

HQ AFSVA/SVPAR

Annual Instrument Exam

1 August 2002

**(Incorporates change 1, dated 11 Oct 02
and change 2, dated 16 Dec 02)**

(Required passing score: 80%)

Please do not mark on booklet

Annual Instrument Exam Questions (50)

(Chg 2, 16 Dec 02) (Question 1 references FAA-H-8083-15 (IFH-new))

1. (Refer to figures 85 and 86.) Which combination of indications confirms that you are approaching WAGGE intersection slightly to the right of the LOC centerline on departure?

- A. 1 and 4
- B. 2 and 3
- C. 1 and 3

(Chg 2, 16 Dec 02) (Question 2 references U.S. Terminal Procedures Publications (rate of climb/descent table))

2. The rate of descent on the glide slope is dependent upon

- A. true airspeed
- B. ground speed
- C. calibrated airspeed

(Chg 2, 16 Dec 02) (Questions 3 - 4 reference FAA-H-8083-15 (IFH-new))

3. (Refer to figure 98 and 99.) To which aircraft position does HSI presentation "F" correspond?

- A. 16
- B. 14
- C. 10

4. After passing a VORTAC, the CDI shows half scale deflection to the right. What is indicated if the deflection remains constant for a period of time?

- A. The airplane is flying away from the radial
- B. The OBS is erroneously set on the reciprocal heading
- C. The airplane is getting closer to the radial

(Chg 2, 16 Dec 02) (Questions 5 references AC 61-27C (IFH-old))

5. The local altimeter setting should be used by all pilots in a particular area, primarily to provide for

- A. the cancellation of altimeter error due to nonstandard temperatures aloft
- B. better vertical separation of aircraft
- C. more accurate terrain clearance in mountainous areas

(Chg 2, 16 Dec 02) (Question 6 references AC 61-23C (PHAK))

6. (Change 1, 11 Oct 02) (Refer to figures 38, 39, 40, and 41.) (Refer to the FD excerpt below, and use the wind entry closest to the flight planned altitude.) Determine the time to be entered in block 10 of the flight plan.

Route of flight:	Figures 38, 39, and 40			
Flight log and MAG VAR:	Figure 39			
ACTON TWO ARRIVAL:	Figure 41			
FT	3000	6000	9000	12000
ABI		2033+13	2141+13	2142+05

- A. 1 hour 24 minutes.
- B. 1 hour 31 minutes.
- C. 1 hour 26 minutes.

(Chg 2, 16 Dec 02) (Question 7 references AC 61-27C (IFH-old))

7. Conditions that determine pitch attitude required to maintain level flight are

- A. airspeed, air density, wing design, and angle of attack
- B. relative wind, pressure altitude, and vertical lift component
- C. flightpath, wind velocity, and angle of attack

(Chg 2, 16 Dec 02) (Questions 8 - 9 reference FAA-H-8083-15 (IFH-new))

8. What is the first fundamental skill in attitude instrument flying?

- A. Instrument interpretation
- B. Aircraft control
- C. Instrument cross-check

9. (Refer to figure 147.) Which is the correct sequence for recovery from the unusual attitude indicated?

- A. Add power, lower nose, level wings, return to original attitude and heading
- B. Stop turn by raising right wing and add power at the same time, lower the nose, and return to original attitude and heading
- C. Level wings, add power, lower nose, descend to original attitude, and heading

(Question 10 references flight computer)

10. (Refer to figure 38.) What CAS must be used to maintain the filed TAS at the flight planned altitude if the outside air temperature is +05°C?

- A. 133 KCAS
- B. 129 KCAS
- C. 139 KCAS

(Chg 2, 16 Dec 02) (Questions 11 - 16 reference AC 00-45 (AWS))

11. A pilot planning to depart at 1100Z on an IFR flight is particularly concerned about the hazard of icing. What sources reflect the most accurate information on icing conditions (current and forecast) at the time of departure?

- A. The Area Forecast, and the Freezing Level Chart
- B. Low-Level Significant Weather Prognostic Chart, and the Area Forecast
- C. Pilot weather reports (PIREPs), AIRMETs, and SIGMETs

12. (Refer to figure 8.) What weather conditions are depicted in the area indicated by arrow D on the Radar Summary Chart?

- A. Strong to very strong echoes within the smallest contour, echo bases 29,000 feet MSL, and cell in northeast Nebraska moving northeast at 50 knots
- B. Echo tops 4,100 feet MSL, strong to very strong echoes within the smallest contour, and area movement toward the northeast at 50 knots
- C. Intense to extreme echoes within the smallest contour, echo tops 29,000 feet MSL, and cell movement toward the northeast at 50 knots

13. The Hazardous Inflight Weather Advisory Service (HIWAS) is a continuous broadcast over selected VORs of

- A. SIGMETs, CONVECTIVE SIGMETs, AIRMETs, Severe Weather Forecast Alerts (AWW), and Center Weather Advisories
- B. SIGMETs, CONVECTIVE SIGMETs, AIRMETs, Wind Shear Advisories, and Severe Weather Forecast Alerts (AWW)
- C. Wind Shear Advisories, Radar Weather Reports, SIGMETs, CONVECTIVE SIGMETs, AIRMETs, and Center Weather Advisories (CWA)

14. The reporting station originating this Aviation Routine Weather Report has a field elevation of 620 feet. If the reported sky cover is one continuous layer, what is its thickness (tops of OVC are reported at 6,500 feet)?

METAR KMDW 121856Z AUTO 32005KT 1 1/2SM +RA

BR OVC007 17/16 A2980

- A. 5,880 feet
- B. 5,180
- C. 5,800

15. The body of a Terminal Aerodrome Forecast (TAF) covers a geographical proximity within a

- A. 5 statute mile radius from the center of an airport runway complex
- B. 5 nautical mile radius of the center of an airport
- C. 5 to 10 statute mile radius from the center of an airport runway complex

16. (Refer to figure 8.) What weather conditions are depicted in the area indicated by arrow A on the Radar Summary Chart?

- A. Moderate to strong echoes; echo tops 30,000 feet MSL; line movement toward the northwest
- B. Strong to very strong echoes; echo tops 30,000 feet MSL; thunderstorms and rain showers
- C. Weak to moderate echoes; average echo bases 30,000 feet MSL; cell movement toward the southeast; rain showers with thunder

(Chg 2, 16 Dec 02) (Question 17 references AIM)

17. A pilot reporting turbulence that momentarily causes slight, erratic changes in altitude and/or attitude should report it as

- A. light turbulence
- B. moderate turbulence
- C. light chop

(Questions 18 - 22 reference AIM and FAA-H-8083-15 (IFH))

18. (Refer to figures 35 and 35A.) At which point does the BUJ.BUJ3 arrival begin?

- A. At the BUJ VORTAC
- B. At the TXK VORTAC
- C. At BOGAR intersection

19. (Refer to figure 36A.) What is the minimum number of waypoints required for the complete RNAV RWY 33 approach procedure including the IAFs and missed approach procedure?

- A. Three waypoints
- B. Two waypoints
- C. One waypoint

20. (Refer to figure 91.) What lighting is indicated on the chart for Jackson Hole Airport

- A. No lighting available
- B. Lights on prior request
- C. Pilot controlled lighting

21. (Refer to figure 76.) Which indication would be an acceptable accuracy check of both VOR receivers when the aircraft is located on the VOR receiver checkpoint at the Helena Regional Airport?

- A. B
- B. C
- C. A

22. (Refer to figure 78.) When eastbound on V86 between Whitehall and Livingston, the minimum altitude that you should cross BZN is

- A. 10,400 feet
- B. 9,300 feet
- C. 8,500 feet

(Questions 23 - 40 reference AIM)

23. Acceptable navigational signal coverage at the MOCA is assured for a distance from the VOR of only

- A. 12 NM
- B. 25 NM
- C. 22 NM

24. For IFR operations off of established airways below 18,000 feet, VOR navigational aids used to describe the "route of flight" should be no more than

- A. 40 NM apart
- B. 80 NM apart
- C. 70 NM apart

25. (Refer to figure 136.) Which illustration would a pilot observe if the aircraft is on a glidepath higher than 3.5°?

- A. 9
- B. 11
- C. 8

26. What is the expected duration of an individual microburst?

- A. One microburst may continue for as long as 2 to 4 hours
- B. Two minutes with maximum winds lasting approximately 1 minute
- C. Seldom longer than 15 minutes from the time the burst strikes the ground until dissipation

27. Which service is provided for IFR arrivals by a FSS located on an airport without a control tower?

- A. Airport advisories
- B. All functions of approach control
- C. Automatic closing of the IFR flight plan

28. (Refer to figure 13.) What effect will a microburst encounter have upon the aircraft in position 4?

- A. Strong updraft
- B. Significant performance increase
- C. Strong tailwind

29. (Refer to figure 44.) What aircraft equipment code should be entered in block 3 of the flight plan?

- A. C
- B. A
- C. I

30. Which report should be made to ATC without a specific request when not in radar contact?

- A. Entering instrument meteorological conditions
- B. When leaving final approach fix inbound on final approach
- C. Correcting an E.T.A. any time a previous E.T.A. is in error in excess of 2 minutes

31. What point at the destination should be used to compute estimated time en route on an IFR flight plan?

- A. The initial approach fix on the expected instrument approach
- B. The final approach fix on the expected instrument approach
- C. The point of first intended landing

32. The RVR minimums for takeoff or landing are published in an IAP, but RVR is inoperative and cannot be reported for the runway at the time. Which of the following would apply?

