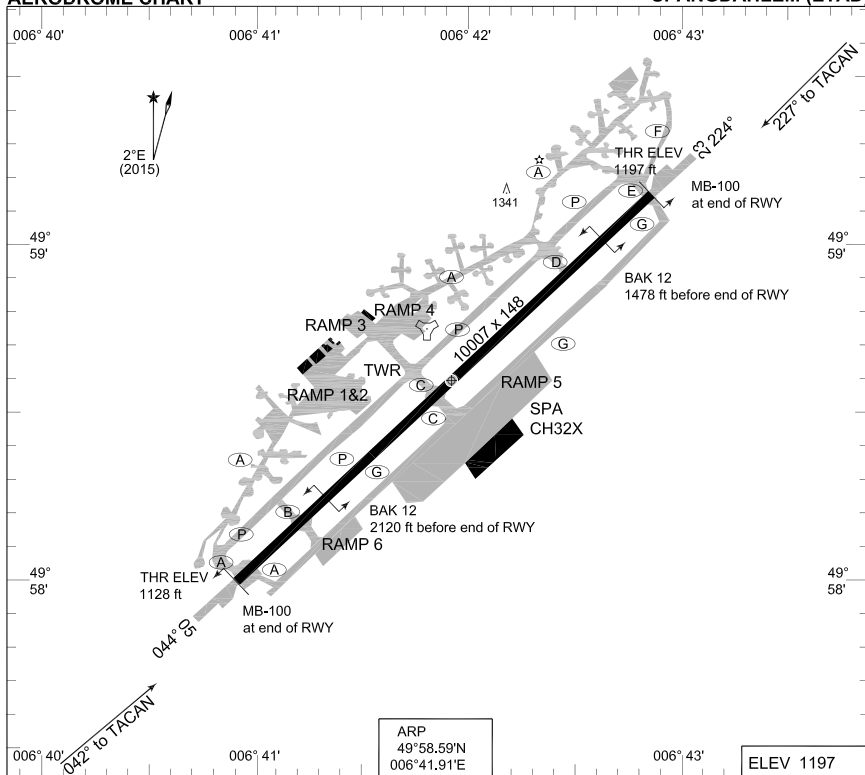


AERODROME CHART

SPANGDAHLEM (ETAD)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
05	81/R/B/W/T	10007	10993	10993	10007	3.0°	1158	49°58.01'N 006°41.01'E
23	81/R/B/W/T	10007	10995	10995	10007	3.0°	1197	49°59.18'N 006°42.81'E

SPANGDAHLEM TWR 256.500 122.200
 SPANGDAHLEM GCA 341.475 129.475

CHANGE: ABN NEW PSN, ARR GEAR REMOVED (376/15)

ZentrLuftOpfINGA 07 JAN 2016

AERODROME CHART

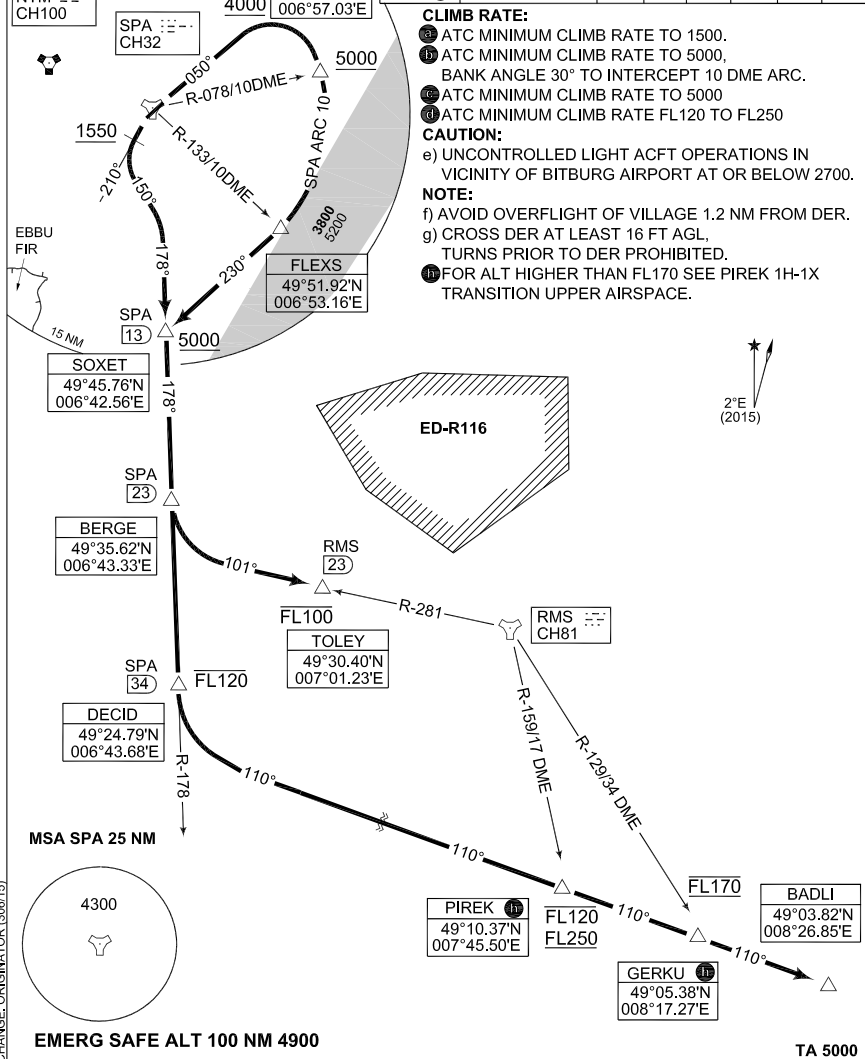
SPANGDAHLEM (ETAD)

