

ICAO Flight Plans and FAA Form 7233-4

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Overview

- Motivation
- Timeline
- Reasons to file the form
- How to fill out the form
- Common airplane situations
- Automation
 - DUATS
 - Lockheed Martin

Motivation

- FAA to deprecate domestic flight plan form 7233-1
- Emphasize “performance-based navigation” (PBN)
- Improve control and routing of aircraft based on finer-grained aircraft navigation capabilities
- Benefits accrue mostly to IFR flights

Timeline

- Original cutover October 2016
- Now planning "Q1" 2017, due to
 - Software difficulties
 - FAA customizations
 - Acceptance of data fields
 - Service provider compliance
 - DUATS
 - Lockheed Martin
 - Special services
 - DVFR
 - Washington DC SFRA
 - Composite flight plans

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Definitions and terms

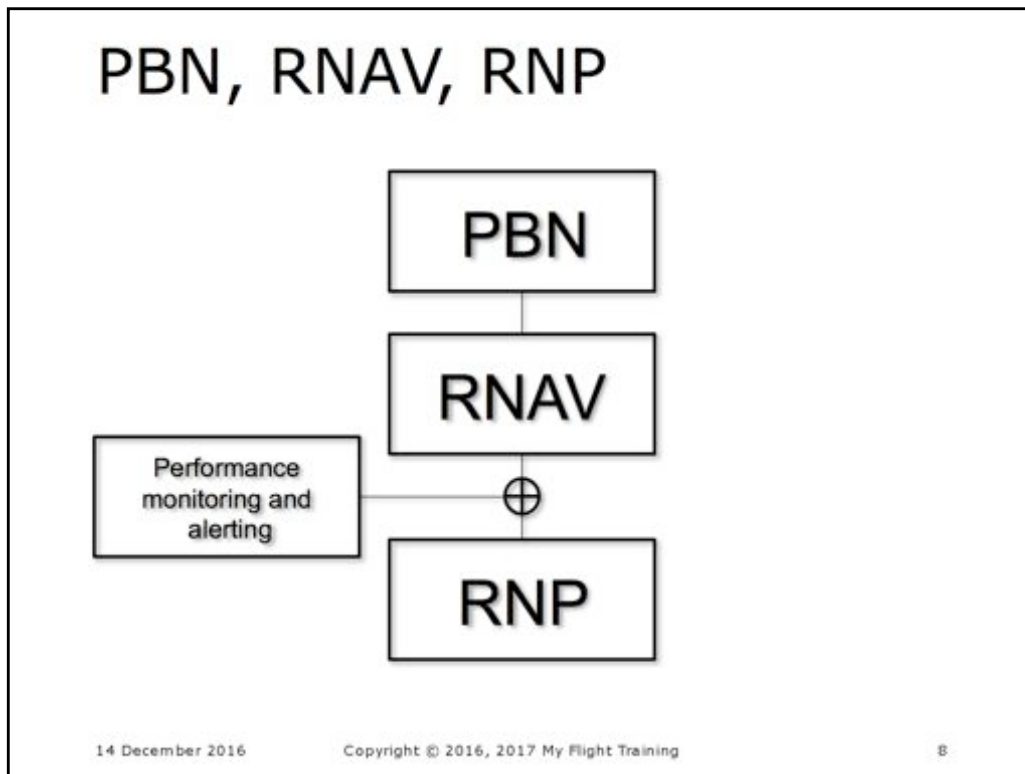
- Confusing terms and AIM revisions
 - Tussles between FAA and ICAO
 - Inconsistent application of terms
- PBN
 - Performance-based navigation
- RNAV
 - Area navigation
- RNP
 - Required navigation performance
- Surveillance
 - ATC monitoring of the identity, position, and ground track of aircraft

Performance based nav

- Historically, aircraft navigation performance was a side-effect of the navigation system used
 - VOR: $\pm 4.5^\circ$
 - NDB: $\pm 5.0^\circ$
- Performance-based navigation uses an amalgamation of sensors to create an aircraft track with defined accuracy independent of the underlying navigation system

Performance based nav

- This is accomplished using either
 - GNSS
 - Global navigation satellite systems
 - Most commonly, GPS
 - But also GLONASS, Galileo
 - Triangulation from ground-based nav aids
 - VOR/DME
 - DME/DME
 - IRU
 - Inertial reference unit



Why?

