



# Specifications for CENOR FLIP

**Instrument Approach Procedures Vol. I**  
**Instrument Approach Procedures Vol. II**  
**Standard Instrument Departures**

CENOR FLIP are unclassified.

The agreement of participating nations to use this publication is recorded in the MEMORANDUM OF UNDERSTANDING signed in 2008.

**Edition 01 JUL 2010**

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## CHANGE LOG

### Edition: 01 APR 2009

- Editorial changes
- Record of Amendments and Check List deleted
- Change Log inserted
- Page 1-3, 4.1 Amendment Request: Delete E-Mail germany@cenor.org, new E-Mail office@cenor.org
- Page 8-4, 4.1 Steering Committee, Germany: Delete E-Mail frankfuhrmann@bundeswehr.org, new E-Mail ulrichgriewel@bundeswehr.org

### Edition: 06 MAY 2009

- Editorial Changes
- Deleted: “High/Low Altitude Instrument Approach Procedures”, new: “Instrument Approach Procedures” where applicable
- Deleted: “©” from footer
- Revised: page 1-4, 5 “Standardization of technology”
- Revised: page 1-5, 6 “CENOR Web Appearance”
- Revised: page 3-7, 3.16 “Minimum Sector / Safe Altitudes”
- Revised: page 3-8, 3.20 example updated
- Revised: page 3-9, 3.24 “VOR, VOR/DME, VORTAC, DME”
- Revised: page 3-14, 6 “Minima Data”
- Chapter 7 “List of Aerodromes” updated
- Revised: page 8-1, 1 “Number and national proportion of CENOR FLIP”
- Revised: page 8-2, 2.1 “Shipment of CENOR FLIP – Belgium”
- Revised: page 8-3, 2.5 “Shipment of CENOR FLIP – Netherlands”
- Revised: page 8-2, 8-3 Contact Information Denmark
- Revised: page 8-4 to 8-6, 4 “Addresses, Phone Numbers and Teletype Addresses of CENOR Members” (Czech Republic, Netherlands and Norway)
- Revised appendices (see chapter 9 for more information)

### Edition: 30 SEP 2009

- Total amount of FLIP Page 8-1, 1.3 changed to “4.060”, 1.4 changed to “11.600”
- Chapter 7 “List of Aerodromes” updated
- Replaced “HAA” by “HAA/DH” and “HAT” by “HAT/DH” where applicable
- Revised: page 3-13, 4.9 “Distance FAF to Threshold”
- Added: page 3-14, 4.12 “Description of the ALS Depiction”
- References to appendices changed: 3-5 3.11, 3.6 3.13/3.14, 3.7 3.16/3.17, 3.9 3.24, 3-11 4.5, 4-1 2, 5-4 2.12, 5.3 2.8/2.9/2.11
- Revised: page 4-1 2 “Color and Screen” and page 6-1 3.1 “Use of grey scales and AutoCAD screening”
- Revised appendices (see chapter 9 for more information)

### Edition: 14 JAN 2010

- Editorial and orthographical revision of the complete specifications
- Front page: new CENOR logo, MoU reference updated
- Page 1-2, 2.7 “Titles”: new titles of CENOR publications
- Page 2-1, 2.2 “Contents Arrangement”: deleted Customer Feedback Form

- Page 2-1, 2.4.2 “Inside Front Cover and General Pages”: replaced all specific entries related to general pages by reference to the applicable appendices
- Page 3-1, 3.1 “General”: paragraph in accordance with appendix 1
- Page 3-5, 3.3.11. “Obstacles”: replaced “When portrayal of several obstacles within a small area would tend to clutter the chart, only the highest need to be shown.” by “If the portrayal of several obstacles within a small area tends to clutter the chart, only the highest obstacles need to be shown.”
- Page 3-5 3.3.13. “Special Use Airspace”<sup>1</sup>: replaced “Special use airspace that falls within the area (...) shown only when ...” by “Special use airspace within the area (...) shown only if ...”
- List of Aerodromes: Thisted (DNK) removed from list
- Revised appendices (see chapter 9 for more information)

#### Edition: 01 JUL 2010

- Amendments 1/2010, 2/2010 incorporated
- Page 1-2, 1.2.8 “Symbolization”: new text
- Page 3-1, 3.1 “General”: changes to be in accordance with appendices
- Page 3-2, 3.3.1 “General”: replace “...distance rings shall not be ...” by “...distance rings may not be ...”
- Page 3-3, 3.3.3 “Outer Ring”: second bullet point deleted
- Page 3-7, 3.3.20 “Radio Aids to Navigation”: new text
- Page 3-7, new 3.3.21 “Initial Approach Fix”
- Page 3-8, 3.3.26 “TACAN”: second paragraph deleted
- Page 3-11, 3.4.5 “Procedure Track”: New paragraph: “In order to facilitate legibility and clarity the profile view of the procedure track may begin with the intermediate fix.”
- Page 3-13, 3.4.12 “Description of ALS depiction”: deleted “...table of the aerodrome layout”, inserted “... briefing strip of each approach procedure.”
- Page 4-1, 4.2.5 “Symbolization”: bullet point “Depiction of Approach Lighting Systems” deleted
- Page 5-1, 5.1 “General”: replace “...chart portrayal shall be...” by “chart portrayal should be...”
- Page 8-1, 8.1 “Number and national proportion of CENOR FLIP”: BEL updated
- Page 8-3, 8.3.4 Payment address NLD added
- Page 8-4, 8.4.1 Steering Committee NOR address changed
- Page 8-4, 8.4.2 CENOR office address BEL changed to vincent.degieter@mil.be
- Page 8-6, 4.2 Specialist and National CENOR Office: Contact info for The Netherlands changed
- Apx 1-5, 2-3 revision cycle changed
- Apx 1-6, 2-5 address update, “AFTN” replaced by “AFS”
- Apx 1-7, 2-5 Abbreviations: “RDR – RADAR” added (used in UK procedures, no ICAO abbreviation)
- Apx 1-8 – 1-10: re-numbering of pages
- Apx 1-11 – 1-12: revised legend including new ALS schematic
- Apx 1-13 – 1-18, 2-8: pages renumbered
- Apx 1-18, 2-9 map replaced with grey scaled map
- Apx 2-7: revised legend
- Apx 3 ALS info removed, ALS-LENGTH info inserted where applicable, hatched layout replaced by grey-scaled layout
- Apx 6 editorial revision, symbols removed (ALS (short), ALS (long), RWY with ARP), symbols changed (RWY, INS), symbol added (Basic Radio Navigation Aid)
- Apx 7 editorial revision

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# 1. GENERAL

## 1.1. Purpose and Scope

The purpose of these specifications is to provide an appropriate guide to effect a uniform and standard methodology in the preparation and production of Instrument Approach Procedures (IAP), Standard Instrument Departure Procedures (SID), and Aerodrome Layouts with Tower and Radar information.

An Instrument Approach Procedure chart provides a pilot with information necessary for an orderly transition from enroute flight to a safe and expeditious approach to land or execute a missed approach at an aerodrome under Instrument Flight Rules (IFR).

A Standard Instrument Departure Procedure chart provides a pilot with an Air Traffic Control coded departure routing clearance to facilitate transition from take-off to enroute operations.

An Aerodrome Layout is specifically designed to assist in the movement of ground traffic and provide data for the updating of Inertial Navigation Systems on board of the aircraft. Additionally, these pages consist of Tower and Radar frequencies and the respective PAR, SRA and Circling Minima.

## 1.2. Requirements

### 1.2.1. General

The CENOR Flight Information Publication (CENOR FLIP) shall be published according to the requirements of the participating CENOR members, and produced in bound booklets. Separate booklets shall be produced for IAP (Vol. 1 & 2) with Aerodrome Layouts and SID.

The IAP and SID shall be produced in accordance with specifications agreed upon by CENOR members. Aerodrome Layouts may be included, when required and are arranged in alphabetical order preceding the appropriate procedures.

### 1.2.2. Quality and Accuracy

The highest standards of accuracy in plotting, drafting, reproduction and currency of information contained therein, shall be maintained. Type style, symbols and line weights as illustrated herein, shall be adhered to. Type size may be varied when absolutely necessary.

### 1.2.3. Color

The IAP, SID, Aerodrome Layouts, and supplemental textual material shall be prepared for a one color presentation using black color. Various screens and percentages of color, as specified, shall be used to obtain a suitable contrast. All information, textual and graphic, shall be in solid color unless otherwise specified.

### 1.2.4. Area of Coverage

The area of coverage is to be considered the area of the CENOR nations and additionally, procedures of foreign states which are not CENOR members.

### 1.2.5. Scale

The format used for the preparation of the IAP, SID and Aerodrome Layouts is the DIN A4 format. Therefore all sizes and dimensions stated within Chapter Three, Four and Five are related to this format.

IAP: The portrayals within the distance circles are according to scale and direction. The radii of distance circles are the following: 20 NM, 10 NM, and 5 NM. Distance circle for High Altitude IAP is normally 20 NM and for Low Altitude IAP 10 and 5 NM.

SID: SID charts shall be depicted "to scale", normally using a scale of 1:500,000 or suitable to best portray the procedure and the supporting supplementary data required. However, due to

the great distances involved on some procedures or route segments, it may be necessary to disregard or distort the scale to adequately depict the procedure in its entirety.

Aerodrome Layout: The scale for portrayal of the Aerodrome Layouts will be commensurate with the aerodrome geographical area to be depicted.

The printing layout which is the basis for the printing plates, are diminished to 60 % of DIN A4 to the CENOR FLIP format.

### **1.2.6. Projection**

The geographic projection used for the IAP, Aerodrome Layouts and SID shall be the Lambert Conformal.

