ICAO Flight Plans

A New Cross to Bear

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Effective Date

- 27 August 2019 for <u>all</u> flight plans
  - Except the FRZ?

- Reference is AIM 5-1-9 (10 pages worth)

- Note: 1800WXBRIEF.COM and tablet programs allow some slack (e.g., ”IFR” instead of “I”) and may be easier to use
  - Everything today works in 1800WXBRIEF.COM and Garmin Pilot
    - I have not tried Foreflight or other tablet programs, but we can answer questions on Foreflight today

Last Opportunity Today: Whine, Whine, Whine!!

- No advantage for VFR flight plans
  - Just a PITA
- Some potential benefit for IFR flight plans to/from busy airports and in certain airspace
  - Principally for air carrier aircraft
  - Not much use for most GA flights
  - Not clear why some of the info is required
- Some advantage for gathering equipage data for the FAA
- The requirement is now, but the AIM is out of date for much of this.

Some Points

- The Air Route Traffic Control Centers (ARTCCs, such as Washington Center) do the flight plan processing for the FAA

- Sometimes the Terminal Radar Control Facilities (TRACONs, such as Potomac) don't get the info passed to them
  - So, you file all this fancy stuff and approach asks, "Can you do the RNAV approach?"
    - It is easier for the controller to query you than query the system
      - I'd do the same thing if I were a controller—there is no use complaining

Some Terminology

IFR Navigation (1/2)

- **PBN is "Performance Based Navigation"**
  - **Basically RNAV and RNP**
- **RNAV is "Area Navigation"**
  - **Point-to-point navigation (done with GPS for GA)**
- **RNP is "Required Navigation Performance"**
  - **RNP and RNAV are equivalent for GPS-equipped aircraft**
- **The U.S. uses "RNAV (GPS)" approaches and ICAO uses "RNP APCH"**
  - **Same thing. Very confusing**

Some Terminology

IFR Navigation (2/2)

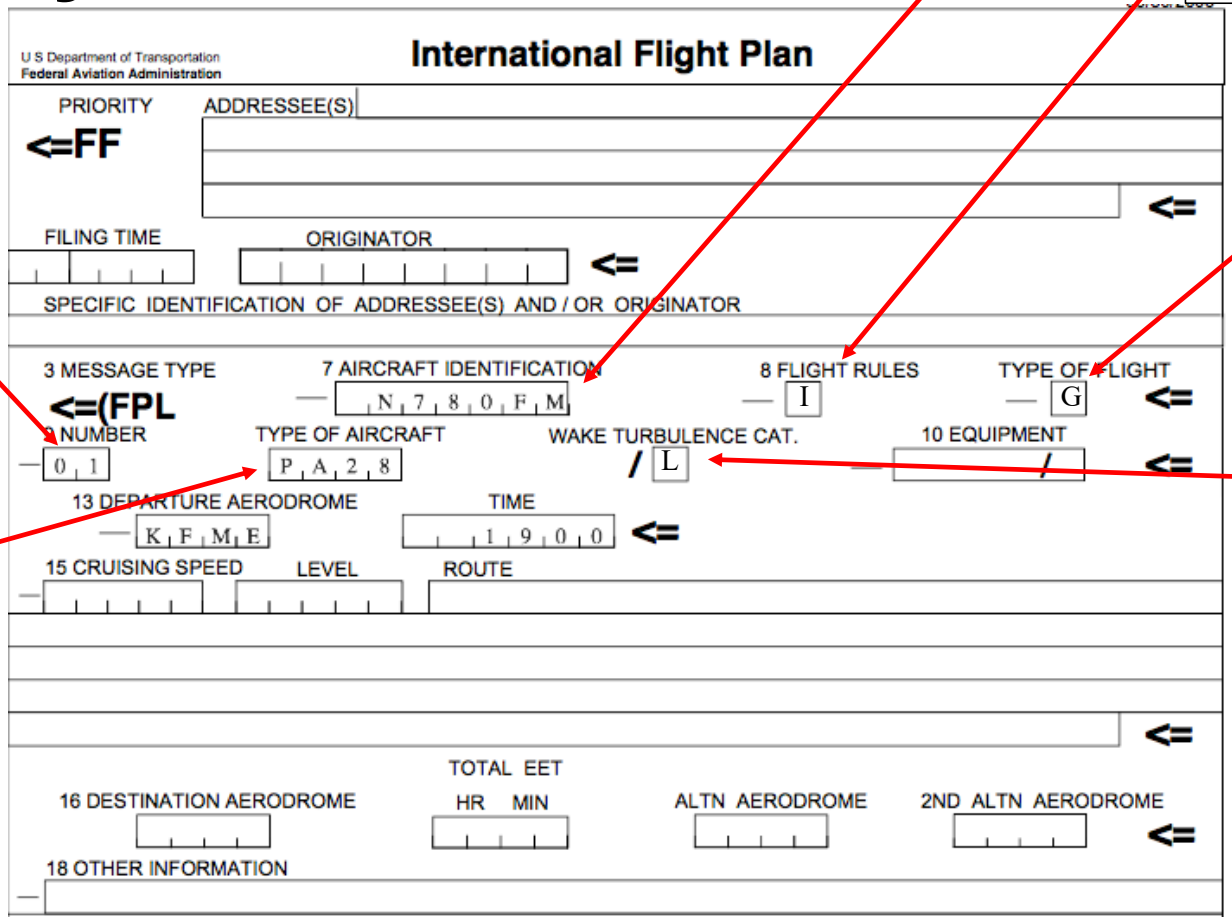
- **RNP AR is "Required Navigation Performance Authorization Required"**
  - **This is a special category of instrument procedure that requires special training and authorization**
  - **RNP APCH or RNAV (GPS) are not the same as**
    - **RNP AR, which is how ICAO specifies it or**
    - **RNAV (RNP), which is how the FAA specifies**
- **Yes, this is confusing…**