- Confine aircraft to tighter tracks
 - Cram more aircraft into the same airspace
 - Particularly terminal airspace
 - Noise abatement (with consequences)
 - Operation closer to terrain
- Allow aircraft to operate on close parallel tracks
 - Parallel runway departures
 - Increase airport departure capacity

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RNAV levels

- RNAV 10 and RNAV 4
 - Oceanic
- RNAV 5 and RNAV 2
 - Domestic en route
- RNAV 1
 - Terminal procedures
 - SIDs
 - STARs
 - ODPs
- RNAV < 1
 - Instrument approaches

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Thus the ICAO flight plan

- Why file FAA Form 7233-4?
 - You are required to because of
 - International border crossing
 - Washington DC SFRA
 - Operation in RVSM airspace
 - Or at your discretion because you want
 - To request ADS-B services
 - Routing based on PBN
 - RNAV 1 procedures
 - Distinction vanishes when Form 7233-1 is retired

RNAV 1 procedures

- Domestic pilots must use Form 7233-4 if requesting RNAV 1 procedures
 - RNAV SID
 - RNAV STAR
 - RNAV ODP
- Many airports now publish only RNAV departures
 - Willits (O28)
 - Reid Hillview (RHV)

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RNAV 1 procedures

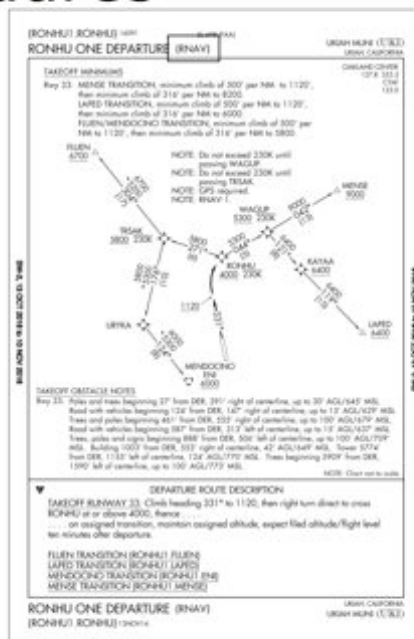
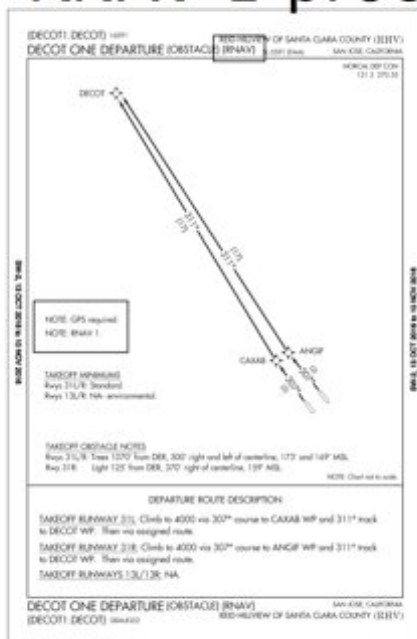
- All RNAV terminal procedures are now RNAV 1
 - Procedures formerly labeled
 - Type A
 - Type B
 - RNAV 2
 - have all been rescinded
- Navigation system must meet RNAV 1 standard
- ICAO flight plan must be filed

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RNAV 1 procedures



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Domestic equipment

- Domestic navigation and surveillance equipment is mashed into a single-letter code
 - Common general aviation variants:
 - /X No transponder
 - /U VOR, no DME, Mode C transponder
 - /A VOR, DME, Mode C transponder
 - /I IFR RNAV (except GPS), Mode C transponder
 - /G IFR RNAV via GPS, Mode C transponder
 - e.g.,
 - C172/G
 - P28A/A
 - M20P/I

ICAO equipment

- Navigation equipment listed separately
 - And much more fine-grained
- Surveillance equipment listed separately
 - And much more fine-grained
- We will see these categories as we fill out the 7233-4 form
 - ICAO Field 10 *navigation/surveillance*

Surveillance equipment

- Surveillance means visibility of aircraft to ATC by means of
 - Radar
 - Transponder (Modes A, C, or S)
 - ADS-B
 - Transponder (Mode S with "extended squitter")
 - Universal Access Transceiver (UAT)
- The intent seems to be that future ATC services will be available to aircraft implementing ADS-B Out.
 - What those services might be is not made clear by AIM 4-5-7.
 - But may include ATC service in areas not served by radar.

Mode A/C vs. Mode S

- Mode A/C transponders identify aircraft via 4-digit (4096 code) squawk
 - Assigned by ATC radio communication
 - ATC computer translates squawk to aircraft ID (tail number or callsign)
- Mode S transponders transmit aircraft ID ("flight ID") directly
 - 4-digit squawk code retained for compatibility
- 4-digit squawk becoming obsolete
 - May not be assigned/required in current or future environments
 - e.g., Eurocontrol today
 - ICAO flight plan Mode S capability is the key

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Transponders: Mode S

- Consult your AFM or transponder installation checklist (Form 337 AFM supplement) to determine the correct entry for ICAO surveillance.
- Mode S transponders have a unique 24-bit (6 hexadecimal digit) address assigned at time of installation.
 - This address can be found in the FAA aircraft registry.
 - Hexadecimal addresses assigned to the U.S. start with **A**.
 - The 6-digit address may need to be entered in Field 18.
- Most Mode S transponders are installed with pressure altitude and aircraft ID ("flight ID") reporting.
 - Normally the aircraft ID is the aircraft registration number.
- Some installations allow aircraft ID to be set by pilot per-flight (e.g., scheduled air carrier).
 - The aircraft ID should match that entered in the flight plan.
 - **DLX50** Dreamline 50
 - **BYF11** Bayflight 11

