Jeppesen NavData®

ARINC 424 Data Definition Document

ATRS_R-002

Document Version: 4.0

10 March 2023

Change Log

Date	Version	Changed By	Description of Change(s)
19 April 2005		D. Ginty	Initial Release
16 May 2005		J. Wall	Add Approval Signature and Revision History
6 December 2006		S. Onitiu	Enlarged list of CA/RA types added (Jeppesen Airspace Translation document incorporated).
15 February 2006		W. Cook	Review of differences to the main record format; updates of ARINC Format available for some record types.
17 March 2006		R. Wagner	Editorial changes to Data Classification.
24 Aug 2006	1.1	A. Riedel	Added paragraphs to Introduction. Added version number and updated dates. Added 5.254 Fixed Radius Trans Indicator not supported note to Enroute Airways. Updated SID/STAR Approach supported data.
25 January 2007	1.2	S. Moody	Updated Airway Marker available format. Updated available SID/STAR/Approach and Path Point format. Update Department and Group name.
22 February 2007	1.3	S. Moody	Added GLS (PT) records, Updates to Header and Footer information.
2 August 2007	1.4	J. Wuich	Notable differences to PF record type updated
17 September 2007	1.5	A. Riedel	Add Biz Rules and QC Edits statements, Frequency Units supported for PV and EV records
15 January 2008	2.0	J. Wuich, S. Moody, A. Riedel	Added Helicopter entities, Updated Accuracy Levels
	2.1	A. Riedel	Re-inserted the Routine Accuracy Level statement, added GPS Phase Indicator and Unit Indicator to the Data Classification Table.
15 January 2009	2.2	A. Ware	Revise format to -18 for PA, ER, EA, PI, DB, PC, and D records.
30 January 2009	2.3	A. Ware	Inserted acknowledgement statement for NavData Notices. Updated Jeppesen Logo. Added Final End Point (FEP) availability statement to SID/STAR/APP record types page.
14 April 2009	2.4	S. Moody	Updated PF record field content. Updated PG record for runway gradient and second Loc Ident.
23 July 2009	2.5	S. Moody	Updated PF -18 format route type and added HD and HE helicopter options.
11 February 2010	2.6	A. Jacobson	Added EU record for Airway Restrictions

26 March 2010	2.7	D. Higgins	Added comments to FIR/UIR, Restrictive Airspace, & Controlled Airspace data being output with WGS-84 as the geodetic datum. General cleanup for spelling & consistency in format & terminology.
7 April 2011	2.8	S. Moody	Multiple changes to ARINC 424 version supported and entity parameters.
9 May 2011	2.9	A. Riedel	Added separate Traceability and Completeness sections, updated Introduction section accordingly.
15 June 2011	2.95	A. Riedel	Updated Resolution statement
08 July 2011	3.0	A. Ware	Updated selectable parameters
10 Jan 2012	3.1	A. Ware	Update Airport Comms, Helicopter Entities, Grid Mora and Holding Patterns, SID/STAR /APP Rec Nav , Enroute Airways
07 Aug 2012	3.2	A. Riedel	Added reference to Alert distribution using RSS Feeds and removed reference to Casual Assurance Level for other data types
18 March 2013	3.3	A. Riedel	Added Additional Assurance Level statements in the Data Classification Section for RNP AR Validation Services Jeppesen Offers
26 March 2014	3.4	S. Moody	Added 665 CRC, Datum ref to Jepp Supp, VFR Reporting Points, Rec Nav ref to Jepp Supp, remove -19 from runway, added -19 MSA, added -19 TAA, updated controlled airspace table, added Climb Gradient record, Controlled Airspace records, Restrictive Airspace records, and Preferred Route records.
9 September 2016	3.5	S. Moody	Added half degree waypoint NAT naming convention. Added FRT for enroute airways, GPS/FMS indicator codes, special indicator field, route type options, waypoint desc code options, and modified altitude desc support clarification for terminal procedures. Added ICAO code for additional sub-divisions. Added optional airport and enroute comm types and service ind codes.
8 August 2017	3.6	K. Jermyn	Added definitions of ATS Service Suffixes which are provided in some Enroute Airway records and as part of ARINC Field 5.8 (Route Ident). Updated Restricted Airspace Types available.
6 May 2019	3.7	K. Phillips	Updated Airway Route Types not available. Updated supported ARINC versions for Helicopter MSA. Updated available Route Type for -18 and -19 procedures records.

			Added support for Runway Continuation records. Added support for Supporting Facility on Localizer and Glide Slope records. Added support for Procedure Design Cat/Type. Added support for SBAS final approach course on path point records.
21 October 2019	3.8	K. Phillips	Updated Runway Continuation Record with -21 Note. Updated Controlled Airspace Continuation – Jeppesen Unified format to align with correct format. Added support for Runway Accuracy Compliance Flag and Landing Threshold Elevation Accuracy Compliance Flag on runway records Removed ARINC 665 CRC option for ARINC -15 header
6 October 2020	3.9	V. Meyer	Removed Route Type of "A" from ARINC -8 and -18 formats as being not supported on ER records. Moved to new template. Editorial changes.
16 May 2022	3.10	K. Phillips	Added support for HP records. Added support for Fixed Radius Transition Indicator on ER records. Added Controlled Airspace (UC) Primary Extension support. Added Airport and Heliport helipad (PH and HH) as not supported records. Updated Route Types supported on ER records. Reviewed Introduction section. Minor updates applied.
10 March 2023	4.0	K. Jermyn	Updated National Security Area output definition within Restrictive Airspace Types table. Updated the Controlled Airspace table with new Controlled Airspace Types.

Table of Contents

Introduction

Jeppesen is committed to providing the highest-level quality of data to its customers and has designed a quality management system conforming to the practices recommended in RTCA DO-200A/EUROCAE ED-76. The intent of these practices is to provide assurance to our customers that the necessary steps are taken to ensure the appropriate level of quality exists in Jeppesen ARINC 424 data. In support of our compliance with DO-200A/ED-76, Jeppesen has created the Data Definition Document as a working record to establish and maintain concurrence of data requirements with customers of Jeppesen ARINC 424.

ICAO Annex 15 sets forth standards and recommended practices for States to follow for the dissemination of aeronautical data. Jeppesen produces ARINC 424 consistent with the information published by the States having governing authority over their respective airspace and aeronautical facilities. Jeppesen has no control over the accuracy, resolution or quality of the data supplied by the States. Jeppesen receives information from the States in the form of an Aeronautical Information Publication (AIP) or other various source documents. Not all States comply with ICAO Annex 15 and inclusion of data in Jeppesen NavData does not represent or imply compliance.

The Data Definition Document contains information on the content, format, accuracy, resolution, timeliness and quality assurance level of Jeppesen NavData. This document describes the types of ARINC 424 and Jeppesen Supplemental records available in Jeppesen NavData.