- A. RVR minimums may be disregarded, providing all other components of the ILS system are operative
- B. RVR minimums which are specified in the procedure should be converted and applied as ground visibility
- C. RVR minimums may be disregarded, providing the runway has an operative HIRL system

33. A pilot is making an ILS approach and is past the OM to a runway which has a VASI. What action should the pilot take if an electronic glide slope malfunction occurs and the pilot has the VASI in sight?

- A. The pilot may continue the approach and use the VASI glide slope in place of the electronic glide slope
- B. The pilot should inform ATC of the malfunction and then descend immediately to the localizer MDA and make a localizer approach
- C. The pilot must request an LOC approach, and may descend below the VASI at the pilot's discretion

34. How does a pilot determine if DME is available on an ILS/LOC?

- A. LOC/DME frequencies available in the Airman's Information Manual
- B. IAP indicate DME/TACAN channel in the LOC frequency box
- C. LOC/DME are indicated on en route low altitude frequency box

35. (Refer to figure 133.) What is the minimum altitude descent procedure if cleared for the S-ILS 9 approach from Seal Beach VORTAC?

- A. Descend and maintain 3,000 to JASER INT, descend to 2,500 while established on the LOC course inbound, intercept and maintain the GS to 991 (DH)
- B. Descend and maintain 3,000 to JASER INT, descend to 2,800 when established on the LOC course, intercept and maintain the GS to 991 (DH)
- C. Descend and maintain 3,000 to JASER INT, descend to and maintain 2,500 until crossing SWAN LAKE, descend and maintain 1,260 until crossing AGNES, and to 991 (DH) after passing AGNES

36. (Refer to figure 130.) How does an LDA facility, such as the one at Roanoke Regional, differ from a standard ILS approach facility?

- A. The GS is unusable beyond the MM
- B. The LOC is wider
- C. The LOC is offset from the runway

37. Which indications are acceptable tolerances when checking both VOR receivers by use of the VOT?

- A. 001° FROM and 005° FROM, respectively
- B. 360° TO and 003° TO, respectively
- C. 176° TO and 003° FROM, respectively

38. When should pilots state their position on the airport when calling the tower for takeoff?

- A. When visibility is less than 1 mile
- B. When departing from a runway intersection
- C. When parallel runways are in use

39. To comply with ATC instructions for altitude changes of more than 1,000 feet, what rate of climb or descent should be used?

- A. As rapidly as practicable to 500 feet above/below the assigned altitude, and then at 500 feet per minute until the assigned altitude is reached
- B. As rapidly as practicable to 1,000 feet above/below the assigned altitude, and then between 500 and 1,500 feet per minute until reaching the assigned altitude
- C. 1,000 feet per minute during climb and 500 feet per minute during descents until reaching the assigned altitude

40. (Refer to figure 113.) You receive this ATC clearance:

“...HOLD EAST OF THE ABC VORTAC ON THE ZERO NINER ZERO RADIAL, LEFT TURNS...”

What is the recommended procedure to enter the holding pattern?

- A. Teardrop only
- B. Parallel only
- C. Direct only

(Questions 41 - 46 reference 14 CFR Part 91)

41. If a pilot elects to proceed to the selected alternate, the landing minimums used at that airport should be the

- A. minimums specified for the approach procedure selected
- B. alternate minimums shown on the approach chart
- C. minimums shown for that airport in a separate listing of “IFR Alternate Minimums”

42. What minimum weather conditions must be forecast for your ETA at an alternate airport, that has only a VOR approach with standard alternate minimums, for the airport to be listed as an alternate on the IFR flight plan?

- A. 800-foot ceiling and 2 statute miles visibility
- B. 600-foot ceiling and 2 statute miles visibility
- C. 1000-foot ceiling and visibility to allow descent from minimum en route altitude (MEA), approach, and landing under basic VFR

43. What are the minimum qualifications for a person who occupies the other seat as safety pilot during simulated instrument flight?

- A. Private pilot with appropriate category, class, and instrument ratings
- B. Private Pilot with instrument rating
- C. Private pilot certificate with appropriate category and class ratings for the aircraft

44. What is the minimum flight visibility and distance from clouds for flight at 10,500 feet MSL with a VFR-on-Top clearance during daylight hours? (Class E airspace)

- A. 5 SM, 1,000 feet above, 1,000 feet below, and 1 mile horizontal
- B. No requirement since you are on an IFR flight plan
- C. 5 SM, 1,000 feet above, 500 feet below, and 1 mile horizontal

45. For aircraft other than helicopters, is an alternate airport required for an IFR flight to ATL (Atlanta Hartsfield) if the proposed ETA is 1930Z? (130) 2012

TAF KATL 121720Z 121818 20012KT 5SM HZ BKN030

FM2000 3SM TSRA OVC025CB

FM2200 33015G20KT P6SM BKN015 OVC040 BECMG

0608 02008KT BKN040 BECMG 1012 00000KT P6SM

CLR=

- A. Yes, because the ceiling could fall below 2,000 feet within 2 hours before to 2 hours after the ETA
- B. No, because the ceiling and visibility are forecast to remain at or above 1,000 feet and 3 miles, respectively
- C. No, because the ceiling and visibility are forecast to be at or above 2,000 feet and 3 miles within 1 hour before to 1 hour after the ETA

46. Which data must be recorded in the aircraft log or other appropriate log by a pilot making a VOR operational check for IFR operations?

- A. Date of check, VOR name or identification, place of operational check, and amount of bearing error
- B. Place of operational check, amount of bearing error, date of check, and signature
- C. VOR name or identification, date of check, amount of bearing error, and signature

(Questions 47 - 49 reference 14 CFR Part 61)

47. Which flight time may be logged as instrument time when on an instrument flight plan?

- A. Only the time you were flying in IFR weather conditions
- B. Only the time you controlled the aircraft solely by reference to flight instruments
- C. All of the time the aircraft was not controlled by ground references

48. A pilot's recent IFR experience expires on July 1 of this year. What is the latest date the pilot can meet the IFR experience requirement without having to take an instrument proficiency check?

- A. July 31, this year
- B. June 30, next year
- C. December 31, this year

49. To meet the minimum instrument experience requirements, within the last 6 calendar months you need

- A. six hours in the same category aircraft, and at least 3 of the 6 hours in actual IFR conditions
- B. six instrument approaches, holding procedures, and intercepting and tracking courses in the appropriate category of aircraft
- C. six hours in the same category aircraft

(Question 50 references AFMAN 34-232)

50. You just received your instrument rating (logged 10 hours actual instrument time) and are planning an IFR flight in an aero club aircraft. Your departure airport weather at your planned takeoff time forecasts an 800-foot ceiling and two miles visibility. Looking at the approach plates for your departure airport, you notice the lowest compatible straight-in approach minimums as 500/1 (MDA/visibility) and the lowest compatible circling minimums as 1000/2. Your planned departure runway does not list non-standard takeoff minimums nor does it have a published departure procedure. May you legally takeoff if the actual conditions are as forecast?

- A. Yes, the weather is greater than my lowest straight-in minimums
- B. No, the weather is less than my lowest circling minimums
- C. Yes, because I'm operating under 14 CFR Part 91, and there are no published departure procedures