Transponders: Mode S

- Mode S transponders include
 - Garmin GTX 33 (built into G1000 or GTN 650/750)
 - Garmin GTX 330 (standalone)
 - Garmin GTX 330 ES (standalone)
 - Bendix-King KT74

Setting Mode S flight ID

- G1000
 - PFD TMR/REF subpanel
- GTN 750
 - Transponder softkey
 - Flight ID softkey
- GTX 330
 - Set on power-up



ADS-B surveillance

- ADS-B Out is the surveillance component, and is implemented in the aircraft using either or both of
 - Mode S transponder with "extended squitter"
 - FAA calls this "1090 MHz ES"
 - Universal Access Transceiver (UAT)
 - FAA calls this "978 MHz UAT"
- Many airplanes are being equipped with ADS-B via transponder or UAT

ICAO flight plan field 3

- Message type
 - Prefilled, no entry:
 - **<=(FPL**

The image shows a standard ICAO International Flight Plan form. A red box highlights the '3 MESSAGE TYPE' field, which contains the text '<=(FPL' followed by a '9 NUMBER' field. The rest of the form is partially visible, showing fields for origin, destination, aircraft type, and other flight details.

ICAO flight plan field 7

- Aircraft identification
 - Full registration number or aircraft callsign
 - Include N for U.S.
 - **N63251**
 - **BYF31**
 - **N6848J**
 - **URF203**

