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NBAA

NBAA INTERNATIONAL FLIGHT PLAN FORMAT GUIDE

Version 1 - March 2024

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BACKGROUND AND INTRODUCTION

This guide contains both industry established standards as well as recommendations to provide baseline elements for the assembly of compliant international flight plans. In providing the core information needed, it aims to address some of the more frequently misunderstood parts of the international flight planning process. The recommendations set forth in this guide have been gathered from ICAO, FAA and industry best practices documentation and aim to be a strong recommendation for flight planning providers and Part 91 operators alike, to use.

A flight plan is a critical part of any flight and it is essential to ensure that it is properly prepared and organized. Mistakes are however widespread, oftentimes due to a lack of knowledge which can have significant consequences on flight operations and operational approvals alike. Errors on sample flight plans provided to authorities are also a frequent reason why Letters of Authorization applications are either delayed or not issued.

This industry standards guide is comprised of the following parts:

- Industry Required Standard Flight Plan Elements
  - Definitions for fuel allocation
  - Industry standard abbreviations used for fuel allocations
  - Checklist of equipment capabilities and codes (ASOCs and Checklist of Aircraft Equipment and Capability Codes)
- Recommended Navigation Log Content and Abbreviations
- Best Practices
- Recommended flight plan package contents
- Best Practices

Note that the primary audience for this document is flight planning service providers and Part 91 operators. This document is not completely comprehensive and should be used in conjunction with the latest recommendations, practices and regulations outlined by ICAO and the FAA.

The use of this document is neither mandatory nor does it constitute a regulation. This document aims to complement existing published resources and its use is strongly recommended whether you're applying for LOAs with the FAA or just conducting your flights on a daily basis as these core elements will work to ensure that you have all the proper information and elements according to industry best practices along with some ICAO annex driven requirements.

While special attention was put on accuracy of information at the time of publication. Planning requirements around the world are always evolving and it is ultimately incumbent on the operator to ensure that they are flying with current information.

For further information, visit the FAA Flight Planning Information resource webpage in addition to the following ressources:

- ICAO Annex 6 Part II
- AC 91-70C (or later released version)
- FAA AIM Appendix 4
- U.S. AIP Appendix 2

SECTION 1: REQUIRED STANDARDIZATION ELEMENTS

PART 1 FUEL

Ensuring you have the proper amount of fuel is extremely important. It's not just crucial to calculate for holding, alternates and bad weather, but also to know how to properly display fuel values on your flight plan.

ICAO Annex 6 Part II outlines how operators should calculate the fuel they require. Below is a more detailed breakdown of the fuel that is to appear on flight plans per these SARPs (Standards and Recommended Practices).

- **Taxi Fuel** (fuel expected to be consumed before takeoff, to also include APU fuel consumption)
- **Trip Fuel** (fuel required to fly from takeoff, or the point of inflight re-planning, until landing at the destination airport)
- **Destination Alternate Fuel** (fuel when a destination alternate is required that enables the airplane to perform a missed approach at the destination airport, climb to the expected cruising altitude, fly the expected routing, descend to the point where the expected approach is initiated, conduct the approach and land at the alternate airport. If the flight is operated without a destination alternate, the fuel required to fly for 15 minutes at holding speed, 1,500 feet above the destination airport in standard conditions. If operating to an isolated airport, a turbine-engine airplane must carry the fuel required to fly for two hours at normal cruise consumption above the destination airport including final reserve fuel.)
- **Contingency Fuel** (fuel required to compensate for unforeseen factors, such as weather deviations, individual aircraft variance in fuel consumption, and extended taxi times. This shall be calculated as 5% of the planned trip fuel. Additionally, for commercial operators, contingency fuel cannot be less than 5 minutes at holding speed at 1,500 feet above the airport elevation in standard conditions.
- **Final Reserve Fuel** (the minimum fuel required to fly for 30 minutes at 1,500 feet above the alternate aerodrome or, if an alternate is not required, at the destination aerodrome at holding speed in ISA conditions).
- **Required Fuel** (the sum of the above fuel quantities)
- **Additional Fuel** (additional fuel above the contingency and final reserve values such as additional holding, ETPs, or to meet company or regulatory requirements.)
- **Discretionary Fuel / Extra Fuel** (additional fuel carried above the required fuel amount. This could be tankering fuel, or any other fuel desired by the Pilot-In-Command.)
- **Total Fuel** (The sum of all fuel, required and discretionary)

