PRACTICAL EXERCISE

NAVIGATIONAL COMPUTER

1. How many pounds are 216 gallons of JP-4 at 6.5 pound/gallon?

2. How many gallons are 1,500 pounds of JP-5 at 6.7 pound/gallon?

3. How many feet in 340 meters (3.28 feet = 1 meter)?

	TIME	SPEED	DISTANCE
4.	_____	110K	5.5NM
5.	0+05	80K	_____
6.	_____	100 mph	4.2NM

7. If the fuel consumption is 6 nautical air miles per gallon, how many gallons per hour would be required at a TAS of 90K?

8. If the fuel consumption is .9 nautical air mile per pound, how many pounds per hour would be required at a TAS of 100K?

	Pressure Alt.	Temp.	CAS	TAS
9.	3,000 feet	+10°C	80K	____K
10.	6,500 feet	-10°C	____mph	110K

	Pressure Alt.	Cal. Alt.	Temp.	Cor. Alt.
11.	9,000 feet	9,100 feet	+15°C	_____
12.	3,000 feet	2,900 feet	0°C	_____
13.	7,000 feet	7,200 feet	-10°C	_____

	Forecast Wind	Magnetic Course	Variation	True Airspeed	Magnetic Heading	Groundspeed
14.	1520	350°	10°E	110K	_____	_____
15.	2615	240°	15°W	120K	_____	_____

	Magnetic Track	Groundspeed	Magnetic Heading	TAS	Wind Direction (Magnetic)/Speed
16.	060°	110K	075°	100K	_____/_____
17.	130°	75K	115°	95K	_____/_____

	Magnetic Wind	Magnetic Course	Variation	Groundspeed	Magnetic Heading	TAS
18.	300°/25K	065°	7°E	120K	_____	____K
19.	050°/15K	274°	12°W	90K	_____	____K

20. At an altitude of 5,000 feet with a 0°C temperature, what would be the indicated airspeed in mph for the TAS in problem 18?

PRACTICAL EXERCISE - KEY

NAVIGATIONAL COMPUTER

1. 1,404 pounds.
2. 223.9 gallons.
3. 1,115 feet.
4. 3 minutes.
5. 6.67 NM.
6. 2 minutes, 54 seconds.
7. 15 gph.
8. 111.5 pounds per hour.
9. 84K.
10. 118 mph.
11. 9,700 feet.
12. 2,800 feet.
13. 6,900 feet.
14. MH 355°; GS 127K.
15. MH 244°; GS 107K.
16. 176°/29K.
17. 075°/30K.
18. MH 054°; TAS 108K.
19. MH 282°; TAS 80K.
20. 117 mph.

PERFORMANCE OBJECTIVES

FLIGHT PLANS

1. KNOWLEDGES: With the aid of notes and references, the student will be able to correctly perform 90 percent of the total number of items listed below.

   a. State three prerequisites for use of the DD Form 1080.

   b. State the standard units for listing time, airspeed, and distance on flight plans.

   c. State the period of time covered by "ETE" on the DD Form 1080.

   d. For "Fuel on Board" computations, state the quantity of fuel and rate of consumption used.

   e. State the unit in which "Fuel on Board" is listed on the flight plan.

   f. State at least two types of information which should be entered in the "Remarks" section of the DD Form 1080.

   g. When given an aircraft serial number, state the standard radio call sign.

   h. State at least three factors which should be considered in selecting an "initial cruising altitude."

   i. State the component of FLIP where codes for each of the following items will be found: TD, VIP, honors, passenger, cargo, airports, and NAVAIDS.

   j. When special handling is desired for departure, state the name of the block in which this is requested.

   k. State the liability which the pilot assumes if he requests a standard instrument departure (SID).

   l. State where SID's for specific airfields would be available to the aviator.

   m. State the procedure for computing ETE on a cross-country flight plan.

   n. State the two points between which the "Distance to Destination" is computed for an IFR flight or a VFR flight.

   o. State the two points upon which the distance for computation of "ETE to Alternate" is based.

   p. State at least two types of information which should be listed in the "Remarks" section of the DD 175.

   q. State one item which the Army aviator must show in the "Remarks" section of FAA Form 7233-1.

r. State the minimum time prior to proposed departure time for filing an IFR Flight Plan.

s. When given the type of flight plan and type of installation from which a flight will depart, state the appropriate clearing authority.

t. State three approved sources for obtaining a weather briefing.

u. State the directional reference and unit of speed of forecast winds on the DD Form 175-1.

v. State the maximum time for which an official weather briefing will be valid for the Army aviator.

w. State who is authorized to extend the weather briefing after it becomes void.

x. State the procedure for filing a flight plan—

(1) At a military field with an established military base operations.