### **1.2.7. Titles**

The titles of CENOR publications shall be as follows:

- INSTRUMENT APPROACH PROCEDURES (CENOR FLIP IAP – VOLUME 1)
- INSTRUMENT APPROACH PROCEDURES (CENOR FLIP IAP – VOLUME 2)
- STANDARD INSTRUMENT DEPARTURES (CENOR FLIP SID)

### **1.2.8. Symbolization**

Symbolization shall be in accordance with the appendices.

### **1.2.9. Type Styles**

Type styles specified within these specifications shall be as stated. Type sizes as specified shall be adhered to; in areas of extreme congestion the size of type may be reduced to the next smaller size.

All types, unless otherwise specified, shall be as indicated on the various Appendices.

### **1.2.10. Abbreviations**

Abbreviations shall conform to ICAO DOC 8400 or national AIP.

## **1.3. Appendices**

Appendices are included within these specifications for use in layout, format and content. Appendices do not necessarily reflect all possible operational contents.

## **1.4. Amendments**

### **1.4.1. Amendment Request**

If amendments should become necessary between the publication cycles, or when safety of flight and/or critical operational changes must be disseminated immediately an Amendment Requests have to be reported via national FLIP/NOTAM office to:

Amt für Flugsicherung der Bundeswehr  
Dezernat Luftfahrtveröffentlichungen  
CENOR Office  
Postfach 93 02 08  
60457 Frankfurt  
AFTN ETCBYFYX  
Telephone + 49 69 7 93 07 - 4 21 or 4 22 (IAP) or 4 23 (SID)  
Telefax + 49 69 7 93 07 - 4 59  
E-Mail office@cenor.org

in the following format:

- a) Amendment Request
- b) FLIP concerned
- c) Aerodrome concerned
- d) Procedure concerned
- e) Previous entry
- f) New entry
- g) NOTAM-action requested: yes/no
- h) Basis for the printing for next edition will be delivered: yes/no

#### **1.4.2. NOTAM**

NOTAM class I series -U- or national NOTAM will be published when safety of flight and/or critical operational changes must be disseminated immediately.

#### **1.4.3. Printed Amendments**

If major changes, which cannot be covered by NOTAM, are necessary due to flight safety reasons, a printed amendment to CENOR FLIP will be produced for issue until the next regular publication cycle. It will be a single volume publication containing revisions, additions and deletions to the last complete issue.

##### Cover

Front cover format shall be in accordance with the corresponding IAP or SID booklet. Information concerning the contents will be printed on the inside of the front cover.

##### Contents

Table of contents, supplemental data and charts will be printed back to back, head to toe. Supplementary pages will be identified by roman numerals, all other pages by Arabic numerals. Textual information and charts shall be printed in black, using solid and screened color as indicated within these specifications.

#### **1.4.4. Control of procedures**

Published procedures must not be older than 5 years. The appropriate control of the procedures has to be executed by each responsible publishing nation.

### **1.5. Standardization of technology**

#### **1.5.1. General**

For the production of CENOR FLIP AutoCAD is the recommended software, however other software can be used as long the result looks exactly as described in the CENOR specifications.

#### **1.5.2. Type of data transfer file**

The type of data transfer file is PDF or dwg.

#### **1.5.3. Media for data transfer**

Recorded on CD or transferred via email.

#### 1.5.4. Naming of PDF Files

The files shall be named according to the following example.

ET\_AD\_2\_ETSB\_01TAC21\_en.pdf

**ET**\_AD\_2\_ETSB\_01TAC21\_en.pdf = ICAO country code (capital letters)

ET\_**AD 2**\_ETSB\_01TAC21\_en.pdf = indicator for part AD 2 in the AIP (capital letters)

ET\_AD\_2\_**ETSB**\_01TAC21\_en.pdf = ICAO location indicator (capital letters)

ET\_AD\_2\_ETSB\_**01**TAC21\_en.pdf = numbering

ET\_AD\_2\_ETSB\_01**TAC21**\_en.pdf = type of procedure (capital letters)

ET\_AD\_2\_ETSB\_01TAC21\_**en**.pdf = language (lower case)

#### 1.6. CENOR Web Appearance

Amt für Flugsicherung der Bundeswehr, Branch Office Aeronautical Publications, has been tasked by the CENOR Steering Committee to take the responsibility for the presentation of the purpose and scope of CENOR FLIP on the Internet. The content of the homepage will be agreed upon by the CENOR committee. The fees for the provider are being taken care of by Germany.

The URL of the Internet homepage is: <http://www.cenor.org>

Additionally a CENOR forum is set up to be a platform for CENOR members to exchange views and information as well as supporting the multinational teamwork.

## **2. LAYOUT AND FORMAT**

### **2.1. Size and Dimension**

The overall size of each bound publication is 130 x 200 mm.

The size and dimensions of the IAP, SID and supplemental information shall be as indicated on the various Appendices.

### **2.2. Contents Arrangement**

The contents of the publication shall be as follows:

- Outside Front Cover
- Inside Front Cover (Table of Contents)
- General Information
- Legend
- Index
- Procedures
- Inside Back Cover (Rate of climb/descent table)
- Outside Back Cover (Area of Coverage)

### **2.3. Page Numbering**

The supplementary pages shall be numbered using Roman numerals. The numerals shall be centered at the bottom of the page.

Due to safety reasons all pages are numbered with small continuously numbers near the ring binding by the Federal Printing Office.

### **2.4. Covers**

#### **2.4.1. Outside Front Cover**

- Layout, format and content of the outside front cover of each bound publication shall be in accordance with that illustrated on Appendices 1 and 2.
- The dates on the cover shall reflect the EFFECTIVE and the expiration dates of the aeronautical data, positioned as indicated on Appendices 1 and 2.
- Dates shown shall consist of the day, month, and year; e.g.: 11 SEP 1997.

#### **2.4.2. Inside Front Cover and general pages**

- The inside front cover shall contain the table of contents
- General pages contain information according to appendices 1-5 to 1-10 and 2-3 to 2-5

#### **2.4.3. Inside Back Cover**

- The inside back cover shall contain the Rate of climb/descent table. Format and content shall be in accordance with that illustrated on appendix 1.

#### **2.4.4. Outside Back Cover**

- The outside back cover shall provide the area of coverage as depicted on appendices 1 and 2.

## 3. INSTRUMENT APPROACH PROCEDURES

### 3.1. General

The Instrument Approach Procedures geographical area shall be prepared for issuance as bound publications. The arrangement and sequence of the content shall be in accordance with chapter two.

- Table of Contents  
The table of contents contains information about the arrangement within each booklet.
- General Information (Appendix 1-5, 1-6)
- Abbreviations (other than ICAO or published in national AIP only) and Identification of Procedures (Appendix 1-7)
- Landing Minima Explanation (Appendix 1-8)
- Determination of declared Distances for Runways (Appendix 1-9)
- Altitude Correction (Appendix 1-10)
- Legend (Appendix 1-11, 1-12)  
The legend depicts all symbols used in the presentation of IAP charts and Aerodrome.
- Approach Lighting System (Appendix 1-13 to 1-15)
- Load Classification Number (Appendices 1-15, 1-16)
- Index of Instrument Approach Charts

The index of IAP charts shall be prepared and be current with each issue. It shall be a colonized alphabetical listing of all aerodromes, by name, contained in each booklet, together with the type/s of procedure/s. Column heading for each column is: Aerodrome, Procedures

A cross reference shall be provided if a special procedure shall be positioned to a certain aerodrome name.

### 3.2. Instrument Approach Charts (Appendices 3-1 to 3-3)

#### 3.2.1. General

The instrument approach charts are divided into following sections:

- Briefing Strip
- Plan view
- Profile
- Minima Data

#### 3.2.2. Margin Information

- Identification of procedure
- Type of procedure
- Aerodrome name and location indicator
- Procedure designation
- Aerodrome reference point
- Authorizing agency/source and effective date
- Changes
  - NEW PROCEDURE – self explanatory
  - EDITORIAL – corrections to writing mistakes or wording without impact on the way the procedure has to be flown
  - MINIMA – changes to altitude/height or weather minima

- FREQUENCY/-IES – changes to one or more radio frequencies
- NAV AID (TACAN etc.) – new navigational aid or changes to its frequency, “NAV AID” is to be replaced by the type of navigation aid
- WARNING – new or changed warning notation
- CAUTION – new or changed caution notation
- NOTE – new or changed note
- VARIATION – change to the variation
- MISSED APPROACH – change to the missed approach procedure
- OBSTACLE/S – new or changed obstacle/s
- ITEM COORDINATES – changes to coordinates; ITEM is to be replaced by e.g. ARP

If changes cannot be described by this standard terminology other wording may be used.

Type size, style, and position shall be as shown in Appendices 3-1 and 3-2. Each procedure shall be named and numbered, as indicated on the procedure form. A Briefing Strip placed on the head of Plan view provides information in the sequence in which pilots would normally brief or review the procedure prior to flying it (Appendices 3-1 to 3-3).

### **3.3. Plan view**

#### **3.3.1. General**

The plan view of the Instrument Approach Charts shall be concerned with the portrayal of instrument approach procedure information, enroute facilities, feeder facilities, approach facilities, missed approach, terminal routings, communications and related base detail.

The enroute and feeder facilities shall be used for depicting terminal routings from Radio Aids to Navigation, fixes and intersections to the initial approach facility or fix.

The plan view shall use one format with a concentric ring, because all procedural and terminal route information cannot be depicted to scale, including facilities that form fixes/intersections and not part of the enroute airway structure, or used for the missed approach.

The distance rings (5, 10 or 20 NM) normally referring to the Radio NAV Facility where the procedure is based on shall be shown on all charts, and all information therein shall be shown to scale. The distance rings may be offset in order to better use the plan view area for procedural portrayal; however, this ring shall never be offset to the extent that the center of the ring will be beyond the plan view neat lines. Information beyond the distance rings may not be depicted to scale. Base information shall be shown only within the distance rings.