MIPS INSTRUMENT DEPARTURE CHART

AD ELEV 1197

GERKU 1H-1X,PIREK 1H-1X,TOLEY 1H-1X SPANGDAHLEM (ETAD)

ATIS		DELIVERY	GND CTL		SPANGDAHLEM TWR					
244.500	143.425	308.850	308.850	140.050	256.500	122.200				
LANGEN RADAR		RHEIN RADAR	RWY		Knots	60	120	180	240	300
340.325	125.600	387.150	05	05	V / V (fpm)	213	426	638	851	1064
			05	05	V / V (fpm)	487	973	1459	1945	2431
			23	23	V / V (fpm)	320	640	960	1280	1600
			05/23	05/23	V / V (fpm)	310	620	930	1240	1550



GERKU 1H-1X,PIREK 1H-1X,TOLEY 1H-1X 49°58.59'N 006°41.91'E SPANGDAHLEM (ETAD)

CHANGE ORIGINATOR (006/15)

ZentrLufOp/NGA 12 NOV 2015

MIPS
INSTRUMENT DEPARTURE CHART

GERKU 1H-1X,PIREK 1H-1X,TOLEY 1H-1X
SPANGDAHLEM (ETAD)

RWY	Knots	60	120	180	240	300	360
05 	V / V (fpm)	213	426	638	851	1064	1276
05 	V / V (fpm)	487	973	1459	1945	2431	2917
23 	V / V (fpm)	320	640	960	1280	1600	1920
05/23 	V / V (fpm)	310	620	930	1240	1550	1860

CLIMB RATE:

-  ATC MINIMUM CLIMB RATE TO 1500.
-  ATC MINIMUM CLIMB RATE TO 5000,
BANK ANGLE 30° TO INTERCEPT 10 DME ARC.
-  ATC MINIMUM CLIMB RATE TO 5000
-  ATC MINIMUM CLIMB RATE FL120 TO FL250

CAUTION:

- e) UNCONTROLLED LIGHT ACFT OPERATIONS IN
VICINITY OF BITBURG AIRPORT AT OR BELOW 2700.

NOTE:

- f) AVOID OVERFLIGHT OF VILLAGE 1.2 NM FROM DER.
- g) CROSS DER AT LEAST 16 FT AGL,
TURNS PRIOR TO DER PROHIBITED.
-  FOR ALT HIGHER THAN FL170 SEE PIREK 1H-1X
TRANSITION UPPER AIRSPACE.