The below table outlines the proposed abbreviations to be used in the flight plan fuel summary to describe the fuel allocations:

Term	Abbreviation
Taxi Fuel	TAXI
Trip Fuel	DEST
Contingency Fuel	CONT 5%
Destination Alternate Fuel	ALT
Final Reserve	FNL RESV
Required Fuel	REQ
Additional Fuel	ADTL
Discretionary Fuel / Extra Fuel	DSC or EXTRA
Total	TOT

Sample Flight Plan Fuel Table (Annex 6 Part 1 & Part 2)

	FUEL	TIME	CORR	DIST	ARRIVE	TAKEOFF	LAND
TAXI	000150		. . . .				
DEST EGGW	011053	06+08	. . . .	3080	07.28Z	037900	026847
ALT EGSS	000605	00+13	. . . .	0043			
CONT 5 PCT	000553	00+23	. . . .		OPNLWT	023500	
FNL RESV	000664	00+30	. . . .				
ADTL	000400	00+17	. . . .		PAYLOAD	000400	
REQ	013425	07+41	. . . .				
DSC	000725	00+30	. . . .		FUEL RMNG AT DEST		002947
TOT	014150	08+11	. . . .		UNITS LBS		

*Commercial Operators: Cannot be less than 5 minutes holding 1500 feet above airport elevation in standard conditions.

PART 2 : EQUIPMENT AND CAPABILITY CODES

Incorrectly listing equipment and capability codes on the flight plan can have real consequences when received by ATC, such as inadvertent flight penalties, significant reroutes or the inability to receive an in-flight clearance.

To guide you in determining what codes you should be listing, we've provided this information in checklist format. We recommend you go through this checklist for each of your aircraft to check the applicable codes for future reference.

Use of Approved ASOC

Operators of newly delivered aircraft and qualifying pre-owned will receive a manufacturer issued and FAA approved ASOC. This ASOC will contain all of the required codes to be filed on your flight plan. Below is a sample of what an ASOC flight plan code page looks like and how it outlines the codes that have been provided by the manufacturer for the specific type.

Table of Manufacturer Suggested Flight Planning Codes For New and Currently Manufactured Aircraft Only

ASOC

DASSAULT AVIATION

Section 4 | Flight Plan Codes

This section facilitates accurate completion of a flight plan when operating internationally. See Flight Plan Quick Guide Brochure (faa.gov) for more information on flight plan code.

ICAO FLIGHT PLAN Field (10a / 10b).	
Code for Full Authorization	10a: S B D E2 E3 F G H I J1 J3 J4 J7 P2 R W X Y Z 10b: L B1 D1
Notes: N/A	
Remove **J3, J4, J7, P2** from **10a** and **D1** from **10b** if A056 FANS is not authorized	
Remove **J1** from **10a** if A056 ATN is not authorized	
Remove **X** from **10a** if B039 is not authorized	
Remove **W** from **10a** if B046 is not authorized	
Remove **B** from **10a** if C052 is not authorized	

ICAO FLIGHT PLAN REMARKS for Field 18.	
Remarks for full authorization	PBN/ A1 B1 C1 D1 L1 O1 S2 NAV/ Z1M1M2 DAT/ 1FANS2PDC SUR/ 260B RSP180
Notes: N/A	
Remove **D1 and 1FANS2PDC** from field **18** if A056 FANS is not authorized	
Remove **NAV/M1M2** from field **18** when B036 RNP2 is not authorized	
Remove **L1** from field **18** if B036 RNP4 is not authorized	
Remove **A1** from field **18** if B036 RNP10 is not authorized	
Remove **O1** from field **18** if C063 is not authorized	

Note that the codes provided in the subsequent table are based on OEM equipment and declared aircraft capabilities and may not apply to modified aircraft. Aircraft no longer being manufactured are not included in this table. The operator is ultimately responsible for checking their manufacture issued ASOC to ensure accuracy.