All charts shall be oriented to True North.

All Radio Aids to Navigation depicted in the plan view shall be shown using the appropriate symbols as specified within these specifications and amendments thereto.

The Radio Aid to Navigation (primary facility) upon which the final approach of the instrument approach procedure is based shall be positioned in the center of the distance ring. All other information shall be positioned in relation to this facility. Exception shall be made when the location of the aerodrome, Radio Aid to Navigation and/or procedure pattern, necessitate that the chart be centered between other facilities or geographical points for better portrayal of the instrument approach procedure. Portions of the ring may be deleted to avoid overprinting of information.

#### **3.3.2. Distance Ring (Inner Ring)**

A ring of 50-70 mm radius shall be shown, centered and labeled within the plan view. The distance ring may be replaced (in whole or in part) by a DME arc if required.

The distance ring shall be cut back or broken so that the distance ring and the DME arc will not cross or intersect one another. When the DME arc and the ring are coincidental, or tend to be, the ring shall be cut back to effect a break in the continuity.

### 3.3.3. Outer Ring (Enroute/Feeder Facilities)

An outer ring shall be concentric with the inner ring, having a radius of 80 mm, shown as a broken line. This ring may be broken, as required, to show facilities, fixes and intersections as clearly as possible.

Enroute facilities shall be those Radio Aids to navigation, fixes and intersections which are part of the enroute structure. From this point terminal routing, giving bearing, distance and altitude information, direct or via Feeder Facilities to the initial approach fix (IAF) shall be shown.

Feeder Facilities shall be those used by the air traffic controller to direct aircraft to intervening facilities/fixes between the enroute structure and IAF.

Enroute and feeder facilities shall be positioned on the outer ring. The facility symbol shall be positioned at the point of intersection of the magnetic bearing from the primary facility or fix to the enroute/feeder facility on the outer ring.

- Enroute and feeder facilities shall be identified by identification, channel number or frequency.

When Enroute Facilities are used in a dual capacity such as a transition facility and missed approach facility, they shall be identified by identification, channel number and/or frequency, within a box.

Enroute facilities not used in the approach procedure and which would normally be positioned on the outer ring may be positioned in the space between the outer ring and the plan view neat line when the facility is employed in the designation and formation of enroute and/or feeder fixes and intersections germane to terminal routes or missed approaches. This technique will obviate the need to position multiple facilities, fixes or intersections within close proximity of each other, within or between the concentric rings, retaining the integrity of the chart format.

### 3.3.4. Terminal Routes

Terminal routes shall be shown when included as part of the procedure as an approved terminal route from a facility/fix.

Discretion must be exercised in portraying the length of terminal routes, depending on the position of the facility, fix or intersection, so as to adequately depict the terminal route from and toward the appropriate facility/fix.

Terminal routes may extend from a facility/fix, distance ring or beyond and within the distance ring when necessary, toward the initial approach facility/fix. Terminal routes shall be shown as an arrowhead line extending from the Enroute/Feeder Facility symbol along the magnetic bearing line toward the IAF. Terminal routes shall include the bearing, distance and minimum altitude. The arrowhead line shall be broken for insertion of bearing values. (Minimum altitude only in connection with Low Altitude IAP)

The magnetic bearing value shall be shown on and breaking the terminal route. Bearing values shall be given to the nearest degree, using three digits, e.g., 061°. The distance shall be shown to the nearest nautical mile, enclosed within parentheses, e.g., (16), positioned directly below the bearing value. The minimum altitude shall be positioned directly above the magnetic bearing value.

### 3.3.5. Changeover Points

Changeover points shall be shown when so identified and submitted on the plan view and profile.

### 3.3.6. Communication

Communication information, when available, should be shown in the Briefing Strip.

Terminal communication information, when available, consisting of the following, shall optionally be shown in the sequence listed below. The communications facility shall be abbreviated.

- AREA CONTROL CENTRE (ACC)
- APPROACH CONTROL (APP CTL)  
When the approach control service is provided by other than Approach Control Unit; e.g. Tower, Center, the appropriate air traffic facility call sign shall be used.
- GROUND CONTROLLED APPROACH (GCA, RADAR) optional
- TOWER (TWR)
- GROUND CONTROL (GND CTL)
- Automatic Terminal Information Services (ATIS) shall be shown by the letters "ATIS" followed by the specific frequency. When the ATIS operates non continuously an asterisk shall be positioned following the letters: ATIS\*

When the service is provided on one frequency for both arrival and departure information, it shall be shown thus:

ATIS 111.800.

When the service is provided on more than one frequency for both arrival and departure information, both (or all) frequencies shall be shown:

ATIS 113.900 124.100.

When the service provided is either arrival and/or departure on different frequencies, both frequencies shall be shown thus:

ATIS ARR 112.700  
DEP 121.850

The primary VHF and UHF frequencies only shall be shown (in ascending order) in conjunction with and on a second line following the above air traffic facility name, aligned on the left. On request frequencies may be used when they are the only frequencies available and shall be suffixed with an x, e.g., 118.500x.

- Hours of operation shall not be shown.

### 3.3.7. Hydrography

Hydrographic features shall be shown. Outlines or names shall not be shown.

Criteria's depiction of hydrographic features:

- Oceans, coast lines.
- Significant rivers and streams.
- Significant lakes.

If only one river or one small lake is involved, not located in the immediate airport vicinity, the hydrographic information requirement may be waived. Hydrographic features shall be limited to within the inner distance ring when the concentric ring format is employed.

### 3.3.8. Relief

Care should be taken in the selection of relief features to be shown. Obstacles in the proximity of the flight path or unusual features which constitute a hazard should receive priority consideration in the selection. Terrain elevations shall be indicated by a dot with the elevation values placed nearby. Terrain elevations shall be plotted accurately according to geographic location. Caution notes, as required by the approving authority, may be shown to emphasize a peculiar hazard. The word "CAUTION" shall be shown in caps. Relief shall be limited to within the distance ring.

### 3.3.9. Culture

Culture shall not be shown.

### 3.3.10. International Boundaries

International boundaries alternative FIR/UIR boundaries shall be identified by country name, (FIR/UIR name) positioned adjacent and parallel to the boundary, within the country area.

### 3.3.11. Obstacles

All obstacles which have influence on the procedure shall be plotted in their exact coordinate location. If the portrayal of several obstacles within a small area tends to clutter the chart, only the highest obstacles need to be shown.

Obstacles and spot elevation symbols shall be those illustrated in Appendix 1-14. When the above obstacles are shown, the elevation of the top of the obstacle above mean sea level shall be shown to the nearest foot. The highest elevation appearing within the plan view area shall be indicated in a larger type. When the highest elevation is a spot elevation, it shall be indicated by a bigger dot, if an obstacle, use the larger obstacle symbol.

### 3.3.12. Aerodromes

Aerodromes shall be shown by a pattern of all runways (including closed runways). Airport pattern shall be shown not to scale.

Heliports shall be shown by the circle H symbol.

Aerodromes, other than the aerodrome of intended landing, in the immediate vicinity of the final approach track shall be shown only when pilot confusion might be possible. These aerodromes shall be shown by pattern and name or location indicator only.

### 3.3.13. Special use Airspace

Special use airspace within the area of coverage of the instrument approach chart shall be shown only if considered critical to the procedure as designated by the formulating agency.

Special use airspace shall be identified as designated, e.g., ED-R 1 Appendix 1-14.

### 3.3.14. Procedure Track

The procedure track shall be indicated by a line, broken for course values. The inbound bearing and directional arrow shall be positioned on the final approach track to indicate direction of flight. Outbound procedure courses shall be shown using the appropriate radial, outbound localizer course or an outbound heading shown in the same method as depicting a radial. A degree sign shall be shown with all headings. Procedure tracks shall be shown beginning at the IAF. The procedure track on procedures with more than one IAF may be shown shortened (or broken and not extending completely to an intermediate or final approach fix) indicating the direction (with an arrowhead) toward the fix. Procedure tracks may include, as designated, the track value, distance and minimum altitude.

The penetration portion of the procedure track (High Altitude IAP) shall be shown using the penetration track symbol (dotted line pattern) extending from:

- the Initial Approach Fix (IAF) to the Final Approach Fix (FAF);
- the IAF to the beginning where a low altitude approach begins, e.g., low altitude procedure turn;
- the IAF to the Missed Approach point when no FAF is used.

The procedure turn shall be shown by a barb symbol as indicated. The barb shall normally be half an arrowhead positioned on the maneuvering side. Inbound and outbound 45 degree off-course bearing values (a directional arrow with the inbound value only) shall be shown on either side of the procedure turn barb.

Procedures using a teardrop (ICAO Base Turn), holding pattern configuration (ICAO Racetrack), 45° or 80°/260° procedure turn shall be shown in their entirety. Inbound and outbound bearings will be included for the teardrop and holding pattern configuration. The 45° procedure turn (Common Depiction) will include bearing on both the outbound and inbound portions of the turn. The 80°/260° or the 45°/180° (Depiction per ICAO Charting Manual) procedure turn will include a bearing on the outbound portion of the turn. The note e.g., "1

MIN" shall be shown in conjunction with the teardrop, holding pattern and 45° procedure turn when requested by the OP.

To distinguish the runway from the procedure track, an arrow shall be positioned on the end of the final approach track, just short of the end of the runway, or where the missed approach begins. When a turn does appear between the final approach arrow and the beginning of the missed approach track the missed approach track shall be placed so as to clear the runway pattern and radio facilities on, or near the airport. The missed approach track shall begin at the missed approach point and shall be symbolized as indicated on the Appendix 1-13.