(2) At a civil field with FAA facilities.

(3) At a civil field without facilities.

(4) In flight.

y. State the procedure for closing a flight plan—

(1) At an airfield with facilities.

(2) At an airfield without facilities.

z. State the maximum time which the aviator is allowed at destination to either close or change the flight plan.

2. SKILLS: Given the necessary flight planning information concerning a proposed flight to include the aircraft type, serial number, special equipment, performance speeds, point of departure, destination, alternate, and weather briefing, the student will be able to fill out any appropriate flight plan form with the aid of notes and references with 90 percent of the required items correct.

NOTES

STUDENT OUTLINE

FLIGHT PLANS

1. Flight plan forms.

   a. DD Form 1080.

      (1) When used.

      (2) Entries.

LOCAL FLIGHT CLEARANCE

STATION		DATE
TYPE A/C	A/C NO.	MISSION

OCCUPANTS *(State whether crew or passenger. List additional passengers on reverse.)*

DUTY SYMBOL	NAME AND INITIALS	GRADE	SERVICE NO.	HOME STATION

SAMPLE

ETD	ETE *(Home base)*	HOURS OF FUEL	AUXILIARY BASE OF 1ST INTENDED LANDING
FORM "F" FILED AT			DATE FILED *(Day, month, year)*

WEATHER IS FORECAST TO REMAIN VFR FOR THE DURATION OF THIS FLIGHT. I AM FAMILIAR WITH ALL CURRENT REGULATIONS AFFECTING THIS FLIGHT AND THIS FLIGHT WILL BE CONDUCTED IN ACCORDANCE WITH SUCH REGULATIONS.

CLEARANCE AUTHORITY	PILOT'S SIGNATURE
ACTUAL DEPARTURE	ACTUAL ARRIVAL

REMARKS

DD FORM 1 JAN 56 1080 REPLACES AF FORM 113, 1 NOV 51, WHICH MAY BE USED.

b. DD Form 175.

(1) When used.

(2) Entries. (See FLIP, section II, "Pilot Procedures, Preflight.")

MILITARY FLIGHT PLAN

AIRCRAFT UNIT OF ASSIGNMENT/HOME STATION	AIRCRAFT SERIAL NO.

TYPE OF FLIGHT PLAN	RADIO CALL	AIRCRAFT DESIGNATION/ TD CODE	ESTIMATED TRUE AIRSPEED	DEPARTURE TIME (Z)	
☐ IFR ☐ DVFR ☐ VFR ☐ FVFR				PROPOSED	ACTUAL

INITIAL CRUISING ALTITUDE	POINT OF DEPARTURE	STANDARD INSTRUMENT DEPARTURE	
		NAME AND NUMBER	TO

IFR	VFR	ROUTE OF FLIGHT	TO	ETE

SAMPLE

REMARKS

RANK/HONOR CODE	PSGR/CARGO CODE

HOURS FUEL ON BOARD	DIST TO DESTN	ALTERNATE AIR FIELD	ETE TO ALTN	NOTAMS	DD FORM 365F (Wt. and Bal.)	WEATHER	REQUEST CLEARANCE AFTER