Annual Instrument Exam Figures

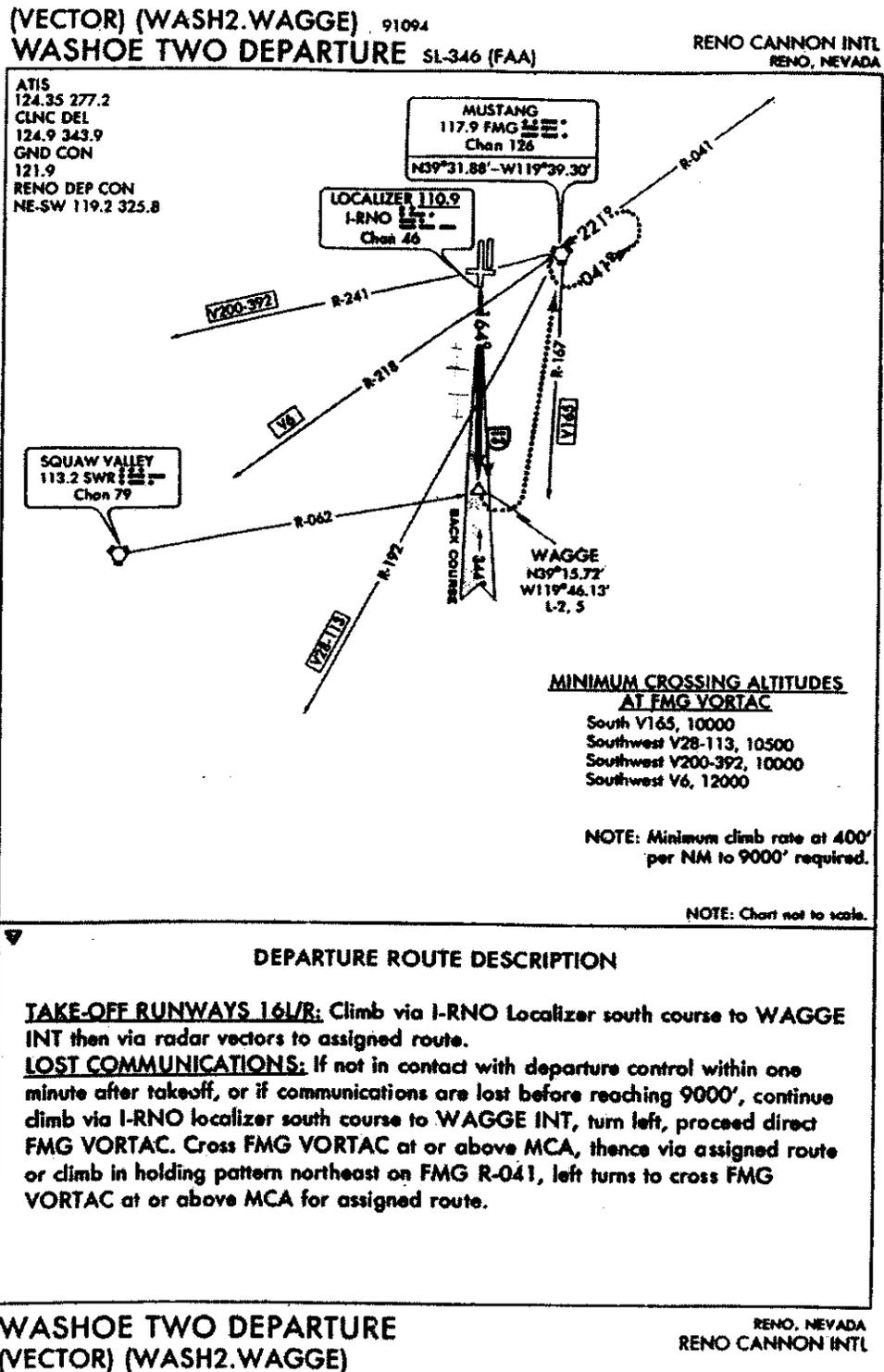
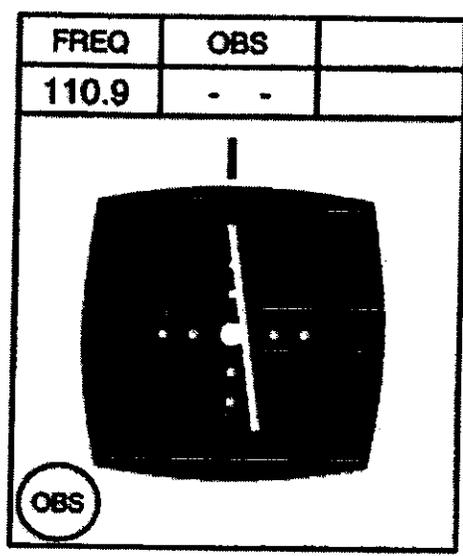
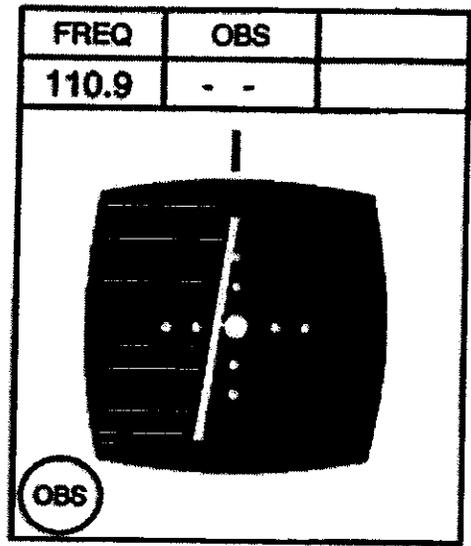


