R;
- OEJN SID RADAR ALL RWYS

**Note: All existing conventional and RNAV IFP based on TERPS criteria will be deleted.**

4.3. OEJN airspace changes has affected the Instrument Flight Procedures serving TAIF – OETF and AL-BAHA-OEBA. The following OETF and OEBA IFPs and charts were revised based on the new definition of Jeddah CTA/TMA without any changes in the design of the procedures:

OETF	OEBA
<ul style="list-style-type: none"> <li>• OETF APCH ILS/DME RWY 35;</li> <li>• OETF APCH ILS/DME RWY 25;</li> <li>• OETF VOR/DME or TACAN RWY 07;</li> <li>• OETF VOR/DME or TACAN RWY 25;</li> <li>• OETF VOR/DME or TACAN RWY 17;</li> <li>• OETF VOR/DME or TACAN RWY 35;</li> <li>• OETF RNAV/ILS RWY 25;</li> <li>• OETF RNAV/ILS RWY 35;</li> <li>• OETF SID A, B, C, D, E, F, G, H, A1,</li> <li>• OETF STAR RWY 35</li> <li>• OETF STAR RWY 25</li> </ul>	<ul style="list-style-type: none"> <li>• OEBA ILS/DME RWY 25</li> <li>• OEBA VOR/DME RWY 07</li> <li>• OEBA VOR/DME RWY 25</li> <li>• OEBA RNAV/ILS 25</li> <li>• OEBA RNAV/GNSS RWY 07</li> <li>• OEBA RNAV/GNSS RWY 25</li> <li>• OEBA SID RWY 07</li> <li>• OEBA SID RWY 25</li> <li>• OEBA RNAV STAR RWY 25</li> <li>• OEBA RNAV STAR RWY 07</li> </ul>
<ul style="list-style-type: none"> <li>• OETF ATSMAC (RADAR VECTORING)</li> </ul>	
<ul style="list-style-type: none"> <li>• Area charts</li> </ul>	

4.4. The amendments to OEJN, OETF and OEBA aeronautical data, aeronautical information and charts are under processing to be part of an AIP AMDT. This amendment will be **published as per AIRAC Cycle 08/2016 effective on 21 July 2016 and it will affect OEJN, OETF and OEBA AD sections and include all changes to ATS route Network data.**

## **5. Future developments**

- 5.1. For Phase Two and three of OEJN IFPs development, it is planned that PBN IFPs will be introduced during the first quarter of 2017 and the simultaneous operations will be authorized by September 2017. Detailed information on the remaining phases will be made available through either an update to this Circular or additional circular.

## **6. Additional information**

- 6.1. Further information can be obtained from:

### **Air Traffic Director General**

General Authority of Civil Aviation  
Air Navigation Services

Phone: 966 12 640 1005

Fax: 966 12 640 2855

E-mail: [ibaljabri@gaca.gov.sa](mailto:ibaljabri@gaca.gov.sa)

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This Circular is issued for information, guidance and necessary action.