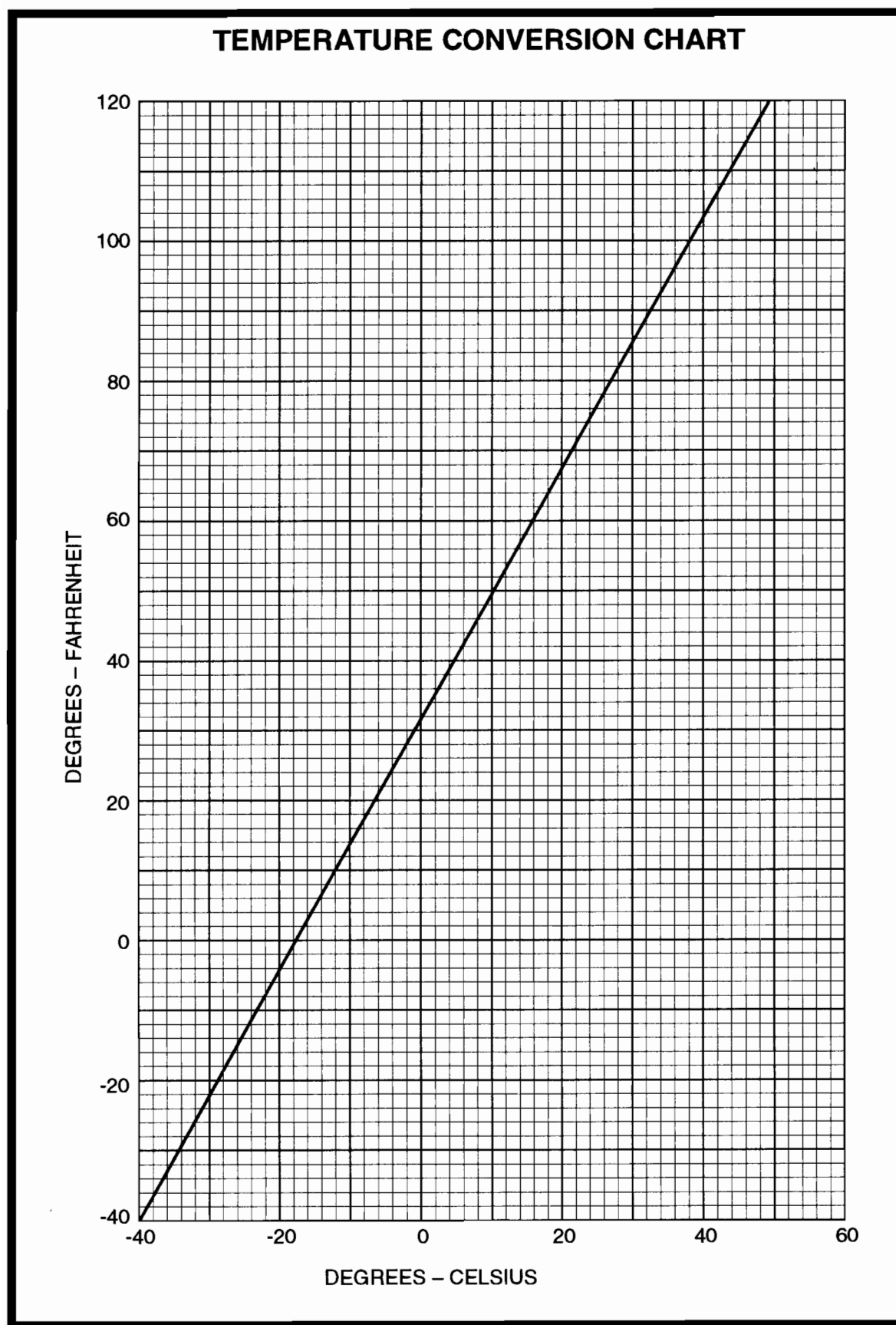




LEGEND 29.—Temperature Conversion Chart.

FAA Form 7233-1 (8-82)

CLOSE VFR FLIGHT PLAN WITH FSS ON ARRIVAL

FIGURE 1.—Flight Plan.

VALID 141200Z FOR USE 0900-1500Z. TEMPS NEG ABV 24000									
FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
EMI	2807	2715-07	2728-10	2842-13	2867-21	2891-30	751041	771150	780855
ALB	0210	9900-07	2714-09	2728-12	2656-19	2777-28	781842	760150	269658
PSB		1509+04	2119+01	2233-04	2262-14	2368-26	781939	760850	780456
STL	2308	2613+02	2422-03	2431-08	2446-19	2461-30	760142	782650	760559

FIGURE 2.—Winds and Temperatures Aloft Forecast.

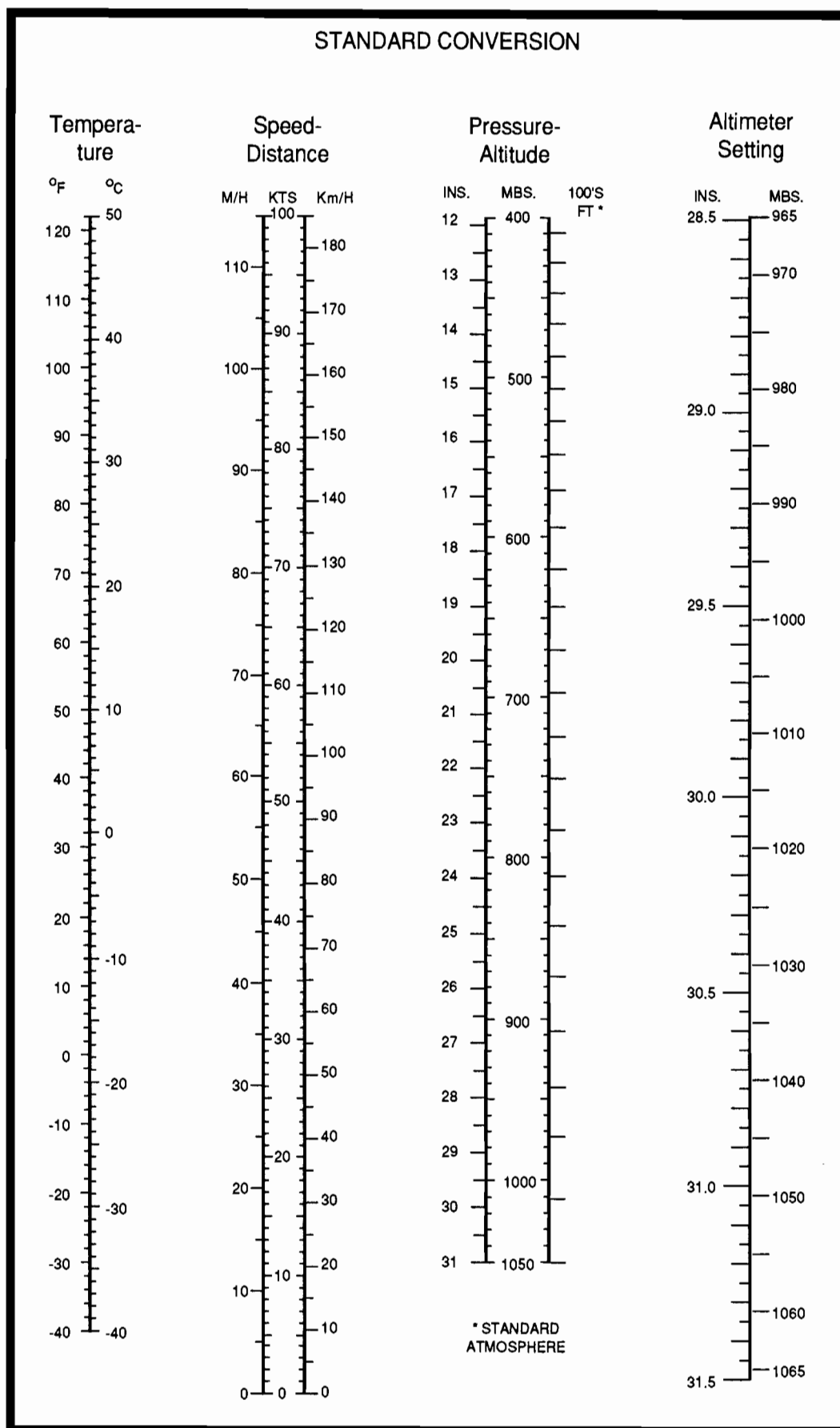


FIGURE 3.—Standard Conversion Chart.



FIGURE 4.—Weather Depiction Chart.

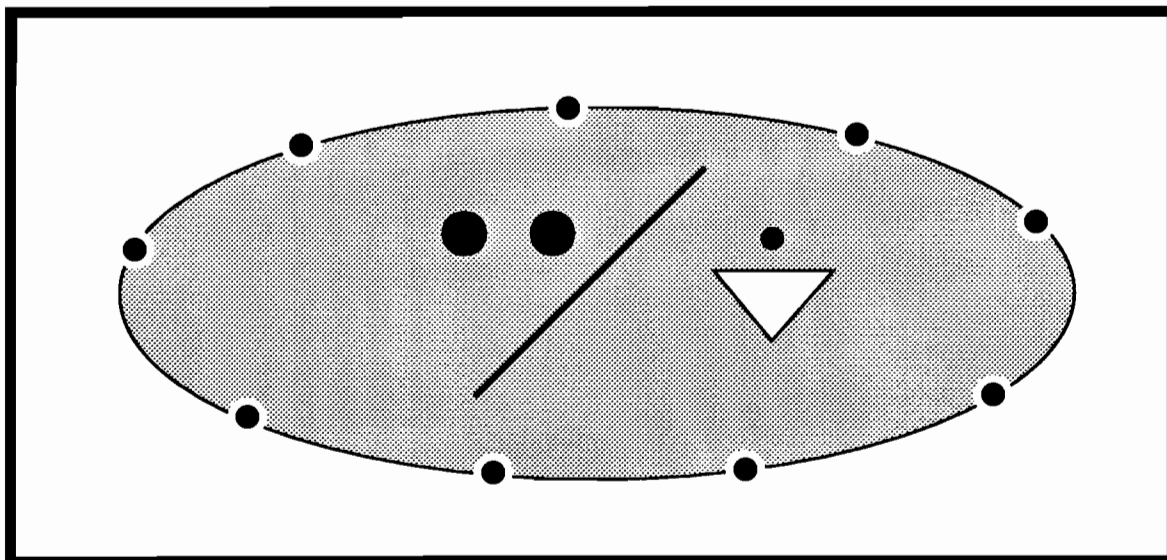


FIGURE 5.—Symbol Used on Low-Level Significant Weather Prognostic Chart.

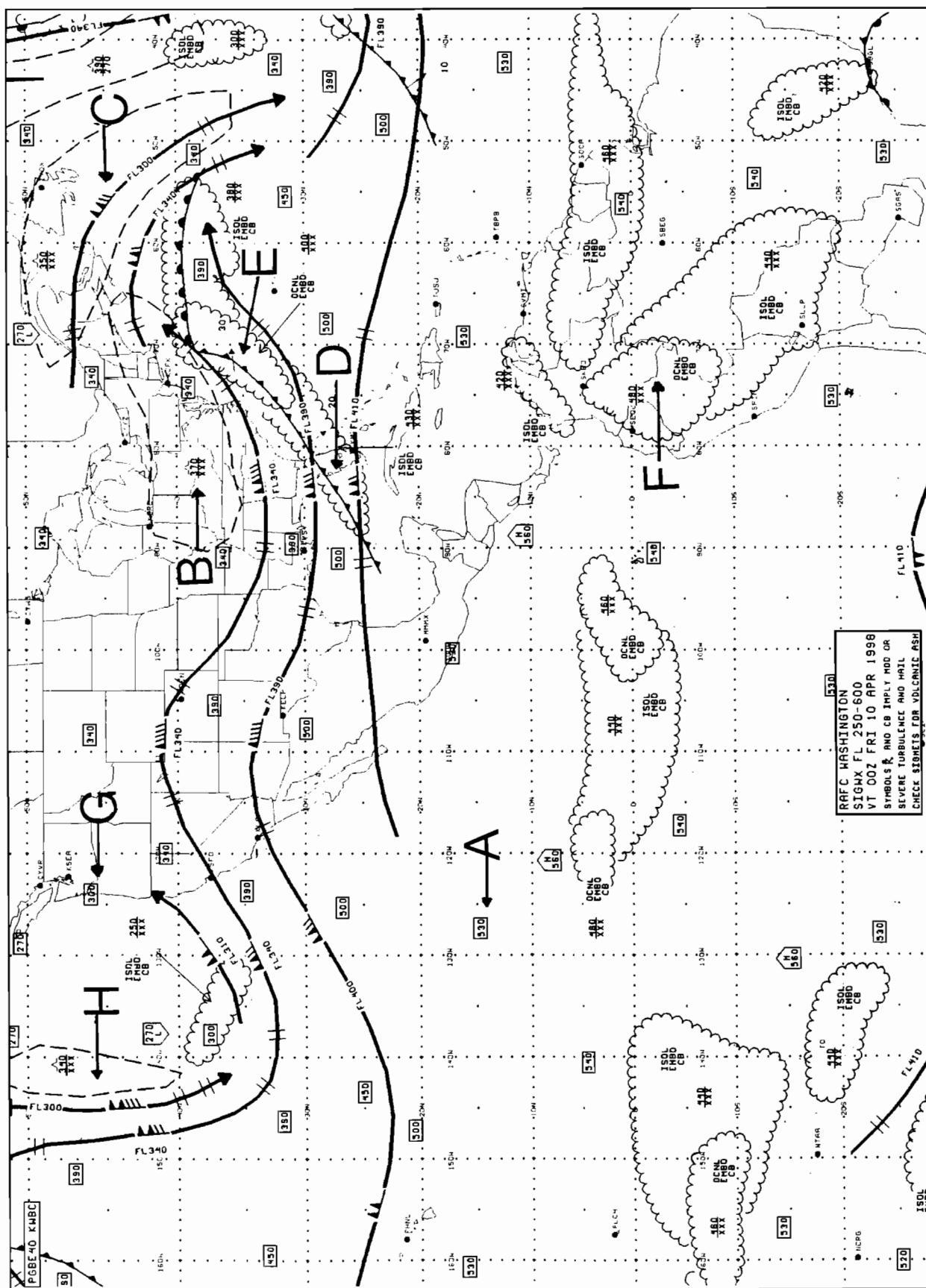


FIGURE 7.—High-Level Significant Weather Prognostic Chart.

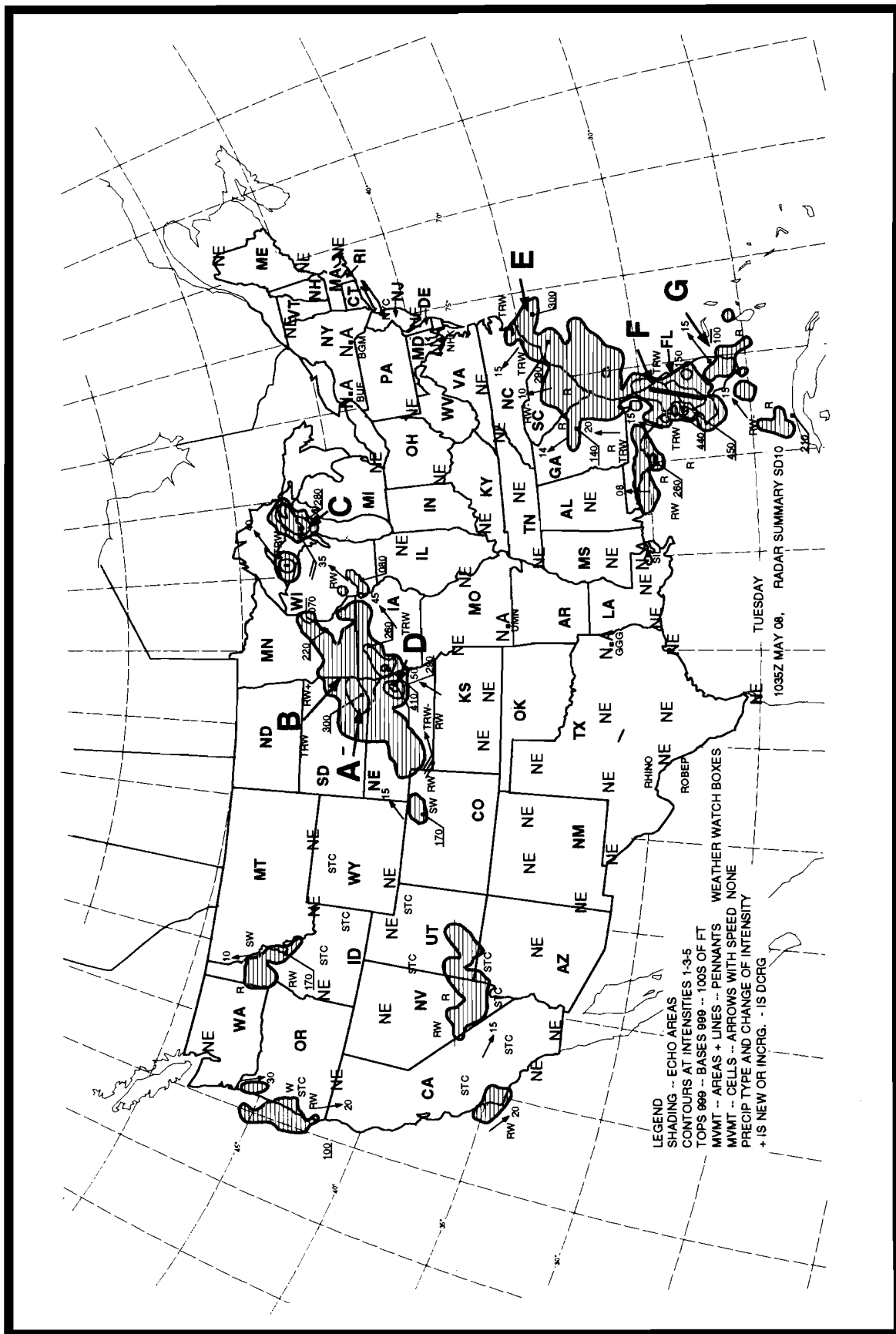


FIGURE 8.—Radar Summary Chart.

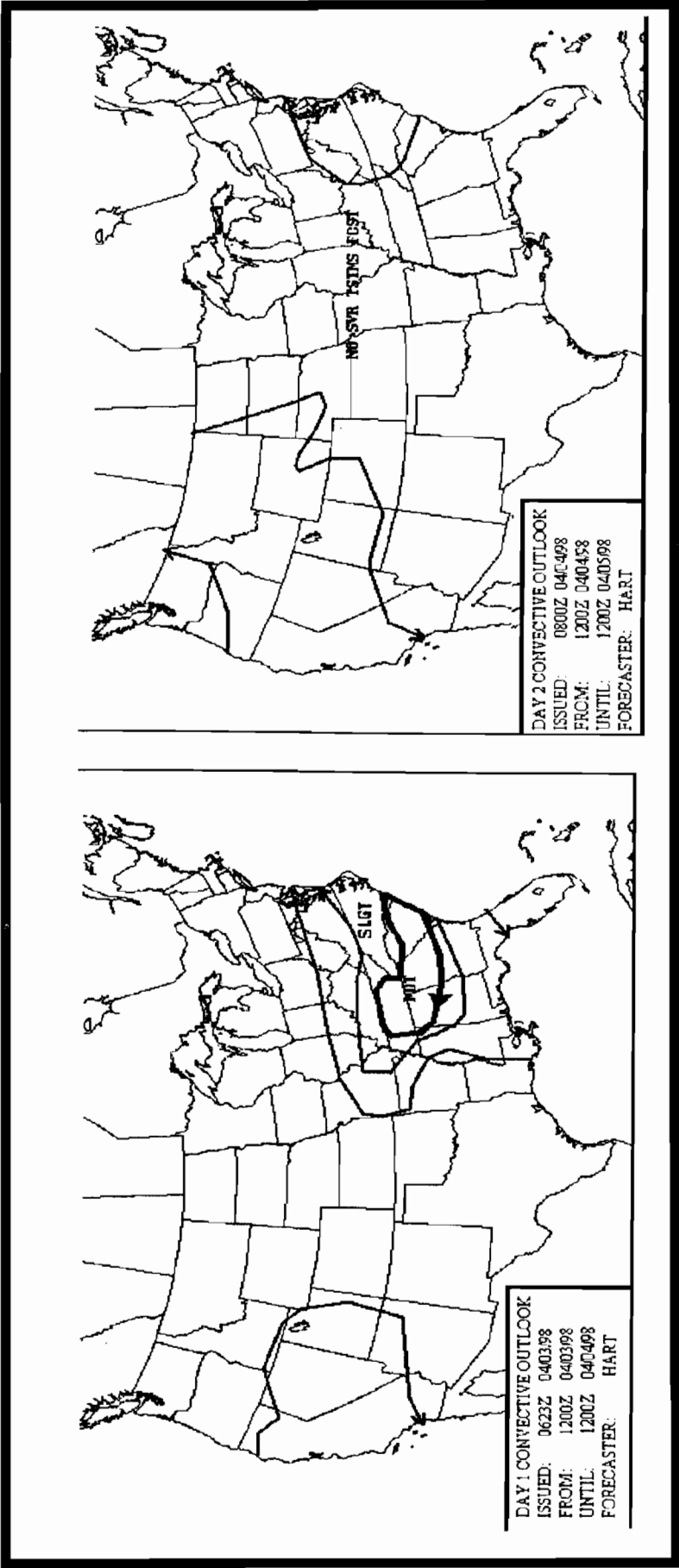


FIGURE 9.—Severe Weather Outlook Charts.

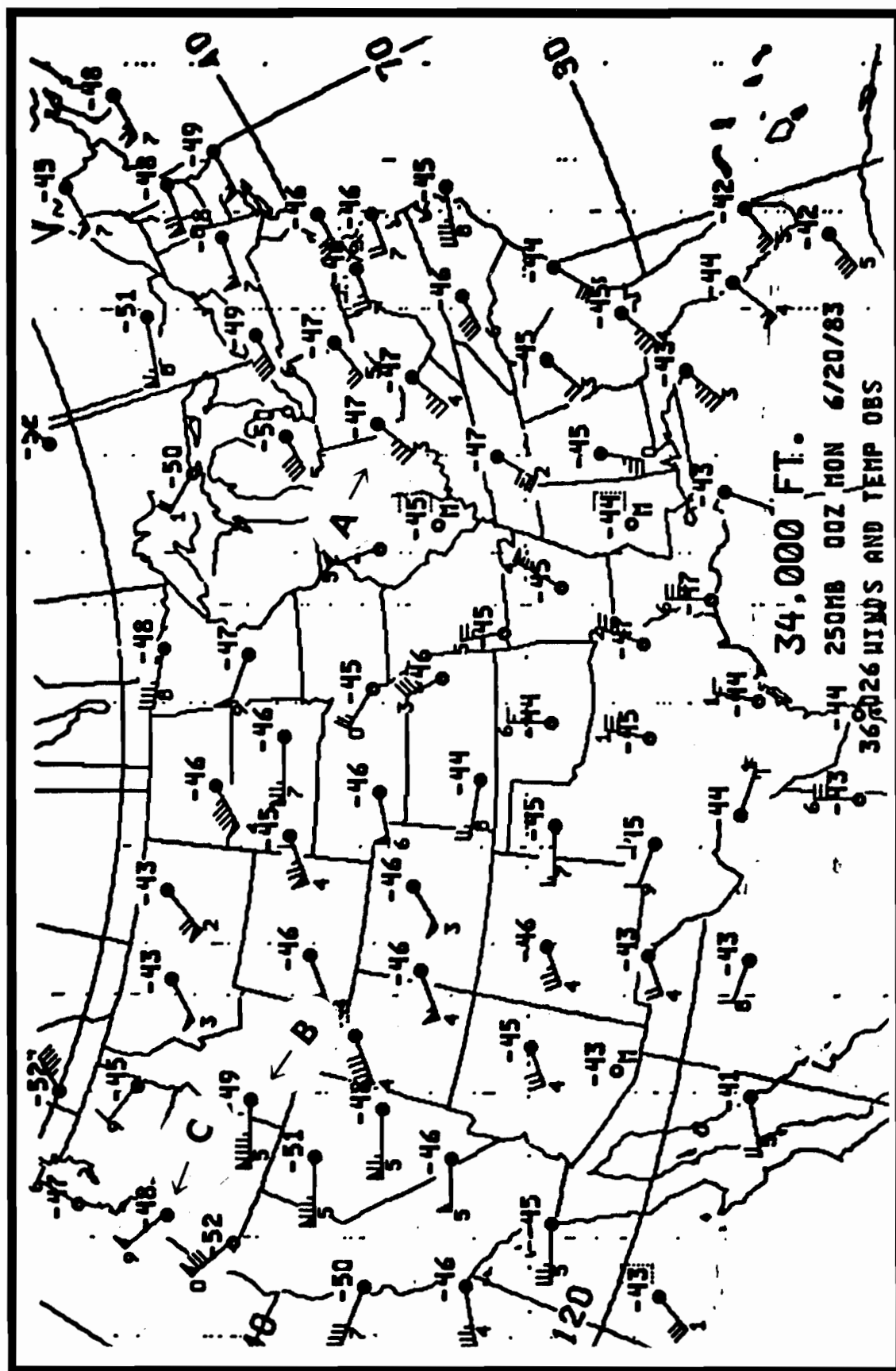


FIGURE 12.—Observed Winds Aloft for 34,000 Feet.

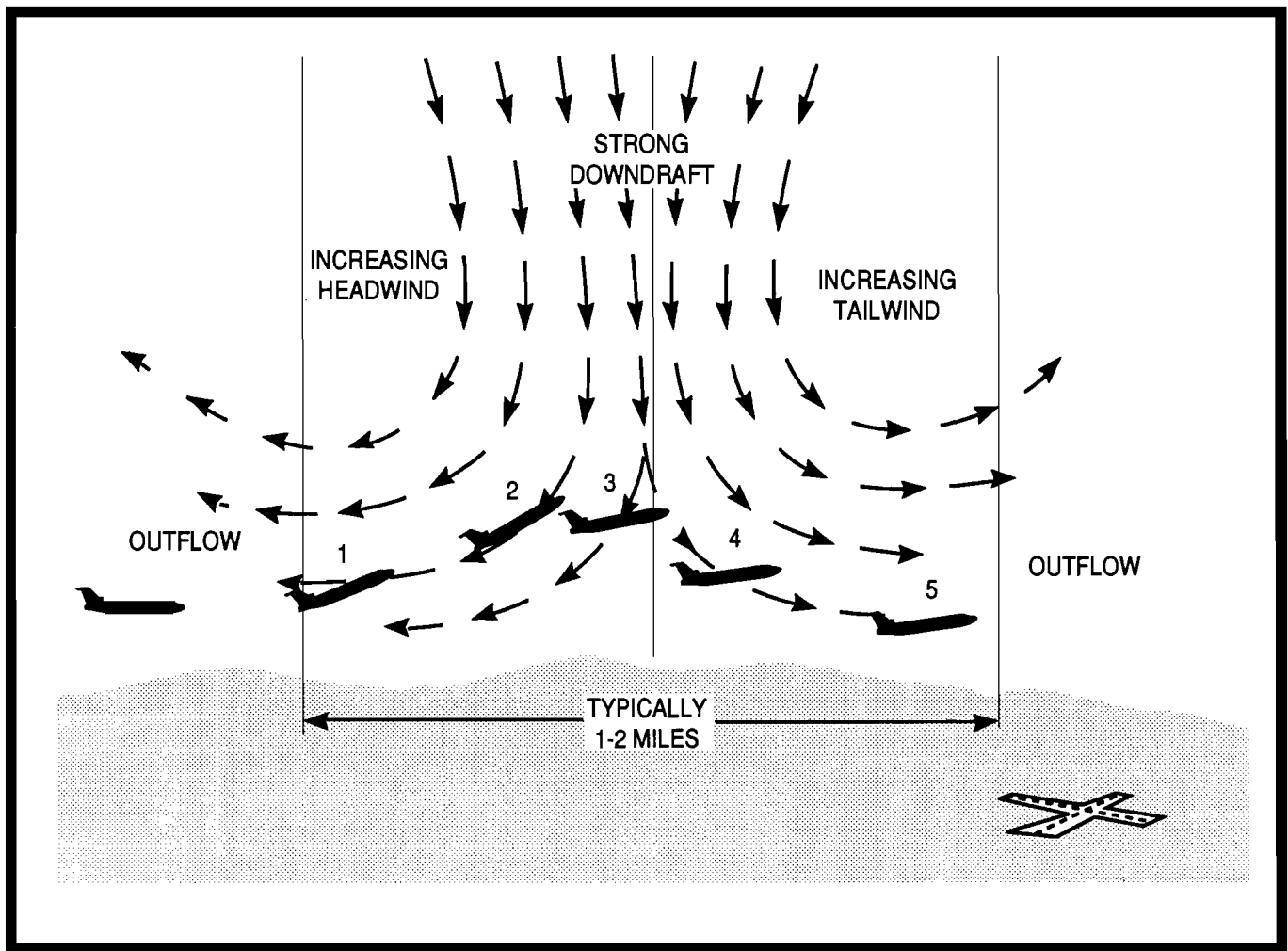


FIGURE 13.—Microburst Section Chart.

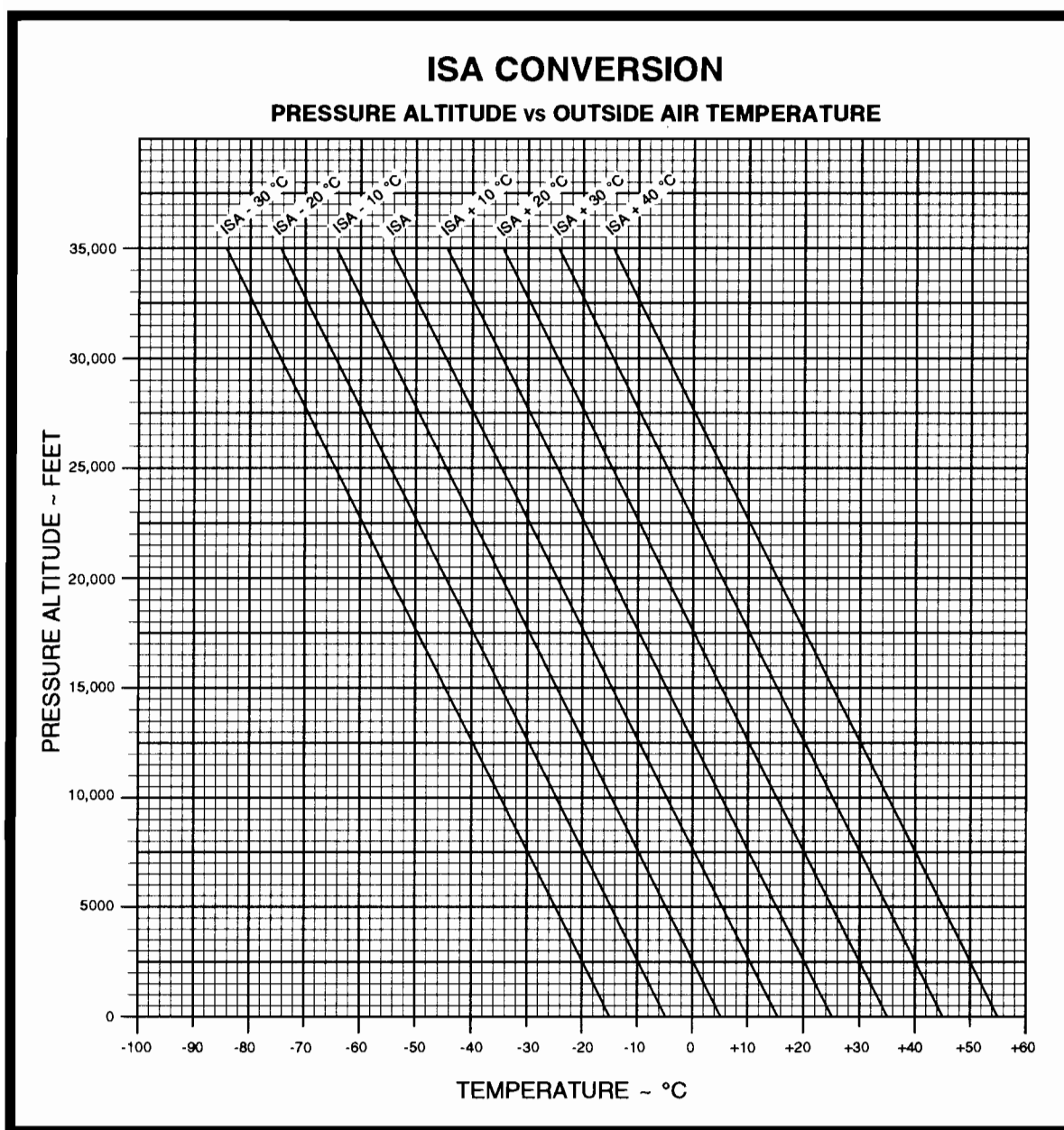


FIGURE 14.—ISA Conversion Chart.

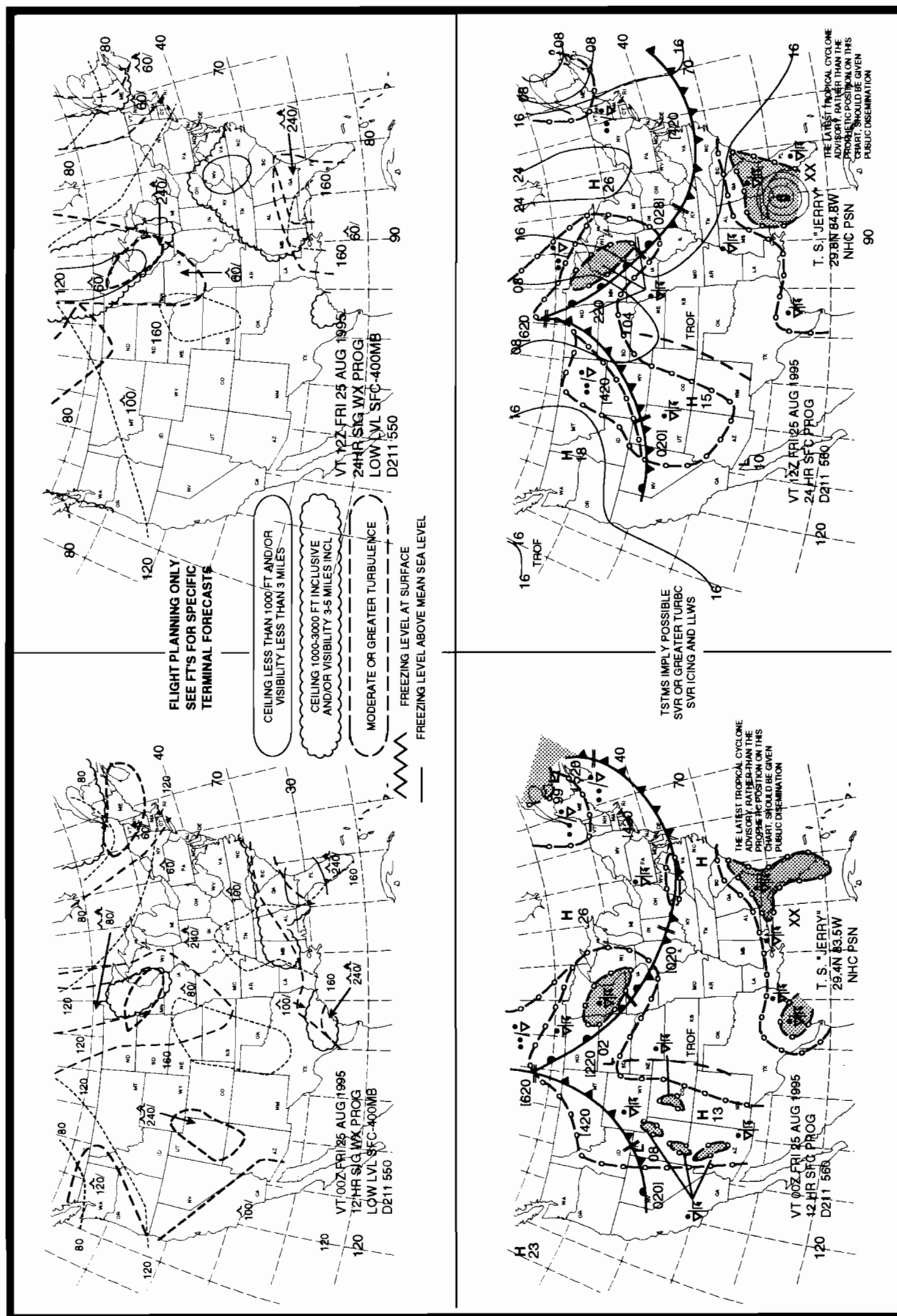


FIGURE 18.—U.S. Low-Level Significant Weather Prognostic Charts.

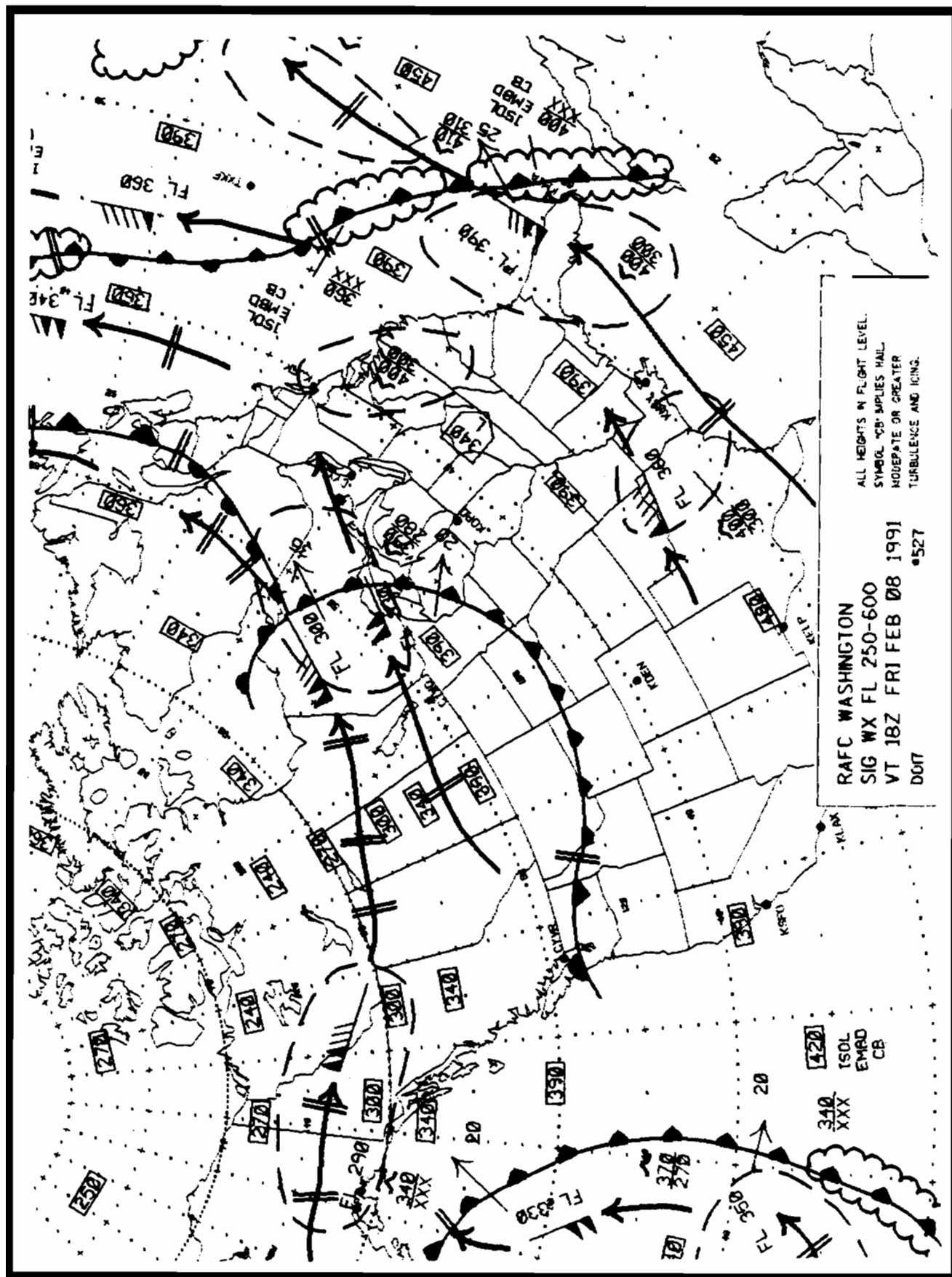


FIGURE 20.—High-Level Significant Weather Prognostic Chart.

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING ☐ VNR ☐ 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
☐ VFR ☒ IFR ☐ DVFR	N 123RC	T210N/	175 KTS	GJT	PROPOSED (Z)	ACTUAL (Z)	15,000
8. ROUTE OF FLIGHT							
JNC9, JNC, V187, MANCA, V211							
9. DESTINATION (Name of airport and city)		10. EST. TIME ENROUTE		11. REMARKS			
DRO		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	GJT		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)			
4	30					2	
16. COLOR OF AIRCRAFT		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 \$1,000 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.					
RED/WHITE/BLUE							

FAA Form 7233-1 (9-82) CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE CessnaMODEL T210NN 123RCVso 58

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 21.—Flight Plan and Aircraft Information.

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING ☐ VNR		TIME STARTED		SPECIALIST INITIALS	
		☐ STOPOVER							
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED		5. DEPARTURE POINT	
VFR		N 123RC		T210N/		175 KTS		DRO	
☒ IFR									
DVFR									
		6. DEPARTURE TIME		7. CRUISING ALTITUDE					
		PROPOSED (Z)		ACTUAL (Z)		16,000			
8. ROUTE OF FLIGHT									
V211, MANCA, V187, HERRM, V187, JNC									
9. DESTINATION (Name of airport and city)			10. EST. TIME ENROUTE		11. REMARKS				
GJT			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								2	
16. COLOR OF AIRCRAFT		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)							
RED/WHITE/BLUE									

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 \$1,000 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.

FAA Form 7233-1 (8-82) CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE CessnaMODEL T210NN 123RCV_{so} 58

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 21A.—Flight Plan and Aircraft Information.

FLIGHT LOG											
GRAND JUNCTION (GJT) TO DURANGO (DRO)											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
GJT	JNC	JNC9JNC		230 08				X			
		CLIMB									
		V187									
		HERRM	15,000	151°		175		:24:0			
			V187								
		MANCA		151°							
	APPROACH & LANDING		V211								
			DESENT	092°				:18:30			
		DRO									

OTHER DATA: NOTE: TAKEOFF RUNWAY 29. MAG VAR, 14° E.	FLIGHT SUMMARY <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
TIME	FUEL (LB)															
		EN ROUTE														
		RESERVE														
		MISSED APPR.														
		TOTAL														

FIGURE 22.—Flight Planning Log.

FLIGHT LOG											
DURANGO (DRO) TO GRAND JUNCTION, WALKER FIELD (GJT)											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
DRO	MANCA	V211	272°	230 08				:14:30			
		CLIMB									
		V187									
	HERRM	16,000	333°		174						
	JNC	V187	331°								
APPROACH & LANDING		DESCENT					:12:00				
	GJT										

OTHER DATA: NOTE: MAG. VAR. 14° E.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">FLIGHT SUMMARY</th> </tr> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </tbody> </table>	FLIGHT SUMMARY			TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
FLIGHT SUMMARY																			
TIME	FUEL (LB)																		
		EN ROUTE																	
		RESERVE																	
		MISSED APPR.																	
		TOTAL																	

FIGURE 22A.—Flight Planning Log.

114

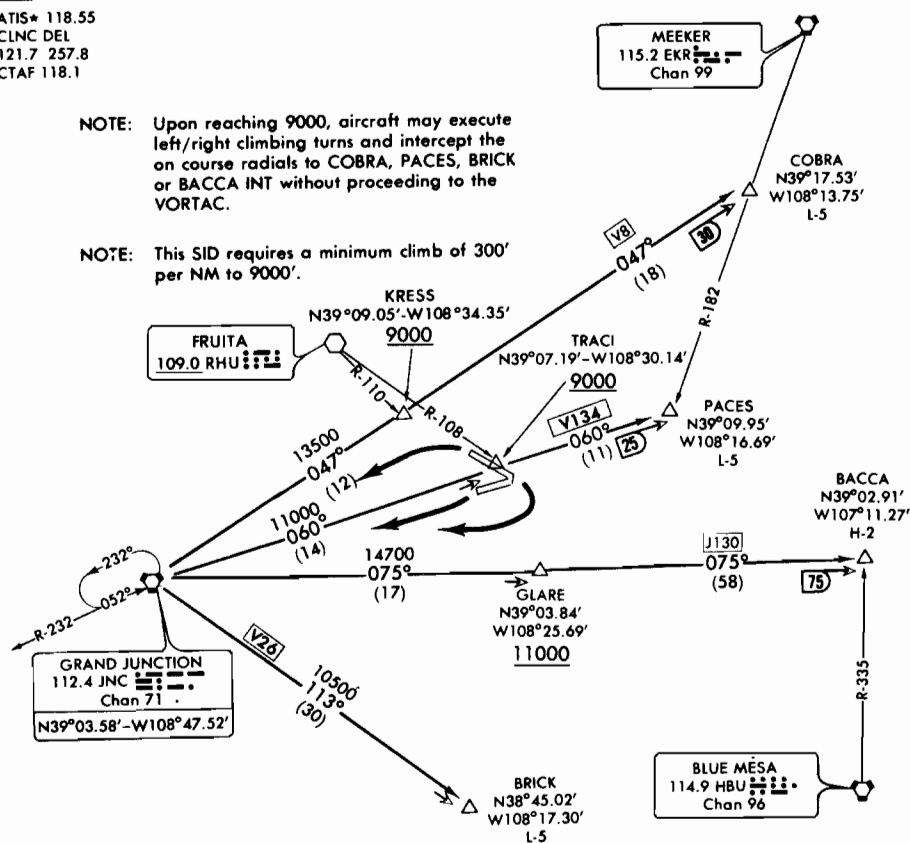
(PILOT NAV) (JNC9.JNC) 90347

GRAND JUNCTION NINE DEPARTURE SL-634 (FAA) GRAND JUNCTION, COLORADO

ATIS* 118.55
CLNC DEL
121.7 257.8
CTAF 118.1

NOTE: Upon reaching 9000, aircraft may execute left/right climbing turns and intercept the on course radials to COBRA, PACES, BRICK or BACCA INT without proceeding to the VORTAC.

NOTE: This SID requires a minimum climb of 300' per NM to 9000'.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 11 and 22: Right turn direct to JNC VORTAC. Then via (transition) or (assigned route).

TAKE-OFF RUNWAY 29: Left turn direct to JNC VORTAC. Then via (transition) or (assigned route).

BACCA TRANSITION (JNC9.BACCA): From over JNC VORTAC via JNC R-075 to BACCA INT.

BRICK TRANSITION (JNC9.BRICK): From over JNC VORTAC via JNC R-113 to BRICK DME Fix.

COBRA TRANSITION (JNC9.COBRA): From over JNC VORTAC via JNC R-047 to COBRA INT.

PACES TRANSITION (JNC9.PACES): From over JNC VORTAC via JNC R-060 to PACES INT.

GRAND JUNCTION NINE DEPARTURE
(PILOT NAV) (JNC9.JNC)

GRAND JUNCTION, COLORADO
GRAND JUNCTION/WALKER FIELD

FIGURE 23.—Grand Junction Nine Departure (JNC9.JNC).

26

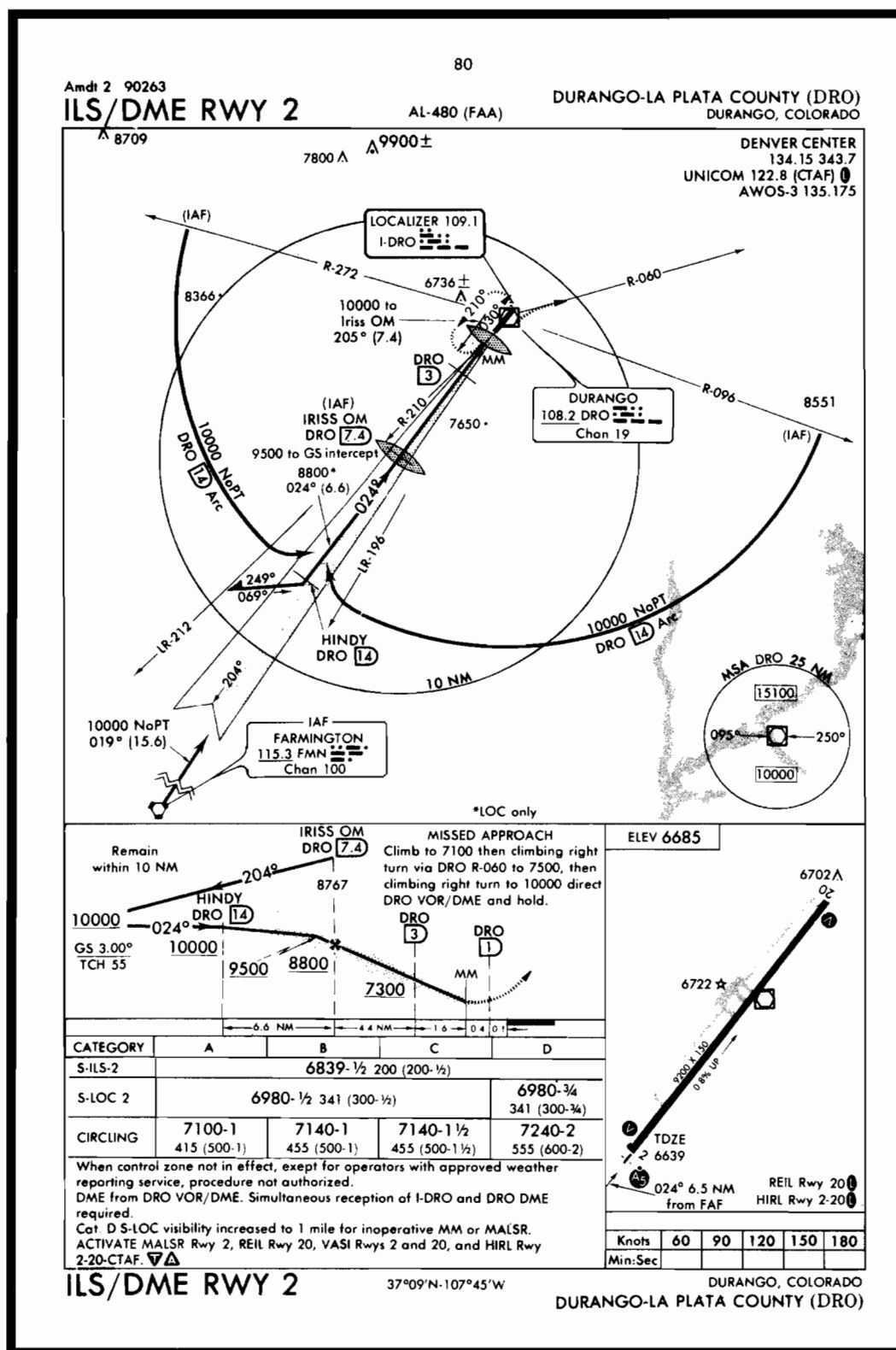


FIGURE 25.—ILS/DME RWY 2.

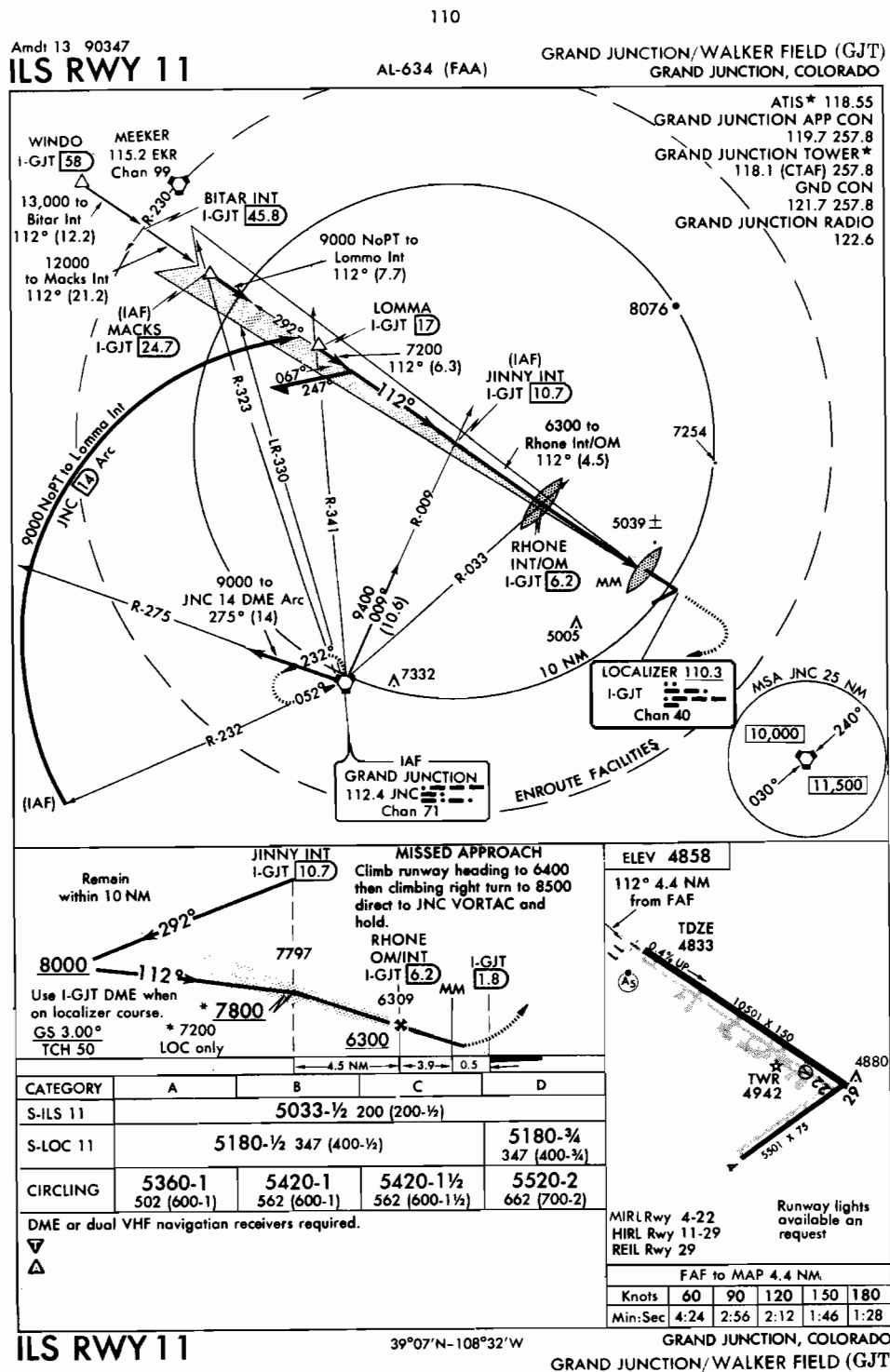


FIGURE 26.—ILS RWY 11.