Some More Terminology

ADS-B

- **Automatic Dependent Surveillance-Broadcast**
  - **ADS-B "Out": Aircraft broadcast ID, position and altitude**
    - **Received by ATC, other aircraft and whomever is listening (e.g., Flight Aware)**
    - **Two choices for transmission**
      - **1090 Mhz from a *Mode S transponder (with extended squitter)***
      - **978 Mhz from a *Universal Access Transmitter (UAT)***
        - **Not a part of the transponder system, but may use the transponder code and altitude**
    - **Required 1/1/2020 in lots of airspace**
  - **ADS-B "In":**
    - **Receive ID, position and altitude from other aircraft**
    - **Receive uplink from ground stations with traffic, weather, NOTAMS, TFRs**

Easy Stuff



N Number

"IFR" (including SFRA)
"VFR"

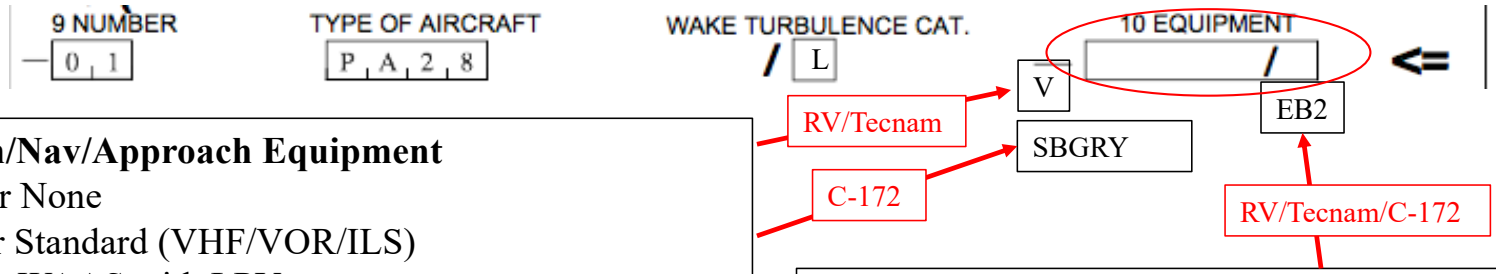
"G" for GA

Number of aircraft

Type aircraft

Wake Category ("L")