INST RATING	SIGNATURE OF PILOT IN COMMAND	SIGNATURE OF APPROVING AUTHORITY	DATE

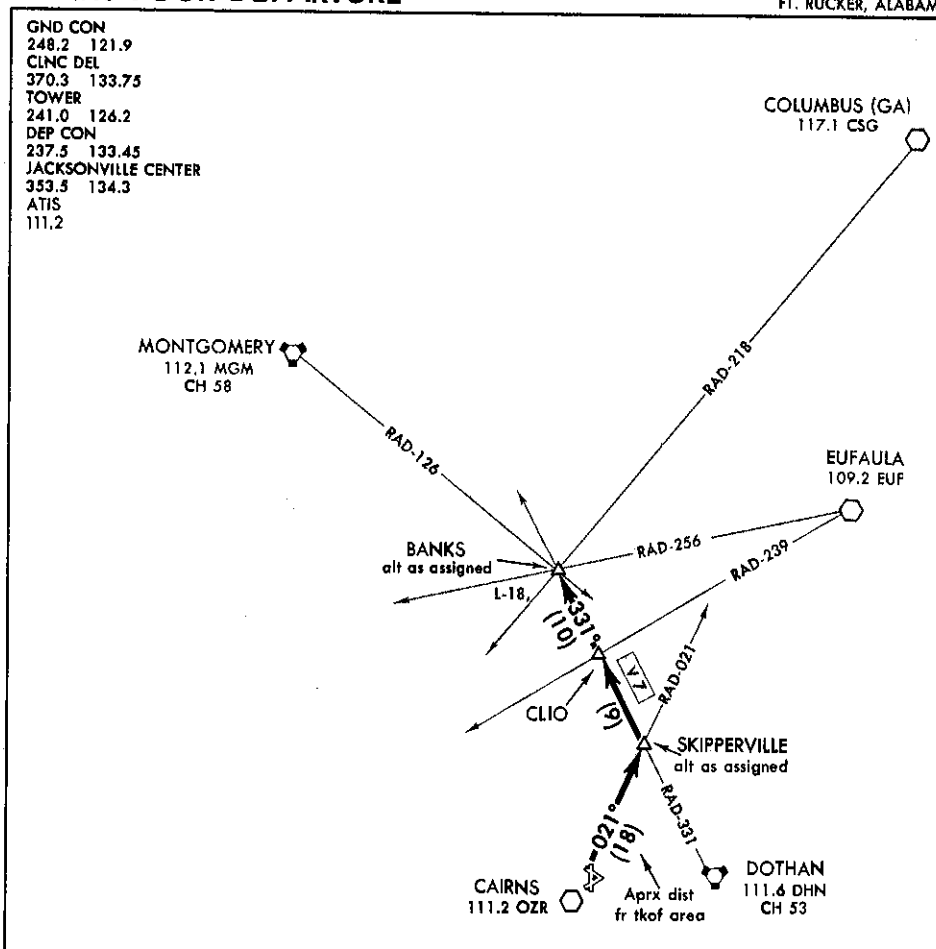
CREW/PASSENGER LIST – ☐ *Attached* ☐ *See Passenger Manifest*

DUTY	NAME AND INITIALS	GRADE	SERVICE NO.	ORGANIZATION AND LOCATION
PILOT IN COMMAND				

DD FORM 1 JUL 65 175 PREVIOUS EDITION OF THIS FORM WILL BE USED UNTIL STOCK IS EXHAUSTED. D-38305

BANKS FOUR DEPARTURE

CAIRNS AAF
FT. RUCKER, ALABAMA



DEPARTURE ROUTE DESCRIPTION

Take-off Rwy 6 or 18: After take-off, climbing LEFT turn to heading 360°.
Take-off Rwy 24: After toke-off, climbing RIGHT turn to heading 050°.
Take-off Rwy 36: After take-off, climb on heading 360°.
Intercept CAIRNS VOR 021 radial and proceed to SKIPPERVILLE INTXN.
Continue to BANKS INTXN via the DOTHAN VORTAC 331 radial.
Cross SKIPPERVILLE at _____ (as assigned).
Cross BANKS at _____ (as assigned).

BANKS FOUR DEPARTURE

c. DD Form 175-1.

(1) Use.

(2) Entries.