Checklist of Flight Planning Codes

Manufacturer	Type	Equipment and Capability Codes Field 10a / 10b	Equipment and Capability Codes Field 18
Bombardier	Challenger 350 (3500)	SBDE1E2E3F-GHIJ1J3J4J5P2RWXYZ / LB1D1	PBN/A1L1B1C2C3D2D3O2 NAV/M1M2 SBAS RNP2 S2 DAT/1FANSE2PDC SUR/260B RSP180
Bombardier	Global 5500-6500	SBDE1E2E3F-GHIJ1J3J4JSP2RWXYZ / LBIDI	PBN/A1L1B1C2C3D2D3O2 NAV/M1M2S2 RNP2 SBAS DAT/1FANSE2PDC SUR/260B RSP180
Bombardier	Global 7500	SBDE1E2E3F-GHIJ1J3J4J7M3P2RWXYZ / LB1D1 or / LB2D1	PBN/A1L1B1C2C3D-2D3O2S2 NAV/M1M2 RNP2 SBAS DAT/1FAN-SE2PDC SUR/260B RSP180
Dassault	Falcon 900LX	SBDE2E3F-GHIJ1J3J4J7P2RWXYZ/ LB1D1	PBN/A1B1C1D1L1O1S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180
Dassault	Falcon 2000LXS	SBDE2E3F-GHIJ1J3J4J7P2RWXYZ/ LB1D1	PBN/A1B1C1D1L1O1S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180
Dassault	Falcon 8X	SBDE2E3FGHIJ1J3 J4J7P2RWXYZ / LB1D1	PBN/ A1B1C1D1L1O1S2 NAV/Z1M1M2 RNP2 DAT/ 1FANSE2PDC SUR/ 260B RSP180
Embraer	Phenom 100-300	SBGRWXY/LB2	PBN/A1B2C2D2L1O2S1S2 NAV/SBAS SUR/260B
Embraer	Praetor 500-600	SBDE1E2E3F-GHJ1J3J4J7P2RSWXYZ / LB1D1	PBN/ A1B2C2D2L1O2S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180
Gulfstream	G280	SBDE2E3F-GHIJ1J3J4J7P2RWXYZ/ LB1D1	PBN/A1L1B1C1D1O1S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180
Gulfstream	G650-G650ER	SBDE2E3F-GHIJ1J3J4J5P2RWXYZ/ LB1D1	PBN/A1L1B1C1D1O1S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180
Gulfstream	GVII-G500	SBDE2E3F-GHIJ1J3J4J5P2RWXYZ/ LB1D1	PBN/A1L1B1C1D1O1S2 NAV/M1M2 RNP2 DAT/ 1FANSE2PDC SUR/260B RSP180

Gulfstream	GVII-G600	SBDE2E3F-GHIJ1J3J4J5P2RWXYZ/LB1D1	PBN/A1L1B1C1D1O1S2 NAV/M1M2 RNP2 DAT/1FANSE2PDC SUR/260B RSP180
Textron	560XL	SBDE1E2E3FGHR-WXYZ/LB1	PBN/A1B2C-2D2O2S2L1 NAV/B4B3C3
Textron	C525 (M2, M2 Gen 2)	SBDE1E2E3FGHR-WYZ/LB2	PBN/A1B2C-2D2O2S2L1 NAV/B4B3C3 SUR/260B
Textron	C525C (CJ4, CJ4 Gen2)	SBDE1E2E3FGHR-WYZ/LB1	PBN/A1B2C-2D2O2S2L1 NAV/B4B3C3
Textron	C560XL (XLS+, XLS Gen2)	SBDE1E2E3FGHR-WXYZ/LB1	PBN/A1B2C-2D2O2S2L1 NAV/B4B3C3
Textron	C680A (Latitude)	SBDE1E2E3F-GHIJ1J3J4J7P2R-WXYZ/LB1D1	PBN/A1L1B1C-1D1O1S2 NAV/M1M2 RNP2 DAT/1FANSE2P-DC SUR/260B RSP180
Textron	C700 (Longitude)	SBDE1E2E3F-GHIJ1J3J4J7P2R-WXYZ/LB1D1	PBN/A1L1B1C-1D1O1S2 NAV/M1M2 RNP2 DAT/1FANSE2P-DC SUR/260B RSP180