Equipment and Surveillance Codes



Comm/Nav/Approach Equipment

"N" for None
"S" for Standard (VHF/VOR/ILS)
"B" for WAAS with LPV
"D" for DME
"G" for GPS *IFR approved GPS only*
"L" for ILS
"O" for VOR
"R" for PBN approved (plus block 18)
"V" VHF radio
"Y" for VHF with 8.33 kHz channel spacing capability

Note: You need Block 18 entries if you use G or R. See later slide.

Surveillance Equipment

Transponder

"N" for None
"C" for Mode C Transponder with altitude reporting
"E" for Transponder - Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability
"S" for Transponder – Mode S with pressure-altitude and aircraft identification capability

ADS-B

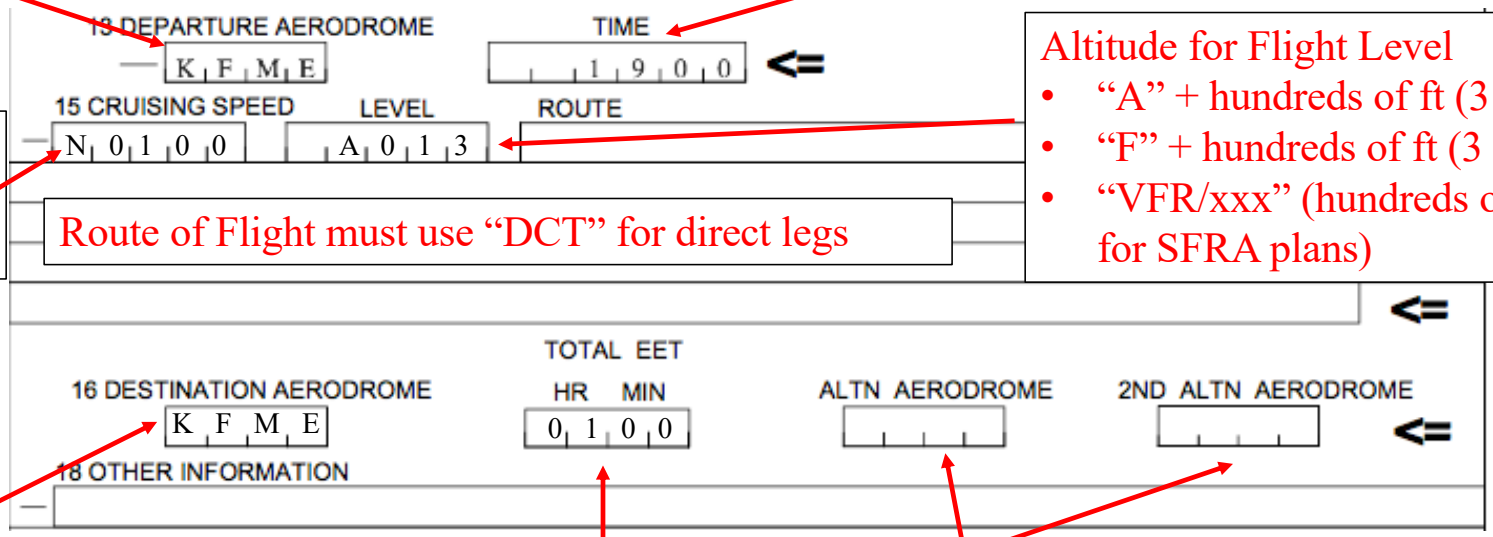
"B1" for ADS-B with 1090 MHz ADS-B "out"
"B2" for ADS-B with 1090 MHz ADS-B "out" and "in"
"U1" for ADS-B "out" using UAT
"U2" for ADS-B "out" and "in" using UAT

Route and Altitude

3W3 or W29 are OK
Generally should use KESN or KBWI (except sometimes the system recognizes the airport without the "K")