Data format or other changes that might affect the Data Definition Document must be coordinated with Avionics OEMs via the standard 120-day Notice period or 30-day Notice period. Notices published with a 120-day implementation period typically are impacts to the ARINC data where Jeppesen does not offer an option whether to receive the changes or not. Notices published with a 30-day implementation period are impacts to the ARINC data where Jeppesen will offer Avionics OEMs a choice to receive the new data or the older format data. Avionics OEMs shall notify Jeppesen when they are ready to accept the new data as stated in the 30-day Notice.

Jeppesen shall require all users of the NavData affected by the Notice to acknowledge the receipt of any 30-day or 120-day Notice within two weeks of sending such notice. The acknowledgement does not require a decision regarding the content of the Notice, merely a confirmation that the Notice was received. Email is an accepted format for the acknowledgment. If Jeppesen has not received an acknowledgement after two weeks, Jeppesen will re-send the Notice and contact the user to confirm receipt.

Jeppesen shall make available a data alterations report upon request for any source data that fall outside the standard practices of coding published information.

Jeppesen shall issue NavData Alerts using RSS Feed Technology for changes and errors to ARINC 424 datasets issued by Jeppesen. Alerts are not designed for individual pilot notification but are intended to supplement the NavData Change Notices by disseminating time critical information

that could have a significant impact on flight operations. Significant changes affecting Jeppesen navigation data are published in NavData Change Notices which are distributed in a subscription service and are available as “On Demand Notices” on www.jeppesen.com. NavData Alerts and NavData Change Notices are available at www.jeppesen.com and should be subscribed to using RSS Feed Technology. The instructions for subscribing to Alerts using RSS Feed Technology is described in the 30 Dec 2019 Customer Service Bulletin, titled “Change in RSS Feed for Jeppesen Notices and Alerts,” which is posted on www.jeppesen.com under the Notices and Alerts section.

Accuracy

The accuracy of Jeppesen ARINC 424 is equal to the source data provided by the States. Jeppesen performs consistency and logical checks on this source data prior to committing it to our database and at various points throughout our production process. Any inconsistencies are coordinated with the State. Every effort is made to attempt to resolve any detected problems through the State.

Resolution

Jeppesen maintains all data contained in our database to the same resolution or greater as defined by ARINC 424 specifications for each individual element. Jeppesen also outputs this data to the resolution defined in ARINC 424 for each data element.

Data Classification (DO-200A/ED-76 / DO-201A/ED-77 Assurance Levels)

Jeppesen ARINC 424 is maintained at Data Classification Levels that meet or exceed those set out in RTCA DO-201A / EUROCAE ED-77. Data elements that are maintained by Jeppesen and are not listed in DO-201A/ED-77 but contain characteristics similar to or the same as DO-201A/ED-77, are also maintained at Assurance Levels that meet or exceed DO-201A/ED-77. The table below depicts additional elements that Jeppesen maintains at Essential or Critical.

Aeronautical Data	**Jeppesen Data Classification Levels**
All Data containing a CRC	Critical
Latitude And Longitude Data	Essential or greater (With CRC)
Elevation and Altitude Data	Essential or greater (With CRC)
Declination and Magnetic Variation Data	Essential
Bearing Data	Essential
Length or Distance Data	Essential
Width Data	Essential or greater (With CRC)

Offset Data	Essential
Angular Data	Essential or greater (With CRC)
Frequencies	Essential
Turn Direction	Essential
FIR/UIR Indicator	Essential
SUA Type	Essential
Channel Number (path point record)	Essential
Unit Indicator (5.133)	Essential
GPS Phase Indicator (5.222)	Essential
RNP Values	Essential

Additionally, all key information such as Airport, Waypoint, Procedure, NAVAID and Airway Identifiers are maintained at the Assurance Level of Essential.

Jeppesen offers multiple additional Validation Services for RNP AR procedures to comply with the requirements described in FAA AC90-101A. The Data Assurance Level for RNP AR Procedures covered under those Service Agreements are considered the same Level as required for RNP AR procedures under FAA AC90-101A, Appendix 3. The increased Assurance Levels applies to those fields covered under Data Parameters Associated with Appendix 3, FAA AC90-101A. For more information on the affected fields, please refer to the FAA RNP AR website or contact your Jeppesen Representative.

Business Rules and Quality Control Edits

In addition to applying the data classification levels defined above, Jeppesen further ensures that the quality of our data exceeds the requirements defined in DO-201A/ED-77 by applying business rules and quality control (QC edit) checks to all elements maintained in our database. Business rules are used in the data capture tool to ensure the information maintained by our Analysts meets Jeppesen's and the Aviation Industry's defined quality criteria. QC edits are used to verify the data within the ARINC strings prior to release to the customers. These edits can either be duplications of the upfront business rules and/or enforce ARINC rules that cannot necessarily be applied to the upfront data.

Jeppesen believes the business rules and QC edits that we apply to certain ARINC data elements qualify them to fall under the Essential accuracy level. Also, in some cases our database

functionality for certain elements is sufficient to qualify those elements as Essential. Those elements are listed in the following table:

ARINC data element	**Jeppesen Data Classification Levels after biz rules/QC edits applied**
Route Type (5.7)	Essential
Waypoint Descript Code (5.17)	Essential
Path and Termination (5.21)	Essential
Approach Qualifier (5.7)	Essential
Level of Service Code (5.276)	Essential
Level of Service Text (5.275)	Essential
Runway Lighting (JS 5.20)	Essential
Communication Type (5.101)	Essential
Guard/Transmit (5.182)	Essential
Boundary Via (5.118)	Essential
Multicode (5.10)	Essential

Data that does not fall into any of the categories listed above are maintained at an Assurance Level of Routine. Jeppesen also maintains some data at an Assurance Level we define as Casual. This includes cultural data and data not critical to flight navigation.

Timeliness

Jeppesen makes every effort to procure data from the States in as timely a manner as possible. At times though, despite these efforts, the source data is received from the State too late to appear in the 28-day AIRAC cycle it was intended for. When this occurs, the late information may appear in Jeppesen NavData Change Notices or if appropriate, in a NavData Alert.

Traceability

Jeppesen achieves data traceability defined by the DO-200A/ED-76 requirement for tracking data from its original publication through to its application by utilizing a combination of processes.

One of those processes includes Jeppesen's Managed Information Tracking System (MITS). MITS is Jeppesen's source document recording and tracking system used for all data source import operations. All new source documents (paper and digital source) are logged into MITS and assigned a unique MITS ID by Jeppesen. Along with the MITS ID, Jeppesen captures other descriptive data such as the source provider, country name, chart name, section name, information capture dates, names of personnel entering and verifying the data and other pertinent data for the source document into the MITS record. A MITS report generator is available for querying the MITS source document library for output of data source reports.

Completeness

An extensive set of worldwide navigation data for the records defined in this document is available in Jeppesen ARINC 424. However, it may not include data for all aeronautical facilities, routes, procedures, boundaries or other aviation entities. The presence of this data in our dataset is dependent on several factors, including, but not limited to source availability and correctness, as well as ARINC 424 restrictions.

DATA FORMATS

The following information documents the various records and ARINC formats that are available in Jeppesen NavData.