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING		☐ VNR		TIME STARTED		SPECIALIST INITIALS	
				☐ STOPOVER							
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED		5. DEPARTURE POINT		6. DEPARTURE TIME	
VFR		N132SM		C 182/		155 KTS		MFR		PROPOSED (Z) ACTUAL (Z)	
☒ IFR											
☐ DVFR											
										8,000	
8. ROUTE OF FLIGHT											
GNATS 1, MOURN, V121 EUG											
9. DESTINATION (Name of airport and city)				10. EST. TIME ENROUTE		11. REMARKS					
MAHLON/SWEET FIELD, EUGENE, OR.				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/R		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)							
16. COLOR OF AIRCRAFT				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 \$1,000 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.							

FAA Form 7233-1 (8-82)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE CESSNA

MODEL 182

N 132SM

Vso 57

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) N/A
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: N/A
 VERTICAL PATH COMPUTER: NA DME: X
 MARKER BEACON: (AUDIO) INOP (VISUAL) Inop.

FIGURE 27.—Flight Plan and Aircraft Information.

FLIGHT LOG											
MEDFORD - JACKSON CO. AIRPORT TO HAHN/SWEET FIELD, EUGENE, OR.											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
MFR	MERLI	GNATS 1	270°		155			:11:0			
		CLIMB									
	MOURN	V121	333°			AVER. 135					
		8000									
	RBG	V121	287°								
8000											
OTH	V121	272°									
	8000										
EUG	APPROACH	026°									
	DESCENT										
APPROACH & LANDING								:10:0			
SWEET FIELD											

OTHER DATA: NOTE: MAG. VAR. 20° E. AVERAGE G.S. 135 KTS. FOR GNATS 1 DEPARTURE CLIMB.	FLIGHT SUMMARY <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
TIME	FUEL (LB)															
		EN ROUTE														
		RESERVE														
		MISSED APPR.														
		TOTAL														

FIGURE 28.—Flight Planning Log.

8 **MAHLON SWEET FLD** (EUG) 7 NW GMT-8(-ZDT) 44° 07' 19" N 123° 13' 03" W
 365 B S4 FUEL 100L JET A OX 1, 2, 3, 4 TPA—1165(GRO) CFR Index B
 RWT 16-34: H620X150 (ASPH-PFC) S-155, D-190, DT-300
 RWT 16: MALSR. RWT 34: ODALS. VASI(V4L)—GA 3.0° TCH 54'
 RWT 03-21: H5221X150 (ASPH) S-60, D-68, DT-105 MRL
 RWT 03: VASI(V4L)—GA 3.0° TCH 50.4'. Trees.
AIRPORT REMARKS: Attended continuously, phone 503-687-5431; between 0100-1600Z: CAUTION—migratory waterfowl and other birds in vicinity. ACTIVATE MALSR Rwy 16 and ODALS Rwy 34—118.9. MRL Rwy 03-21 unavailable when twr clsd. CLOSED to scheduled air carrier operations with more than 30 passenger seats during twr closure except PPR call airport manager 503-687-5430. Taxiways F and G closed to Part 121 ops. Terminal apron available to scheduled air carriers and flights with prior permission. Control Zone effective continuously.

COMMUNICATIONS: CTAF 118.9 ATIS 125.2 (1400-0800Z) UNICOM 122.95
 PORTLAND FSS (PDX) LC 688-8411. NOTAM FILE EUG.
 EUGENE FCO 122.3 122.1R 112.9T (PORTLAND FSS).
 (R) EUGENE APP/REP COM 119.6 (280°-090°) 120.2 (091°-279°) (1400-0800Z)
 (N) SEATTLE CENTER APP/REP COM 125.8 (0800-1400Z)
 EUGENE TOWER 118.9 (1400-0800Z) GND COM/CLNC DEL 121.7
 STAGE H SYNC ctc APP COM within 25 NM
 RADIO AIDS TO NAVIGATION: NOTAM FILE EUG.
 EUGENE (IN APPROX) 112.9 M EUG Chan 76 44° 07' 16" N 123° 13' 18" W at fld 360/20E
 General outlook on TWEE 0600-1300Z.
 FRANK MOB (LOM) 260 EU 44° 12' 47" N 123° 13' 10" W 179° 5.5 NM to fld.
 NDB unusable 190°-270° beyond 11 NM.
 ILS 109.51 EUG Rwy 16 LOM FRANK NDB
 ILS unmonitored when tower closed.

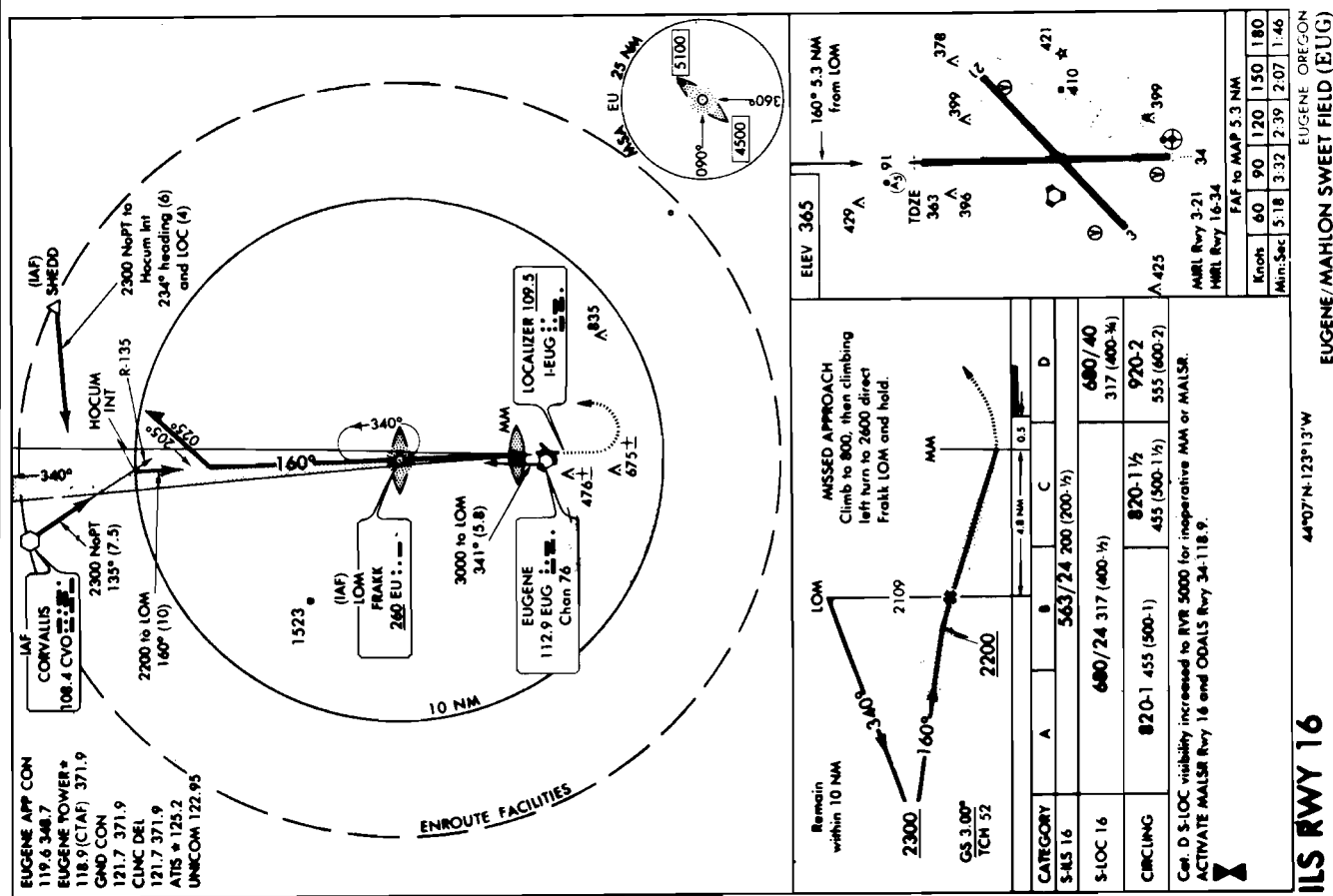


FIGURE 29.—ILS RWY 16 (EUG) and Excerpt from Airport /Facility Directory.

GNATS ONE DEPARTURE (GNATS1.GNATS)

DEPARTURE ROUTE DESCRIPTION
(Continued)

MOURN TRANSITION (GNATS1.MOURN): Continue via 270° magnetic bearing from the LMM to MERLI INT, turn right via MEDFORD 15 DME ARC to intercept V23-121 to MOURN INT.

DREWS TRANSITION (GNATS1.DREWS): Continue via 270° magnetic bearing from the LMM to MERLI INT, turn right via MEDFORD 15 DME ARC to DREWS INT. TALEM TRANSITION (GNATS1.TALEM): Turn left via MEDFORD R-216 to 15 DME Fix, thence turn left via MEDFORD 15 DME ARC to Intercept V23 to TALEM INT. HANDEY TRANSITION (GNATS1.HANDEY): Turn left via MEDFORD R-216 to 15 DME Fix, thence turn left via MEDFORD 15 DME Arc to HANDY DME Fix.

GNATS ONE DEPARTURE (GNATS1 GNATS)

**MEDFORD, OREGON
MEDFORD-JACKSON CO**

MEDFORD-JACKSON CO (MFR) 3 N GMT-8(-ZDT) 42°22'21"N 122°52'17"W
 1331 B SA FUEL 80, 100, 100LL, JET A1 + OX 1.3 CFR Index B
 RWT 14-32: H6700X150 (ASPH-PFC) S-200, D-200, DT-400 HIRL 5% up S
 RWT 14: MALSR. Trees. RWT 32: REIL. VAS(V41)—GA 3.0° TCH 49'. Road.
 RWT 09-27: H3145X150 (ASPH) S-50, D-70, DT-108 MIRL
 RWT 27: Road.

SUPPORT REMARKS: Attended continuously. CLOSED to unscheduled Part 121 air carriers operation, without prior approval, call 503-776-7222. Night refueling delay, sunset 1500Z; etc TOWER, Rwy 09-27 closed to act over 12,500 lbs GWT. Rwy 09/27 CLOSED when tower closed. Rwy 14/32 operate med ints when tower closed. ACTIVATE MALSR 14--119.4. Flocks of large waterfowl in vicinity Nov-May

COMMUNICATIONS: CTAF 119.4 AITS 125.75 UNCOM 122.95
NOTAM BEING FSS (OTH) LC 773-3256. NOTAM FILE MFR.

RCO 122.65 122.1R 113.6T (NORTH BEND FSS)
APP COM 124.3 (1400-0800Z) DEP COM 124.3 (1400-0800Z)
SEATTLE CENTER APP/DEP COM 125.3 (0800-1400Z)
TOWER 119.4 (1400-0800Z) GND COM 121.7

VFR ADVISY SVC ctc TOWER

RADIO AIDS TO NAVIGATION: NOTAM FILE OTH. VHF/DF ctc Medford TOWER
(N) AIRPORTAC 1136 ■ OED Chan 83 42° 28' 47" N 122° 54' 43" W 146° 6.1 NM to fld. 2080/19E
VORTAC unusable:

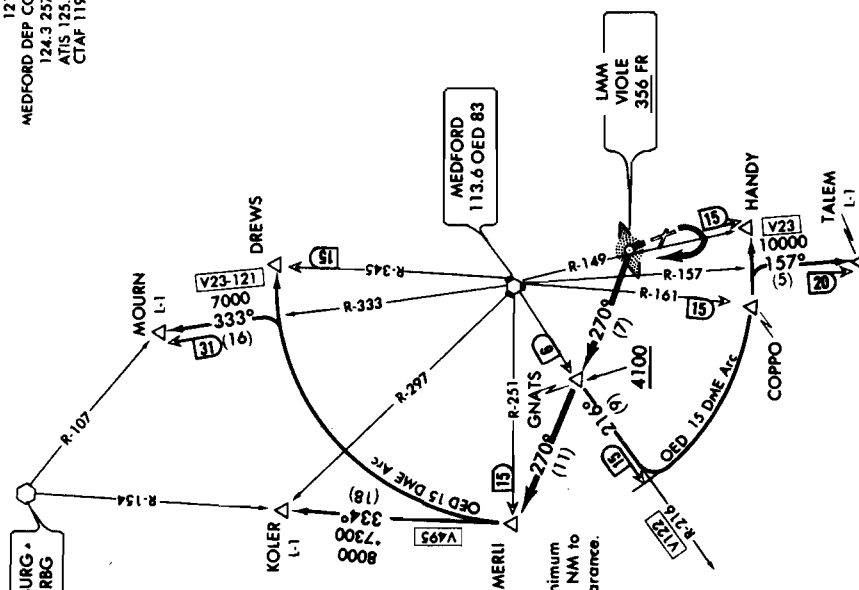
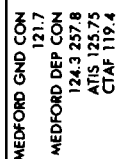
160°-165° beyond 35 NM below 8900'
198°-205° beyond 35 NM below 8500'
250°-280° beyond 25 NM below 6100'
280°-345° beyond 30 NM below 6500'
345°-360° beyond 35 NM below 6800'

250°-280° beyond 2.5 NM below 0100
PUMIE NDB (LOW) 373 MF 42°27'04"N 122°54'44"W 140° 4.5 NM to fld. NOTAM FILE MFR

LOM unusable 150°-165° and 260°-265° beyond 5 miles.

BOLE NO8 (LMM) 356 FR 42°23'22"N 122°52'47"W 140°0.5 NM to fld. NOTAM FILE MFR

LMM unusable 305° -335° beyond 10 NM, all altitudes
ILS/DME 110.3 I-MFR Chan 40 Rwy 14 LOM PUMIE NDB. LMM VIOLE NDB. ILS unmonitored when tower closed.
Localizer unusable inside threshold.



NOTE: This SID requires a minimum climb rate of 400' per NM to 4100' for obstacle clearance.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

Climb direct to the VIOLE ILS Middle Compass Locator (south take-off turn right), then climb on the 270° magnetic bearing from the LMM to GNATS INT, cross GNATS INT at or above 4100; thence via (transition) or (route).

COPPO TRANSITION (GNATS1.COPPO): Turn left via R-216 to 15 DME Fix, thence turn left via MEDFORD 15 DME Arc to COPPO DME Fix.

270° magnetic bearing from the LMM to MERLI INT, turn right via ROSEBURG R-154 to KOLER INT.

(Continued on next page)

GNATS ONE DEPARTURE (GNATS1.GNATS)

**MEDFORD, OREGON
MEDFORD-JACKSON CO**

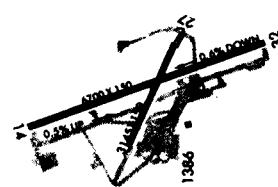


FIGURE 30.—GNATS One Departure and Excerpt from Airport/Facility Directory.

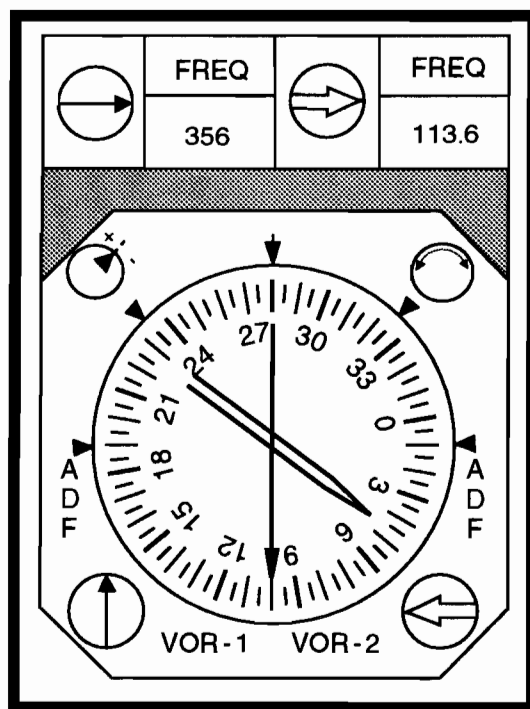


FIGURE 30A.—RMI Indicator.

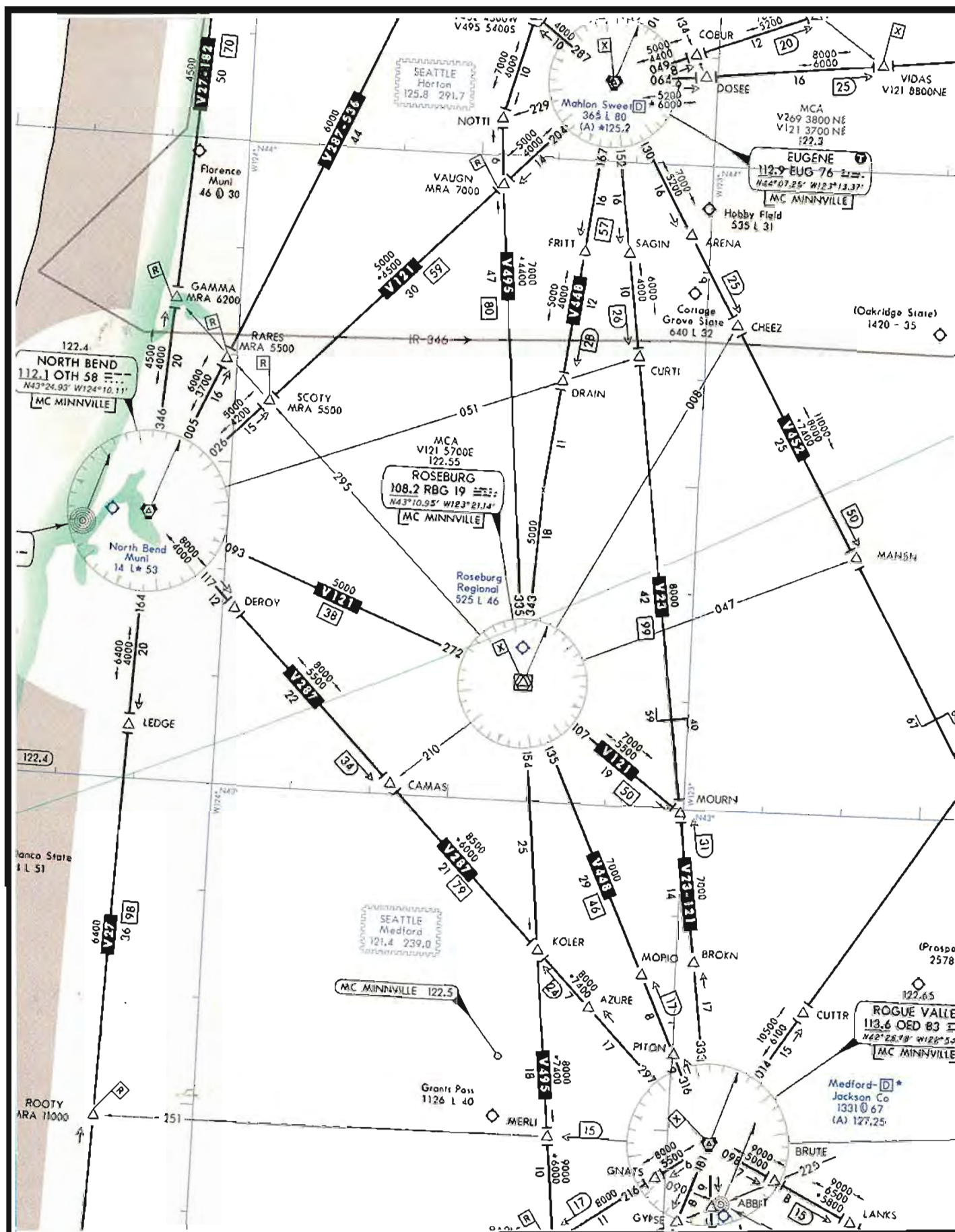


FIGURE 31.—En Route Low-Altitude Chart Segment.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING ☐ VNR		TIME STARTED		SPECIALIST INITIALS	
				☐ STOPOVER					
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED		5. DEPARTURE POINT	
☐ VFR		N4078A		PA 31/		180 KTS		HOT	
☒ IFR									
☐ DVFR									
						6. DEPARTURE TIME		7. CRUISING ALTITUDE	
						PROPOSED (Z) ACTUAL (Z)		8,000	
8. ROUTE OF FLIGHT HOT V573, TXK, TXK.BUJ3									
9. DESTINATION (Name of airport and city)				10. EST. TIME ENROUTE		11. REMARKS			
DALLAS ADDISON AIRPORT DALLAS, TX				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		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)				2	
16. COLOR OF AIRCRAFT TAN/WHITE				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 \$1,000 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.					

FAA Form 7233-1 (8-82) CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Piper	MODEL PA-31
N 4078A	Vso 74

AIRCRAFT EQUIPMENT/STATUS**

****NOTE:** X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 32.—Flight Plan and Aircraft Information.

FLIGHT LOG											
HOT SPRINGS, MEMORIAL FIELD TO DALLAS, ADDISON, TX.											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
HOT	MARKI	V573	221°					:12:00			
		CLIMB									
	TXK	V573	210°		180						
	TXK	8000									
	BUJ3	BUJ3	272°								
		8000									
	BUJ3	BUJ3	239°								
		DESCENT									
APPROACH & LANDING								:10:00			
	DALLAS										
	ADDISON										

OTHER DATA: NOTE: MAG. VAR. 4° E.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">FLIGHT SUMMARY</th> </tr> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </tbody> </table>	FLIGHT SUMMARY			TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
FLIGHT SUMMARY																			
TIME	FUEL (LB)																		
		EN ROUTE																	
		RESERVE																	
		MISSED APPR.																	
		TOTAL																	

FIGURE 33.—Flight Planning Log.

40

ARKANSAS

HOT SPRINGS

MEMORIAL FLD (HOT) 3 SW UTC-6(-5DT) 34°28'41"N 93°05'46"W **MEMPHIS**
 540 B S4 FUEL 100LL, JET A ARFF Index Ltd. H-4G, L-14E
 RWY 05-23: H6595X150 (ASPH-GRVD) S-75, D-125, DT-210, DDT-400. HIRL 0.6% up NE IAP
 RWY 05: MALSR. Tree. RWY 23: REIL. Thld displcd 490'. Tree.
 RWY 13-31: H4099X150 (ASPH) S-28, D-36, DT-63 MIRL
 RWY 13: REIL. Road/Trees. RWY 31: Pole.
AIRPORT REMARKS: Attended 1130-0400Z+. CLOSED to unscheduled air carrier ops with more than 30 passenger seats except PPR, call arpt manager 501-624-3306. Last 500' Rwy 05 CLOSED to takeoffs. Rwy 13-31 fair with extensive loose grvl-pavement debris. ACTIVATE HIRL Rwy 05-23 and MALSR Rwy 05—CTAF. Rwy 23 REIL out of svc indefinitely. Control Zone effective 1200-0400Z+.
COMMUNICATIONS: CTAF/UNICOM 123.0
 JONESBORO FSS (JBR) TF 1-800-WX-BRIEF. NOTAM FILE HOT.
 HOT SPRINGS RCO 122.1R 110.0T (LITTLE ROCK FSS)
 MEMPHIS CENTER APP/DEP CON: 118.85
RADIO AIDS TO NAVIGATION: NOTAM FILE HOT.
 HOT SPRINGS (L) VOR/DME 110.0 HOT Chan 37 34°28'43"N 93°05'26"W at fld. 530/4E.
 HOSSY NDB (HW/LOM) 385 HO 34°25'21"N 93°11'22"W 050' 5.7 NM to fld.
 ILS/DME 111.5 I-HOT Chan 52 Rwy 05 LOM HOSSY NDB. Unmonitored.

FIGURE 34A.—Airport/Facility Directory (HOT).

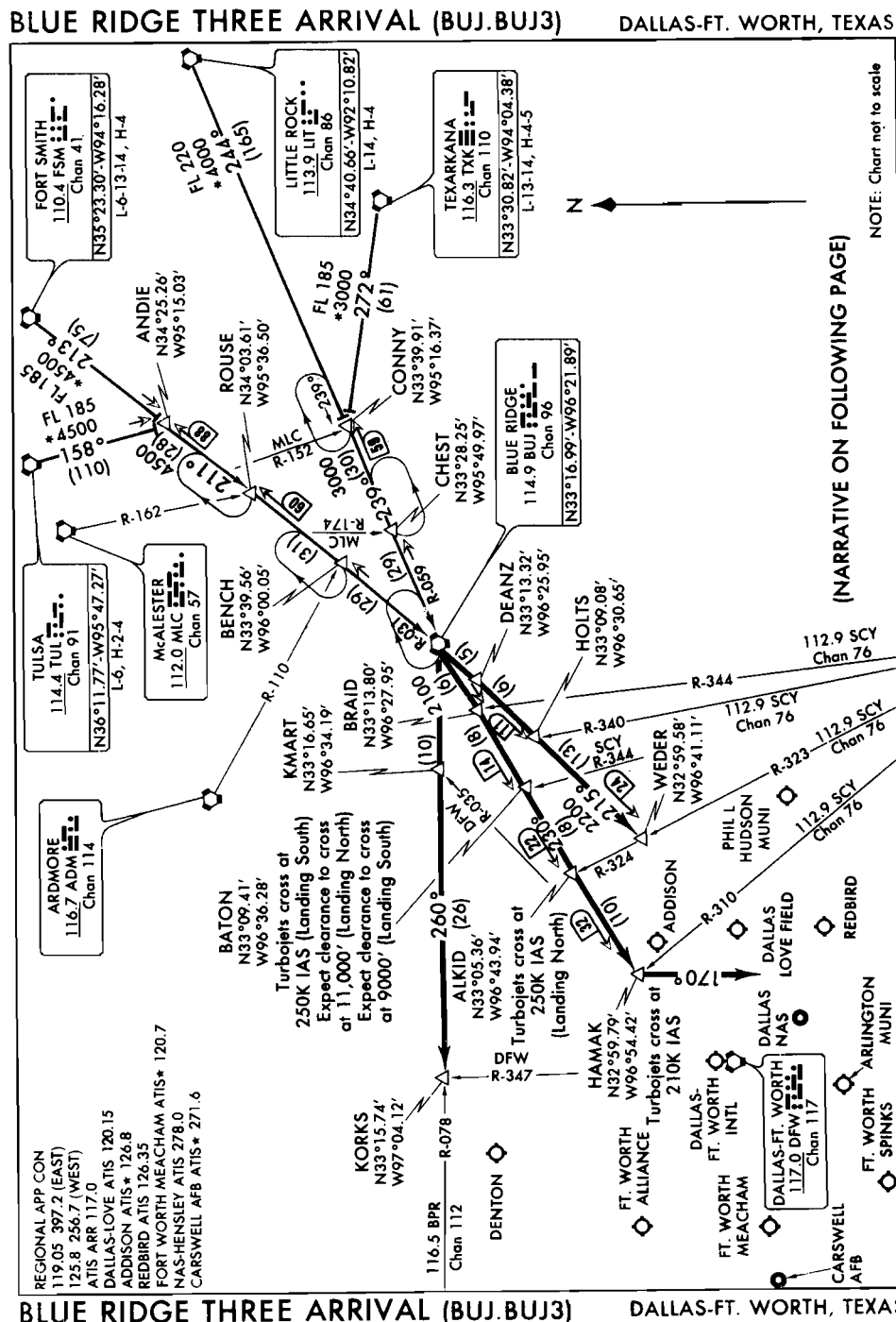


FIGURE 35.—En Route Chart Segment and Blue Ridge Three Arrival.

91094

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

TURBOJETS 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-TURBOJETS 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.—Blue Ridge Three Arrival Description.

TEXAS				1:15
DALLAS				
ADDISON	(ADS)	9 N	UTC-6(-5DT)	32°58'06"N 96°50'10"W
643	B	S4	FUEL	100LL, JET A
				DALLAS-FT. WORTH
				H-2K, 4F, 5B, L-13C, A
				14P
RWY 15-33: H7201X100 (ASPH) S-80, D-100, DT-160 MRL				
RWY 15: MALSR. VASI(V4R)—GA 3.0°TCH 51'. Thld dspcd 980'. Ground.				
RWY 33: REIL. Thld dspcd 468'. Road.				
AIRPORT REMARKS: Attended continuously. Numerous flocks of birds on and in vicinity of arpt. Use extreme care: numerous 200' AGL buildings within 1 mile East, and South of arpt, transmission towers and water tanks West of arpt. Rwy 33 REIL out of svc indefinitely. ACTIVATE MALSR Rwy 15—CTAF. Rwy limited to maximum gross weight 120,000 pounds. Control Zone effective 1200-0400Z.				
WEATHER DATA SOURCES: LAWRS				
COMMUNICATIONS: CTAF 121.1 ATIS 126.8 (1200-0400Z) UNICOM 122.95				
FORT WORTH FSS (FTW) TF 1-800-WX-BRIEF. NOTAM FILE ADS.				
① REGIONAL APP CON 123.9 ② REGIONAL DEP CON 124.3				
TOWER 121.1 (1200-0400Z) GND CON 121.6 CLNC DEL 119.55				
RADIO AIDS TO NAVIGATION: NOTAM FILE DAL.				
LOVE (L) VORW/DME 114.3 LUE Chan 90 32°50'51"N 96°51'42"W 002° 7.4 NM to fld. 490/08E.				
BRONS NDB (LOM) 407 AD 33°02'40"N 96°52'13"W 153° 4.9 NM to fld.				
ILS/DME 110.1 I-ADS Chan 38 Rwy 15. LOM BRONS NDB. Unmonitored when tower closed.				
ILS 110.1 I-TBQ Rwy 33 LOC only. Unmonitored when twr clsd.				

FIGURE 36.—Excerpt from Airport/Facility Directory.

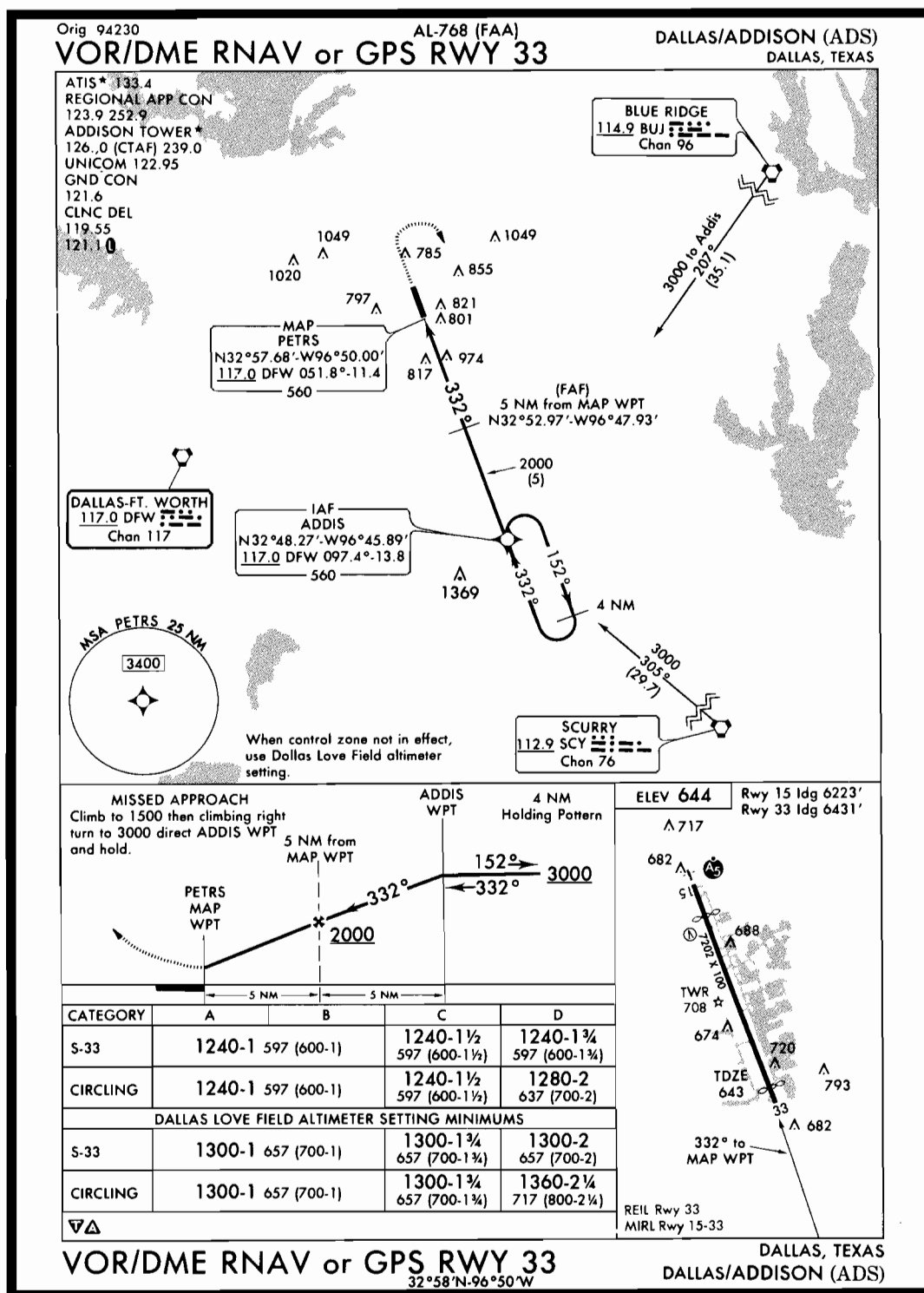


FIGURE 36A.—RNAV RWY 33 (ADS).

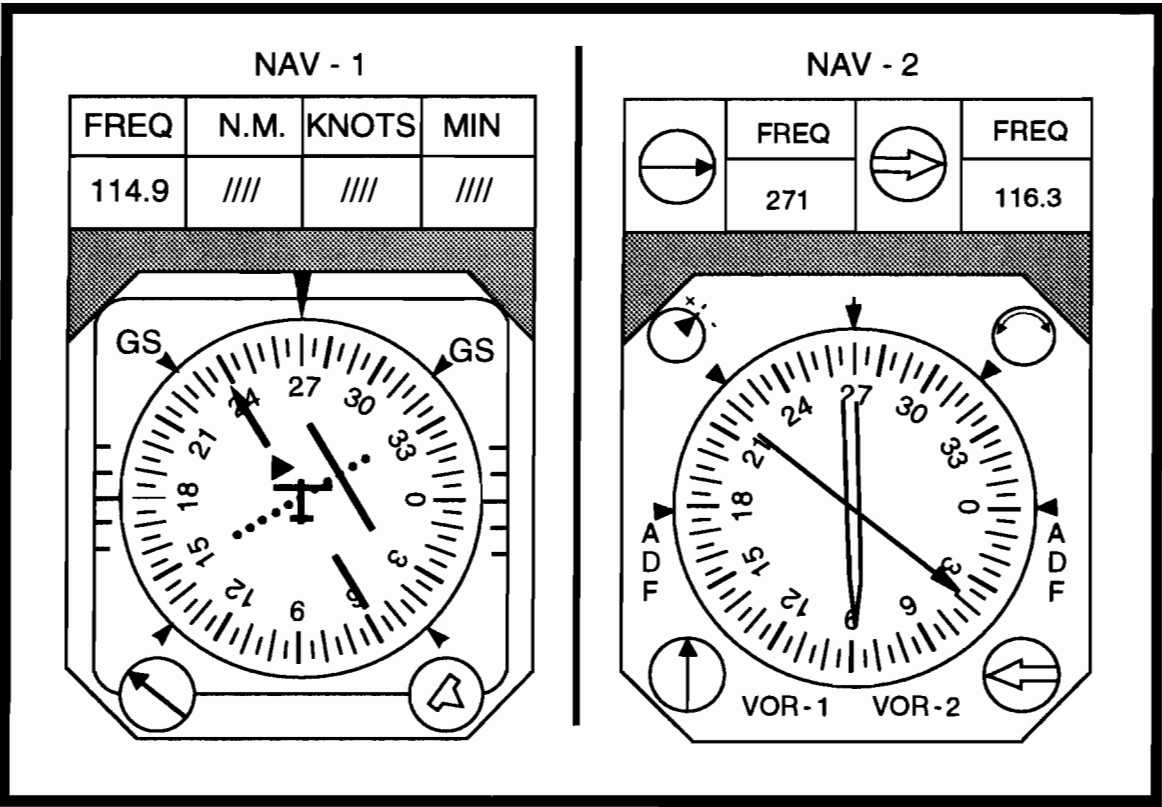


FIGURE 37.—CDI and RMI — NAV 1 and NAV 2.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		(FAA USE ONLY) ☐ PILOT BRIEFING ☐ VNR		TIME STARTED		SPECIALIST INITIALS	
FLIGHT PLAN		☐ STOPOVER					
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE
☐ VFR	N4321P	C402/	156 KTS	BGS	PROPOSED (Z)		11000
☒ IFR					ACTUAL (Z)		
☐ DVFR							
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		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		2	
16. COLOR OF AIRCRAFT		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 \$1,000 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.					
RED/BLUE/WHITE							

AIRCRAFT INFORMATION

MAKE Cessna

MODEL 402C

N 4321P

Vso 71

AIRCRAFT EQUIPMENT/STATUS**

****NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE**
TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
VERTICAL PATH COMPUTER: N/A DME: X
MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 38.—Flight Plan and Aircraft Information.

FLIGHT LOG											
BIG SPRING McMAHON-WRINKLE TO DALLAS FT. WORTH (DFW)											
CHECK POINTS		ROUTE		WIND	SPEED-KTS		DIST	TIME		FUEL	
FROM	TO	ALTITUDE	COURSE	TEMP	TAS	GS	NM	LEG	TOT	LEG	TOT
21XS	BGS	DIRECT	DIRECT					:06:0			
	LORAN	CLIMB									
		V16									
	ABI	11,000	075°								
		V16			156						
	ABT	11,000	076°								
	COTTN	DIRECT									
		11,000	087°								
		AQN2									
	AQN		075°								
		AQN2									
	CREEK		040°								
APPROACH &		RADAR									
LANDING		VEC-						:08:0			
	DFW	DESCENT									
	AIRPORT										

OTHER DATA: NOTE: MAG. VAR. 11° E. (STAR) ACTON TWO ARRIVAL (AQN2)	FLIGHT SUMMARY <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
TIME	FUEL (LB)															
		EN ROUTE														
		RESERVE														
		MISSED APPR.														
		TOTAL														

BIG SPRING McMAHON-WRINKLE (21XS) 2SW UTC-6(-5DT).

32°12'45"N101°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.PVASI(ASPH)-GA3.0°TCH 41'.

RWY 06-24:H4600X75(ASPH) MIRL

RWY 24:PVASI(PSIL)-GA3.55°TCH31'. P-line.

AIRPORT REMARKS: Attended 1400-2300Z . For 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) VORTACW 144.3 BGS Chan 90 32°23'08"N 101°10.5NM to fld. 2670/11E.

DALLAS-FT. WORTH

H-21, 5A, L-13A, 15B

IAP

EXCERPT FROM AIRPORT/FACILITY DIRECTORY (21 XS)

FIGURE 39.—Flight Log and Excerpt from Airport/Facility Directory (21 XS).

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 H-1C, L-9B
 RWY 09-27: H9000X150 (ASPH-PFC) S-100, D-160, DT-250 HIRL IAP
 RWY 09: VASI(V4L)—GA 3.0'TCH 45'. Ground. RWY 27: MALSR. VASI(V4L)—GA 3.0'TCH 55'. Rgt ttc.
 RWY 05-23: H4599X75 (ASPH-PFC) S-21, D-30
 RWY 05: Road. RWY 23: Fence. Rgt ttc.
 RWY 16-34: H2979X75 (ASPH) S-21, D-30 MIRL
 RWY 34: Ground. Rgt ttc.
AIRPORT REMARKS: Attended 1200-0800Zt. 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 1500-0000Zt, 0000-1500Zt 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 HIRL Rwy 09-27 and MALSR Rwy 27—CTAF, when twr closed MIRL 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 1300-0700Zt, Sat-Sun 1300-0500Zt)
 UNICOM 122.95
GREAT FALLS FSS (GTF) TF 1-800-WX-BRIEF. NOTAM FILE HLN.
 RCO 122.2 122.1R 117.7T (GREAT FALLS FSS)
 APP/DEP CON 119.5 (Mon-Fri 1300-0700Zt, Sat-Sun 1300-0500Zt)
 SALT LAKE CENTER APP/DEP CON 133.4 (Mon-Fri 0700-1300Zt, Sat-Sun 0500-1300Zt)
 TOWER 118.3 (Mon-Fri 1300-0700Zt, Sat-Sun 1300-0500Zt) GND CON 121.9
RADIO AIDS TO NAVIGATION: NOTAM FILE HLN.
 (H) VORTAC 117.7 HLN Chan 124 46°36'25"N 111°57'10"W 254° 1.2 NM to fld. 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'
 CAPITOL NDB (HW) 317 CVP 46°36'24"N 111°56'11"W 254° 1.9 NM to fld.
 NDB unmonitored when tower closed.
 HAUSER NDB (MHW) 386 HAU 46°34'08"N 111°45'26"W 268° 9.6 NM to fld.
 ILS 110.1 I-HLN Rwy 27 ILS unmonitored when tower closed.

Excerpt from Airport/Facility Directory (21 XS)

BIG SPRING McMAHON-WRINKLE (21XS) 2 SW UTC-6(-5DT). **DALLAS-FT WORTH**
 32°12'45"N 101°31'17"W H-21, SA, L-13A, 15B
 2572 B S4 FUEL 100LL, JET A IAP
 RWY 17-35: H8803X100 (ASPH-CONC) S-44, D-62, DDT-101 MIRL
 RWY 17: SSALS. PVASI (PSIL)—GA 3.0' TCH 41'.
 RWY 06-24: H4600X75 (ASPH) MIRL
 RWY 24: PVASI (PSIL)—GA 3.55'TCH 31'. P-line.
AIRPORT REMARKS: Attended 1400-2300Zt. For 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 ANGELO FSS (SJT) TF 1-800-WX-BRIEF. NOTAM FILE SJT.
 RCO 122.4 (SAN ANGELO FSS)
 FORT WORTH CENTER APP/DEP CON 133.7
RADIO AIDS TO NAVIGATION: NOTAM FILE SJT.
 (L) VORTACW 114.3 BGS Chan 90 32°23'08"N 101°29'00"W 180° 10.5 NM to fld. 2670/11E.

FIGURE 39A.—Excerpt from Airport/Facility Directory (21 XS).

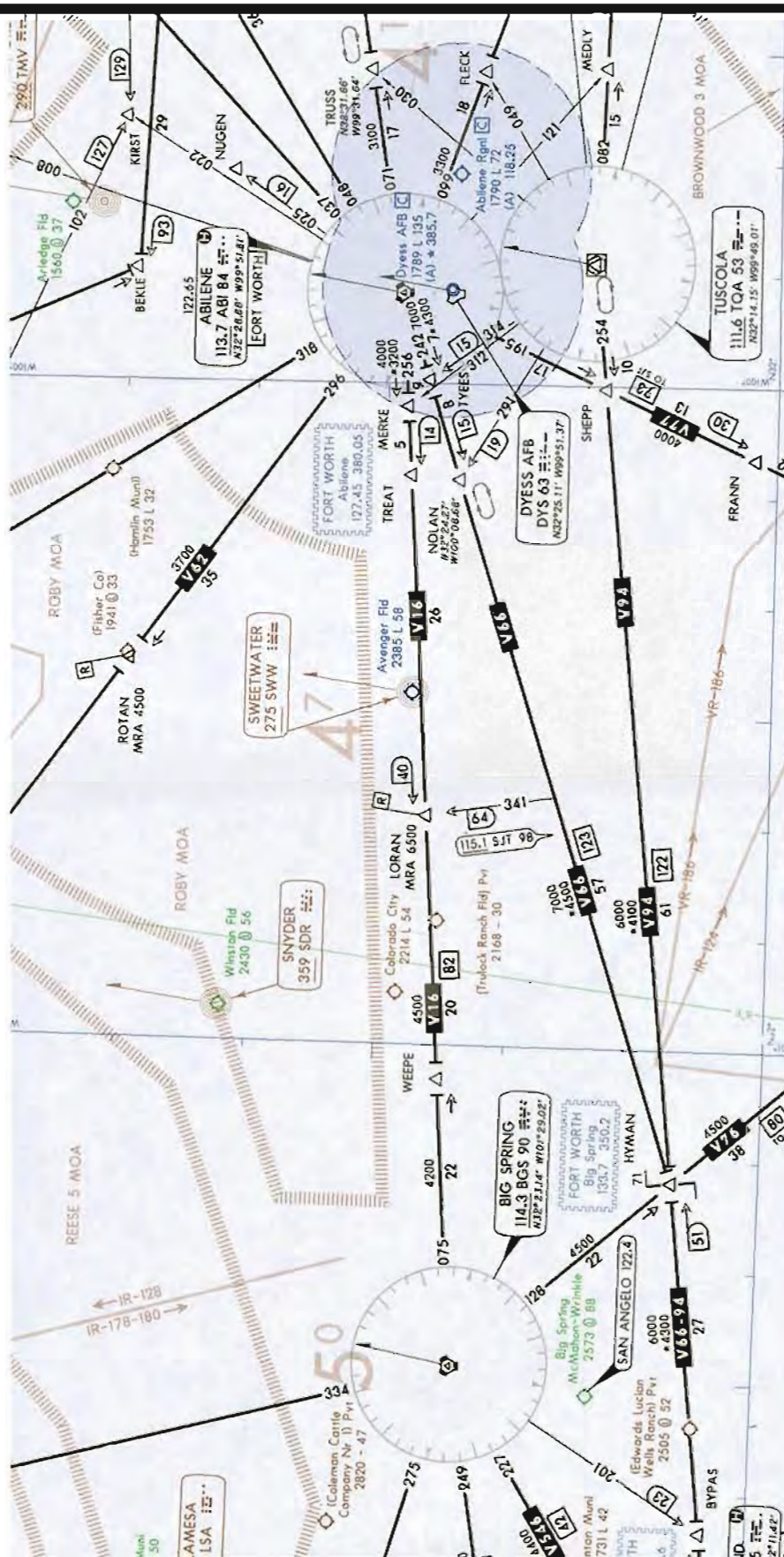


FIGURE 40.—En Route Chart Segment.

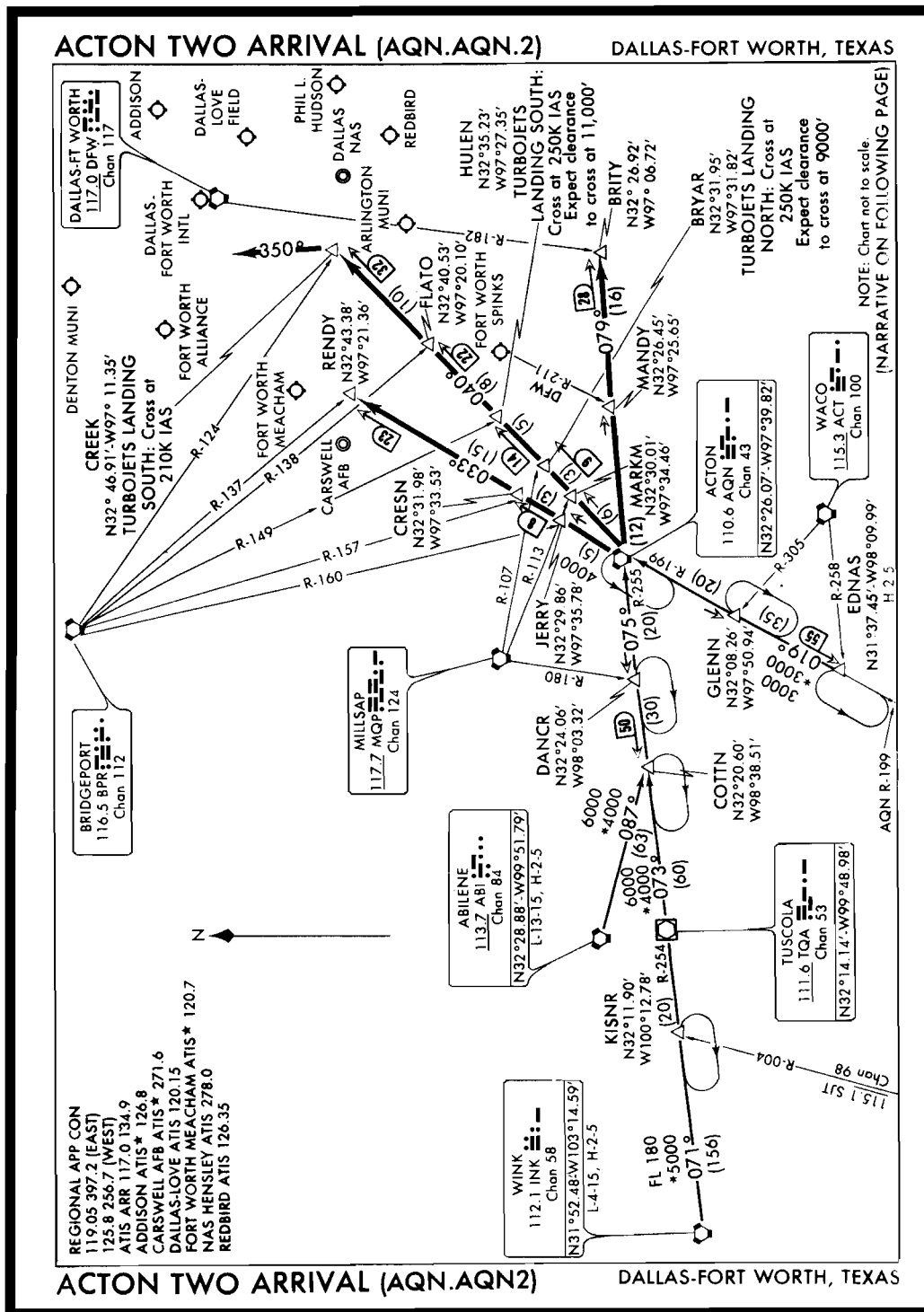


FIGURE 41.—ACTON Two Arrival.

ACTON TWO ARRIVAL (AQN.AQN2)

DALLAS-FORT WORTH, TEXAS

ARRIVAL DESCRIPTION

ABILENE TRANSITION (ABI.AQN2): From over ABI VORTAC via ABI R-087 and AQN R-255 to AQN VORTAC. Thence

EDNAS TRANSITION (EDNAS.AQN2): From over EDNAS INT via AQN R-199 to AQN VORTAC. Thence

WINK TRANSITION (INK.AQN2): From over INK VORTAC via INK R-071, TQA R-254, TQA R-073 and AQN R-255 to AQN VORTAC. Thence

TURBOJETS LANDING DALLAS-FT. WORTH INTL, MEACHAM, CARSWELL AFB, DENTON, ALLIANCE: (Landing South): From over AQN VORTAC via AQN R-040 to CREEK INT, thence heading 350° for vector to final approach course. (Landing North): From over AQN VORTAC via AQN R-040 to CREEK INT. Expect vectors at BRYAR INT.

NON-TURBOJETS LANDING DALLAS-FT. WORTH INTL, MEACHAM, CARSWELL AFB, DENTON, ALLIANCE: (Landing South): From over AQN VORTAC via AQN R-033 to RENDY INT. Expect vectors to final approach course. (Landing North): From over AQN VORTAC via AQN R-040 to CREEK INT. Expect vector at BRYAR INT.

TURBOJETS LANDING DALLAS-LOVE FIELD and ADDISON: (Landing South): From over AQN VORTAC via AQN R-040 to CREEK INT, thence heading 350° for vector to final approach course. (Landing North): From over AQN VORTAC via AQN R-079 to BRITY INT. Expect vector to final approach course.

NON-TURBOJETS LANDING DALLAS-LOVE FIELD and ADDISON: (Landing South/North): From over AQN VORTAC via AQN R-079 to BRITY INT. Expect vector to final approach course.

