

RFC/ENC SPECIFICATION

The following pages (until LEGENDS page 8.18) describes the RFC/ENC specification for charts dated earlier than 23 JUL 04. For charts dated 23 JUL 04 or later, description is found on LEGENDS pages 8.19 - 8.35.

RFC / ENC

The Radio / Route Facility Charts (RFC) and the Enroute Navigation Charts (ENC) are compiled from official documents and topographical reference charts. The RFC/ENC:s have been designed primarily for instrument enroute navigation.

The information contained is kept to a minimum, consistent with the function of the chart.

Charts covering Europe are called ENC, and charts covering the rest of the world are called RFC.

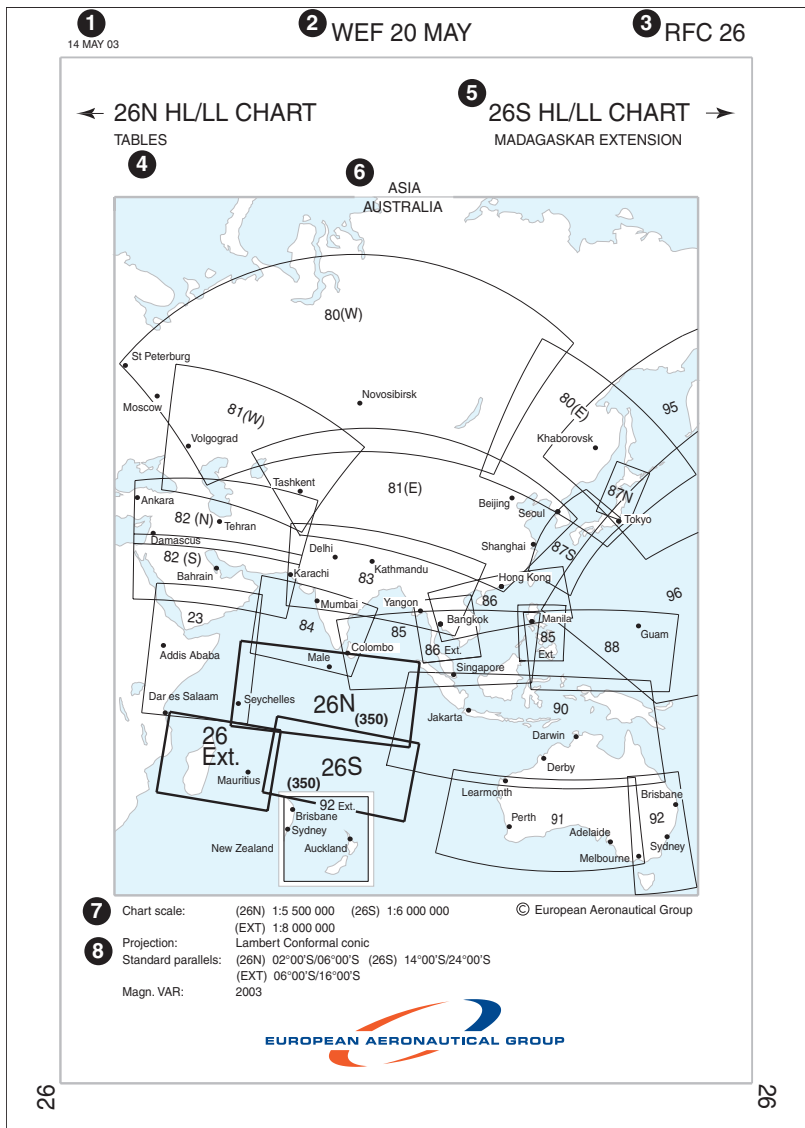
Numbering

The RFC/ENC:s are identified by a number, assigned as follows:

Chart covering	RFC/ENC number
Europe	1 - 14
Africa	20 - 39
North / South Atlantic	40 - 49
North America / Carribean	50 - 69
South America	70 - 79
Asia / Australia	80 - 94
The Pacific	95 - 96

The RFC/ENC:s are normally combined High Level (HL) and Low Level (LL) charts. Due to the complexity of the route structure such a combined chart would be insufficient, the HL charts and the LL charts are produced separately.