FLIGHT WEATHER BRIEFING

AIRCRAFT NO.	BRIEFING NO.	DATE

I. TAKEOFF DATA

RUNWAY TEMP.	PRESSURE ALT.	TEMP DEVIATION	VAPOR PRESSURE	SPECIFIC HUMIDITY	DENSITY ALTITUDE

CLIMB WINDS

REMARKS

II. ENROUTE DATA

FLIGHT LEVEL	TEMPERATURE	WINDS

CLOUDS AT FLIGHT LEVEL _____
☐ YES ☐ NO ☐ IN AND OUT

VISIBILITY AT FLIGHT LEVEL _____
☐ HAZE ☐ DUST ☐ SMOKE ☐ PRECIPITATION

MINIMUM CEILING ENROUTE	MAXIMUM CLOUD TOPS	MINIMUM FREEZING LEVEL

THUNDERSTORMS	TURBULENCE	PRECIPITATION	ICING
☐ NONE	☐ NONE	☐ NONE	☐ NONE
☐ FEW	☐ CAT ☐ LGT	☐ RAIN ☐ DRZL	☐ CLEAR ☐ LGT
☐ SCATTERED	☐ TSTM ☐ MOD	☐ SHOWERS ☐ SNOW	☐ RIME ☐ MOD
☐ NUMEROUS	☐ ☐ SVR	☐ FREEZING	☐ MIXED ☐ SVR
☐ HAIL			☐ IN CLOUDS

SAMPLE

III. TERMINAL DATA

DESTINATION *(Existing)*

FORECAST (Z To Z)

ALTERNATE *(Existing)*

FORECAST (Z To Z)

IV. COMMENTS/REMARKS

VOID TIME	EXTENDED TO	FORECASTER

V. TELEVISION/TELEPHONE BRIEFING RECORD

WEATHER FACILITY

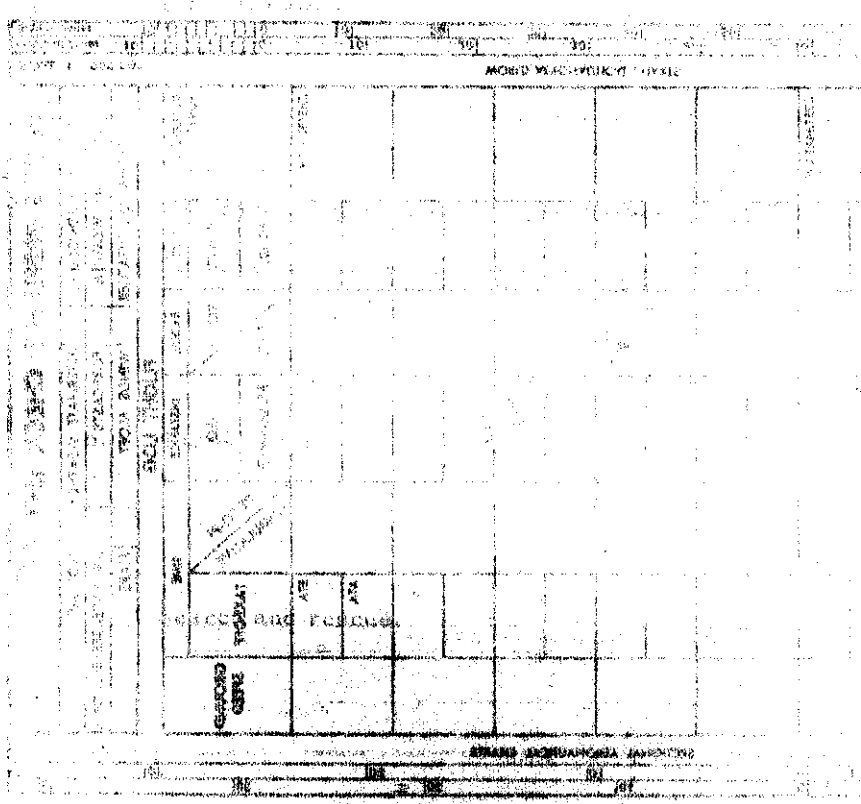
TAPE NO.	START	STOP	PHONE CHARGE

DD FORM 1 NOV 64 175-1

d. FAA Form 7233-1.

(1) Use.

(2) Entries.



FEDERAL AVIATION AGENCY

FLIGHT PLAN

Form Approved,
Budget Bureau No. 04-R072.3

1. TYPE OF FLIGHT PLAN	2. AIRCRAFT IDENTIFICATION
☐ FVFR ☐ VFR ☐ IFR ☐ DVFR	

3. AIRCRAFT TYPE/SPECIAL EQUIPMENT 1/	4. TRUE AIRSPEED	5. POINT OF DEPARTURE	6. DEPARTURE TIME		7. INITIAL CRUISING ALTITUDE
	KNOTS		PROPOSED (Z)	ACTUAL (Z)	

