8 AERONAUTICAL INFORMATION

Aeronautical Information Publications (AIPs) encompass detailed data on airports, airways, airspace utilization, navigation facilities, and procedural guidelines. The structure and content of AIPs are standardized in line with the International Civil Aviation Organization's (ICAO) Annex 15.

8.1 STRUCTURE AND CONTENTS OF THE AIP

Each AIP contains information tailored to the specific airspace it represents. This encompasses air traffic regulations, operational procedures, available services, navigational facilities, and the unique structure of the country's airspace.

The provider of navigation charts and manuals for Riyadh Air, utilizes the data from AIPs in the creation of Route Manual. This integration ensures that flight crews have consistent, accurate, and current AIP information at their disposal.

8.2 THE AIRAC CYCLE

The Aeronautical Information Regulation and Control (AIRAC) system establishes a standardized set of dates and procedures for the dissemination of aeronautical information by States. This system ensures uniformity and synchronization in the information used by pilots, air traffic controllers, air traffic flow managers, flight management systems, and aviation charts, enhancing both efficiency and safety in air navigation.

Under the AIRAC system, the Aeronautical Information Services (AIS) units are required to distribute information at least 42 days before the effective date, aiming for it to reach the end-users, including pilots and air traffic management personnel, no later than 28 days before it becomes effective. In cases involving significant changes where extended notice is beneficial and feasible, there is a longer lead time of 56 days prior to the effective date.

Key changes governed by the AIRAC system include modifications to airspace structures and route revisions, alterations in navigation aids, amendments to Standard Instrument Departures (SIDs) and Standard Terminal Arrival Routes (STARs), and updates to runway and taxiway information.

8.2.1 Significant Dates

The AIRAC system is structured around three key dates:

1. Publication Date: This is the date when the Aeronautical Information Services (AIS) distributes the information. It marks the beginning of the information dissemination process, ensuring that the data is received by the relevant recipients.
2. Latest Reception Date: This is the deadline by which the recipients must have received the new, amended, or deleted information. It ensures that there is a sufficient buffer for the recipients to review and integrate the information before it becomes effective.
3. Effective Date: Also known as the AIRAC date, this is when the changes officially come into effect. It is a standardized date, ensuring that all parties involved in aviation operations incorporate and apply the new information simultaneously.

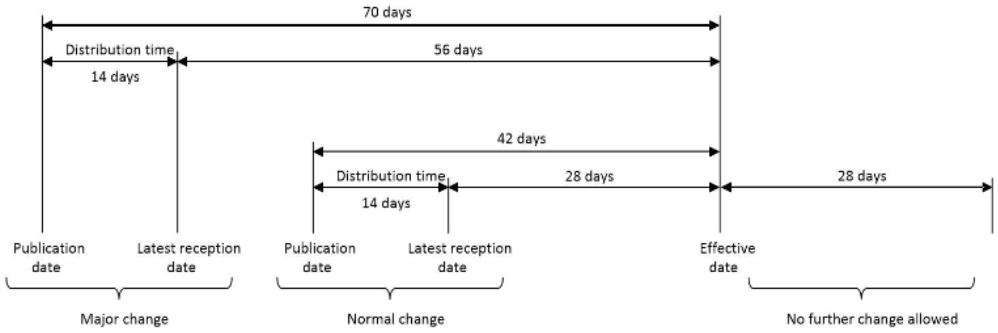

Figure 1 - AIRAC Cycle

8.2.2 Effective Dates

The changeover time for new Aeronautical Charts and Navigation databases should occur on the effective date of the new AIRAC cycle as follows:

1. **International:** ICAO guidance specifies that aeronautical information should be effective on the designated effective date at 00:00 UTC. However, national, and local authorities may change the effective time to allow for implementation during the local night or at other times due to local operational considerations.
2. **FAA and Canada**: Aeronautical information in the U.S., U.S. territories and Canada is generally effective on the designated effective date at 09:01 UTC. The effective time applies to airspace, airways, and flight procedures.

8.3 DISTRIBUTION OF AERONAUTICAL DATA

GACA 121.77(C) / 121.93

The distribution of current aeronautical data within Riyadh Air is a critical component of our flight operations, ensuring safety and efficiency across our network. To achieve this, Riyadh Air employs a digital approach to distribution that integrates digital charts and manuals, Notices to Airmen (NOTAMs), and Lido flight planning software.

8.3.1 Lido Flight Planning System

Lido software plays a key role in our operational planning. It utilizes the latest data to generate accurate and efficient flight plans, considering variables such as NOTAMS, weather, aircraft performance, and route restrictions.

Lido flight planning and monitoring software is used for obtaining forecasts and reports of adverse weather phenomena, such as clear air turbulence, thunderstorms, and low altitude windshear that may affect safety of flight on each route to be flown and at each aerodrome to be used.