Header Record

Available in the following formats:
ARINC -15
ARINC -17*
* ARINC 665 CRC is available upon request

VHF Navaid

ARINC Record code D

Record Types Available:
4.1.2.1 VHF Navaid Primary
4.1.2.3 VHF Navaid Simulation Continuation
4.1.2.4 VHF Navaid Flight Planning Continuation
JS 4.2 VHF Navaid Jeppesen Supplemental

Description:
The VHF Navaid file contains the data elements of all VHF Navaids that fall within the geographic regions defined by the customer. VHF Navaids will also be provided that are required as supporting detail for other record types selected by the customer.

Parameters Available - see ND-027 form.

Formats Available:
ARINC 18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.149 Figure of Merit	424-12
5.197 Datum	424-18 plus the following:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Enroute NDB Navaid

ARINC Record code DB

Record types Available:
4.1.3.1 Enroute NDB Navaid Primary
4.1.3.3 Enroute NDB Navaid Simulation Continuation
4.1.3.4 Enroute NDB Navaid Flight Planning Continuation
JS 4.3 Enroute NDB Navaid Jeppesen Supplemental

Description:
The Enroute NDB file contains the data elements of all Enroute NDBs that fall within the geographic regions defined by the customer. Enroute NDBs will also be provided that are required as supporting detail for other record types selected by the customer.

Parameters Available - see ND-027 form.

Formats Available:
ARINC 18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.197 Datum	424-18 plus the following:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Enroute NDBs are also available as Enroute Waypoints (ARINC code EA – also refer to Enroute Waypoint). In an optional output format, when Enroute NDBs are referenced in Enroute Airways, Holding Patterns, Company Routes and SID/STAR/Approach records, the route record will reference them as an Enroute Waypoint and the Enroute NDB will be output as an Enroute Waypoint.

Terminal NDB Navaid

ARINC Record code PN

Record types Available:
4.1.3.1 Terminal NDB Navaid Primary
4.1.3.3 Terminal NDB Navaid Simulation Continuation
4.1.3.5 Terminal NDB Navaid Flight Planning Continuation
JS 4.3 Terminal NDB Navaid Jeppesen Supplemental

Description:
The Terminal NDB file contains the data elements of all Terminal NDBs that fall within the geographic regions defined by the customer. Terminal NDBs will also be provided that are required as supporting detail for other record types selected by the customer.

Formats Available:
ARINC 18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.197 Datum	424-18 plus the following:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Terminal NDBs are also available as Terminal Waypoints (ARINC code PC). See Terminal Waypoints. In an optional output format, when Terminal NDBs are referenced in Company Routes and SID/STAR/Approach records, the route record will reference them as a Terminal Waypoints and the Terminal NDB will be output as a Terminal Waypoint.

Enroute Waypoint

ARINC Record code EA

Record types Available:
4.1.4.1 Enroute Waypoint Primary
4.1.4.3 Enroute Waypoint Flight Planning Continuation

Description:
The Enroute Waypoint file contains the data elements of all Enroute Waypoint that fall within the geographic regions defined by the customer. Enroute waypoints will also be provided that are required as supporting detail for other record types selected by the customer.
Europe and North America VFR Reporting Points can be included upon request. These reporting points are coded as VFR Waypoints.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 18 with the following notable difference:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.39 Dynamic Mag Var	Not Supported for VFR Reporting Points
5.42 Waypoint Type	424-18 with exception - column 28 values of V and W which are not supported.
5.196 Name Format Indicator	Not Supported
5.197 Datum	424-18 plus the following:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Half Degree Grid Waypoints that are associated with the North Atlantic (NAT) Region will have either a State source provided waypoint identifier or the identifier will be in the following format:

Hxxyy, where xx = degrees and 30 minutes of NORTH latitude and yy = degrees of WEST longitude (e.g., H5250 = 52°30' NORTH 050°00' WEST)."

All other Half Degree Grid Waypoints will have an identifier that is either source provided or will follow the standard ARINC naming convention found in section 7.2.5 of the ARINC 424 document.

Enroute NDBs (ARINC code DB) are also available as Enroute Waypoints. When they are provided as Enroute waypoints, the ident is the Enroute NDB ident plus the suffix NB (e.g., Enroute NDB ident MR becomes Enroute Waypoint ident MRNB).

In an optional output format, when Enroute NDBs are referenced in Enroute Airways, Holding Patterns, Company Routes and SID/STAR/Approach records, the route record will reference them as an Enroute Waypoints and the Enroute NDB will be output as an Enroute Waypoint.

Terminal Waypoint

ARINC Record code PC

Record types Available:
4.1.4.1 Terminal Waypoint Primary
4.1.4.3 Terminal Waypoint Flight Planning Continuation

Description:
The Terminal Waypoint file contains the data elements of all Terminal Waypoint that fall within the geographic regions defined by the customer. Terminal Waypoints will also be provided that are required as supporting detail for other record types selected by the customer.
VFR Reporting Points can be included upon request. These reporting points are coded as VFR Waypoints.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 18 with the following notable difference:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.39 Dynamic Mag Var	Not Supported for VFR Reporting Points
5.196 Name Format Indicator	Not Supported
5.197 Datum	424-18 plus additional Jeppesen Supplemental

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Terminal NDBs (ARINC code PN) are also available as Terminal Waypoints (ARINC code PC). When they are provided as Terminal waypoints, the ident is the Terminal NDB ident plus the suffix NB (e.g., Terminal NDB ident RK becomes Terminal Waypoint ident RKNB).

In an optional output format, when Terminal NDBs are referenced in Company Routes and SID/STAR/Approach records, the route record will reference them as Terminal Waypoints and the Terminal NDB will be output as a Terminal Waypoint.

Holding Patterns

ARINC Record code EP

Record types Available:
4.1.5.1 Holding Pattern Primary

Description:
The Holding Pattern file contains the data elements of all Holding Patterns that fall within the geographic regions defined by the customer. Holding Patterns will also be provided that are required as supporting detail for other record types selected by the customer.

Parameters Available - see ND-027 form.

Format Available:
ARINC 18

Enroute Airways

ARINC Code ER

Records Available:
4.1.6.1 Enroute Airway Primary

Description:
The Enroute Airway file contains the data elements of all Enroute Airways that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-8 with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	ARINC 424-19 – Route Type D and S Not Supported
5.23 Recommended Navaid	Not Supported
5.24 Theta	Not Supported
5.25 Rho	Not Supported
5.254 Fixed Radius Transition Indicator	424-16 – Available on request only

ARINC 424-18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	ARINC 424-19 – Route Type D and S Not Supported
5.23 Recommended Navaid	Not Supported
5.24 Theta	Not Supported
5.25 Rho	Not Supported
5.254 Fixed Radius Transition Indicator	424-16 – Available on request only

Comments:
ARINC 424-8 is still used by some older systems that have not been changed to handle the newer ARINC formats. This format only outputs a File Code for the Fix Identifier unlike newer versions of ARINC which output a Section Code and Sub-Section code. When the output format for Enroute Airways is 424-8, Enroute NDBs that are output as Enroute Waypoints. The identifier of the Enroute Waypoint is the NDB identifier with an NB suffix added (MR NDB becomes MRDB Enroute Waypoint).