8. ROUTE OF FLIGHT

9. DESTINATION *(Name of airport and city)*

10. REMARKS

SAMPLE

11. ESTIMATED TIME EN ROUTE		12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)	14. PILOT'S NAME
HOURS	MINUTES	HOURS	MINUTES		

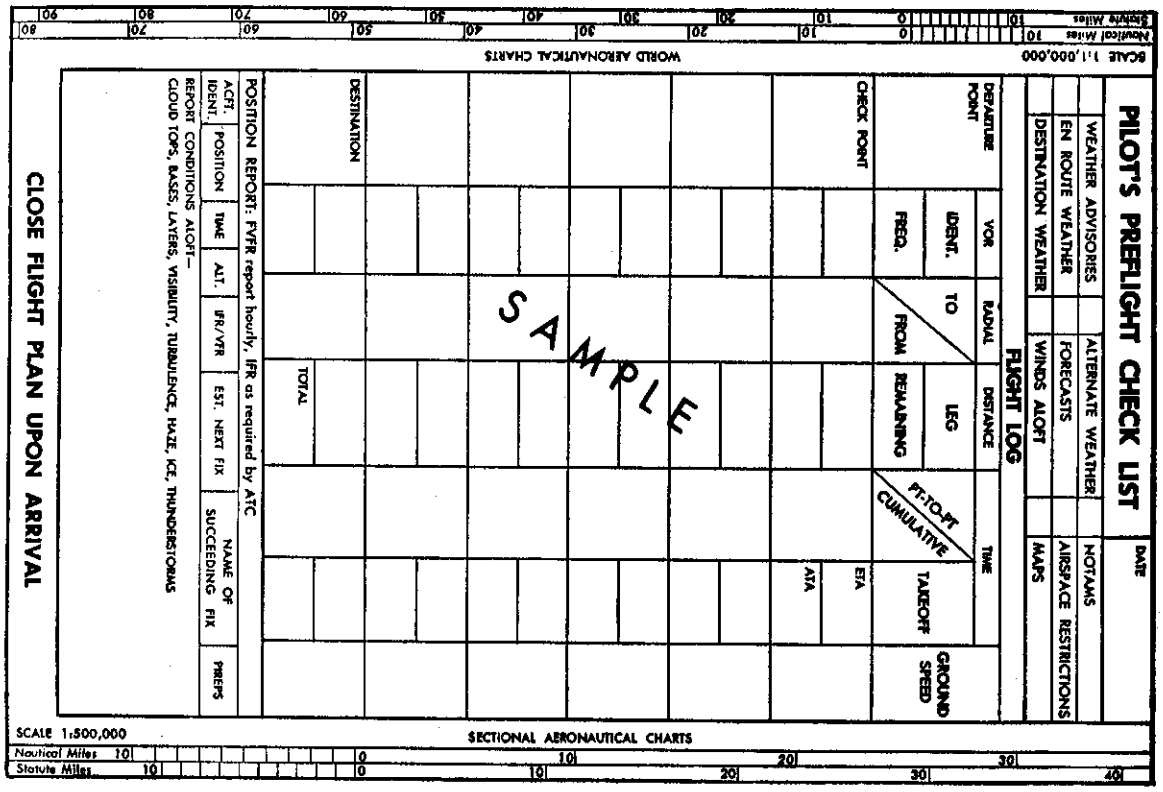
15. PILOT'S ADDRESS AND TELEPHONE NO. OR AIRCRAFT HOME BASE	16. NO. OF PERSONS ABOARD	17. COLOR OF AIRCRAFT	18. FLIGHT WATCH STATIONS

CLOSE FLIGHT PLAN UPON ARRIVAL

1/ SPECIAL EQUIPMENT SUFFIX
A — DME & 4096 Code transponder
B — DME & 64 Code transponder
D — DME
L — DME & transponder—no code
T — 64 Code transponder
U — 4096 Code transponder
X — Transponder—no code

FAA Form 7233—1 (4-66) FORMERLY FAA 398

0052-027-8000



2. Filing and closing of flight plans.

a. Military field.

b. Civil field with FAA facilities.

c. Civil field without FAA facilities.

(1) Filing.

(2) Closing.

3. Services provided by a Flight Service station.

a. Briefing and flight planning service.

b. Transmittals.

c. Search and rescue.