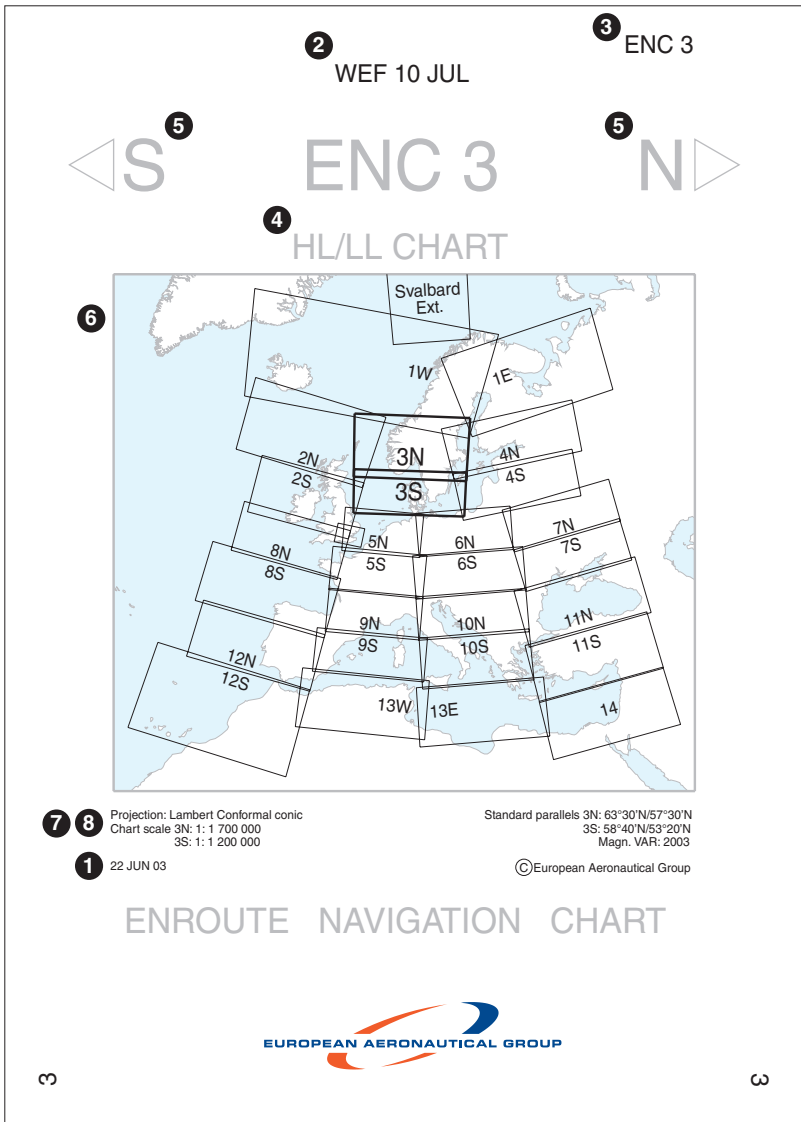
RFC FRONT COVER



- 1 Date when the latest obtained amendments are included.
- 2 Effective date, when chart is issued prior to the effective date.
- 3 RFC number.
- 4 Indicate side where tables and inset charts are found.
- 5 Indication of side of combined high level (HL) and low level (LL) chart.

- 6 Chart index shows the area covered by the RFC and also indicates adjacent RFCs.
- 7 Chart scale chosen for a chart depends on the extension of the geographical area covered and on the density of the information within that area.
- 8 Projection used is Lambert conformal conic projection, except for polar areas where a polar stereographic projection is used.

ENC FRONT COVER



- 1 Date when the latest obtained amendments are included.
- 2 Effective date, when chart is issued prior to the effective date.
- 3 ENC number.
- 4 Indicates combined high level (HL) and low level (LL) chart.
- 5 Indication of side of chart.
- 6 Chart index shows the area covered by the ENC and also indicates adjacent ENCs.
- 7 Chart scale chosen for a chart depends on the extension of the geographical area covered and on the density of the information within that area.
- 8 Projection used is Lambert conformal conic projection.