Field 10a – This field corresponds to the Equipment and Capabilities of the aircraft

☑ **N - No Capabilities**
Not Common - this should only be used if no COM/NAV equipment is carried – or the equipment is unusable.

☑ **S - Standard**
Typical - this should be checked. Standard is considered to be VHF, VOR and ILS.

☑ **A - GBAS Landing System**
Not Common - this should be checked if you are equipped with GBAS to support approaches, landing, departures. To find out if you are equipped, check your AFM Limitations Section or navigation equipment list (i.e CAMP - Chapter 34).

☑ **B - LPV (APV with SBAS) - Requires an LOA (FAA - C052)**
Varies - this should be checked if you are equipped, capable and approved for LPV approaches (RNAV GNSS with LPV minima). To find out if you can do these operations, check your AFM Navigation Limitations section, and look for the term LPV. These operations require an LOA (FAA - C052); always check foreign and domestic authorization requirements.

☑ **C - LORAN C**
Not Common - This has been decommissioned, and is no longer used.

☑ **D - DME**
Typical - This should be checked if your aircraft is equipped with DME. To find out if you are equipped, check your navigation equipment list (i.e CAMP - Chapter 34).

☑ **E1 - FMC WPR**
Varies - This should be checked if your aircraft has, in addition to Datalink Capabilities, an FMS Waypoint Reporting (WPR) function. These are position reports that can be forwarded to ATC and used to replace HF voice position reports. To find out if you are capable, check the datalink portion of your AFM (this is usually in the Limitations Section.

☑ **E2 - D-FIS**
Varies - This should be checked if your aircraft has, in addition to Datalink Capabilities, the FMS capability to receive messages from flight information services (FIS), such as weather reports and operational data. To find out if you are capable, check the datalink portion of your AFM (this is usually in the Limitations Section.

☑ **E3 - PDC**
Varies - This should be checked if your aircraft has, in addition to Datalink Capabilities, the FMS capability to receive PDCs (Pre-Departure Clearances). To find out if you are capable, check the datalink portion of your AFM (this is usually in the Limitations Section.

☑ **F - ADF**
Typical - Check this if you are equipped with ADF. To find out if you are equipped, check your navigation equipment list (i.e CAMP - Chapter 34).

☑ **G - GNSS**
Typical – this should be checked if equipped with a GPS. To find out if you are equipped, check your navigation equipment list (i.e CAMP - Chapter 34).

☑ **H - HF RTF**
Typical, Check this if you are equipped with HF Radio(s). To find out if you are equipped, check your communications equipment list (i.e CAMP - Chapter 23).

☑ **I - INS**
Varies - Check this if you are equipped with Inertial Navigation System (INS/IRS/IRU). To find out if you are equipped, check your navigation equipment list (i.e CAMP - Chapter 34).

☑ **J1 - VDL Mode 2 (CPDLC over ATN) - Requires an LOA (FAA - A056)**
Varies - Check this if you are capable of and approved for CPDLC over ATN B1, which is the European datalink network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term ATN B-1. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.

☑ **J2 - HFDL**
Not Common - Check this box if you are capable of High Frequency Data Link Communications. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term HFDL.

☑ **J3 - VDL Mode A (CPDLC over FANS 1/A) - Requires an LOA (FAA - A056)**
Varies - Check this if you are capable of and approved for CPDLC over FANS using VHF Datalink Mode A (analog). To find out if you are capable of this, check your AFM Limitations Section and lookout for the term VDL M0/A. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.. Please note that both J3 and J4 may be used.