ALL AIRCRAFT LANDING FORT WORTH SPINKS, ARLINGTON, NAS DALLAS, REDBIRD, and PHIL L. HUDSON: (Landing South/North): From over AQN VORTAC via AQN R-079 to BRITY INT. Expect vectors to final approach course.

FIGURE 41A.—ACTON Two Arrival Description.

TEXAS

DALLAS-FORT WORTH INTL (DFW) 12 NW UTC-6(-5DT)32°53'47"N 97°02'28"W **DALLAS-FT. WORTH**
 603 B FUEL 100LL, JET A OX 1, 3 LRA ARFF Index E H-2K, 4F, 5B, L-13C, A
 RWY 17L-35R: H11,388X150 (CONC-GRVD) S-120, D-200, DT-600, DDT-850 HIRL CL IAP
 RWY 17L: ALSF2. TDZ. RWY 35R: MALSR. TDZ.
 RWY 17R-35L: H11,388X200 (CONC-GRVD) S-120, D-200, DT-600, DDT-850 HIRL CL
 RWY 17R: MALSR. TDZ. RWY 35L: TDZ. VASI(V6L).
 RWY 18R-36L: H11,388X150 (CONC-GRVD) S-120, D-200, DT-600, DDT-850 HIRL CL
 RWY 18R: ALSF2. TDZ. RWY 36L: MALSR. TDZ.
 RWY 18L-36R: H11,387X200 (CONC-GRVD) S-120, D-200, DT-600, DDT-850 HIRL CL
 RWY 18L: MALSR. TDZ. RWY 36R: TDZ. VASI(V6L).
 RWY 13R-31L: H9300X150 (CONC-GRVD) S-120, D-220, DT-600, DDT-850 HIRL CL
 RWY 13R: MALSR. TDZ. RWY 31L: TDZ.
 RWY 13L-31R: H9000X200 (CONC-GRVD) S-120, D-200, DT-600, DDT-850 HIRL CL 0.5% up NW
 RWY 13L: TDZ. VASI(V6L)—Upper GA 3.25' TCH 93'. Lower GA 3.0' TCH 47'. RWY 31R: MALSR. TDZ.
 RWY 18S-36S: H4000X100 (CONC)
AIRPORT REMARKS: Attended continuously. Rwy 18S-36S CLOSED indefinitely. Arpt under construction, men and equipment in movement areas. Partial outages of arpt lgt circuits will occur daily. Prior Permission Required from arpt ops for General Aviation acft to proceed to airline terminal gate except to General Aviation Facility. Rwy 18S-36S located on taxiway G, 4000' long 100' wide restricted to prop acft 12,500 lbs. & below and stol acft daylight VFR plus IFR departures. Prior permission required from the primary tenant airlines to operate within central terminal area, CAUTION: proper minimum clearance may not be maintained within the central terminal area. Landing fee. Heliport H1 on apt 104X104 (CONC) Heliport located at Twy G and Twy 24 intersection, daylight VFR. Clearways 500X1000 each end Rwy 17L-35R, Rwy 17R-35L, Rwy 18L-36R and Rwy 18R-36L. Flight Notification Service (ADCUS) available.
WEATHER DATA SOURCES: LLWAS.
COMMUNICATIONS: ATIS 117.0 134.9 (ARR) 135.5 (DEP) UNICOM 122.95
 FORT WORTH FSS (FTW) LC 429-6434, TF 1-800-WX-BRIEF, NOTAM FILE DFW
 (R) REGIONAL APP CON 119.05(E) 119.4(E) 125.8(W) 132.1(W)
 REGIONAL TOWER 126.55 (E) 124.15 (W) GND CON 121.65 133.15(E) 121.8 (W) CLNC DEL 128.25 127.5
 (R) REGIONAL DEP CON 118.55 (E) 124.25 (WEST) 127.75 (NORTH-SOUTH)
 TCA: See VFR Terminal Area chart.
RADIO AIDS TO NAVIGATION: NOTAM FILE DFW.
 (H) VORTACW 117.0 DFW Chan 117 32°51'57"N 97°01'40"W at fld. 560/08E.
 VOR Portion unusable 045°050° all altitudes and distances, 350-100° beyond 30 NM below 2100'.
 ISSUE NDB (LOM) 233 PK 32°47'35"N 97°01'49"W 348° 6.2 NM to fld.
 JIFFY NDB (LOM) 219 FL 32°59'44"N 97°01'46"W 179° 6.0 NM to fld.
 ILS/DME 109.5 I-LWN Chan 32 Rwy 13R.
 ILS/DME 109.1 I-FLQ Chan 28 Rwy 17L. LOM JIFFY NDB.
 ILS 111.5 I-JHZ Rwy 17R. LOM JIFFY NDB.
 ILS 111.3 I-CIX Rwy 18L.
 ILS/DME 111.9 I-VYN Chan 56 Rwy 18R.
 ILS 110.9 I-RRR Rwy 31R.
 ILS/DME 109.1 I-PKQ Chan 28 Rwy 35R. LOM ISSUE NDB.
 ILS/DME 111.9 I-BXN Chan 56 Rwy 36L.

FIGURE 42.—ILS-1 RWY 36L, Dallas-Fort Worth Intl.

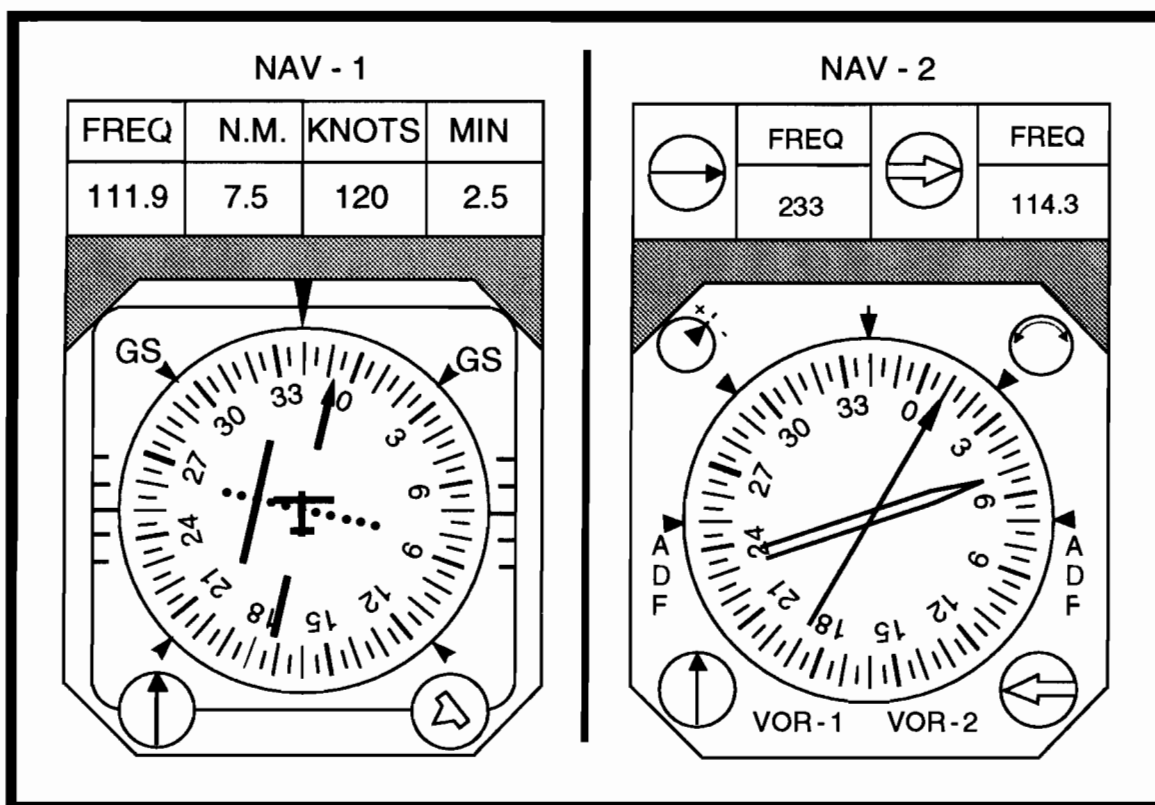


FIGURE 43.—CDI and RMI – NAV 1 and NAV 2.

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING ☐ VNR		TIME STARTED		SPECIALIST INITIALS	
		☐ STOPOVER							
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED		5. DEPARTURE POINT	
☐ VFR ☒ IFR ☐ DVFR		N3678A		PA31/		180 KTS		YKM	
								6. DEPARTURE TIME	
								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		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 \$1,000 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.							
GOLD/WHITE									

FAA Form 7233-1 (8-82) CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Piper MODEL PA-31
N 3678A Vso 77

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) INOP (VISUAL) X

FIGURE 44.—Flight Plan and Aircraft Information.

FLIGHT LOG YAKIMA AIR TERMINAL TO PORTLAND, INTL.											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
YKM	HITCH	GROMO 2	206°					:10.			
	VOR	CLIMB									
	C.O.P.	V468	206°		180						
		V468									
		BTG	12,000	234°							
	PDX	DIRECT									
APPROACH & LANDING			160°					:13.			
	PDX AIRPORT										

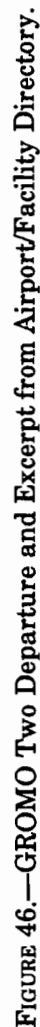
OTHER DATA:

NOTE: MAG. VAR. 20° E.

FLIGHT SUMMARY

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

FIGURE 45.—Flight Planning Log.



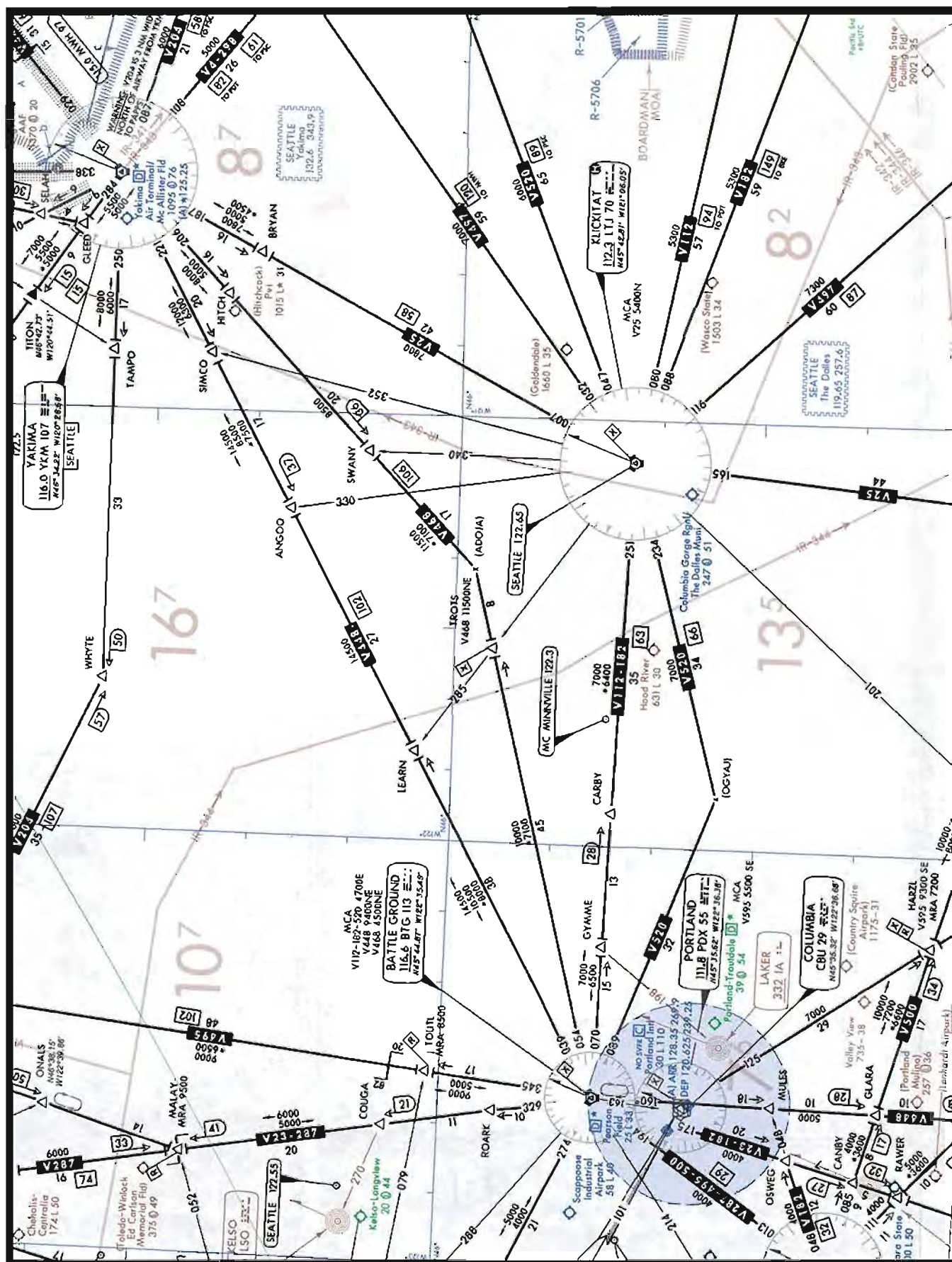


FIGURE 47.—En Route Chart Segment.

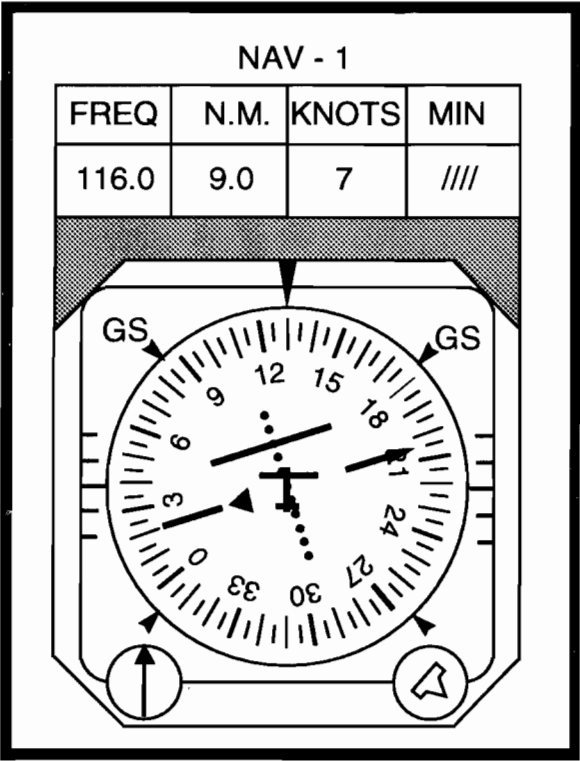


FIGURE 48.—CDI — NAV 1.

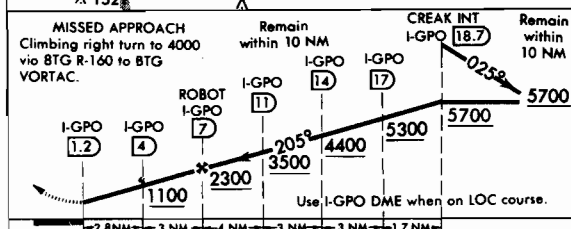
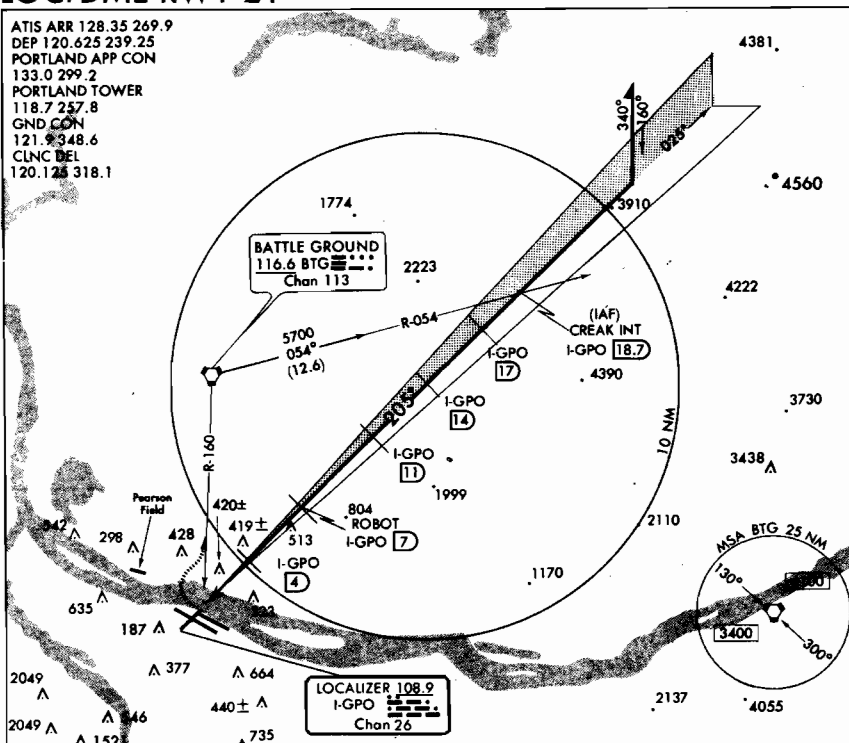
Amdt 7A 9

LOC/DME RWY 21

AL-330 (FAA)

PORTLAND INTL (PDX)
PORTLAND, OREGON

ATIS ARR 128.35 269.9
 DEP 120.625 239.25
 PORTLAND APP CON
 133.0 299.2
 PORTLAND TOWER
 118.7 257.8
 GND CON
 121.9 348.6
 CLNC DEL
 120.125 318.1



CATEGORY	A	B	C	D
S-21	680-1 657 (700-1)	680-1 657 (700-1)	680-1 657 (700-1)	680-2 657 (700-2)
CIRCLING	720-1 694 (700-1)	740-1 714 (800-1)	740-2 714 (800-2)	980-3 954 (1000-3)

REIL Rwy 21	TDZ/CL Rwy 10R	MIRL Rwy 3-21	MIRL Rwy 10R-28L and 10L-28R
Knots	60	90	120 150 180
Min:Sec			

LOC/DME RWY 21

45°35'N-122°36'W

Amdt 7A 99364

PORTLAND, OREGON
PORTLAND INTL (PDX)

NW-1, 30 DEC 1999

FIGURE 49.—LOC/DME RWY 21 (PDX).

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING	☐ VNR	TIME STARTED	SPECIALIST INITIALS
				☐ STOPOVER			
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE
☐ VFR	N2468	A36/	158 KTS	SBA	PROPOSED (Z)		8000
☒ IFR							
☐ DVFR							
8. ROUTE OF FLIGHT HABUTI GVO, V27 MQO, V113 PRB							
9. DESTINATION (Name of airport and city) PASO ROBLES MUNI PRB		10. EST. TIME ENROUTE HOURS MINUTES		11. REMARKS IFR TRAINING FLIGHT			
12. FUEL ON BOARD HOURS MINUTES		13. ALTERNATE AIRPORT(S) N/A		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE		15. NUMBER ABOARD	
				17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		2	
16. COLOR OF AIRCRAFT GOLD/WHITE		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 \$1,000 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.					

FAA Form 7233-1 (8-82)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Beechcraft

MODEL A-36

N 2468

Vso 52

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) INOP

FIGURE 50.—Flight Plan and Aircraft Information.

FLIGHT LOG											
SANTA BARBARA MUNI TO PASO ROBLES MUNI											
CHECK POINTS		ROUTE		WIND	SPEED-KTS		DIST	TIME		FUEL	
FROM	TO	ALTITUDE	COURSE	TEMP	TAS	GS	NM	LEG	TOT	LEG	TOT
SBA	HABUT	HABUT 1	253°					:08:00			
		CLIMB									
		163°R	343°			158					
		8000									
		GVO	V27	306°							
	MQO	8000									
		V113	358°								
	PRB										
APPROACH & LANDING		DESCENT						:10:00			
	PRB AIRPORT										

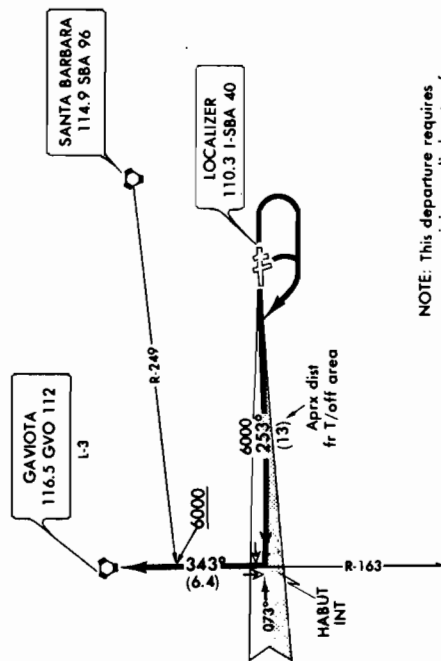
OTHER DATA: NOTE: MAG. VAR. 16° E.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">FLIGHT SUMMARY</th> </tr> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </tbody> </table>	FLIGHT SUMMARY			TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
FLIGHT SUMMARY																			
TIME	FUEL (LB)																		
		EN ROUTE																	
		RESERVE																	
		MISSED APPR.																	
		TOTAL																	

FIGURE 51.—Flight Planning Log.

HABUT ONE DEPARTURE (HABUT1.GVO)

SANTA BARBARA MUNI
SANTA BARBARA, CALIFORNIA

SANTA BARBARA GND CON
121.7
SANTA BARBARA TOWER •
119.7 242.4
SANTA BARBARA DEP CON
120.35 321.4
ATIS • 125.1



NOTE: This departure requires
a minimum climb rate of
385' per NM to 6000

NOTE: IFR departure Rwy 33L/R
not authorized.

NOTE: Chart not to scale

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 7: Maintain runway heading to at least 650', then turn right, thence intercept and climb westbound via I-SBA localizer west course to HABUT INT, thence via GVO R-163 to GVO VORTAC. Cross SBA R-249 at or above 6000'.

TAKE-OFF RUNWAY 15: Maintain runway heading to at least 310', then turn right, thence intercept and climb westbound via I-SBA localizer west course to HABUT INT, thence via GVO R-163 to GVO VORTAC. Cross SBA R-249 at or above 6000'.

(Continued on next page)

HABUT ONE DEPARTURE (HABUT1.GVO)

SANTA BARBARA, CALIFORNIA
SANTA BARBARA MUNI

HABUT ONE DEPARTURE (HABUT1.GVO)

SANTA BARBARA MUNI
SANTA BARBARA, CALIFORNIADEPARTURE ROUTE DESCRIPTION
(Continued)

TAKE-OFF RUNWAY 25: Climb westbound via I-SBA localizer west course to HABUT INT, thence via GVO R-163 to GVO VORTAC. Cross SBA R-249 at or above 6000'.

HABUT ONE DEPARTURE (HABUT1.GVO)

SANTA BARBARA, CALIFORNIA
SANTA BARBARA MUNI

SANTA BARBARA MUNI (SBA) 7 W GMT-8(-7DT) 34°25'34"N 119°50'22"W
10 B SA FUEL 80, 100, 100LL, JETA OX 1, 2, 3, 4 TPA—See Remarks
CFR Index C
RWT 07-25: H6049X150 (ASPH-GRVD) S-110, D-160, DT-245 HIRL
RWT 07: MALSR, Tree, Rgt. ftc. RWT 25: VASI(VAL)—CA 3.0" TCH 46'. Thid dispd 324'. Road.
RWT 19K-33L: H4183X100 (ASPH) S-48, D-63, DT-100 MIRL
RWT 19L: REIL, Pole. RWT 33L: Road, Rgt. ftc.
RWT 15L-33R: H4179X75 (ASPH) S-35, D-41, DT-63
RWT 15L: Thid dispd 225'. Tree. RWT 33R: Pole, Rgt. ftc.
AIRPORT REMARKS: Attended 1330-0600Z. Fee after hours. Numerous flocks of birds on and in vicinity of apt.
TPA—1000(990) small act. 1500(1490) large act. Pure jet touch/go or low approaches prohibited.
COMMUNICATIONS: CTAF 119.7 ATIS 125.1 (1430-0600Z) UNICOM 122.95
SANTA BARBARA FSS (SBA) on apt 123.65, 122.3, 122.2, 122.1R, 116.5T LD (805) 967-2305, DL NOTAM FILE SBA.
① APP CON 125.4 (1430-0600Z) ② DEP CON 120.55 (1430-0600Z)
③ LOS ANGELES CENTER APP/DEP CON 128.05 (0600-1430Z)
TOWER 119.7 (1430-0600Z) GND CON 121.7
VFR ADVISY SVC c/c TOWER
RADIO AIDS TO NAVIGATION: NOTAM FILE SBA, VHF/DF c/c SANTA BARBARA FSS
④ AIRPORTAC 114.9 SBA Chan 96 34°30'34"N 119°46'12"W 198°5.6 NM to fld. 3620/16E.
GAVIOTA (I) VORTAC 116.5 GVO Chan 112 34°31'53"N 120°05'24"W 099°14.0 NM to fld. 2620/16E
15/00E 110.3 I-SBA Chan 40 Rwy 07

CALIFORNIA

VOR RECEIVER CHECK POINTS

Facility Name (Apt Name)	Freq/Ident	Grd. AB/ALT	Fac. Mag	Azimuth Pt. from	Dist. from Fac. N.M.	Check Point Description
Sacramento (Sacramento Executive)	115.2/SAC	A/1000	G	015		Over apch end rwy 02
Salinas (Salinas Muni)	117.3/SNS	G	247			0.4 NM on Compass rose.
Santa Ana (John Wayne Airport/Orange County)	109.4/SNA	G	186			On runup pad rwy 01R.
Santa Barbara	114.9/SBA	A/2000	277		11	Over Lake Cachuma Dam spillway.
Santa Barbara (Santa Barbara Muni)	114.9/SBA	G	200		5.9	On runup area end rwy 15.

FIGURE 52.—HABUT One Departure and Excerpt from Airport/Facility Directory.

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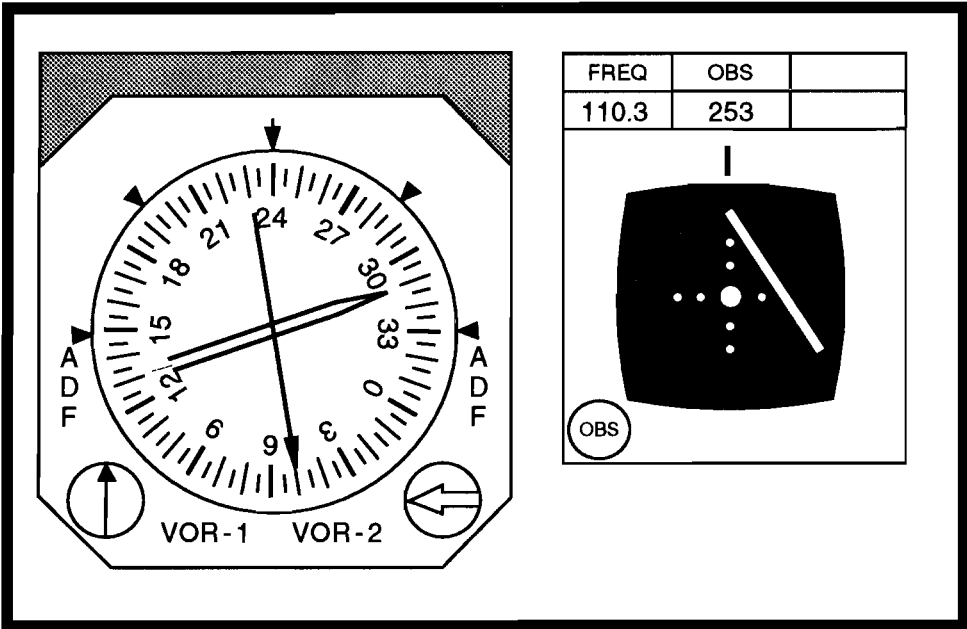
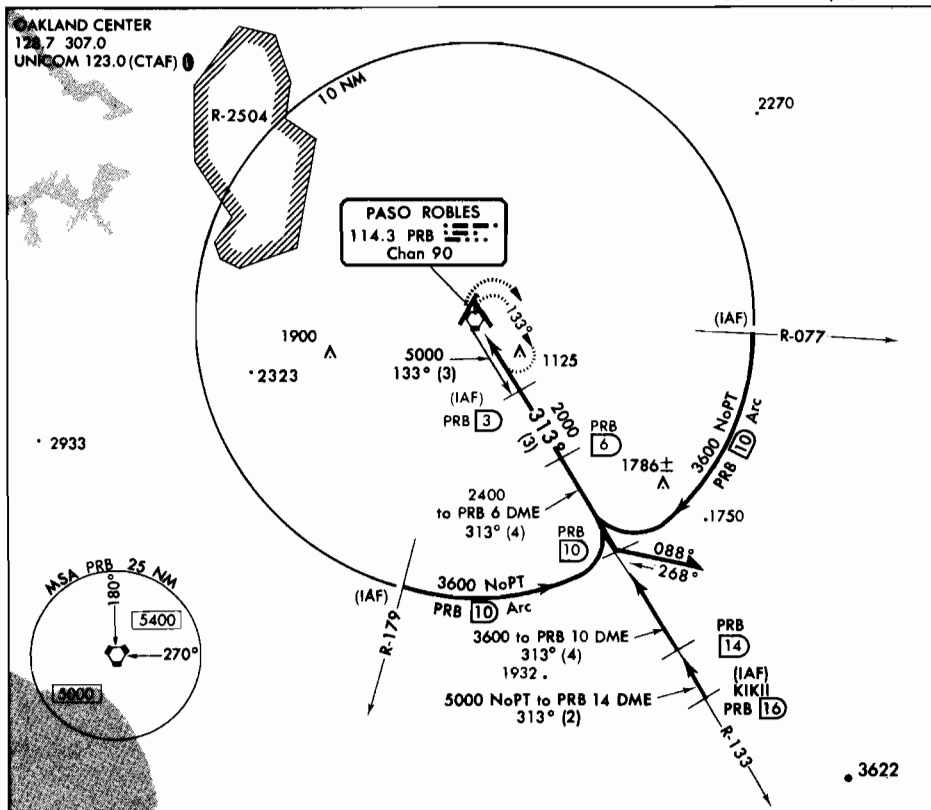


FIGURE 54.—RMI and CDI Indicators.

Amdt 2 91150
VOR/DME-B

AL-858 (FAA)

PASO ROBLES MUNI (PRB)
 PASO ROBLES, CALIFORNIA



VOR/DME-B

35°40'N - 120°38'W

PASO ROBLES, CALIFORNIA
 PASO ROBLES MUNI (PRB)

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FIGURE 55.—VOR/DME-B (PRB).

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY)		☐ PILOT BRIEFING ☐ VFR		TIME STARTED		SPECIALIST INITIALS	
				☐ STOPOVER					
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE		
☐ VFR	N12193	BH 206/	110 KTS	EASTERWOOD FIELD	PROPOSED (Z)		ACTUAL (Z)		
☒ IFR									
☐ DVFR									
8. ROUTE OF FLIGHT DIRECT CLL, V15 TNV, V571 IAH, DIRECT									
9. DESTINATION (Name of airport and city) WILLIAM P HOBBY AIRPORT HOUSTON, TX		10. EST. TIME ENROUTE HOURS MINUTES		11. REMARKS					
12. FUEL ON BOARD HOURS MINUTES		13. ALTERNATE AIRPORT(S) N/A		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE				15. NUMBER ABOARD	
				17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)				2	
16. COLOR OF AIRCRAFT TAN/GOLD/WHITE		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 \$1,000 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.							

FAA Form 7233-1 (6-82)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

 AIRCRAFT INFORMATION

MAKE Bell

MODEL 206L

N 12193

Vso N/A

 AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 56.—IFR Flight Plan and Aircraft Information.

FLIGHT LOG											
EASTERWOOD FIELD TO WILLIAM P HOBBY AIRPORT											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
EASTERWOOD	CLL	DIRECT	DIRECT					:05:			
	TNV	CLIMB									
		V15									
		7000	127°		110		27				
		V571									
		7000	110°				42				
		DIRECT									
		7000	161°				18				
APPROACH & LANDING								:15:			
	HOBBY AIRPORT										

OTHER DATA: NOTE: MAG. VAR. 6° E.	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th colspan="3">FLIGHT SUMMARY</th> </tr> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	FLIGHT SUMMARY			TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
FLIGHT SUMMARY																			
TIME	FUEL (LB)																		
		EN ROUTE																	
		RESERVE																	
		MISSED APPR.																	
		TOTAL																	

FIGURE 57.—Flight Planning Log.

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TEXAS

COLLEGE STATION

EASTERWOOD FLD (CLL) 3 SW UTC-6(-5DT) 30°35'18"N 96°21'49"W **HOUSTON**
 320 B S4 FUEL 100LL, JET A OX 2 ARFF Index A H-2K, 5B, L-17A
 RWY 16-34: H7000X150 (ASPH-GRVD) S-70, D-90, DT-150 MRL IAP
 RWY 16: VASI(V4R)—GA 3.0°TCH 51'. Tree. RWY 34: MALS.R.
 RWY 10-28: H5160X150 (CONC) S-27, D-50, DT-87 MRL
 RWY 10: VASI(V4L)—GA 3.0°TCH 50'. Tree. RWY 28: REIL VASI(V4L)—GA 3.0° TCH 54'. Tree.
 RWY 04-22: H5149X150 (CONC) S-27, D-50, DT-87
 RWY 04: Tree. RWY 22: Tree.
AIRPORT REMARKS: Attended 1200-0500Zt. CAUTION: deer on rwys. CAUTION: Rwy 10-28 taxiway B and taxiway E have uneven surfaces. Birds on and in vicinity of arpt. MRL Rwy 10-28 preset medium ints when twr clsd, to increase ints and ACTIVATE MRL Rwy 16-34 and MALS.Rwy 34—CTAF. CLOSED to unscheduled air carrier ops with more than 30 passenger seats except 24 hours PPR call, arpt manager 409-845-4811. Rwy 04-22 day VFR ops only. Itinerant acft park North of twr, overnight parking fee. Ldg fee scheduled FAR 135 and all FAR 121 ops. For fuel after hours PPR call 409-845-4811/823 -0690 or ctc Texas A and M University police 409-845-2345; late ngt fee. Rwy 16-34 grvd except south 200'. Rwy 04-22 deteriorating and vegetation growing through cracks. NOTE: See SPECIAL NOTICE—Simultaneous Operations on Intersecting Runways.
COMMUNICATIONS: CTAF 118.5 ATIS 126.85 (1200-0400Zt) UNICOM 122.95
 MONTGOMERY COUNTY FSS (CXO) TF 1-800-WX-BRIEF. NOTAM FILE CLL.
 COLLEGE STATION RCO 122.65 122.2 (MONTGOMERY COUNTY FSS).
 (R) **HOUSTON CENTER APP/DEP CON:** 120.4
TOWER: 118.5 (1200-0400Zt) (VFR only) **GND CON:** 121.7
RADIO AIDS TO NAVIGATION: NOTAM FILE CLL. VHF/DF ctc FSS
COLLEGE STATION (L) VORTACW 113.3 CLL Chan 80 30°36'17"N 96°25'13"W 100° 3.1 NM to fld.
 370/08E. HIWAS.
ROWDY NDB (LOM) 260 CL 30°29'36"N 96°20'16"W 341° 5.9 NM to fld.
 ILS 111.7 I-CLL Rwy 34 LOM ROWDY NDB. ILS unmonitored when twr closed.

COLLEGE STATION 30°36'17"N 96°25'13"W NOTAM FILE CLL. **HOUSTON**
 (L) **VORTACW** 113.3 CLL Chan 80 100° 3.1 NM to Easterwood Fld. 370/08E. HIWAS. H-2K, 5B, L-17A
 RCO 122.65 122.2 (MONTGOMERY COUNTY FSS)

VOR RECEIVER CHECK

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TEXAS

VOR RECEIVER CHECK POINTS

Facility Name (Arpt Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag	Dist. from Fac. N.M.	Check Point Description
Abilene (Abilene Regional)	113.7/ABI	A/2800	047	10.1	Over silos in center of Ft Phantom Lake.
Alice (Alice International)	114.5/ALI	G	270	0.5	On twy N of hangar.
Amarillo (Amarillo International)	117.2/AMA	G	210	4.5	On east runoff pad Rwy 22
Austin (Robert Mueller Muni)	114.6/AUS	G	118	0.6	On runoff area on twy to Rwy 31L.
Beaumont (Jefferson County).....	114.5/BPT	G	310	1.0	On runoff area for Rwy 12
Big Spring (Big Spring McMahon-Wrinkle)	114.3/BGS	A/3500	107	10.5	Over red and white water tank.
Borger (Hutchinson Co).....	108.6/BGD	G	175	6.7	On intersecting twy in front of terminal.
Brownsville (Brownsville/South Padre Island Intl)	116.3/BRO	G	248	3.2	On NE corner of parking ramp.
Brownwood (Brownwood Muni).....	108.6/BWD	A/2600	169	6.2	Over rotating bcn.
Childress (Childress Muni).....	117.6/CDS	G	353	3.7	At intersection of edge of ramp at center twy.
College Station (Easterwood Field)	113.3/CLL	G	097	3.2	On W edge of parking ramp
Corpus Christi (Corpus Christi Intl).....	115.5/CRP	A/1100	187	7.5	Over grain elevator.
Corpus Christi (San Patricio County)....	115.5/CRP	A/1000	318	9.5	Over rotating beacon on arpt.
Daisetta (Liberty Muni).....	116.9/DAS	A/1200	195	7.5	Over hangar S of arpt.
Dalhart (Dalhart Muni).....	112.0/DHT	G	170	3.9	On SE corner of main ramp
Eagle Lake (Eagle Lake)	116.4/ELA	A/1200	180	4.5	Over water tank 0.4 NM S of

FIGURE 58.—Excerpts from Airport/Facility Directory.

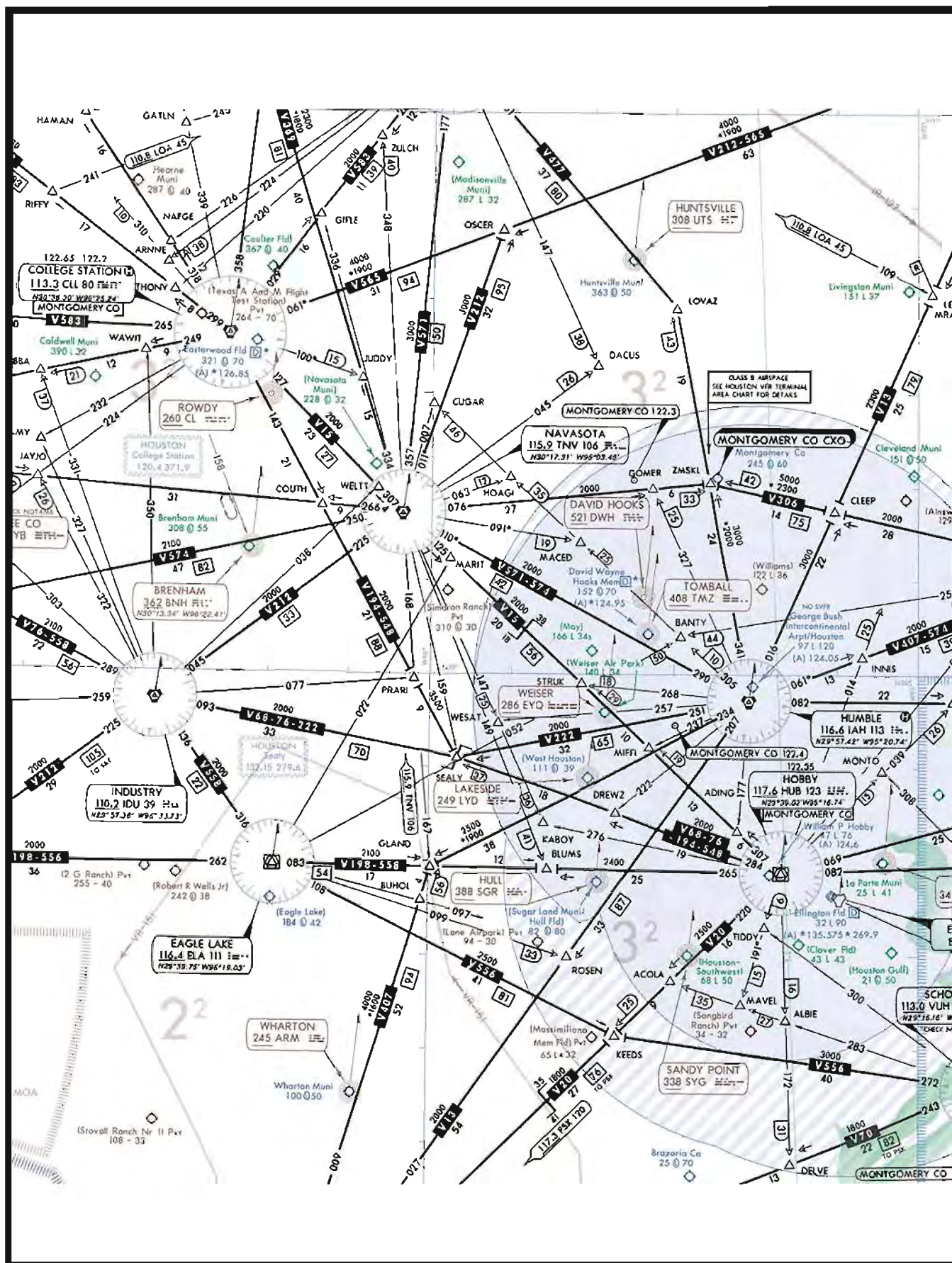


FIGURE 59.—En Route Chart Segment.

172

TEXAS

WILLIAM P. HOBBY (HOU) 8 SE UTC-6(-5DT) 29°38'43"N 95°16'43"W **HOUSTON**
 47 B S4 FUEL 100, JET A OX 1, 2, 3, 4 LRA ARFF Index C **H-58, I-178**
 RWY 04-22: H7602X150 (CONC-GRVD) S-75, D-200, DT-400 HIRL CL **IAP**
 RWY 04: MALSR, TDZ. RWY 22: MALSR, VASI(V4L)—GA 3.0" TCH 52'. Pole.
 RWY 12R-30L: H7601X150 (ASPH-GRVD) S-75, D-195, DT-220 HIRL CL
 RWY 12R: MALSR, VASI(V4R)—GA 3.0" TCH 49'. Thld dspcd 1032'. Pole.
 RWY 30L: REIL. Thld dspcd 200'. Road.
 RWY 17-35: H6000X150 (CONC-ASPH-GRVD) S-75, D-121, DT-195 MIRL
 RWY 17: VASI(V4L)—GA 3.0" TCH 38'. Antenna. RWY 35: VASI(V4R)—GA 3.0" TCH 41'. Building.
 RWY 12L-30R: H5149X100 (CONC-GRVD) S-30, D-45, DT-80 MIRL
 RWY 12L: VASI(V4L)—GA 3.0" TCH 52'. RWY 30R: Antenna.
AIRPORT REMARKS: Attended continuously. Arpt CLOSED to acft with wing span over 117' except 24 hours PPR, call arpt manager 713-643-4597. CAUTION: numerous birds on and in vicinity of arpt. CAUTION to larger acft: W ramp twy centerline to parked acft on W side only 68'. W ramp twy centerline to edge of adjacent svc vehicle road on W side only 48'. PPR to taxi to main terminal bldg, call 713-643-4597. Flight Notification Service (ADCUS) available. NOTE: See SPECIAL NOTICE—Simultaneous Operations on Intersecting Runways.
WEATHER DATA SOURCES: LLWAS.
COMMUNICATIONS: ATIS 124.6 UNICOM 122.95
 MONTGOMERY COUNTY FSS (CXO) TF 1-800-WX-BRIEF. NOTAM FILE HOU.
 HOBBY RCO 122.35 (MONTGOMERY COUNTY FSS)
 (H) HOUSTON APP COM 120.8 (South) 124.35 (West) 120.05 (North and East)
 HOBBY TOWER 118.7 HOUSTON GND COM 121.9 CLNC DEL 125.45 PRE-TAXI CLNC 125.45
 (H) HOUSTON DEP COM 120.8 (South) 123.8 (West) 119.7 (North and East)
 ARSA ctc APP COM
RADIO AIDS TO NAVIGATION: NOTAM FILE HOU.
 HOBBY (H) VORW/DME 117.6 HUB Chan 123 29°39'00"N 95°16'44"W at fld. 50/06E.
 TUTTE NDB (LOM) 395 HU 29°35'20"N 95°20'25"W 038° 4.7 NM to fld.
 ILS/DME 111.3 I-PRQ Chan 50 Rwy 12R.
 ILS/DME 109.9 I-HUB Chan 36 Rwy 04 LOM TUTTE NDB. BC unusable beyond 25° SE of centerline.
 ILS/DME 111.3 I-UPU Chan 50 Rwy 30L.

ENROUTE FLIGHT ADVISORY SERVICE (EFAS)

Radio Call: Flight Watch-Freq. 122.0

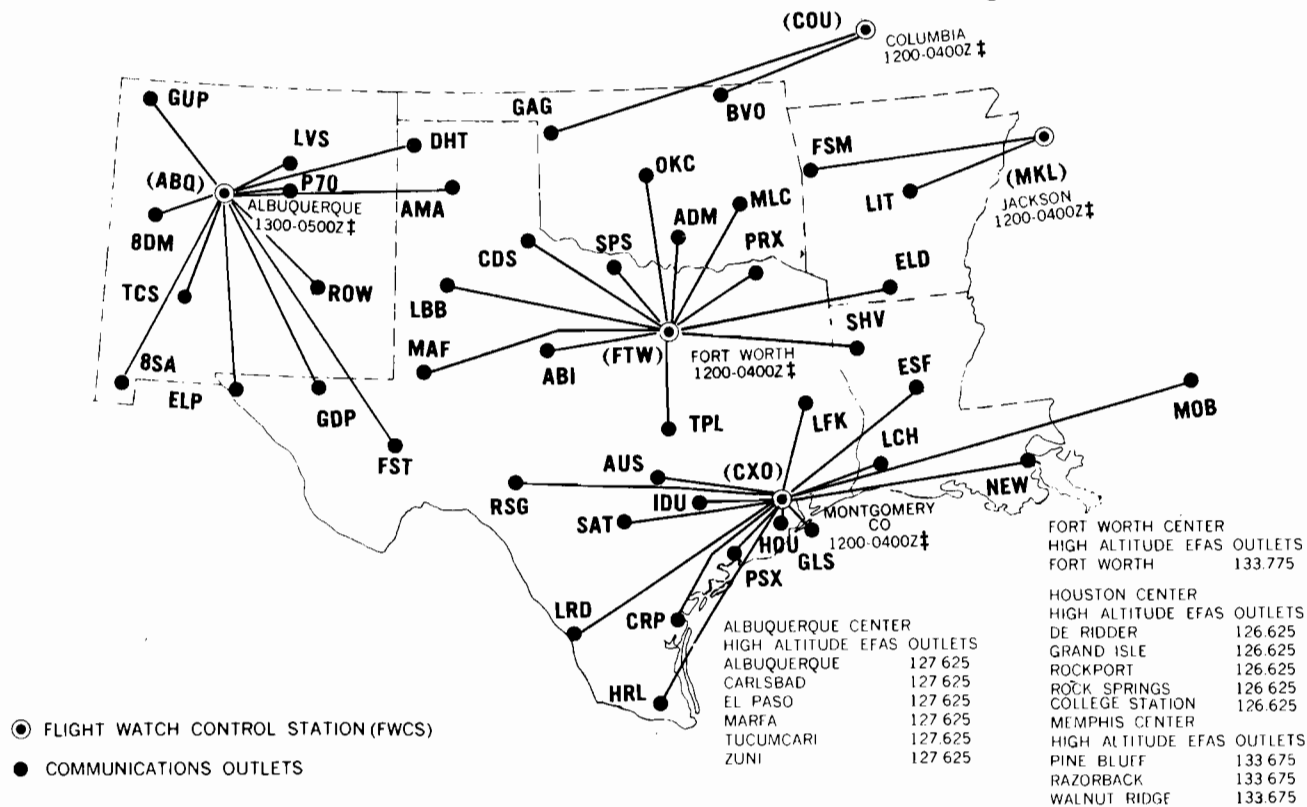
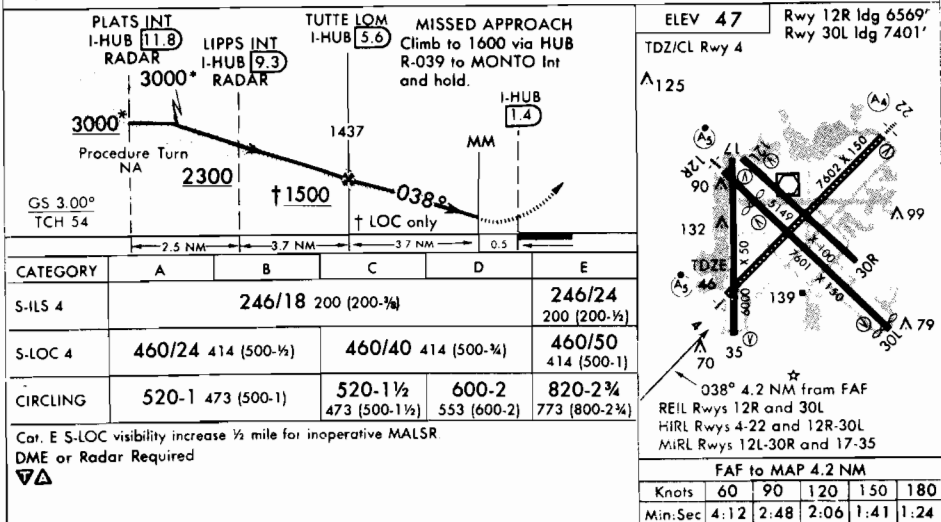
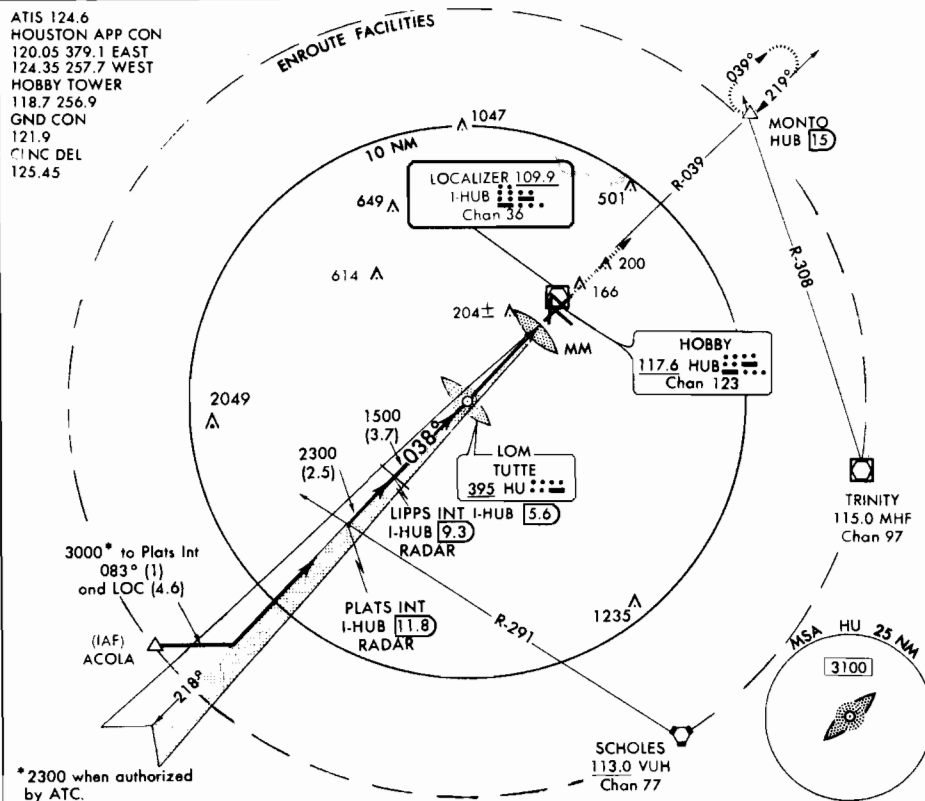


FIGURE 60.—Airport/Facility Directory and Enroute Flight Advisory Service (EFAS).

Amdt 35 91094

ILS RWY 4

AL-198 (FAA)

HOUSTON/WILLIAM P. HOBBY (HOU)
HOUSTON, TEXAS**ILS RWY 4**

29°39'N 95°17'W

HOUSTON, TEXAS
HOUSTON/WILLIAM P. HOBBY (HOU)

FIGURE 60A.—ILS RWY 4 (HOU).