TABLES

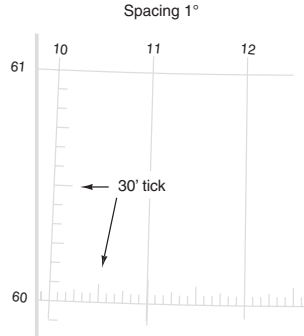
ATS restriction in addition to those given in the chart. Listed countrywise and in alphabetical order.

Restricted airspace Specifications for areas indicated in the RFC/ENC. Listed countrywise and in alphabetical order.

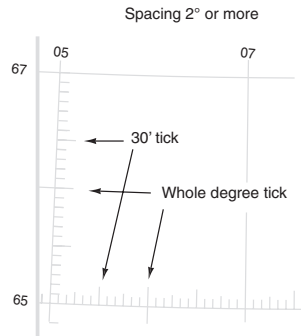
For RFC/ENC where no tables are published applicable reference will be printed on front panel.

GRATICULE, ISOGONIC LINES

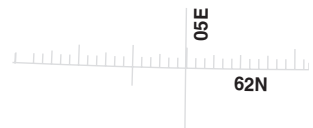
Graticule of meridians and parallels with latitude and longitude values outside and close to chart border. Graduation of ticks spaced at 5 minute intervals. At high LAT and in chart with small scale bigger spacing may be used.



LAT/LONG figures are placed outside and close to the chart border. "N", "S" resp. "E", "W" is only given at the first meridian/parallel passing 0° resp 180°.



In addition, LAT/LONG figures are given at meridians /parallels (on all free areas) used for orientation and plotting charts.



Isogonic lines with value followed by "E" or "W". Spacing each second or fifth degree pending on density and scale of chart.

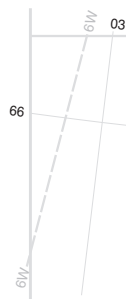


Chart legend

Explanations as required for the RFC/ENC concerned. Normally placed in the upper left part of the chart.

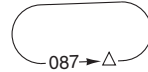
LEGENDS (Explanations as required. Normally placed in the upper left of the chart.)

GENERAL INFORMATION

Selected aerodromes, with city name and 4-letter ICAO code.



Holding with inbound magnetic track. Indicated for selected enroute HL HP only. MT shown when not corresponding with route track figure.



Exceptionally, HP for AD inbound routes (not established STAR) may be given in a box connected to a reverse page inset chart, but only when these routes coincide with the inset route structure.

MNM Off Route Altitude (MORA).

Indicated in hundreds of feet for each LAT/ LONG square as used in the chart. MORA is calculated according to principles presented in Legends MOCA/MORA



In charts with small scale, northern LAT or condensed areas two or more squares may be used. When MORA includes more than two LAT/LONG squares this will be explained in an index in the chart.



FIR-, UIR-, boundary and when CTA-, UTA-, and OCA-boundary coincides with FIR/UIR boundary. Boundary symbol together with FIR/UIR name, country name and 4-letter ICAO code. In W-Europe, USA and Canada, country name will only be presented when political border coincides with FIR/UIR border. Vertical limits are tabulated on reverse side of chart.



ARTCC always with name and 4-letter ICAO code. In USA and Canada FIR symbol is used when ARTCC coincides with FIR.



OCA boundary with name. Vertical limits are tabulated on reverse side of chart.



CTA border, when not coinciding with FIR or UIR. For vertical limits see ATS restrictions on reverse side of chart.



CTA boundary with upper limit in hundreds of FT when not in accordance with ATS-restrictions.



TMA boundary.



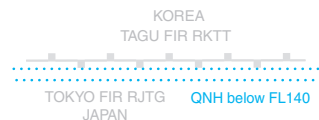
TMA boundary with upper vertical limit in hundreds of FT when not in accordance with ATS-restrictions. Where TMA is divided into sectors, only outer border and MAX upper limits are indicated in chart.



QNH area boundary, with text if required inside the QNH area.



QNH area coinciding with FIR or UIR boundary, with text if required inside the QNH area.



Political border with country name indicated when not consistent with FIR- or CTA-border.



ADIZ-, CDIZ- boundary. Selected boundaries only.



Boundary of "erratic" area of magnetic compass reliability (polar- and sub-polar area).



Date line with text.