ARINC Field 5.8 Route Ident includes a reserved column for a 6th character, intended to be used for an ATS Service Suffix. This field provides an indication of the type of Service provided on the

respective Route. The Service Suffix is not used during normal ATC Communications and filing of Flight Plans. The following codes are used and may be provided as part of the Route Ident.

Field Content	Description
D (old) (Note 1)	ATC Advisory Service
F (old) (Note 1)	Flight Information Service
F (new)	ATC Advisory Service only
G (new)	Flight Information Service only

Note 1: The implementation status of ICAO Member States may still be in a transition phase. Some states have already complied with the new suffixes, however, some may still be using the old suffixes.

Airport

ARINC Record code PA

Record types Available:
4.1.7.1 Airport Primary
4.1.7.3 Airport Flight Planning Continuation
JS 4.7 Airport Jeppesen Supplemental

Description:
The Airport file contains details of all Airports that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Format Available:
ARINC 12**with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA “P” and Antarctica “A1” (Australia, New Zealand) and “F1” (Africa)
5.249 Longest Runway Surface	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.177 Public Military Indicator	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.178 Time Zone	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.179 Daylight Time Indicator	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.197 Datum	424-18 plus the below codes

ARINC 18** with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA “P” and Antarctica “A1” (Australia, New Zealand) and “F1” (Africa)
5.249 Longest Runway Surface	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.178 Time Zone	424-20
5.197 Datum	424-18 plus the following codes:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

** Additional Helicopter By Request Format Available:

The Helicopter By Request format allows customers to receive heliports as PA records which can be identified by the H in column 81 of the primary record (column 119 of supplemental record) via the “Set Airport Pub/Mil to H” selectable parameter.

Comments:
Although the field definitions of ‘Public/Military Indicator’, ‘Time Zone’ and ‘Daylight Time Indicator’ are identical with those published in the ARINC 424-18 document, when used on the Jeppesen Supplemental record (JS4.7), the associated content is extended in order to reflect Jeppesen daily experience with the State AIP documentation (for reference see field JS5.14, 5.15 and 5.16 in Jeppesen Supp Document). For the ARINC 424-12 format, these fields can only be received in the Jeppesen Supplemental Record.

Gate
ARINC Record code PB

Record Types Available:
4.1.8.1 Gate Primary

Description:
Gate records are only available as tailored records. The customer must specify the gates they want at each airport.

Format Available:
ARINC 17

SID/STAR/Approach

ARINC code PD/PE/PF

Records Types Available:
4.1.9.1 SID/STAR/Approach Primary
4.1.9.2 SID/STAR/Approach Primary Extension (Per ARINC 424-20)
4.1.9.3 SID/STAR/Approach Flight Planning
4.1.9.5 Procedure Data Continuation Record (Per ARINC 424-19)

Description:
SID/STAR/Approach records are provided only for the Airports that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-8
ARINC 424-15
ARINC 424-18
ARINC 424-19

ARINC 424-8 is available with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	424-12
5.10 Approach Route Identifier	424-12
5.11 Transitions Identifier	424-13
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	424-15 (Field content “C” and “V” not supported)
5.70 Vertical Angle	424-16
5.153 Start/End date	Not Supported
5.204 Arc Radius	Not Supported
5.211 RNP	424-18
5.222 GPS/FMS Indicator	Not Supported
5.261 Speed Limit Description	424-18
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

ARINC 424-15 is available with the following notable differences:

5.7 Route Type	424-12
5.7 Qual 1 and Qual 2	Not Supported
5.10 Approach Route Identifier	424-12
5.11 Transitions Identifier	424-13

5.17 Waypoint Description Code	Column 42 code values of “A” and “B” are available on request only.
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	Field content “C” and “V” not supported
5.70 Vertical Angle	424-16
5.144 Center Fix	424-18
5.153 Start/End date	Not Supported
5.211 RNP	424-18
5.222 GPS/FMS Indicator	424-21 code values “G” and “L” are available on request only.
5.261 Speed Limit Description	424-18
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

ARINC 424-18 is available with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	424-19. Approach Route Type H and Z, and Qualifier 1 of “F” and “A” available on request only. SID and STAR Route Types of R, N, P, T, V are not supported.
5.11 Transitions Identifier	424-13
5.17 Waypoint Description Code	Column 42 code values of “A” and “B” are available on request only.
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	424-15 (Field content “C” and “V” not supported)
5.70 Vertical Angle	424-16
5.153 Start/End date	Not Supported
5.222 GPS/FMS Indicator	424-21 code values “G” and “L” are available on request only
5.275 Level of Service Name	424-20
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

ARINC 424-19 is available with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	424-20. Approach Route Type H and Z, and Qualifier 1 of “F” and “A” available on request only. SID Route Types of T, V are not supported.
5.11 Transitions Identifier	424-13
5.17 Waypoint Description Code	Column 42 code values of “A” and “B” are available on request only.
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	424-15 (Field content “C” and “V” not supported)

5.70 Vertical Angle	424-16
5.153 Start/End date	Not Supported
5.222 GPS/FMS Indicator	424-21 code values “G” and “L” are available on request only
5.275 Level of Service Name	424-20
5.293 Vertical Scale Factor	Not Supported
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

Fields not supported in the 4.1.9.2 SID/STAR/Approach Primary Extension:
5.242 Procedure Category
5.211 RNP
5.299 Procedure Reference Fix
5.292 Category Distance

Comments:
In ARINC 424-8 format, all Terminal NDBs and Enroute NDBs referenced in SID/STAR/Approach records are output as Terminal Waypoints and Enroute Waypoints. An NB suffix is added to the NDB ident to form the waypoint ident.

Final End Point (FEP) data is available on Approach (PF) records according to ARINC 424, version 19, Attachment 5, FEP Output File Delivery Options. For additional information on receiving FEPs, please contact your Business Representative.

Runway

ARINC Code PG

Records Available:
4.1.10.1 Runway Primary
4.1.10.2 Runway Continuation (ARINC 424-21) - *Note 1*
4.1.10.3 Runway Simulation Continuation
JS 4.10 Jeppesen Supplemental
Note 1 – Runway restriction and runway treatment information is provided when available in the Notes field of this continuation record.

Description:
The Runway file contains the elements of all runways that fall within the geographic regions defined by the customer. Additional Runways will be provided that are required as supporting detail for other record types selected by the customer. Only Runways for the Airports selected will be extracted.

Parameters Available - see ND-027 form.

Formats Available:
ARINC 424-17 with the following notable differences:

ARINC Field	ARINC Version Supported
5.80 ILS Category	Not Supported
5.270 TCH Value Indicator	Not Supported
5.318 Runway Accuracy Flag	424-22 – Available on request only
5.319 Landing THR Elev Flag	424-22 – Available on request only

ARINC 424-18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.270 TCH Value Indicator	Not Supported
5.318 Runway Accuracy Flag	424-22 – Available on request only
5.319 Landing THR Elev Flag	424-22 – Available on request only

Localizer and Glide Slope

ARINC code PI

Records Available:
4.1.11.1 Localizer and Glide Slope Primary
4.1.11.3 Localizer Simulation Continuation

Description:
The Localizer and Glide Slope file contains the data elements of all Localizer and Glide Slope records that fall within the geographic regions defined by the customer. Localizer and Glide Slope records will also be provided that are required as supporting detail for other record types selected by the customer.