☑ **J4 - VDL Mode 2 (CPDLC over FANS 1/A) - Requires an LOA (FAA - A056)**
Varies - Check this if you are capable of and approved for CPDLC over FANS using VHF Datalink Mode A (digital). To find out if you are capable of this, check your AFM Limitations Section and lookout for the term VDL M0/2. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.. Please note that both J3 and J4 may be used.

☑ **J5 - Satellite Inmarsat (CPDLC over FANS 1/A) - Requires an LOA (FAA - A056)**
Varies - Check this if you are capable of and approved for CPDLC over FANS using Satellite Datalink over the Inmarsat Network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term Inmarsat. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.. Please note that though both J5 and J7 may be selected, it is usually one or the other.

☑ **J6 - Satellite MTSAT (CPDLC over FANS 1/A)**
Not Common - Check this if you are capable of and approved for CPDLC over FANS using Satellite Datalink over the MTSAT Network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term MTSAT. These operations typically require an LOA (FAA – A056); always check foreign and domestic authorization requirements..

☑ **J7 - Satellite Iridium (CPDLC over FANS 1/A) - Requires an LOA (FAA - A056)**
Varies - Check this if you are capable of and approved for CPDLC over FANS using Satellite Datalink over the Iridium Network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term Iridium. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.. Please note that though both J5 and J7 may be selected, it is usually one or the other.

☑ **K - MLS**
Not Common - Check this if you are equipped and capable of Microwave Landing System. This would be outlined in your AFM Navigation Limitations Section.

☑ **L - ILS**
Typical - Check this if you are capable of ILS. ILS equipment can be specified by using the letter S (Standard) only and/or by inserting the letter L. To find out if you are capable of this, check your AFM Navigation Limitations Section.

☑ **M1 - Inmarsat (ATC SATVOICE)**
Varies - Check this if you are equipped with Air Traffic Control (ATC) SATellite VOICE radio (SATVOICE) with data transmitting via the Inmarsat satellite network. To find out if you are equipped with such radio, check your equipment list (i,e CAMP Chapter 23). Also note that the installed system must be in accordance with AC 20-150B.

☑ **M2 - MTSAT (ATC SATVOICE)**
Not Common - Check this if you are equipped with Air Traffic Control (ATC) SATellite VOICE radio (SATVOICE) with data transmitting via the MTSAT satellite network. To find out if you are equipped with such radio, check your equipment list (i.e CAMP Chapter 23). Also note that the installed system must be in accordance with AC 20-150B.

☑ **M3 - Iridium (ATC SATVOICE)**
Varies - Check this if you are equipped with Air Traffic Control (ATC) SATellite VOICE radio (SATVOICE) with data transmitting via the Iridium satellite network. To find out if you are equipped with such radio, check your equipment list (i,e CAMP Chapter 23). Also note that the installed system must be in accordance with AC 20-150B.

☑ **O - VOR**
Typical - Check this if you are equipped with VOR Equipment. To find out if you are equipped with such, check your equipment list (i.e CAMP Chapter- 23). Please note that VOR equipment can be specified by using the letter S (Standard) only and/or by inserting the letter O.

☑ **P1 - RCP400**
Not Common - Check this if you comply with Required Communication Performance 400 (in seconds).
To find out if you are compliant with this standard, check your AFM Limitations Section and lookout for the term RCP400. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.

☑ **P2 - RCP240 - Requires an LOA (FAA - A056)**
Varies - Check this if you comply with Required Communication Performance 240 (in seconds).
To find out if you are compliant with this standard, check your AFM Limitations Section and lookout for the term RCP240. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.

☑ **P3 - RCP400 (SATVOICE)**
Not Common - Check this if you comply with Required Communication Performance 400 SatVoice (in seconds). To find out if you are compliant with this standard, check your AFM Limitations Section and lookout for the term RCP400 SatVoice. These operations require an LOA (FAA – A056); always check foreign and domestic authorization requirements.

☑ **R - PBN - Requires an LOA (FAA – B036 / C063 / C052)**.
Typical – Check this if you are compliant with and approved for Performance Based Navigation standards. To find out if you are compliant check your AFM Navigation Limitations Section and lookout for terms such as RNAV and RNP. These operations require an LOA (FAA – B036 / C063 / C052); always check foreign and domestic authorization requirements.