Components of an ILS, including outer markers, although not specifically cited in a non-precision procedure but located along of underlying the procedure track, shall be shown, appropriately symbolized and identified.

### **3.3.15. Warnings, Cautions and Notes (Example see Appendix 3-1)**

Warnings, Cautions and Notes (in that order) will be marked as follows:

- They will be marked by small letters in a consecutive order [ a), b), c)...], even if there is only one, preceded by the respective title (WARNING, CAUTION, NOTE).
- The letter will be followed by a closing bracket.
- If a specific cross-reference exists, it will be marked by inverted letters.
- Explanatory notes, when required, shall be placed in the upper left corner below the briefing strip, except when affecting some part of the procedure where it can be put at the appropriate place.
- The text of WARNING, CAUTION and NOTE should be in capital letters if possible (Font size see Appendix 3-2).
- When RADAR is required for the execution of the procedure, the note "RADAR MONITORING MANDATORY" shall be shown positioned normally below the distance circle.

### **3.3.16. Minimum Sector / Safe Altitudes**

Minimum Sector Altitudes (MSA), as established, shall be shown for each aerodrome where instrument approach procedures have been established.

MSA shall be depicted graphically, as detailed below, when the altitudes between sectors differ, resulting in 2, 3 or 4 sectors, indicated as minimum sector altitudes.

MSA shall be provided as a circular diagram, as illustrated on Appendix 1-14 positioned normally in the lower left corner of the plan view. The appropriate symbol of the relevant MSA identifier, - NavAid symbol, ARP symbol or any other reference point on which the MSA is predicated -, shall be positioned at the center of the circle.

The sectors shall be shown as outbound radials/bearings. The MSA values shall be shown centrally positioned within the sector. The MSA diagram shall be identified by the letters "MSA", the facility identifier, and the applicable mileage, e.g., "MSA ABC 25 NM" positioned outside and above the circle. MSA with the same altitude value for each of the four sectors shall be shown by the altitude value applicable to all sectors, centrally positioned within the circle and above the MSA identifier symbol.

A safe altitude for 100 NM may be depicted at the option of the approving authority. When a safe altitude for 100 NM is required, it shall be depicted by a common note in the lower left corner of the plan view to read: "Safe Altitude 100 NM 0000". The term "Safe Altitude 100 NM" is used to ensure distinction between the 25 NM and 100 NM radius. Sectors are not used.

### **3.3.17. Holding Patterns (Symbolism: see Appendix 1-13)**

Holding patterns shall be shown only when identified and submitted with the procedure. Missed approach holding patterns shall not be labeled. Missed approach holding pattern symbolization shall be depicted only when the missed approach holding pattern is not coincidental with other type holding patterns.

Holding patterns shall be depicted with a race track type symbol, as illustrated. The symbol may be expanded laterally, when required, to include mileage fixes, intersections, or other

facilities upon which the holding pattern may be premised. When the arrival holding pattern is shown in the plan view and not affixed to the beginning of the approach track, a lead arrow shall be shown leading from the approach side of the holding pattern to the initial approach fix or facility. The arrow may be curved in order to properly depict the flight path from the holding pattern to the initial approach point. Holding patterns shall be oriented on the proper flight path bearing or radial, and both inbound and outbound bearings (including degree sign) must be shown, except where the nearness of the procedure track bearing may preclude the need for the holding pattern bearing.

When required, holding patterns with non-standard leg lengths are shown with the non-standard time positioned within the holding pattern symbol (VOR or NDB).

A holding pattern entry diagram may be portrayed on a voluntary basis as shown on Appendix 3-1.

### 3.3.18. Radial Lines and MLS Azimuths

All radials or azimuths, pertinent to the procedure, missed approach, or holding patterns shall be shown and identified. Radial lines shall be shown by an arrowhead line emanating from the facility with the values positioned on and breading the arrowhead line, preceded by the letter "R". The radial value shall be in three digits, e.g., "R-010". Lead radials, when identified and submitted with the procedure, shall be additionally identified with the letters "LR" preceding the numerical value, e.g. "LR-053".

In congested areas, radial values may be placed in a clear area and related to the radial by a leader line.

### 3.3.19. Bearing Lines

Bearing lines shall be shown by a line and arrowhead always to the facility. Bearing values shall be shown using three digits positioned on and breading the arrowhead line. A degree line shall be shown with all bearing values. In congested areas, values may be placed in a clear area and related to the bearing line by leader line.

### 3.3.20. Radio Aids to Navigation

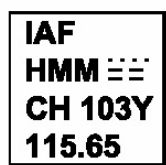
Radio Aids to Navigation upon which the procedure is based shall be depicted enclosed in a box.

Radio Aids to Navigation used in the procedure shall be identified by identification, frequency, and Morse code within a box.

Arrangement of the data within the box shall basically be in the following sequence: IDENTIFICATION, CODE, FREQUENCY or CHANNEL.

Radio Aids to Navigation, identified on the procedure form as an initial approach fix (IAF) shall be identified by the letters IAF, identification, channel number and/or frequency, within boxes shaded at the right and lower line.

e. g.



### 3.3.21. Initial Approach Fix

An IAF not collocated with the NavAid shall be identified by the letters "IAF" within a box, which is shadowed at the right bottom line.

e. g.



The initial approach fix shall be indicated by a distance measuring curved line centered across the radial. This curved line shall be formed according to the direction of the flight track and labeled with the letter IAF, within a shadowed box and nautical mile distance indicated as DME.

Geographical coordinate data of the IAF will be depicted. The geographic coordinates will be portrayed to a hundredth of a minute. Geographic coordinate data will be listed at the right top of the plan view.

### **3.3.22. Marker Beacons**

Marker beacons shown shall be positioned in their geographical position.

Marker beacons of an instrument landing system shall be identified by the letters "IM" (inner marker), "MM" (middle marker) or "OM" (outer marker) positioned adjacent to the symbol, unless collocated with compass locators.

### **3.3.23. Radio Beacons**

Non-Direction Radio Beacons (NDB) shall be plotted in their exact position using the NDB symbol.

NDBs that are paired with DME shall be shown with both symbols. The DME facility shall be identified as well as the NDB data "DME CH30 (109.3)".

### **3.3.24. Compass Locators**

Compass locators are similar to NDBs and shall use the same symbol and type style. Compass locators shall be identified by the letter "L", frequency and code.

When collocated with the outer- or middle marker, compass locators shall be identified as LOM or LMM in the same manner indicated above.

### **3.3.25. VOR, VOR/DME, VORTAC, DME**

VOR, VOR/DME, VORTAC Radio Aids to Navigation shown, shall be plotted in the exact position using the appropriate symbol indicated, and identified.

DME shall be symbolized by the symbol illustrated in Appendix 1-13. The DME symbol may be combined with a VOR, NDB, or LOC symbol. The DME or TACAN mode will be enclosed (X or Y), e.g., CH17Y.

### **3.3.26. TACAN**

TACAN facilities shown shall be plotted in their exact position using the appropriate symbol indicated, and identified.

### **3.3.27. Instrument Landing System (ILS)**

Only those components of the Instrument Landing System used in the instrument approach procedure shall be shown.

The localizer course shall be shown by the appropriate symbol. The localizer course symbol shall be centered on the magnetic bearing as projected outward from the transmitter site, cleared for the runway, the screened portion of the symbol shall be positioned on the right for front courses, and on the left for back courses.

On simultaneous ILS procedures a small representation of the localizer only portion of the other simultaneous approach shall be shown on each of the single approaches.

ILS Stations, with compatible DME, shall be identified identical to a VOR/DME, if they are collocated and have the same identification, only one box.

Marker Beacon symbols shall be centered across and perpendicular to the localizer course. The position of these facilities shall be plotted by measuring the given distance along the bearing from the approach threshold of the instrument runway. When the localizer symbol and NDB/LMM, and/or a radio range is in the same location, the localizer symbol and portions of facilities other than the radio beacon and/or marker beacons shall be deleted. The localizer symbol shall be cleared to provide for placement of the inbound and outbound bearing.

When the localizer and glide slope frequencies are paired frequencies, only the localizer frequency will be shown within a box. When frequencies are not paired, both the localizer and glide slope frequencies will be shown. The localizer identification will be shown.

When the localizer is used as the primary facility in a LOC or LOC BC procedure, and the glide slope is not used, or is not available, the glide slope frequency shall not be shown. Procedures based on the back course of the localizer shall have the words "BACK COURSE" displayed in the plan view.

Both inbound and outbound bearings shall be depicted in the outer extremity of the localizer symbol. When procedure track bearing (which shall always be shown) and the inbound course bearing is the same, only the outbound localizer course bearing shall be shown.

### **3.3.28. Intersections/Fixes**

Intersections used in the instrument approach procedure shall be defined by bearings, radials, and / or DME values.

Mileage fixes along terminal routes shall be shown centered on and perpendicular to the terminal route or procedure track. DME fixes shall be identified by establishing the fix and the mileage in nautical miles. RADAR fixes shall be identified in nautical miles, e.g., 8 RADAR. When the fix is appointed, the identification shall be shown near the fix with the mileage centered beneath. Mileage fixes for holding pattern shall be shown in the same manner.

### **3.3.29. Dual Facility Approaches**

Procedures portraying two final approaches, i.e., ILS, TACAN, may be published when depiction is not required which would render the approach chart difficult to interpret. The final approach course shall be published for each final approach, one above the other, on either side of the procedure track, identifying the facility to which it applies, e.g., 090° ILS, 092° VOR.

### **3.3.30. Variation**

Variation information shall be shown on instrument approach charts.

Variation information will consist of a magnetic variation diagram, displayed in the upper left portion of the plan view.