RESTRICTED AIRSPACE

No information about areas below MORA is published. Ident is given in an abbreviated format. Find official identification by adding the two first letters of the 4-letter ICAO FIR code. Specifications of areas respectively are tabulated on reverse side of chart, or in a specific panel.

Prohibited area



Restricted area



Danger area



Military area without designation.



Small area. Parachute areas, bird refuges and high intensity radio transmission areas, fuel jettison areas or similar areas are not published.



RADIO AIDS

Radio facility symbol not coinciding with



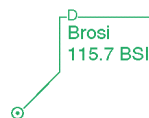
Radio facility box.



VOR with name, FREQ and identification.



DME-station with name, FREQ and identification.



VOR and DME collocated, FREQ paired and same identification.



NDB with name, FREQ and identification. Type of emission not indicated. CONSOL-stations are published as NDB.



VOR and NDB collocated with same identification.



DME and NDB collocated with same identification.



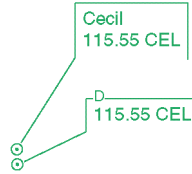
VOR -DME and NDB collocated and with same identification.



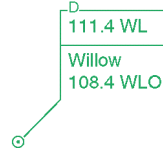
VOR-DME or VOR and NDB collocated, with different identification.



VOR and DME with same identification, but not collocated.



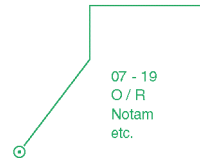
VOR and DME collocated, FREQ is not paired and with different identification.



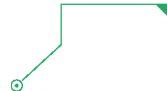
Name omitted when identical to adjacent AD.



Hours of operations and activities of radio aid. When below a combined VOR-NDB-DME box, the hours refers to the VOR if not otherwise indicated.



Unreliable NAV aid, blue triangle in right hand corner of NAV aid box, for further information check RFC textpanel. Information below MORA and scheduled maintenance hours, is not given.

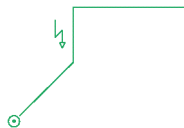


Flight service station, FSS, frequencies are given in chart legend. FREQ for low level use is only shown on LL- or combined HL/LL- charts only.

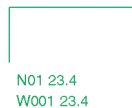


★ FSS	CANADA	USA
	126.70	122.20
★ FSS ENR WX	126.70	122.20
		122.20 LL

Hazardous Inflight Weather Advisory Service, HIWAS.



Navaid position coordinates. When indicated for a combined VOR/NDB/DME, the position refers to the VOR if not otherwise indicated. Coordinates for additional nav aids is selectively published .



Z-marker, VDF station, Marine beacon and A1/A2 voice are omitted.

COMMUNICATION FREQUENCIES

En-route communication frequencies presented within a box. Placement corresponding to the area where frequencies are to be used.

Shannon SOTA
Centre
135.800

Amsterdam RAD
below FL300
131.380 134.705
131.380 134.705

Maastricht CTL
131.380 134.705
131.380 134.705
131.380 134.705
131.380 134.705
131.380 134.705
131.380 134.705
131.380 134.705

Maastricht CTL/RAD
FL300 and above
131.380 134.705
131.380 134.705
131.380 134.705
131.380
Amsterdam RAD
below FL300
131.380 134.705
131.380 134.705

REPORTING POINTS

Compulsory

Non compulsory

High or High/Low ALT with or without radio aid.



Low ALT only with or without radio aid.



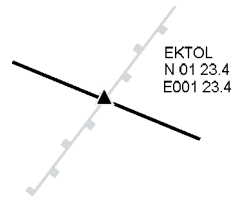
Coordinates will always be indicated. However if space not available, coordinates will be presented in a separate list on a suitable place on the RFC/ENC.

REP COORDINATES		
ROINE	N 01 23.4	W123 45.6

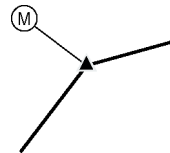
REP with name.

▲ GERONAS
N01 23.4
W123 45.6

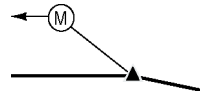
RNAV point.



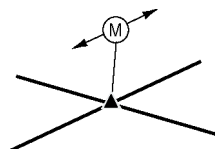
AIREP, section 3.



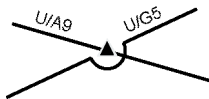
AIREP, section 3 in one direction only.