☑ **T - TACAN**
Not Common – Check this if your aircraft is capable of Tactical Air Navigation using UHF. To find out if you are capable of such operations, check your AFM Navigation Limitations Section and look for the term TACAN.

☑ **U - UHF RTF**
Not Common – Check this if your aircraft is equipped with Ultra High Frequency Radio(s). To find our if you are equipped, check your equipment list (i.e. CAMP Chapter 23.

☑ **V - VHF RTF**
(Typical– Check this if your aircraft is equipped with Very High Frequency Radio(s). To find out if you are equipped, check your equipment list (i.e CAMP Chapter 23.Please note that VHF equipment can be specified by using the letter S (Standard) only and/or by inserting the letter V)

☑ **W - RVSM - Requires an LOA (FAA – B046).**
Typical - Check this if you are compliant with and approved for Reduced Vertical Separation Minima standards. To find out if you are compliant, check your AFM Navigation Limitations Section and look for the term RVSM. These operations require an LOA (FAA – B046); always check foreign and domestic authorization requirements.)

☑ **X - NAT HLA - Requires an LOA (FAA – B039).**
Typical - Check this if you are compliant with and approved for North Atlantic High-Level Airspace standards. To find out if you are compliant, check your AFM Navigation Limitations Section and look for the term RVSM. These operations require an LOA (FAA – B039); always check foreign and domestic authorization requirements.

☑ **Y - 8.33kHz VHF Radio**
Typical - Check this if you are equipped with a VFH radio that has a 8.33kHz channel split. To find out if you are, consult your equipment list (i.e. CAMP Chapter 23.)

☑ **Z - Other Capacities**
Typical - Check this box if you have additional equipment capabilities. If so, this should then be followed by COM/ , NAV and/or DAT/ in field 18 of the flight plan. Example: NAV/RNP2, DAT/1FANS2PDC.

Field 10b – This field corresponds to the Surveillance Equipment and Capabilities of the aircraft

1.) Transponder Codes – Check One Only:

- ☑ N - No Capabilities
- ☑ A - Mode A
- ☑ C Mode A and C
- ☑ S Mode S, ACID and Altitude
- ☑ P Mode S, Altitude, no ACID
- ☑ I Mode S, ACID, no Altitude
- ☑ X Mode S, no ACID, no Altitude
- ☑ E Mode S, ACID, Altitude, extended squitter
- ☑ H Mode S, ACID, Altitude, Enhanced Surveillance *(Varies - check this box if you are equipped with ADS-B Out/In Transponder)*
- ☑ L Mode S, ACID, Altitude, Enhanced Surveillance, extended squitter *(Typical - check this box if you are equipped with ADS-B Out/In Transponder)*

2.) Transponder ADS-B Surveillance Codes - Check One Only:

- ☑ **B1 - 1090 MHz out capability**
  (typical – Check this box if you are equipped with an ADS-B out transponder. To find out if you are equipped, consult your equipment list (i.e. CAMP chapter 34), and cross check with the FAA Approved ADS-B Out equipment link in the note above. Please note that for US registry, an LOA is no longer required for this (FAA A153 has been decommissioned)
- ☑ **B2 - 1090 MHz out and in capability**
  (Varies – Check this box if you are equipped with an ADS-B out AND in transponder. To find out if you are equipped, consult your equipment list (i.e. CAMP chapter 34), and cross check with the FAA Approved ADS-B Out equipment link in the note above. Please note that for US registry, an LOA is no longer required for this (FAA A153 has been decommissioned)
- ☑ **U1 - UAT out capability**
  (Not Common – Check this box if you are equipped with a Universal Access Transceiver for ADS-B Out. To find out if you are equipped, consult your equipment list (i.e. CAMP chapter 34)
- ☑ **U2 - UAT out and in capability**
  (Not Common – Check this box if you are equipped with a Universal Access Transceiver for ADS-B Out AND in. To find out if you are equipped, consult your equipment list (i.e. CAMP chapter 34)
- ☑ **V1 - VDL Mode 4 out capability**
  (Not Common – Check this box if you are capable of ADS-B VHF Datalink Mode 4 out. To find out if you are compliant, consult your AFM Limitations Section and look for VDL Mode 4.)
- ☑ **V2 - VDL Mode 4 out and in capability**
  (Not Common – Check this box if you are capable of ADS-B VHF Datalink Mode 4 in / out. To find out if you are compliant, consult your AFM Limitations Section and look for VDL Mode 4.