Departure airport/fix (3, 4, or 5 letters/numbers, despite only 4 blocks) or ZZZZ

Departure time (Z)



Altitude for Flight Level
- "A" + hundreds of ft (3 digits)
- "F" + hundreds of ft (3 digits)
- "VFR/xxx" (hundreds of ft (3 digits for SFRA plans)

Speed knots "N"+ 4-digit speed

Route of Flight must use "DCT" for direct legs

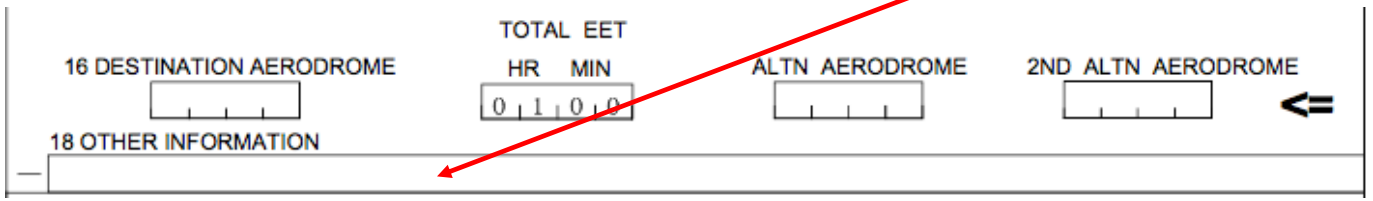
Destination airport/fix (3, 4, or 5 letters/numbers (despite only 4 blocks) or ZZZZ

Alternate airport (3 or 4 letters/numbers) or ZZZZ

EET: Estimated Elapsed Time in hours and minutes
Aka: "ETE"

The Bear: Other Information (Block 18)

Generally Not Required for VFR Flight Plans



The flight plan can include a *bewildering* number of capabilities to put into Block 18 for IFR flights. This includes RNAV and RNP capabilities, datalink, route preferences, etc**. Important:** *If you put "G" or "R" in the equipment block, you must put your PBN capabilities in Block 18 or the flight plan may bounce*.

My suggestion if you have an IFR GPS as follows. Without an IFR GPS, Block 18 can generally be blank.
See the AIM for other stuff, which you will generally not use

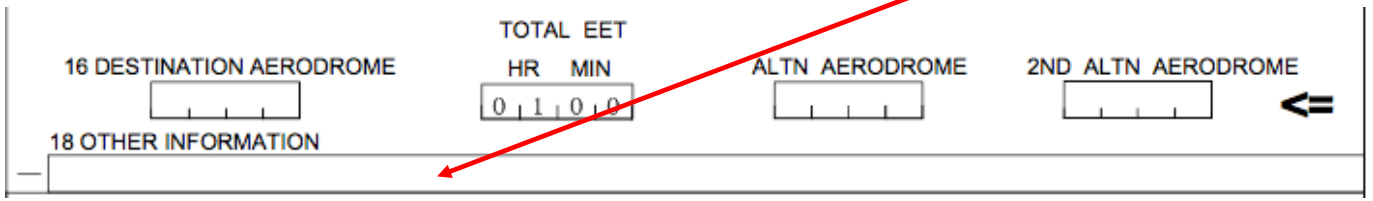
PBN/C2D2O2S1

This suggestion is 4 2-character entries.
You can have a max of 8 entries/16 characters

Which is:
C2 (RNAV 2 GNSS)
D2 (RNAV 1 GNSS)
O2 (Basic RNP 1 GNSS),
S1 (RNP APCH) The FAA term is RNAV(GPS)

SFRA Plans: Other Information (Block 18)

Only applicable for SFRA Flight Plans



Some instructions for SFRA flight plans indicate that a remark "SFRA" is not required. However, it is ok to put it the remarks in Block 18. If you want to do this, enter "RMK/SFRA" after a space.