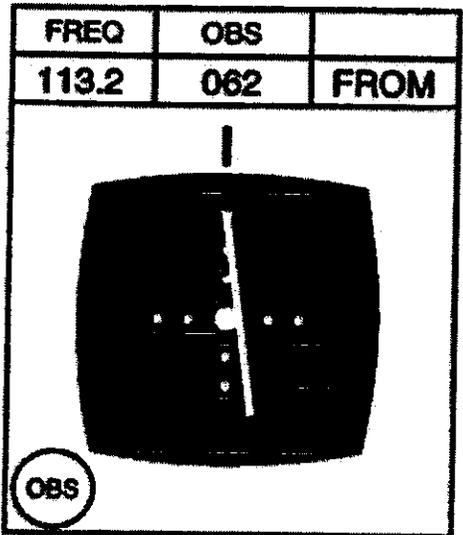
Figure 85



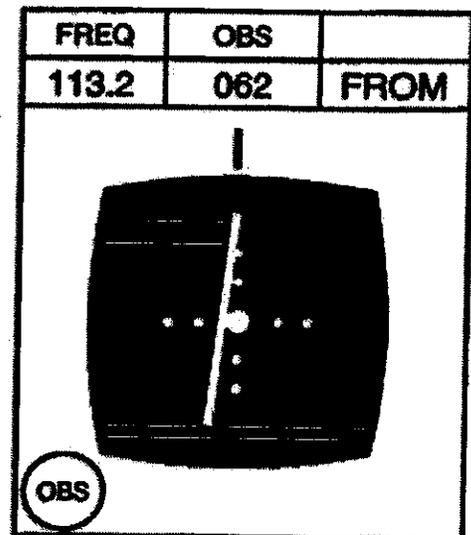
1



2



3



4

Figure 86

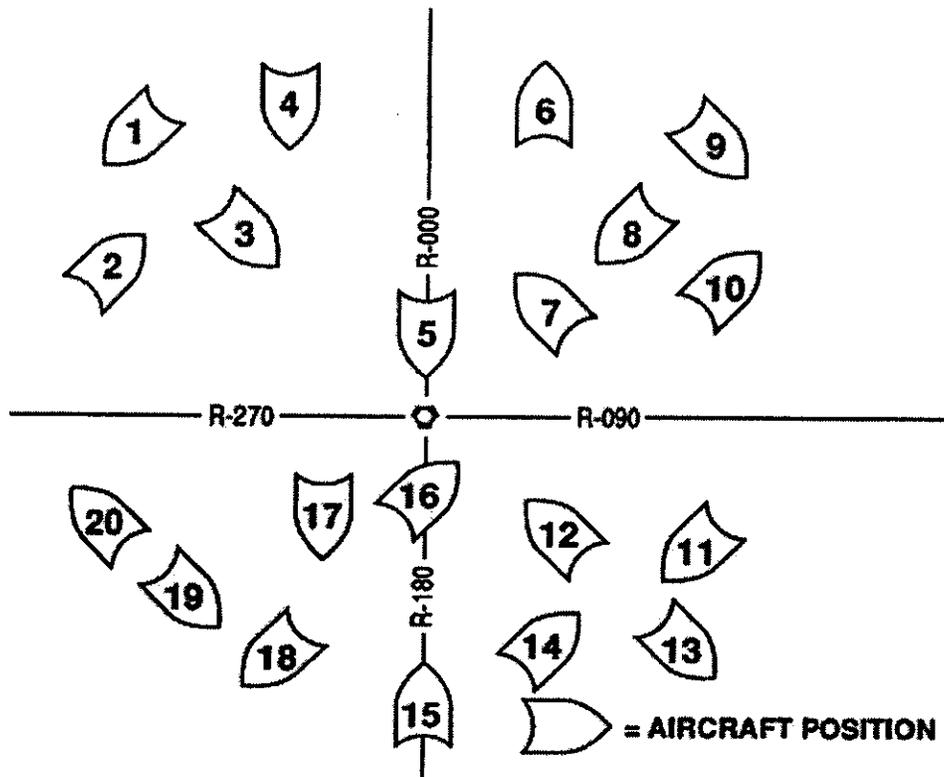


Figure 98

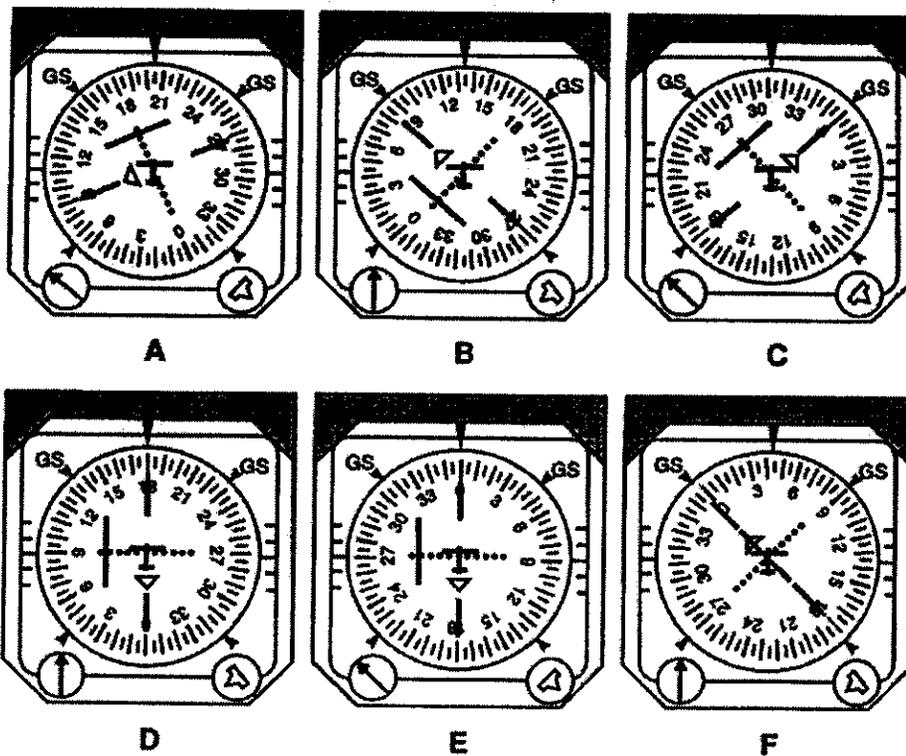


Figure 99

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		<input type="checkbox"/> PILOT BRIEFING <input type="checkbox"/> VFR <input type="checkbox"/> STOPOVER		TIME STARTED	SPECIALIST INITIALS
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE
<input type="checkbox"/> VFR <input checked="" type="checkbox"/> IFR <input type="checkbox"/> DVFR	N4321P	C402/	156 kts	BGS	PROPOSED (Z)	ACTUAL (Z)	11000
8. ROUTE OF FLIGHT DIRECT BGS, V16 ABI, ABI.AQN2							
9. DESTINATION (Name of airport and city)			10. EST. TIME ENROUTE		11. REMARKS		
DALLAS FT. WORTH DFW			HOURS	MINUTES			
12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE		15. NUMBER ABOARD	
HOURS	MINUTES	N/A				2	
17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		18. COLOR OF AIRCRAFT					
		RED/BLUE/WHITE					
<small>18. COLOR OF AIRCRAFT: RED/BLUE/WHITE. DVM, AIRCRAFT PILOTS, FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning DVFR flight plans.</small>							
FAA Form 7233-1 (4-80)		CLOSE VFR FLIGHT PLAN WITH _____				FSS ON ARRIVAL	
<hr/> AIRCRAFT INFORMATION <hr/>							
MAKE Cessna				MODEL 402C			
N 4321P				Vso 71			
<hr/> AIRCRAFT EQUIPMENT/STATUS** <hr/>							
**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE TRANSPONDER: <u>X</u> (MODE C) <u>X</u> ILS: (LOCALIZER) <u>X</u> (GLIDE SLOPE) <u>X</u> VOR NO. 1 <u>X</u> (NO. 2) <u>X</u> ADF: <u>X</u> RNAV: <u>X</u> VERTICAL PATH COMPUTER: <u>N/A</u> DME: <u>X</u> MARKER BEACON: <u>X</u> (AUDIO) <u>X</u> (VISUAL) <u>X</u>							

Figure 38

FLIGHT LOG

BIG SPRING McMAHON-WRINKLE TO DALLAS FT. WORTH (DFW)

CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
21XS	BGS	DIRECT CLIMB V16	DIRECT					:06.0			
	LORAN	11,000 V16	075°								
	ABI	11,000 DIRECT	076°		156	182	87				
	COTTN	11,000 AQN2	087°			174	63				
	AQN	AQN2	075°			182	37				
	CREEK	AQN2	040°								
APPROACH & LANDING		RADAR VEC.						:06.0			
	DFW AIRPORT	DESCENT									

OTHER DATA:
 NOTE: MAG. VAR. 11° E.
 (STAR) ACTON TWO ARRIVAL (AQN2)

FLIGHT SUMMARY		
TIME	FUEL (LB)	
		EN ROUTE
		RESERVE
		MISSED APPR.
		TOTAL

BIG SPRING McMAHON-WRINKLE (21XS) 25W UTC-6(-SDT) **DALLAS-FT. WORTH**
H-21, 5A, L-13A, 15B
IAP

32°12'45"N 101°31'17"W
 2572 B S4FUEL 100LL, JET A
 RWY 17-35: H8803X100 (ASPH-CONC) S-44, D-62, DDT-101 MIRL
 RWY 17:SSALS.PVASKASPH-GA3.0°TCH 41'.
 RWY 06-24:H4600X75(ASPH) MIRL
 RWY 24:PVASK(PSIL)-GA3.55°TCH31'. P-line.
AIRPORT REMARKS: Attended 1400-2300Z . Per fuel after hours call 915-263-3958. ACTIVATE MIRL Rwy 06-24 and Rwy 17-35, SSALS Rwy 17 and PVASI Rwy 17 and 24-CTAF.
COMMUNICATIONS:CTAF/UNICOM 122.8
 SAN ANGELOSFSS (SJT) TF 1-800-WX-BRIEF. NOTAM FILE SJT.
 RCO 122.4(SAN ANGELOFSS)
 FORT WORTH CENTER APP/DEP CON 133.7
RADIO AIDS TO NAVIGATION: NOTAM FILE SJT.
 (L) VORTAGW 144.3 BGS Chan 90 32°23'08"N 101°10.5NM to fld. 2670/11E.

EXCERPT FROM AIRPORT/FACILITY DIRECTORY (21 XS)