3.) ADS-C capabilities of your aircraft

- ☑ **D1 - ADS-C FANS-1/A, and/or**
  (Varies – Check this box if you are equipped with and approved for use of a datalink system capable of ADS-C over the FANS 1/A(+) network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term FANS 1/A(+) and corresponding ADS-C aircraft allocated performance. These operations require an LOA (FAA – A056).
- ☑ **G1 - ADS-C ATN**
  (Not Common – Check this box if you are equipped with and approved for use of a datalink system capable of ADS-C over the European ATN-B1 network. To find out if you are capable of this, check your AFM Limitations Section and lookout for the term ATN-B1 and corresponding ADS-C aircraft allocated performance. These operations typically require an LOA (FAA – A056).

Field 18 - Additional Capabilities and Equipment

Codes relating to PBN capabilities:
Note: if your aircraft complies with all navigation specifications, please only check "all".

Oceanic and Remote Continental RNP

- ☑ A1 RNP-10 (may be referred to as RNAV10 in certain instances)
- ☑ L1 RNP-4

RNAV 5 (referred to sometimes as B-RNAV)

- ☑ B1 All (indicates that you are capable of B2-B5)
- ☑ B2 GNSS
- ☑ B3 DME/DME
- ☑ B4 VOR/DME
- ☑ B5 INS or IRS
- ☑ B6 LORANC

RNAV 2

- ☑ C1 All (indicates that you are capable of C2-C4)
- ☑ C2 GNSS
- ☑ C3 DME/DME
- ☑ C4 DME/DME/IRU

RNAV 1 (referred to sometimes as P-RNAV)

- ☑ D1 All (indicates that you are capable of D2-D4)
- ☑ D2 GNSS

☑ D3 DME/DME
☑ D4 DME/DME/IRU

RNP 1

☑ O1 All (indicates that you are capable of O2-O4)
☑ O2 GNSS
☑ O3 DME/DME
☑ O4 DME/DME/IRU

Approach

☑ O1 All (indicates that you are capable of O2-O4)
☑ O2 GNSS
☑ O3 DME/DME
☑ O4 DME/DME/IRU

AR Approach (Authorization Required Approach)

☑ T1 RNP AR APCH With RF
☑ T2 RNP AR APCH Without RF

Codes relating to CPDLC and ADS-B:

☑ SUR/ (Surveillance applications or capabilities not specified in Item 10b)

This field corresponds to any included surveillance applications or capabilities not specified in Item 10b.

-ADS-B: Typically, you'll be listing the technical standard orders that your transponders meet, such as for example 260B, which indicates that you meet the DO-260B/TSO C166b standards. You can check this by looking at your AFM limitations section pertaining to ADS-B, or looking at the specification sheet for your installed transponders.

-RSP: Typically, if you have an installed and approved ADS-C system, you'll be listing what required surveillance performance you comply with. You can check this by looking at your AFM limitations section pertaining to ADS-C (most often under Datalink) and checking what your interoperability standards are. You'll usually find RCP240 and RSP180. The latter should be entered under the SUR/ field.

Important: If you are trying to show that you are PBCS capable on your flight plan, then code "SUR/RSP180" in Item 18 is only part of the required coding. PBCS also requires that you have a "P2" entry in Item 10a; refer to the detailed information earlier in this guide.

DAT/ (Data applications or capabilities not specified in Item 10a - per AC 90-117 Appendix D)

☑ **1FANS2PDC**
This code shows priority preference to obtain clearances through datalink or PDC (e.g. CPDLC-DCL is the primary preference; PDC is the secondary that will be used if the primary is unavailable and not feasible.)