So, for the IFR plan suggested on the prior page, Block 18 would look like:

PBN/C2D2O2S1 RMK/SFRA

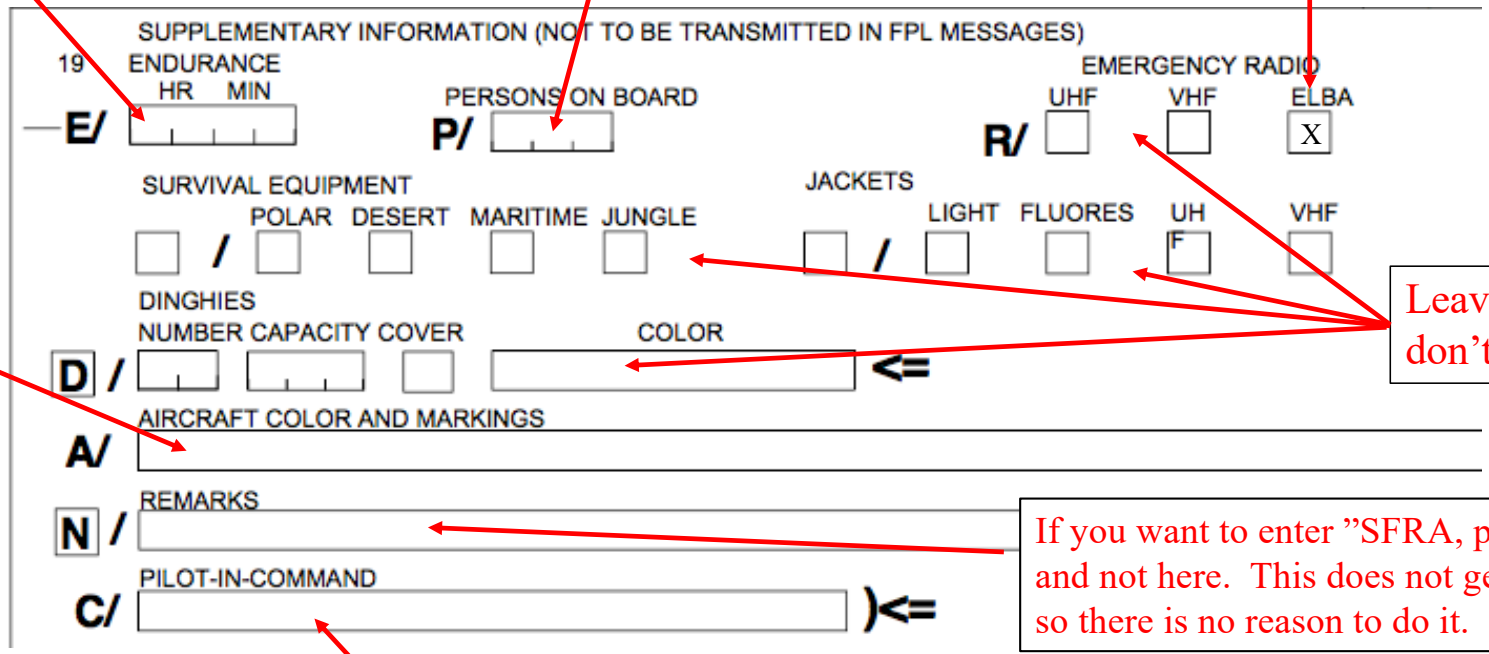
Note: Put a space between groups of characters (i.e., right before RMK in the example above.