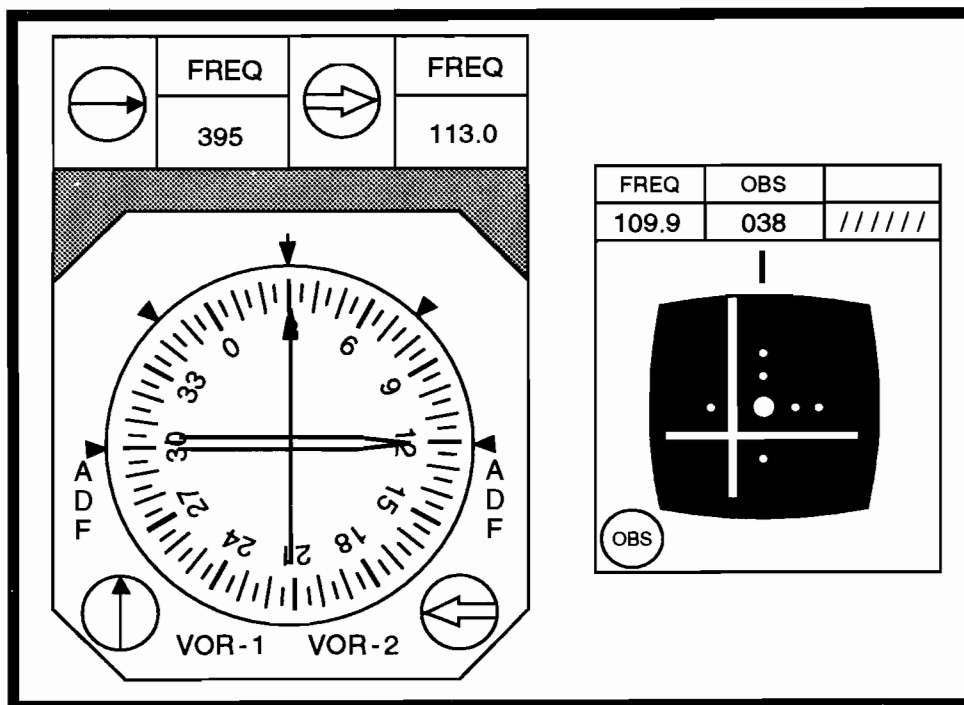


FIGURE 61.—RMI and CDI Indicators.

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAA USE ONLY) ☐ PILOT BRIEFING ☐ VNR ☐ STOPOVER		TIME STARTED		SPECIALIST INITIALS	
1. TYPE		2. AIRCRAFT IDENTIFICATION		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT		4. TRUE AIRSPEED	
☐ VFR		N321JL		HU369/		105 KTS	
☒ IFR							
☐ DVFR							
5. DEPARTURE POINT		6. DEPARTURE TIME		7. CRUISING ALTITUDE			
LFT		PROPOSED (Z)		ACTUAL (Z)		5000	
8. ROUTE OF FLIGHT							
DIRECT LFT, V552 TBD							
9. DESTINATION (Name of airport and city)		10. EST. TIME ENROUTE		11. REMARKS			
HOUMA TERREBONNE LA (HUM)		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		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		2	
16. COLOR OF AIRCRAFT		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 \$1,000 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.					
ORANGE/BLACK/WHITE							

FAA Form 7233-1 (8-82)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Hughes

MODEL 369

N 321JL

Vso N/A

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: X
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 62.—Flight Plan and Aircraft Information.

FLIGHT LOG

LAFAYETTE REGIONAL TO HOUMA TERREBONNE (HUM)

CHECK POINTS		ROUTE		WIND	SPEED-KTS		DIST	TIME		FUEL	
FROM	TO	ALTITUDE	COURSE	TEMP	TAS	GS	NM	LEG	TOT	LEG	TOT
LFT AIRPORT	LFT VOR	DIRECT CLIMB						:05:0			
	HATCH	V552 5000	114°		105						
	GRICE	V552 5000	116°								
	TBD	V552 5000	116°								
APPROACH & LANDING		DESCENT	117°					:10:0			
	HUM AIRPORT										

OTHER DATA:
 NOTE: MAG. VAR. 6° E.

FLIGHT SUMMARY

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

FIGURE 63.—Flight Planning Log.

LOUISIANA

VOR RECEIVER CHECK POINTS

Facility Name (Arpt Name)	Freq/Ident	Type Check Pt. Gnd AB/ALT	Azimuth from Fac. Mag	Dist. from Fac. N.M.	Check Point Description
Baton Rouge (Baton Rouge Metro, Ryan)	116.5/BTR	A/1500	063	7.7	Over water tank W side of arpt.
Downtown	108.6/DTN	A/1500	290	10	Over white water tower.
Esler (Esler Regional)	108.8/ESF	G	151	3.5	On ramp in front of admin bldg.
Hammond (Hammond Muni)	109.6/HMU	G	342	.6	On twy W side app end Rwy 18.
Lafayette (Lafayette Regional)	110.8/LFT	A/1000	340	25	Over rotating beacon
Lake Charles (Lake Charles Muni)	113.4/LCH	A/1000	253	6.2	Over rotg bcn on atct.
Monroe (Monroe Muni)	117.2/MLU	G	209	0.9	On ramp SE of atct.
Natchez (Concordia Parish)	110.0/HEZ	A/1000	247	10.5	Over hangar NW end of field.
New Orleans (Lakefront)	113.2/MSY	A/1000	081	7.7	Over lakefront atct.
Ruston	112.8/RSN	A/2000	343	14	Over hwy & RR crossing at Dubash.
Shreveport (Shreveport Downtown)	108.6/DTN	G	307	.5	On runup area N side of rwy 14.
Shreveport (Shreveport Regional)	117.4/SHV	A/1200	175	19.3	Over old terminal building.
Tibby (Thibodaux Muni)	112.0/TBD	A/1000	006	5.0	Over railroad bridge off apch end rwy 26.
	112.0/TBD	A/1000	117	10.0	Over intersection of rwys 17-35 and 12-30

LAFAYETTE REGIONAL (LFT) 2 SE GMT-6(-5DT) 30°12'14"N 91°59'16"W

HOUSTON

42 B S4 FUEL 100LL, JET A OX 1 CFR Index B

H-4F, L-17C

RWY 03-21: H7651X150 (ASPH-GRVD) S-75, D-170, DT-290 HIRL

IAP

RWY 03: REIL VASI(V4L)—GA 3.0° TCH 35'. Tree.

RWY 21: MALSR VASI(V4L)—GA 3.0° TCH 44'. Tree.

RWY 10-28: H5401X150 (ASPH) S-85, D-110, DT-175 MIRL

RWY 10: REIL (out of svc indefinitely). VASI(V4L)—GA 3.0° TCH 35.33'. Tree.

RWY 28: REIL VASI(V4L)—GA 3.0° TCH 55'. Thld dsplcd 202'. Tree.

RWY 01-19: H5069X150 (ASPH) S-25, D-45

RWY 01: VASI(V4R)—GA 3.0° TCH 50'. Tree.

AIRPORT REMARKS: Attended continuously. Rwy 01-19 closed to air carriers. ACTIVATE MALSR Rwy 21—118.5.

COMMUNICATIONS: CTAF 118.5 ATIS 120.5 Opr 1200-0500Z† UNICOM 122.95

LAFAYETTE FSS (LFT) on arpt. 122.35, 122.2, 122.1R, 110.8T LD 318-233-4952 NOTAM FILE LFT.

② APP/DEP COM 121.1 (011°-190°) 124.0 (191°-010°) (1200-0400Z†)

HOUSTON CENTER APP/DEP COM 133.65 (0400-1200Z†)

TOWER 118.5, 121.35 (Helicopter ops) (1200-0400Z†) GND COM 121.8 CLNC DEL 125.55

STAGE III ctc APP COM within 25 NM below 7000'

RADIO AIDS TO NAVIGATION: NOTAM FILE LFT. VHF/DF ctc LAFAYETTE FSS

(L) VORTAC 110.8 LFT Chan 45 30°08'45"N 91°59'00"W 344°3.0 NM to fld. 40/06E

LAFFS NDB (LOM) 375 LF 30°17'21"N 91°54'29"W 215° 5.8 NM to fld

LAKE MARTIN NDB (MHW) 362 LKM 30°11'33"N 91°52'58"W 270°5.2 NM to fld

ILS/DME 109.5 I-LFT Chan 32 Rwy 21 LOM LAFFS NDB. Unmonitored when twr clsd.

ASR

FIGURE 64.—Excerpt from Airport/Facility Directory (LFT).



83

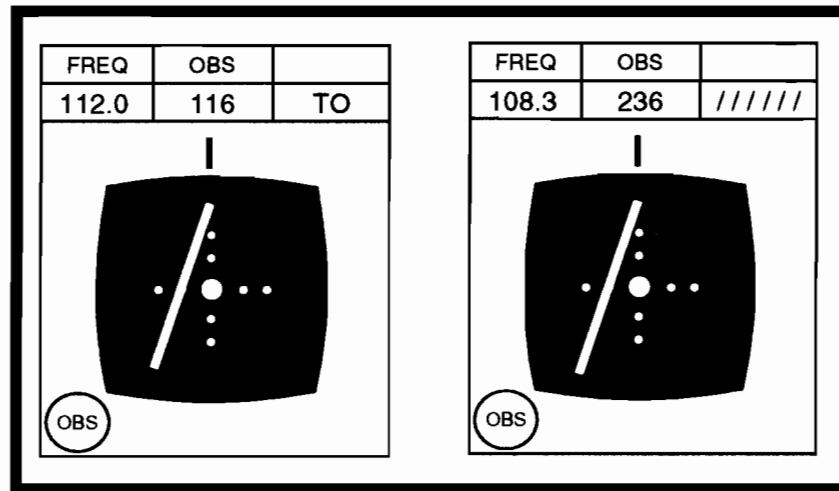


FIGURE 66.—CDI and OBS Indicators.

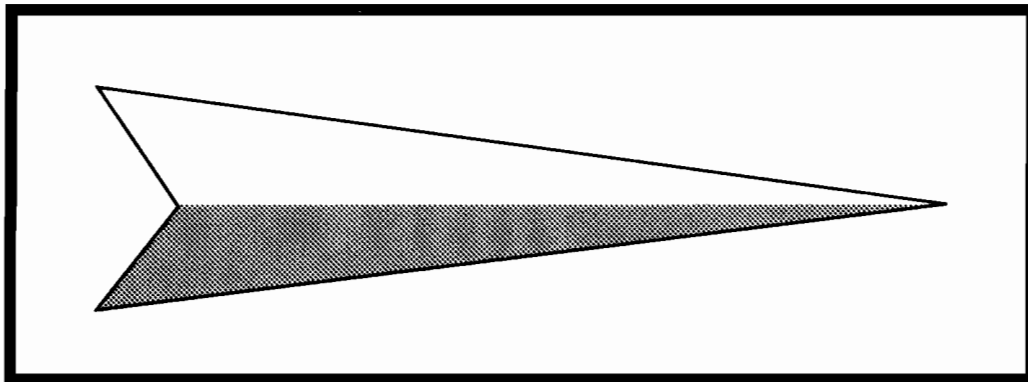


FIGURE 67.—Localizer Symbol.

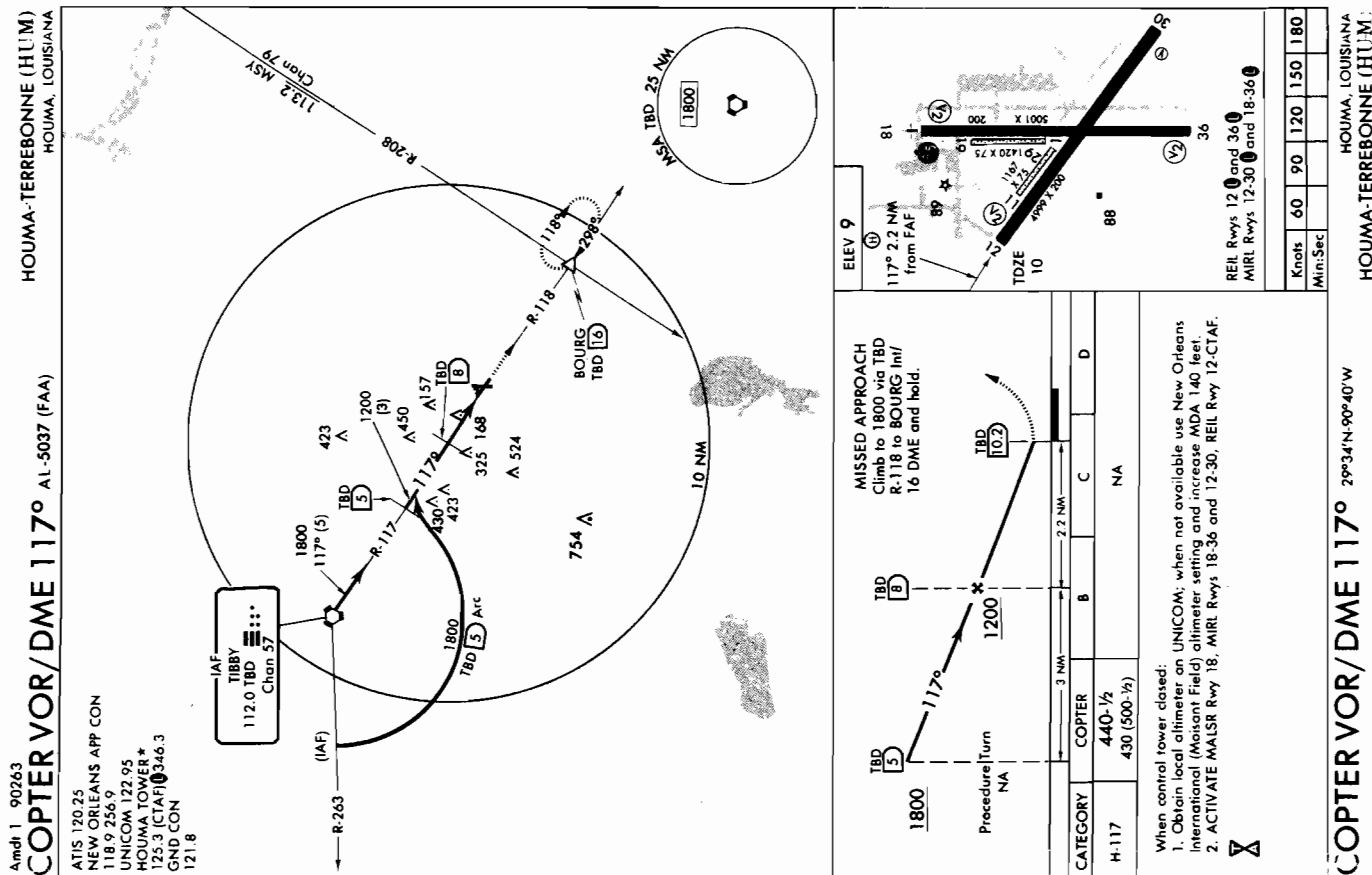


FIGURE 68.—COPTER VOR DME-117 Degrees (HUM).

Form Approved: OMB No. 2120-0034

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN		(FAR USE ONLY) ☐ PILOT BRIEFING ☐ VNR ☐ STGPOVER		TIME STARTED		SPECIALIST INITIALS	
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME PROPOSED (Z) ACTUAL (Z)		7. CRUISING ALTITUDE
☐ VFR ☒ IFR ☐ DVFR	N2142S	C172/	128 KTS	GREENWOOD LAKE 4N1			5000
8. ROUTE OF FLIGHT DIRECT SHAFF INT., V213 HELON INT., V58 JUDDS INT., JUDDS2							
9. DESTINATION (Name of airport and city) BRADLEY INTL. BDL		10. EST. TIME ENROUTE HOURS MINUTES		11. REMARKS INSTRUMENT TRAINING FLIGHT			
12. FUEL ON BOARD HOURS MINUTES		13. ALTERNATE AIRPORT(S) N/A		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE 17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		15. NUMBER ABOARD 2	
16. COLOR OF AIRCRAFT BROWN/TAN/WHITE		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 \$1,000 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.					

FAA Form 7233-1 (8-82)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Cessna

MODEL 172

N 2142S

Vso 33

AIRCRAFT EQUIPMENT/STATUS**

**NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE
 TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) X
 VOR NO. 1 X (NO. 2) X ADF: X RNAV: N/A
 VERTICAL PATH COMPUTER: N/A DME: X
 MARKER BEACON: X (AUDIO) INOP (VISUAL) X

FIGURE 69.—Flight Plan and Aircraft Information.

FLIGHT LOG											
GREENWOOD LAKE (4N1) TO BRADLEY INTL. (BDL)											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
4N1	SHAFF	DIRECT	350°					:08:0			
		CLIMB									
		V213	029°		128						
		5000									
		HELON	V58	102°							
	IGN	5000									
		JUDDS2	112°								
		JUDDS2	100°								
	JUDDS	JUDDS2									
	BRISS		057°								
APPROACH & LANDING								:12:0			
	BDL										
	INTL										

OTHER DATA: NOTE: MAG. VAR. 14° W.	FLIGHT SUMMARY <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
TIME	FUEL (LB)															
		EN ROUTE														
		RESERVE														
		MISSED APPR.														
		TOTAL														

FIGURE 70.—Flight Planning Log.

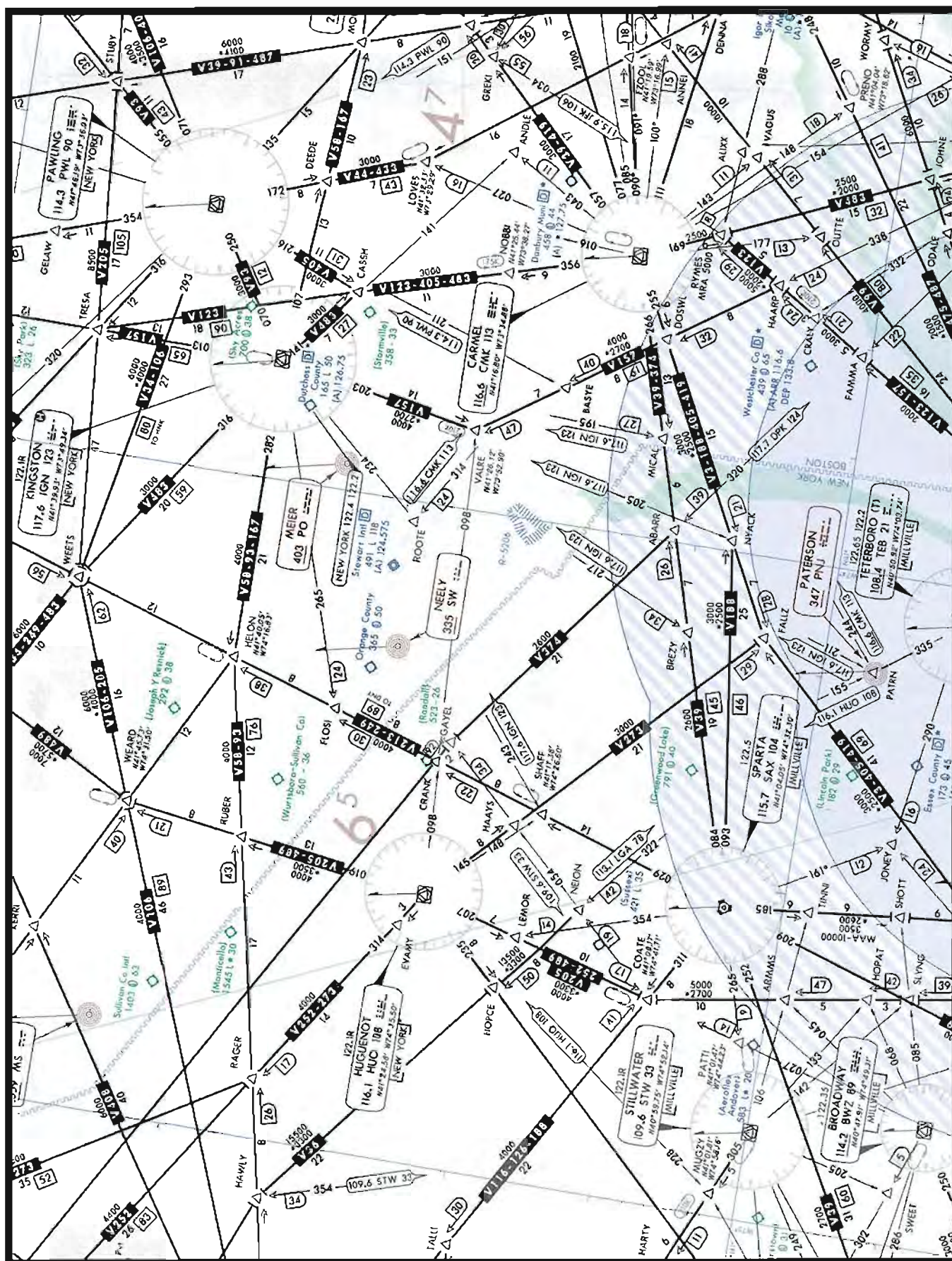


FIGURE 71.—En Route Chart Segment.

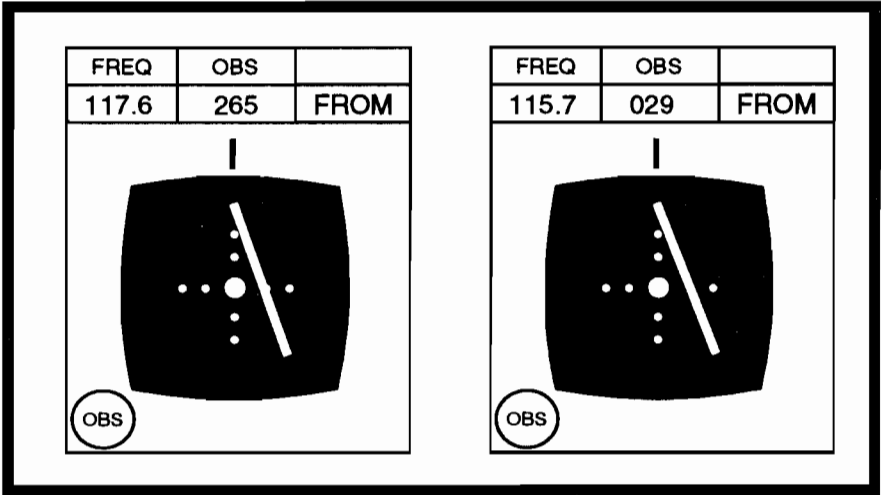
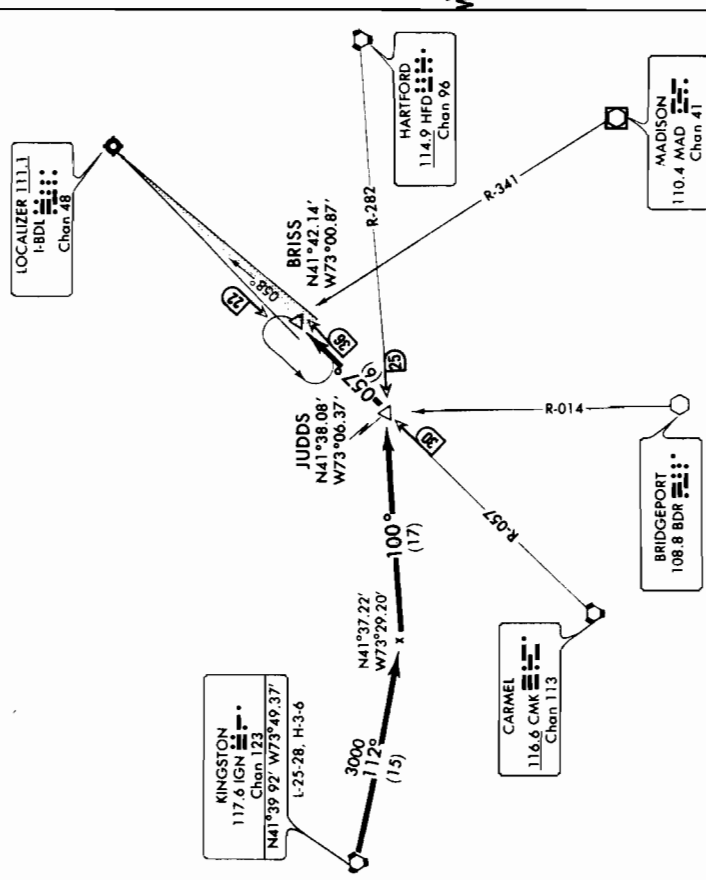


FIGURE 71A.—CDI and OBS Indicators.

91150
JUDDS TWO ARRIVAL (IGN.JUDDS2)
ST-460 (FAA)
BRADLEY INTERNATIONAL
WINDSOR LOCKS, CONNECTICUT
ATIS 118.15



NOTE: Chart not to scale

From over IGN VORTAC via R-112 and HFD R-282 to JUDDS INT; then via CMt R-057 to BRISS INT. Expect radar vectors to final approach course.

JUDDS TWO ARRIVAL (IGN.JUDDS2)
WINDSOR LOCKS, CONNECTICUT
BRADLEY INTERNATIONAL

CONNECTICUT

WINDSOR LOCKS

BRADLEY INTL (BDL) 3 W UTC-5(-4DT) 41°56'20"N 72°41'01"W
174 B S4 FUEL 100LL, JET A OX 1, 2, 3, 4 TPA—See Remarks
LRA ARFF Index D NEW YORK
H-30, 6, L-250, 28
IAP

RWY 06-24: H9502X200 (ASPH-GRVD) S-200, D-200, DT-350, DDT-710 HIRL CL

RWY 06: ALSF2 TDZ, Trees. RWY 24: MALS, VASI(V4L)—GA 3.0°TCH 56'.

RWY 15-33: H6846X200 (ASPH) S-200, D-200, DT-350 HIRL

RWY 15: REIL, VASI(V4L)—GA 3.5°TCH 59'. Trees. RWY 33: MALS, VASI(V4R)—GA 3.0°TCH 59'. Trees

RWY 01-19: H5141X100 (ASPH) S-60, D-190, DT-328 MIRL

RWY 01: Building. RWY 19: Trees.

AIRPORT REMARKS: Attended continuously. Rwy 01-19 restricted to ldg and lft with maximum 141 gross weight of 73,000 pounds. This restriction does not apply to act emergency. Numerous birds frequently on or in vicinity of airport. Portions of taxiway Alpha not visible from tower. TPA—1174(1000) light act, 1874(1700) heavy act. Landing fee for business, corporate and revenue producing aircraft. 24 hours ARFF level D svc avbl. 24 hours PPR for unscheduled air carrier ops with more than 30 passenger seats call airport manager 203-627-3001/3008. This does not include delayed regularly scheduled air carrier ops or diversions. Rwy 15 REIL out of svc indefinitely. Flight Notification Service (ADCUS) available. NOTE: See SPECIAL NOTICE—Simultaneous Operations on Intersecting Runways.

WEATHER DATA SOURCES: LLWAS.

COMMUNICATIONS: ATIS 118.15 UNICOM 122.95

BRIDGEPORT FSS (BDR) TF 1-800-WX-BRIEF, NOTAM FILE BDL.

WINDSOR LOCKS RCO 122.3 (BRIDGEPORT FSS)

BRADLEY APP CON 125.8 (within 20 miles)

BRADLEY DEP CON 121.05 (South) 125.35 (North and West) 123.95 (Northeast)

TOWER 120.3 GND CON 121.9 CLNC DEL 121.75

ARSA ctc APP CON

RADIO AIDS TO NAVIGATION: NOTAM FILE BDL.

(1) VORTAC 109.0 BDL Chan 27 41°56'27"N 72°41'21"W at fld. 165/14W.

VOR portion unusable 090°-103° beyond 24 NM below 5000' 104°-170° beyond 10 NM below 6000' 260°-290° beyond 15 NM below 6000'.

DME portion unusable:

040°-085° beyond 13 NM below 2000'

130°-150° beyond 10 NM below 3000'

170°-195° beyond 14 NM below 3000'

250°-290° beyond 18 NM below 6000'

CHUPP NDB (LOW) 388 BD 41°52'38"N 72°46'00"W 058° 5.2 NM to fld.

ILS/DME 111.1 I-BDL Chan 48 Rwy 06 LOM CHUPP NDB.

ILS/DME 108.55 I-HX Chan 221 Rwy 33

ILS/DME 111.1 I-MYQ Chan 48 Rwy 24

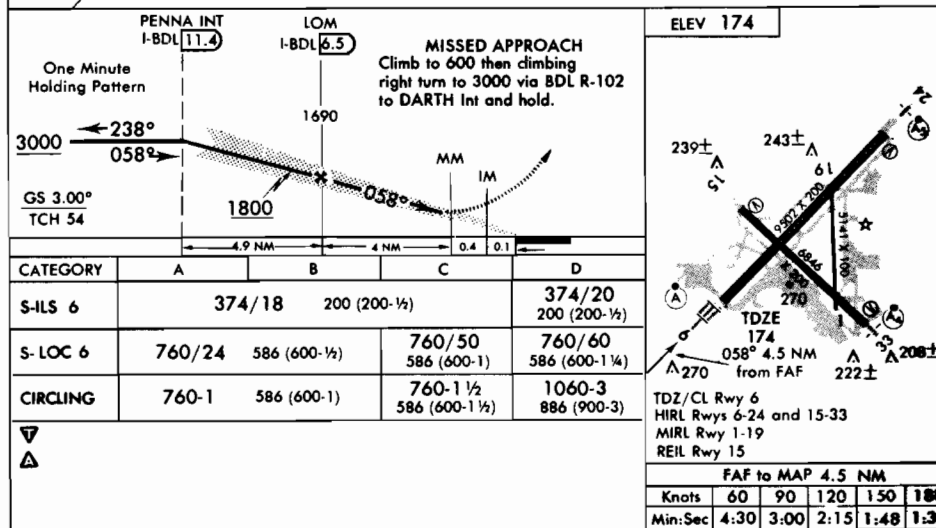
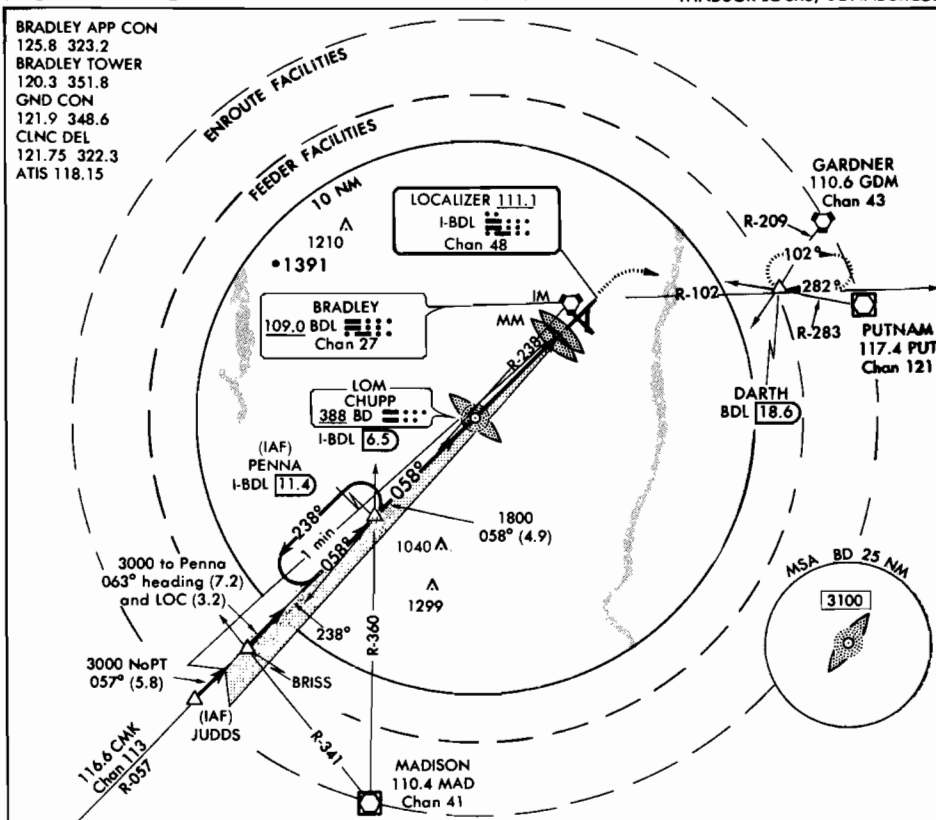
FIGURE 72.—JUDDS TWO ARRIVAL.

ILS RWY 6

AL-460 (FAA)

WINDSOR LOCKS/BRADLEY INTL (BDL)

WINDSOR LOCKS, CONNECTICUT



ILS RWY 6

41°56'N-72°41'W

WINDSOR LOCKS, CONNECTICUT
WINDSOR LOCKS/BRADLEY INTL (BDI)

FIGURE 73.—ILS RWY 6 (BDL).

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION FLIGHT PLAN				(FAA USE ONLY) ☐ PILOT BRIEFING ☐ VNR ☐ STOROVER		TIME STARTED		SPECIALIST INITIALS					
1. TYPE VFR X IFR DVFR		2. AIRCRAFT IDENTIFICATION N242T		3. AIRCRAFT TYPE/SPECIAL EQUIPMENT C310/		4. TRUE AIRSPEED 160 KTS		5. DEPARTURE POINT HLN		6. DEPARTURE TIME PROPOSED (Z) ACTUAL (Z)		7. CRUISING ALTITUDE 11000	
8. ROUTE OF FLIGHT STAKK2, V365 BZN, V86													
9. DESTINATION (Name of airport and city) LOGAN INTL. AIRPORT (BIL)			10. EST. TIME ENROUTE HOURS MINUTES		11. REMARKS								
12. FUEL ON BOARD HOURS MINUTES		13. ALTERNATE AIRPORT(S) N/A		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE 17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)				15. NUMBER ABOARD 2					
16. COLOR OF AIRCRAFT RED/BLACK/WHITE			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 \$1,000 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.										

FAA Form 7233-1 (8-82)
CLOSE VFR FLIGHT PLAN WITH
FSS ON ARRIVAL

AIRCRAFT INFORMATION

MAKE Cessna MODEL 310R
N 242T Vso 72

AIRCRAFT EQUIPMENT/STATUS**

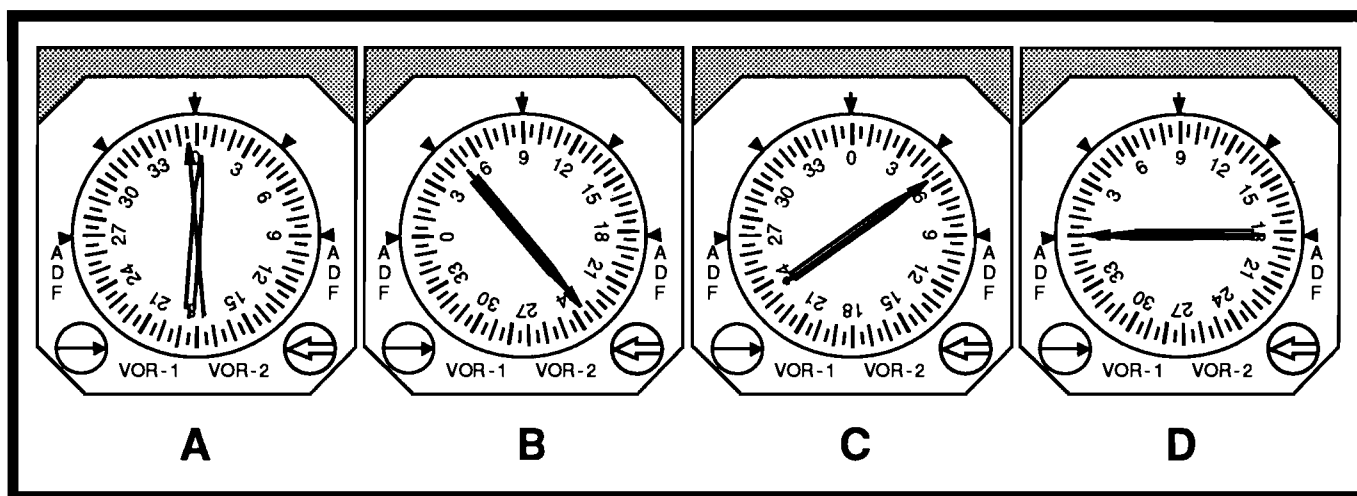
****NOTE: X= OPERATIVE INOP= INOPERATIVE N/A= NOT APPLICABLE**
TRANSPONDER: X (MODE C) X ILS: (LOCALIZER) X (GLIDE SLOPE) INOP
VOR NO. 1 X (NO. 2) X ADF: X RNAV: N/A
VERTICAL PATH COMPUTER: N/A DME: X
MARKER BEACON: X (AUDIO) X (VISUAL) X

FIGURE 74.—Flight Plan and Aircraft Information.

FLIGHT LOG											
HELENA REGIONAL AIRPORT TO BILLINGS LOGAN INTL.											
CHECK POINTS		ROUTE	COURSE	WIND	SPEED-KTS		DIST NM	TIME		FUEL	
FROM	TO	ALTITUDE		TEMP	TAS	GS		LEG	TOT	LEG	TOT
HLN	VESTS	STAKK2	103°					:15:0			
		CLIMB									
		V365	140°			160					
		BZN		V86							
		LVM	11000	110° 063°							
		V86									
	REEPO	11000	067°								
		V86									
	BIL		069°								
APPROACH & LANDING								:15:0			
	LOGAN INTL										

OTHER DATA: NOTE: MAG. VAR. 18° E.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3">FLIGHT SUMMARY</th> </tr> <tr> <th>TIME</th> <th>FUEL (LB)</th> <th></th> </tr> <tr> <td></td> <td></td> <td>EN ROUTE</td> </tr> <tr> <td></td> <td></td> <td>RESERVE</td> </tr> <tr> <td></td> <td></td> <td>MISSED APPR.</td> </tr> <tr> <td></td> <td></td> <td>TOTAL</td> </tr> </table>	FLIGHT SUMMARY			TIME	FUEL (LB)				EN ROUTE			RESERVE			MISSED APPR.			TOTAL
FLIGHT SUMMARY																			
TIME	FUEL (LB)																		
		EN ROUTE																	
		RESERVE																	
		MISSED APPR.																	
		TOTAL																	

FIGURE 75.—Flight Planning Log.



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 H-1C, L-9B
 RWY 09-27: H9000X150 (ASPH-PFC) S-100, D-160, DT-250 HIRL IAP
 RWY 09: VASI(V4L)—GA 3.0°TCH 45'. Ground. RWY 27: MALSR. VASI(V4L)—GA 3.0°TCH 55'. Rgt ttc.
 RWY 05-23: H4599X75 (ASPH-PFC) S-21, D-30
 RWY 05: Road. RWY 23: Fence. Rgt ttc.
 RWY 16-34: H2979X75 (ASPH) S-21, D-30 MIRL
 RWY 34: Ground. Rgt ttc.
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 HIRL Rwy 09-27 and MALSR Rwy 27—CTAF, when twr closed MIRL 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)
 UNICOM 122.95
GREAT FALLS FSS (GTF) TF 1-800-WX-BRIEF. NOTAM FILE HLN.
RCO 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.
(H) VORTAC 117.7 HLN Chan 124 46°36'25"N 111°57'10"W 254° 1.2 NM to fld. 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'
CAPITOL NDB (HW) 317 CVP 46°36'24"N 111°56'11"W 254° 1.9 NM to fld.
 NDB unmonitored when tower closed.
HAUSER NDB (MHW) 386 HAU 46°34'08"N 111°45'26"W 268° 9.6 NM to fld.
 ILS 110.1 I-HLN Rwy 27 ILS unmonitored when tower closed.

VOR RECEIVER CHECK

Facility Name (Arprt 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 twr 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.— VOR Indications and Excerpts from Airport/Facility Directory (HLN).

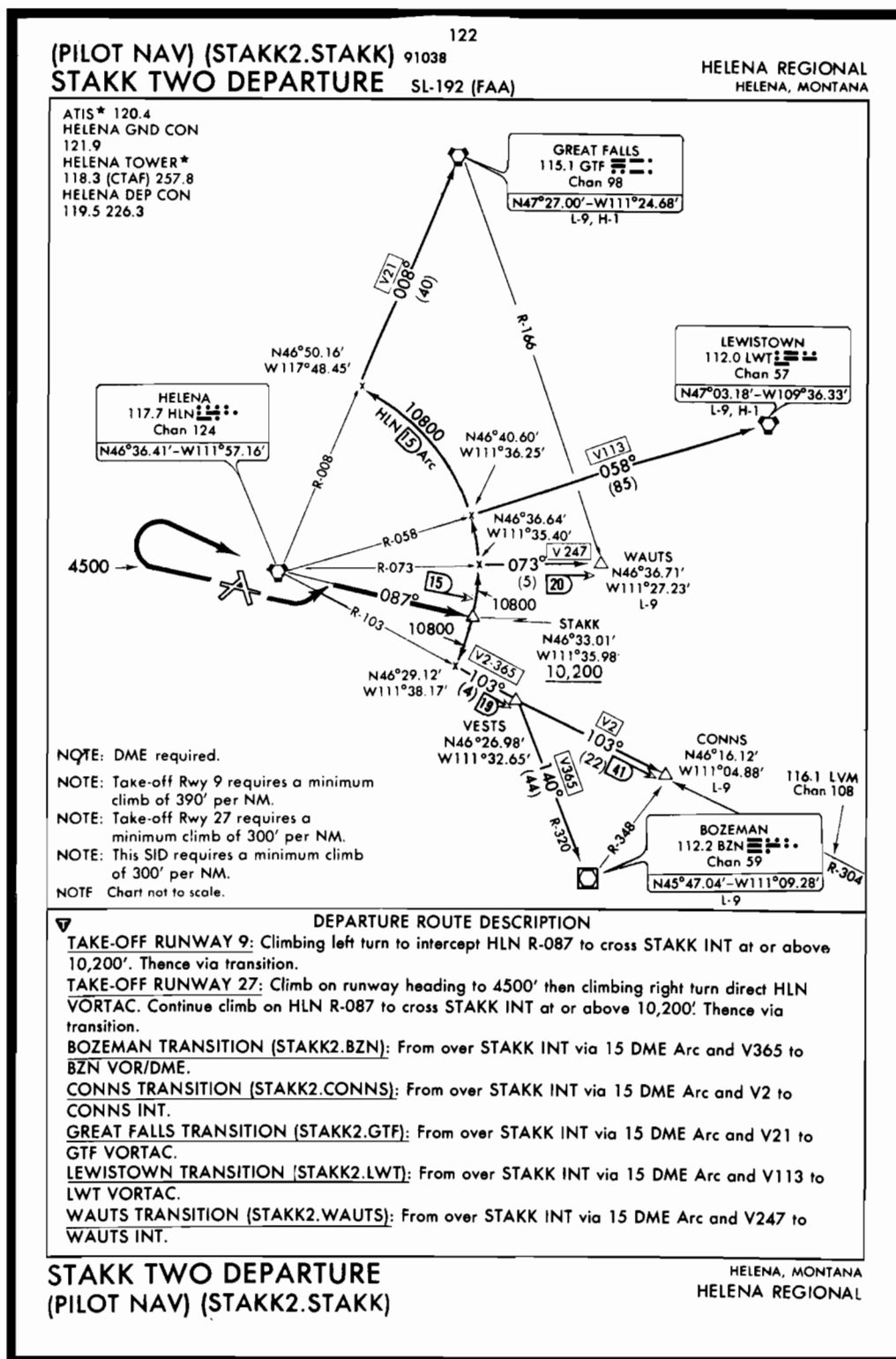


FIGURE 77.—STAKK TWO DEPARTURE.

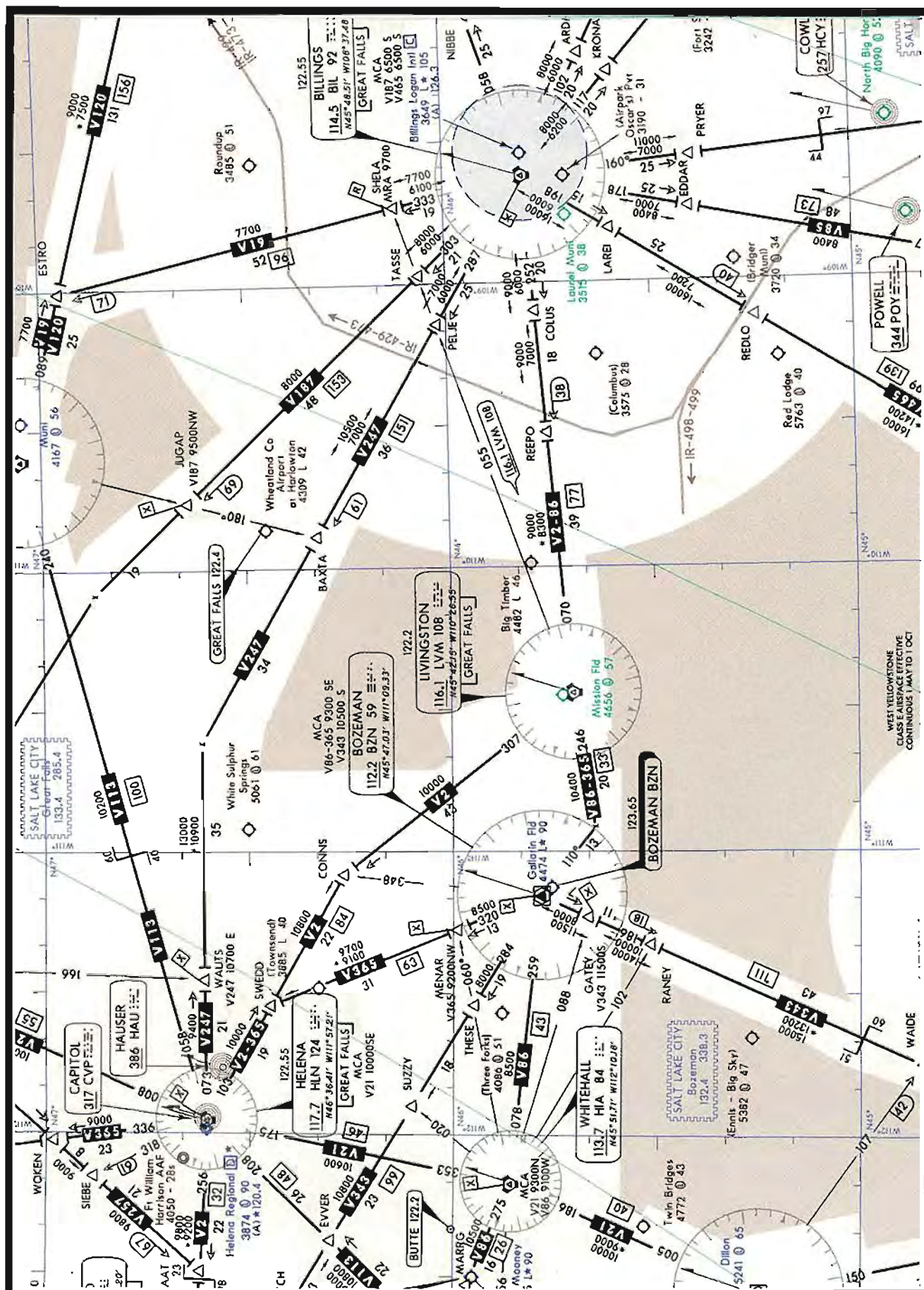


FIGURE 78.—En Route Chart Segment.

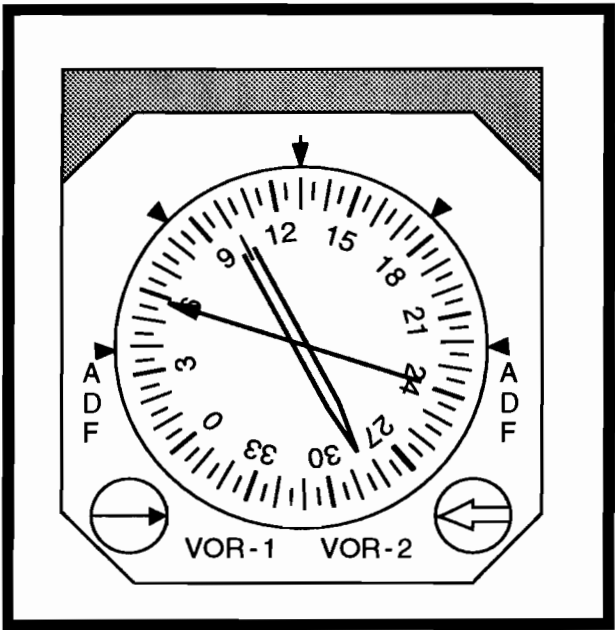


FIGURE 79.—RMI Indicator.

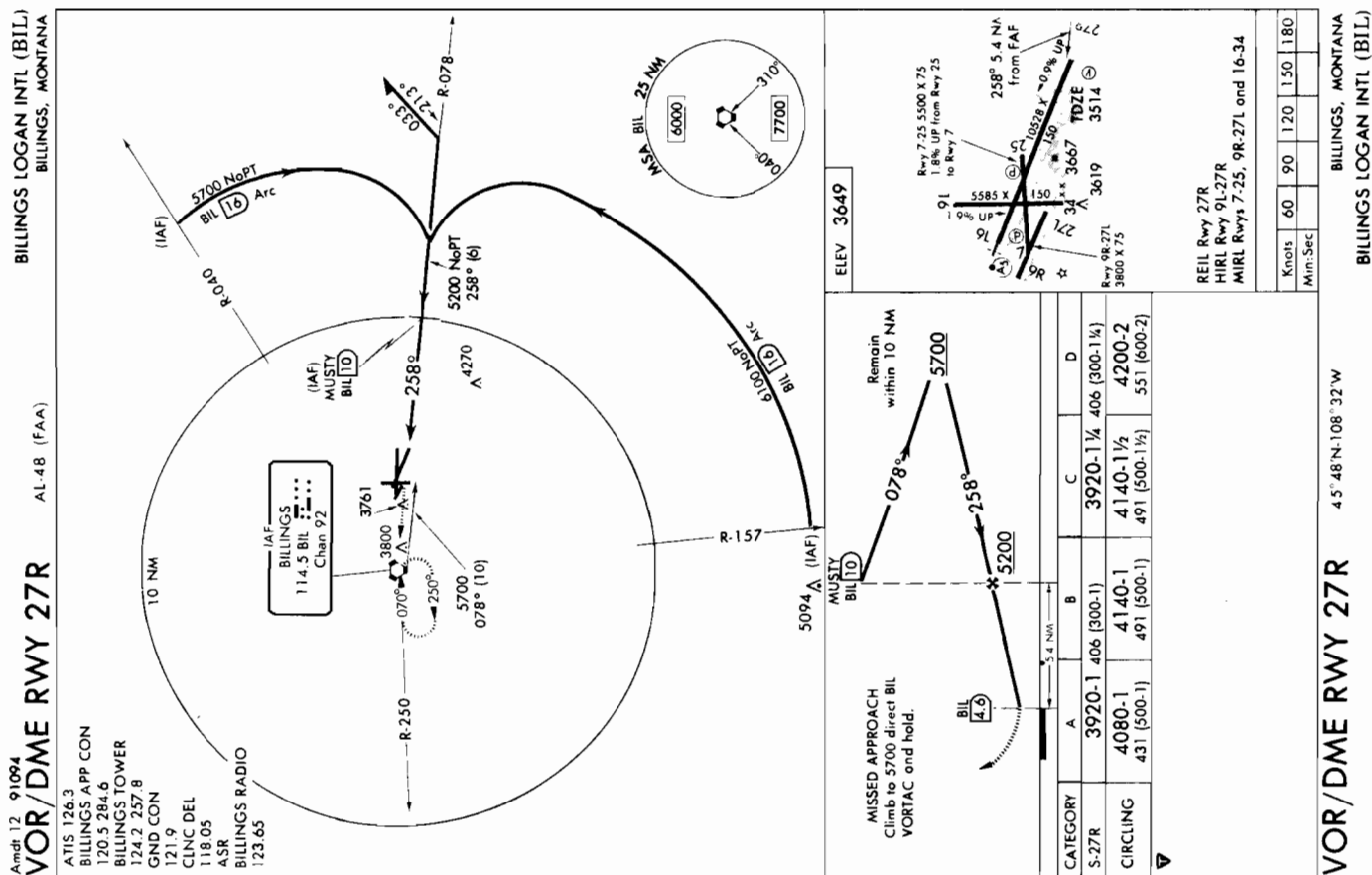


FIGURE 80.—VOR/DME RWY 27R and Airport/Facility Directory (BIL).

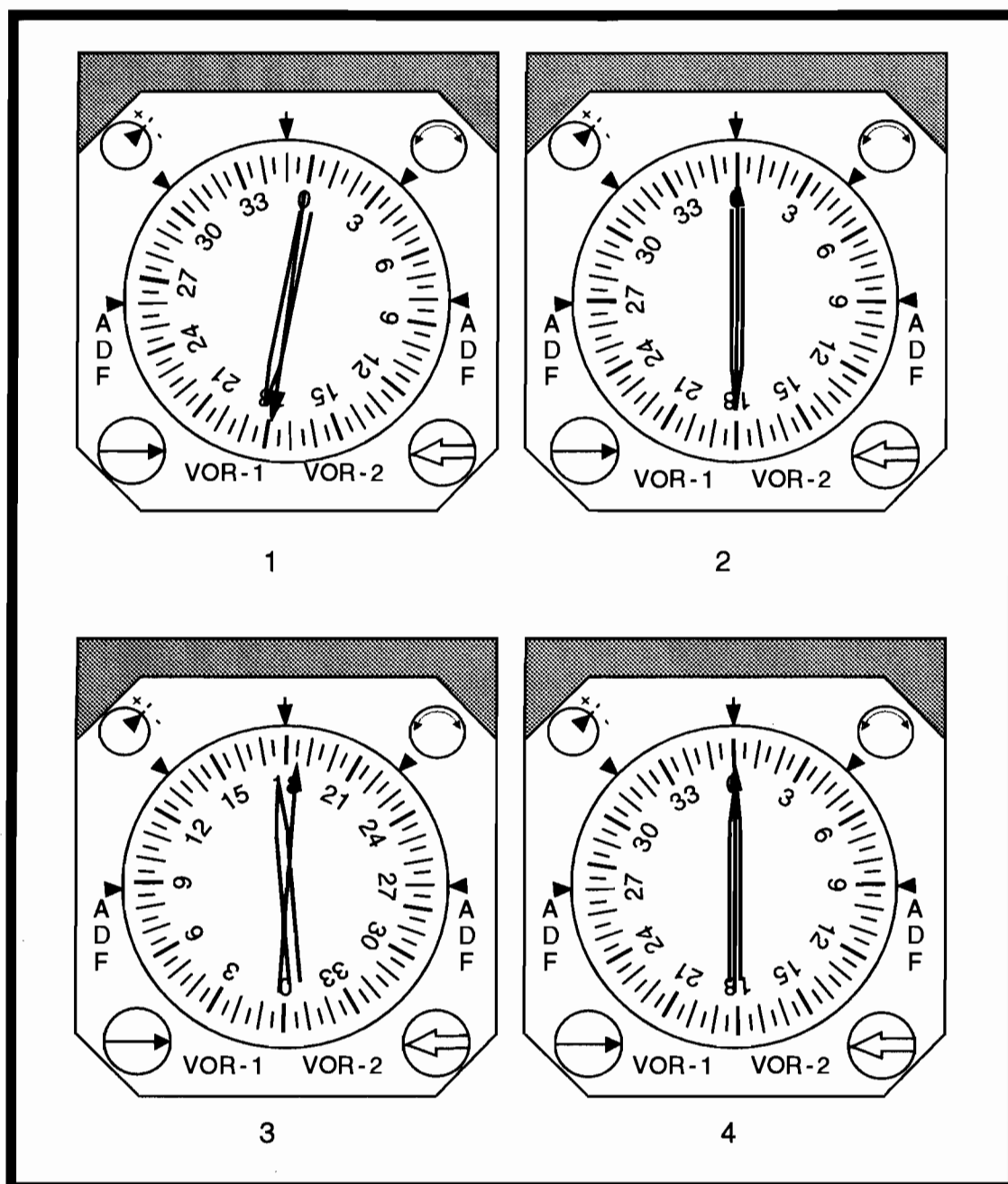


FIGURE 81.—Dual VOR System, VOT Check.