8.3.1.1 Lido Notam and Weather Integration – Automated Suitability Checks

Lido considers and integrates NOTAMs directly into the operational flight planning process, ensuring that all operational planning is based on the most current information.

8.3.2 Digital Charts and Manuals

Charts and manuals are key components of our data distribution system, providing up-to-date information on aerodrome facilities, runway details (e.g., Runways, clearways, stop ways, dimensions), navigation aids, RVR equipment, instrument flight procedures, and airspace restrictions. The digital format ensures that updates are quickly and efficiently integrated, offering real-time data access to our flight crews and dispatchers.

8.3.3 Boeing – Onboard Performance Tool (OPT)

The integration of obstacle data into our flight planning is achieved through the utilization of data provided by Lido (i.e. NOTAMs), combined with the tactical use of Boeing's Onboard Performance Tool (OPT). The OPT, accessible to all flight crew as an Electronic Flight Bag (EFB) application, captures obstacle data for the calculation of take-off and landing performance. These metrics include, but are not limited to, takeoff and landing distances, climb gradients, and required speeds.

Alongside this, Riyadh Air's performance engineers, using OEM and Lido data, identify and capture data on controlling obstacles through the analysis of airport specific NOTAMS. This information is then integrated into Riyadh Air's flight planning systems, including the Boeing OPT, ensuring that flight crew and aircraft dispatchers are informed about the operational environment of each flight.

8.4 SPECIAL CREW BRIEFING (SCB)

Special Crew Briefings (SCB) are a key component of Riyadh Air's flight operations, designed to communicate crucial, temporary information that is not documented elsewhere. These briefings are tailored to enhance the flight crew's situational awareness.

All Riyadh Air flight crew and aircraft dispatchers must thoroughly review any pertinent Special Crew Briefings (SCBs) before each flight. This review is crucial to ascertain the operational impact of the information provided and to ensure appropriate planning and mitigation strategies are in place for the flight.

8.4.1 Scenarios for Issue of a SCB

1. **Unusual or Complex Operations**: Special briefings should be issued for flights involving unusual routes, challenging airspace, new destinations, or airports with unique operational challenges.
2. **Changing Environmental Conditions**: Special briefings may be issued in response to evolving meteorological conditions, such as unexpected weather patterns, volcanic activity, or other environmental factors that could impact flight safety.
3. **Geopolitical Developments**: In instances of heightened geopolitical tensions or unrest in certain regions, special briefings should be issued to provide critical insights to ensure crew awareness and preparedness.
4. **Airspace Modifications**: Temporary changes in airspace, such as restrictions due to military exercises or major events, warrant special briefings to inform crews of these developments.

8.4.2 SCB Contents Guidance

The SCB should include detailed information about the specific scenario, whether it is related to route, weather, geopolitical issues, or airspace changes. When issued, Special Crew Briefings should address the following points:

1. Operational Impact: Briefings must assess and explain the potential impact of the scenario on flight operations, including any anticipated challenges or necessary modifications in standard operating procedures.
2. Mitigation Strategies: Briefings must provide strategies and recommendations to mitigate risks associated with the specific scenario, ensuring the crew is well-equipped to manage the situation effectively.

Duration and Validity: Briefings must provide information on the expected duration of the scenario and the validity of the briefing.

8.4.3 Distribution and Access

Special Crew Briefings are created by the appropriate department, such as Flight Operations or the Operations Control Center (OCC). Once authored, these briefings are passed on to the technical publications team, who are tasked with formatting the document to meet the required standards. Following this, the briefing undergoes a thorough review by the Technical Pilot for accuracy and relevance. Upon completion of this review, the document is then submitted to the Director Flight Crew, initiating the formal approval process.

The VPFO has the final authority to approve Special Flight Crew Briefings.

When a SCB is approved, the Technical Publications department pushes a digital version of the document to the portable devices of flight crew, aircraft dispatchers and other relevant operational personnel, ensuring they have access to the latest information.

8.4.4 Special Crew Brief Sample

RIYADH AIR طيران الرياض	**Special Flight Crew Briefing #001**	
	Hong Kong (VHHH/HKG)	
	Topic	False Localizer Capture
	Effectivity	05 January 2024 - Until Further Notice

Overview:

This special briefing addresses a critical operational update for flight operations at Hong Kong International Airport (VHHH), as per the AIC 29/22 issued by the Hong Kong Civil Aviation Authority.

Subject: False Localizer Capture

Due to terrain around VHHH, there is a notable unreliability of the localizer signal when outside of the capture area. This issue affects runways 07R/25L at VHHH, as outlined below.

Impact on Operations:

Runways 07R/25L

1. Approach Limitations: The localizer signal unreliability beyond 10 degrees left/ right of the approach course may result in the false capture of the localizer. Crews should be prepared for potential signal degradation under these circumstances.
2. Increased Situational Awareness: Pilots are advised to exercise increased vigilance during ILS approaches, particularly when maneuvering to align with the runway.