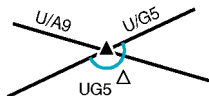
AIREP, section 3 for both directions with directional arrows to indicate a certain route.



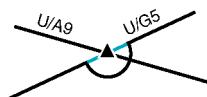
Reporting point for U/A9 only.



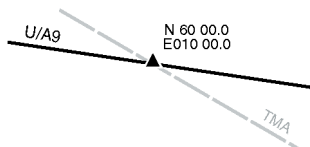
Compulsory reporting point for U/A9 and non-compulsory reporting point for UG5.



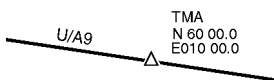
Reporting point for U/A9 and G5.



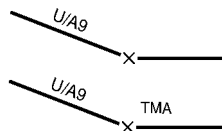
Reporting point at CTA- or TMA-boundary, with type of boundary line.



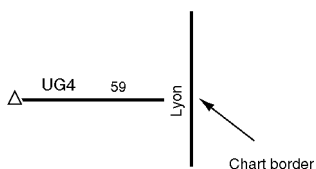
Reporting point at CTA- or TMA-boundary, when no boundary line is indicated.



Milage break, with explanation when required. REP only when specified in text.



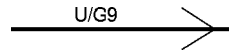
Indication of next REP outside chart.



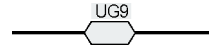
AIRWAY - ROUTE STRUCTURE

TRACK LINE AND DESIGNATION IN AIRSPACE CLASSIFICATION A-E.

Indication of one way traffic for route in area with incomplete INFO.



High level AWY only.



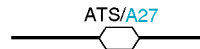
Combined High and Low level AWY



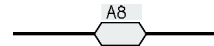
High or High/Low level ATS routes.



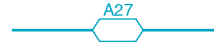
Combined high level ATS with low level AWY.



Route without distinction between high and Low level AWY.



Low level AWY.



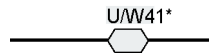
Low level ATS route.



AWY designation in areas with incomplete information and areas where domestic routes are shown for reference only.



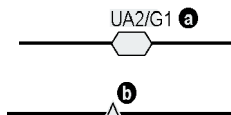
Weekend route (FRI1700-MON0600/0700 exceptions in "ATS restrictions").



Seasonal route (Details in ATS-restrictions).



Notes to give difference in route structure.



TRACK LINE WITHIN AIRSPACE CLASSIFICATION F,G

Advisory routes.



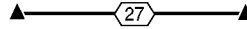
Advisory route with designator.



DISTANCE

DIST in distance box always between compulsory REP.

Distance box for two way AWY on LL/HL



Distance box for two way AWY on LL route.



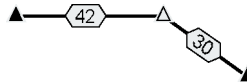
One way AWY DIST box on LL/HL route.



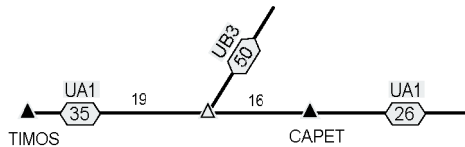
One way AWY DIST box on LL route.



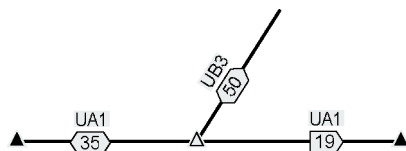
Distance between non-compulsory and compulsory REP will be indicated at milage break and track change.



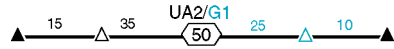
Total DIST always refers to same route, i.e total dist "35" applies from "TIMOS" to "CAPET". Intermediate DIST will be presented if necessary to clarify distance to turning points.



New box when changing from two-way to one-way route.



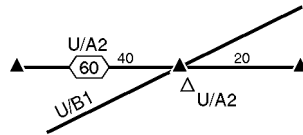
On HL and combined LL/HL DIST is given between HL compulsory REP. Intermediate DIST for distance between compulsory and non-compulsory REP and LL REP.



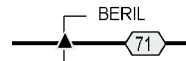
On exclusive LL AWY, total DIST is always indicated between compulsory REP in a distance box. Intermediate DIST between non-compulsory REP, milage break and compulsory REP will be indicated to clarify distances.