Formats Available:
ARINC -12

ARINC 424-18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.10 Approach Identifier	Not Supported
5.33 Supporting Facility	On Request Only

Company Routes

ARINC Code R

Records Available:
4.1.12.1 Company Route Primary

Description
Company Routes are only available as tailored records. The customer must define the departure airport, destination airport, and routing for each company route.

Formats Available:
ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.11 Transition Identifier	424-13
5.75 From Airport/Fix	424-13
5.77 Via Code	424-12
5.78 SID/STR/APP/AWY	424-12
5.83 To Fix	424-12

Localizer Marker/Locator

ARINC Code PM

Records Available:
4.1.13.1 Localizer Marker/Locator Primary

Description:
The Local Marker/Locator file contains the data elements of all Localizer Markers/Locators that fall within the geographic regions defined by the customer. Only Localizer Marker/Locators for the Airports selected will be extracted.

Parameters Available - see ND-027 form.
Formats Available:

ARINC 424-17 with the following notable differences:

ARINC Field		ARINC Version Supported
5.44	Localizer Identifier	424-12

Airport Communications

ARINC Code PV

Records Available:
4.1.14.1 Airport Communication Primary
4.1.14.2 Airport Communication Continuation
JS 4.14 Airport Communication Record Jeppesen Supplemental

Description:
The Airport Communications file contains the data elements of all Airport Communications that fall within the geographic regions defined by the customer. Only Airport Communications for the Airports selected will be extracted.

Airport Communications Available:
All Communication Types listed in ARINC 424-17, paragraph 5.101 are available.

Parameters Available - see ND-027 form.
Formats Available:

ARINC 424-8 with the following notable differences:

ARINC Field	ARINC Version Supported
5.6 Airport Identifier	424-15
5.29 Altitude Description	424-13
5.39 Magnetic Variation	424-15
5.101 Communications Type	424-17 (Additional Communication Types available upon request. See table in comments.)
5.102 Radar	424-15
5.103 Comm Frequency	424-12
5.104 Frequency Units	424-18 (field content “C” is not supported)
5.106 Service Indicator	424-15(Additional Service Indicator types available upon request. See table in comments.)
5.187 Distance Description	424-15
5.188 Comm Distance	424-15

ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.29 Altitude Description	424-13
5.101 Communications Type	424-17(Additional Communication Types available upon request. See table in comments.)
5.104 Frequency Units	424-18

5.106 Service Indicator 424-15(Additional Service Indicator types available upon request. See table in comments.)

Comments:

Additional Communication Types:

Field Content	Description	Airport Heliport Comm Only	Enroute Comm Only	Both Comm Type
MBZ	Mandatory Broadcast Zone	X		
AIR	Air to Air	X		
CTF	Common Traffic Advisory Frequency	X		
MIL	Military Frequency			X
LWS	Limited Weather Information System	X		
WTI	Weather and Terminal Information Reciter	X		
WSS	Aviation Weather Sensor System	X		
STP	Automatic Data Transmission System (France)	X		

Additional Service Indicator codes:

Description	Column Contents		
	27/57	28/58	29/59
Flight Information Area (FIA)	B		
Dial Up Remote Communication Outlet (DRCO)	H		
Aerodrome Frequency Response Unit (AFRU)	K		
Automated Unicom (AU)	U		
Certified Air/Ground Radio Service (CA/GRS)	G		

Airway Marker

ARINC Code EM

Records Available:
4.1.15.1 Airway Marker Primary

Description:
The Airway Marker file contains details of all Airway Markers as defined by the customer's geographic regions.

Formats Available:
ARINC 424-17

Cruising Table

ARINC Code TC

Records Available:
4.1.16.1 Cruise Table Primary

Description:
The Cruising Table file contains details of all Cruising Table records for the entire world.

Formats Available:
ARINC 424-17

FIR/UIR

ARINC Code UF

Records Available:
4.1.17.1 FIR/UIR Primary
JS4.17.1 FIR/UIR Primary (Jeppesen Supplemental)
JS4.1.17.2 FIR/UIR Continuation (Jeppesen Supplemental)
Description:
The FIR/UIR file contains the data elements of all FIR/UIR boundaries as defined by the customer's geographic regions.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-8: FIR/UIR Address (Para 5.151) output as two characters in column 11-12.

ARINC 424-15: FIR/UIR Address (Para 5.151) output as four characters in column 11-14.

With the exception of the fields mentioned above, all data contained in these two formats are ARINC 424-15.

Comment:
FIR/UIR boundary data are output using WGS-84 as the geodetic datum.

Restrictive Airspace

ARINC code UR

Records Available:

4.1.18.1 Restrictive Airspace Primary
4.1.18.2 Restrictive Airspace Continuation
JS4.1.18.1 Restrictive Airspace Primary (Jeppesen Unified Format)
JS4.1.18.4 Restrictive Airspace Continuation – Time Narrative (Jeppesen Unified Format)
JS4.1.18.5 Restrictive Airspace Continuation - Activity (Jeppesen Unified Format)
JS4.1.18.6 Restrictive Airspace Continuation – Communication (Jeppesen Unified Format)

Description:

The Restrictive Airspace file contains the data elements of all Restrictive Airspace boundaries as defined by the customer's geographic regions.

Restrictive Airspace Types Available:

	*ARINC-15	ARINC-15	ARINC-8
Advisory Area (Canada)	S	(n/a)	(n/a)
Air Defense Identification Zone (ADIZ)	Z	(n/a)	(n/a)
Alert Area	A	A	A
Buffer Zone	B	(n/a)	(n/a)
Caution Area	C	C	C
Controlled Firing Area (Note 1)	W	W	W
Cross Border Area (CBA)	F	(n/a)	(n/a)
Danger Area	D	D	D
Flight Training Area (Note 1)	W	W	W
Fuel Dumping Area (Note 1)	W	W	W
In Flight Refueling Area (Note 1)	W	W	W
Military Climb Corridor (Note 1)	W	W	W
Military Operations Area (MOA)	M	M	M
National Security Area (Note 2)	N or W	W	W
Prohibited Area	P	P	P
Restricted Area	R	R	R
Temporary Reserve Area (TRA)	G	(n/a)	(n/a)
Training Area	T	T	T
Temporary Segregated Areas (TSA)	K	(n/a)	(n/a)
Warning Area	W	W	W
Unspecified Area	U	U	U

* Jeppesen Supplemental Airspace Types included.

NOTE 1: Boundary Types Controlled Firing Area, Flight Training Area, Fuel Dumping Area, In Flight Refueling Area and Military Climb Corridor do not have standard ARINC output definitions, and instead output as Boundary Type = Warning Area (Column 9 = W).