Mitigation Required:

1. Flight Planning: Consideration should be given to the potential for localizer signal issues in pre-flight planning and briefing stages, for approaches to 07R/25L.
2. In-Flight Strategy: Crews should be prepared to fly an alternate approach procedure if experiencing ILS signal issues. This may include switching to a non-precision approach or requesting a runway change.
3. Crew Coordination: Enhanced crew communication and coordination are essential during the approach phase at VHHH, with a focus on monitoring alignment and localizer signal integrity.

4.	Reporting: Any instances of signal degradation or navigational issues experienced should be reported to ATC.

Conclusion:

It is imperative for flight crews operating into VHHH to be aware of the localizer signal limitations for approaches to runways 07R/25L and adjust their approach preparations and briefings accordingly. This briefing serves to enhance situational awareness and ensure the continued safety of operations at Hong Kong International Airport. Compliance with this briefing is mandatory until further notice.

For any queries or further clarifications, please contact Riyadh Air Flight Operations or the Operational Control Center.

Table 7 - Special Crew Brief

8.5 COMPANY AND CREW INFORMATION BRIEFINGS (CCI)

Riyadh Air provides Company and Crew Information (CCI) pages to equip flight crews with additional, threat-based information essential for safe and efficient operations. These pages are based on standard operational procedures and are constructed using the most current information available. It's important to note that CCI pages are not exhaustive and cannot account for all operational variables such as weather and NOTAMs. The PIC retains full responsibility for the flight's safe conduct, and any mitigation strategies suggested in the CCI are not intended to restrict the PIC's decision-making authority or absolve them of their responsibilities. The CCI should complement, not replace, good airmanship, common sense, and adherence to State Regulations.

8.5.1 CCI Contents Guidance

The CCI pages will:

1. Provide concise, threat-based information for all scheduled destinations and selected alternate aerodromes.
2. Feature a Quick Reference Bar (QRB) on the first page to highlight predefined threats, if applicable.
3. Offer threat-based information categorized by phase of flight (Arrival, Ground Operations, Departure).

The CCI pages will not:

1. Replicate information found on aeronautical charts, except where identified as operationally, legally, or economically critical.
2. Duplicate content from other controlled company documents like OM-A, OM-C, etc.
3. Reproduce CONOTAM information.

8.6 OFP FORMAT AND DESCRIPTION

8.6.1 Main OFP

The Operational Flight Plan (OFP) consists of the following elements:

1. Flight Dispatch Release.
2. Basic Data.
3. Fuel Data.
4. Tankering Section (if applicable).
5. Signature Section.
6. Alternate Summary.
7. RVSM Section.
8. MEL/CDL Section.
9. Performance Data.
10. Times Section.
11. Terrain Clearance.
12. Main Routing (Navlog).
13. Wind Summary.
14. ETOPS Summary (if applicable).
15. Destination Alternate Routing.
16. Reclearance Fuel Section (if applicable).
17. Reclearance Flight Release (if applicable).
18. RAP Alternate Information (If applicable).
19. RAP Routing (if applicable).

Note: *A full functional description of all items of the Main and Info OFP can be found in Appendix A of this manual.*

8.6.2 Info OFP

The dispatcher can generate an information flight plan, which will be attached to the briefing package to provide the pilot with additional information. The format of the Info OFP is the same as described for the Main OFP above. It contains Flight Release as well as Detailed OFP Part. Additionally, on top of the Info OFP the label "FOR INFORMATION ONLY" is shown.

8.6.3 Summary OFP

The dispatcher can also generate a short Summary OFP. This OFP format can be used to depict minor changes to the main OFP that do not result in lateral track changes. The format to be used for generation of the summary OFP is described below. If any remark related to the Summary OFP has been entered, it will be displayed right below the label "OFP SUMMARY".

```
-------------------------------------------------------------------
SECONDARY FLIGHT ROUTING INFORMATION OFP 4/2/1
-----------------------------------
 REM FOR IN


ROUTE   OTBD/33 N0496F300 PATOM UL604 BAH UM444 DAVUS/N0494F300
-----   UL602 TASMI/N0492F300 UL602 ELEXI/N0489F300 UL602 DRZ DCT
DEFRTE  GAZ UL602 SULAK/N0483F320 UL602 MAKOL DCT ORTIP DCT MOPUG
        DCT BEGLA DCT DITIS DCT VARIK UL602 TABAT/N0479F340 UL602
        KEMAD DCT SUPUR UL602 MIMVA DCT GETNO UL46 REMSI DCT
        MOLAK/M084F360 DCT RESNO DCT 55N020W 55N030W 54N040W 52N050W
        DCT TUDEP DCT TOPPS DCT KBGR/15

PLANNING SUMMARY   VRBL       FL 300   DIST 5526          TRIP 99055
----------------            AV WC M031  TIME 07.52  TOTAL FUEL 127557
```

Figure 2 - Summary OFP