☑ **1FANSE2PDC**
This code is to be used to obtain CPDLC-DCL / PDC and enroute clearances for aircraft that have US-Enroute CPDLC capabilities

☑ **CPDLCX**
This code is used to show that the aircraft is exempt from the European ATN CPDLC mandate, either by age, weight, or a previously-accepted FANS installation. This code should not be entered if "J1" is present in Item 10a.

NAV/ (Navigation capabilities that are outside of the scope entered in the PBN/ field - Note that these codes are not recognized in all areas of the world at this time)

☑ Z1 (Radius to Fix)
☑ Z2 (Fixed Radius Transitions (FRT))
☑ Z5 (Time of Arrival Control (TOAC))
☑ R1 (Helicopter RNP 0.3)
☑ P1 (Advanced RNP (A-RNP))
☑ M1 (RNP-2 (Continental) - FAA)
☑ M2 (RNP-2 (Oceanic / Remote) - FAA)
☑ RNP-2 (RNP-2 (Oceanic / Remote) - ICAO)

SECTION 2: RECOMMENDED NAVIGATION LOG ABBREVIATIONS AND CONTENT (BEST PRACTICES)

It is recommended that master documents (sometimes referred to as "computer flight plans") include the following data points:

Flight Plan Contents

- Airway Name or Direct
- Navaid identifier and frequency
- LAT/LONG in 13 Character Format
- LAT/LONG in ARINC 424 Format when necessary
- Routing to Alternate Airport
- FIR Boundary Crossing with CPDLC log on information

Recommended content and corresponding abbreviations

Item	Abbreviation
Initial Magnetic Course to waypoint	MC
Initial Magnetic Heading to waypoint	MH
Average True Course to waypoint	TC
Average True heading to waypoint	TH
Zone or Leg Distance	DIST
Distance Remaining	DIST REM
Estimated Time of Arrival	ETA (to be entered by crew after being airborne, provide space for crew entry)
Zone or Leg Time	TIME
Elapsed Time over waypoint	ET
Zone MORA:	MORA
Flight Level:	FL
Tropopause Level: TROP	TROP
Planned cruise MACH number: MACH	MACH
Forecast Static Air Temperature: SAT	SAT

Ground Speed: GS	GS
Wind directions and speed: WIND	WIND
True Airspeed: TAS	TAS
Zone Fuel Burn prediction for leg: ZBO	ZBO
Fuel remaining over fix:	FUEL REM (provide space for crew entry, so comparison can be made)
Actual Time of Arrival	ATA (to be entered by the crew when crossing fix, provide space for crew entry)
Wind Shear	W/S

SECTION 3: RECOMMENDED CREW PACKAGE CONTENTS (BEST PRACTICES)

- Equal Time Point Calculations
  Note: To include mid-ocean alternate whenever possible
- Matrix that shows ETP suitability time windows based on TAF weather. (Alternate weather minimums are applicable)
- Weather to include:
  - METARS
  - TAFS
  - Significant Weather Charts
  - Prognostic Weather Charts
  - Tropopause Prognostic Chart
  - Winds Aloft Charts (to include winds for ETP flight levels or altitudes)
  - Volcanic Ash
  - Space Weather
- NOTAMS - Analyze and Identify NOTAMS that are pertinent to your flight.
  Note: As required, operators should ensure they have access to and have reviewed Local, Distant, International, Oceanic Control Area, FIR, Security, Ash, Snow, Bird and GPS NOTAMS.
- FDE (fault detection and exclusion)
- RAIM (receiver autonomous integrity monitoring) predictions
- Track Message (when required)
- International Flight Plan Form (Ref. FAA 7233-4)

SECTION 4: CONTINUITY AND ACCURACY

In the compilation of the document, care has been taken to ensure that the information contained therein is accurate and complete at the time of publication. Email ops@nbaa.org to report any errors, updates or omissions, or if you have any questions about this document.

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ABOUT NBAA

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