### **3.3.31. Airways**

Airways shall only be shown when referenced in the approach and/or missed approach parts of the procedure, or when depiction of the airway is requested by the agency responsible for the procedure.

### **3.3.32. Special Boundaries**

When required, special boundaries, e.g. Identification zone (IZ), may be shown using symbolism as shown on the legend.

## **3.4. Profile**

### **3.4.1. General**

A profile diagram of the instrument approach procedure shall be placed in the space provided below the plan view. Those facilities, intersections, fixes, etc. identified in the procedure and minimum altitudes, as required by the procedure, shall be shown.

### 3.4.2. Aerodrome Profile

The aerodrome profile shall be shown by a line, positioned below the underline.

### 3.4.3. Radio Aids to Navigation

All Radio Aids to Navigation shown shall be positioned relative to the aerodrome profile and other facilities, using a vertical line. The primary facility symbol shall extend above the underline.



When only one facility of the same type is shown, the facility shall be identified directly above the symbol as follows:

- Fan Marker by a capital FM.
- Outer Markers and Middle Markers as OM and MM; or, when a compass locator beacon is collocated with a marker beacon and used in an instrument landing system, as LOM or LMM.
- VOR, VOR/DME, VORTAC and TACAN by the letters "VOR", "VOR/DME", "VORTAC" or "TACAN", as appropriate.
- Radio Beacons by the letter NDB.

When more than one facility of the same type is shown, then each shall be additionally identified by the facility identifiers positioned immediately over the type of facility.

### 3.4.4. Intersections/Fixes

Intersections/fixes formed by radials and bearings shall be indicated by a short line in the approach track perpendicular to the underline.

- Fixes formed by radials and shown along the procedure track shall be identified in abbreviated form, e.g., R-145, and mileage figure positioned below the radial value, all centered above the line.
- Fixes formed by bearings and shown along the procedure track shall be identified as follows: "180° to ABC", centered above the line.
- TACAN fixes shall be identified in nautical miles, using the DME symbol e.g.  centered above the line.
- TACAN final approach fix shall be identified by the formed Cross symbol illustrated.
- DME fixes shall be identified in nautical miles using the DME symbol e.g.  centered above the line symbol.
- Combinations of any of the above intersections/fixes shall be identified as appropriate.
- The line symbol may be broken as required and necessary for placement of altitude values and procedure notes.

### 3.4.5. Procedure Track

#### Low Altitude IAP

- A profile view of the procedure track shall be shown using a straight line. The approach-track shall begin at the top of the primary facility symbol, unless otherwise dictated by the procedure, and shall descend to close above the underline, where the final approach ends and the missed approach begins.
- All headings associated with the procedure shall be shown with directional arrowheads on and breaking the track after each change in direction. A degree sign shall be shown with all headings.
- Procedure and teardrop turns shall be symbolized as indicated on Appendix 1-13. Procedure turn headings shall not be shown. When a one-minute holding pattern is required in lieu of a procedure turn, a horizontal line shall be shown. The descending line shall begin at the fix when the fix altitude is the same as the minimum holding pattern altitude; the descending line shall begin at the midpoint of the holding pattern symbol.

- Procedure turn notes shall be shown, positioned adjacent to (preferably above) the procedure turn altitude. Wording shall be condensed to indicate length of maneuvering area e.g., "Remain within 10 NM", or "Two min" holding pattern.
- When included as part of the procedure, the notation "Procedure Turn NA" shall be shown.
- The procedure turn altitude shall be shown in lieu of a specific procedure turn symbol.
- The non-precision final approach fix (FAF), when specifically identified on the approach procedure, shall be shown by a Cross symbol illustrated, positioned on and breaking the procedure track.

#### High Altitude IAP

- A profile view of the penetration of the procedure track shall be shown using a dot line pattern. The approach track shall begin at the top of the primary facility symbol, unless otherwise dictated by the procedure or space consideration requires the beginning of the track be lowered for the placement of other data, such as the altitude of glide slope at OM, and shall descend to:
  - the Final Approach Fix (FAF) (glide slope intercept point for ILS approaches);
  - the missed Approach Point without a FAF or when the FAF is located at the aerodrome;
  - the beginning where a low altitude approach begins, e.g., procedure turn.
- The procedure track from the FAF shall be shown using a straight line.
- Penetration and descending turns by symbolized as indicated in Appendix 1-7.

In order to facilitate legibility and clarity the profile view of the procedure track may begin with the intermediate fix.

#### **3.4.6. Missed Approach**

- The missed approach procedure shall be shown by symbol and note. The note shall specify what to do, including altitudes and distances. The facility or facilities used in the missed approach shall be identified in the note by facility identifier and type when more than one facility of the same type is depicted in the plan view. The missed approach note shall be positioned below the caption titled "MISSED APPROACH".
- All facilities, radials, fixes, and intersections used in the missed approach shall be shown in the plan view, depicted as stated under appropriate subject headings.
- One missed approach note shall suffice for dual profiles with identical missed approaches.
- When an obstruction or ATC reason requires a minimum rate of climb for the missed approach, a Minimum Climb Table shall be shown as close as possible to the Missed Approach Note in the profile. Asterisks shall be used to correlate the Missed Approach Note and Minimum Climb Table.

#### **3.4.7. Altitudes**

Minimum, Maximum, Mandatory, and Recommended Altitudes shall be shown along the profile procedure track, preceding the fix of facility to which they apply, as follows:

- Minimum Altitude  
This is an MSL altitude, vertical to a geographic location below an aircraft may not descend during an instrument approach. The requirement for a minimum altitude may be created by obstruction clearance criteria or airspace separation criteria. Minimum altitudes shall be depicted as an underlined number, e.g. 4000
- Maximum Altitude  
This is an MSL altitude, vertical to a geographic location, above which an aircraft may not be flown during an instrument approach. The requirement for a maximum altitude may be created by airspace separation criteria. Maximum altitudes shall be depicted as a number with a line above it, e.g. 4000
- Mandatory Altitude  
This is an MSL altitude, vertical to a geographic location, which an aircraft must maintain during a portion of an instrument approach. The requirement for such may be created by

airspace separation criteria or airspace separation criteria in conjunction with obstruction clearance criteria. Mandatory altitudes shall be depicted as a number with a line above and below it, e.g. 4000

– Recommended Altitude

This altitude category has been added to describe assigned altitudes other than those cited above and shall be depicted as a number without a line above or below.

– Transition Altitude

In areas where Transition Altitudes are established, they shall be abbreviated and shown as "TA" with appropriate altitudes. Preferable positioning shall be the top right corner of the profile section.

### 3.4.8. ILS Glide Slope (GS)

The ILS procedures are based on the use of electronic vertical guidance. The appropriate vertical guidance symbols shall be positioned at an angle from the approach end of the procedure runway. The angle of the glide slope may be varied to provide for the placement of inbound bearings, notes, altitude, etc. A note providing the glide slope angle (in degrees and hundredths) and the Reference Datum Height (RDH), as provided, shall be conveniently positioned within the profile, using the following format:

GS 3.0°  
RDH 55

The final approach track shall be centered on the glide slope symbol from the point of interception and continuing downward to the missed approach point. The track and vertical guidance symbol shall be cleared to provide for placement of inbound bearings, when shown.

The altitude of the glide slope or glide path at a fix or the outer marker as designated on the procedure shall be shown, positioned on and breaking the vertical line symbol, above the procedure track.

The actual point of interception of the glide slope with the procedure track shall be graphically depicted to indicate the interception point and altitude. The interception altitude shall be shown below the procedure track, with a lightning type arrowhead line leading to the actual point of glide slope interception.

### 3.4.9. Distance FAF to THR

On a non-precision approach with a FAF the distance between the FAF and the threshold shall be depicted with an arrow on each end, with the distance centered on and breaking the line, positioned between the lower neat line and the underline.

### 3.4.10. Notes

Notes shall be held to an absolute minimum and shall be based on user requirements consistent with a safe execution of the procedure.

### 3.4.11. Dual Approaches

Procedures portraying two final approaches, i.e., ILS, TACAN, may be published where depiction is not required, which would render the approach chart difficult to interpret. The following restrictions apply to the publication of dual final approach procedures:

- No procedure having a final approach step-down fix shall be published as a dual procedure unless the step-down fix applies to both procedures.
- The Final Approach Fix (FAF) for both procedures will be collocated whenever possible. Where a different final approach fix is required for each final approach, both final approach fixes shall be identified. The non-precision FAF shall be shown by a Cross, positioned on and breaking the procedure track.
- The final approach course shall be published for each final approach, one above and one below the final approach track, identifying the facility it applies to, e.g., 090° ILS, 093° VOR.

### 3.4.12. Description of the ALS depiction

The ALS depiction is a schematic of what the pilot has to expect when approaching an aerodrome. The amount of lines and cross lines in the drawing should relate to the actual number of rows and crossbars.

The length of the ALS will be shown in feet in the briefing strip of each approach procedure.

### 3.5. Time/Distance Table

On procedures where a distance from the final approach facility/fix to the missed approach is specified, a time/distance table may be shown as illustrated on Appendix 3-2. Time/distance table shall reflect knots as 60, 90, 120, 150 and 180 respectively.

On procedures with the facility located on the aerodrome and the missed approach point is the same facility (and on TACAN procedures), the time/distance table shall be omitted.

### 3.6. Minima Data

The landing minima data for the aerodrome shall be shown positioned in the space provided in the lower portion of the chart, as illustrated on the Appendices 3-1 and 3-2.

Landing minima data provided shall consist of the Minimum Descent Altitude (MDA) or Decision Altitude (DA), Runway Visual Range (RVR) or visibility (VIS), Height Above Aerodrome Elevation (HAA), or Height Above Touchdown Zone Elevation (HAT) and ceiling-visibility values (and if available no light visibility values) for the type of approach and approach speed categories indicated on a.m. appendices.