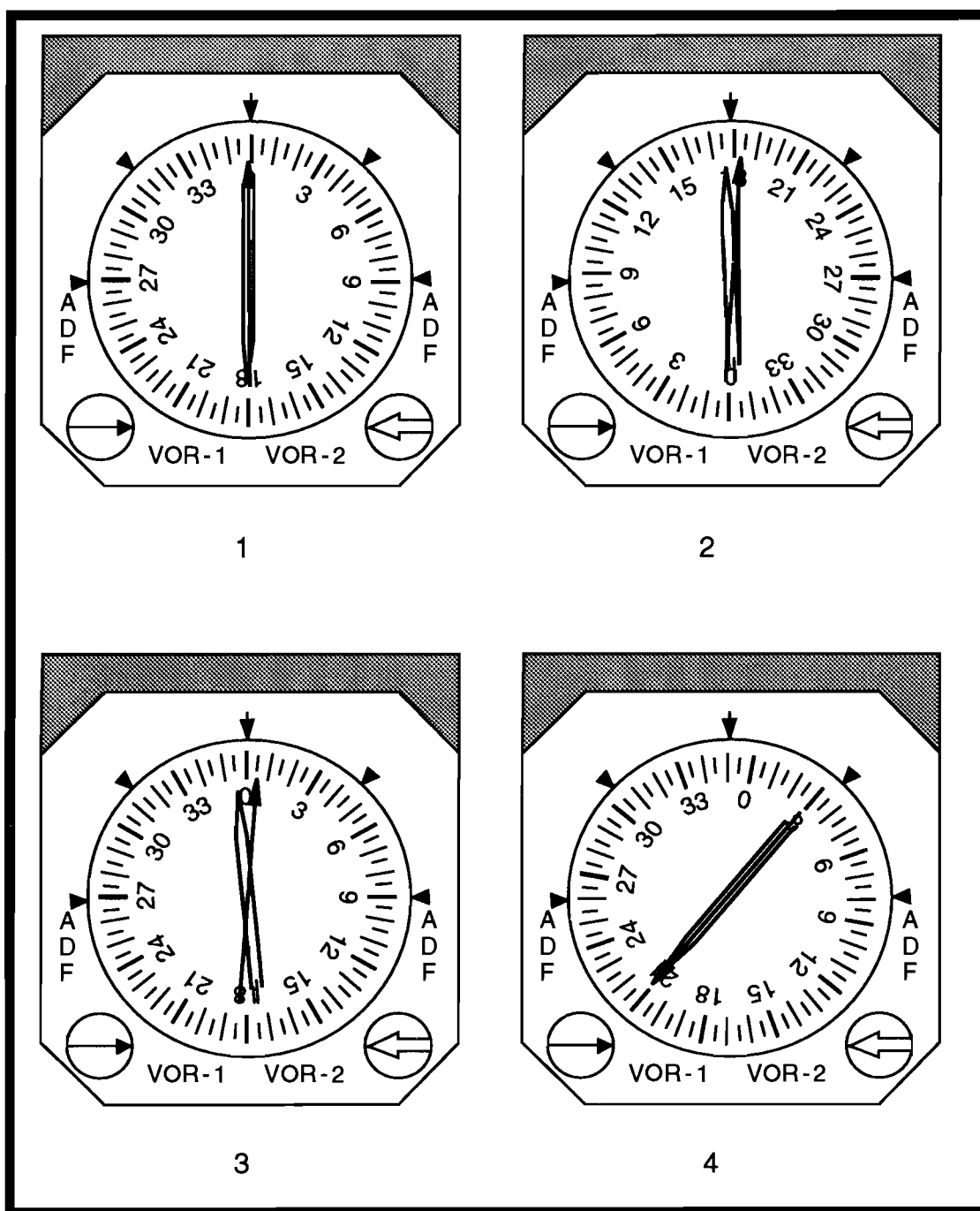


FIGURE 82.—Dual VOR System, Accuracy Check.

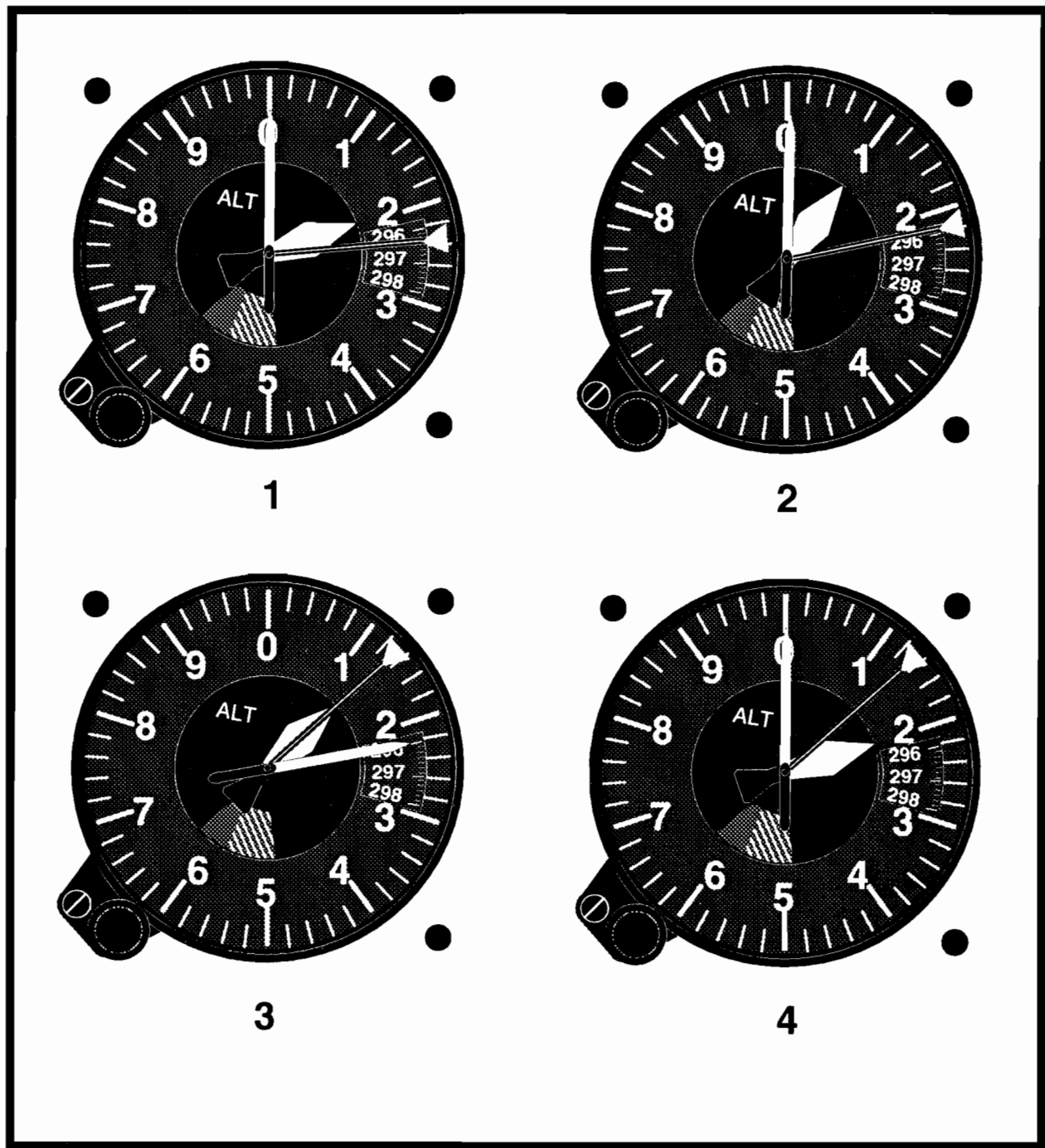


FIGURE 83.—Altimeter/12,000 Feet.

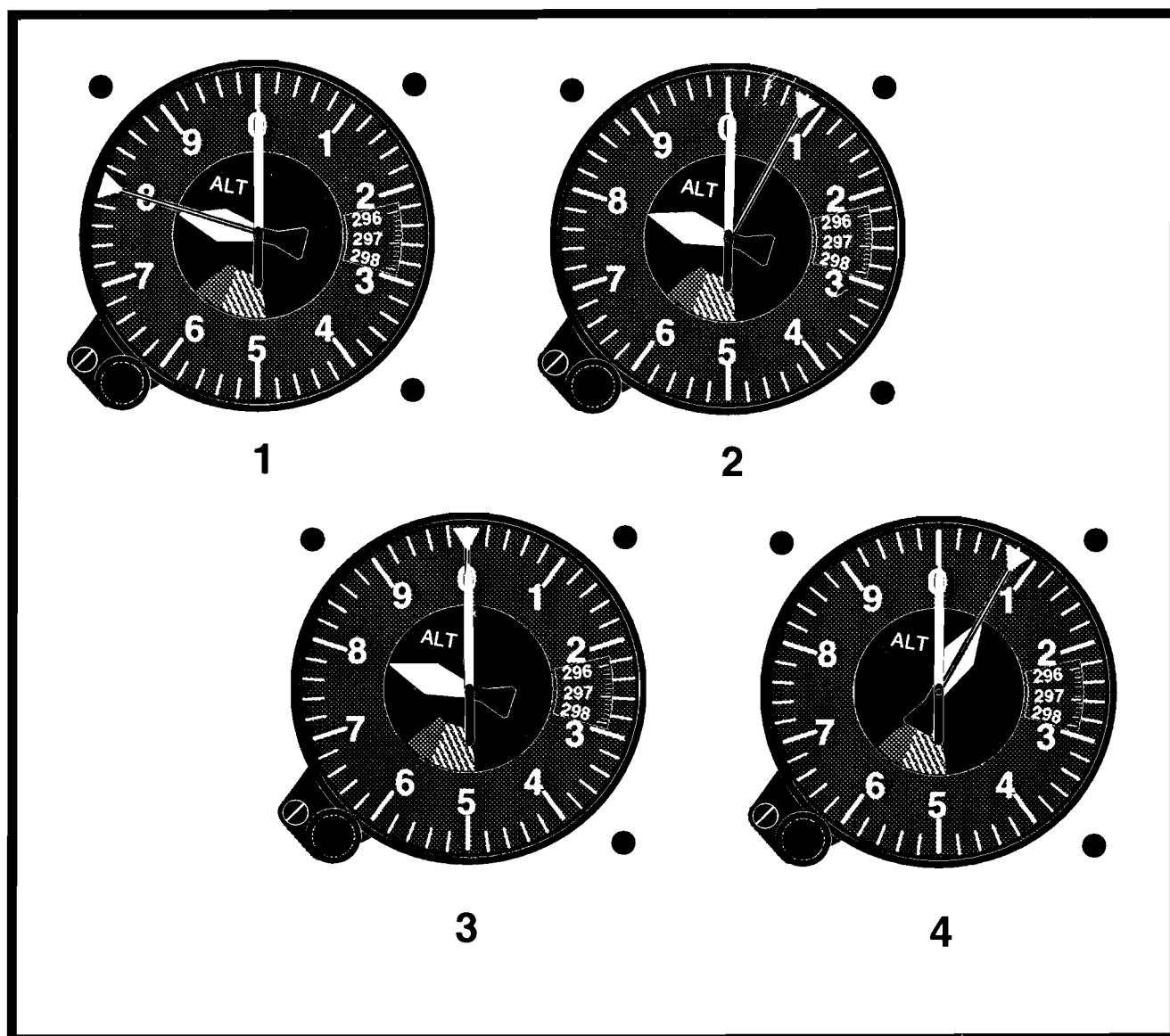


FIGURE 84.—Altimeter/8,000 Feet.

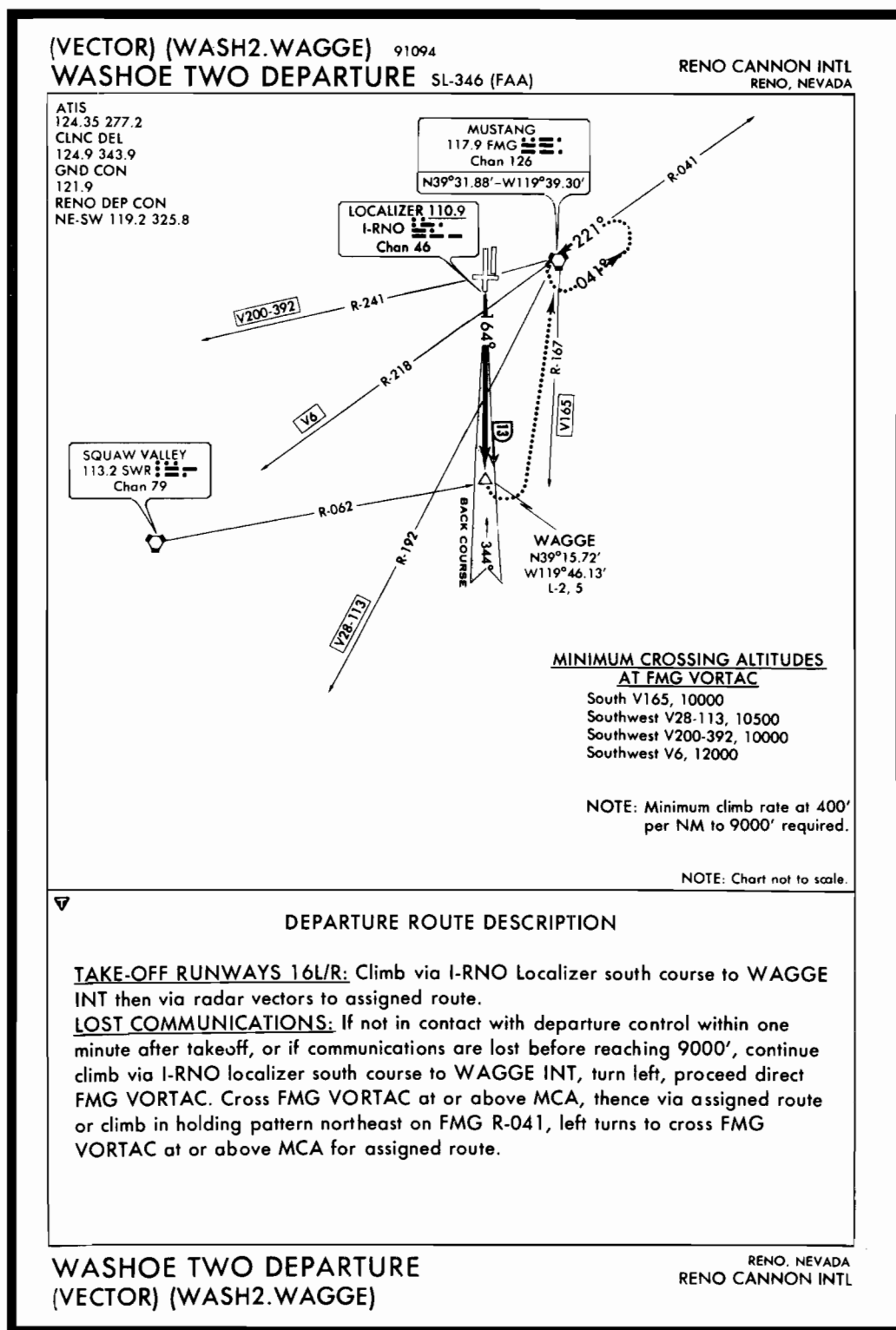


FIGURE 85.—WASHOE TWO DEPARTURE.

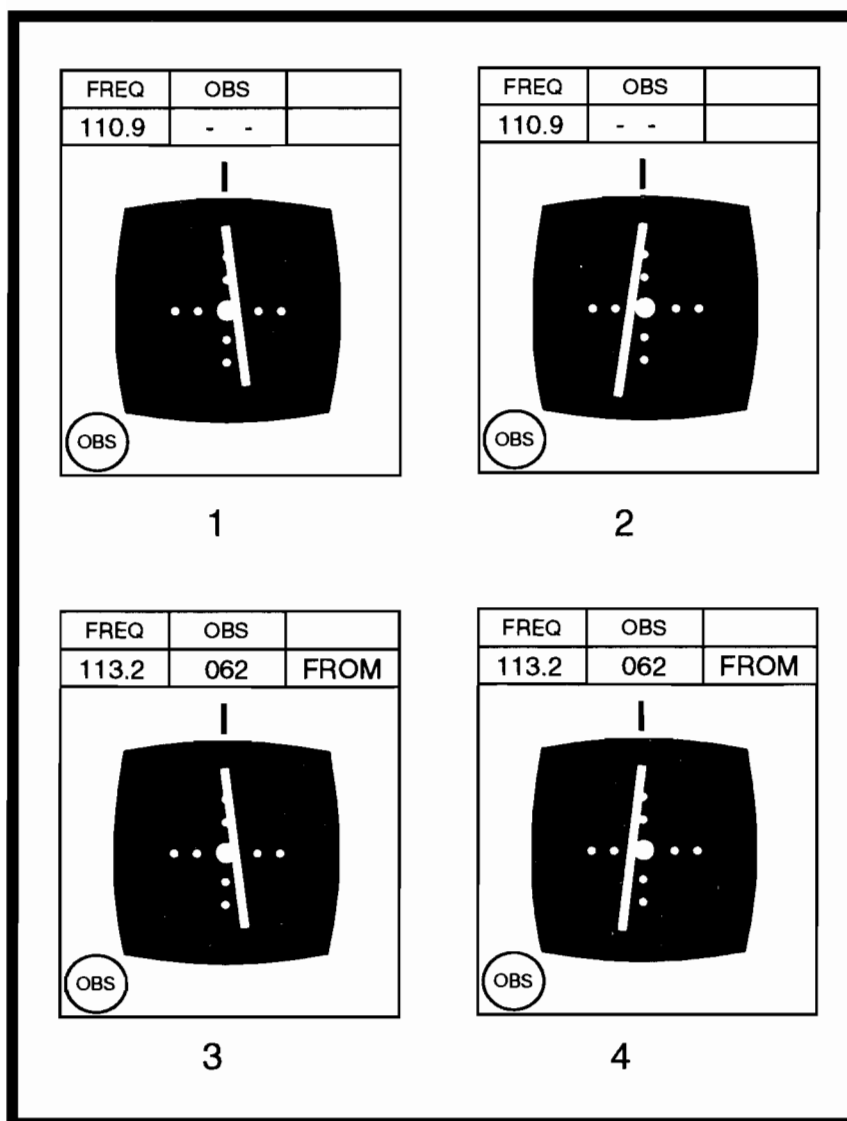


FIGURE 86.—CDI and OBS Indicators.

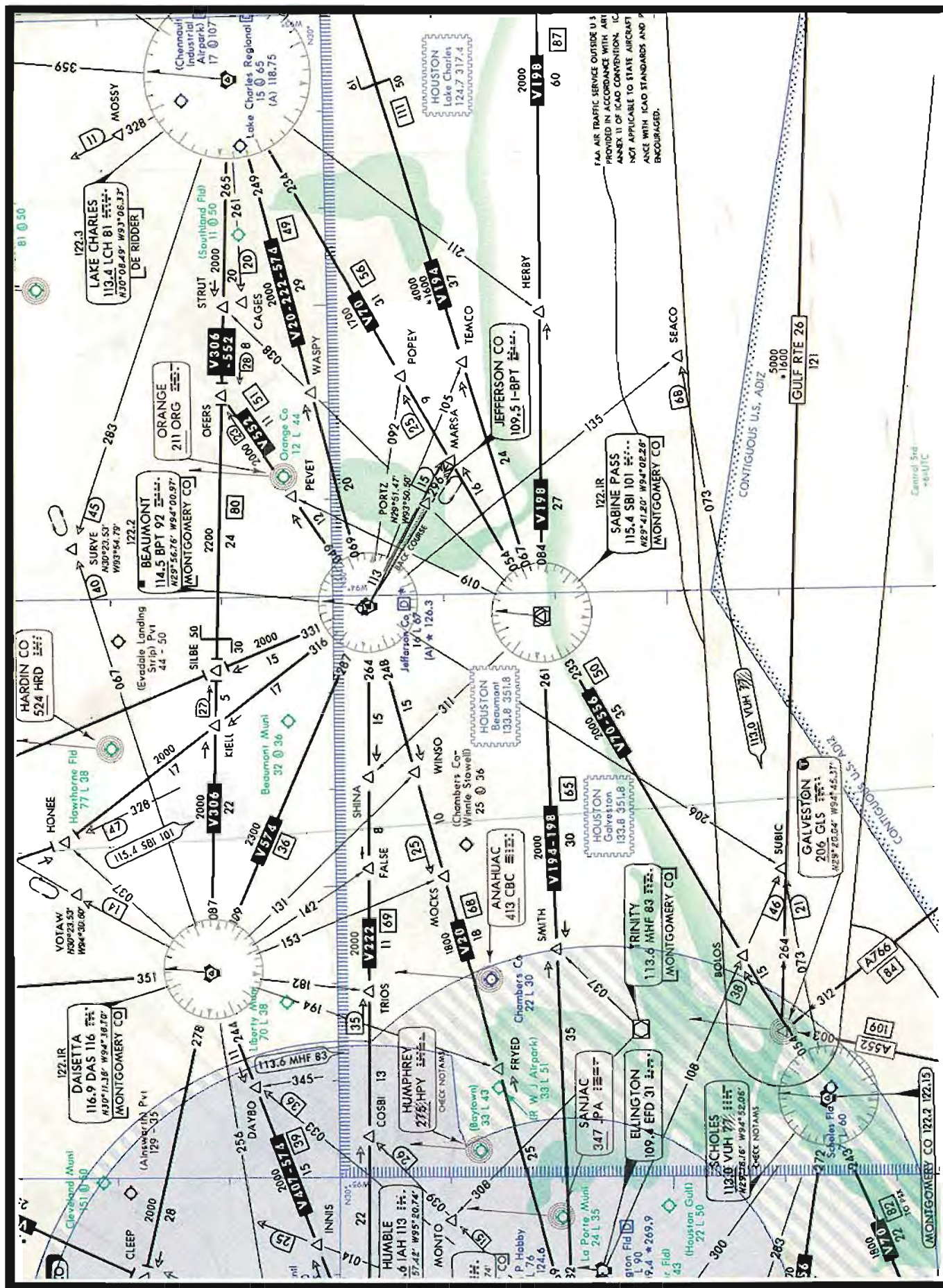


FIGURE 87.—En Route Chart Segment.

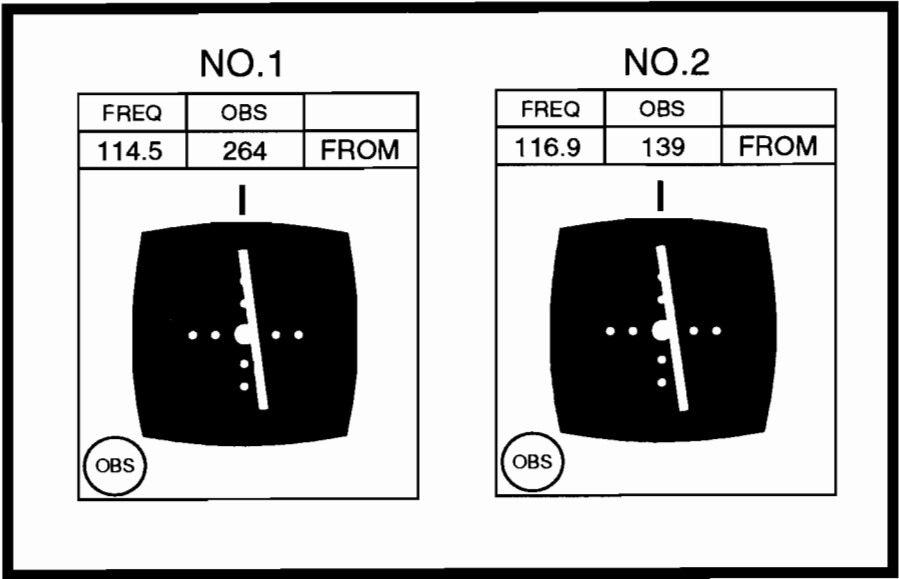


FIGURE 88.—CDI and OBS Indicators.

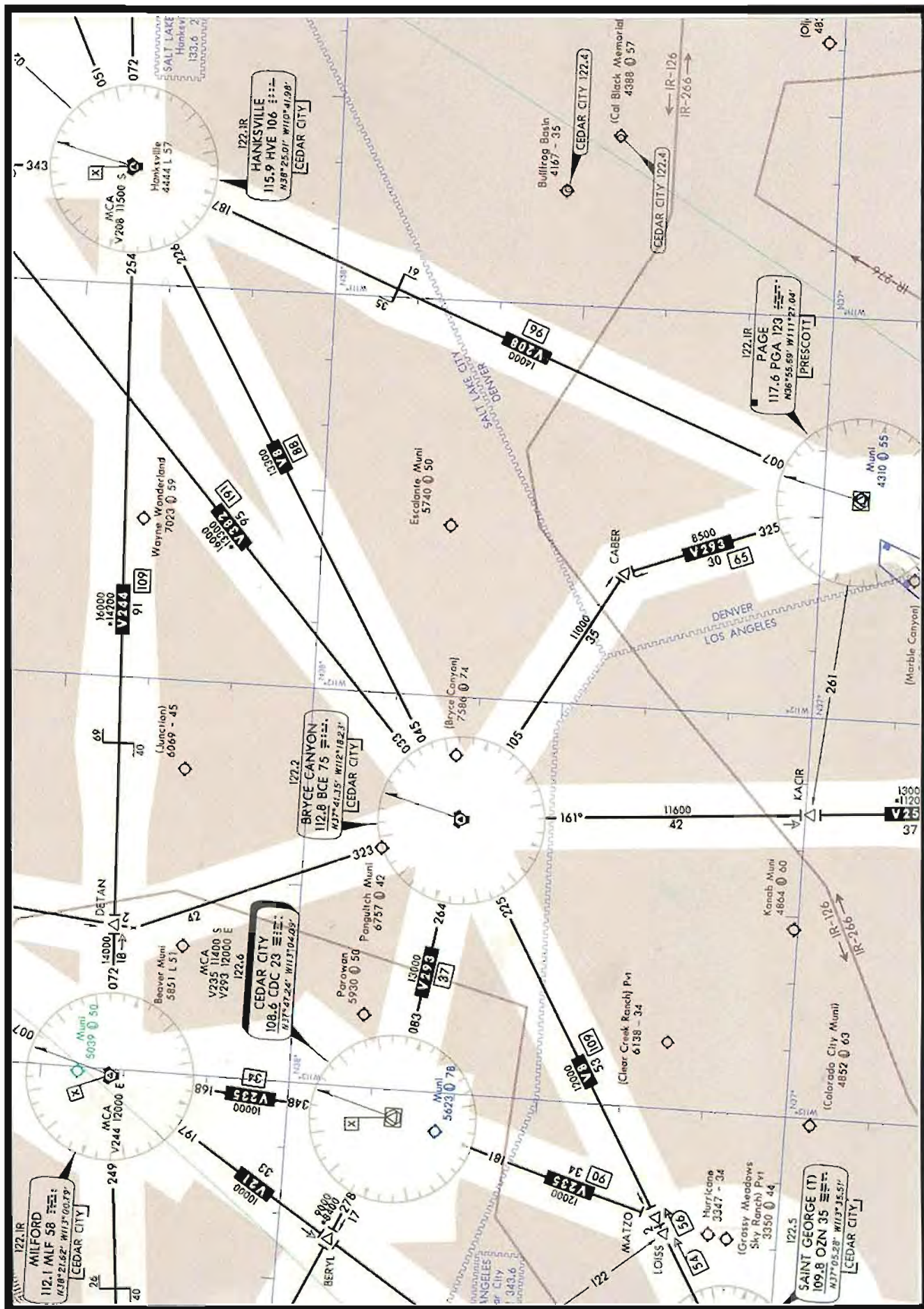


FIGURE 89.—En Route Chart Segment.

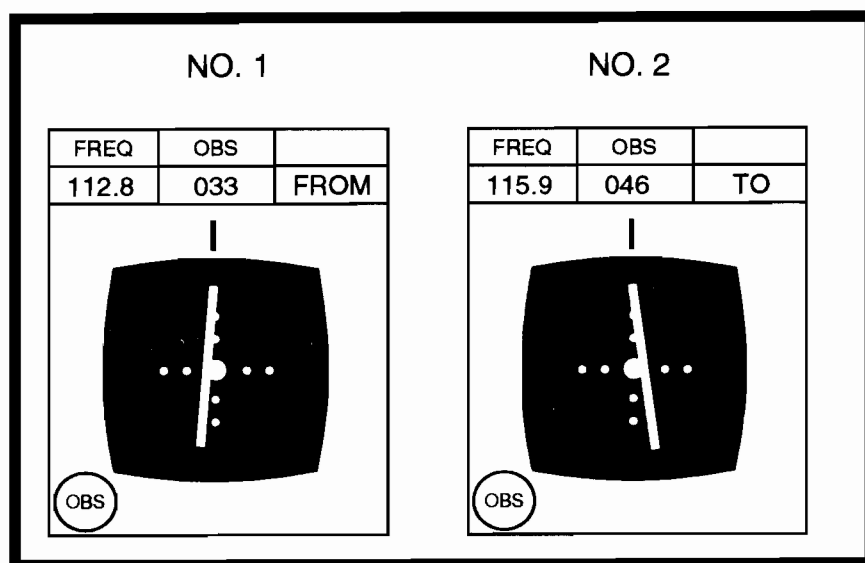


FIGURE 90.—CDI/OBS Indicators.

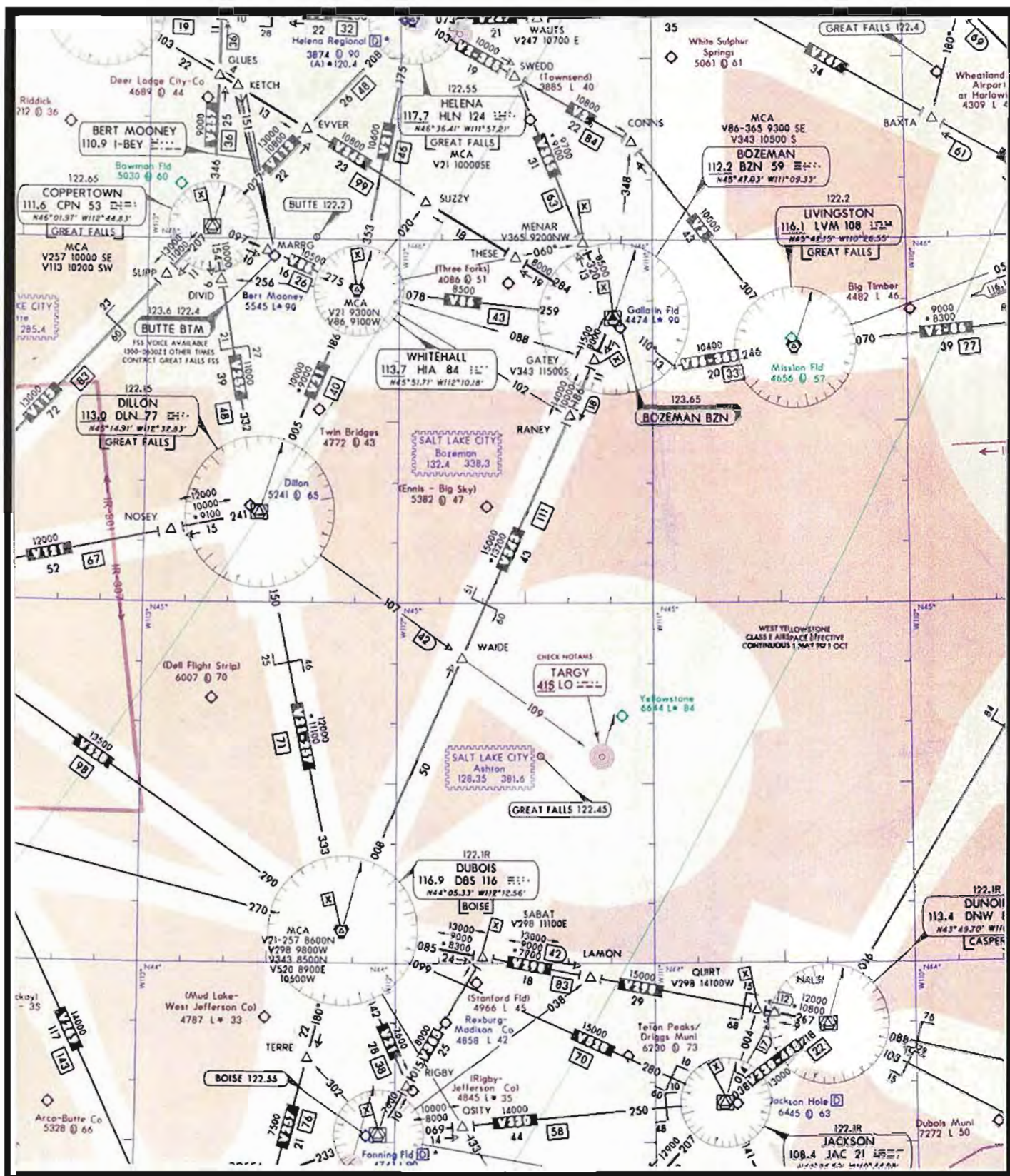


FIGURE 91.—En Route Chart Segment.

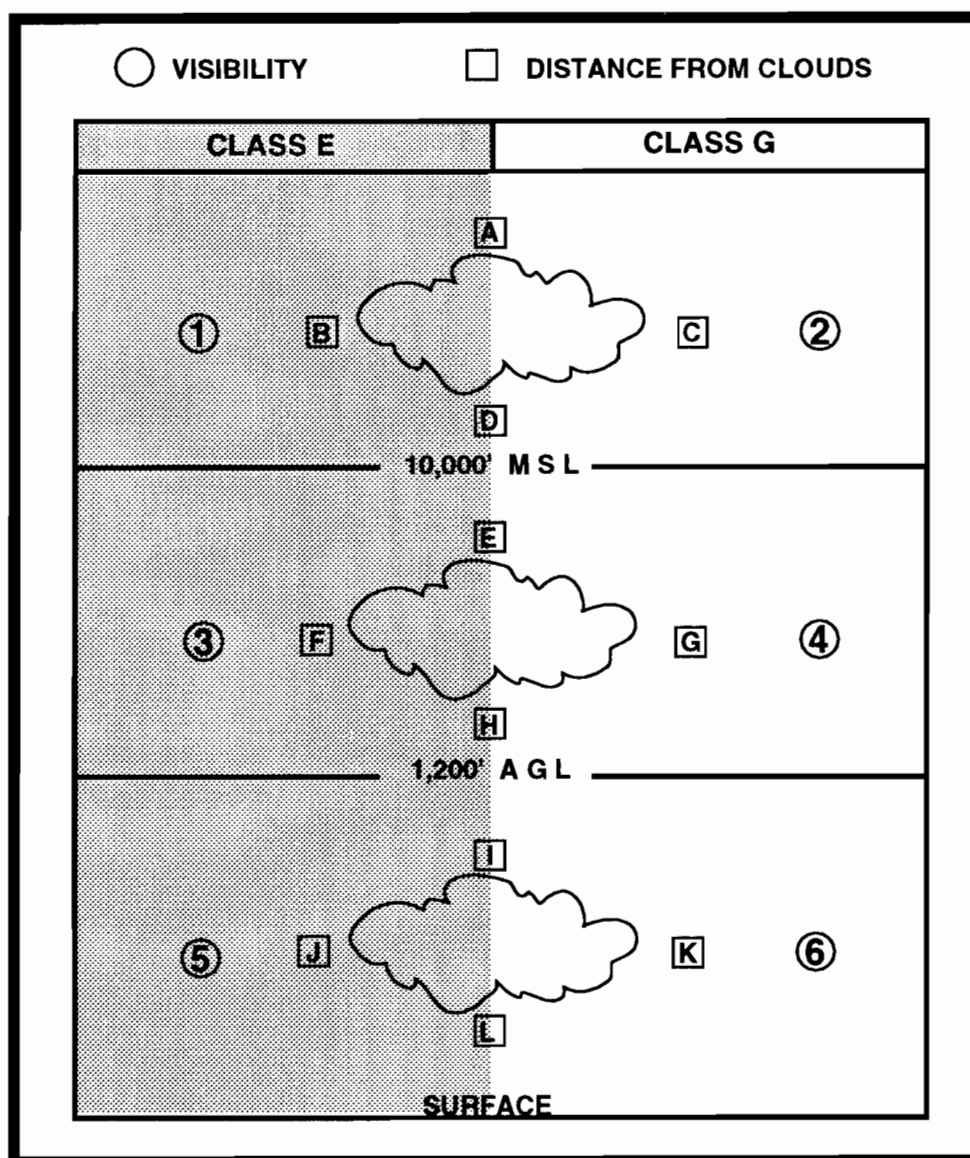


FIGURE 92.—Minimum In-Flight Visibility and Distance from Clouds.

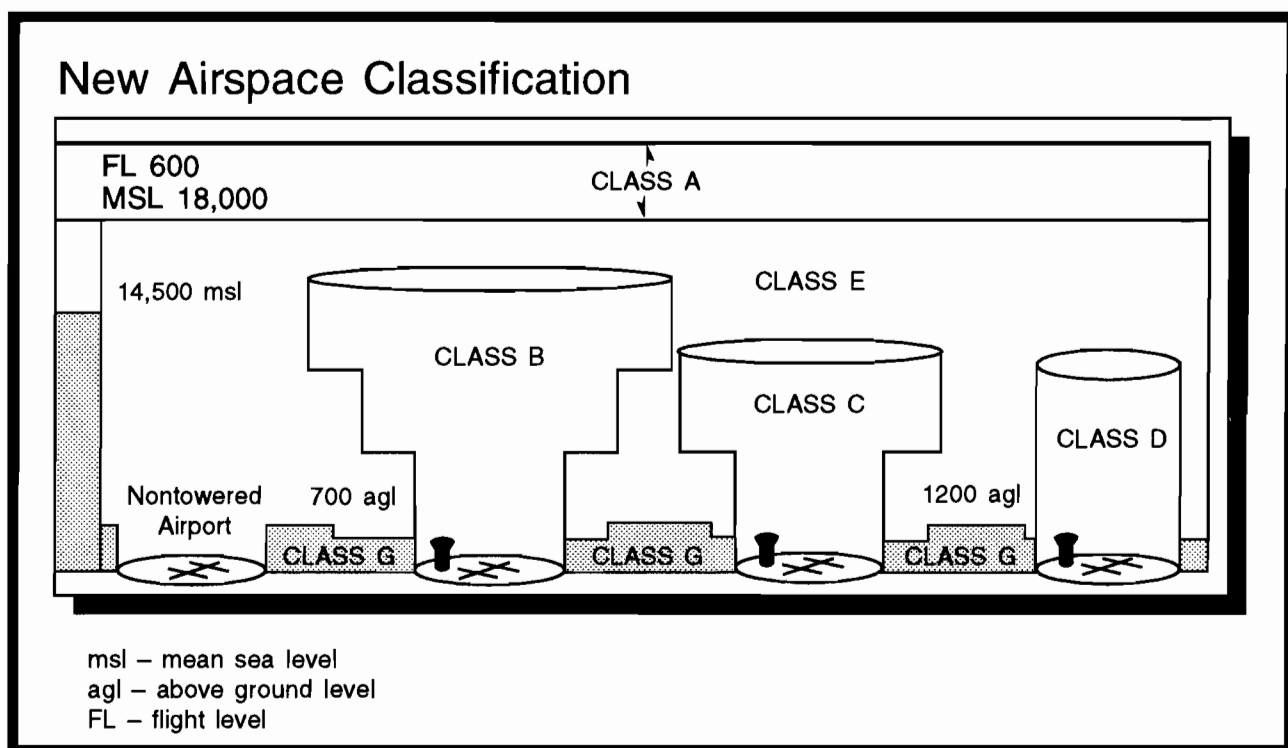


FIGURE 93.—New Airspace Classification.

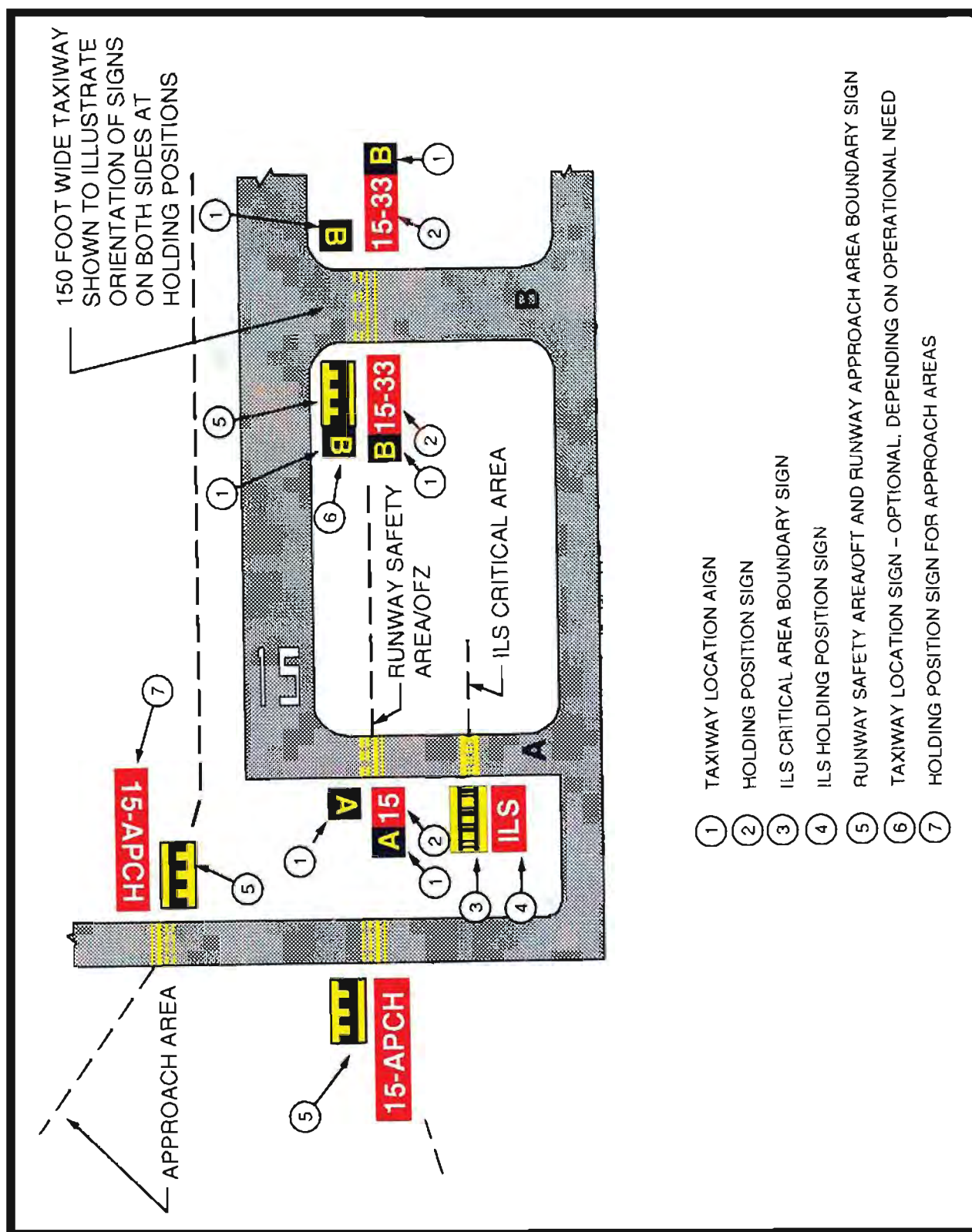


FIGURE 94.—Application Examples for Holding Positions.

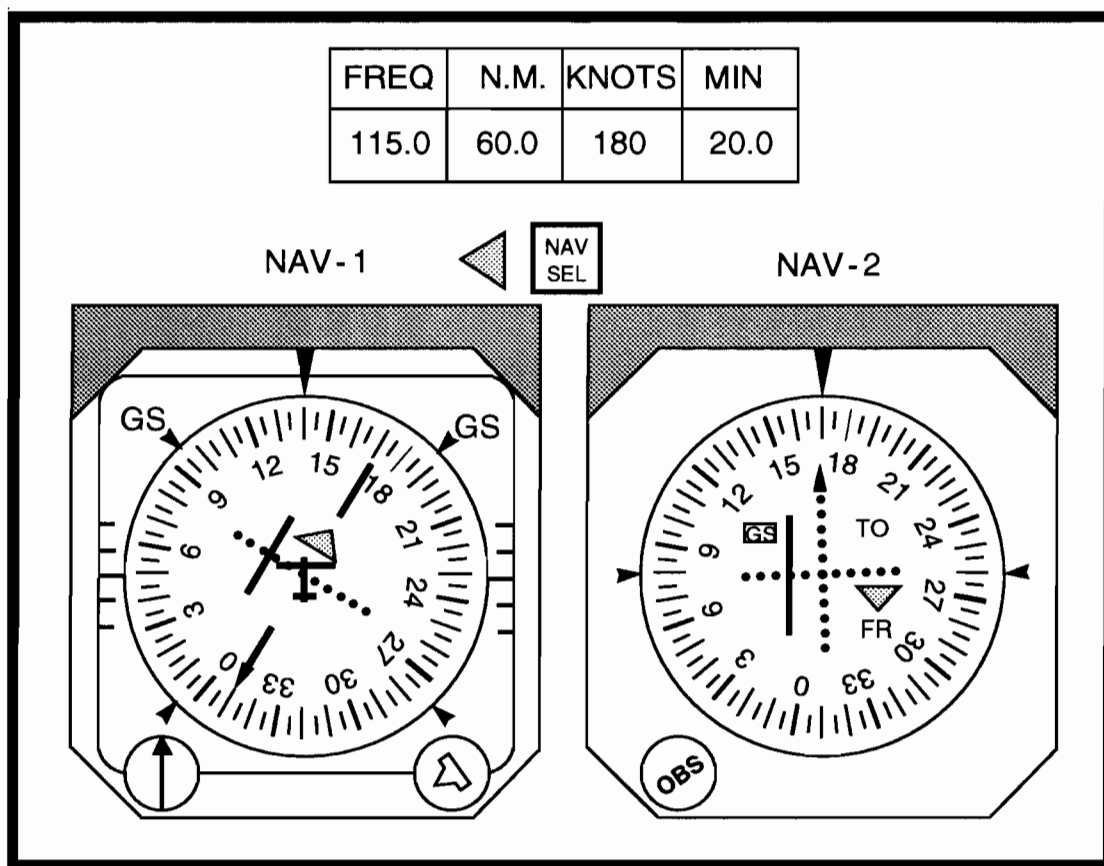


FIGURE 95.—No. 1 and No. 2 NAV Presentation.

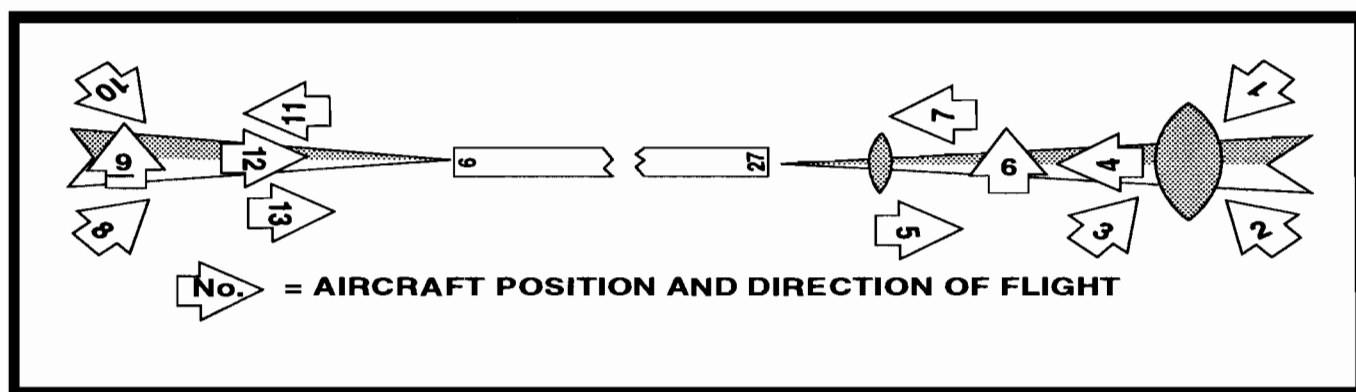


FIGURE 96.—Aircraft Position and Direction of Flight.

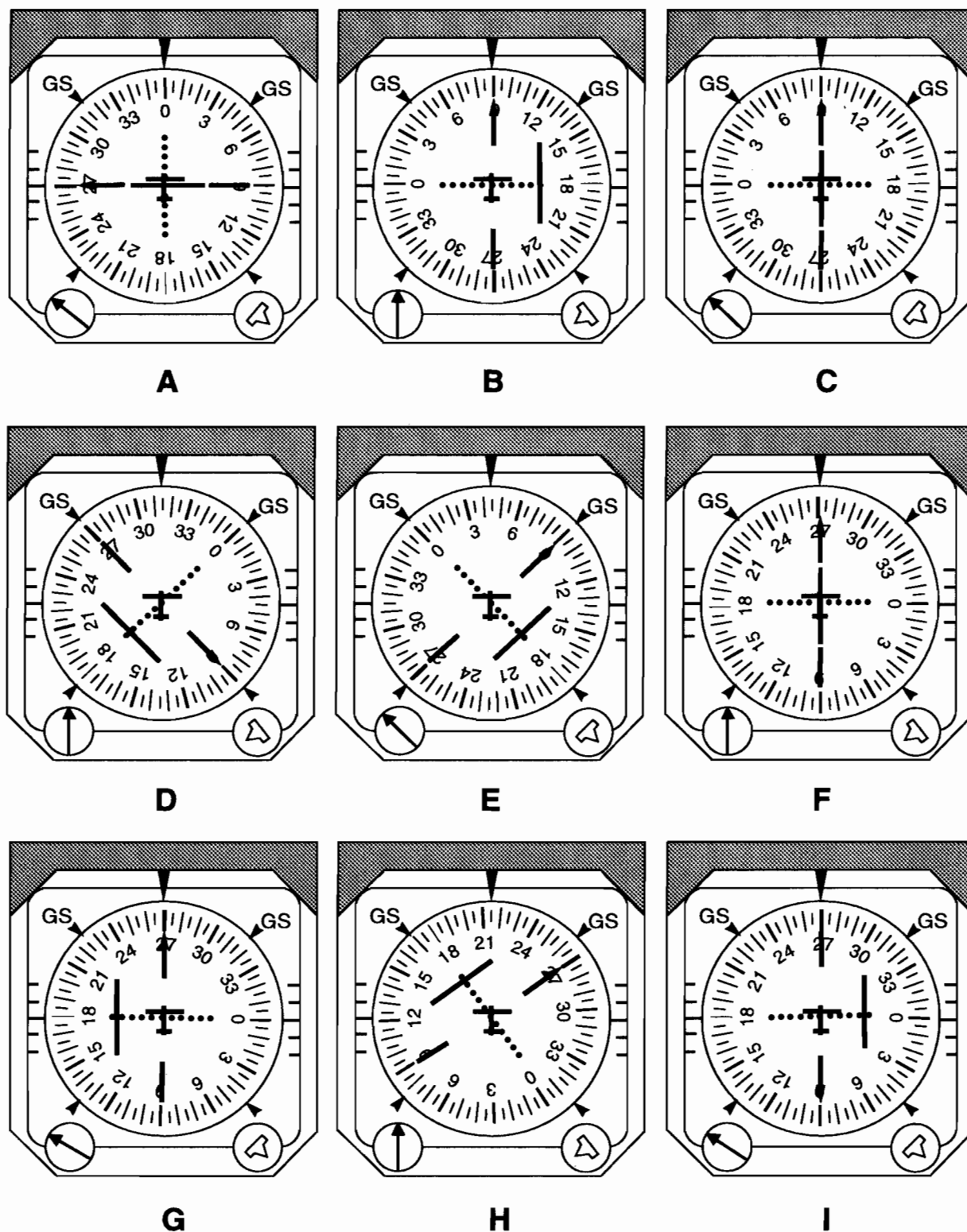


FIGURE 97.—HSI Presentation.