Figure 39

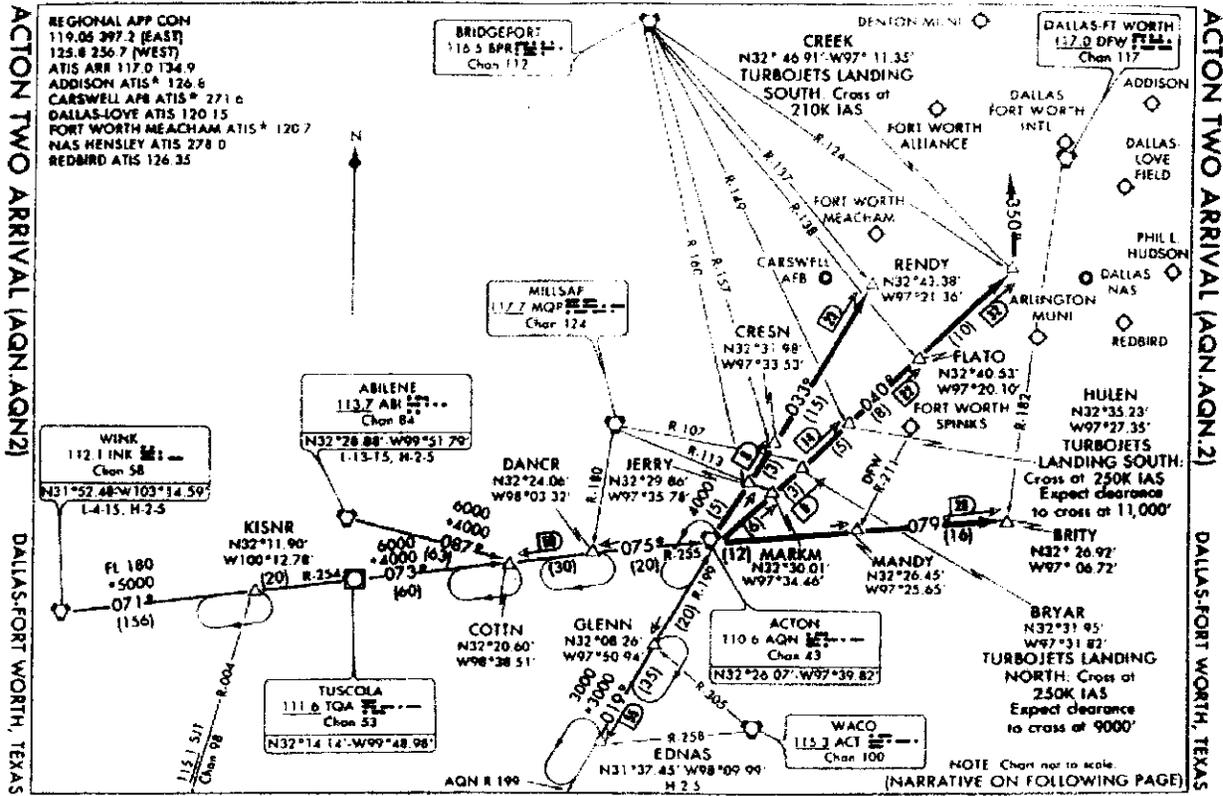


Figure 41

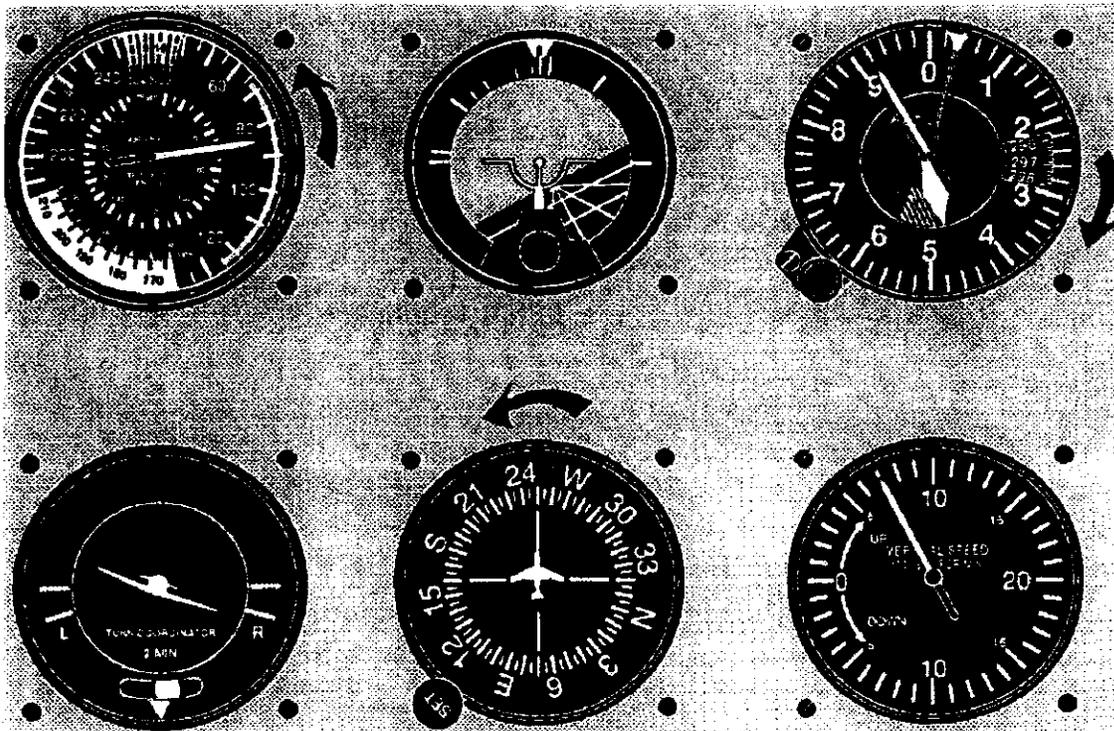


Figure 147

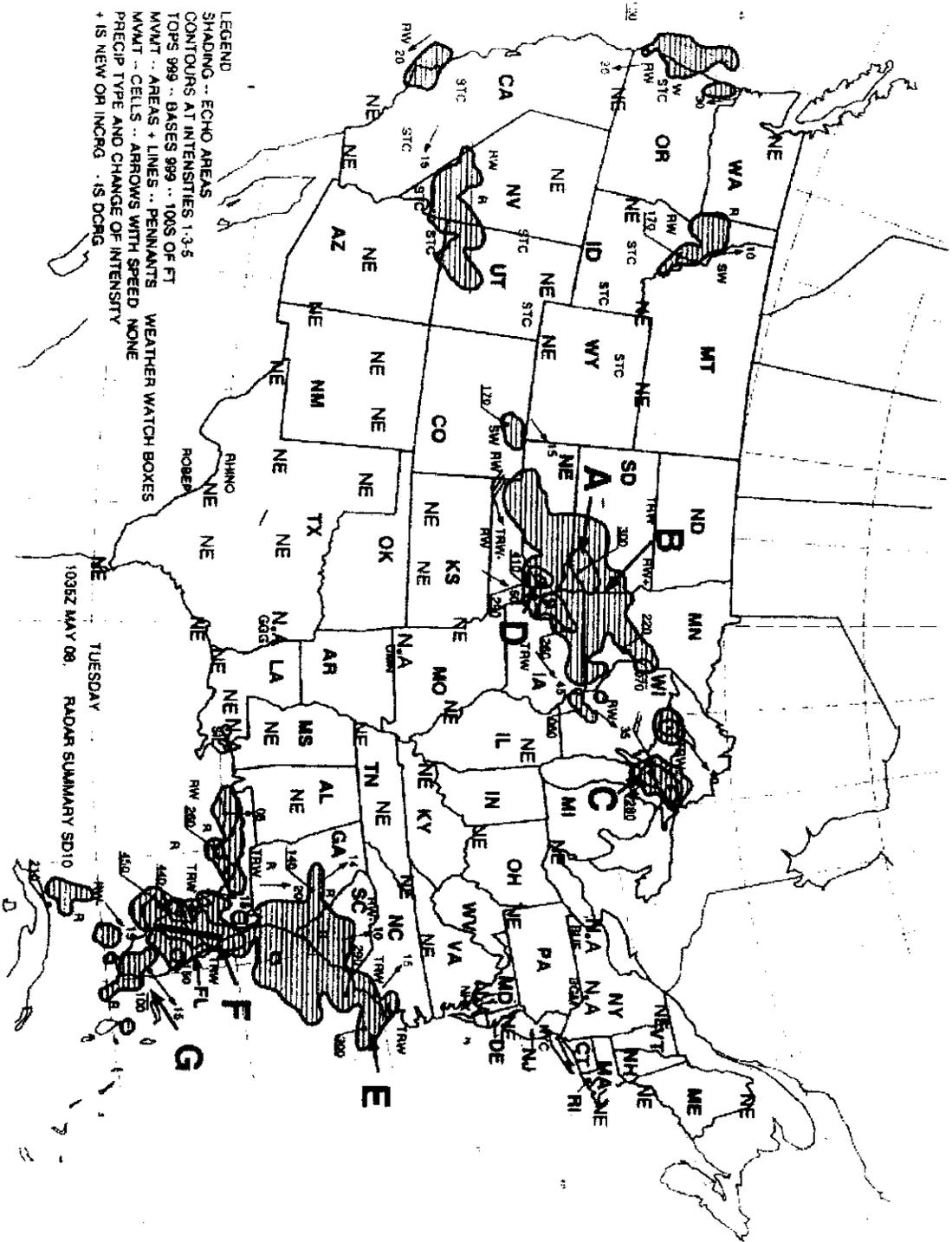


Figure 8

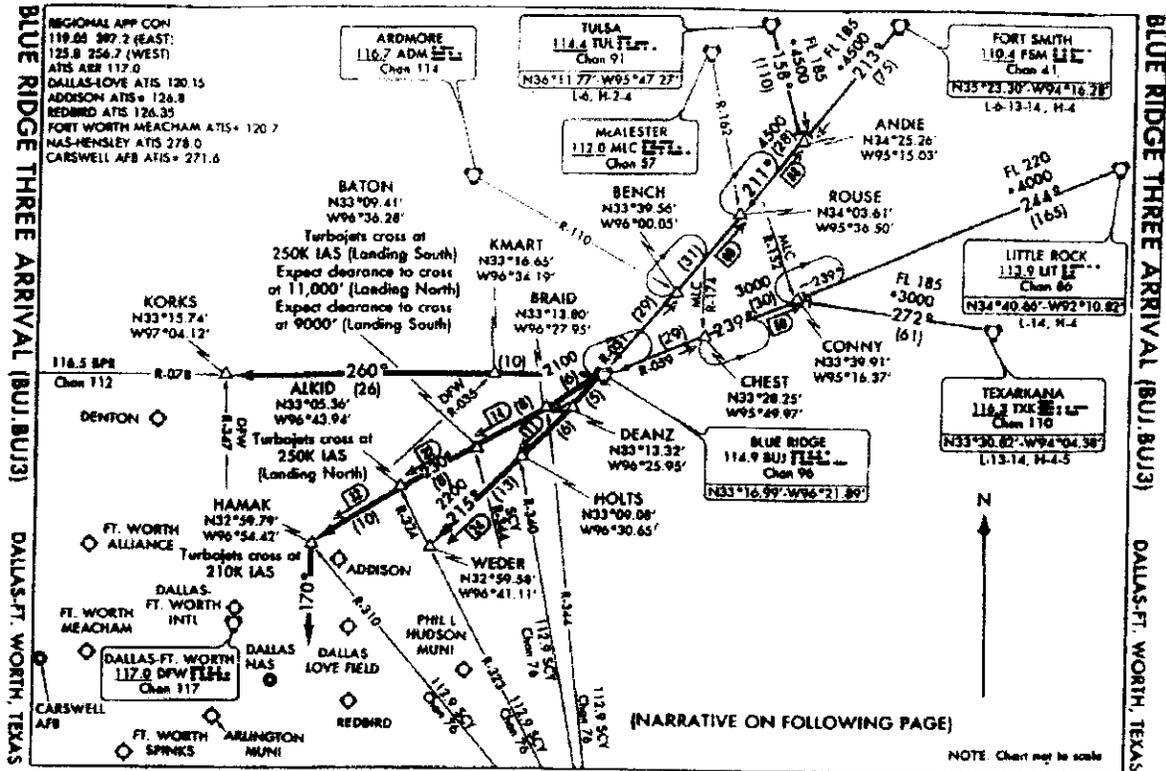


Figure 35

91004 SL-6039 (FAA)
BLUE RIDGE THREE ARRIVAL (BUJ, BUJ3) DALLAS-FT. WORTH, TEXAS

ARRIVAL DESCRIPTION

FORT SMITH TRANSITION (FSM, BUJ3): From over FSM VORTAC via FSM R-213 and BUJ R-031 to BUJ VORTAC. Thence

LITTLE ROCK TRANSITION (LIT, BUJ3): From over LIT VORTAC via LIT R-244 and BUJ R-059 to BUJ VORTAC. Thence

TEXARKANA TRANSITION (TXK, BUJ3): From over TXK VORTAC via TXK R-272 and BUJ R-059 to BUJ VORTAC. Thence

TULSA TRANSITION (TUL, BUJ3): From over TUL VORTAC via TUL R-158 and BUJ R-031 to BUJ VORTAC. Thence

TURBOJET LANDING DALLAS-FT WORTH INTL: (Landing South): From over BUJ VORTAC via BUJ R-230 to HAMAK INT. Expect vectors at BATON INT. (Landing North): From over BUJ VORTAC via BUJ R-230 to HAMAK INT, thence heading 170° for vector to final approach course.

