

ADVISORY CIRCULAR

SUBJECT	DATE	AC NUMBER	VERSION
Production of World Aeronautical Chart (WAC) – ICAO 1:1 000 000 and Aeronautical Chart – ICAO 1:500 000	30 June 2025	AC 175.04	2.0

NOTE: THIS ADVISORY CIRCULAR IS PUBLISHED TO DESCRIBE ACCEPTABLE MEANS OF COMPLIANCE WITH THE GENERAL AUTHORITY OF CIVIL AVIATION REGULATIONS (GACAR).

GACAR PART 175 AIS & AERONAUTICAL CHARTS

Production of World Aeronautical Chart (WAC) – ICAO 1:1 000 000 and Aeronautical Chart – ICAO 1:500 000

1. Purpose.

This Advisory Circular (AC) serves as guidance on the utilization and significance of the World Aeronautical Chart (WAC) - ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500 000, as published in the Kingdom of Saudi Arabia Aeronautical Information Publication (AIP), in accordance with GACAR Part 175 requirements.

The purpose of this AC is to inform pilots about the importance of utilizing the World Aeronautical Chart (WAC) - ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500000 for flight planning and navigation.

2. Applicability.

This AC applies to all pilots operating within the Kingdom of Saudi Arabia airspace and provides guidance on the appropriate use, interpretation, and limitations of the WAC - ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500 000.

3. Related Regulatory Provisions.

This AC should be read in the context of the following provisions:

- (a) GACAR Part 91 - General Operating and Flight Rules.
- (b) GACAR Part 175 - Aeronautical Information Services & Aeronautical Charts.

4. Related Reading Material

The following documents provide additional material related to the Production of World Aeronautical Chart (WAC) – ICAO 1:1 000 000 and Aeronautical Chart – ICAO 1:500 000:

- (a) GACAR Part 1 - Definitions Abbreviations and Editorial Conventions.

- (b) ICAO Annex 4 - Aeronautical Charts.
- (c) ICAO Doc 8400 - Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS-ABC).
- (d) ICAO Doc 8126 - Aeronautical Information Services Manual.
- (e) ICAO Doc 8697 - Aeronautical Chart Manual.

5. Definition of terms used in this AC

This AC does not introduce any new definition.

6. Approval.

This AC has been approved for publication by the Executive Vice President of Aviation Safety and Environmental Sustainability Sector of the GACA.

7. Cancellation.

This AC cancels and supersedes AC 175.04 version 1.0 dated 16 May 2024 and must remain in force until cancelled, suspended or amended.

8. Background

- (a) The WAC - ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500 000 are comprehensive charts that provide essential information for pilots. The aeronautical data shown on these charts is kept to a minimum, consistent with the use of the chart for visual air navigation. It includes aerodromes, obstacles, terrain features, elements of the ATS system, prohibited, restricted and danger areas, and radio navigation aids.
- (b) WAC and Aeronautical Chart - ICAO 1:500 000 are constructed using Lambert's conformal conic projection and conform to ICAO specifications.
- (c) These charts are designed to enhance situational awareness and facilitate the safe conduct of flight operations. The use of the WAC - ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500 000 is considered essential in order to ensure safe and effective flight operations.
- (d) Users are reminded to use the most appropriate chart type for their operation and consider the scale of each chart type.

9. Reporting chart errors

Errors on charts can be reported via email to:

aip@gaca.gov.sa and aim@sans.com.sa

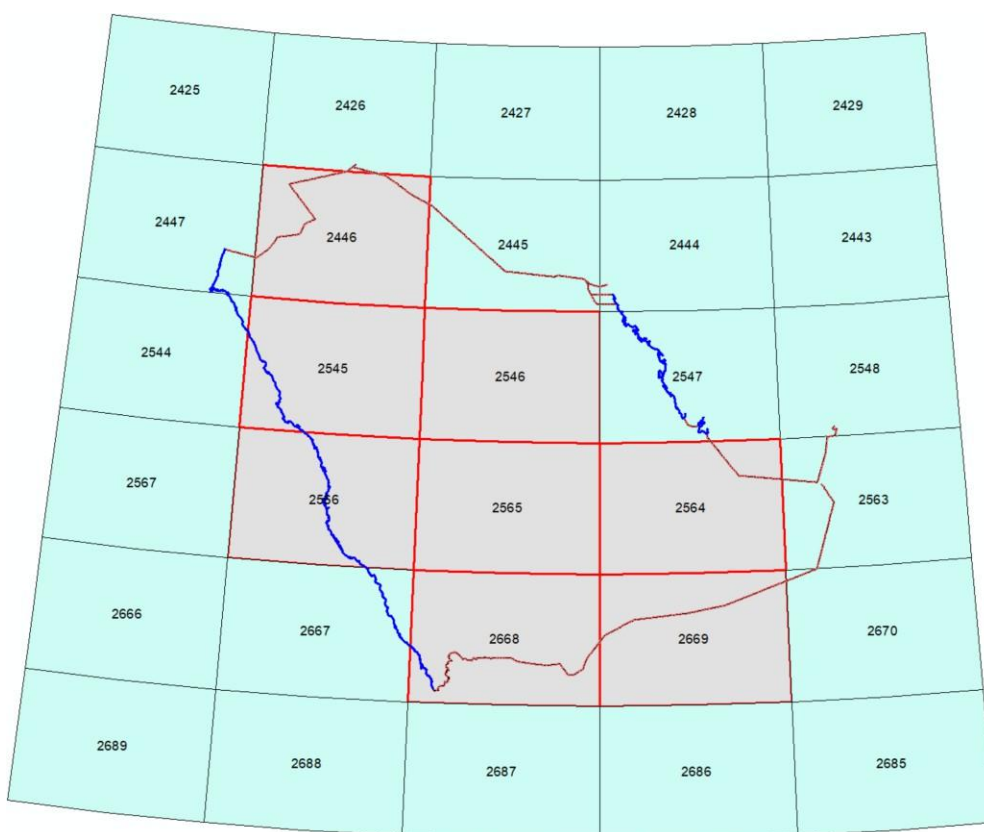
10. World Aeronautical Chart (WAC) - ICAO 1:1 000 000

- (a) Function: This mandatory chart provides information that fulfils the requirements for visual air navigation and is also designed to be used as a pre-flight planning chart.
- (b) Identification:
 - i. Eight (8) sheets are produced by the Kingdom of Saudi Arabia (KSA).
 - ii. WAC – ICAO 1:1 000 000 are published in the KSA Aeronautical Information Publication (AIP).

- iii. Sheets are identified by the reference number of the corresponding World Aeronautical Chart – ICAO (WAC) 1:1 000 000 delineated in ICAO Annex 4 Appendix 5 (sheet layout).
- iv. The following index shows the coverage and sheet layout for the WAC:

Sequence	Sheet Number
1	2446
2	2545
3	2546
4	2564
5	2565
6	2566
7	2668
8	2669

WAC Coverage Areas



11. Aeronautical Chart – ICAO 1:500 000

(a) Function: The Aeronautical Chart — ICAO 1:500 000 serves the following functions:

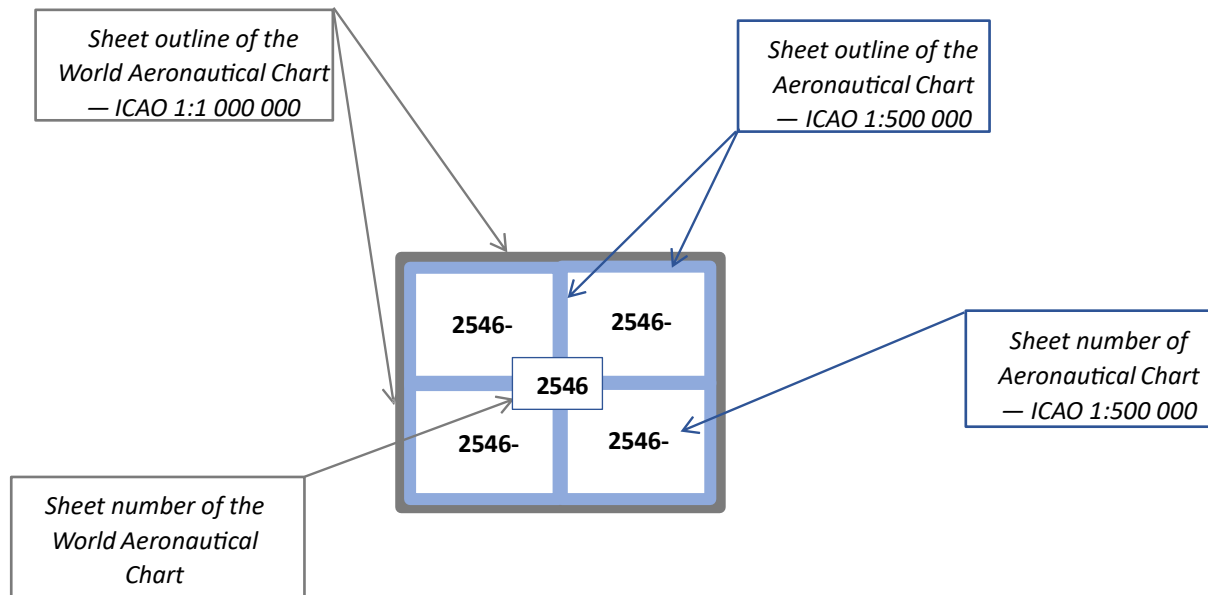
- i. Provides information for visual air navigation during low speed, short or medium-range operations at low and intermediate altitudes.
- ii. Serves as a basic aeronautical chart.
- iii. Is suitable for basic pilot and navigation training.
- iv. Supplements specialized charts (e.g. Area Chart — ICAO and Enroute Chart - ICAO) that do not provide essential visual information.
- v. Is suitable for use in pre-flight planning.

Note: The Aeronautical Chart — ICAO 1:500 000 can be used as an alternative to the World Aeronautical Chart – ICAO 1:1 000 000.

(b) Identification:

- i. The entire territory of the Kingdom of Saudi Arabia is covered by forty-five (45) sheets.
- ii. Aeronautical Charts – ICAO 1:500 000 are published in the Kingdom of Saudi Arabia AIP.
- iii. Each sheet is identified by the name of the principal town appearing on the sheet.
- iv. Sheets are identified by the reference number of the corresponding World Aeronautical Chart – ICAO (WAC) 1:1 000 000, as delineated in ICAO Annex 4 Appendix 5 (sheet layout), with the addition of one of the following letter suffixes indicating the quadrant:

Letter	Chart Quadrant
A	North-West
B	North-East
C	South-East
D	South-West



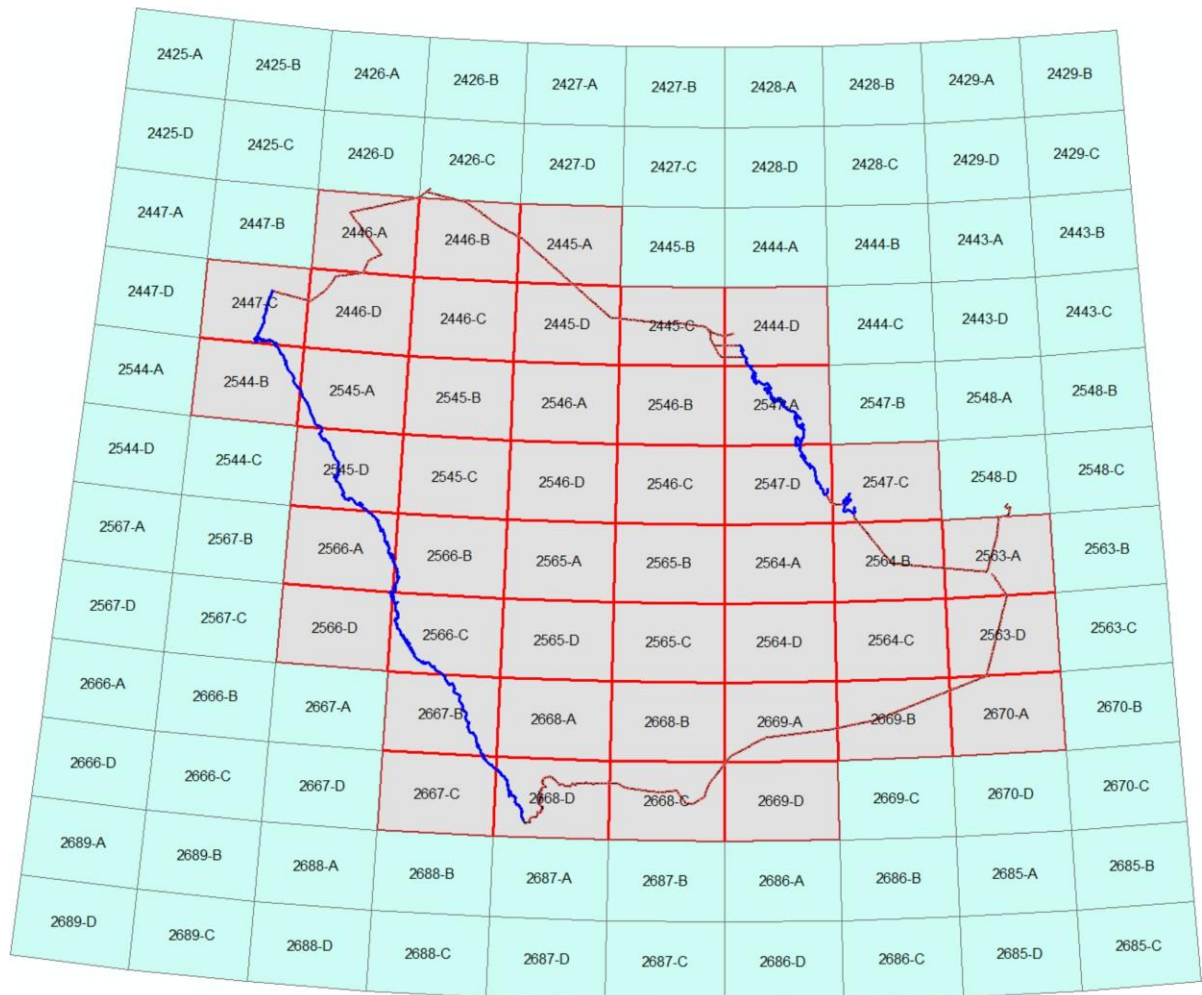
Notes:

1. *Sheet 2546 is the number of the WAC – ICAO 1:100 000 sheet.*
 2. *Sheet 2546-A is the number of a single Aeronautical Chart — ICAO 1:500000 sheet in the North-West quadrant of the WAC – ICAO 1:1 000 000 Sheet.*
 3. *Sheet 2546-B is the number of a single Aeronautical Chart — ICAO 1:500000 sheet in the North-East quadrant of the WAC – ICAO 1:1 000 000 Sheet.*
 4. *Sheet 2546-C is the number of a single Aeronautical Chart — ICAO 1:500000 sheet in the South-East quadrant of the WAC – ICAO 1:1 000 000 Sheet.*
 5. *Sheet 2546-D is the number of a single Aeronautical Chart — ICAO 1:500000 sheet in the South-West quadrant of the WAC – ICAO 1:1 000 000 Sheet.*
- v. The following index chart shows the coverage and sheet layout for the Aeronautical Charts – ICAO 1:500 000:

Sequence	Sheet Number	Sequence	Sheet number	Sequence	Sheet Number
1	2444-D	16	2546-B	31	2565-D
2	2445-A	17	2546-C	32	2566-A
3	2445-C	18	2546-D	33	2566-B
4	2445-D	19	2547-A	34	2566-C
5	2446-A	20	2547-C	35	2566-D
6	2446-B	21	2547-D	36	2667-B
7	2446-C	22	2563-A	37	2667-C
8	2446-D	23	2563-D	38	2668-A
9	2447-C	24	2564-A	39	2668-B
10	2544-B	25	2564-B	40	2668-C
11	2545-A	26	2564-C	41	2668-D
12	2545-B	27	2564-D	42	2669-A

13	2545-C	28	2565-A	43	2669-B
14	2545-D	29	2565-B	44	2669-D
15	2546-A	30	2565-C	45	2670-A

Aeronautical Chart — ICAO 1:500 000 Coverage Areas



12. Maintenance of WAC and Aeronautical Charts – ICAO 1:500 000

The aeronautical charts published in the KSA AIP are kept up to date through amendments to the AIP. If incorrect information of operational significance is detected on published charts, it is corrected through NOTAM. Information regarding the planning or issuance of new charts is notified through Aeronautical Information Circular (AIC).

Approximate revision periods:

- (a) Base: 4 years
- (b) Aeronautical data: when a significant change occurs.

The effective date of each chart is clearly depicted, as well as the date when the data was acquired.

Users should also check KSA AIP Supplements (SUP) and NOTAM for important updates between publication cycles.

13. Topographical Charts

The topographic data used in producing the WAC and the Aeronautical Charts – ICAO 1:500 000 is sourced from the General Authority for Survey and Geospatial Information (GEOSA).

TEL: 00-966-920000427

E-mail: info@gasgi.gov.sa

Website: <https://www.geosa.gov.sa>

14. Obstacles

- (a) A list of obstacles with a height of 100 m (300 ft) or more above the ground is published in the KSA AIP ENR 5.4.
- (b) Obstacles with a height of 100 m (300 ft) or more above the ground are depicted on the WAC – ICAO 1:1 000 000 and the Aeronautical Chart — ICAO 1:500 000.
- (c) Where there are crowded obstacle areas, such as wind turbines, the WAC – ICAO 1:1000 000 and the Aeronautical Chart – ICAO 1:500 000 depict several of the highest obstacles with symbols and labels. The number of obstacles shown depends on the scale of the chart and the available space to ensure important information is not obscured.

15. Maximum Elevation Figures (MEF)

- (a) The Maximum Elevation Figures (MEF) represent the highest elevation, whether natural or man-made, within the area bounded by ticked lines. For the Aeronautical Chart - ICAO 1:500 000, the ticked lines are marked at intervals of 30 minutes of latitude and 30 minutes of longitude (half-degree). For the WAC – ICAO 1:1 000 000, the ticked lines are marked at intervals of one degree of latitude and one degree of longitude.
- (b) The MEF is based on available information about the highest known feature in each quadrangle, with an additional 200 feet added to account for possible vertical error.
- (c) The MEF values are represented in thousands and hundreds of feet above mean sea level (AMSL) and rounded up to the nearest 100-foot value. The last two digits of the number are not shown. For example, a value of 3⁵ represents an MEF of 3 500 feet.
- (d) It is important to note that while the MEF is based on the best information available, it is not verified by field surveys.
- (e) The MEF must not be considered as a minimum safe altitude.

16. Limitations:

Pilots should be aware of the limitations of the WAC – ICAO 1:1 000 000 and Aeronautical Chart - ICAO 1:500 000, which include the following:

- (a) The charts may not reflect real-time changes such as temporary airspace restrictions or aerodrome closures. Pilots should consult NOTAM, AIP SUP, and the KSA AIP for the most up-to-date information.
- (b) The level of detail provided on the charts may vary in certain regions. Pilots should exercise caution when operating in areas with limited chart coverage.
- (c) Information for territories outside of the Kingdom of Saudi Arabia is published for information only and has not been verified.