When the Minima for one type of approach are the same for two or more approach speed categories, the data shall be shown centered below the appropriate approach speed headings, eliminating the vertical separation line(s) between the approach speed categories. When space considerations demand, minima data may be positioned on two lines, one above the other, for each speed category and type of approach.

When available, approach minima and glide slope angle information shall be published on instrument approach charts.

The sequence of designation should be:

- S-(ILS, TACAN, LOC) Approaches
- Circling-PAR

Statement of categories

- A B C D E for Low procedures
- C D E for High procedures

Nomenclature of minima data shall be in accordance with AATCP-1 and as depicted in appendix 1-10.

## 4. AERODROME LAYOUT/RADAR

### 4.1. General

The Aerodrome Layout/Radar chart (Appendices 3-4 and 3-5) is divided into two main parts:

- Aerodrome Layout and
- Radar Minima, supplemented by RWY data, TWR and GCA/RADAR frequencies.

Type size, style and position of margin information shall be as shown in Appendix 3-5.

### 4.2. Aerodrome Layout

#### 4.2.1. Aerodrome Data

Aerodrome data shown must be of sufficient detail to facilitate visual orientation of aircraft while parked or taxiing.

#### 4.2.2. Color and Screen

The chart shall be prepared for one color presentation (black). Grey scales shall be used for portraying the maneuvering area (see Appendix 5-2).

#### 4.2.3. Scale

Scale will vary as necessary.

#### 4.2.4. Projection

Projection shall be Lambert Conformal. The grid net, as an overlay, is based on the World Global Coordinate System (WGS 84). The grid net of aerodrome layouts from non CENOR members may be based on other than World Global Coordinate System (WGS 84), e.g. European Datum, Ordnance System (OS). The respective datum will be displayed in the upper part of the aerodrome layout.

#### 4.2.5. Symbolization

For symbolization see Appendices 1-13, 1-14 and 6-1 to 6-4.

##### Graphic Information Requirements

- Runway with overrun
- Taxiway
- Taxiway Identification (not mandatory)
- Parking Areas
- Helicopter Landing Area
- Tower
- Aeronautical Information Service
- Aerodrome Reference Point
- Obstructions
- Aerodrome Beacon, Navigational Facilities
- Grid net
- INS Position

Operational Data Requirements

- Dimensions of RWY - THR to THR - (ft)
- RWY Designation
- RWY Heading (mag)
- Field Elevation
- Coordinates of ARP
- Final heading to or from the facility
- Arresting Gear and Jet Barriers (in relation to THR)
- Variation

**4.3. Minima/Data**

The minima shall be stated within a box in the lower part of the page consisting of following information and sequenced as such:

PAR Data

- RWY Designation
- GS
- TCH/OTCH
- RPI
- Approach Categories
- Minima
- DA (ft)
- VIS (km), RVR (m)
- HAT/DH (ft)
- CLG - VIS (ft - km) and no light vis

SRA Data

- RWY Designation
- Approach Categories
- Minima
- MDA (ft)
- VIS (km) RVR (m)
- HAT/DH (ft)
- CLG - VIS (ft - km) and no light vis

Circling Data

- RWY Designation
- Approach Categories
- MDA (ft)
- VIS (km)
- HAA/DH (ft)
- CLG - VIS (ft - km)

If required, information notes marked with an asterisk at the corresponding data will be placed within the Minima box.

Supplementary Data

Information concerning

- PCN / LCN
- TORA
- ASDA
- TODA
- LDA
- ASI
- ALS
- TDZE
- THR PSN

shall be listed within boxes in relation to the appropriate RWY designation below the plan view of the Aerodrome Layout.

Frequencies of

- TWR
- (RADAR APP)
- GCA and
- SSR Code

shall be stated in ascending order above the Minima box.

## 5. STANDARD INSTRUMENT DEPARTURE PROCEDURES

### 5.1. General

A Standard Instrument Departure (SID) Procedure is an air traffic control coded departure routing developed to simplify departure, the procedures and phraseology for issuing departure clearances and provide pilots with a pre-planned departure clearance.

Instrument Departure Charts are designed to provide the pilot with all electronic aid information, together with procedural and other pertinent data required to execute the departure.

The chart portrayal should be limited to one procedure. Procedures departing from opposite RWY with same exit/routing may be handled as one procedure.

The SID shall be plotted using, insofar as possible, the center of the graphic area for positioning of the first facility/fix after takeoff. However, it may not always be practicable to use the first facility/fix after takeoff as the chart center. Cartographic judgment must therefore be exercised in plotting the SID. All turns, altitude, radio aids to navigation, including radio aids used in the formation of fixes, germane to the procedure, shall be accurately plotted on the graphic.

Every effort should be made to chart to scale or in relative geographic position. However, due to distances involved on some route segments such a depiction may be the exception rather than the rule.

All information shall be plotted to indicate its true (or relative in not to scale presentations) geographic location. Identifications and data notes shall be positioned adjacent to or as near the symbol as possible, except when such placement would result in the obliteration of other detail. All textual or type data shall be positioned relative to true north.

### 5.2. Margin Information

- Type of procedure
- Aerodrome name and location indicator
- Procedure designation
- Aerodrome reference point
- Authorizing agency
- Changes
  - NEW PROCEDURE – self explanatory
  - EDITORIAL – corrections to writing mistakes or wording without impact on the way the procedure has to be flown
  - MINIMA – changes to altitude/height or weather minima
  - FREQUENCY/-IES – changes to one or more radio frequencies
  - NAV AID (TACAN etc.) – new navigational aid or changes to its frequency, “NAV AID” is to be replaced by the type of navigation aid
  - WARNING – new or changed warning notation
  - CAUTION – new or changed caution notation
  - NOTE – new or changed note
  - VARIATION – change to the variation
  - MISSED APPROACH – change to the missed approach procedure
  - OBSTACLE/S – new or changed obstacle/s
  - ITEM COORDINATES – changes to coordinates; ITEM is to be replaced by e.g. ARP

If changes cannot be described by this standard terminology other wording may be used.

A Briefing Strip placed on the head of plan view provides information in the sequence in which pilots would normally brief or review the procedure prior to flying it (Appendices 4-1 to 4-3).

### 5.3. Plan view

#### 5.3.1. General

The chart shall encompass the area required to effectively show the departure routing, including transitions to the appropriate en route structure. One procedure shall be shown on each chart. Take-off portrayals from more than one runway, or opposite ends of a runway, are not to be treated as separate procedures.

All routes, turns, altitudes, radio aids to navigation, facilities forming intersections and fixes, and those facilities terminating the departure route (where the procedure joins the altitude structure for which the departure was established), shall be shown in the graphic depiction. Leader lines may be used as required.

#### 5.3.2. Communications

Communications information, when available, should be shown in the Briefing Strip. Terminal communications information when available and identified by the OPR shall be shown by name, e.g., "DEP CTL". Terminal communications shall be abbreviated. Generally, one primary VHF and one primary UHF Departure Control frequency shall be shown.

Additional communications, as identified, shall not exceed one VHF and one UHF primary frequency for each of the following:

- Ground Control (GND CTL).
- Tower (TWR).
- Area Control Center (ACC).

#### 5.3.3. Aerodromes

The aerodrome of departure shall be shown by screened outline pattern depicting all runways, including closed runways (Appendix 4-2). Aerodromes in the immediate vicinity of the departure track, which affect the departure route, shall be shown.

#### 5.3.4. Radio Aids to Navigation

Radio aids to navigation used in the procedure, including transitions and those shown to establish fixes, intersections, etc., shall be shown, positioned in their relative geographical location with the following exceptions:

- Radio aids to navigation that are located beyond the established limits of the chart area used to establish transitions shall be brought or moved within the neat line of the plan view, retaining its magnetic bearing relationship. Mileage and bearing values, etc., shall, however, be accurate.
- Radio aids to navigation that are located beyond the established limits of the chart area and used to establish fixes, intersections, etc., shall not be brought or moved within the neat line of the plan view.

Radio aids to navigation shown shall be appropriately displayed by symbol, frequency identifier, Morse code and/or channel number. The navigational aid the SID is based on shall be described within a box. Boxes shall be of a size consistent with the informational data contained therein.

#### 5.3.5. Routes

Departure and transition routes (Appendix 4-2) shall be shown, broken for all symbols and for the insertion of bearing values. Directional arrowheads shall be positioned on the routes, near, but not touching the symbol.

A departure route that terminates at one radio aid to navigation shall show the departure route from the aerodrome to the terminal facility. A departure route that terminates at two or more radio aids to navigation shall show the departure route from the aerodrome to the radio aid to navigation that is common to all of the terminating facilities. Depiction of departure and transition routes may be shown not to scale if it will depict the procedures more clearly. Such a

depiction may be necessary due to distances involved on some route segments of the departure procedures.

#### **5.3.6. Altitudes**

Restrictive altitudes along the departure route shall be shown.

Minimum, Maximum, Mandatory and Recommended Altitudes shall be shown along the procedure track, preceding the fix of facility to which they apply. The use of the over/under line on altitudes of the SID shall be identical to the wording of the IAP as stated in Chapter III item 4.7.

#### **5.3.7. Changeover Points**

Changeover points, other than midpoints (plus or minus one NM) shall be shown when so identified and submitted on the procedure form.

#### **5.3.8. Radial Lines**

Those radials that are associated with the departure route, intersections, reporting points and mileage fixes shall be shown and identified (Appendix 2-8). Lead radials, when identified and submitted with the procedure, shall be additionally identified with the letters "LR" preceding the numbered value, e.g., LR-053.