The image shows a portion of an ICAO International Flight Plan form. The title is 'International Flight Plan' with a reference number 'Doc 2909 Rev. 1-2013'. The form is divided into several sections. The '7 AIRCRAFT IDENTIFICATION' section is highlighted, showing the registration number 'N91338' entered in the 'REGISTRATION' field. Other fields in this section include 'TYPE OF FLIGHT' (set to 'VFR'), 'WAKE TUR', 'TYPE OF AIRCRAFT', and 'WAKE TUR'. Below this, there are fields for 'DEPARTING STATION', 'ENROUTE', and 'ROUTE'. Further down, there are fields for 'TOTAL SET', 'ALT. SET', 'ALT. SET', and 'ALT. SET'. The bottom section contains 'SUPPLEMENTARY INFORMATION' with checkboxes for 'E', 'P', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z', 'AA', 'AB', 'AC', 'AD', 'AE', 'AF', 'AG', 'AH', 'AI', 'AJ', 'AK', 'AL', 'AM', 'AN', 'AO', 'AP', 'AQ', 'AR', 'AS', 'AT', 'AU', 'AV', 'AW', 'AX', 'AY', 'AZ', 'BA', 'BB', 'BC', 'BD', 'BE', 'BF', 'BG', 'BH', 'BI', 'BJ', 'BK', 'BL', 'BM', 'BN', 'BO', 'BP', 'BQ', 'BR', 'BS', 'BT', 'BU', 'BV', 'BW', 'BX', 'BY', 'BZ', 'CA', 'CB', 'CC', 'CD', 'CE', 'CF', 'CG', 'CH', 'CI', 'CJ', 'CK', 'CL', 'CM', 'CN', 'CO', 'CP', 'CQ', 'CR', 'CS', 'CT', 'CU', 'CV', 'CW', 'CX', 'CY', 'CZ', 'DA', 'DB', 'DC', 'DD', 'DE', 'DF', 'DG', 'DH', 'DI', 'DJ', 'DK', 'DL', 'DM', 'DN', 'DO', 'DP', 'DQ', 'DR', 'DS', 'DT', 'DU', 'DV', 'DW', 'DX', 'DY', 'DZ', 'EA', 'EB', 'EC', 'ED', 'EE', 'EF', 'EG', 'EH', 'EI', 'EJ', 'EK', 'EL', 'EM', 'EN', 'EO', 'EP', 'EQ', 'ER', 'ES', 'ET', 'EU', 'EV', 'EW', 'EX', 'EY', 'EZ', 'FA', 'FB', 'FC', 'FD', 'FE', 'FF', 'FG', 'FH', 'FI', 'FJ', 'FK', 'FL', 'FM', 'FN', 'FO', 'FP', 'FQ', 'FR', 'FS', 'FT', 'FU', 'FV', 'FW', 'FX', 'FY', 'FZ', 'GA', 'GB', 'GC', 'GD', 'GE', 'GF', 'GG', 'GH', 'GI', 'GJ', 'GK', 'GL', 'GM', 'GN', 'GO', 'GP', 'GQ', 'GR', 'GS', 'GT', 'GU', 'GV', 'GW', 'GX', 'GY', 'GZ', 'HA', 'HB', 'HC', 'HD', 'HE', 'HF', 'HG', 'HH', 'HI', 'HJ', 'HK', 'HL', 'HM', 'HN', 'HO', 'HP', 'HQ', 'HR', 'HS', 'HT', 'HU', 'HV', 'HW', 'HX', 'HY', 'HZ', 'IA', 'IB', 'IC', 'ID', 'IE', 'IF', 'IG', 'IH', 'II', 'IJ', 'IK', 'IL', 'IM', 'IN', 'IO', 'IP', 'IQ', 'IR', 'IS', 'IT', 'IU', 'IV', 'IW', 'IX', 'IY', 'IZ', 'JA', 'JB', 'JC', 'JD', 'JE', 'JF', 'JG', 'JH', 'JI', 'JJ', 'JK', 'JL', 'JM', 'JN', 'JO', 'JP', 'JQ', 'JR', 'JS', 'JT', 'JU', 'JV', 'JW', 'JX', 'JY', 'JZ', 'KA', 'KB', 'KC', 'KD', 'KE', 'KF', 'KG', 'KH', 'KI', 'KJ', 'KK', 'KL', 'KM', 'KN', 'KO', 'KP', 'KQ', 'KR', 'KS', 'KT', 'KU', 'KV', 'KW', 'KX', 'KY', 'KZ', 'LA', 'LB', 'LC', 'LD', 'LE', 'LF', 'LG', 'LH', 'LI', 'LJ', 'LK', 'LL', 'LM', 'LN', 'LO', 'LP', 'LQ', 'LR', 'LS', 'LT', 'LU', 'LV', 'LW', 'LX', 'LY', 'LZ', 'MA', 'MB', 'MC', 'MD', 'ME', 'MF', 'MG', 'MH', 'MI', 'MJ', 'MK', 'ML', 'MN', 'MO', 'MP', 'MQ', 'MR', 'MS', 'MT', 'MU', 'MV', 'MW', 'MX', 'MY', 'MZ', 'NA', 'NB', 'NC', 'ND', 'NE', 'NF', 'NG', 'NH', 'NI', 'NJ', 'NK', 'NL', 'NM', 'NN', 'NO', 'NP', 'NQ', 'NR', 'NS', 'NT', 'NU', 'NV', 'NW', 'NX', 'NY', 'NZ', 'OA', 'OB', 'OC', 'OD', 'OE', 'OF', 'OG', 'OH', 'OI', 'OJ', 'OK', 'OL', 'OM', 'ON', 'OO', 'OP', 'OQ', 'OR', 'OS', 'OT', 'OU', 'OV', 'OW', 'OX', 'OY', 'OZ', 'PA', 'PB', 'PC', 'PD', 'PE', 'PF', 'PG', 'PH', 'PI', 'PJ', 'PK', 'PL', 'PM', 'PN', 'PO', 'PP', 'PQ', 'PR', 'PS', 'PT', 'PU', 'PV', 'PW', 'PX', 'PY', 'PZ', 'QA', 'QB', 'QC', 'QD', 'QE', 'QF', 'QG', 'QH', 'QI', 'QJ', 'QK', 'QL', 'QM', 'QN', 'QO', 'QP', 'QQ', 'QR', 'QS', 'QT', 'QU', 'QV', 'QW', 'QX', 'QY', 'QZ', 'RA', 'RB', 'RC', 'RD', 'RE', 'RF', 'RG', 'RH', 'RI', 'RJ', 'RK', 'RL', 'RM', 'RN', 'RO', 'RP', 'RQ', 'RR', 'RS', 'RT', 'RU', 'RV', 'RW', 'RX', 'RY', 'RZ', 'SA', 'SB', 'SC', 'SD', 'SE', 'SF', 'SG', 'SH', 'SI', 'SJ', 'SK', 'SL', 'SM', 'SN', 'SO', 'SP', 'SQ', 'SR', 'SS', 'ST', 'SU', 'SV', 'SW', 'SX', 'SY', 'SZ', 'TA', 'TB', 'TC', 'TD', 'TE', 'TF', 'TG', 'TH', 'TI', 'TJ', 'TK', 'TL', 'TM', 'TN', 'TO', 'TP', 'TQ', 'TR', 'TS', 'TT', 'TU', 'TV', 'TW', 'TX', 'TY', 'TZ', 'UA', 'UB', 'UC', 'UD', 'UE', 'UF', 'UG', 'UH', 'UI', 'UJ', 'UK', 'UL', 'UM', 'UN', 'UO', 'UP', 'UQ', 'UR', 'US', 'UT', 'UU', 'UV', 'UW', 'UX', 'UY', 'UZ', 'VA', 'VB', 'VC', 'VD', 'VE', 'VF', 'VG', 'VH', 'VI', 'VJ', 'VK', 'VL', 'VM', 'VN', 'VO', 'VP', 'VQ', 'VR', 'VS', 'VT', 'VU', 'VV', 'VW', 'VX', 'VY', 'VZ', 'WA', 'WB', 'WC', 'WD', 'WE', 'WF', 'WG', 'WH', 'WI', 'WJ', 'WK', 'WL', 'WM', 'WN', 'WO', 'WP', 'WQ', 'WR', 'WS', 'WT', 'WU', 'WV', 'WW', 'WX', 'WY', 'WZ', 'XA', 'XB', 'XC', 'XD', 'XE', 'XF', 'XG', 'XH', 'XI', 'XJ', 'XK', 'XL', 'XM', 'XN', 'XO', 'XP', 'XQ', 'XR', 'XS', 'XT', 'XU', 'XV', 'XW', 'XX', 'XY', 'XZ', 'YA', 'YB', 'YC', 'YD', 'YE', 'YF', 'YG', 'YH', 'YI', 'YJ', 'YK', 'YL', 'YM', 'YN', 'YO', 'YP', 'YQ', 'YR', 'YS', 'YT', 'YU', 'YV', 'YW', 'YX', 'YY', 'YZ', 'ZA', 'ZB', 'ZC', 'ZD', 'ZE', 'ZF', 'ZG', 'ZH', 'ZI', 'ZJ', 'ZK', 'ZL', 'ZM', 'ZN', 'ZO', 'ZP', 'ZQ', 'ZR', 'ZS', 'ZT', 'ZU', 'ZZ'.