Note 2: Boundary Type National Security Area does not have a standard ARINC output definition. However, there is a parameter in Jeppesen's extract to include National Security Areas in the extract. There is a second parameter in Jeppesen's extract to output National Security Area using "N" in column 9. If the parameter is set to YES then the National Security Area will be output using an "N" in column 9. If the parameter is set to NO then the National Security Area will be output using a "W" in column 9.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-8
ARINC 424-15 with the following notable differences:
5.128 Restrictive Airspace Type – Optional Jeppesen Supplemental Airspace Types are available.

Jeppesen Unified Format – Defined in the Jeppesen Supplemental Specification

Comment:
Restrictive Airspace boundary data are output using WGS-84 as the geodetic datum.

Grid MORA
ARINC Code AS

Records Available:
4.1.19.1 Grid MORA Primary
JS 4.19 Grid MORA Jeppesen Supplemental

Description:
The Grid MORA file contains the data elements of all Grid MORA records for the entire world.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-18

Minimum Sector Altitude (MSA)

ARINC Code PS

Records Available:
4.1.20.1 MSA Primary
4.1.20.2 MSA Primary Extension (424-19 Format Only)
4.1.20.3 MSA Continuation

Description:
The MSA file contains the data elements of all MSAs that fall within the geographic regions defined by the customer. Only MSAs for the Airports selected will be extracted.

Formats Available:
ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.144 Center Fix	424-12

ARINC 424-19 with the following notable differences:

ARINC Field	ARINC Version Supported
5.144 Center Fix	424-12

Enroute Communications

ARINC Code EV

Records Available:
4.1.23.1 Enroute Communications Primary
4.1.23.2 Enroute communications Continuation

Enroute Communications Available:
All Enroute Communication types listed in ARINC 424-17, paragraph 5.101 are available.

Description:
The Enroute Communication file contains details of all Enroute Communications that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 424-8 with the following notable differences:

5.29 Altitude Description	424-13
5.36/5.37 Latitude/Longitude	424-17
5.101 Communications Type	424-17(Additional Communication Types available upon request. See table in comments.)
5.103 Communications Frequency	424-12
5.104 Frequency Units	424-18 (field content “C” is not supported)
5.106 Service Indicator	424-15(Additional Service Indicator types available upon request. See table in comments.)

ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.29 Altitude Description	424-13
5.36/5.37 Latitude/Longitude	424-17
5.101 Communications Type	424-17(Additional Communication Types available upon request. See table in comments.)
5.104 Frequency Units	424-18
5.106 Service Indicator	424-15(Additional Service Indicator types available upon request. See table in comments.)

Comments:

Additional Communication Types:

Field Content	Description	Airport Heliport Comm Only	Enroute Comm Only	Both Comm Type
MBZ	Mandatory Broadcast Zone	X		
AIR	Air to Air	X		
CTF	Common Traffic Advisory Frequency	X		
MIL	Military Frequency			X
LWS	Limited Weather Information System	X		
WTI	Weather and Terminal Information Reciter	X		
WSS	Aviation Weather Sensor System	X		
STP	Automatic Data Transmission System (France)	X		

Additional Service Indicator codes:

Description	Column Contents		
	27/57	28/58	29/59
Flight Information Area (FIA)	B		
Dial Up Remote Communication Outlet (DRCO)	H		
Aerodrome Frequency Response Unit (AFRU)	K		
Automated Unicom (AU)	U		
Certified Air/Ground Radio Service (CA/GRS)	G		

Controlled Airspace

ARINC code UC

Records Available:
4.1.25.1 Controlled Airspace Primary (ARINC 424-15)
4.1.25.2 Controlled Airspace Continuation (ARINC 424-15)
4.1.25.3 Controlled Airspace Primary Extension (ARINC 424-22)
JS4.27.1 Controlled Airspace Primary (Jeppesen Supplemental Format)
JS4.27.2 Controlled Airspace Continuation (Jeppesen Supplemental Format)
JS4.27.3 Controlled Airspace Continuation – Time Narrative (Jeppesen Supplemental Format)
JS4.27.4 Controlled Airspace Continuation – Activity (Jeppesen Supplemental Format)
JS4.27.5 Controlled Airspace Continuation – Communications (Jeppesen Supplemental Format)

Description:
The Controlled Airspace file contains data elements of all Controlled Airspace Boundaries that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Formats Available:
Jeppesen Supplemental Specification
Jeppesen Unified Format – Defined in the Jeppesen Supplemental Specification

ARINC 424-15 with the following notable differences:
5.213 - Airspace Type - Additional controlled airspace types

Controlled Airspace Available

Controlled Airspace Types	Jeppesen Supplemental Format	ARINC-15
Airport Radar Service Area (ARSA)	A	A
Air Traffic Zone (ATZ)	B	(n/a)
Class A Airspace (Class A)	C	(n/a)
Class B Airspace (Class B)	D	*T, M
Class C Airspace (Class C)	E	*A, M
Class D Airspace (Class D)	F	Z
Class E Airspace (Class E)	G	(n/a)
Class F Airspace (Class F)	H	(n/a)
Class G Airspace (Class G)	I	(n/a)
Multi-Class Airspace (MCA) (Note 1)	J	(n/a)
Control Area (Airport) (CTA)	K	C
Control Area (Non-Airport) (CTL)	L	C
Control Zone (CTR or CTZ)	M	Z
Helicopter Protected Zone (HPZ)	N	(n/a)
Helicopter Traffic Zone (HTZ)	O	(n/a)

Military Air Traffic Zone (MATZ)	P	(n/a)
Military Control Zone (MCTR)	Q	Z
Military Terminal Area (MTMA)	R	M
Oceanic Control Area (Non-Airport)(OCA)	S	(n/a)
Radar (Zone or Area) (RRZ or RRA)	T	(n/a)
Special Rules Area (SRA)	U	(n/a)
Special Rules Zone (SRZ)	V	(n/a)
Terminal Control Area (TCA)	W	T
Terminal Area (TMA)	X	M
Terminal Radar Service Area (TRSA)	Y	R
Traffic Information Zone (TIZ)	Z	(n/a)
Upper Control Area (UTA)	1	(n/a)
Upper Control Area (Non-Airport) (UTL)	2	(n/a)
Positive Control Area (PCA)	3	(n/a)
Traffic Information Area (TIA)	4	(n/a)
Class E5 Airspace (Class E) (Note 1)	5	(n/a)
Airway Airspace (Note 2)	6	(n/a)
Mandatory Broadcast Zone (MBZ)	7	(n/a)
Common Frequency Zone (CFZ)	8	(n/a)
Radio Mandatory Zone (RMZ)	9	(n/a)
Mode C Area (MOC)	0 (zero)	(n/a)
Transponder Mandatory Zone (TMZ)	$	(n/a)

Note: * indicates value is only applicable for USA ARINC Area.

Note 1: Some USA Airports have multiple Class E Airspaces, one starting at the surface and one starting at 700 above ground level. The two airspaces existing independent of each other and are there treated as separate airspace types.