DESCRIPTION OF SID

(RWY 05)	- Climbing to 5000 ft on track 050°, upon passing 4000 ft - Turn right to cross FODOR at or above 5000 ft - At FODOR, intercept the SPA TAC 10 DME arc south to FLEXS - Depart FLEXS heading 230° to intercept SPA R-178 outbound to SOXET - Continue via transition
(RWY 23)	- Climbing to 5000 ft on track 210°, upon passing 1550 ft - Turn left on track 150° to intercept SPA R-178 outbound at 13 DME - Continue via transition

TRANSITIONS

GERKU 1H-1X	- At SPA 178/34 DME turn left tracking 110° to cross GERKU at FL 170
PIREK 1H-1X	- At SPA 178/34 DME turn left tracking 110° to cross PIREK at or above FL 250
TOLEY 1H-1X	- At SPA R-178/23 DME turn left to intercept RMS R-281 and proceed to TOLEY (RMS R-281/23 DME) - Pass TOLEY at FL 100 or below

CHANGE: ORIGINATOR (306/15)

ZentrLufOp/NGA 12 NOV 2015

MIPS INSTRUMENT DEPARTURE CHART

AD ELEV 1197

GEBSO 1H-1X,NOR 1H-1X
SPANGDAHLEM (ETAD)

ATIS		DELIVERY	GND CTL		SPANGDAHLEM TWR					LIPPE RADAR	
244.500	143.425	308.850	308.850	140.050	256.500	122.200				314.600	
LANGEN RADAR			RWY	from - to	60	120	180	240	300	360	Reason
340.325 125.600			05		220	430	640	860	1070	1280	ATC
			05	- FL140	375	750	1125	1500	1875	2250	ATC
			23	- FL140	324	648	972	1296	1620	1944	ATC
			05/23	FL140 - FL250	630	1260	1890	2520	3150	3780	ATC

NOR

CH109X

SPA

52.3



NOR CH109X
116.2

SPA 52.3
FL250

2°E
(2015)

GEBSO
50°32.97'N
006°41.45'E

SPA 32
FL140

SPA 34.3
FL140
FL095
for VMC

ATC MINIMUM CLIMB RATE TO 1500.

CAUTION:

b) UNCONTROLLED LIGHT ACFT OPERATIONS IN
VICINITY OF BITBURG AIRPORT AT OR BELOW 2700.

NOTE:

- c) AVOID OVERFLIGHT OF VILLAGE 1.2 NM FROM DER.
- d) CROSS DER AT LEAST 16 FT AGL.
- e) TURNS PRIOR TO DER PROHIBITED.
- f) IF UNABLE TO REACH FL250 AT NOR, WITH ATC APPROVAL
EXECUTE RIGHT 360° CLIMBING TURN AT GEBSO.
- g) RADAR REQUIRED
- h) FOR GEBSO 1X, NOR 1X DEPARTURE
DEAD RECKONING ON TRACK 045°

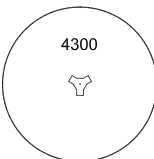
CHANGE: FREQ (355/15)

TA 5000

EDGG FIR
EBBU FIR

SPA CH32

MSA SPA 25 NM



EMERG SAFE ALT 100 NM 4900

GEBSO 1H-1X,NOR 1H-1X

49°58.59'N
006°41.91'E

SPANGDAHLEM (ETAD)

ZentLufTopiNGA 07 JAN 2016

MIPS
INSTRUMENT DEPARTURE CHART

GEBSO 1H-1X,NOR 1H-1X
SPANGDAHLEM (ETAD)

RWY	from - to	60	120	180	240	300	360	Reason
05		220	430	640	860	1070	1280	ATC
05	- FL140	375	750	1125	1500	1875	2250	ATC
23	- FL140	324	648	972	1296	1620	1944	ATC
05/23	FL140 - FL250	630	1260	1890	2520	3150	3780	ATC

-  ATC MINIMUM CLIMB RATE TO 1500.
- CAUTION:**
- b) UNCONTROLLED LIGHT ACFT OPERATIONS IN VICINITY OF BITBURG AIRPORT AT OR BELOW 2700.
- NOTE:**
- c) AVOID OVERFLIGHT OF VILLAGE 1.2 NM FROM DER.
- d) CROSS DER AT LEAST 16 FT AGL.
- e) TURNS PRIOR TO DER PROHIBITED.
- f) IF UNABLE TO REACH FL250 AT NOR, WITH ATC APPROVAL EXECUTE RIGHT 360° CLIMBING TURN AT GEBSO.
- g) RADAR REQUIRED
- h) FOR GEBSO 1X, NOR 1X DEPARTURE DEAD RECKONING ON TRACK 045°