ICAO flight plan field 8

- Flight rules
 - Y and Z will not be discussed further
 - **I** IFR
 - **V** VFR
 - **Y** IFR then VFR
 - **Z** VFR then IFR
- Type of flight
 - **G** general aviation
 - ... others

The image shows a portion of the ICAO International Flight Plan form. Field 8, labeled '8 FLIGHT RULES', contains the letter 'V'. Field 10, labeled '10 EQUIPMENT', contains the letter 'G'. A callout box points to these fields with the text '8 FLIGHT RULES' and 'TYPE OF FLIGHT'.

ICAO flight plan field 9

- **Number**
 - Number of aircraft
 - **1** single aircraft
 - **n** a flight of n
- **Type of aircraft**
 - Use ICAO 3- or 4-character type as before
 - *Not* manufacturer model
 - Per FAA Order 7360.1
 - **C172**
 - **P28A** (*not* PA28)
 - **M20P** (*not* M20J)
 - **C82R**
 - **SR22**
- **Wake turbulence category**
 - **L** light
 - **M** medium
 - **H** heavy

Sample Form No. 5010-10
Rev. 5/2005

International Flight Plan

PROXY
PROPERTY ☐ ADDRESS/USE ☐

<OFF

FLYING TIME **DEPARTURE** **<CR**

9 NUMBER **01** **TYPE OF AIRCRAFT** **P28A** **WAKE TURBULENCE CAT.** **1** **L**

11 DEPARTURE AIRCROAASE **TIME**

12 DEPARTURE AIRCROAASE **TIME** **<CR**

13 DEPARTURE AIRCROAASE **ROUTE** **<CR**

14 DEPARTURE AIRCROAASE **TOTAL EST** **ALTITUDE AIRCROAASE** **ONE ALTITUDE AIRCROAASE** **<CR**

15 DEPARTURE AIRCROAASE **ALTITUDE AIRCROAASE** **<CR**

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146 DEPARTURE AIRCROAASE

ICAO flight plan field 10

- Equipment
 - Coded as
 - *navigation/surveillance*
 - Enter one or more letter codes for navigation equipment
 - /
 - Enter one or more letter codes for surveillance equipment
 - Selections here may require *indicators* to be coded in Field 18
 - These are coded as
 - *indicator/data*

The image shows a standard ICAO International Flight Plan (FPL) form. A callout box labeled 'TO EQUIPMENT S/C' points to field 10, which is designated for equipment codes. The form includes various fields for flight details such as origin, destination, altitude, and communication frequencies. The callout box highlights the specific area where navigation and surveillance equipment codes are entered.

Navigation: Field 10

- **N** no navigation/communication equipment; or,
- **S** standard navigation/communication equipment;
 - VHF comm, VOR, and ILS
 - Equivalent to entering **V O L**
- or, enter one or more equipment codes for
 - DME, ADF, RNAV, GPS, RNP, etc.

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Navigation: Field 10

- **B** LPV
- **D** DME
- **F** ADF
- **G** GNSS (GPS)
- **L** ILS
- **O** VOR
- **R** PBN (Performance-Based Navigation)
 - Requires **PBN/** indicator entry in Field 18
- **Z** Special navigation or communication
 - Requires **NAV/** indicator entry in Field 18

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PBN: Fields 10 and 18

- **PBN/** followed by one or more of,
 - **B2** RNAV 5 using GNSS (en route)
 - **C2** RNAV 2 using GNSS (en route)
 - **D2** RNAV 1 using GNSS (terminal procedures)
- **NAV/**
 - **RNV** followed by one or more of,
 - **D1** accept RNAV 1 departures (SIDs)
 - **D0** refuse RNAV 1 departures (SIDs)
 - **E2** accept RNAV 2 en route routings
 - **A1** accept RNAV 1 arrivals (STARs)
 - **A0** refuse RNAV 1 arrivals (STARs)
 - This can be used like the old "No SIDs" and "No STARs" flight plan remarks.
 - **SBAS** WAAS (satellite-based augmentation system)
- Example
 - GNSS-based PBN but do not want RNAV SIDs/STARs
 - Field 10: **SGRZ**
 - Field 18: **PBN/B2C2D2 NAV/RNVD0E2A0**