#### **5.3.9. Bearing Lines**

Those bearings associated with the departure route, intersections, reporting points, and mileage fixes shall be shown and identified (Appendix 2-8). Bearing lines shall be shown by an arrowed line from the fix to the radio aid to navigation, with the value. Bearing values shall be in three digits. A degree sign shall be shown with all bearing values.

#### **5.3.10. Reporting Points, Intersections and Fixes**

Reporting points (compulsory and non-compulsory), intersections and fixes described in the SID shall be shown.

#### **5.3.11. Special Use Airspace**

Special Use Airspace that falls within the area of coverage of the standard instrument departure chart shall be shown only when considered critical to the procedure as designated by the formulating agency. The functional procedural data in no case is to be obliterated by Special Use Airspace boundary/data.

Special Use Airspace shall be identified as designated, e.g. ED-R 116 (Appendix 2-8)

#### **5.3.12. Obstacles**

Prominent obstacles such as buildings, radio masts, towers, mountain peaks, terrain features, and other objects which would have an influence on the SID shall be shown in their exact geographic location so as to be in true relationship to the departure procedure. When portrayal of several obstacles in a small area would tend to create clutter, only the highest of the group need be shown.

The elevation of the top of the obstacles above mean sea level shall be shown to the nearest foot.

Spot elevations shall be plotted accurately according to geographic location and indicated by a dot with the elevation value placed nearby.

Obstacles and spot elevations shall be shown by the symbol illustrated in Appendix 2-8.

#### **5.3.13. Minimum Climb Rate**

When established by the formulating office, a minimum rate of climb table, as determined by the controlling obstacles, or due to ATC-reasons, shall be placed in the top right corner of the plan view.

Minimum rates shall be shown as vertical velocity (V/V) in feet per minute (fpm) in 60 knots increments, from 60 knots to 240 knots for conventional a/c and copter and 120 knots to 360 knots for high performance a/c. If these values will exceed a "Caution Note" has to be made.

Where multiple runway departures are required, provision shall be made in the minimum climb rate table to show the vertical velocity information for all runways involved.

When the departure requires a minimum climb rate it must indicate the reason and the altitude and/or fix at which the climb gradient is no longer required.

Operational notes shall be held to an absolute minimum and shall be based on user requirements concerning lost communications and procedural data notes consistent with a safe execution of the procedure.

#### **5.3.14. Minimum Sector Altitude**

See Chapter III item 3.16

#### **5.3.15. Special Boundaries**

When required, special boundaries, e.g. Identification zone (IZ), may be shown using symbolization as shown on the legend.

#### **5.3.16. Aerodrome Elevation**

The elevation of the aerodrome shall be displayed as shown on Appendix 4-1. It shall be the same elevation as shown on the Instrument Approach Charts.

#### **5.3.17. Transition Altitude**

The transition altitude will be displayed as shown on Appendix 4-1.

#### **5.3.18. Variation**

Variation information shall be shown on Standard Instrument Departures charts. Variation information will consist of a magnetic variation diagram, displayed in the upper left portion of the plan view.

### **5.4. Departure Route textual Description**

The departure route text shall be printed below the plan view.

A written description of the departure procedure, including all turns, altitudes, headings, distances, facilities/fixes and all routes (indicating number if on airways, or direct if off airways) to the terminating facility/fix will be printed as provided by the OPR (see Appendix 4-2).

## 6. SPECIAL AUTOCAD PROCEDURES AND PRINTING

### 6.1. General

The purpose of this instruction is to provide the requirements for the printing layouts and printing of Instrument Approach Procedures (IAP) and Standard Instrument Departure Procedures (SID).

### 6.2. IAP and SID

#### 6.2.1. General

These publications consist of IAP, SID and associated data in bound book form having separate printed covers and pages.

#### 6.2.2. Paper

Paper used for the production of the publications will be as follows:

Book Pages (IAP/SID) white, free from chlorine poached 80g paper

Cover Pages paper 170 g, color to be used is green-light for IAP Volume 1, green-dark for IAP Volume 2 and yellow for SID

#### 6.2.3. Ink

Ink color required for print of the publications is black.

### 6.3. Special AutoCAD procedures

The covers and pages are printed in solid colors.

SID, IAP and aerodrome layout

- Frame, Lines and Symbols Solid (100 %)
- Text Solid (100 %)

#### 6.3.1. Use of grey scales and AutoCAD screening

See appendix 5 for detailed description of grey scales and AutoCAD screening to be used.

#### 6.3.2. Use of common standard layers and colors

##### Layer

- FRAME – Black / White
- DRAW – Black
- SYMBOLS – Green
- HELP – Magenta
- TEXT – Red
- HATCH – Cyan
- GRID (AD-Layout) – Blue

## **6.4. Printing**

### **6.4.1. Pages and Covers**

Charts (on pages) are printed back to back, head to foot. The outside front cover and the outside back cover are printed head to bound edge. The inside front cover is printed toot to the bound edge; the inside back cover is printed head to the bound edge.

Graphics and/or descriptions on cover, pages, and single sheets are printed back to back, head to head.

Cover images are printed centered on the finished cover size.

IAP, SID and Aerodrome Layout pages are printed back to back, head to foot, with the lines of type reading parallel to the bound edge.

### **6.4.2. Collating**

The pages will be collated in the proper sequence, i.e., Roman page numerals first, followed by the procedures of the appropriate aerodromes in the alphabetical order.

## **6.5. Bookbinding**

The approved bookbinding is a kind of closed wire ring binding.

## 7. LIST OF AERODROMES PUBLISHED IN CENOR FLIP IAP AND/OR SID

This Chapter contains a list of all aerodromes published in the CENOR FLIP IAP and SID in connection with the appropriate user and responsible CENOR partner for preparations and amendments.

### 7.1. Abbreviations used in this List

- BEL Belgium
- CZE Czech Republic
- DNK Denmark
- FRA France
- GBR Great Britain
- DEU Germany
- ITA Italy
- NLD Netherlands
- NOR Norway
- PRT Portugal
- SWE Sweden
- USA United States

### 7.2. List of Aerodromes

AERODROME	LOC INDICATOR	ORIGINATOR	RESPONSIBILITY
Aalborg	EKYT	DNK	DNK
Aarhus	EKAH	DNK	DNK
Alghero	LIEA	ITA	DEU
Andoya	ENAN	NOR	NOR
Ansbach	ETEB	USA	DEU
Aviano	LIPA	ITA	DEU
Avord	LFOA	FRA	DEU
Banak	ENNA	NOR	NOR
Bardufoss	ENDU	NOR	NOR
Beauvechain	EBBE	BEL	BEL
Bergen/Flesland	ENBR	NOR	NOR
Billund	EKBI	DNK	DNK
Bodö	ENBO	NOR	NOR
Büchel	ETSB	DEU	DEU
Bückeburg	ETHB	DEU	DEU
Cambrai-Epinoy	LFQI	FRA	DEU
Čáslav	LKCV	CZE	CZE
Cazaux	LFBC	FRA	DEU
Celle	ETHC	DEU	DEU
Cognac Chateaubernard	LFBG	FRA	DEU

<b>AERODROME</b>	<b>LOC INDICATOR</b>	<b>ORIGINATOR</b>	<b>RESPONSIBILITY</b>
Coleman	ETOR	USA	DEU
Colmar-Meyenheim	LFSC	FRA	DEU
Coningsby	EGXC	GBR	NLD
Cottesmore	EGXJ	GBR	NLD
Decimomannu	LIED	ITA	DEU
Deelen	EHDL	NLD	NLD
De Kooy	EHKD	NLD	NLD
Diepholz	ETND	DEU	DEU
Dijon-Longvic	LFSD	FRA	DEU
Eindhoven	EHEH	NLD	NLD
Erding	ETSE	DEU	DEU
Esbjerg	EKEB	DNK	DNK
Fassberg	ETHS	DEU	DEU
Florennes	EBFS	BEL	BEL
Fritzlar	ETHF	DEU	DEU
Geilenkirchen	ETNG	DEU	DEU
Ghedi	LIPL	DEU	DEU
Gilze-Rijen	EHGR	NLD	NLD
Göteborg/Säve	ESGP	SWE	NOR
Goetsenhoven	EBTN	BEL	BEL
Grafenwöhr	ETIC	USA	DEU
Grazzanise	LIRM	ITA	DEU
Grosseto	LIRS	ITA	DEU
Gütersloh	ETUO	GBR	DEU
Harstad/Narvik Ev.	ENEV	NOR	NOR
Helchteren Range	EB P5	BEL	BEL
Hohn	ETNH	DEU	DEU
Holzdorf	ETSH	DEU	DEU
Illesheim	ETIK	USA	DEU
Ingolstadt	ETSI	DEU	DEU
Istres-le-Tube	LFMI	FRA	DEU
Jever	ETNJ	DEU	DEU
Karup	EKKA	DNK	DNK
Kbely	LKKB	CZE	CZE
Kinloss	EGQK	GBR	NLD
Kiruna	ESNQ	SWE	NOR
Kleine-Brogel	EBBL	BEL	BEL
Koksijde	EBFN	BEL	BEL
Kristiansand/Kjevik	ENCN	NOR	NOR