PERFORMANCE CHECK NO. 1

FLIGHT PLANS

F 1. Local flight plans may be used at the discretion of the pilot for any flight conducted within the local area, except when the flight is terminated at another airport or prolonged stops are anticipated.

F 2. On a flight plan for a flight originating from an airport within the eastern time zone and terminating in the central time zone, times filed should be in eastern standard time.

3. ETE on a local flight plan (DD Form 1080) is—

   a. The time between takeoff and touchdown at the point of first intended landing.

   b. The time between takeoff and estimated time of final landing at the point of departure.

   c. The estimated flight time only between takeoff and final touchdown.

   d. The estimated flight time between takeoff and arrival over the destination facility if the flight is an IFR local flight.

4. An item of information which should be listed in the "Remarks" section of the DD Form 1080 is—

   a. Remarks concerning anticipated stops.

   b. Information as to weight and balance for class II aircraft.

   c. Fuel requirement for the flight.

   d. Instrument rating of the pilot and copilot.

5. List two situations which would require a pilot to file a DD Form 175 when operating from a military field.

   a.

   b.

T F 6. The manifest portion of the DD Form 175 must include the pilot and crewmembers, but need not include passenger personnel below code 7 unless such personnel are on orders entitling them to "hazardous duty" pay.

7. If you are flying an Army aircraft equipped with a 64-code radar beacon transponder, what symbol should you list in the TD Code box of the DD Form 175?

8. The mileage listed on a DD Form 175 for a VFR flight is the mileage from _____ to _____.

9. The ETE listed on the DD Form 175 for an IFR flight should be the estimated time between—

   a. Takeoff and touchdown at the destination.

   b. Takeoff and arrival over the radio facility serving the destination.

   c. Arrival at cruising altitude and arrival over the radio facility serving the destination.

   d. Takeoff and arrival over the alternate airport.

10. The ETE to the alternate is the estimated time from _____ to _____.

11. On a particular flight, you will be carrying as a passenger in your aircraft, the governor of one of the states of the United States. What code designation should you enter in the "Highest Rank on Board" block of your flight plan?

T F 12. A pilot filing a specific SID for an airport must have all SID's for the airport, inasmuch as he may be given an SID other than the one filed.

13. List three items of information which could be listed in the "Remarks" section of the DD Form 175.

a.

b.

c.

14. If your weather briefing for a particular flight was completed at 1045 central, what is the weather briefing void time which will be entered on the DD Form 175-1?

15. The FAA Form 7233-1 would normally be used—

a. Only for VFR flights from civil fields.

b. Only for IFR flights from civil fields.

c. For both IFR and VFR flights departing from civil fields, except when such flights will be operating through or in a coastal ADIZ.

d. For all flights originating from civil fields.

16. A pilot is planning an IFR flight within noncontrolled airspace. The magnetic course is 175°. A heading of 185° will be required to maintain the course. According to the semicircular rule, the pilot should—

a. File for an odd thousand-foot level; however, ATC may assign him an even thousand.

b. File for an even thousand-foot level; however, ATC may assign him an odd thousand-foot level.

c. File for and fly an odd thousand-foot level.

d. File for and fly an even thousand-foot level.

17. A pilot might use a DVFR flight plan for—

a. An IFR flight through a coastal ADIZ.

b. Any flight in or through a joint-use restricted area.

c. Any flight in or through a coastal ADIZ.

d. A VFR flight within or through an ADIZ.

18. List two items of information which might be listed in the "Remarks" section of the FAA Form 7233-1.

a.

b.

19. List three sources of weather information which could be used by aviators.

a.

b.

c.

20. On an IFR flight plan, your ETD is 1900Z. According to ATC practices, your flight plan should be filed no later than (disregard local SOP)—

a. 1800Z.

b. 1815Z.

c. 1830Z.

d. 1845Z.

T F 21. In certain situations, flight plans may be closed while airborne with an FSS, military tower, or civil tower.

22. In closing a flight plan while airborne, the aircraft should be within _____ nautical miles of the field.

23. In closing a flight plan at a civil field with FAA facilities, the pilot should—

a. Close airborne with the FAA Flight Service station.

b. Close airborne with the nearest military tower.

c. Close by radio with the civil tower serving the field, upon landing.

d. Close personally with the FSS.