Note 2: Airway Airspace is a defined boundary provided by official source documentation. It is not to be confused with the more generic term Airway Width.

Comment:
Controlled Airspace boundary data are output using WGS-84 as the geodetic datum.

Path Point

ARINC code PP

Records Available:
4.1.28.1 Path Point Primary Record
4.1.28.2 Path Point Continuation Record

Description:
The Path Point file contains the data elements for all Path Point records required to support RNAV (GPS) WAAS/SBAS approaches.

Formats Available
ARINC 424-18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.320 SBAS Final Approach Course	424-22

GLS Navaid

ARINC code PT

Records Available:
4.1.29.1 GLS Primary Record

Description:
The GLS file contains the data elements required to support all GNSS Landing Systems (GLS) approaches.

Formats Available:
ARINC 424-18 with the following notable differences:

ARINC Field
5.244 - GLS Channel - Includes SCAT-1 channel numbers of 00000 to 09999.

Heliport

ARINC Record code HA

Record types Available:
4.2.1.1 Heliport Primary
4.2.1.3 Heliport Flight Planning Continuation
JS 4.24 Heliport Jeppesen Supplemental

Description:
The Heliport file contains details of all Heliports that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Format Available:
ARINC 18 with the following notable differences:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.249 Longest Runway Surface	Only available in the JS4.7 Airport Jeppesen Supplemental Record
5.178 Time Zone	424-20
5.197 Datum	424-18 plus the following codes:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Although the field definitions of 'Public/Military Indicator', 'Time Zone' and 'Daylight Time Indicator' are identical with those published in the ARINC 424-18 document, when used on the Jeppesen Supplemental record (JS4.7), the associated content is extended in order to reflect Jeppesen daily experience with the State AIP documentation (for reference see field JS5.14, 5.15 and 5.16 in Jeppesen Supp Document). For the ARINC 424-12 format, these fields can only be received in the Jeppesen Supplemental Record.

Helicopter Terminal Waypoint

ARINC Record code HC

Record types Available:
4.2.2.1 Terminal Waypoint Primary
4.2.2.3 Terminal Waypoint Flight Planning Continuation

Description:
The Helicopter Terminal Waypoint file contains the data elements of all Helicopter Terminal Waypoints that fall within the geographic regions defined by the customer. Helicopter Terminal Waypoints will also be provided that are required as supporting detail for other record types selected by the customer.

Parameters Available - see ND-027 form.
Formats Available:
ARINC 18 with the following notable difference:

ARINC Field	ARINC Version Supported
5.14 ICAO Code	Additional sub-division for Oakland OCTA "P" and Antarctica "A1" (Australia, New Zealand) and "F1" (Africa)
5.196 Name Format Indicator	Not Supported
5.197 Datum	424-18 plus the following codes:

Datum	Code	Ellipsoid
Austria NS	ANS	International
Nouvelle Triangulation de France (France)	IGF	Clarke 1880
Portuguese Datum 1983	PRD	International

Comments:
Terminal NDBs (ARINC code PN) are also available as Helicopter Terminal Waypoints (ARINC code HC). When they are provided as Helicopter Terminal waypoints, the ident is the Terminal NDB ident plus the suffix NB (e.g., Terminal NDB ident RK becomes Terminal Waypoint ident RKNB).

Heliport Minimum Sector Altitude (MSA)

ARINC Code HS

Record Types Available:
4.2.4.1 MSA Primary
4.2.4.3 MSA Continuation

Description:
The heliport MSA file contains the data elements of all heliport MSAs that fall within the geographic regions defined by the customer. Only heliport MSAs for the heliports selected will be extracted.

Formats Available:
ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.144 Center Fix	424-12

Heliport Communications

ARINC Code HV

Record Types Available:
4.2.5.1 Heliport Communication Primary
4.2.5.2 Heliport Communication Continuation
JS 4.26 Heliport Communications Jeppesen Supplemental

Description:
The Heliport Communications file contains the data elements of all Heliport Communications that fall within the geographic regions defined by the customer. Only Heliport Communications for the Heliports selected will be extracted.

Heliport Communications Available:
All Communication Types listed in ARINC 424-15, paragraph 5.101 are available.

Formats Available:
ARINC 424-15 with the following notable differences:

ARINC Field	ARINC Version Supported
5.29 Altitude Description	424-13
5.101 Communications Type	424-17(Additional Communication Types available upon request. See table in comments.)
5.104 Frequency Units	424-18(Additional Service Indicator types available upon request. See table in comments.)

Comments:

Additional Communication Types:

Field Content	Description	Airport Heliport Comm Only	Enroute Comm Only	Both Comm Type
MBZ	Mandatory Broadcast Zone	X		
AIR	Air to Air	X		
CTF	Common Traffic Advisory Frequency	X		
MIL	Military Frequency			X
LWS	Limited Weather Information System	X		
WTI	Weather and Terminal Information Reciter	X		
WSS	Aviation Weather Sensor System	X		
STP	Automatic Data Transmission System (France)	X		

Additional Service Indicator codes:

Description	Column Contents		
	27/57	28/58	29/59
Flight Information Area (FIA)	B		
Dial Up Remote Communication Outlet (DRCO)	H		
Aerodrome Frequency Response Unit (AFRU)	K		
Automated Unicom (AU)	U		
Certified Air/Ground Radio Service (CA/GRS)	G		

Heliport SID/STAR/Approach

ARINC code HD/HE/HF

Records Types Available:
4.2.3.1 Heliport SID/STAR/Approach Primary
4.2.3.2 SID/STAR/Approach Primary Extension (Per ARINC 424-20)
4.2.3.3 SID/STAR/Approach Flight Planning
4.2.3.5 Procedure Data Continuation Record (Defined in 424-19)

Description:
Heliport SID/STAR/Approach records are provided only for the Heliports that fall within the geographic regions defined by the customer.

Parameters Available - see ND-027 form.
Formats Available:

ARINC 424-18 is available with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	424-19. Approach Route Type H, and Qualifier 1 of “F” and “A” are not supported. Route Type of Z is available on request only. SID and STAR Route Types of R, N, P, T, V are not supported.
5.11 Transitions Identifier	424-13
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	424-15 (Field content “V” not supported)
5.70 Vertical Angle	424-16
5.153 Start/End date	Not Supported
5.222 GPS/FMS Indicator	424-21 code values “G” and “L” are available on request only
5.275 Level of Service Name	424-20
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

ARINC 424-19 is available with the following notable differences:

ARINC Field	ARINC Version Supported
5.7 Route Type	424-20. Approach Route Type Z available on request only. SID Route Types of T, V are not supported
5.11 Transitions Identifier	424-13
5.17 Waypoint Description Code	Column 42 code values of “A” and “B” are available on request only.
5.23 Recommended Navaid	Defined in the Jeppesen Supplemental.
5.29 Altitude Description	424-15 (Field content “V” not supported)

5.70 Vertical Angle	424-16
5.153 Start/End date	Not Supported
5.222 GPS/FMS Indicator	424-21 code values “G” and “L” are available on request only
5.275 Level of Service Name	424-20
5.307 Special Indicator	424-21 – Available on request only.
5.301 Procedure Design Cat/Type	424-21 – Available on request only.