Transponders: Field 10

- For traditional Mode A or Mode C transponders, in Field 10 after slash enter
 - **N** No transponder
 - **A** Transponder with Mode A (4096-code)
 - **C** Transponder with Mode C (4096-code with pressure altitude reporting)

Transponders: Field 10

- For Mode S transponder, in Field 10 enter
 - **P** Pressure altitude, no aircraft ID
 - **S** Pressure altitude, aircraft ID
 - **E** Pressure altitude, aircraft ID, extended squitter (ADS-B)
- Newer Garmin transponders and software levels require
 - **H** enhanced surveillance
 - **L** enhanced surveillance
 - Consult Garmin equipment spreadsheet

ADS-B equipped: Field 10

- For 1090 MHz ES:
 - Enter in Field 10:
 - The Mode S transponder type code, followed by
 - **B1** ADS-B Out only
 - **B2** ADS-B Out and In
 - Enter in Field 18:
 - **SUR/260B** and
 - **CODE/hhhhhh** where *hhhhhh* is the Mode S 6 hexadecimal digit address
 - e.g., **SG/EB2, SUR/260B CODE/A20FDC**
- For 978 MHz UAT:
 - Enter in Field 10:
 - The Mode A, C, or S transponder type code, followed by
 - **U1** ADS-B Out only
 - **U2** ADS-B Out and In
 - Enter in Field 18:
 - **SUR/282B** and
 - **CODE/hhhhhh** where *hhhhhh* is the Mode S 6 hexadecimal digit address
 - e.g., **SG/SU2, SUR/282B CODE/A9158C**

ICAO flight plan field 13

- Departure aerodrome
 - 4-alphabetic letter ICAO identifier
 - If non-alphabetic FAA identifier, enter
 - **ZZZZ**
 - **DEP/lid** in Field 18
- Estimated time of departure
 - **hhmm**

The image shows a portion of an ICAO International Flight Plan form. Field 13, 'DEPARTURE AERODROME', is filled with the four-letter ICAO identifier 'KSQL'. Field 17, 'TIME', is filled with '1730'. Other visible fields include 'PROPOSED FLIGHT RULES' (VFR), 'TYPE OF FLIGHT' (VFR), 'CROSSING SPEED' (1500), and 'ROUTE' (R017R). The form also includes sections for 'SUPPLEMENTARY INFORMATION' and 'REMARKS'.

ICAO flight plan field 15

- Cruising speed
 - **Nssss** knots
 - **Msss** Mach
- Level
 - **ALLL** MSL altitude
 - **Ffff** flight level
 - **VFR**
- Route
 - As for domestic flight plans
 - **DCT** direct

International Flight Plan

1. COUNTRY OF ORIGIN 2. AIRCRAFT TYPE 3. AIRCRAFT REGISTRATION

4. FLIGHT RULES 5. TYPE OF FLIGHT

6. DEPARTURE AIRPORT 7. ENROUTE AIRPORTS 8. DESTINATION AIRPORT

9. CRUISING SPEED 10. CRUISING LEVEL 11. ROUTE

12. SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN PL MESSAGE)

13. PILOT IN COMMAND 14. SIGNATURE OF PILOT IN COMMAND

15. ACCEPTED BY 16. ADDITIONAL INFORMATION

Example data for field 15: N0115 A045 DCT VPCOY DCT VPSUN DCT ALTAM V334 SAC DCT MYV DCT

ICAO flight plan field 16

- Alternate aerodrome
 - 4-alphabetic letter ICAO identifier
 - If non-alphabetic FAA identifier, enter
 - **ZZZZ**
 - **ALTN/Id** in Field 18
- 2nd alternate aerodrome
 - Unneeded by Part 91

The image shows a portion of the ICAO International Flight Plan form. Field 16, 'ALTERNATE AERODROME', is highlighted and contains the text 'ZZZZ' and 'KMYV'. The form also shows fields for '18 DESTINATION AERODROME' (1845) and '19 DEPARTURE AERODROME' (KMYV). The form is titled 'International Flight Plan' and includes various other fields for flight information.