<b>AERODROME</b>	<b>LOC INDICATOR</b>	<b>ORIGINATOR</b>	<b>RESPONSIBILITY</b>
Laage	ETNL	DEU	DEU
Lakenheath	EGUL	GBR	NLD
Landivisau	LFRJ	FRA	DEU
Landsberg/Lech	ETSA	DEU	DEU
Laupheim	ETHL	DEU	DEU
Lechfeld	ETSL	DEU	DEU
Leeming	EGXE	GBR	NLD
Leeuwarden	EHLW	NLD	NLD
Leuchars	EGQL	GBR	NLD
Liege/Bierset	EBLG	BEL	BEL
Lossiemouth	EGQS	GBR	NLD
Lulea/Kallax	ESPA	SWE	NOR
Luxeuil	LFSX	FRA	DEU
Marham	EGYM	GBR	NLD
Metz-Frescaty	LFSF	FRA	DEU
Mildenhall	EGUN	GBR	NLD
Monte Real	LPMR	PRT	DEU
Náměšť	LKNA	CZE	CZE
Nancy-Ochey	LFSO	FRA	DEU
Neubrandenburg	ETNU	DEU	DEU
Neuburg	ETSN	DEU	DEU
Niederstetten	ETHN	DEU	DEU
Nimes	LFTW	FRA	DEU
Nörvenich	ETNN	DEU	DEU
Nordholz	ETMN	DEU	DEU
Odense	EKOD	DNK	DNK
Orland	ENOL	NOR	NOR
Oslo / Gardermoen	ENGM	NOR	NOR
Pardubice	LKPD	CZE	CZE
Piacenza	LIMS	ITA	DEU
Přerov	LKPO	CZE	CZE
Ramstein	ETAR	USA	DEU
Reims-Champagne	LFSR	FRA	DEU
Rheine-Bentlage	ETHE	DEU	DEU
Rimini	LIPR	ITA	DEU
Roenne	EKRN	DNK	DNK
Roskilde	EKRK	DNK	DNK
Rygge	ENRY	NOR	NOR
Saint-Dizier Robinson	LFSI	FRA	DEU
Schleswig	ETNS	DEU	DEU
Skrydstrup	EKSP	DNK	DNK
Solenzara	LFKS	FRA	DEU

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<b>AERODROME</b>	<b>LOC INDICATOR</b>	<b>ORIGINATOR</b>	<b>RESPONSIBILITY</b>
Spangdahlem	ETAD	USA	DEU
Stavanger/Sola	ENZV	NOR	NOR
Torp	ENTO	NOR	NOR
Trapani/Birgi	LICT	ITA	DEU
Tromso/Langnes	ENTC	NOR	NOR
Trondheim/Vaernes	ENVA	NOR	NOR
Vigra	ENAL	NOR	NOR
Vliehors Range		NLD	NLD
Volkel	EHVK	NLD	NLD
Waddington	EGXW	GBR	NLD
Wiesbaden	ETOU	USA	DEU
Wittering	EGXT	GBR	NLD
Wittmundhafen	ETNT	DEU	DEU
Woensdrecht	EHWO	NLD	NLD
Wunstorf	ETNW	DEU	DEU

## 8. ADMINISTRATION

### 8.1. Number and national Proportion of CENOR FLIP

#### 8.1.1. IAP Volume 1

Belgium	197
Czech Republic	40
Denmark	195
Germany (including spare copies)	2.136
Netherlands	570
Norway	230
	<u>3.368</u>

#### 8.1.2. IAP Volume 2

Belgium	197
Czech Republic	40
Denmark	165
Germany (including spare copies)	3.081
Netherlands	570
Norway	115
	<u>4.168</u>

#### 8.1.3. SID

Belgium	192
Czech Republic	40
Denmark	100
Germany (including spare copies)	2.995
Netherlands	560
Norway	175
	<u>4.062</u>

### 8.2. Shipment of CENOR FLIP

Normally the FLIP should be ready for shipment at the Federal Printing Office on Mondays, 10 days prior effective date.

#### 8.2.1. Belgium

The shipment will be handled by the Belgian Air Component. The CENOR FLIP will be picked up at the federal printing office.

The printing office will send a fax to:

Belgian Air Component – COMOPSAIR  
 Movement Control Centre (MCC)  
 Fax +32 2 701 7062

and in addition for information to:

Belgian Air Component – COMOPSAIR  
 Airspace Control Ops  
 Fax +32 2 701 7266

### 8.2.2. Czech Republic

The Federal Printing Office will send the FLIP directly to:

VU 6950 Praha  
MIL AIS Centre  
Pilotů 217  
161 00 PRAHA 614  
Czech Republic

### 8.2.3. Denmark

The contracting firm Thyssen Haniel Air GmbH, Frankfurt will collect the FLIPs at the Federal Printing Office at Dietzenbach for shipment to:

Danish Defence Acquisition and Logistics Organization (DALO)  
Joint Publication Centre  
Logistic Depot Noret  
Norvangen 23  
4220 Korsøer  
Denmark

via SAS at Frankfurt Rhein Main Airport.

Note: The contracting firm is commissioned by the Supply Depot Vaerloese.

The Federal Printing Office will send a Fax, if the CENOR FLIP are ready for pick up to: DAN Transport, 8000 Arhus Fax No ++45 - 89 36 - 45 03

### 8.2.4. Germany

Germany (AFSBw) will receive its FLIP by means of the Federal Printing Office.

### 8.2.5. Netherlands

The CENOR FLIP will be picked up at the federal printing office. This office is available for pick up: Monday-Friday 07.30 – 16.00.

### 8.2.6. Norway

The Federal Printing Office has to inform the firm DHL that the FLIP are ready for being picked up. If the FLIP have been picked up the Federal Printing Office will send a fax to the LOI/FLIP-Office, Rygge, Fax No: ++47 - 69 23 82 09.

## 8.3. Payment

The Federal Printing Office will send the bill directly the following offices:

### 8.3.1. Belgium

Belgian Air Component - COMOPSAIR  
AIRSPACE CONTROL OPS (A3.2)  
Distribution Aeronautical Documentation  
Kwartier Koningin Elisabeth / Quartier Reine Elisabeth  
Block 5Bis  
Eversestraat 1  
B-1140 BRUSSELS  
BELGIUM

### 8.3.2. Czech Republic

Joint Forces Headquarters  
J3 / OBP VzS  
Dobrovského 6  
771 11 OLOMOUC  
Czech Republic

**8.3.3. Denmark**

Danish Defence Acquisition and Logistics Organization (DALO)  
Joint Publication Centre  
Logistic Depot Noret  
Norvangen 23  
4220 Korsoer  
Denmark

**8.3.4. The Netherlands**

Royal Netherlands Army Geographic Agency  
Lkol Tonnetkazerne  
Building 73  
Procurement and Distribution Office  
Postbus 1000  
8084 ZX 't Harde  
The Netherlands

**8.3.5. Norway**

Norwegian Defence Accounting Office  
Att: 15068  
K-11  
P.O Box 1, Haakonsværn  
N-5886 Bergen  
Norway

**8.3.6. Transfer of amount of invoice**

The amount of invoice shall be transferred cashless to the account number of the Federal Printing Office.

**8.4. Addresses, Phone Numbers and Teletype Addresses of CENOR Members****8.4.1. Steering Committee**Belgium

COMOPSAIR  
Airspace Control Ops (A3.2)  
Kwartier Koningin Elisabeth  
Eversestraat 1  
B – 1140 BRUSSELS  
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## 9. APPENDICES

### 9.1. General Pages Instrument Approach Procedures Vol. 1 & 2

1-1	Front Cover CENOR FLIP IAP Vol. 1	14 JAN 2010
1-2	Front Cover CENOR FLIP IAP Vol. 2	14 JAN 2010
1-3	Table of Contents CENOR FLIP IAP Vol. 1	14 JAN 2010
1-4	Table of Contents CENOR FLIP IAP Vol. 2	14 JAN 2010
1-5	General Information I	01 JUL 2010
1-6	General Information II	01 JUL 2010
1-7	Abbreviations, Identification of Procedures	01 JUL 2010
1-8	Altitude Correction Chart	01 JUL 2010
1-9	Landing Minima Explanation	01 JUL 2010
1-10	Determination of Declared Distances for Runways	01 JUL 2010
1-11	Legend I	01 JUL 2010
1-12	Legend II	01 JUL 2010
1-13	Approach Lighting Systems I	01 JUL 2010
1-14	Approach Lighting Systems II, Load Classification Number I	01 JUL 2010
1-15	Load Classification Number II	01 JUL 2010
1-16	Contact Points for the Change from VFR to IFR Flights	01 JUL 2010
1-17	Rate of Climb / Descent Table	01 JUL 2010
1-18	Back Cover	01 JUL 2010

### 9.2. General Pages Standard Instrument Departures

2-1	Front Cover	14 JAN 2010
2-2	Table of Contents	14 JAN 2010
2-3	General Information I	01 JUL 2010
2-4	General Information II	01 JUL 2010
2-5	Abbreviations, Identification of Procedures	01 JUL 2010
2-6	Altitude Correction	14 JAN 2010
2-7	Legend	01 JUL 2010
2-8	Rate of Climb / Descent Table	01 JUL 2010
2-9	Back Cover	01 JUL 2010

### 9.3. Formats Instrument Approach Procedures Vol. 1 & 2

3-1	Format IAP	01 JUL 2010
3-2	Format IAP	01 JUL 2010
3-3	Briefing Strip	01 JUL 2010
3-4	Aerodrome Layout	01 JUL 2010
3-5	Aerodrome Layout	01 JUL 2010

### 9.4. Formats Standard Instrument Departures

4-1	Format SID Procedures	01 APR 2009
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4-2	Format SID Procedures	01 APR 2009
4-3	Briefing Strip	01 APR 2009

### **9.5. Additional Specifications SID and IAP**

5-1	Lettertype and Line Strength	30 SEP 2009
5-2	Shades of Grey	30 SEP 2009

### **9.6. Symbols**

6-1	NavAid, Waypoint, Obstructions	01 JUL 2010
6-2	Obstructions, HIRTA, Miscellaneous	01 JUL 2010
6-3	Miscellaneous	01 JUL 2010
6-4	Miscellaneous, Approach Lighting System	01 JUL 2010

### **9.7. PDF-File Specifications Version 1.0**

7-1		01 JUL 2010
7-2		01 JUL 2010