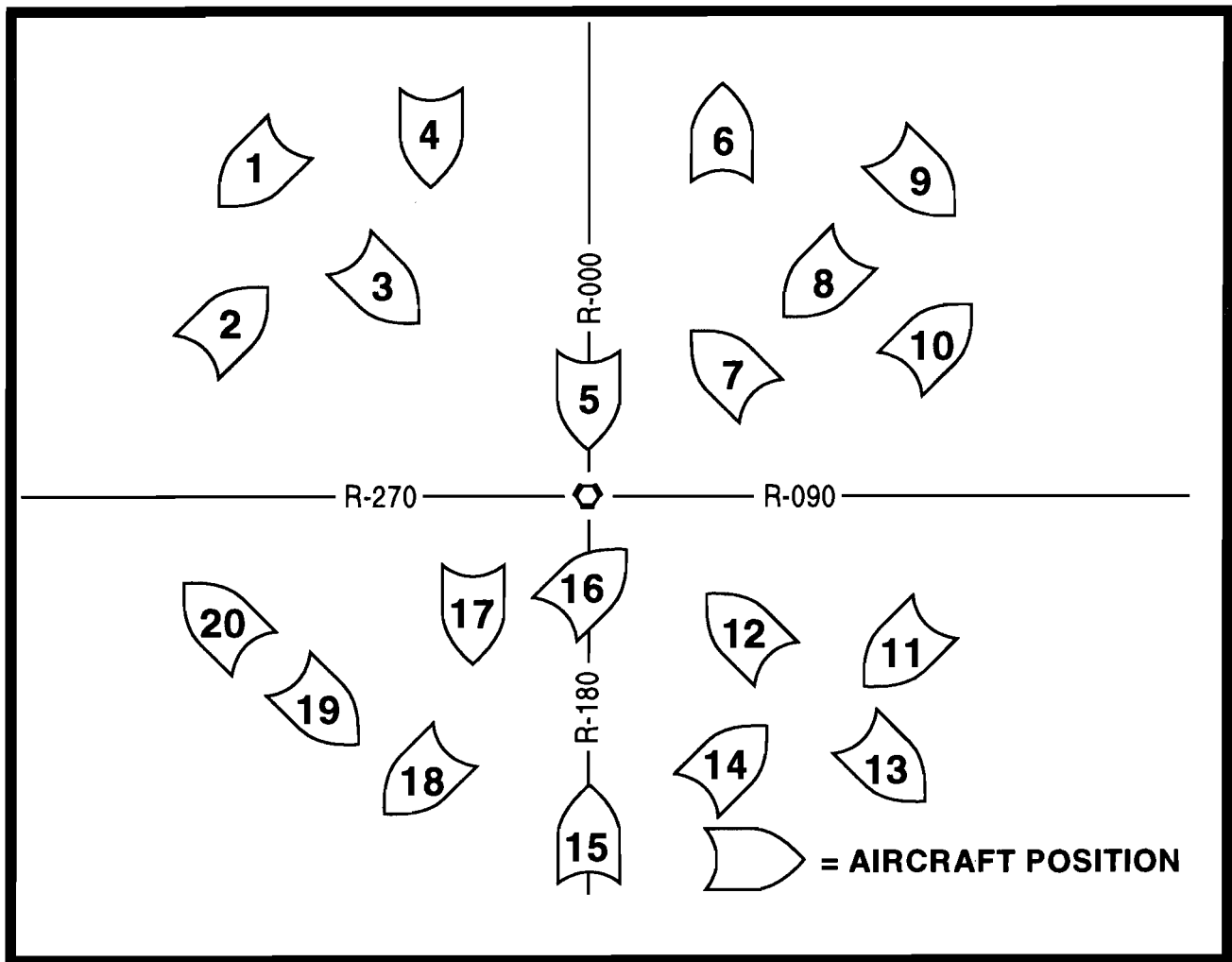


FIGURE 98.—Aircraft Position.

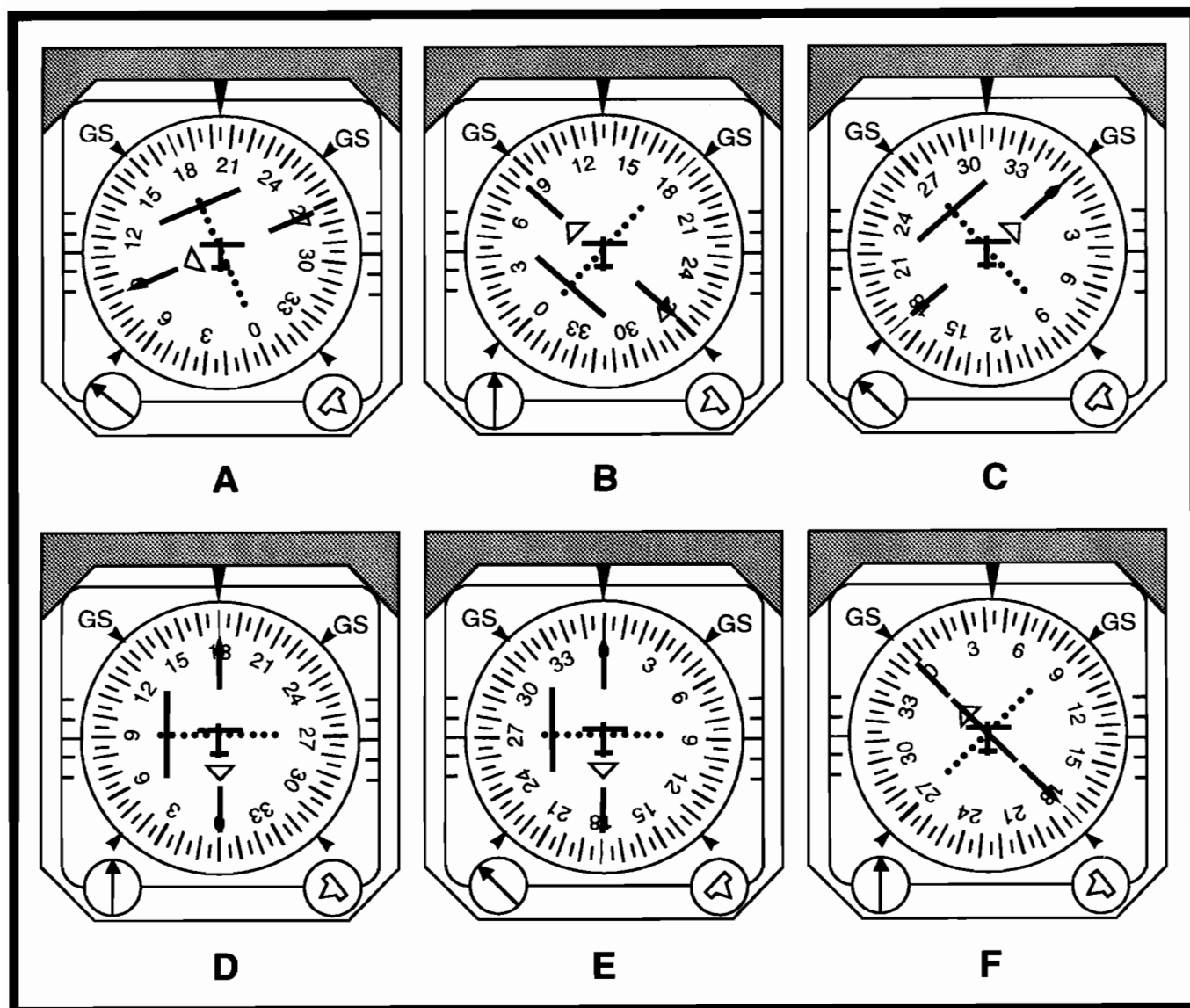


FIGURE 99.—HSI Presentation.

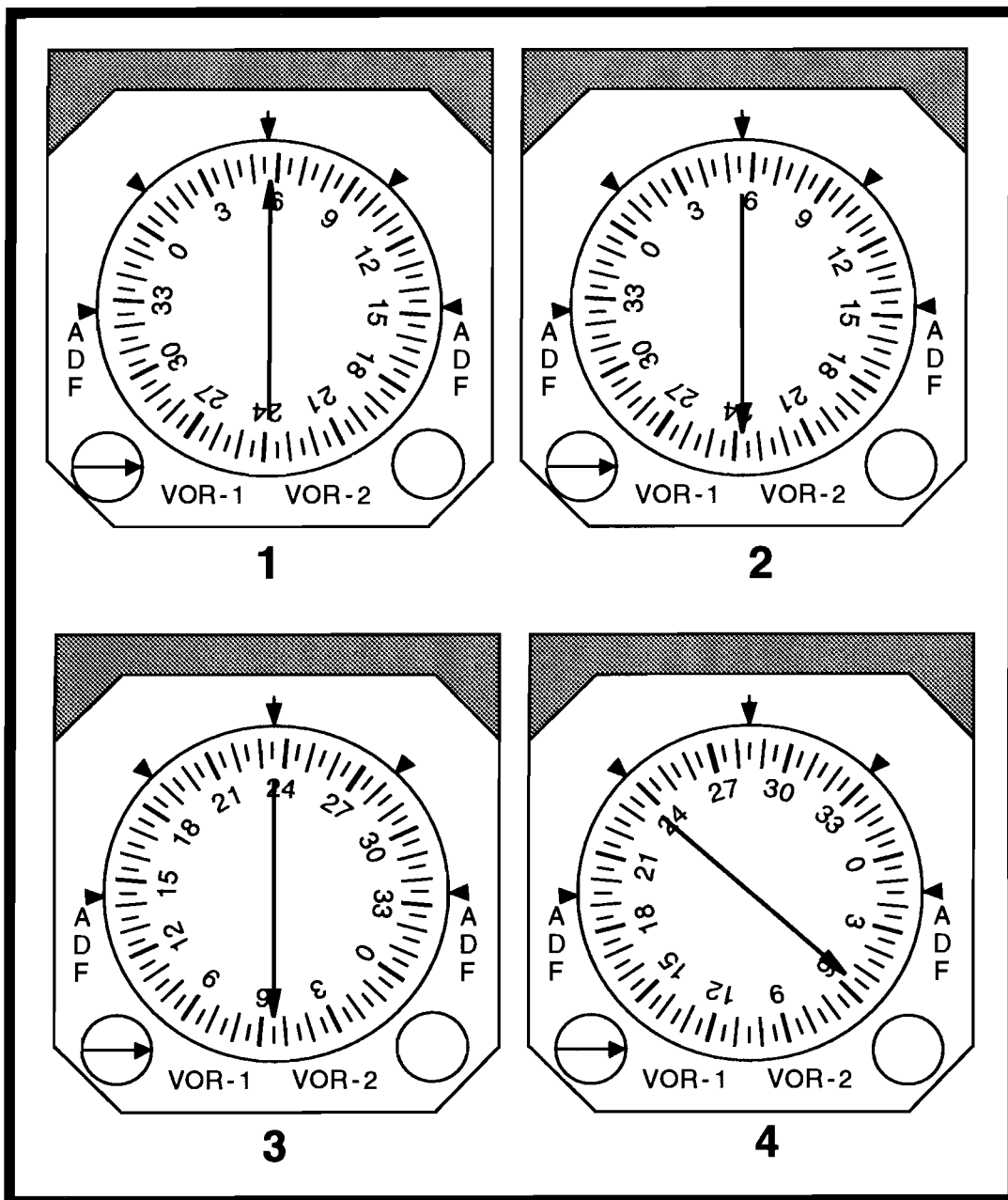


FIGURE 100.—RMI Illustrations.

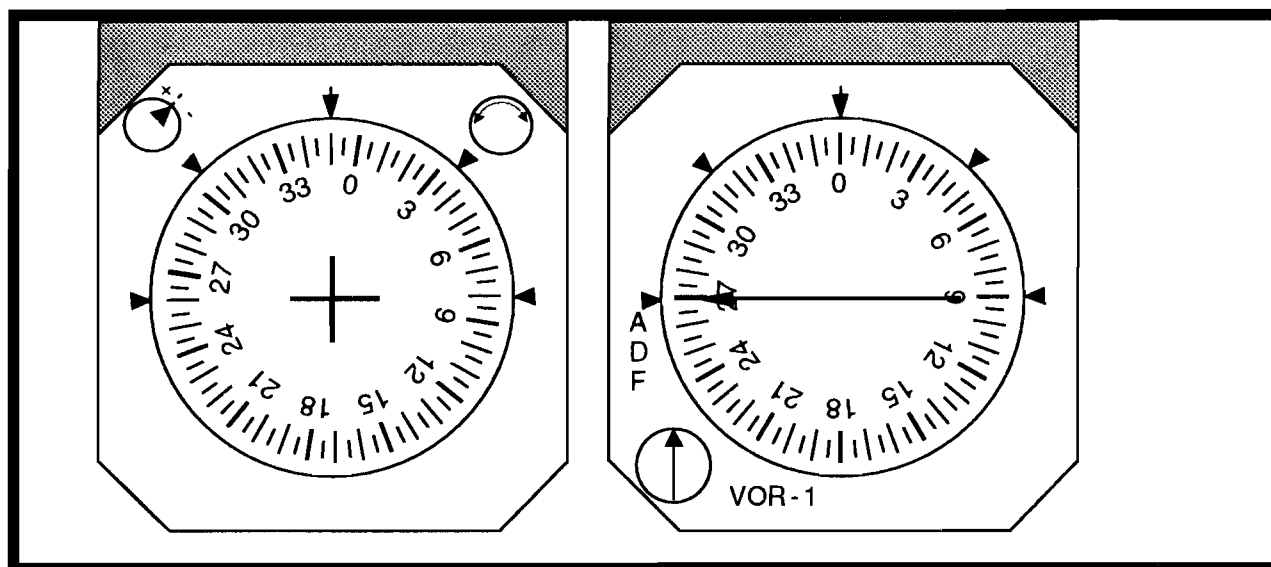


FIGURE 101.—Directional Gyro and ADF Indicator.

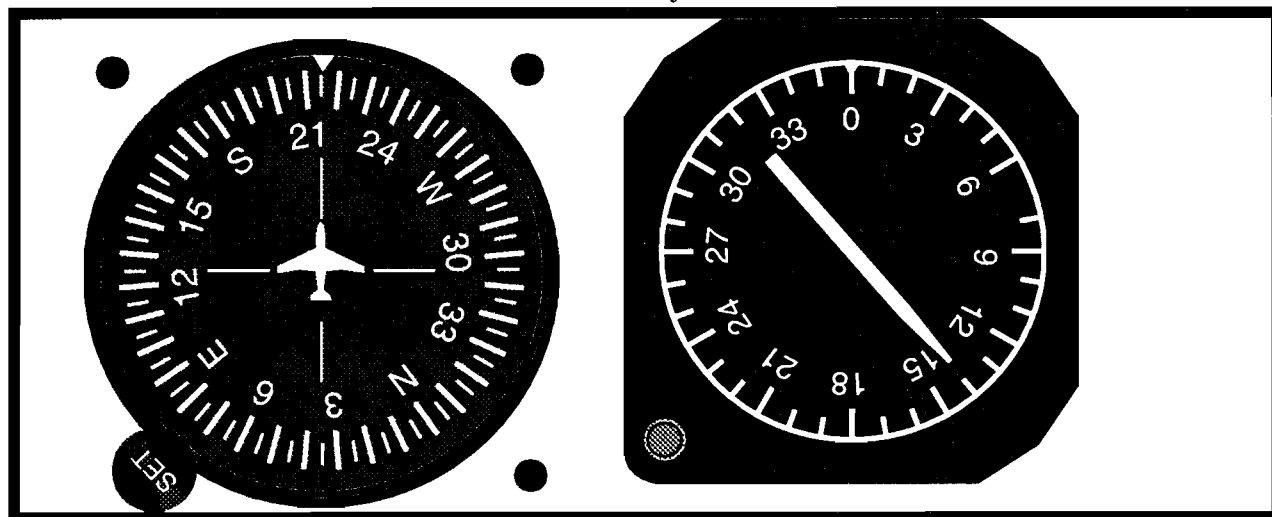


FIGURE 102.—Directional Gyro and ADF Indicator.

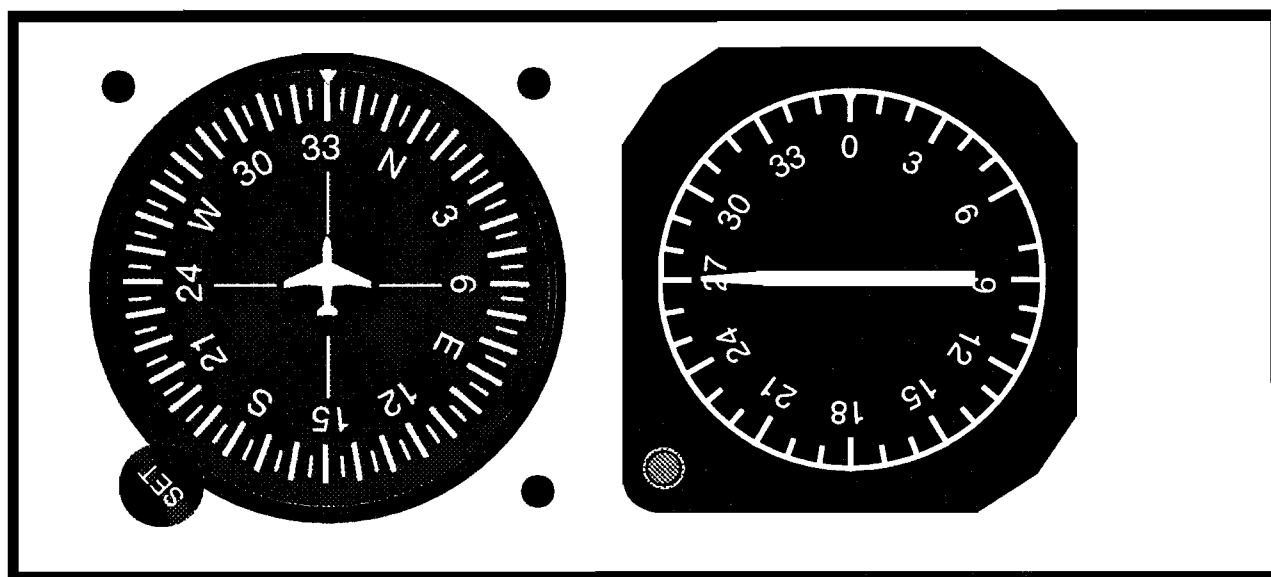


FIGURE 103.—Directional Gyro and ADF Indicator.

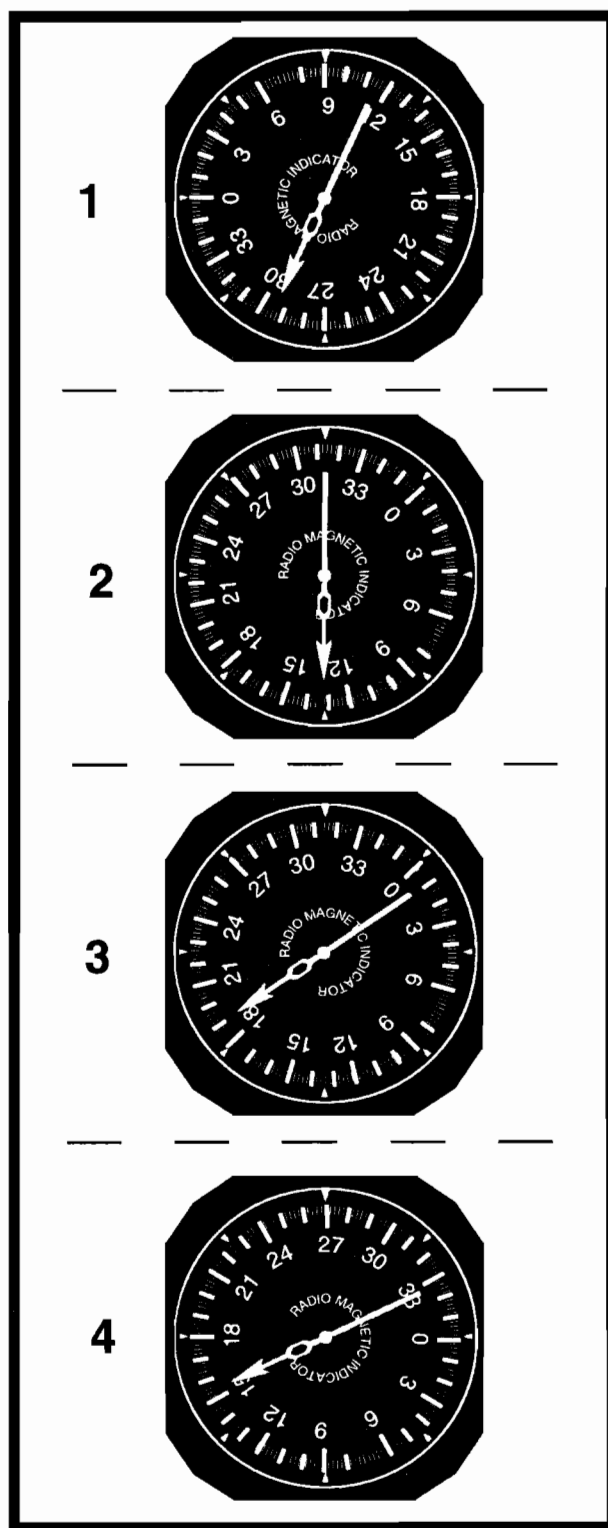


FIGURE 104.—Radio Magnetic Indicator.

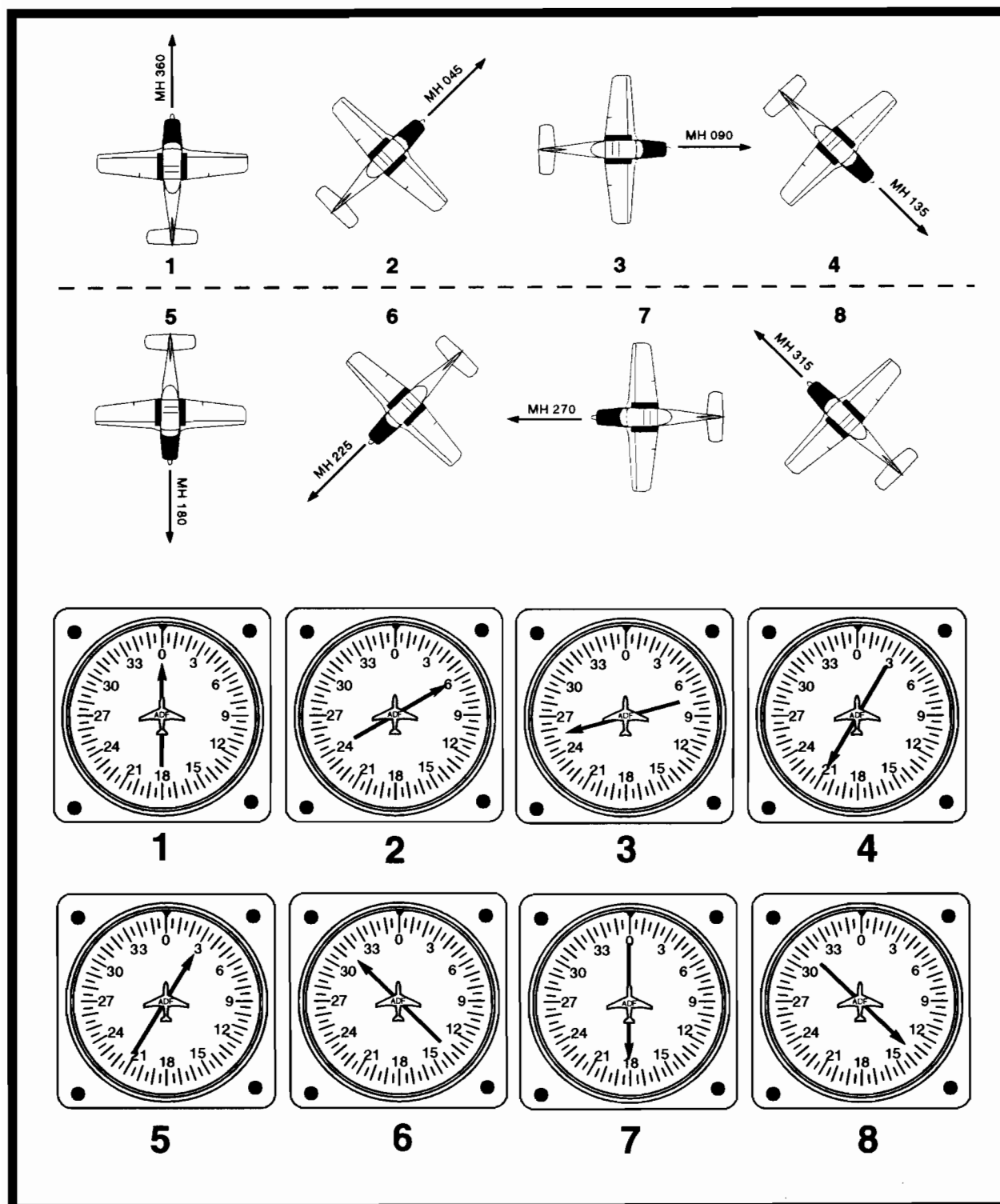


FIGURE 105.—Aircraft Magnetic Heading and ADF Illustration.

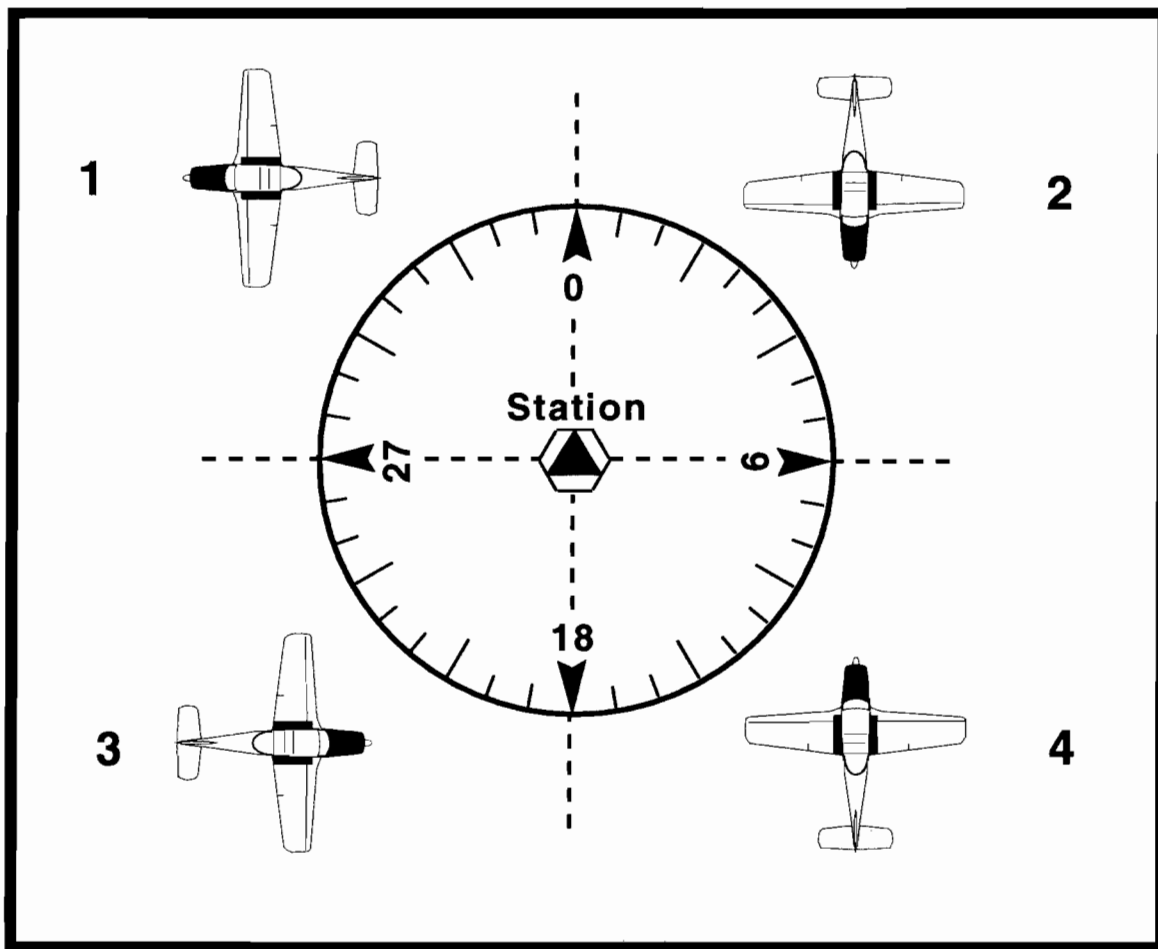


FIGURE 106.—Aircraft Location Relative to VOR.

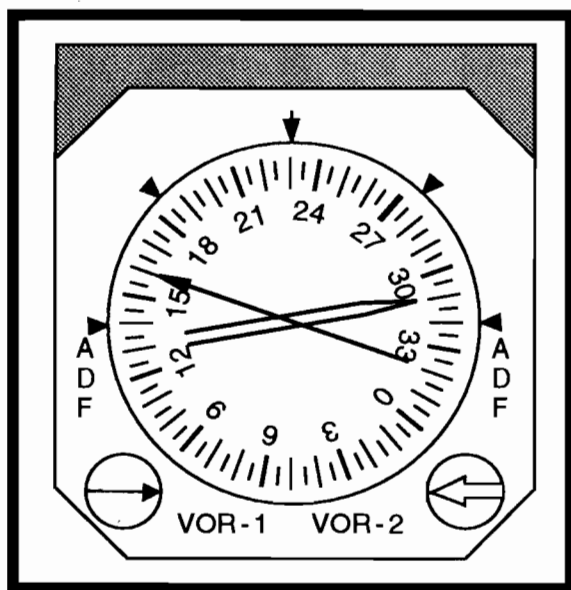


FIGURE 107.—RMI — DME — ARC
Illustration Wind Component.

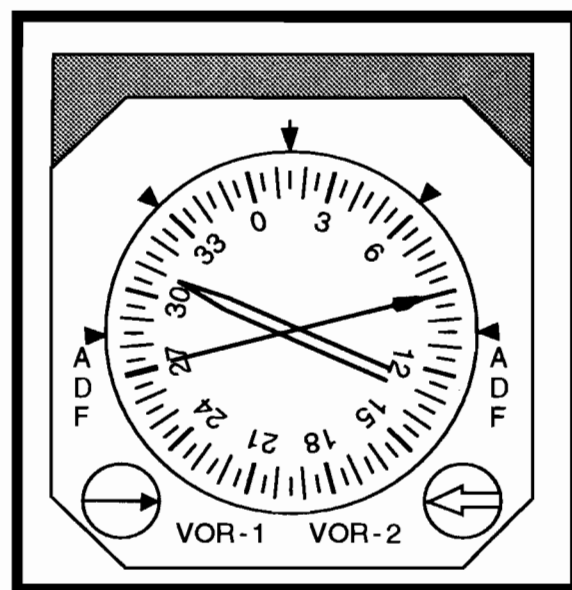


FIGURE 108.—RMI — DME — ARC
Illustration Wind Component.

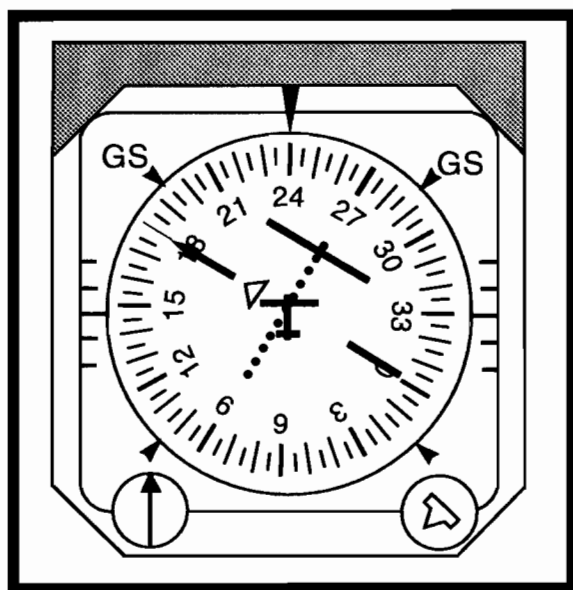


FIGURE 109.—CDI Direction from VORTAC.

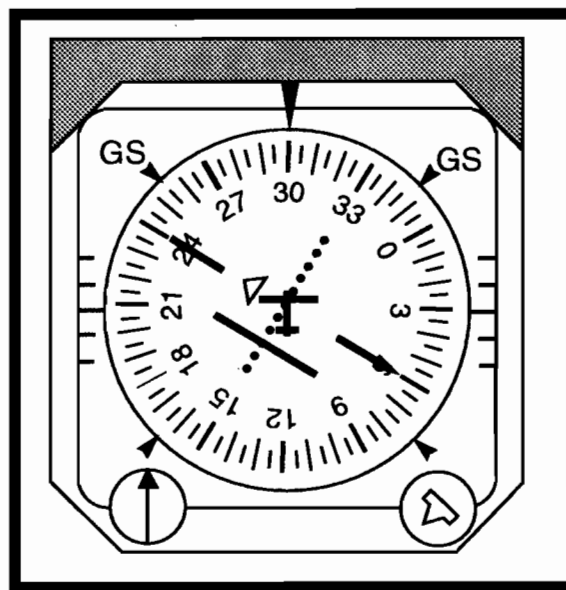


FIGURE 110.—CDI Direction from VORTAC.

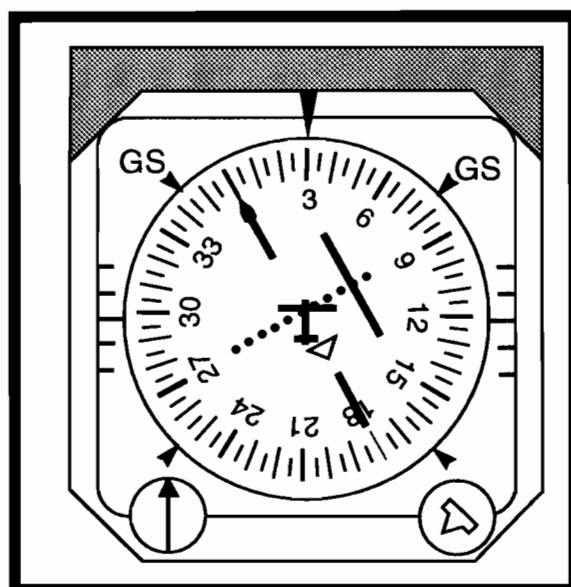


FIGURE 111.—CDI Direction from VORTAC.

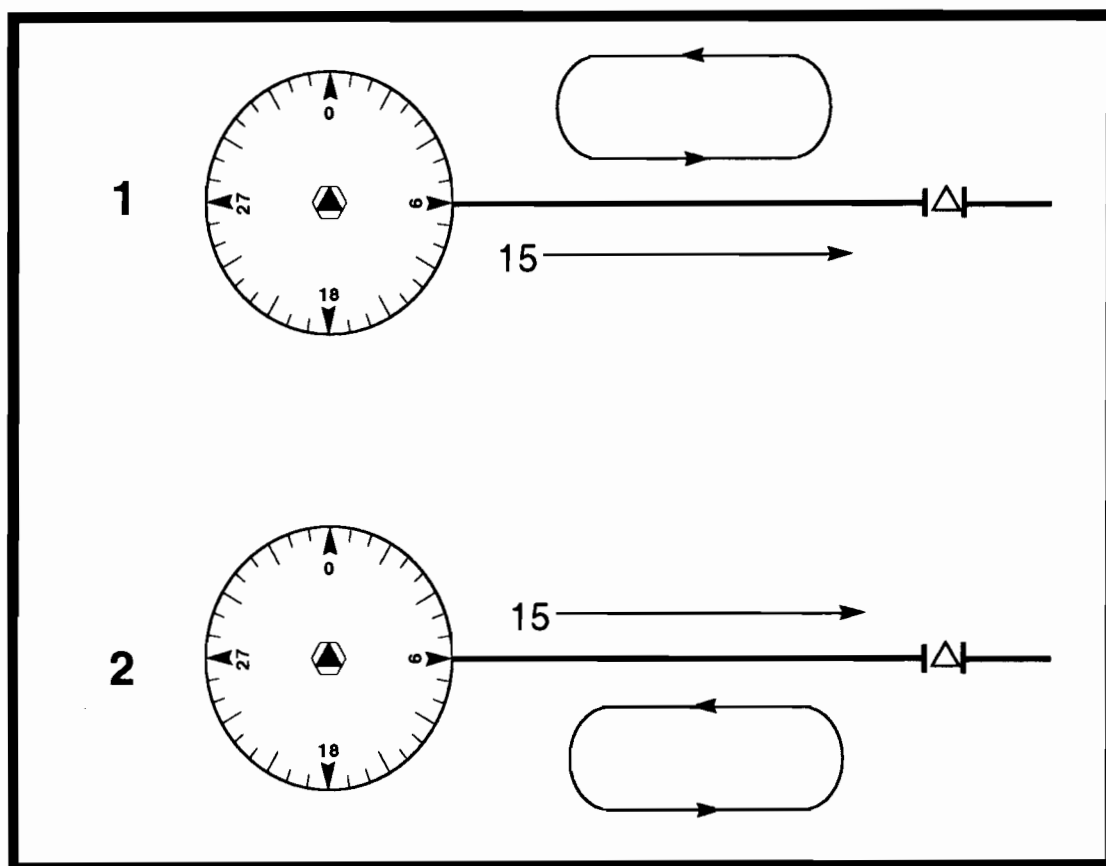


FIGURE 112.—Holding Entry Pcedure.



FIGURE 113.—Aircraft Course and DME Indicator.



FIGURE 114.—Aircraft Course and DME Indicator.

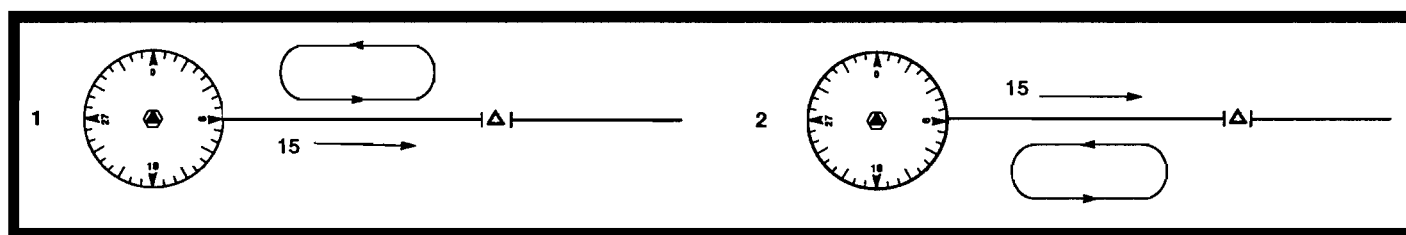


FIGURE 115.—DME Fix with Holding Pattern.

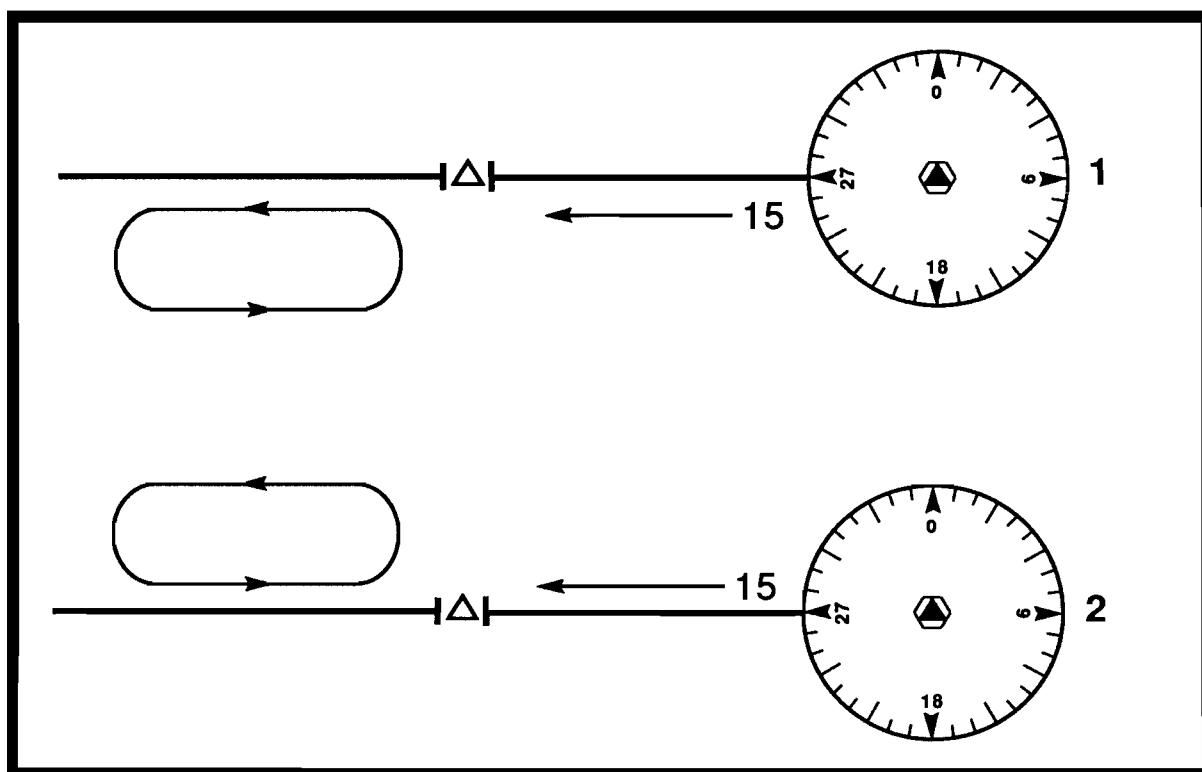


FIGURE 116.—Holding Entry Procedure.

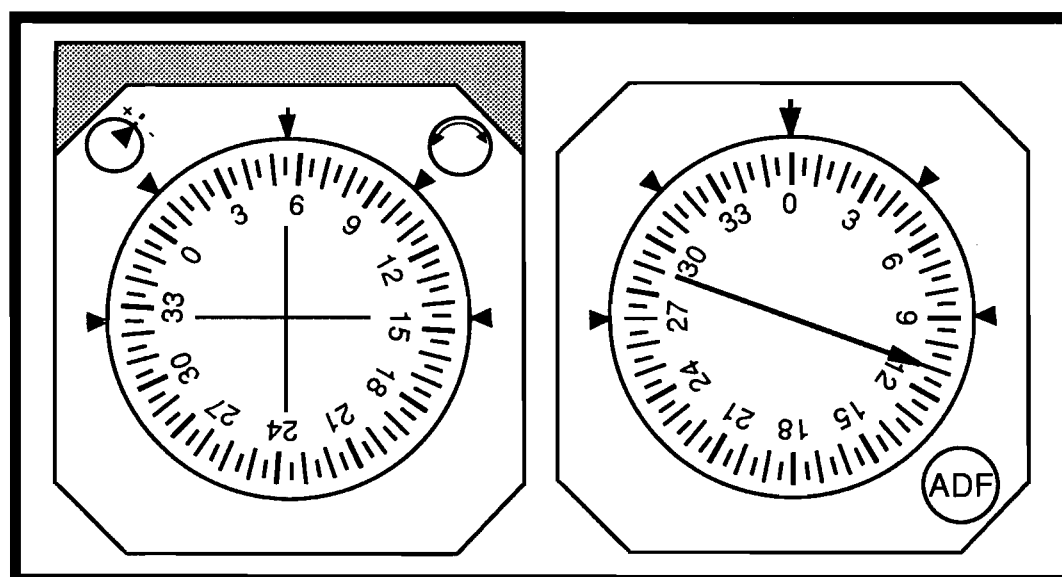


FIGURE 117.—Heading and ADF Indicators.

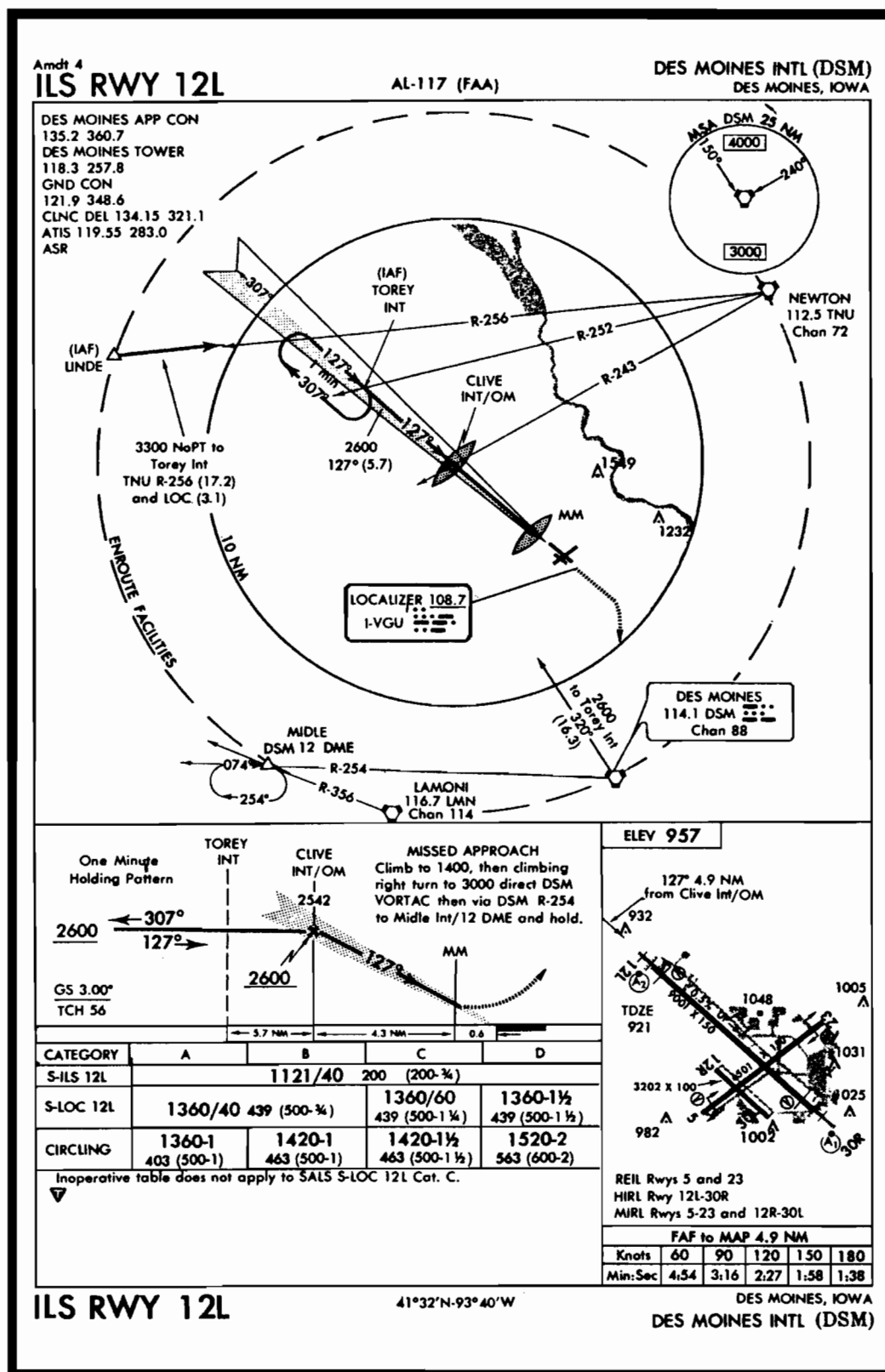


FIGURE 118.—ILS RWY 12L (DSM).

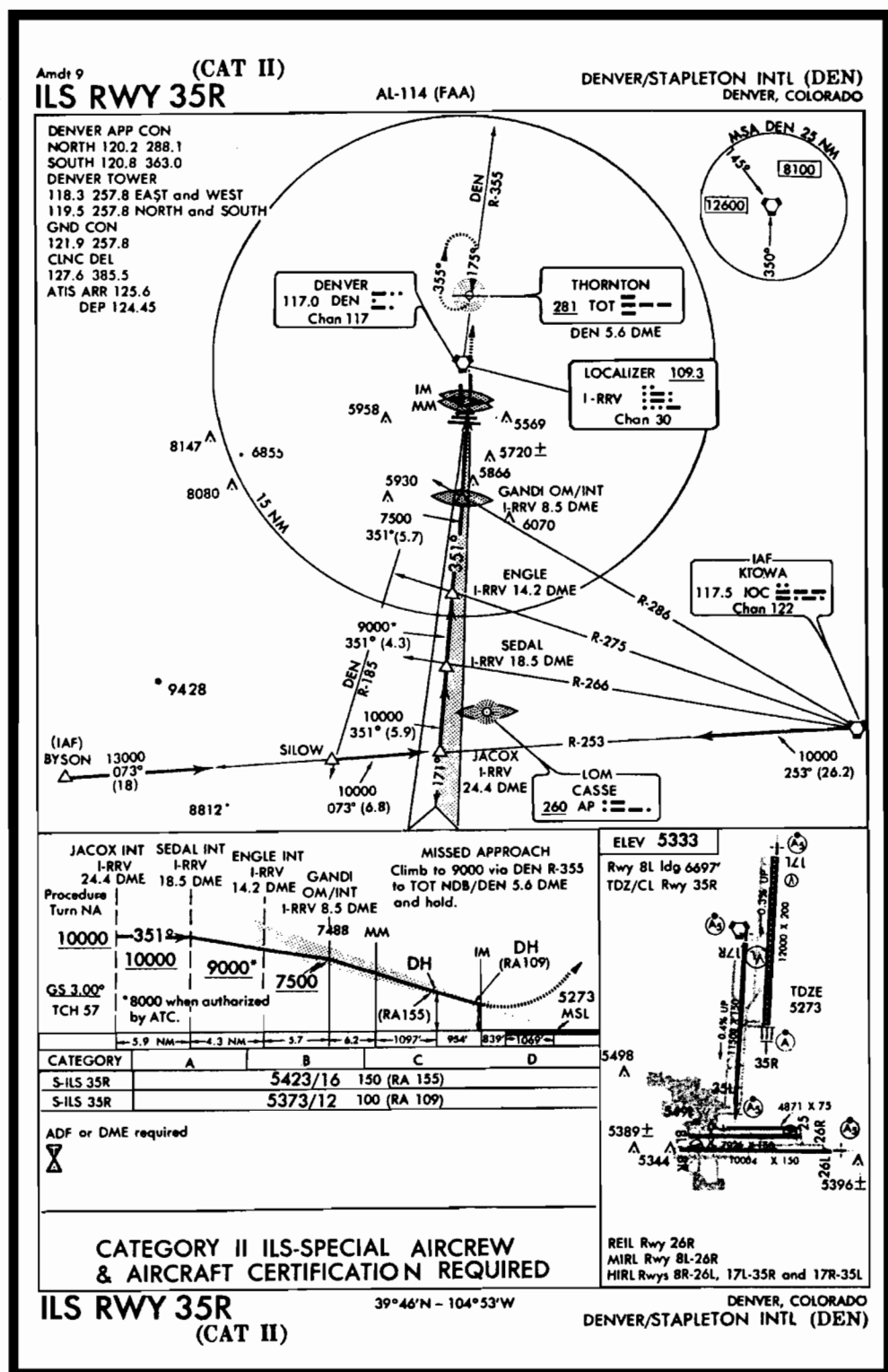


FIGURE 120.—ILS RWY 35R (DEN).