24. List four services provided by FAA Flight Service stations.

a.

b.

c.

d.

25. Failure to report within _____ past the filed ETA will normally result in a communications and ramp check being initiated.

PERFORMANCE CHECK NO. 1 - KEY

FLIGHT PLANS

False 1. Local flight plans are not to be used for IFR flights within the local flying area.

False 2. Times filed are to be in Greenwich mean time.

3. b.

4. a. Information as to weight and balance should be entered in the block provided. Fuel required need not be listed; although, the pilot must be cognizant of fuel required. The DD Form 1080 is used strictly for VFR local flights and instrument rating is superfluous.

5. a. Cross-country flights outside the local flying area.

   b. IFR flights.

   c. Flights within the local flying area where prolonged stops are anticipated and facilities are not available for notifying the home base of progress, at no expense to the government.

   d. Flights within the local flying area which terminate at other than home base.

False 6. All personnel must be included in the manifest.

7. /T.

8. Airport of origin to destination airport.

9. b.

10. Radio facility serving the destination to radio facility serving the alternate.

11. Code 2.

True 12.

13. a. Information as to anticipated stops.

    b. Honors requested by any codes aboard.

    c. Requests for approaches if such approaches operate noncontinuously (i.e., certain GCA's).

d. No oxygen—if flight handling might be affected by lack of oxygen.

14. 1815Z.

15. d.

16. c. The semicircular rule is based on the magnetic course being flown. It is applicable to VFR flights at and above 3,000 feet above ground level and to IFR flights operating outside controlled airspace. ATC may modify the semicircular rule for IFR flights only when such flights are within controlled airspace.

17. d.

18. a. Source of weather briefing.

b. Weight and balance information, if applicable.

c. Radio information, as applicable.

d. Information as to anticipated stops.

e. Manifest extension.

f. Any remarks deemed necessary by the pilot.

19. a. Weather facility at an established base operations.

b. FAA Flight Service station.

c. US Weather Bureau.

d. USAF weather briefing facilities.

20. c. One-half hour prior to ETD.

True 21.

22. 3.

23. d.

24. a. Weather briefing service.

b. Help in flight planning, if requested.

c. Transmittal of messages (RON's, etc.).

d. Scheduled weather broadcasts.

e. Aid in search and rescue.

25. 30 minutes.

PRACTICAL EXERCISE NO. 1

FLIGHT PLANS

The purpose of this exercise is to give you practice in filling out DD Form 175 and FAA Form 7233-1. Use FLIP Enroute Low Altitude US L-20, other references as needed, and the following information:

You are a 3-2 Army aviator stationed at Fort Rucker, Alabama. Your aircraft is a UH-1A, Serial No. 58-7711, equipped with an all-channel UHF transmitter-receiver, omni, and RMI. Usable fuel in tanks is 2,080 pounds. Plan on using 80 pounds for warmup and taxi. Use a consumption rate of 400 pounds per hour. Use 95 knots as the true airspeed and 90 knots as the groundspeed for all legs of this flight.

REQUIREMENTS:

1. Prepare a copy of the DD Form 175 for an IFR flight from Lawson Army Airfield, Fort Benning, Georgia (LSF), to Atlanta Municipal, Atlanta, Georgia (ATL), via direct Columbus VOR, V-241 Atlanta VOR, altitude 5,000 feet. Use Macon Airport, Macon, Georgia (MCN), as your alternate. Estimate your time of departure as 1200 EST.

2. Prepare a copy of an FAA Form 7233-1 for a VFR return flight to Lawson Army Airfield from Atlanta via the same airway route, using the same groundspeed, fuel load, and consumption rate. Estimated time of departure, 2000Z.

MILITARY FLIGHT PLAN

AIRCRAFT UNIT OF ASSIGNMENT/HOME STATION	AIRCRAFT SERIAL NO.