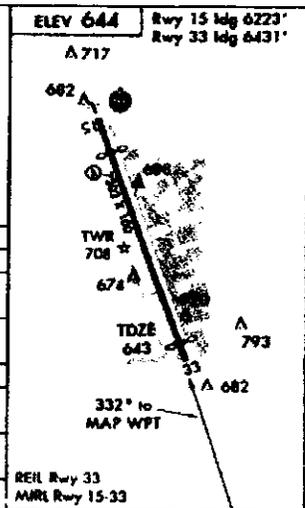
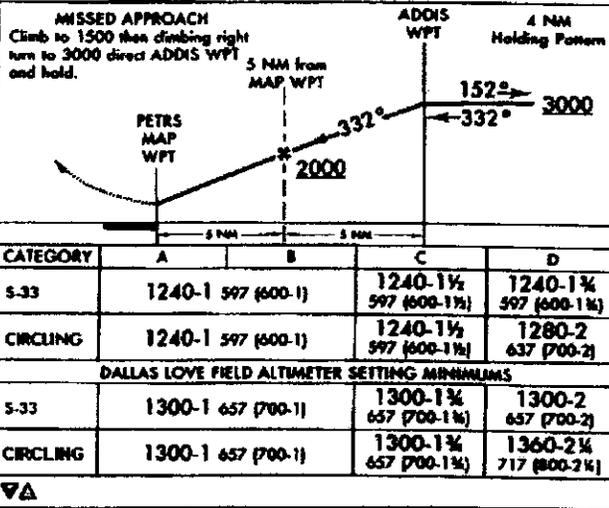
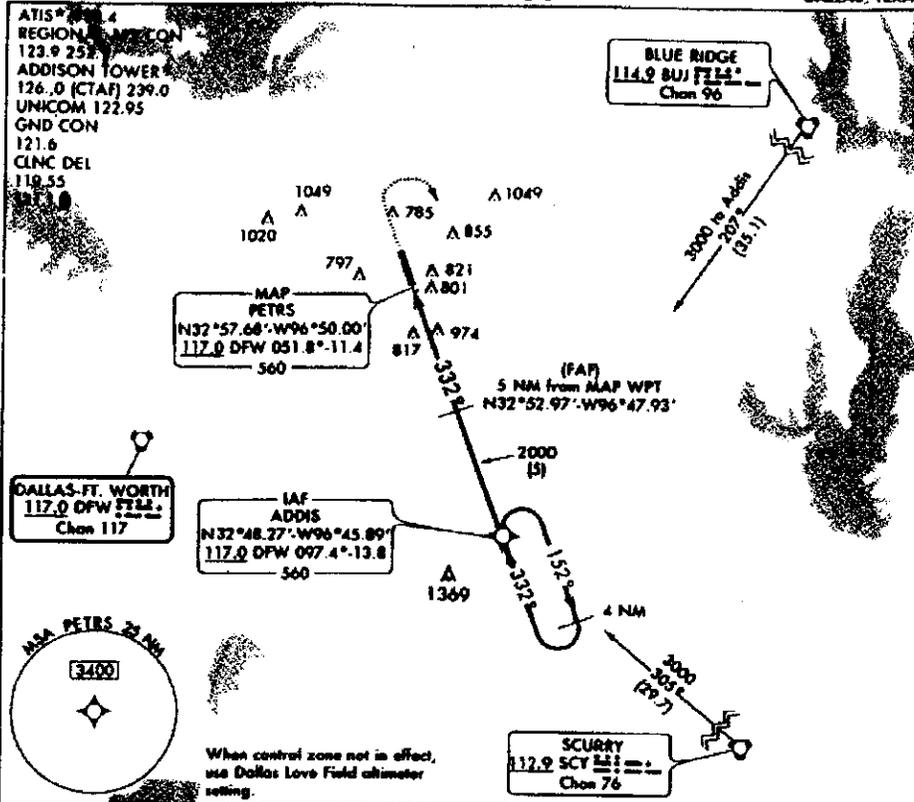
NON-TURBOJET LANDING DALLAS-FT WORTH INTL: (Landing South): From over BUJ VORTAC via BUJ R-230 to HAMAK INT. Expect vectors at BATON INT. (Landing North): From over BUJ VORTAC via BUJ R-215 to WEDER INT. Expect vectors to final approach course.

ALL AIRCRAFT LANDING DALLAS-LOVE FIELD, ADDISON, REDBIRD, NAS DALLAS, and PHIL L. HUDSON: (Landing South/North): From over BUJ VORTAC via BUJ R-215 to WEDER INT. Expect vectors to final approach course.

ALL AIRCRAFT LANDING MEACHAM, CARSWELL AFB, ALLIANCE, ARLINGTON, DENTON and FT. WORTH SPINKS: (Landing South/North): From over BUJ VORTAC via BUJ R-260 to KORKS INT. Expect vectors to final approach course.

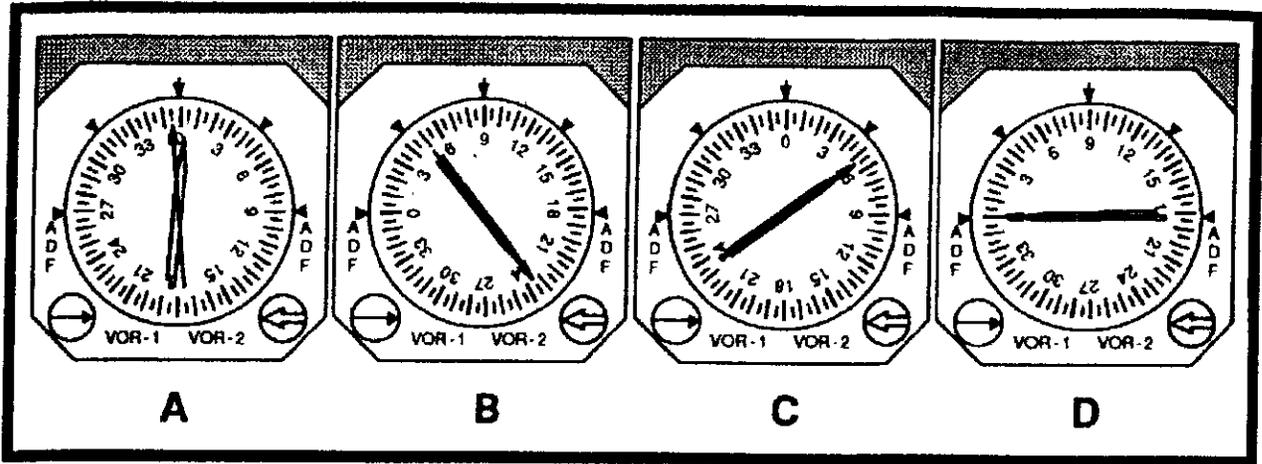
Figure 35A

Orig 94230 AL-768 (FAA) DALLAS/ADDISON (ADS)
VOR/DME RNAV or GPS RWY 33 DALLAS, TEXAS



VOR/DME RNAV or GPS RWY 33
 32°58'N-96°50'W DALLAS, TEXAS
 DALLAS/ADDISON (ADS)

Figure 36A



HELENA REGIONAL (HLN) 2 NE UTC-7(-6DT) 46°36'25"N 111°58'55"W **GREAT FALLS**
 3873 B S4 FUEL 100LL JET A OX 1.3 AOE ARFF Index B **M-IC 1-30**
 RWY 09-27: H9000X150 (ASPH-PFC) S-100, D-160, DT-250 **MRL** **IAP**
 RWY 08: VAS(V4L)—GA 3.0TCH 45: Ground. RWY 27: MALS: VAS(V4L)—GA 3.0TCH 55: Rgt tk.
 RWY 05-23: H4599X75 (ASPH-PFC) S-21, D-30
 RWY 05: Road. RWY 25: Fence. Rgt tk.
 RWY 16-34: H2979X75 (ASPH) S-21, D-30 **MRL**
 RWY 34: Ground. Rgt tk.
AIRPORT REMARKS: Attended 1200-0800Z. East 2400' Taxiway C and first 900' Rwy 27 not visible from tower.
 Prior permission for unscheduled FAR 121 operations, Call 406-442-2821. AOE, 1 hour prior notice required.
 phone 449-1569 1500-0000Z. 0000-1500Z: 449-1024. Twys A,B; high speed and C (between A and D)
 not available for air carrier use by acft with greater than 30 passenger seats. Rwy 16-34 and Rwy 05-23 (except
 between Rwy 09-27 and Twy D) not available for air carrier use by acft with greater than 30 passenger seats.
 When tower closed, ACTIVATE MRL Rwy 09-27 and MALS: Rwy 27—CTAF, when twr closed MRL Rwy 16-34
 are off. Ldg fee for all acft over 12,500 lbs. NOTE: See SPECIAL NOTICE—Simultaneous Operations on
 Intersecting Runways.
COMMUNICATIONS: CTAF 118.3 ATIS 120.4 (Mon-Fri 1300-0700Z, Sat-Sun 1300-0500Z)
BRCON 122.95
GREAT FALLS FSS (GTF) TF 1-800-WX-BRIEF. NOTAM FILE HLN.
BOB 122.2 122.1R 117.7T (GREAT FALLS FSS)
APP/DEP CON 119.5 (Mon-Fri 1300-0700Z, Sat-Sun 1300-0500Z)
SALT LAKE CENTER APP/DEP CON 133.4 (Mon-Fri 0700-1300Z, Sat-Sun 0500-1300Z)
TOWER 118.3 (Mon-Fri 1300-0700Z, Sat-Sun 1300-0500Z) GND CON 121.9
RADIO AIDS TO NAVIGATION: NOTAM FILE HLN
(W) VORTAC 117.7 HLN Chan 124 46°36'25"N 111°57'10"W 254 1.2 NM to Rd. 3810/16E.
VORTAC unusable:
 006°-090° beyond 25 NM below 11,000' 091°-120° beyond 20 NM below 16,000'
 121°-240° beyond 25 NM below 10,000' 355°-006° beyond 15 NM below 17,500'
 241°-320° beyond 25 NM below 10,000'
CAPROL NDB (RW) 317 CVP 46°36'24"N 111°56'11"W 254 1.9 NM to Rd.
NDB unmonitored when tower closed.
HAUSER NDB (MWR) 306 HAU 46°34'08"N 111°45'26"W 268 9.6 NM to Rd.
ILS 110.1 HLN Rwy 27 ILS unmonitored when tower closed.

VOR RECEIVER CHECK

Facility Name (Ardt Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac Mag	Dist. from Fac. N.M.	Check Point Description
Helena (Helena Regional)	117.7/HLN	G	237	0.7	On Twy E midway between Twy C and Rwy 27.
Kalispell (Glacier Park Intl)	108.4/FCA	A/4000	316	6.4	Over apch end Rwy 29.
Lewistown (Lewistown Muni)	112.0/LWT	A/5200	072	5.4	Over apch end Rwy 07.
Livingston	116.1/LVM	A/6500	234	5.5	Over northern most radio tower NE of city.
Miles City (Frank Wiley Field)	112.1/MLS	G	036	4.2	On twy leading to Rwy 30
Missoula (Missoula Intl)	112.8/MSO	G	340	0.6	On edge of ramp in front of Admin Building.