STS/
PBN/
NAV/
COM/
DAT/
SUR/
DEP/
DEST/
DOF/
REG/
EET/
SEL/
TYP/
CODE/
DLE/
OPR/
ORGN/

PER/2016, 2
ALTN/
RAIT/

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- [illegible]

Aircraft profile: Basic IFR

- IFR equipped
 - No GPS
 - No DME
 - VOR, ILS, ADF
 - Mode C transponder
 - /U domestic equipment code

7 AIRCRAFT IDENTIFICATION
N106RA

8 TYPE OF AIRCRAFT
C172

9 NUMBER
01

10 EQUIPMENT
SF/C

11 DEPARTURE AERODROME
0

12 OTHER INFORMATION
0

13 SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)

14 ENDURANCE
E/ 0400

15 PERSONS ON BOARD
P/ 001

16 EMERGENCY RADIO
R/ X X E

17 SURVIVAL EQUIPMENT
POLAR DESERT MARITIME JUNGLE
P D M J

18 JACKETS
LIGHT FLUORESC UHF VHF
L F U V

19 DITCHES
NUMBER CAPACITY COVER COLOR
D / 1 1 1 C

20 AIRCRAFT COLOR AND MARKINGS
A/ W/B

21 REMARKS
X/

22 PILOT-IN-COMMAND
C/ JANE Q PILOT 415-555-1212)<=

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Aircraft profile: IFR GPS

- IFR equipped
 - IFR GPS
 - Non-WAAS
 - No DME, ADF
 - VOR, ILS
 - Mode C transponder
 - /G domestic equipment code

7 AIRCRAFT IDENTIFICATION
N458SP

9 NUMBER
01

TYPE OF AIRCRAFT
C172

WAKE TURBULENCE CAT.
/L

10 EQUIPMENT
SG/C

11 DEPARTURE AERODROME

12 OTHER INFORMATION
0

13 SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)

ENDURANCE
E/ **0330**

PERSONS ON BOARD
P/ **001**

EMERGENCY RADIO
R/ **X** X/ **X** E/ **E**

SURVIVAL EQUIPMENT
POLAR ☐ DESERT ☐ MARITIME ☐ JUNGLE ☐

JACKETS
LIGHT ☐ FLUORESC ☐ UHF ☐ VHF ☐

DITCHES
NUMBER CAPACITY COVER COLOR

AIRCRAFT COLOR AND MARKINGS
A/ **W/B**

PILOT-IN-COMMAND
C/ **JANE Q PILOT 415-555-1212**

14 December 2016

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- [illegible]

DUATS ICAO profile

Aircraft profile: ADS-B

- IFR equipped
 - Garmin GTN 750
 - WAAS
 - GNSS RNAV 1, RNAV 2, RNAV 5
 - ADS-B in and out via 978 MHz UAT
 - Garmin GDL 88
 - Mode C transponder
 - Field 10:
 - **SBGRZ/CU2**
 - Field 18:
 - **PBN/B2C2D2 NAV/SBAS SUR/282B CODE/A22068**

7 AIRCRAFT IDENTIFICATION
N236SP

TYPE OF AIRCRAFT WAKE TURBULENCE CAT.
01 C172 / L

9 NUMBER
01

11 DEPARTURE AIRCROISS
C172

13 OTHER INFORMATION
**PBN/B2C2D2 NAV/SBAS SUR/282B
CODE/A22068**

15 OTHER INFORMATION
**PBN/B2C2D2 NAV/SBAS SUR/282B
CODE/A22068**

SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES):

16 ENDURANCE
HRS MIN
E/ 0330

PERSONS ON BOARD
P/ 001

EMERGENCY RADIO
LIF VHF ELT
R/ X X E

SURVIVAL EQUIPMENT
POLAR DESERT MARITIME JUNGLE
☐ / **P D M J**

JACKETS
LIGHT FLORES UNF VHF
☐ / **L F U V**

DINCHES
NUMBER CAPACITY COVER COLOR
D/ 1 1 1 C

AIRCRAFT COLOR AND MARKINGS
A/ W/B/Y

REMARKS
X/

PILOT-IN-COMMAND
C/ JANE Q PILOT 415-555-1212

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CSRA DUATS

Session Number : 00189
Transaction number: 005782
Tue Dec 6 04:48:50 2016 (UTC)

7 Aircraft tail number: N1483L
8 Type of flight plan: VFR G
9/10 Acft type/special equip: C182/L SBGLORVZ/S
13 Departure point: ZZZZ
Departure time: (UTC) Tue Dec 6 06:00
15 Cruising speed: 00135
Level: F050
Route of flight: DCT
16 Destination: ZZZZ
Estimated time enroute: 0100
Alternate destination(s): ZZZZ
18 Other Information: PBN/82C202 NAV/RNVD1E2A1 SBAS DEP/052 DEST/022
PER/B ALTN/E16
19 Endurance: 0430
Persons on board: 1
Emergency Radio: E
Survival Equipment:
Jackets:
Number of Dinghies:
Total Capacity of Dinghies:
Covered Dinghies ? N
Color of Dinghies:
Color of aircraft: W
Remarks about safety equipment:
Pilot in command: BRIAN D ELIOT
Address: PO BOX 611195 SAN JOSE, CA
Phone no.: 408 373 4057

Flight plan accepted by CSRA DUATS service and will be filed
with KRIU on Tue Dec 6 05:00 (UTC).