TYPE OF FLIGHT PLAN	RADIO CALL	AIRCRAFT DESIGNATION/ TD CODE	ESTIMATED TRUE AIRSPEED	DEPARTURE TIME (Z)	
☐ IFR ☐ DVFR ☐ VFR ☐ FVFR				PROPOSED	ACTUAL

INITIAL CRUISING ALTITUDE	POINT OF DEPARTURE	STANDARD INSTRUMENT DEPARTURE	
		NAME AND NUMBER	TO

IFR	VFR	ROUTE OF FLIGHT	TO	ETE

SAMPLE

REMARKS

RANK/HONOR CODE	PSGR/CARGO CODE

HOURS FUEL ON BOARD	DIST TO DESTN	ALTERNATE AIR FIELD	ETE TO ALTN	NOTAMS	DD FORM 365F *(Wt. and Bal.)*	WEATHER	REQUEST CLEARANCE AFTER

INST RATING	SIGNATURE OF PILOT IN COMMAND	SIGNATURE OF APPROVING AUTHORITY	DATE

CREW/PASSENGER LIST – ☐ *Attached* ☐ *See Passenger Manifest*

DUTY	NAME AND INITIALS	GRADE	SERVICE NO.	ORGANIZATION AND LOCATION
PILOT IN COMMAND				

DD FORM 1 JUL 65 175 PREVIOUS EDITION OF THIS FORM WILL BE USED UNTIL STOCK IS EXHAUSTED. D-38305

NOTE: Please refer to page 87 for FAA Form 7233-1.

FEDERAL AVIATION AGENCY

FLIGHT PLAN

Form Approved.
Budget Bureau No. 04-R072.3

1. TYPE OF FLIGHT PLAN: ☐ IFR ☐ VFR ☐ DVFR ☐ PVFR

2. AIRCRAFT IDENTIFICATION

3. AIRCRAFT TYPE/SPECIAL EQUIPMENT 1/

4. TRUE AIRSPEED — KNOTS

5. POINT OF DEPARTURE

6. DEPARTURE TIME — PROPOSED (Z) / ACTUAL (Z)

7. INITIAL CRUISING ALTITUDE

8. ROUTE OF FLIGHT

9. DESTINATION (Name of airport and city)

10. REMARKS

SAMPLE

11. ESTIMATED TIME EN ROUTE — HOURS / MINUTES

12. FUEL ON BOARD — HOURS / MINUTES

13. ALTERNATE AIRPORT(S)

14. PILOT'S NAME

15. PILOT'S ADDRESS AND TELEPHONE NO. OR AIRCRAFT HOME BASE

16. NO. OF PERSONS ABOARD

17. COLOR OF AIRCRAFT

18. FLIGHT WATCH STATIONS

CLOSE FLIGHT PLAN UPON ARRIVAL

1/ SPECIAL EQUIPMENT SUFFIX
A — DME & 4096 Code transponder
B — DME & 64 Code transponder
D — DME
L — DME & transponder—no code
T — 64 Code transponder
U — 4096 Code transponder
X — Transponder—no code

FAA Form 7233—1 (4-66) FORMERLY FAA 398

0052-027-8000

PILOT'S PREFLIGHT CHECK LIST

DATE

WEATHER ADVISORIES
EN ROUTE WEATHER
DESTINATION WEATHER
ALTERNATE WEATHER
FORECASTS
WINDS ALOFT
NOTAMS
AIRSPACE RESTRICTIONS
MAPS

FLIGHT LOG

DEPARTURE POINT
CHECK POINT
VOR — FREQ. / IDENT.
RADIAL — TO / FROM
DISTANCE — LEG / REMAINING
TIME — FT-TO-FT / CUMULATIVE
ETA / ATA
TAKEOFF
GROUND SPEED

DESTINATION

POSITION REPORTS: PVFR report hourly, IFR as required by ATC
ACFT. IDENT. | POSITION | TIME | ALT. | IFR/VFR | EST. NEXT FIX | NAME OF SUCCEEDING FIX | FREQ'S

REPORT CONDITIONS ALOFT — CLOUD TOPS, BASES, LAYERS, VISIBILITY, TURBULENCE, HAZE, ICE, THUNDERSTORMS

SAMPLE

CLOSE FLIGHT PLAN UPON ARRIVAL

SCALE 1:500,000

SECTIONAL AERONAUTICAL CHARTS

Nautical Miles 10 0 10 20 30
Statute Miles 10 0 10 20 30 40

SCALE 1:1,000,000

WORLD AERONAUTICAL CHARTS

Statute Miles 10 0 10 20 30 40 50 60 70 80 90
Nautical Miles 10 0 10 20 30 40 50 60 70 80