Supplementary Information

Endurance in hours and minutes

Persons on board

Emergency Locator Beacon



Aircraft color

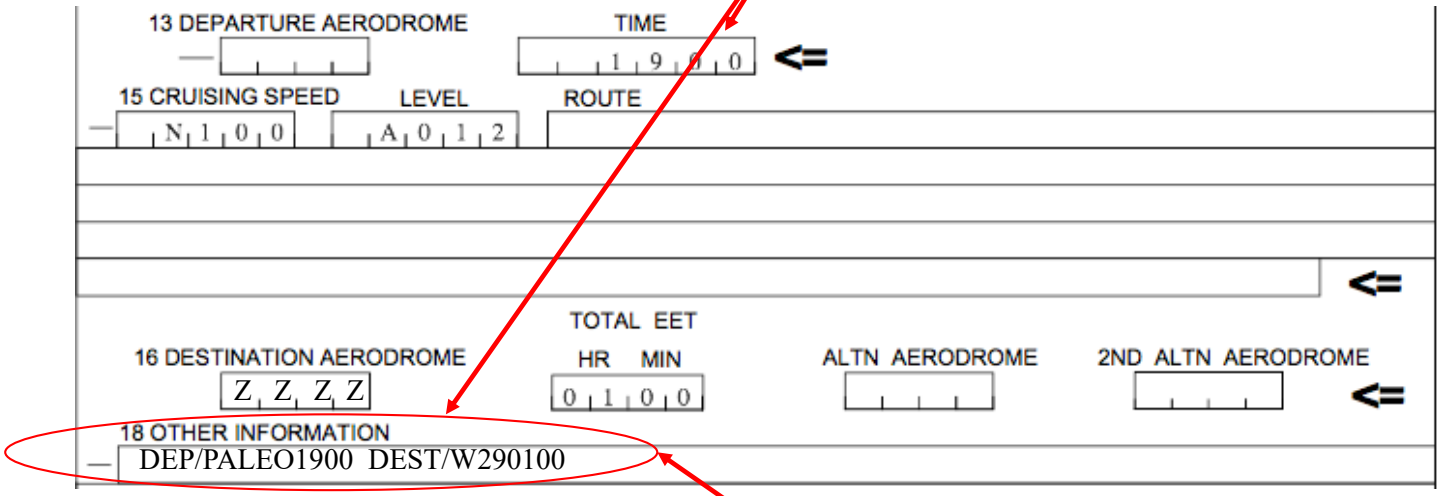
Leave blank if you don't carry this stuff

If you want to enter "SFRA, put in in Block 18 and not here. This does not get sent to ATC, so there is no reason to do it.

PIC. Only the name is required, but 1800wxbrief.com will take phone number and based airport

If you put “ZZZZ” in Block 13, then put, e.g., “DEP/PALEO1900” or “DEP/W291900”) in Block 18. No spaces.

ZZZZ (Stay Awake!!)



If you put “ZZZZ” in Block 16 and ETE, then put, e.g., “DEST/PALEO0100” or “DEST/W290100”) in Block 18. No spaces.

It is normally *much* easier to just use the departure/destination airport or fix, and 1800WXBRIEF and most tablet programs accept these-–including five characters in the four character block.

Done

- **Go file**

- **Once you have done this for your N number, Leidos (FSS) and your tablet will retain the aircraft-specific info**

- **I usually file electronically on my PC. 1800WXBRIEF.com is pretty good, but so are the tablet programs**
  - **A handy item if you file the night before is the scheduled weather briefing—you can have it sent by email in the morning.**

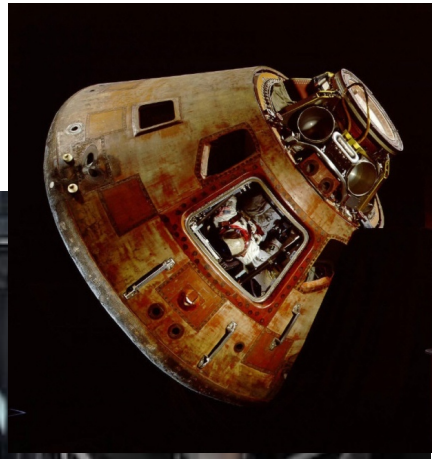
New Item

Separate from Flight Plans

- **To get your IFR clearance on the ground at a non-towered airport with no remote clearance outlet, you now call the specific ATC facility for that airport on the phone**
  - **In general, you do not call Flight Service**

- **The phone numbers for the ATC facilities are in the Chart Supplement (CS, which is what the Airport/Facilities Directory (AFD) is now called)**
  - **My tablet program has the CS and phone numbers, as does Airnav.com and other online sources**

Questions?



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Source: Author