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Lockheed Martin AFSS

Proposed				Domestic		ICAO	
Revert Flight Plans Favorite Flight Plans Save as Favorite				<small>Notice: Per FAA Guidance, IFR flights exiting US airspace must be filed as ICAO flight plans.</small>			
Aircraft ID N1483L	Flight Rule IFR	Flight Type (Optional) G	No. of Aircraft 1	Aircraft Type C182	Wake Turbulence L	Aircraft Equipment SBAZ	
Departure TZZZ	Airport Info Area Brief	Departure Date & Time 12/04/2016 0400	Evaluate EST	Cruising Speed N0135	Level 4050	Optimize Surveillance Equipment S	
Route of Flight LIN V23 YUBSA				Other Information (Optional) PBN/R2C202 NAT/RMVD182A1 SBAS DEPR022 DEST/POS2 PBRUB ALTN/V72			
Destination TZZZ	Airport Info Area Brief	Total Estimated Elapsed Time 0115	Alternate 1 (Optional) TZZZ		Alternate 2 (Optional) TZZZ	Airport Info Area Brief	
Fuel Endurance 0430	Persons on Board 1	Aircraft Color & Markings WIKUC2	Supplemental Remarks (Optional)		Pilot In Command (Optional)		
Emergency Radios <input type="checkbox"/> UHF <input type="checkbox"/> VHF <input checked="" type="checkbox"/> ELBA	Survival Equipment <input type="checkbox"/> Polar <input type="checkbox"/> Desert <input type="checkbox"/> Maritime <input type="checkbox"/> Jungle	Jackets <input type="checkbox"/> Light <input type="checkbox"/> Fluorescent <input type="checkbox"/> UHF <input type="checkbox"/> VHF	Dinghies (Optional) Number Capacity Color Covered				
Pilot Contact Information R, ELIOT, (777)777-7777 (777)777-7777		Briefing Corridor 99 nm Winds Aloft Corridor 200 nm High Altitude Briefing					

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Lockheed Martin AFSS

Proposed Domestic ICAO

Revert Flight Plans

Aircraft Equipment

Aircraft ID: N1483L

Departure: 7777

Route of Flight: LIN V23 YUBSA

Destination: 7777

Fuel Endurance: 0430

Emergency Radios: ☐ LHF ☐ VHF ☒ ELBA

Pilot Contact Inform: R, ELIOT, (777)777-7777 (777)777-7777

Save as Favorite

Notice: Per FAA Guidance, IFR flights exiting US airspace must be filed as ICAO flight plans.

Aircraft Type: C182

Wake Turbulence: L-18

Surveillance Equipment: 58GAZ

Cruising Speed: NE015

Level: 4050

Surveillance Equipment

Other: ☐ NO, ☐ Mode A, ☐ Mode A and C, ☐ Mode S, ID, Alt and Squitter, ☐ Mode S, ID, Alt and Enhanced Squitter, ☐ Mode S, ID no Alt, ☐ Mode S, ID, Alt, Squitter and Enhanced Squitter, ☐ Mode S, Alt no ID, ☐ Mode S, ID and Alt

Other: ☐ ADS-B, Decoded 1090 MHz Out, ☐ ADS-B, Decoded 1090 MHz Out and In, ☐ ADS-B, 1090 MHz Out, ☐ ADS-B, 1090 MHz Out and In, ☐ ADS-B, VDL Mode 4 Out, ☐ ADS-B, VDL Mode 4 Out and In, ☐ ADS-C, 1090 MHz, ☐ ADS-C, 1090 MHz

OK Cancel

Click magnifier

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Automation

- Stores aircraft profile based on aircraft ID, with:
 - Domestic equipment
 - ICAO equipment
 - Populates flight plan fields directly
- Assistance with Fields 10, 18
 - Checkboxes for most items
 - Navigation equipment
 - Surveillance equipment
 - **PBN/** indicator in Field 18
 - Field 18 maintained in required order, or **0** if no entries
 - PBN/, NAV/, COM/, DAT/, SUR/, DEP/, DEST/, CODE/, PER/,
ALTN/, RMK/
- No assistance for
 - Non-ICAO airport identifiers
 - Enter **ZZZZ** and Field 18 **DEP/ DEST/ ALTN/** indicators manually
 - **NAV/** indicator
 - **SUR/** indicator
 - **CODE/** indicator

References

- AIM
 - 5-1-8
 - Flight plan domestic IFR flights
 - 5-1-9
 - International flight plans
- FAA forms
 - 7233-4
 - http://www.faa.gov/documentLibrary/media/form/FAA_7233-4_PSA_revised_07-28-2015.pdf
- FAA flight planning information
 - https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/flight_plan_filing/
- AC
 - 90-100A
 - U.S. Terminal and En Route Area Navigation (RNAV) Operations
 - 90-114A
 - ADS-B Operations
- Garmin
 - ICAO Flight Plan Equipment (Excel file)
- ICAO
 - DOC 4444 Appendices 2-3
 - Air Traffic Management, Flight Plan
 - DOC 8643
 - Aircraft Type Designators