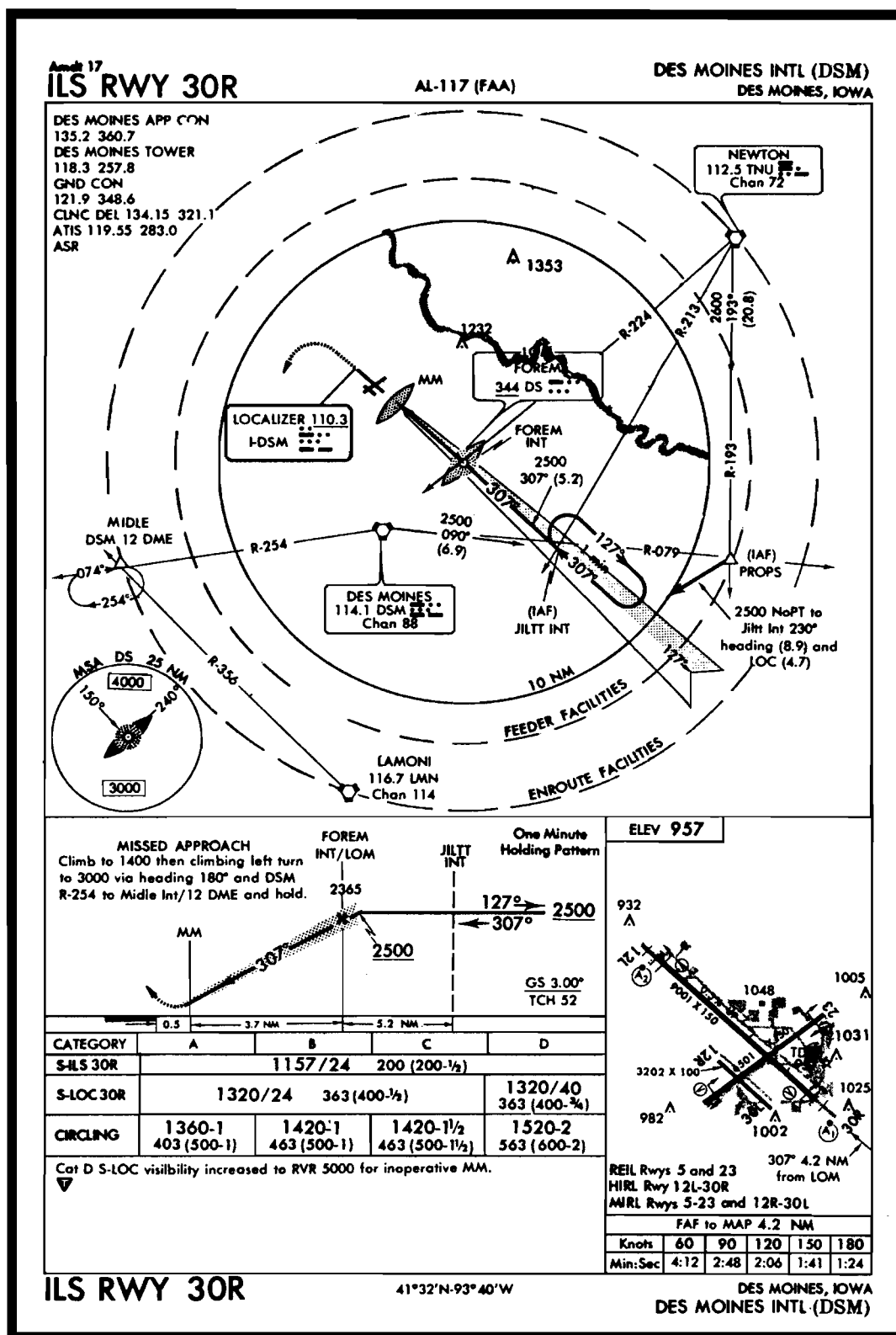


FIGURE 121.—ILS RWY 30R (DSM).

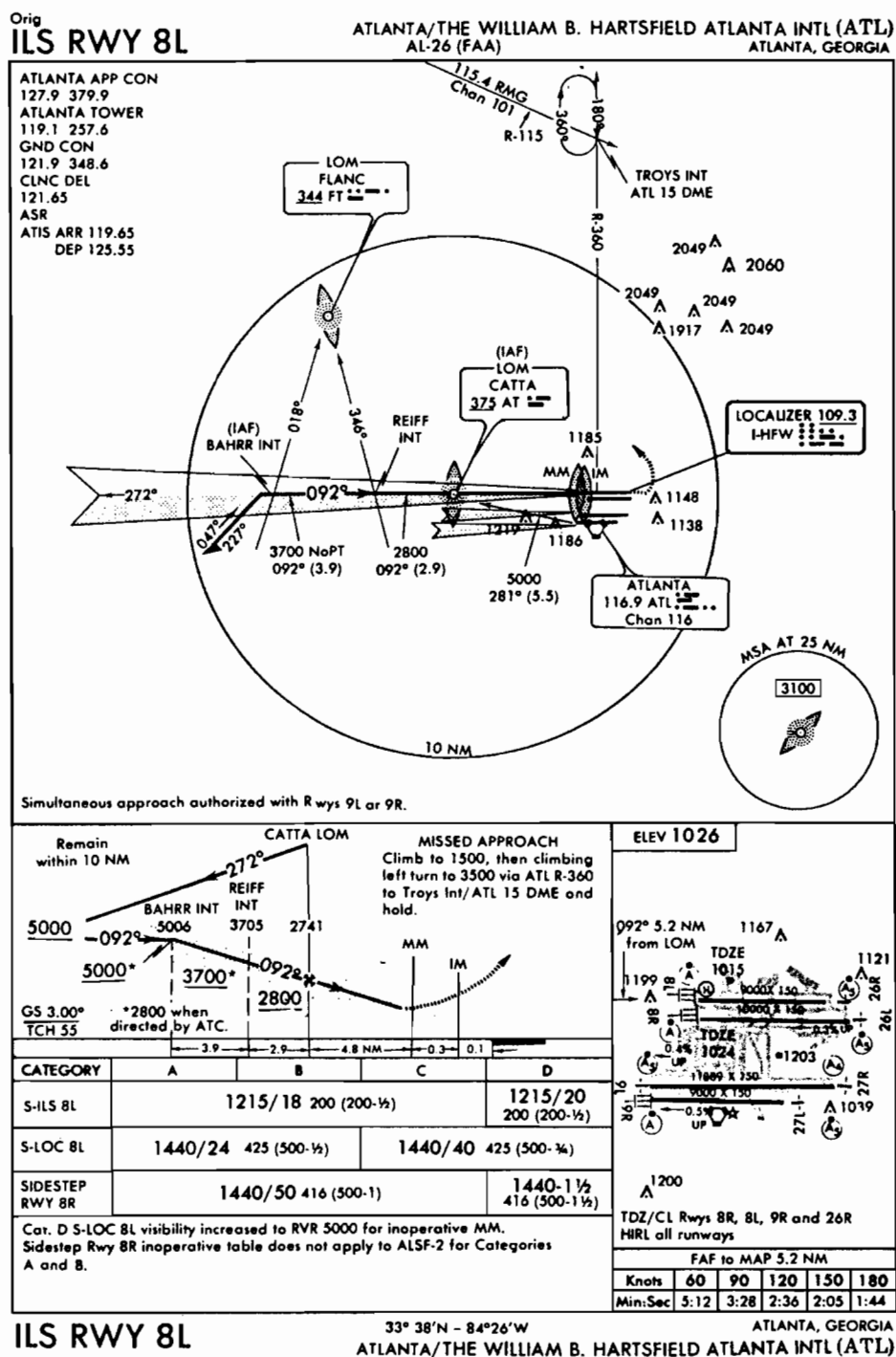


FIGURE 122.—ILS RWY 8L (ATL).

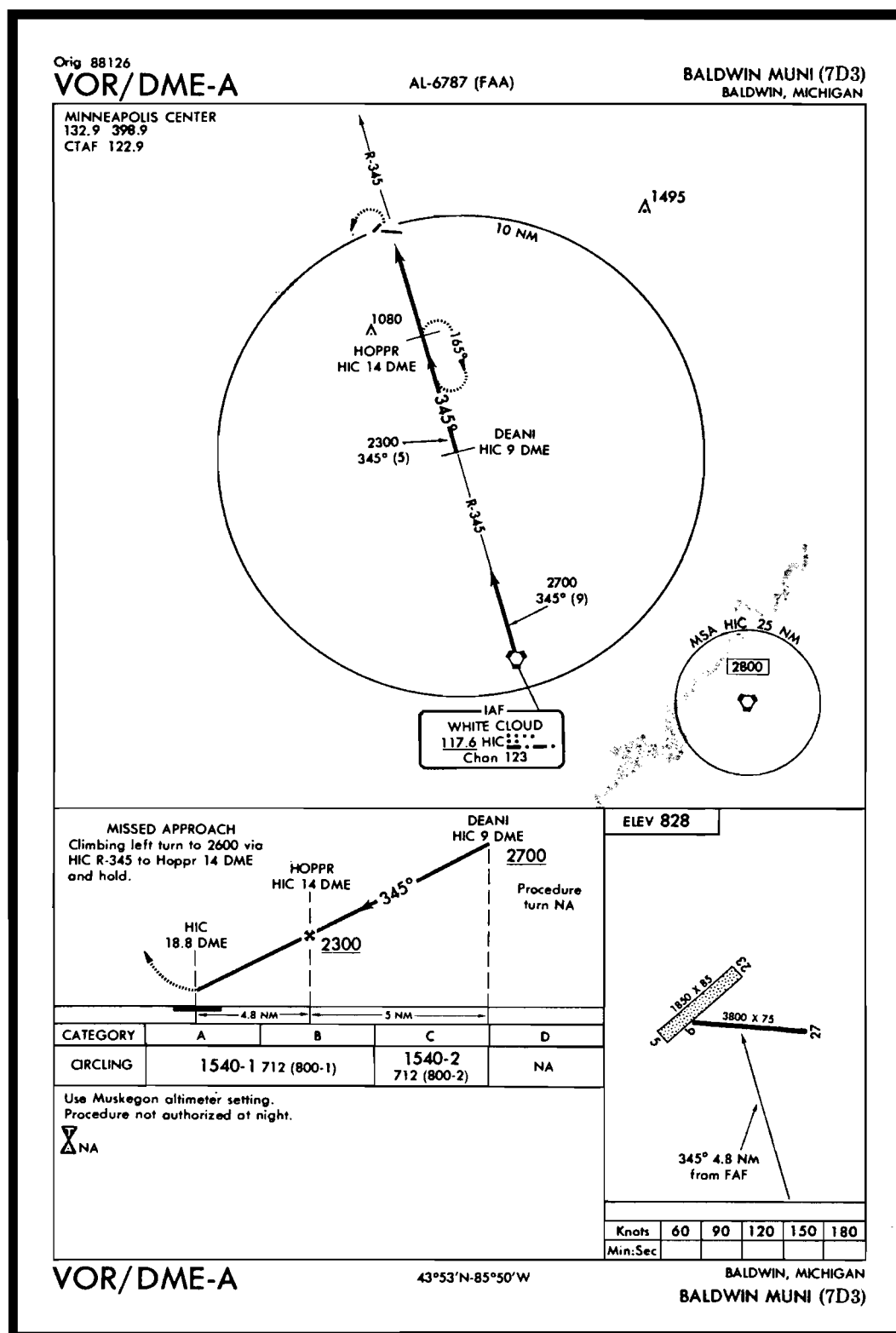


FIGURE 123.—VOR/DME-A (7D3).

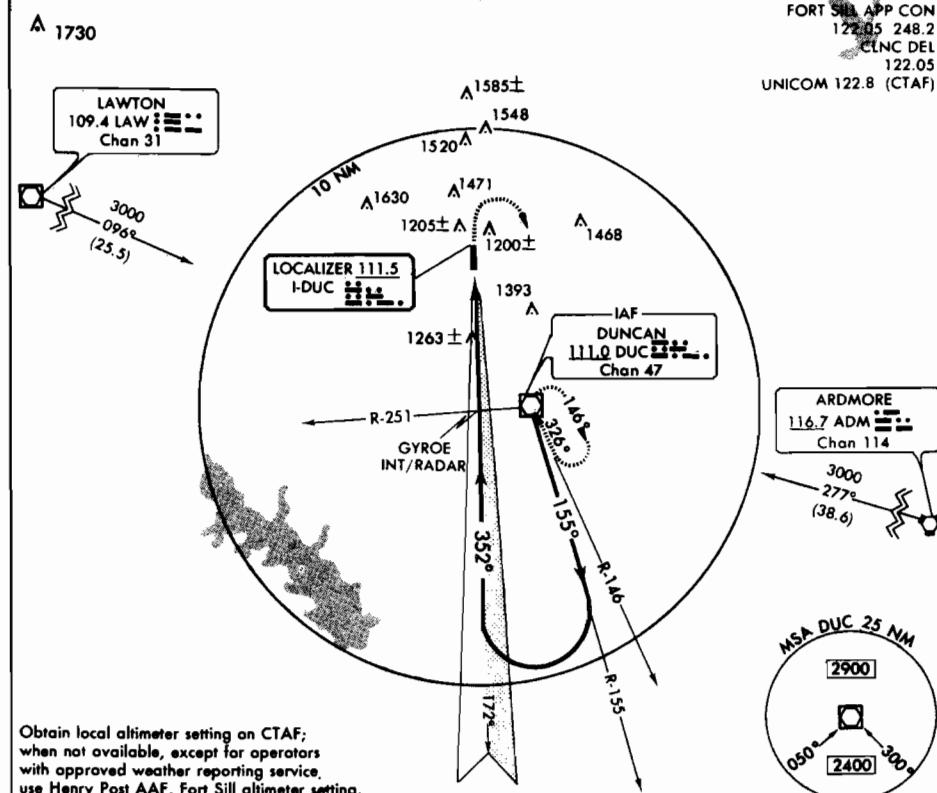
Amdt 3 91038

LOC RWY 35

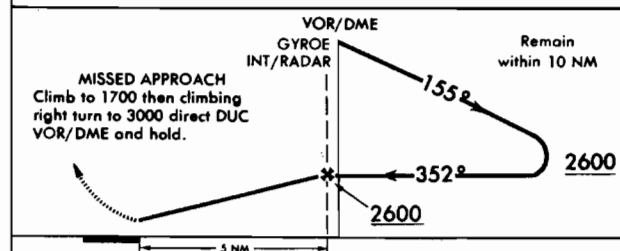
AL-5140 (FAA)

DUNCAN/HALLIBURTON FIELD (DUC)
DUNCAN, OKLAHOMA

FORT SILL APP CON
122.05 248.2
CLNC DEL
122.05
NICOM 122.8 (CTAF)



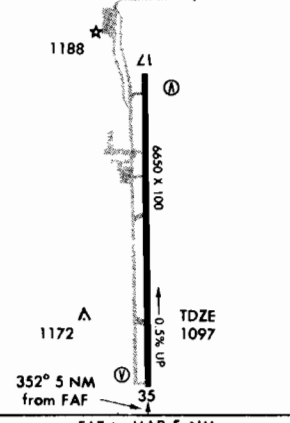
Obtain local altimeter setting on CTAF; when not available, except for operators with approved weather reporting service, use Henry Post AAF, Fort Sill altimeter setting.



CATEGORY	5 NM			
	A	B	C	D
S-35	1520-1 423 (500-1)		1520-1½ 423 (500-1½)	
CIRCLING	1560-1 447 (500-1)	1580-1 467 (500-1)	1580-1½ 467 (500-1½)	1780-2 667 (700-2)
HENRY POST AAF, FT. SILL ALTIMETER MINIMUMS				
S-35	1620-1 523 (600-1)		1620-1½ 523 (600-1½)	1620-1¾ 523 (600-1¾)
CIRCLING	1660-1 547 (600-1)	1680-1 567 (600-1)	1680-1½ 567 (600-1½)	1880-2½ 767 (800-2½)

T
A NA

ELEV 1113	MIRL Rwy 17-35 REIL Rwys 17 and 35
-----------	---------------------------------------



FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

LOC RWY 35

34°28'N-97°58'W

DUNCAN, OKLAHOMA
DUNCAN/HALLIBURTON FIELD (DUC)

FIGURE 124.—LOC RWY 35, Duncan, Oklahoma.

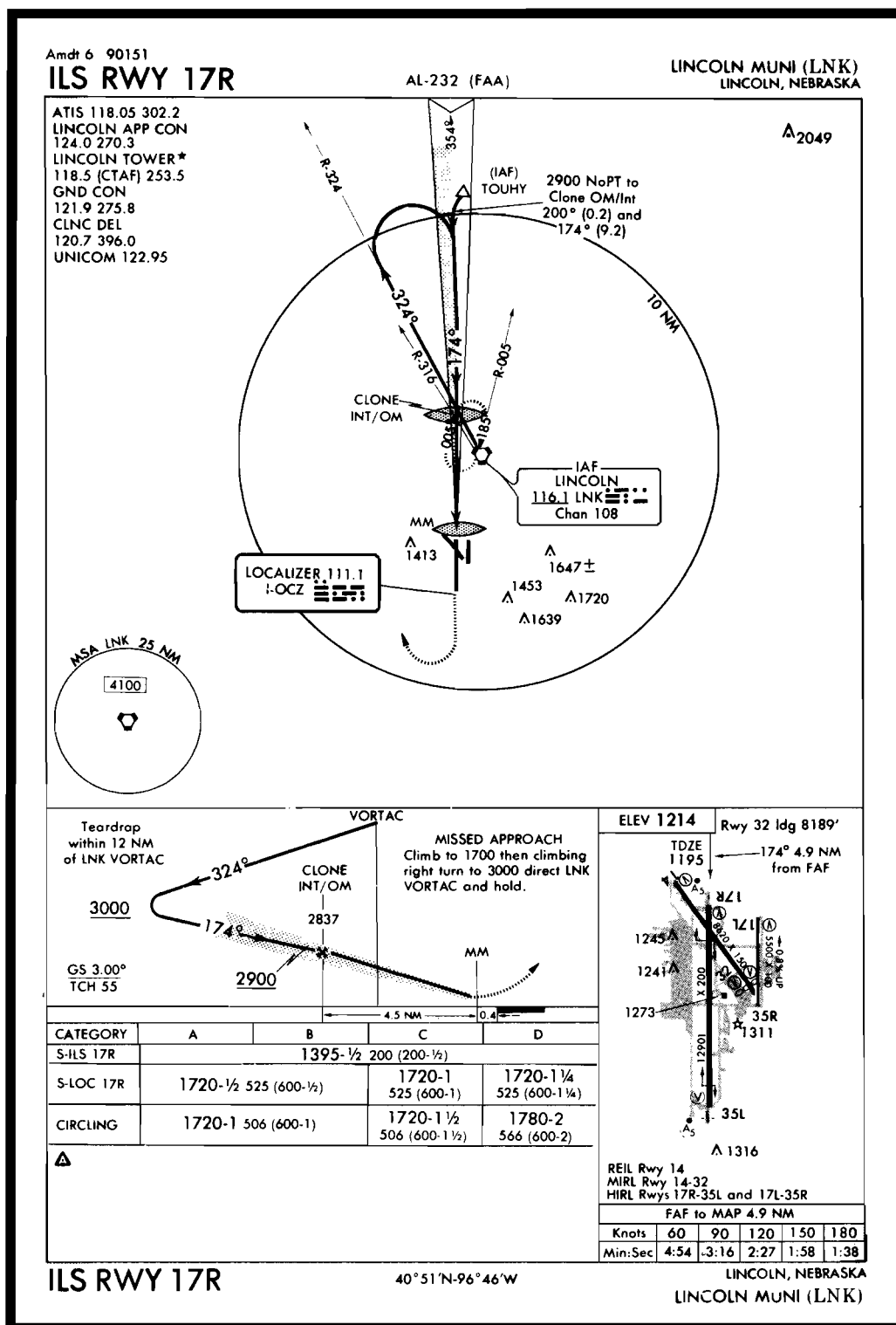


FIGURE 125.—ILS RWY 17R, Lincoln, Nebraska.

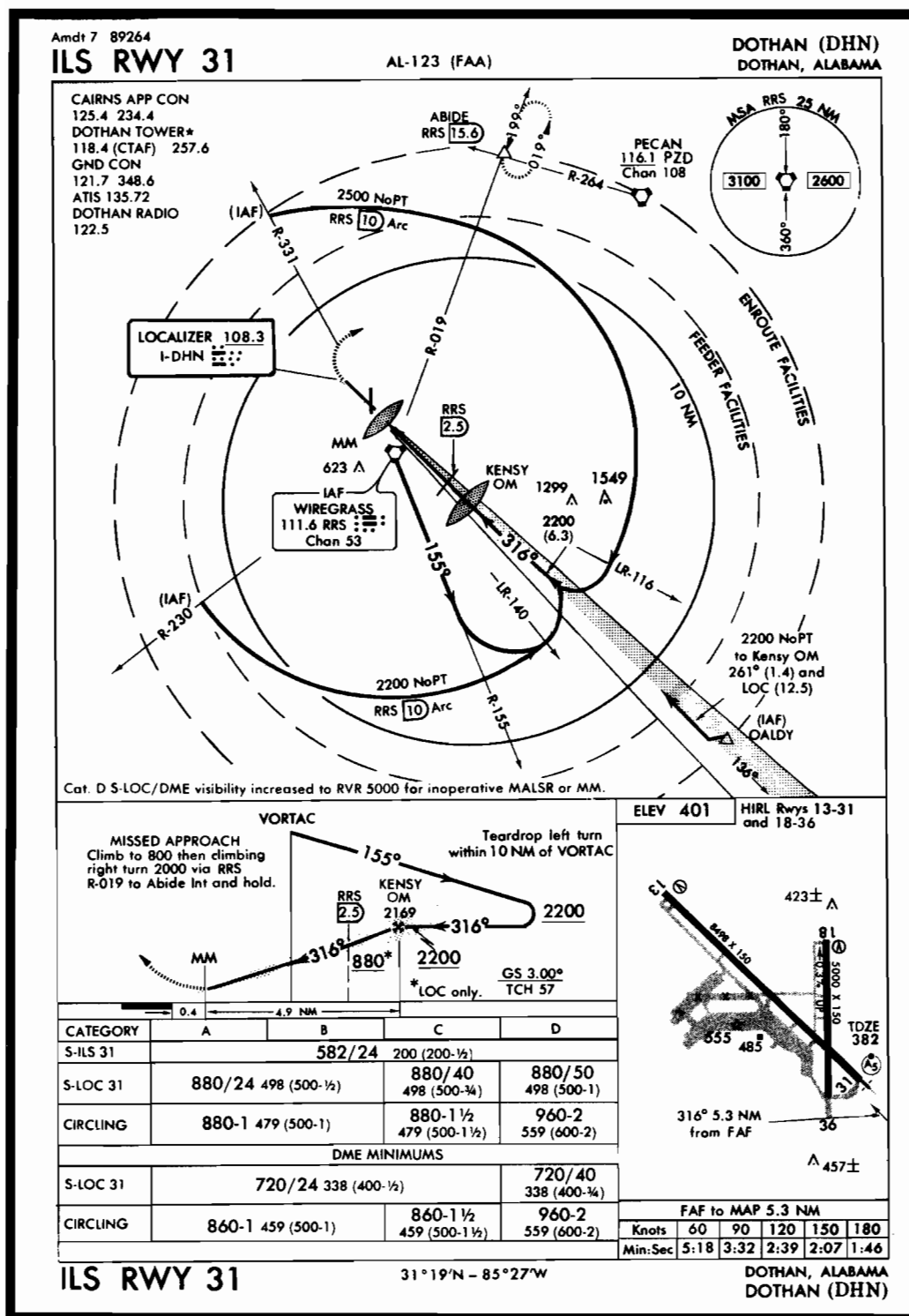


FIGURE 126.—ILS RWY 31, Dothan, Alabama.

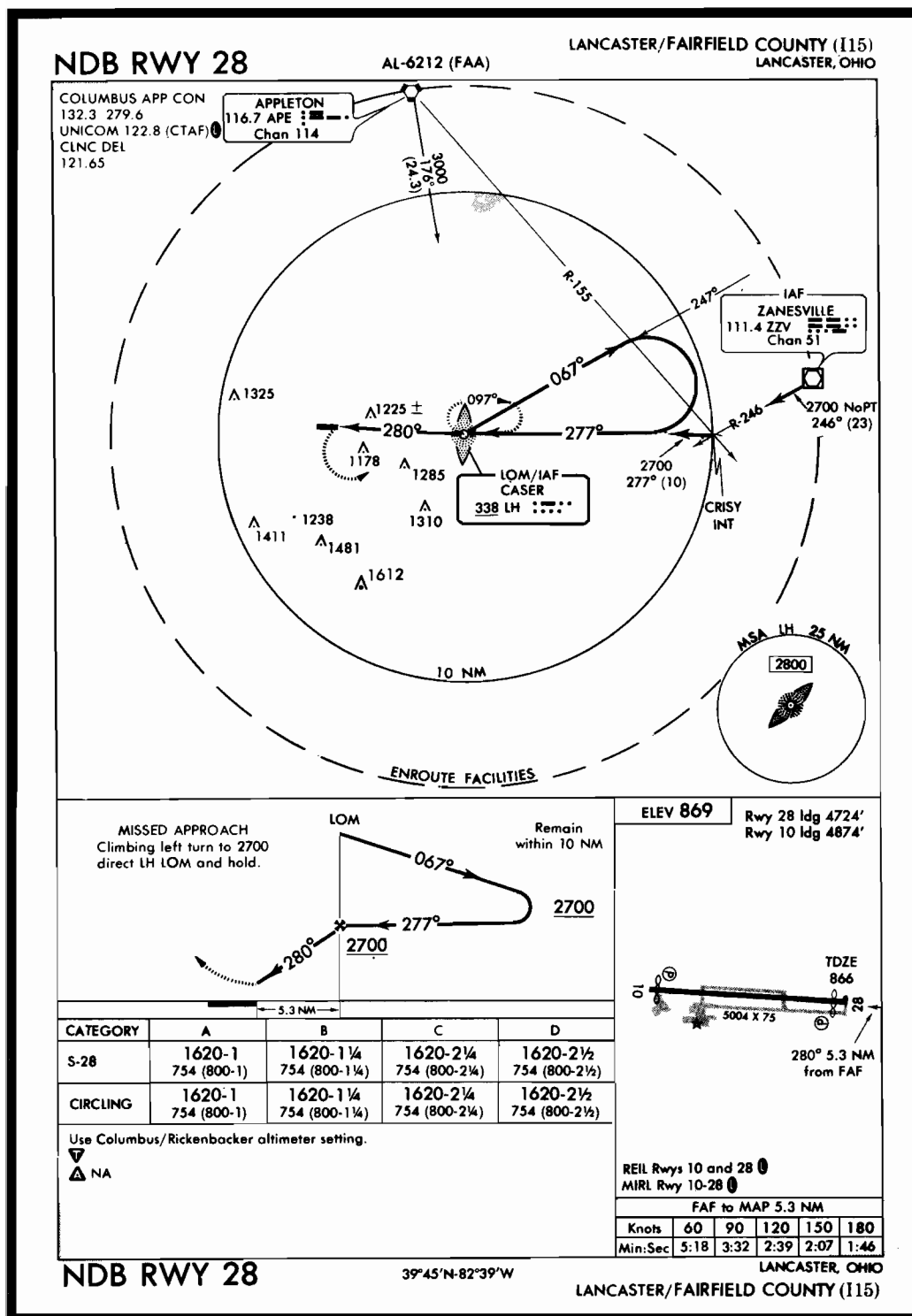
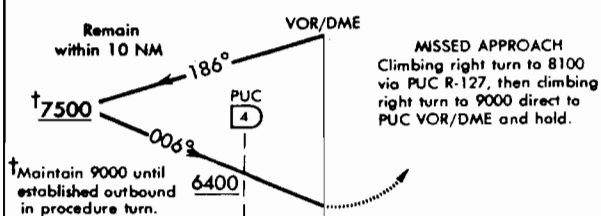
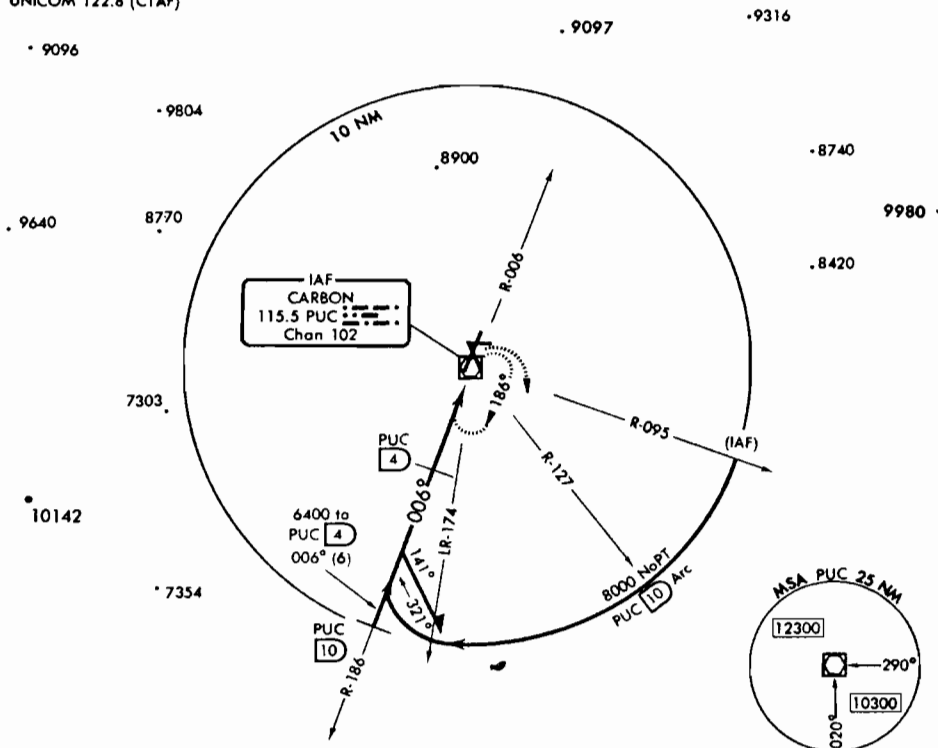


FIGURE 127.—NDB RWY 28, Lancaster/Fairfield County.

AL-681 (FAA)

PRICE, UTAH

SALT LAKE CITY CENTER
134.8 257.7
UNICOM 122.8 (CTAF)



CATEGORY	A	B	C	D
S-36	6400-1	556 (500-1)	6400-1½ 556 (500-1½)	6400-1¾ 556 (500-1¾)
CIRCLING	6560-1 639 (700-1)	6680-1¼ 759 (800-1¼)	6720-2¼ 799 (800-2¼)	6920-3 999 (1000-3)

DME MINIMA	
S-36	6180-1 336 (300-1)

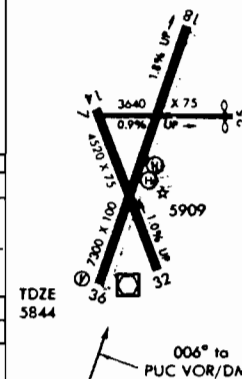
When Price altimeter setting not available, procedure not authorized.

T
Δ **NA**

ELEV 5921

Rwy 25 ldg 3412'

MIRL Rwy's 14-32
and 18-36



TDZE
5844

Knots	60	90	120	150	180
Min:Sec					

39°37'N – 110°45'W

PRICE, UTAH

PRICE/CARBON COUNTY(PUC)

FIGURE 128.—VOR RWY 36 (PUC).

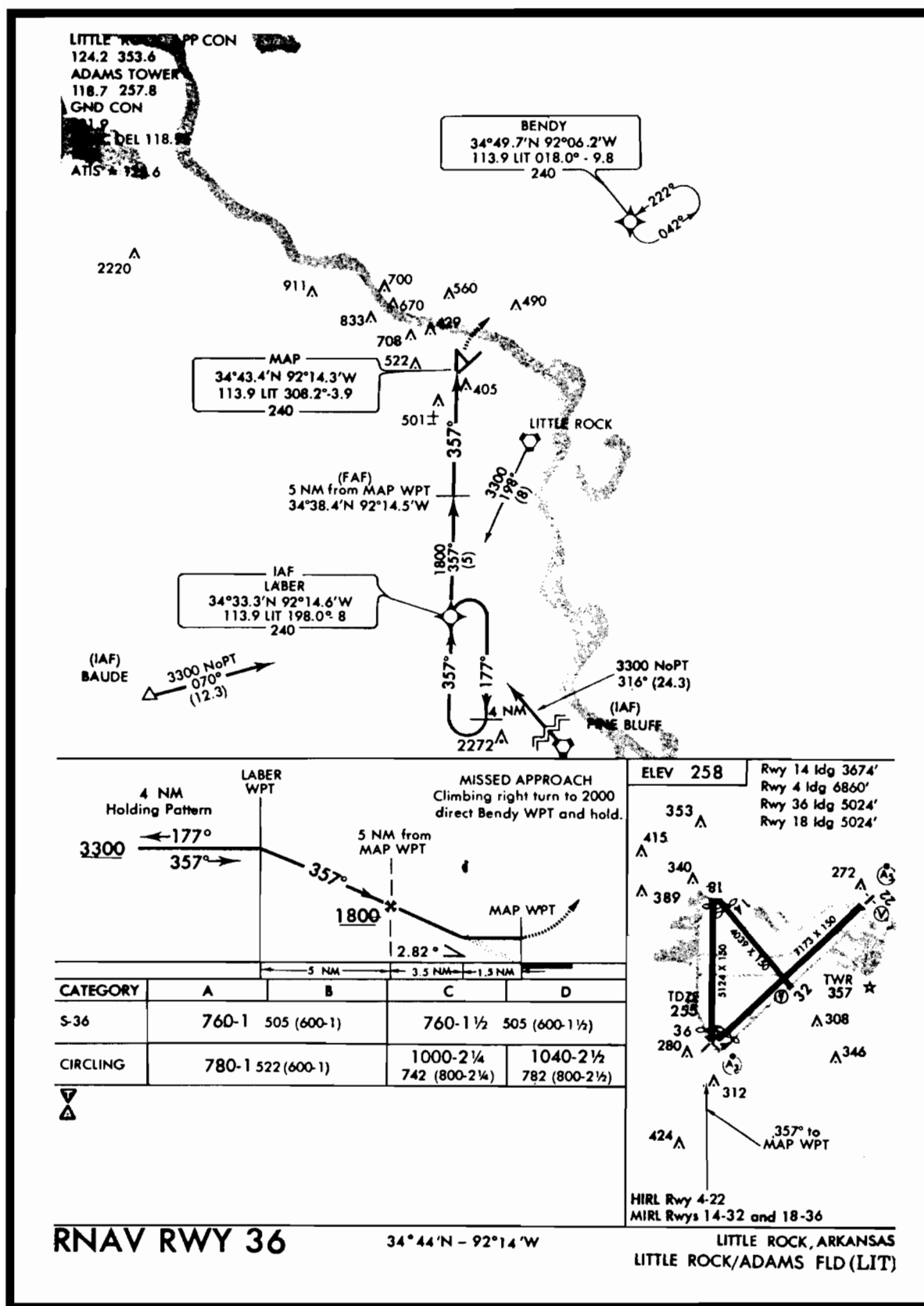
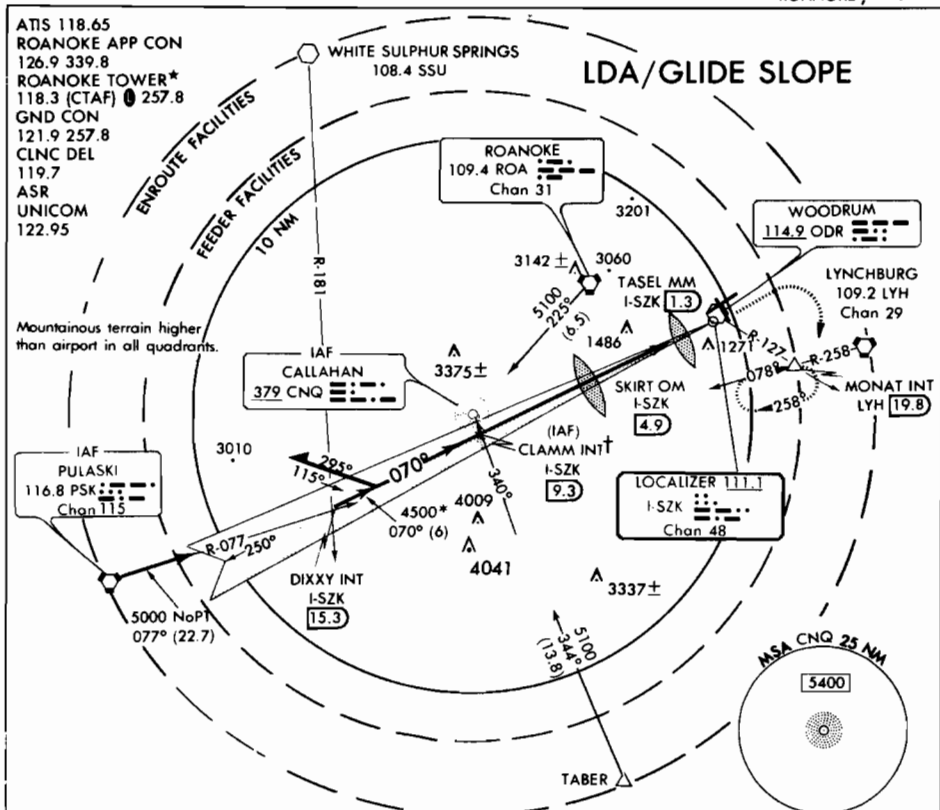


FIGURE 129.—RNAV RWY 36 (LIT).

LDA RWY 6

ROANOKE REGIONAL / WOODRUM FIELD (ROA)
AL-349 (FAA) ROANOKE, VIRGINIA



Remain within 10 NM

CLAMM INT†: NDB I-SZK 9.3

5100

250°

4182

*4500

070°

2718

SKIRT OM I-SZK 4.9

2800

†(LDA/LOC only)

TASEL MM I-SZK 1.3

MISSED APPROACH

Climb to 1800, then climbing right turn to 4000 via ODR R-127 to Monat Int and hold.

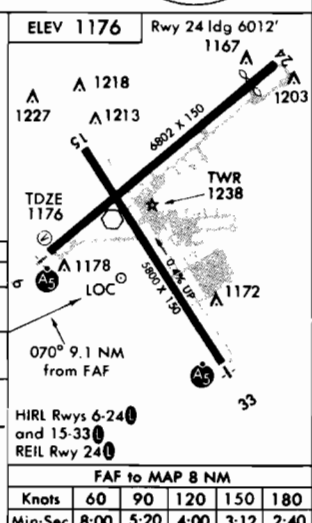
GS 3.0 TCH 5

†Procedure turn may commence at CNQ NDB.

*4200 when alid slope not used.

CATEGORY				
	A	B	C	D
S-LDA/GS 6	1540-1 364 (400-1)			1620-1½ 444 (500-1½)
S-LDA 6	1800-1 624 (700-1)		1800-1¾ 624 (700-1¾)	1800-2 624 (700-2)
CIRCLING	1800-1¼ 624 (700-1¼)		1800-1¾ 624 (700-1¾)	1800-2 624 (700-2)

Circling not authorized NW of Rwy 6-24. Circling to Rwy 15 NA.
 Glide Slope unusable below 1540' MSL.
 Inoperative table does not apply.
 ▼▲



FAF to MAP 8 NM					
Knots	60	90	120	150	180
Min:Sec	8:00	5:20	4:00	3:12	2:40

LDA RWY 6

37°19'N-79°59'W ROANOKE VIRGINIA
ROANOKE REGIONAL (WOODBRUN FIELD) (ROA)

FIGURE 130.—LDA RWY 6 (ROA).

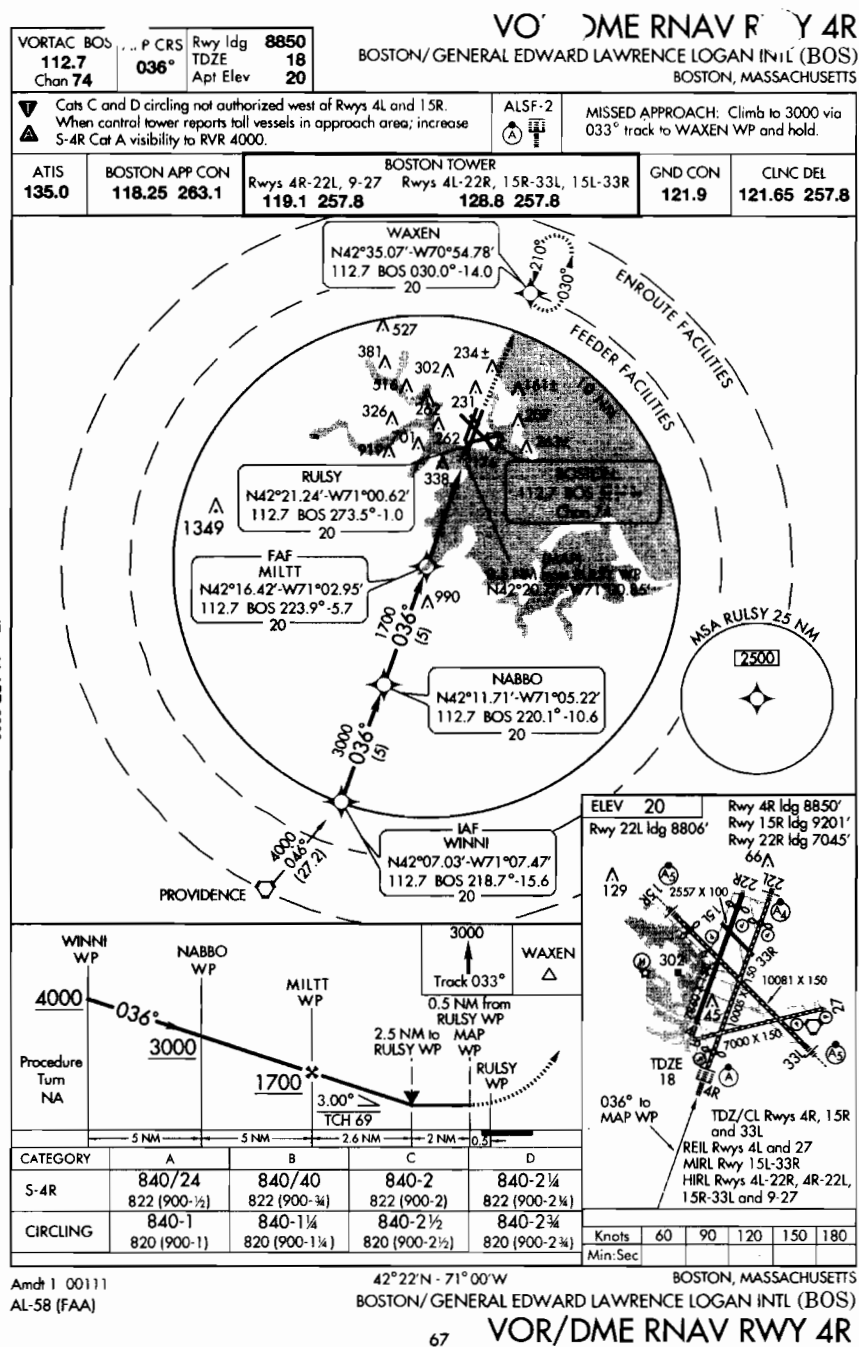


FIGURE 131.—VOR/DME RNAV RWY 4R.

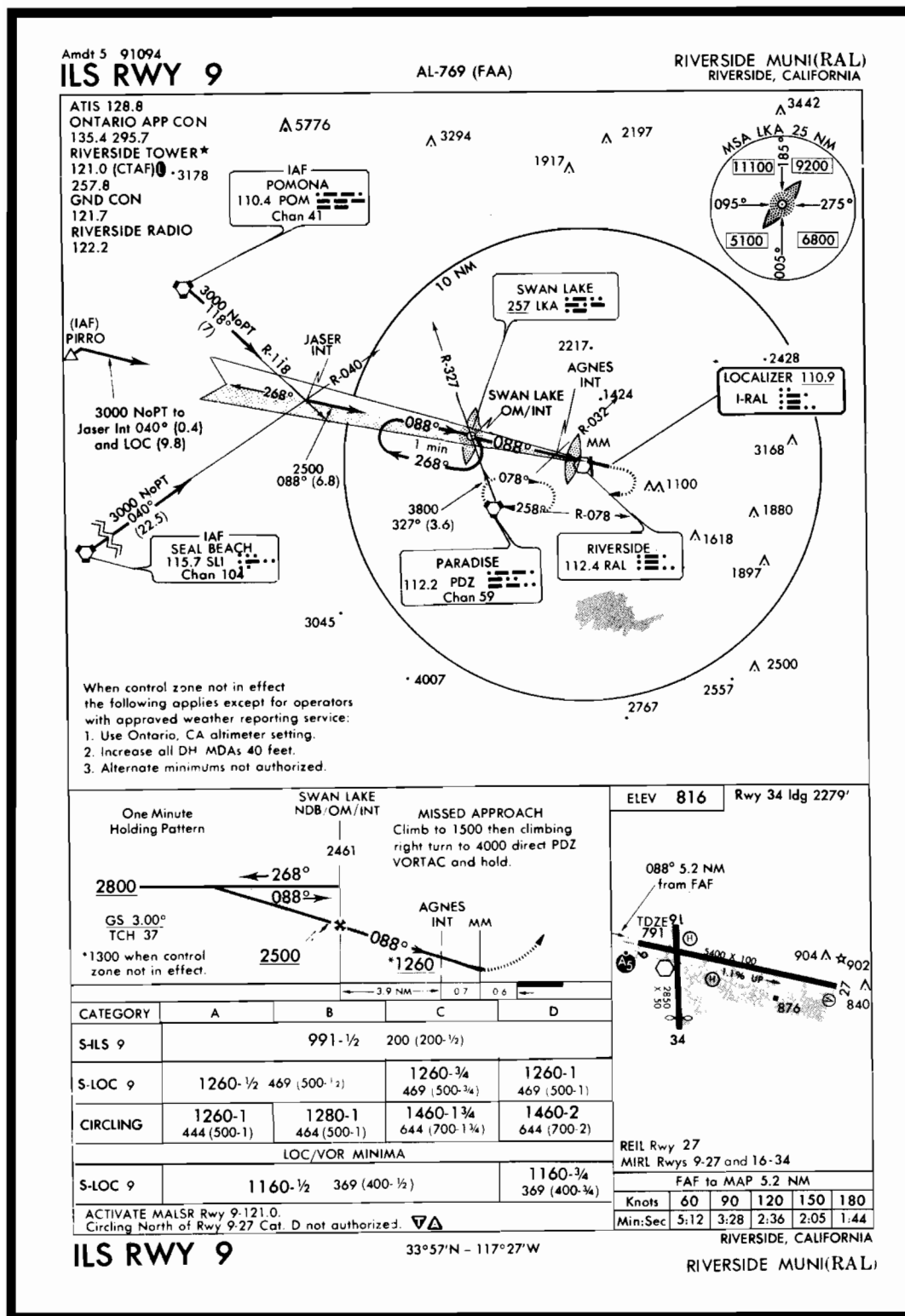


FIGURE 133.—ILS RWY 9 (RAL).

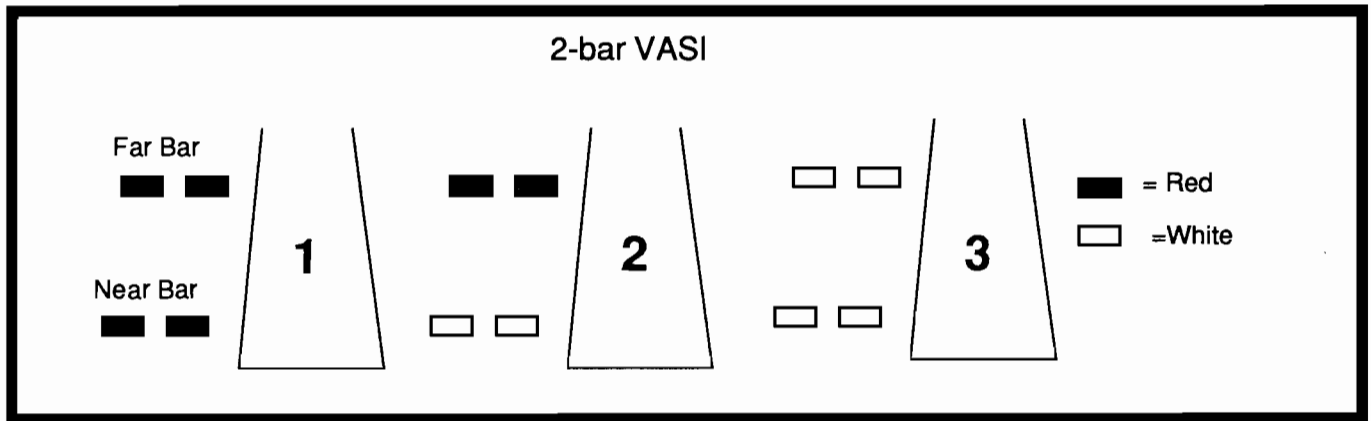


FIGURE 134.—2-BAR VASI.

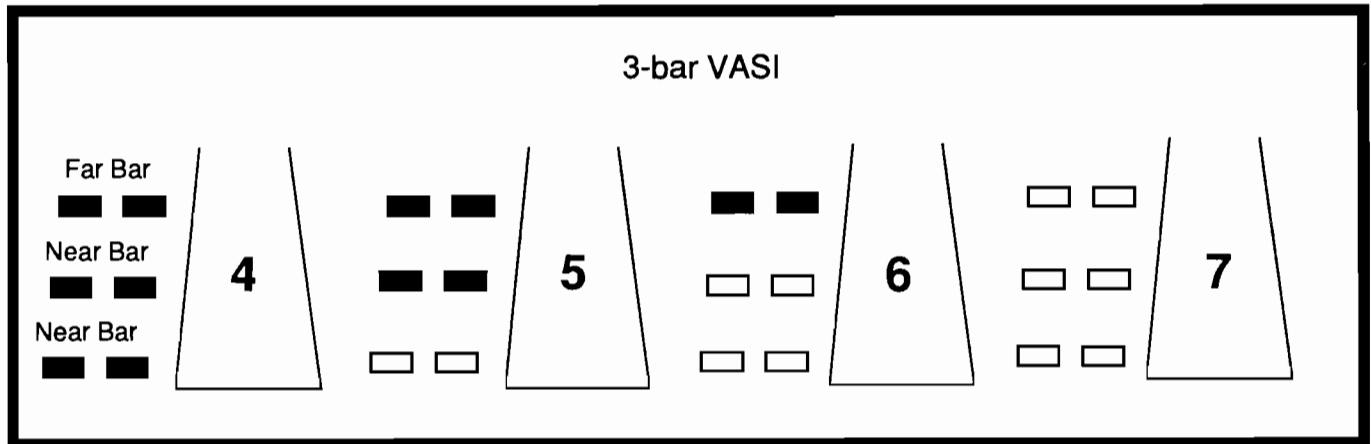


FIGURE 135.—3-BAR VASI.

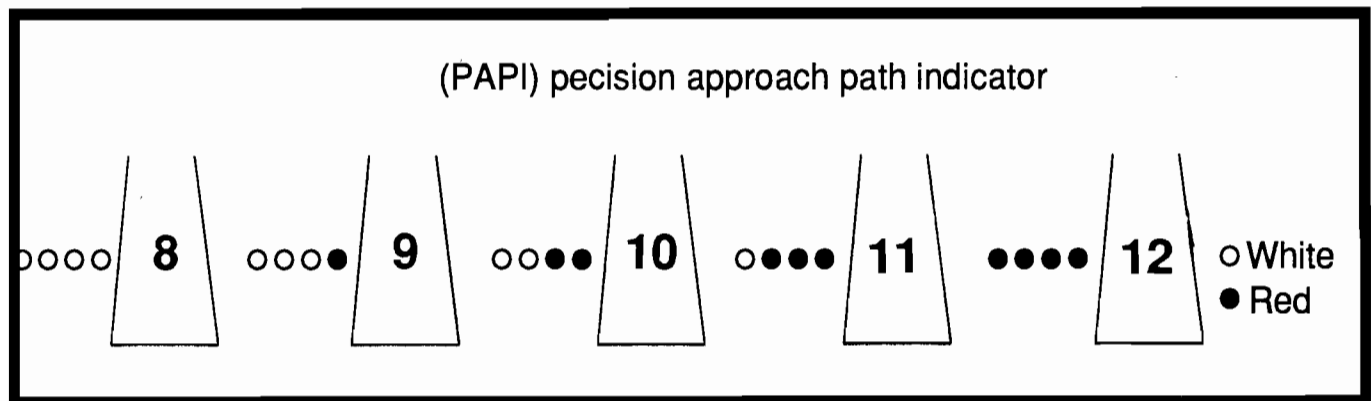


FIGURE 136.—Precision Approach Path Indicator (PAPI).

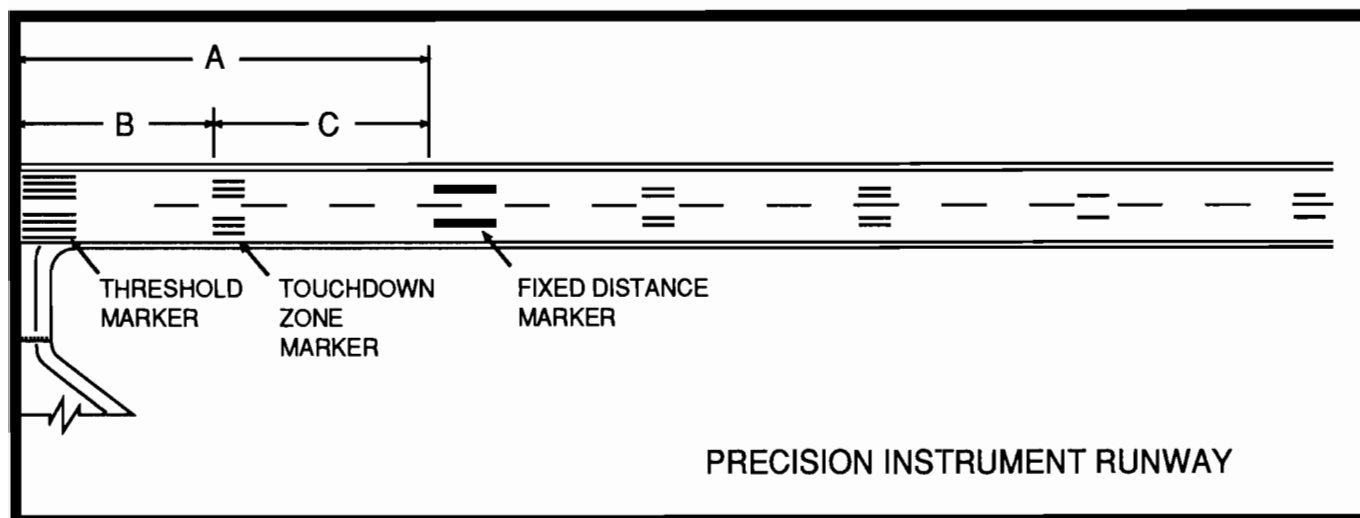


FIGURE 137.—Precision Instrument Runway.