Figure 76

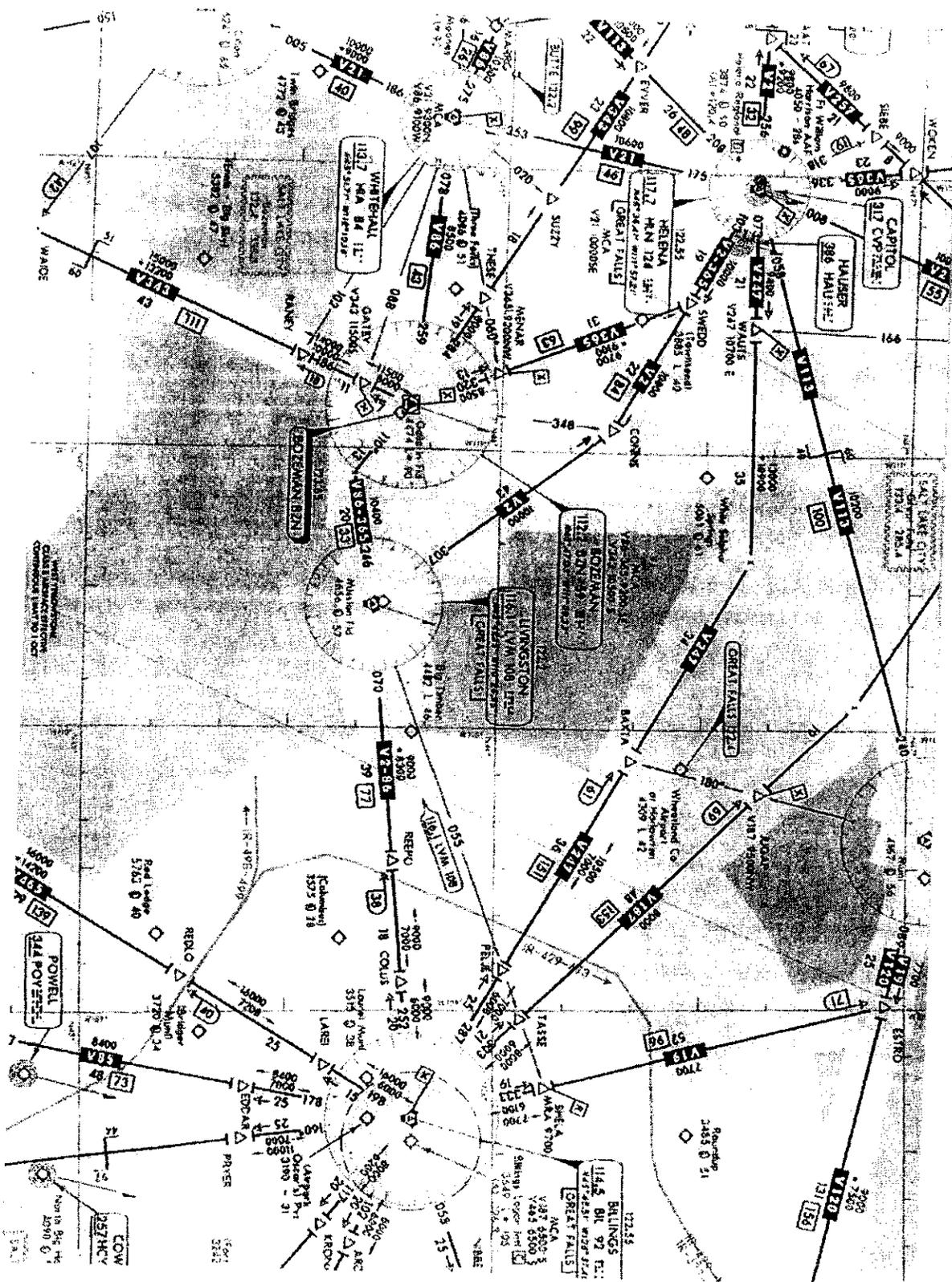


Figure 78

(PAPI) precision approach path indicator

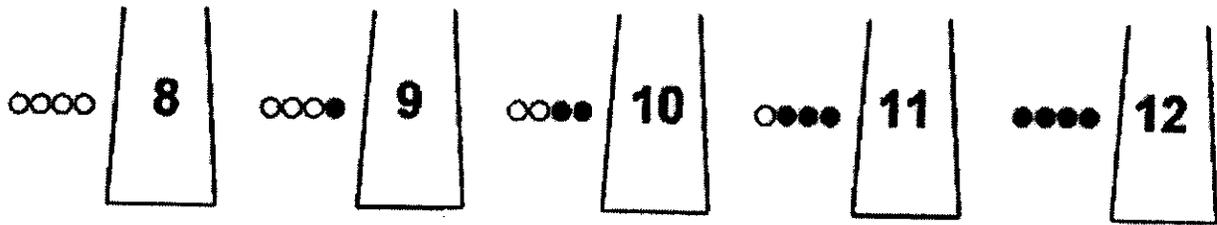


Figure 136

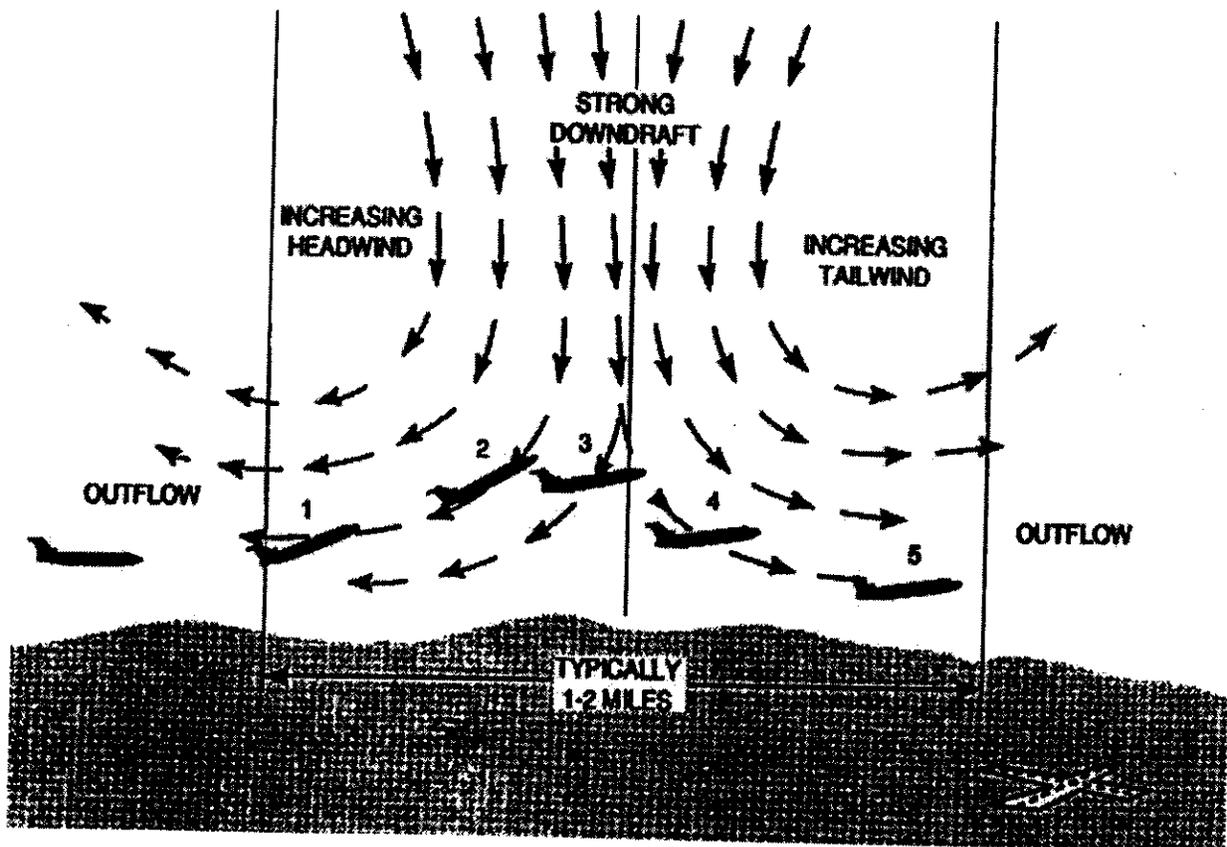


Figure 13

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		(FAA USE ONLY)		<input type="checkbox"/> PILOT BRIEFING		<input type="checkbox"/> VFR		TIME STARTED		SPECIALIST INITIALS	
FLIGHT PLAN											
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED		5. DEPARTURE POINT		6. DEPARTURE TIME	
<input type="checkbox"/> VFR <input checked="" type="checkbox"/> IFR <input type="checkbox"/> DVFR		N3678A		PA31/		180 KTS		YKM		PROPOSED (Z) ACTUAL (Z)	
7. CRUISING ALTITUDE 12000											
8. ROUTE OF FLIGHT GROMO 2, HITCH, V468 BTG, DIRECT											
9. DESTINATION (Name of airport and city)			10. EST. TIME ENROUTE		11. REMARKS						
PORTLAND INTL. AIRPORT PDX			HOURS MINUTES		INSTRUMENT TRAINING FLIGHT						
12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)			14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE				15. NUMBER ABOARD		
HOURS MINUTES		N/A							2		
16. COLOR OF AIRCRAFT GOLD/WHITE				17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)							
18. CIVIL AIRCRAFT PILOTS: FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed \$1,500 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 91 for requirements concerning DVFR flight plans.											
FAA Form 7233-1 (Rev. 2001)		CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL									
AIRCRAFT INFORMATION											
MAKE Piper						MODEL PA-31					
N 3678A						Vso 77					
AIRCRAFT EQUIPMENT/STATUS**											
<p>**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE TRANSPONDER: <u>X</u> (MODE C) <u>X</u> ILS: (LOCALIZER) <u>X</u> (GLIDE SLOPE) <u>X</u> VOR NO. 1 <u>X</u> (NO. 2) <u>X</u> ADF: <u>X</u> RNAV: <u>X</u> VERTICAL PATH COMPUTER: <u>N/A</u> DME: <u>X</u> MARKER BEACON: <u>X</u> (AUDIO) INOP (VISUAL) <u>X</u></p>											