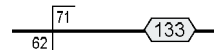
Intermediate distance when non-compulsory REP for U/A2



COP (Change Over Point) at fix, showing DIST from or to VOR.



COP not coinciding at fix, showing DIST to or from VOR.



TRACKS AND RADIALS

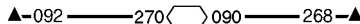
Average magnetic track placed close to DIST box, indicating track to REP.



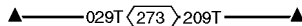
Radial, placed close to VOR station and indicating radial from the VOR.



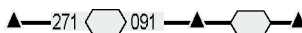
Radial and average magnetic tracks on great circle tracks for long legs exceeding coverage of VOR to VOR or VOR to NDB when track figure differs more than 2°.



True track (T) when used in "erratic area" of compass reliability.

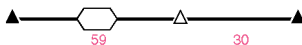


Repeated track figures may be excluded when space problems.



MNM OBSTACLE CLEARANCE ALT (MOCA)

MOCA is given in hundreds of FT. Lowest indicated MOCA is 2000FT (20). On exclusive HL chart MOCA for the LL route is omitted. MOCA is calculated in accordance with principles presented in Legends MORA/MOCA.



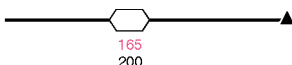
MNM ENROUTE ALT (MEA)

MNM Enroute Altitude (MEA) without direction as published by the authorities. For exclusive HL routes MEA is only shown where it differs from the standard altitude given in ATS restrictions on reverse side of RFC.

MEA (55) on LL-route.



MEA (200) on HL/LL or HL route.



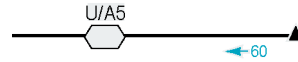
MNM FLIGHT ALTITUDE /FLIGHT LEVEL

MNM Flight ALT/FL as published by the authorities with directional arrow. For consecutive ALT/FL to be obtained see "IFR cruising levels" table.

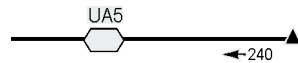
MNM Flight ALT/FL on LL-route.



MNM Flight ALT/FL on HL/LL-route.

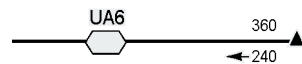


MNM Flight ALT/FL on HL-route.

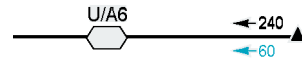


Where upper limits of AWYs are standardized (countrywise) according to tabulated upper limits in Airspace restrictions on reverse side of RFC, no indication will be in the chart. If not according to standard, the upper limits are shown as below. UNL is not indicated

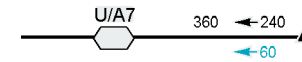
MNM Flight ALT/FL for a HL -route with upper limit at FL360 without direction.



MNM Flight ALT/FL for a LL -and HLroute with direction.



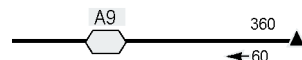
MNM FL/ALT for LL-route and HL -route segment, from FL240 to FL360.



MNM FL/ALT with direction and upper limit.



MNM FL/ALT with direction and upper limit for HL -route, without distinction between high and low airspace.

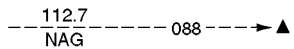


POSITION LINES

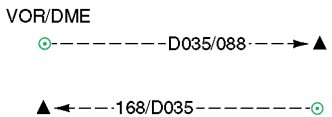
Radial from VOR station.



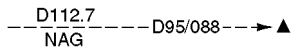
Radial with FREQ and identification of distant VOR station.



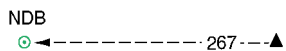
Radial and DIST from VOR/DME station.



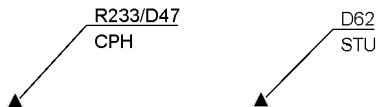
Radial and DIST, FREQ and identification of a distant VOR/DME station.



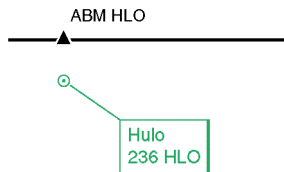
Magnetic bearing to NDB station.



Radial and DIST from a VOR and or a DME station, presented in a "hook" when space required.



Abeam position where "abeam" (ABM) is included in REP.



Abeam position where "abeam" (ABM) is not included in REP.