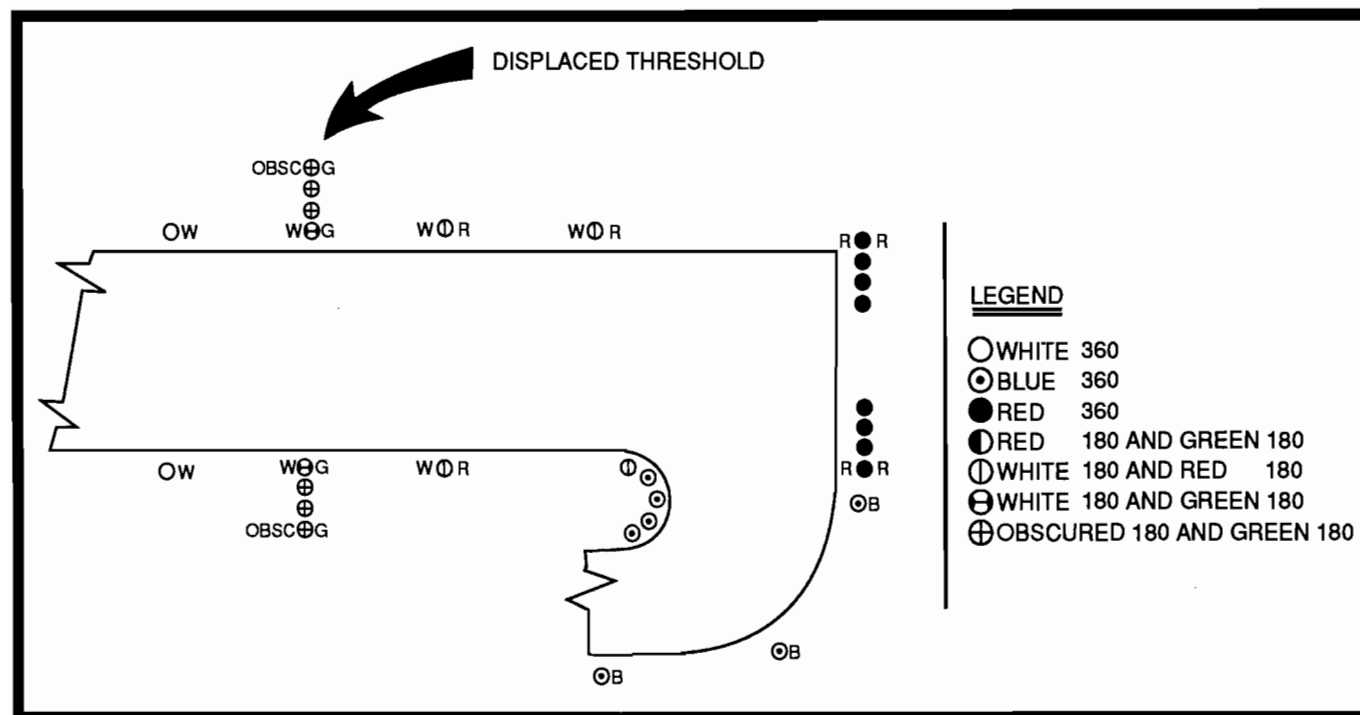


FIGURE 138.—Runway Legend.

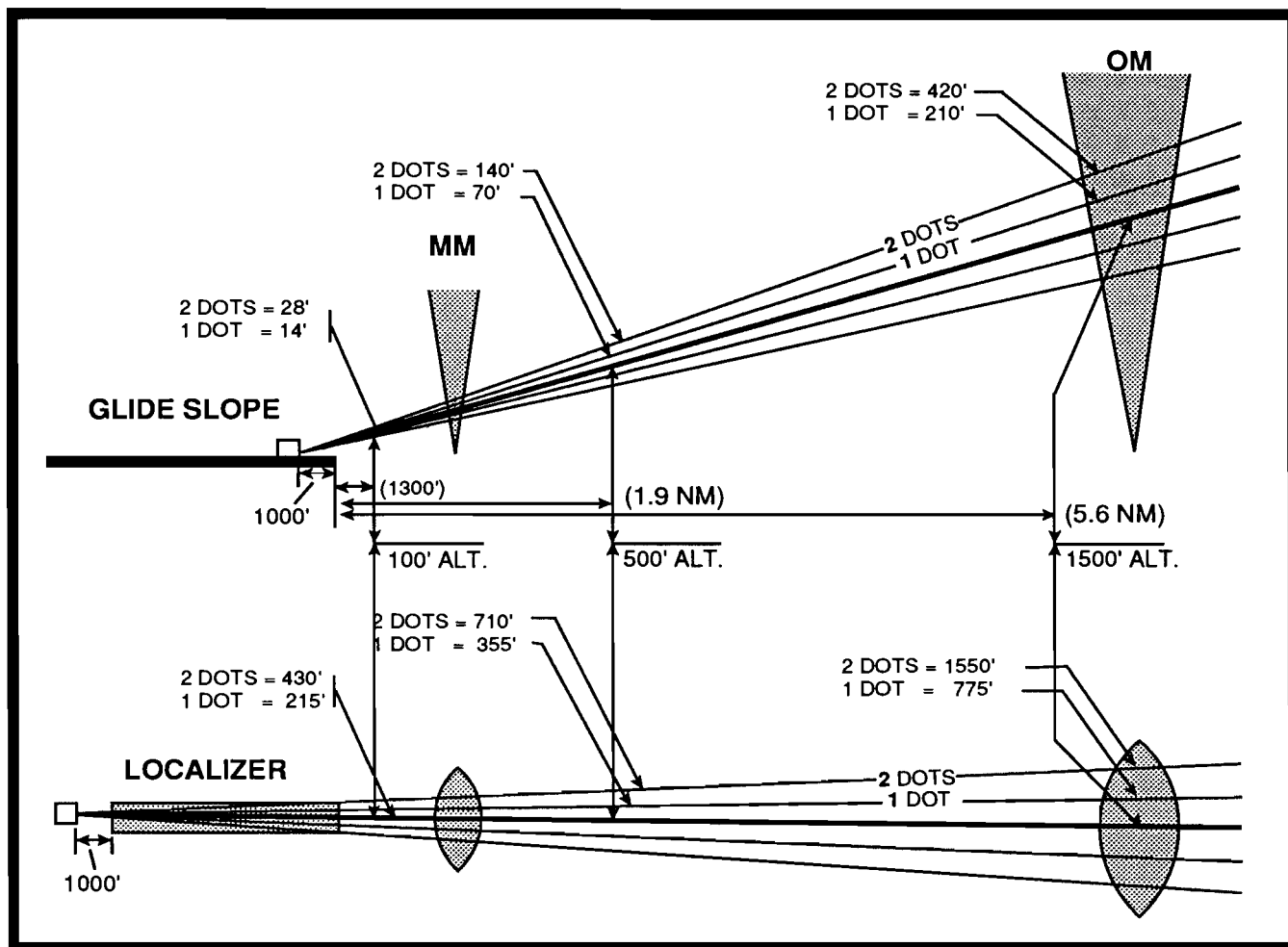


FIGURE 139.—Glide Slope and Localizer Illustration.

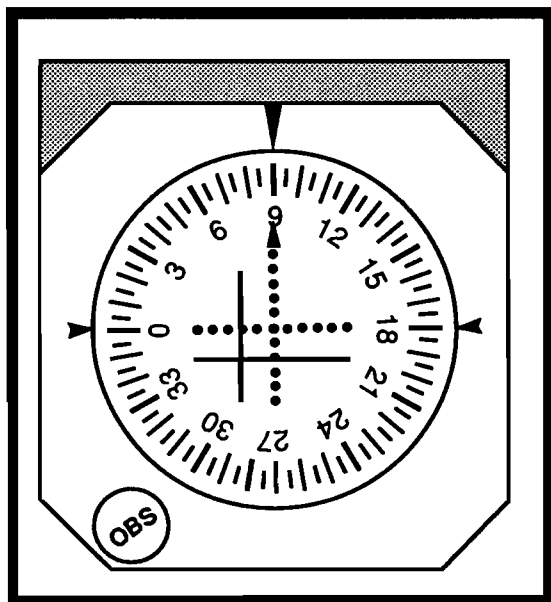


FIGURE 140.—OBS, ILS, and GS Displacement.

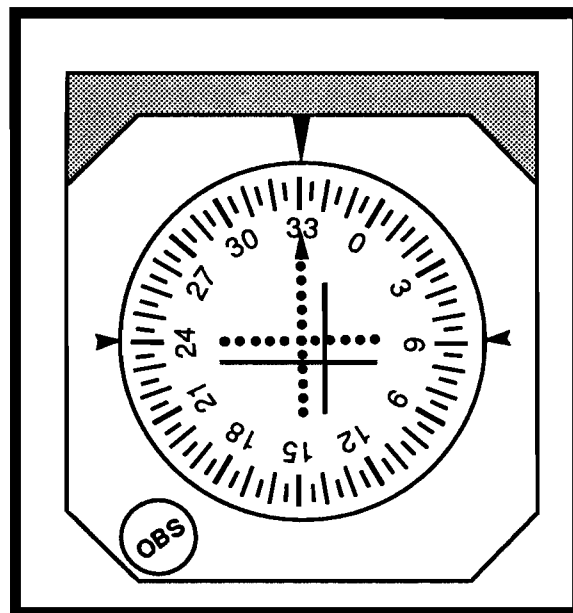


FIGURE 141.—OBS, ILS, and GS Displacement.

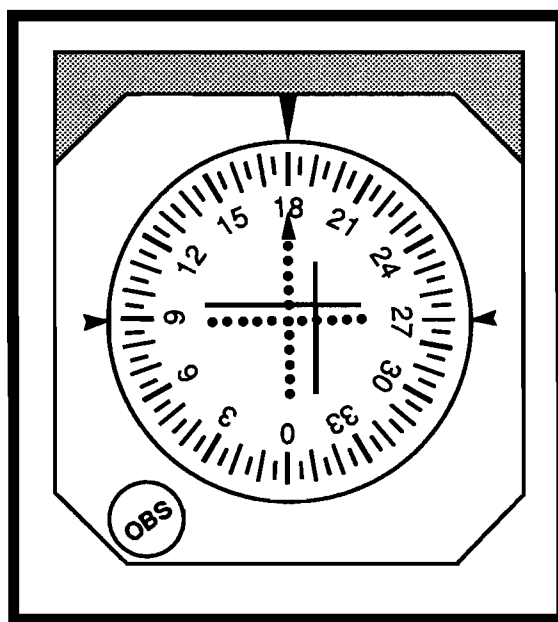


FIGURE 142.—OBS, ILS, and GS Displacement.

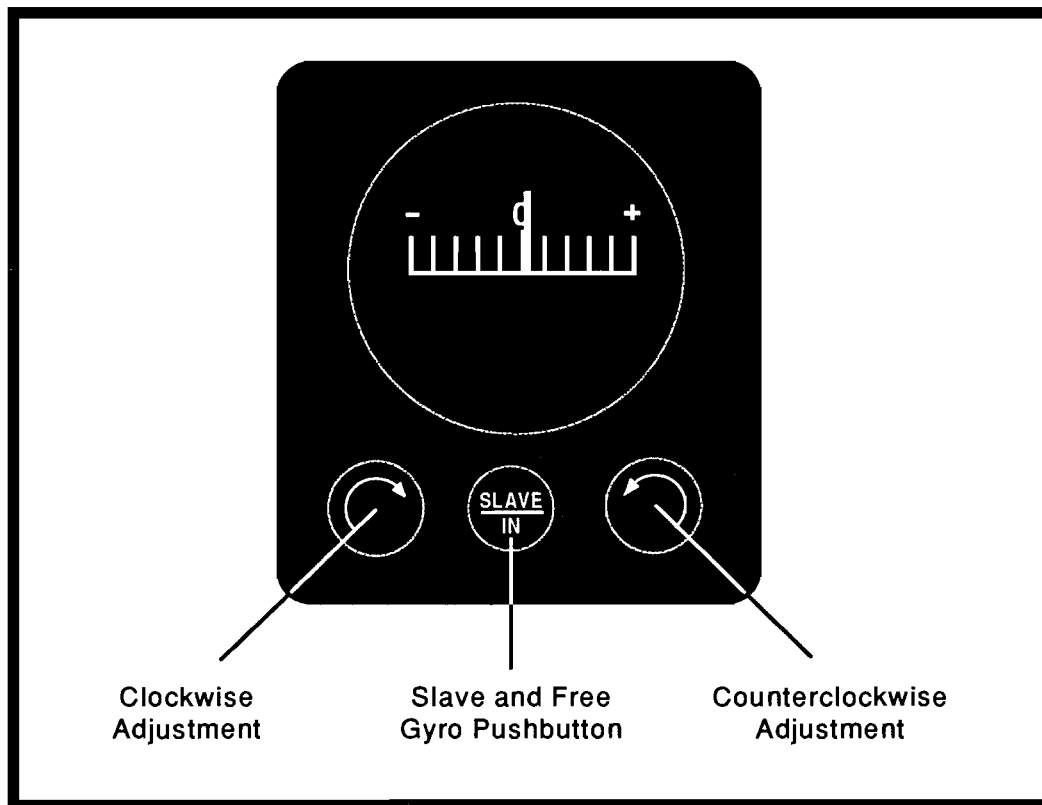


FIGURE 143.—Slaved Gyro Illustration.

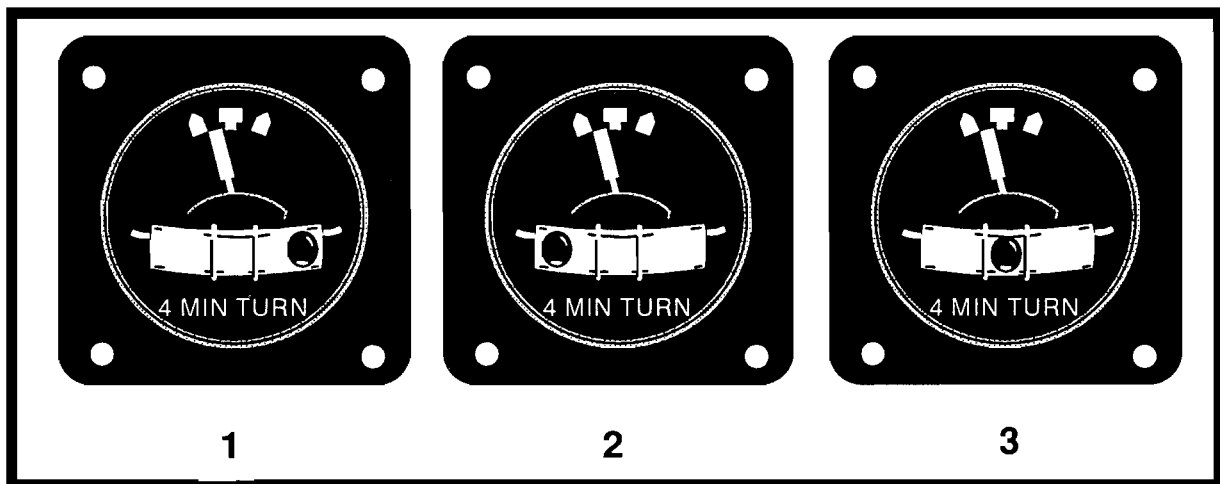


FIGURE 144.—Turn-and-Slip Indicator.

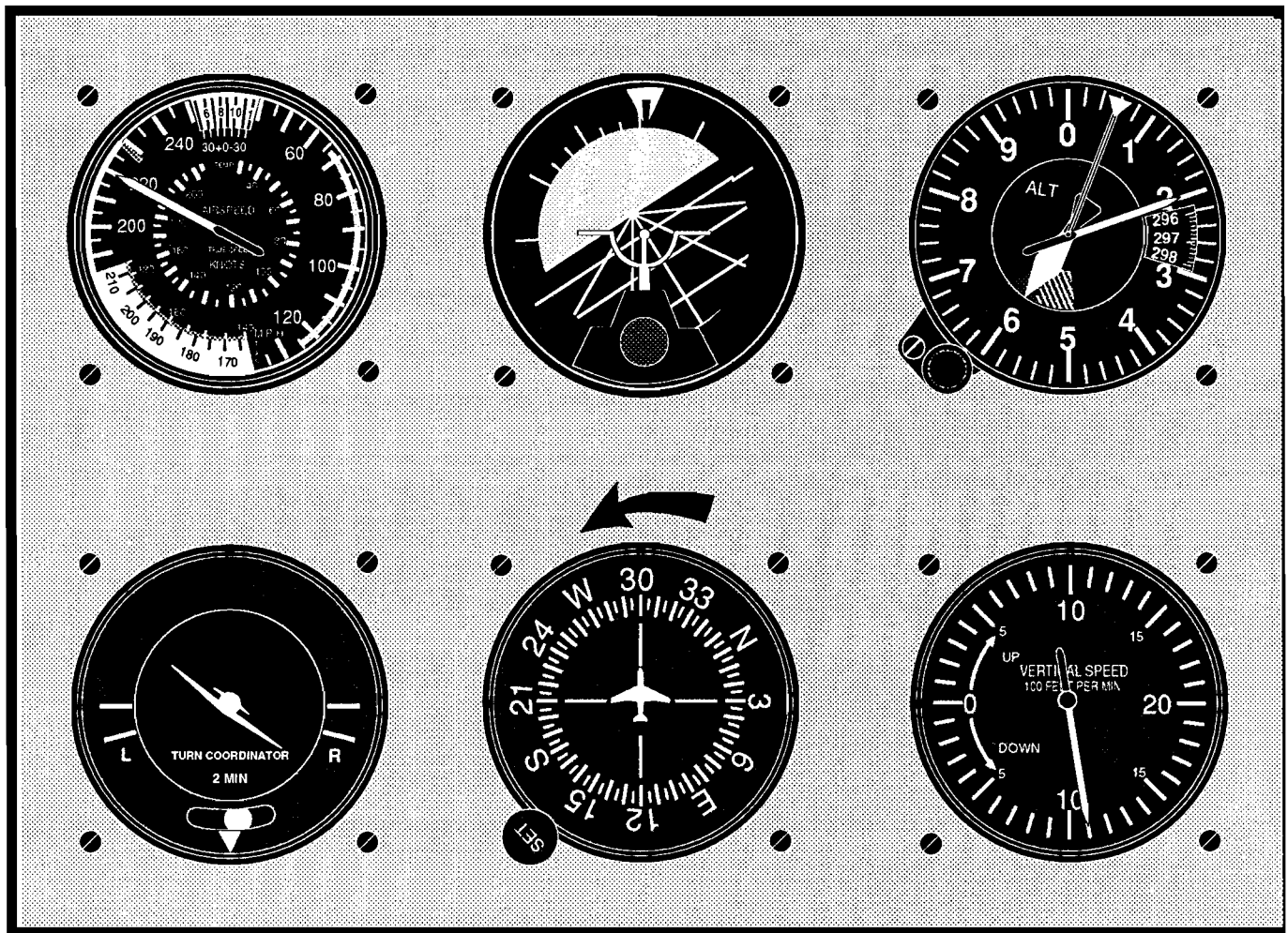


FIGURE 145.—Instrument Sequence (Unusual Attitude).

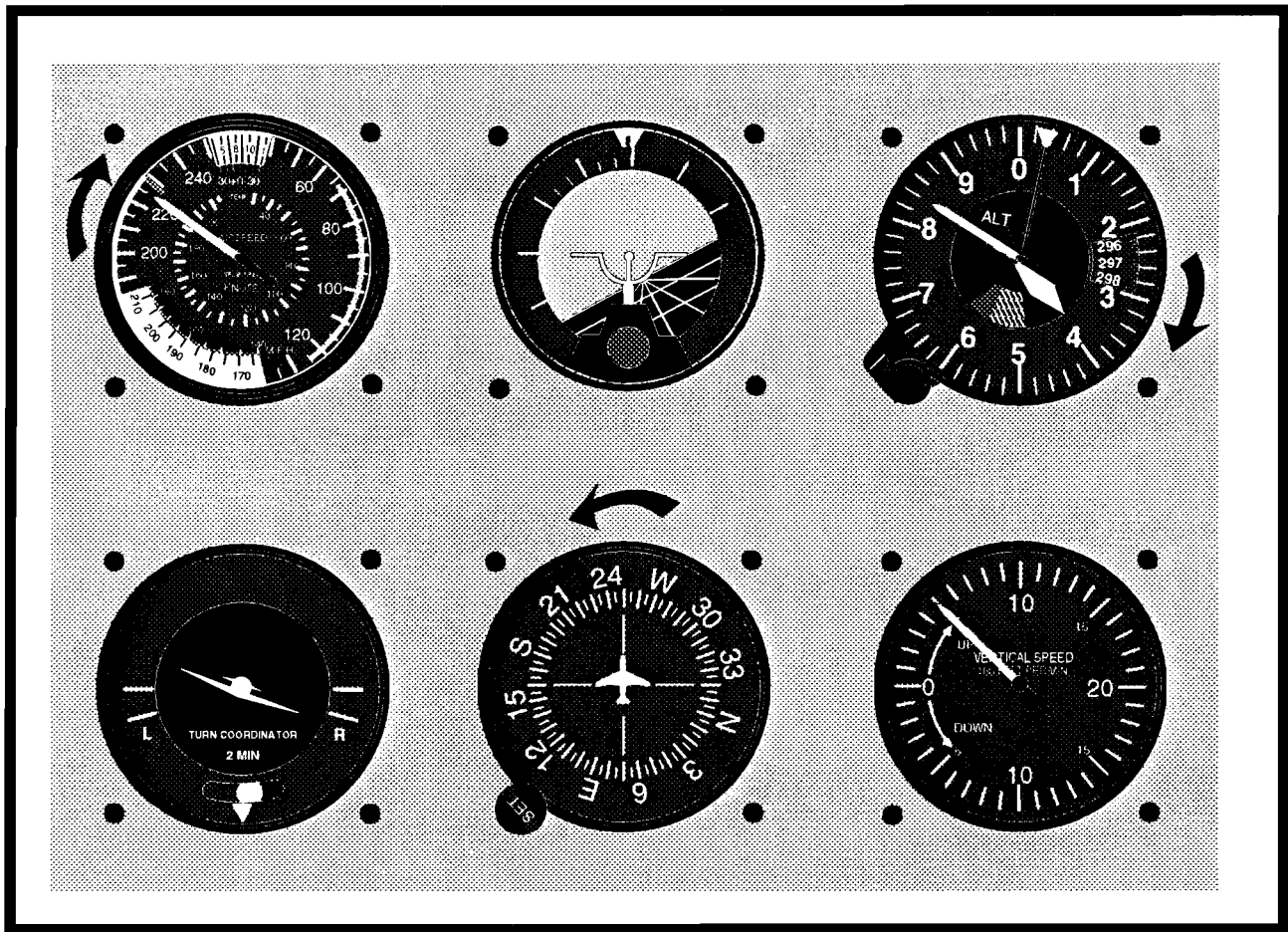


FIGURE 146.—Instrument Sequence (System Failed).

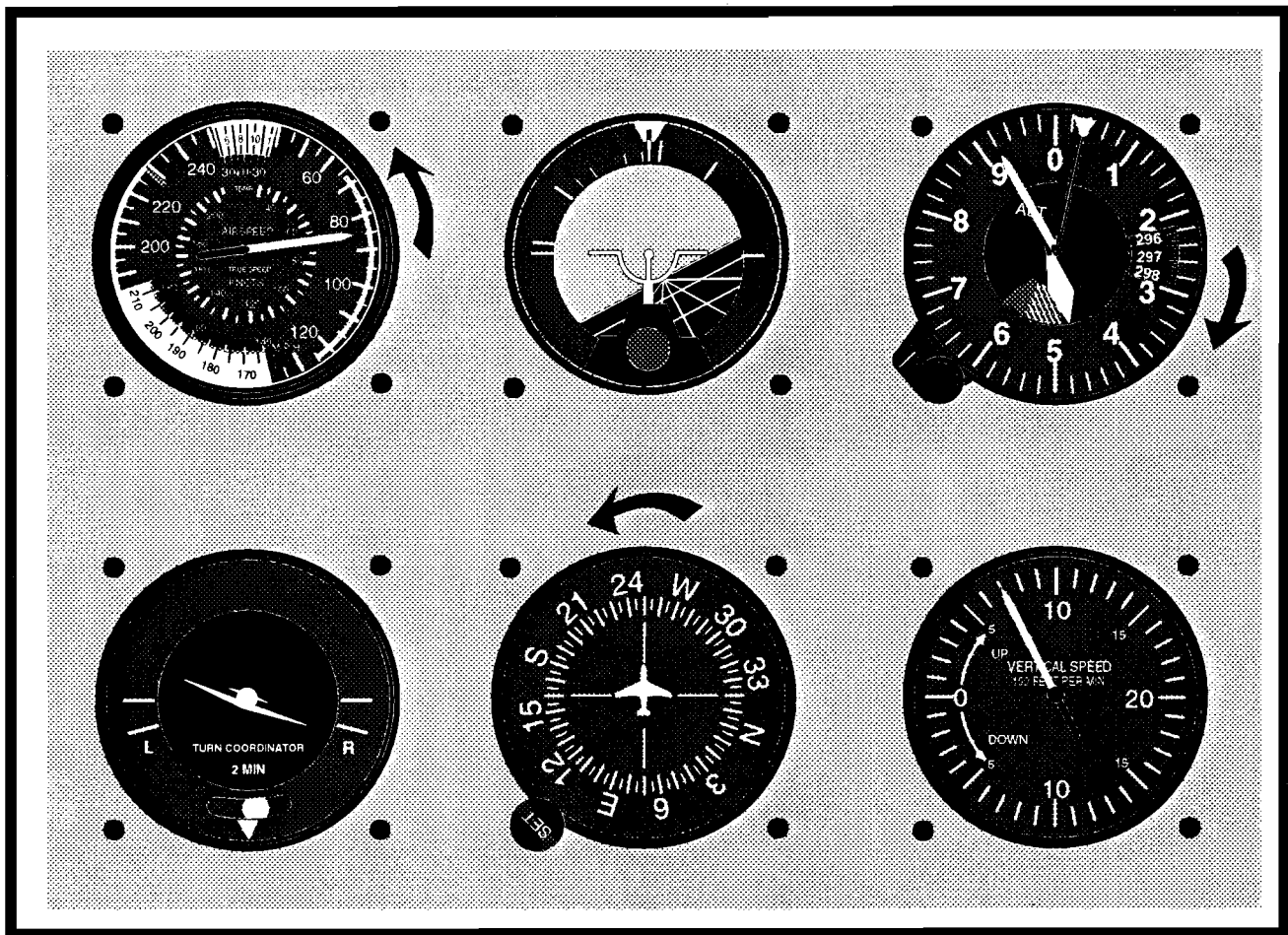


FIGURE 147.—Instrument Sequence (Unusual Attitude).

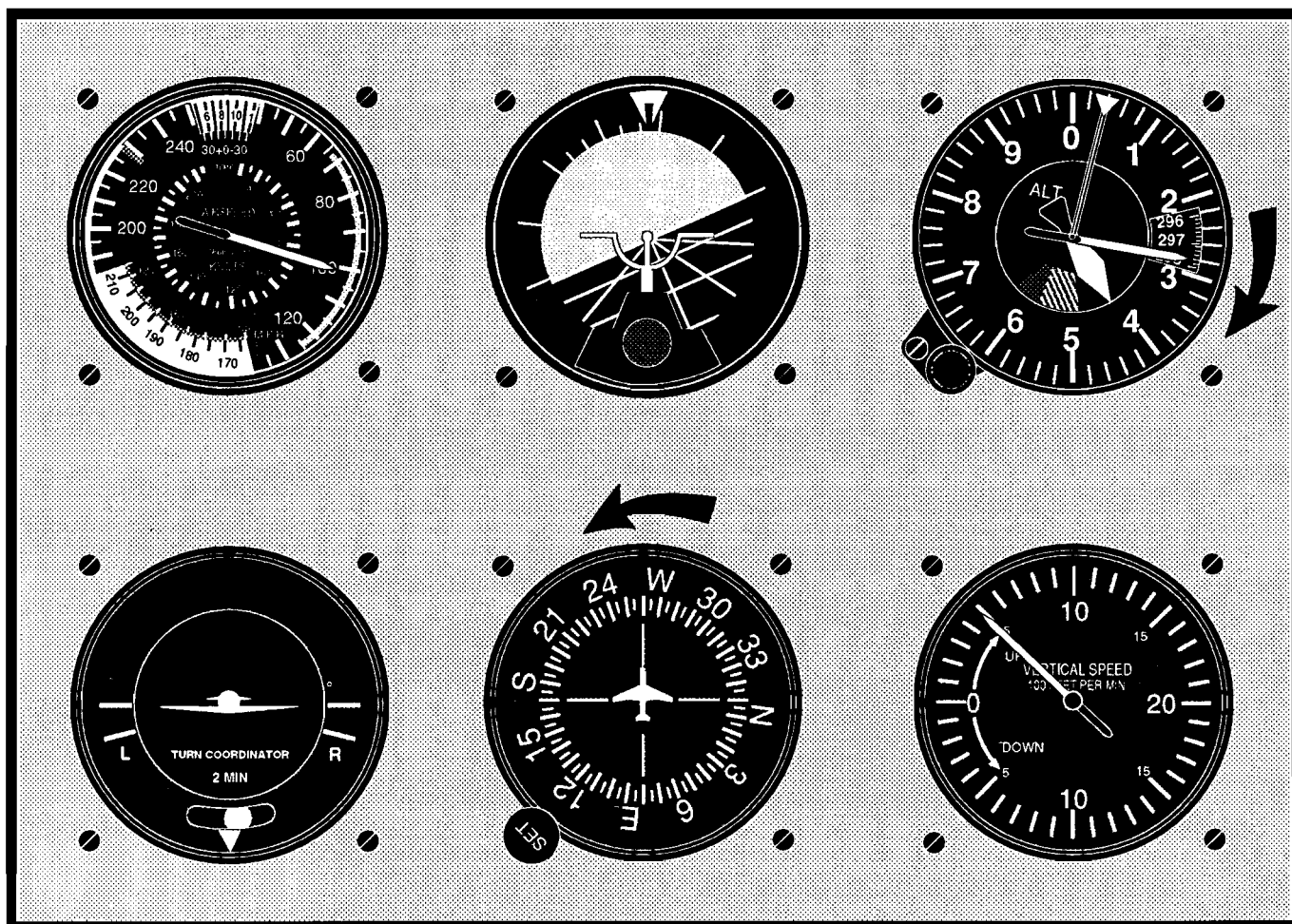


FIGURE 148.—Instrument Interpretation (System Malfunction).

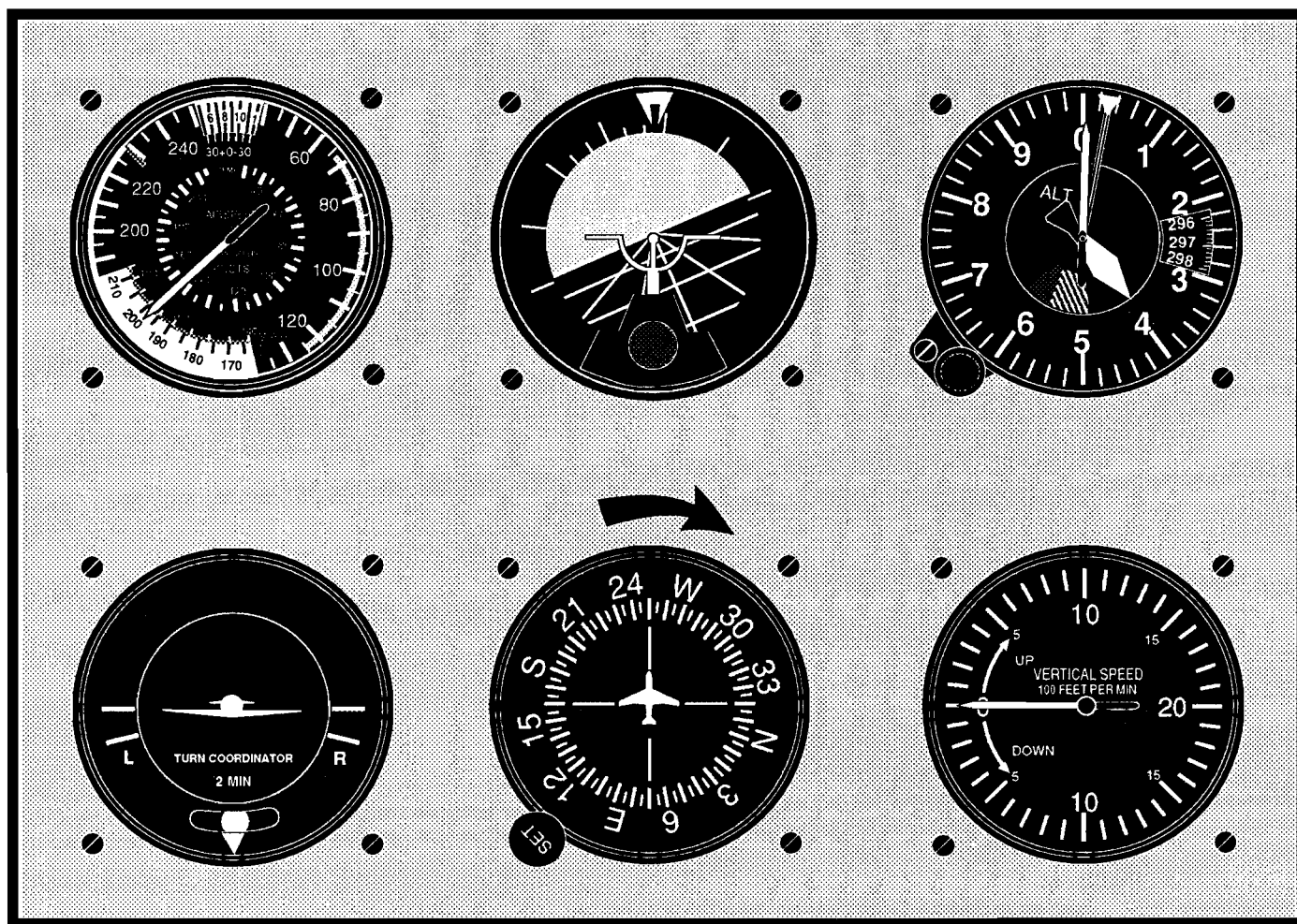


FIGURE 149.—Instrument Interpretation (System Malfunction).

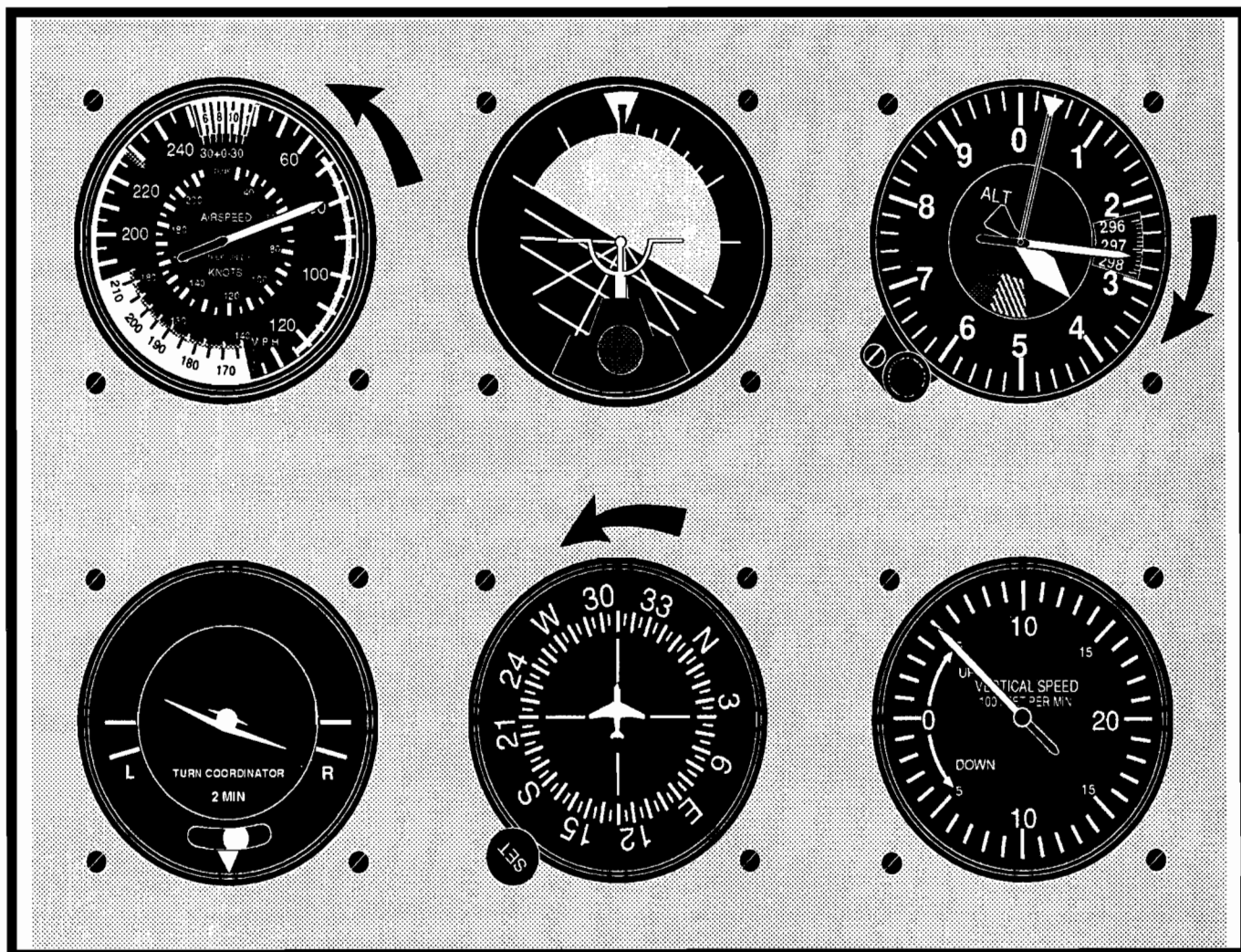


FIGURE 150.—Instrument Interpretation (Instrument Malfunction).

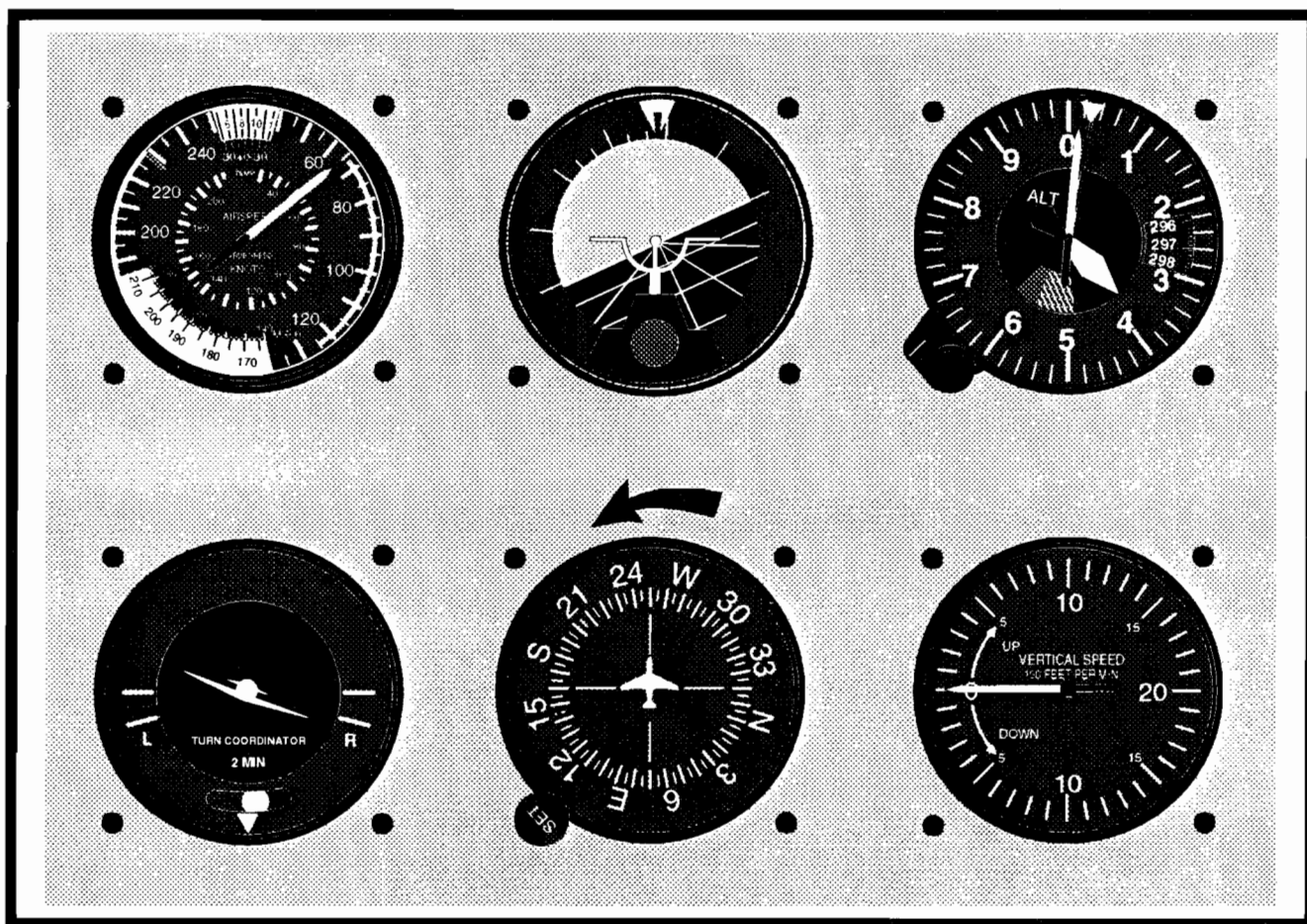


FIGURE 151.—Instrument Interpretation (Instrument Malfunction).

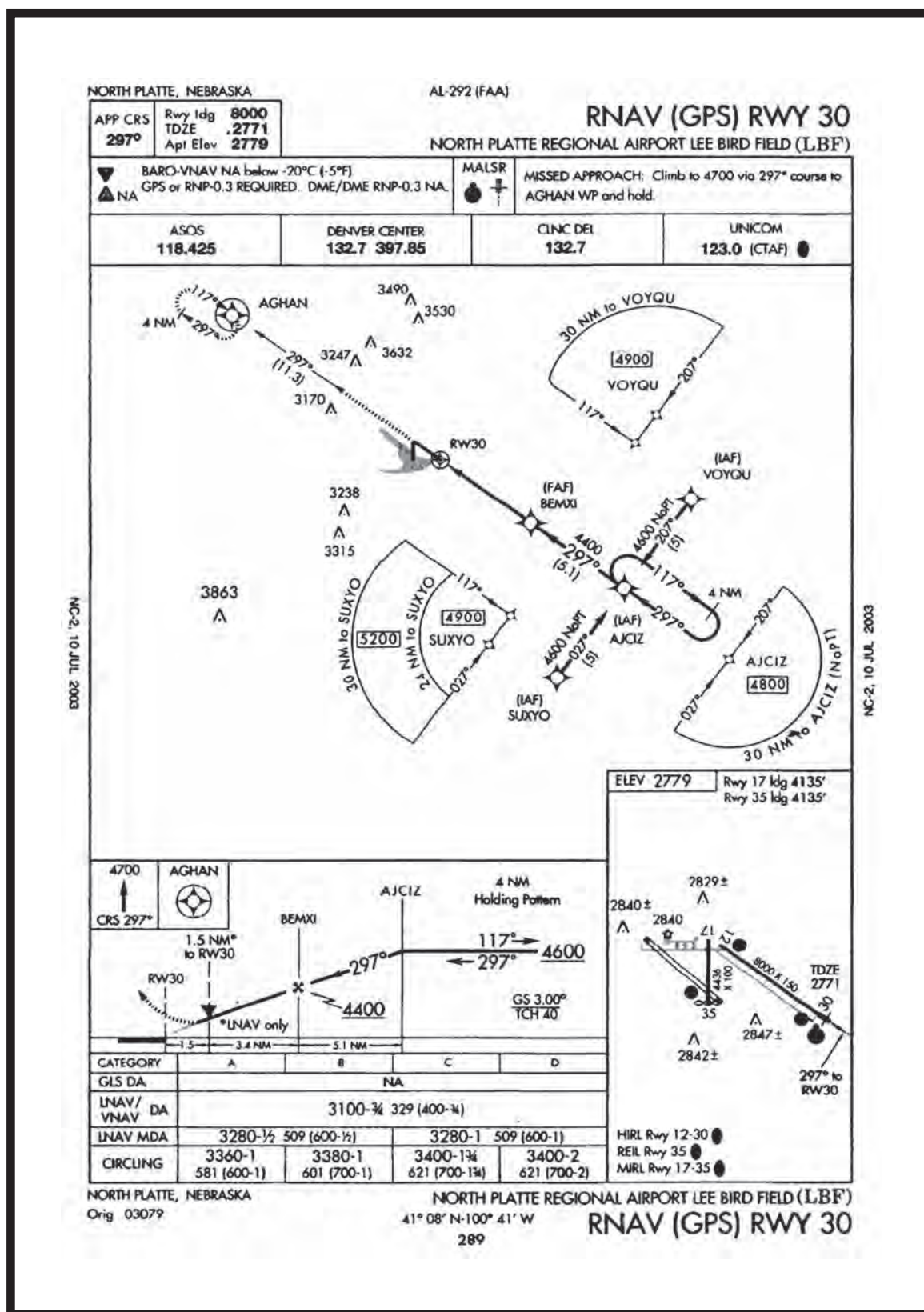


FIGURE 152.—RNAV (GPS) RWY 30, North Platte Regional Airport Lee Bird Field (LBF).

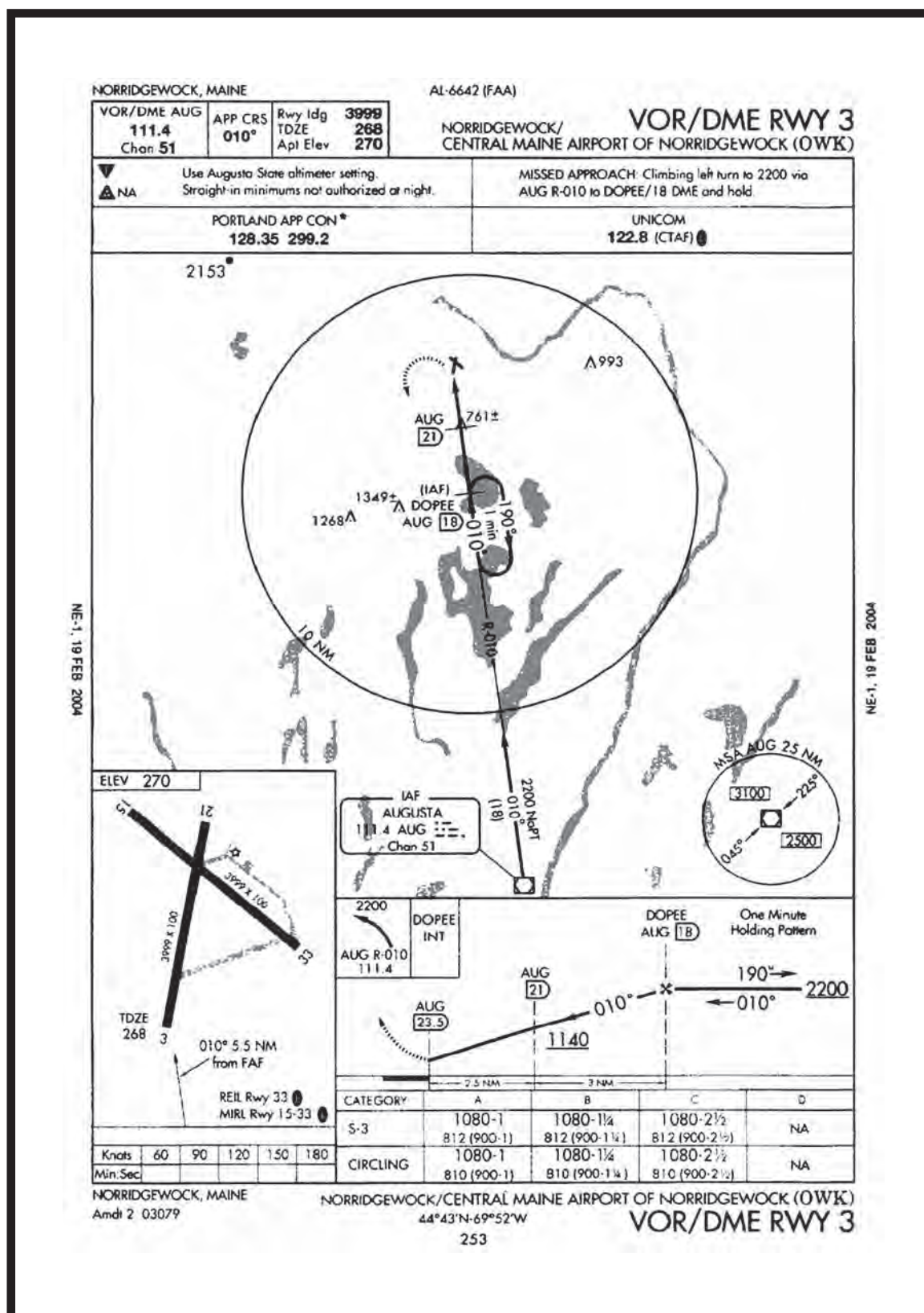


FIGURE 153.—VOR/DME RWY 3, Norridgewock/Central Maine Airport of Norridgewock (OWK).

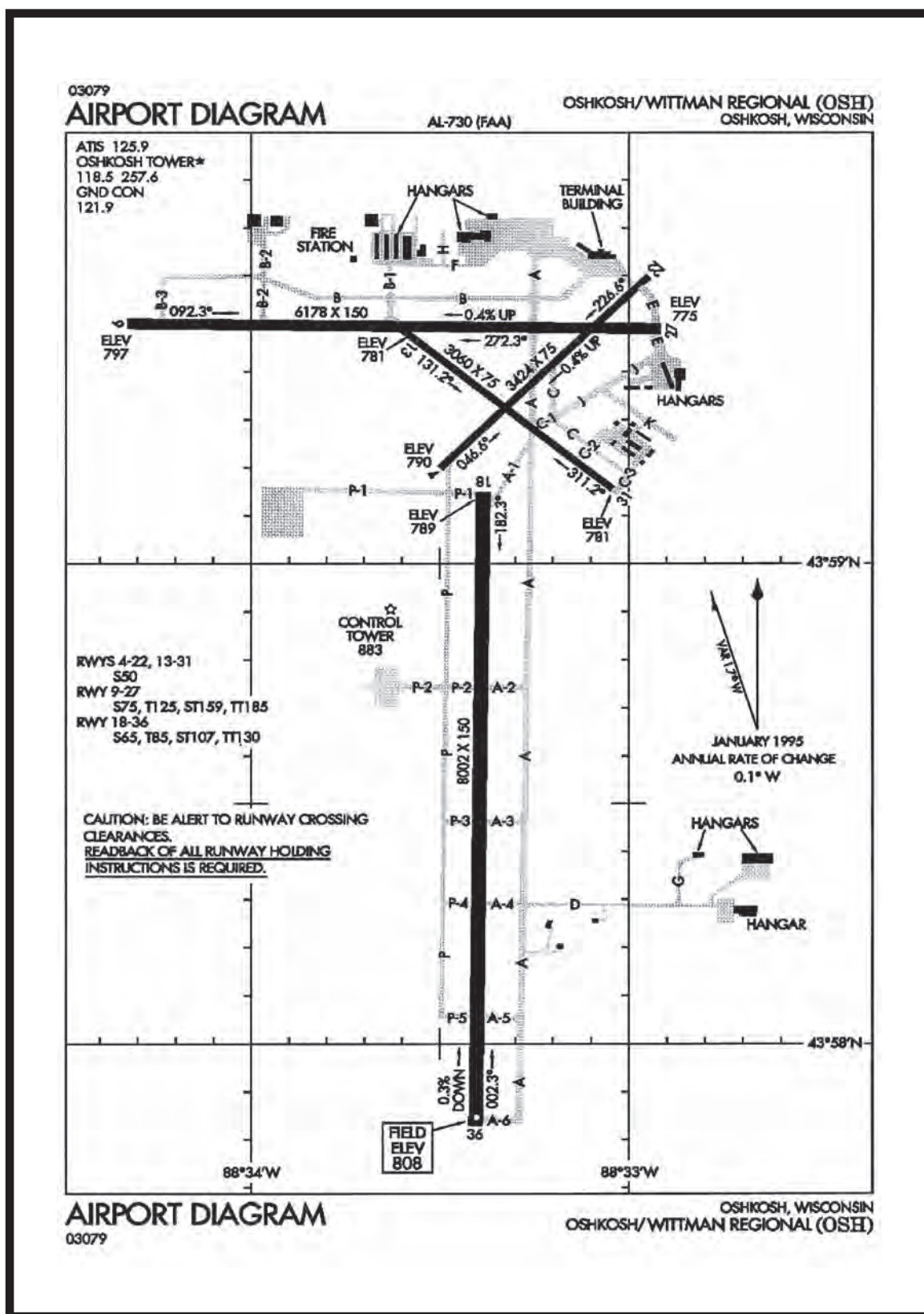


FIGURE 154.—Osh Kosh/Wittman Regional (OSH).