Figure 44

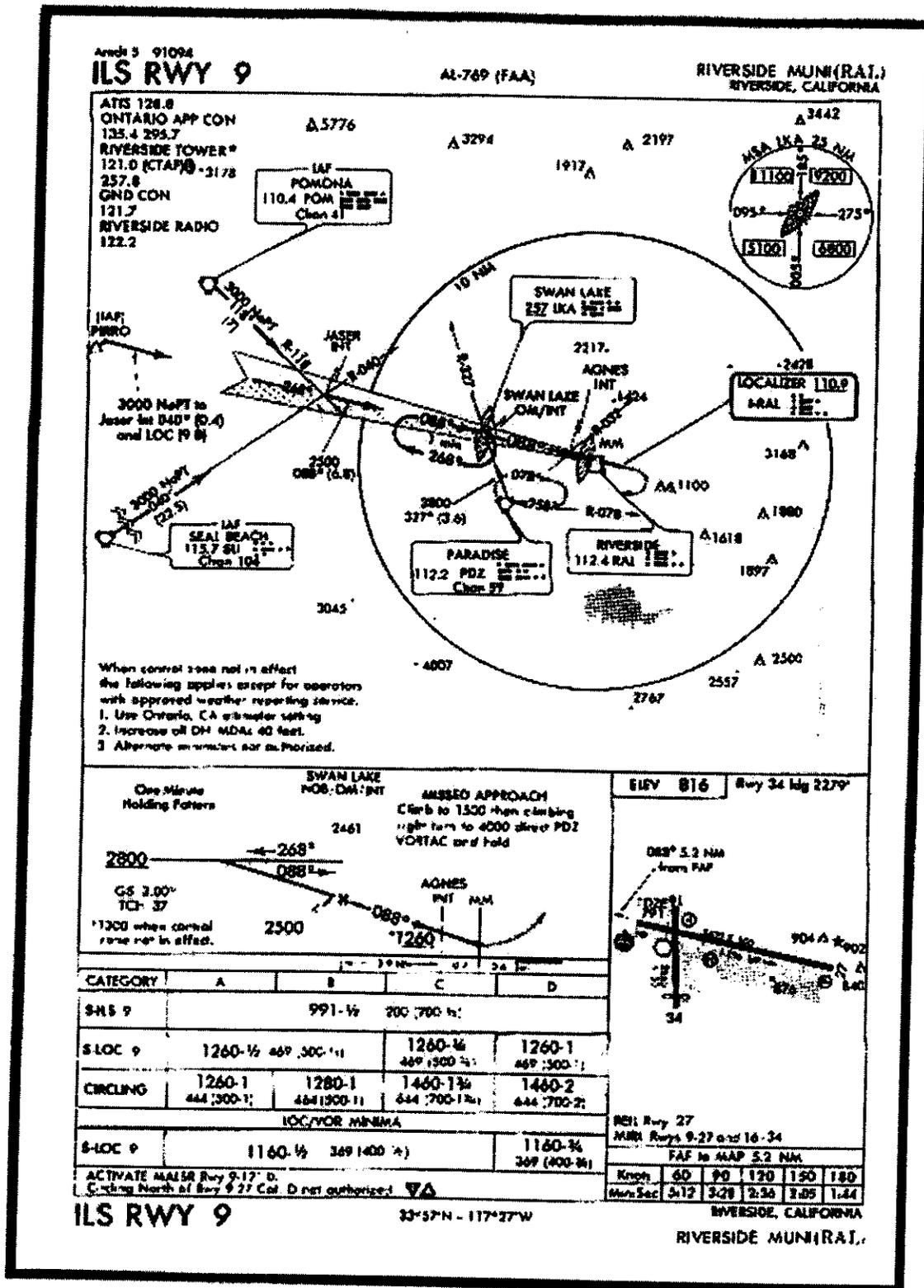


FIGURE 133.—ILS RWY 9 (RAL).

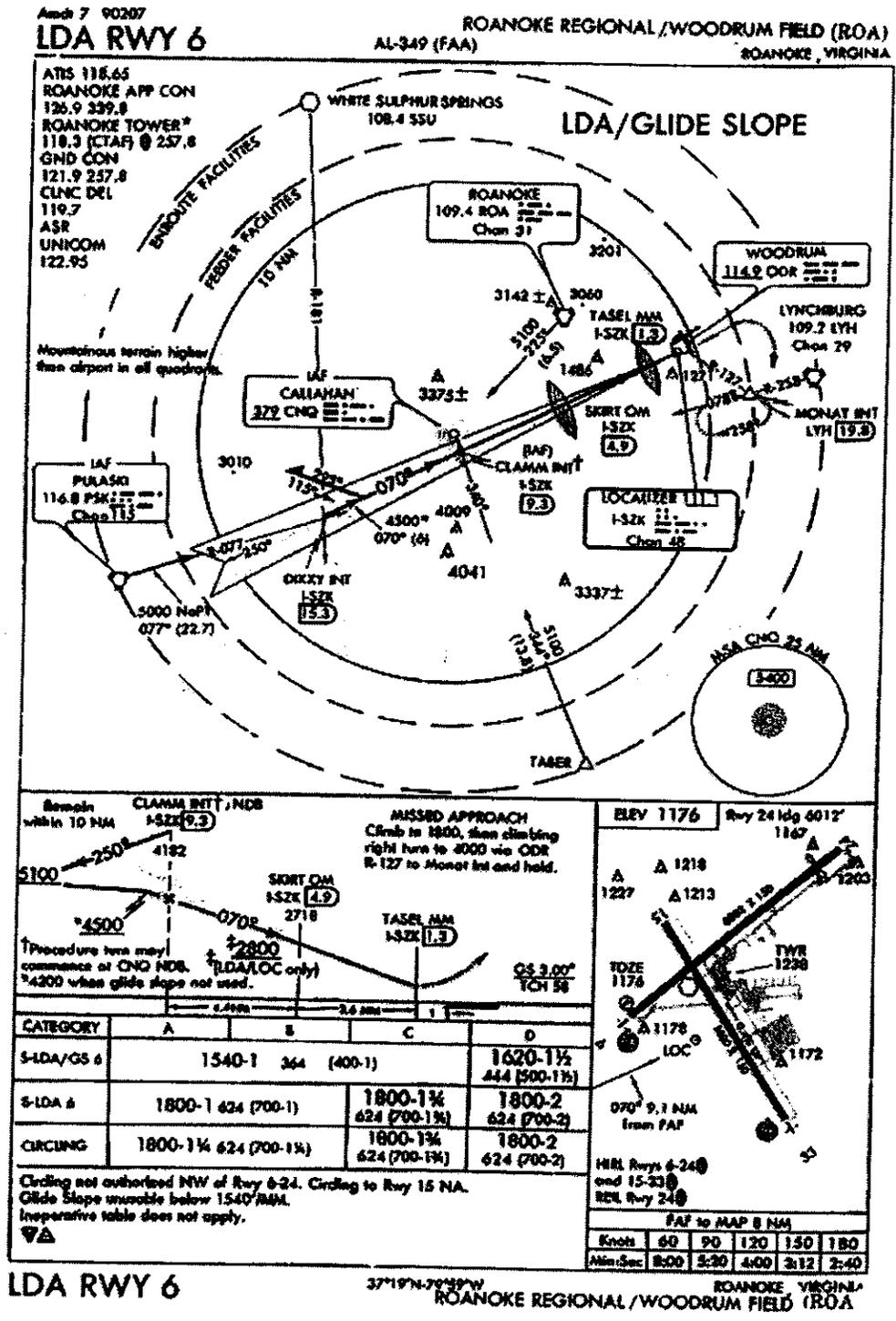


Figure 130

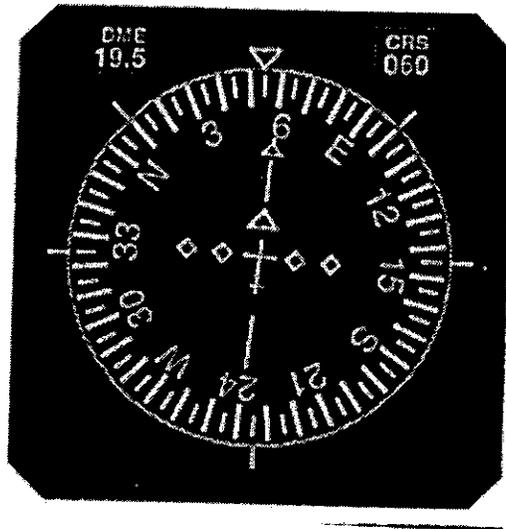


Figure 113