Fields not supported in the 4.1.9.2 SID/STAR/Approach Primary Extension:
5.242 Procedure Category
5.211 RNP
5.299 Procedure Reference Fix
5.292 Category Distance

Helicopter Operations SBAS Path Point

ARINC code HP

Records Available:
4.2.8.1 Helicopter Operations SBAS Path Point Primary Record

Description:
The Path Point file contains the data elements for all Path Point records required to support Helicopter SBAS approaches.

Formats Available
ARINC 424-20

Airway Restriction

ARINC Code EU

Records Available:
4.1.21.1 Airway Restriction Altitude Exclusion Primary
4.1.21A.1 Airway Restriction Note Restriction Primary
4.1.21A.2 Airway Restriction Note Restriction Continuation
4.1.21B.1 Airway Restriction Seasonal Closure
4.1.21C.1 Airway Restriction Cruise Table Replacement Primary

Description:
The Enroute Airway Restriction file contains altitude and time restrictions for an airway, airway segment or sequence of airway segments.

Restriction Record Types Available:
Altitude Exclusion
Cruise Table Replacement
Seasonal
Note

Format Available:
ARINC 424-16 with the following notable differences:

5.160 - Units of Altitude - Codes of K and M are not supported.

Airport Terminal Arrival Area (TAA)

ARINC Code PK

Records Available:
4.1.31.1 Airport TAA Primary
4.1.31.2 Airport TAA Continuation

Description:
The Airport Terminal Arrival Area contains details relating to TAA sectorization and sector altitudes.

Format Available:
ARINC 424-19 with the following notable differences:

5.7 – Route Qualifier 2 field was added to the format in column 119 of the TAA records to ensure proper linkage to the referenced approach identifier is made.

Airport Climb Gradient

ARINC Code PX

Records Available:
JS 4.1.10.1 Airport Climb Gradient Primary (Supplemental Record)
JS 4.1.10.2 Airport Climb Gradient Continuation (Supplemental Record)

Description:
The Airport Climb Gradient record contains ATC, Noise Abatement, and Obstacle Clearance published climb gradients. The record contains the climb rate, angle, and termination information.

Format Available:
Jeppesen Supplemental Format

The format and field definitions are published in the Jeppesen Climb Gradient Supplemental Specification document.

Preferred Routes

ARINC Code ET

Records Available:
4.1.24.1 Preferred Route Primary
4.1.24.2 Preferred Route Continuation record*
*Provides complex times as narrative times in note record format.

Description:
The Preferred Routes file contains details defining the Preferred Routes and Preferred/Preferential Overflight Routes.

Format Available:
ARINC 424-17 with the following notable differences:

ARINC Field	ARINC Version Supported
5.220 Use Ind	Not Supported
5.221 Acft Use Group	Not Supported
5.115 Direct	Not Supported
5.29 Alt Desc	Not Supported
5.30 Alt One	Not Supported
5.30 Alt Two	Not Supported

Records Not Supported

VHF Navaid
ARINC Record code D

4.1.2.2 VHF Navaid Continuation
4.1.2.6 VHF Navaid Limitation Continuation

Enroute NDB Navaid
ARINC Record code DB

4.1.3.2 Enroute NDB Navaid Continuation

Terminal NDB Navaid
ARINC Record code PN

4.1.3.2 Terminal NDB Navaid Continuation

Enroute Waypoint
ARINC Record code EA

4.1.4.2 Enroute Waypoint Continuation

Terminal Waypoint
ARINC Record code PC

4.1.4.2 Terminal Waypoint Continuation

Holding Patterns
ARINC Record code EP

4.1.5.2 Holding Pattern Continuation

Enroute Airways
ARINC Code ER

4.1.6.2 Enroute Airway Continuation
4.1.6.3 Enroute Airway Flight Planning Continuation

Airport
ARINC Record code PA

4.1.7.2 Airport Continuation

Gate
ARINC Record code PB

4.1.8.2 Gate Continuation

Localizer and Glide Slope
ARINC code PI

4.1.11.2 Localizer Continuation

Localizer Marker/Locator
ARINC Code PM

4.1.13.2 Localizer Marker/Locator Continuation

Airport Communications
ARINC Code PV

4.1.14.3 Airport Communication Continuation
4.1.14.4 Airport Communication Continuation
4.1.14.5 Airport Communication Continuation

Airway Marker
ARINC Code EM

4.1.15.2 Airway Marker Continuation

FIR/UIR
ARINC Code UF

4.1.17.2 FIR/UIR Continuation

Restrictive Airspace
ARINC code UR

4.1.18.3 Restrictive Airspace Continuation

Airway Restriction
ARINC Code EU

4.1.21C.2 Airway Restriction Cruise Table Replacement Continuation
4.1.21.2 Airway Restriction Altitude Exclusion Continuation

Airport & Heliport MLS
ARINC Code PL

4.1.22.1 Airport & Heliport MLS Primary
4.1.22.2 Airport & Heliport MLS Continuation

Enroute Communications
ARINC Code EV

4.1.23.3 Enroute Communications Continuation
4.1.23.4 Enroute communications Continuation

Geographical Reference Table
ARINC Code TG

4.1.26.1 Geographical Reference Table Primary
4.1.26.2 Geographical Reference Table Continuation

Flight Planning Arrival/Departure
ARINC Code PR

4.1.27.1 Flight Planning Arrival/Departure Primary
4.1.27.2 Flight Planning Arrival/Departure Continuation
4.1.27.3 Flight Planning Arrival/Departure Continuation

GLS Navaid
ARINC code PT

4.1.29.2 GLS Continuation

Alternate Record
ARINC code RA

4.1.30.1 Alternate Primary

TACAN-Only Navaid
ARINC code DT

4.1.32.1 TACAN-Only Navaid Primary

Special Activity Area
ARINC code ES

4.1.33.1 Special Activity Area Primary

Communication Type Translation
ARINC code TV

4.1.34.1 Communication Type Translation Primary

GBAS Path Point
ARINC code PQ

4.1.35.1 GBAS Path Point Primary
4.1.35.2 GBAS Path Point Continuation

Airport Helipad
ARINC Record PH and HH

4.1.36.1 Airport Heliport Primary

Heliport
ARINC Record code HA

4.2.1.2 Heliport Continuation

Helicopter Terminal Waypoint
ARINC Record code HC

4.2.2.2 Terminal Waypoint Continuation

Heliport Communications
ARINC Code HV

4.2.5.3 Heliport Communication Continuation
4.2.5.4 Heliport Communication Continuation
4.2.5.5 Heliport Communication Continuation

Heliport TAA
ARINC Record code HK

4.2.6.1 Heliport TAA Primary
4.2.6.2 Heliport TAA Continuation

Helicopter Operations Company Route
ARINC Record code RH

4.2.7.1 Helicopter Operations Company Route Primary

Helicopter Operations SBAS Path Point
ARINC Record code HP

4.2.8.2 Helicopter Operations SBAS Path Point Continuation