DESCRIPTION OF SID

(RWY 05)	- Climb on track 045° to SPA 4/DME - Turn left on track 315° to intercept SPA R-360 outbound - Continue via transition
(RWY 23)	- Climb on track 210° to SPA 4/DME - Turn right on track 045° to intercept SPA R-160 outbound - Continue via transition

TRANSITIONS

GEBSO 1H (For VFR Flights)	- Cross SPA 32/DME at or below FL095 - If unable to maintain VMC maintain last assigned altitude and advise ATC.
GEBSO 1X (For VFR Flights)	- Cross SPA 32/DME at or below FL095 - If unable to maintain VMC maintain last assigned altitude and advise ATC.
NOR 1H	- Climb to FL250, proceed to NOR via GEBSO - Cross SPA 32/DME at or below FL140 - Cross SPA 34.3/DME at or below FL 140
NOR 1X	- Climb to FL250, proceed to NOR via GEBSO - Cross SPA 32/DME at or below FL140 - Cross SPA 34.3/DME at or below FL 140

CHANGE: FREQ (355/15)

ZentLutOpINGA 07 JAN 2016

ATIS	DELIVERY	GND CTL	SPANGDAHLEM TWR					
244.500 143.425	308.850	308.850 140.050	256.500 122.200					
LANGEN RADAR	LIPPE RADAR	RWY	from - to	60	120	180	240	300 360
340.325 125.600	314.600	05	- 1600 ft	230	460	690	920	1150 1380

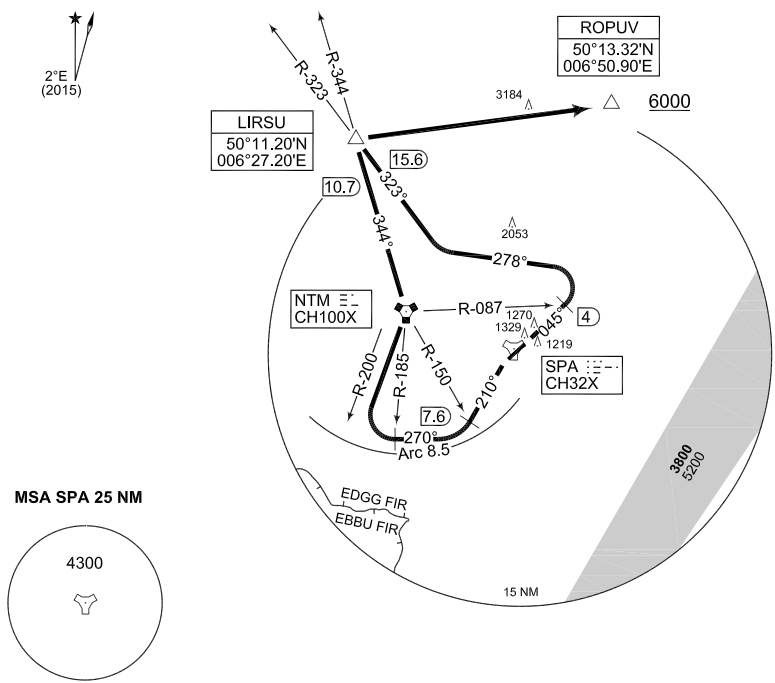
CAUTION:

a) UNCONTROLLED LIGHT ACFT OPERATIONS IN VICINITY OF BITBURG AIRPORT AT OR BELOW 2700.

NOTE:

b) CROSS DER AT LEAST 16 FT AGL.

c) REMAIN WITHIN NTM/8.5 DME UNTIL ESTABLISHED ON NTM R-200



EMERG SAFE ALT 100 NM 4900

TA 5000

ROPUV 1H (RWY 05)	- Climb on track 045° to 5000 ft - At SPA/4 DME turn left on track 278° to intercept SPA R-323 outbound - Proceed on SPA R-323 to LIRSU (SPA R-323/15.6 DME). (Non TACAN equipped ACFT, at SPA/4 DME (NTM R-087) turn left direct LIRSU (NTM R-344/10.7 DME)). - Proceed via LIRSU to ROPUV
ROPUV 1X (RWY 23)	- Climb on track 210° to 5000 ft until crossing NTM R-150 - Turn right (MAX KIAS 180) and proceed on track 270° until crossing NTM R-185 - Turn right to intercept NTM R-200 inbound NTM (MAX KIAS 180 until established on NTM R-200) and proceed to NTM - Proceed on NTM R-344 to LIRSU - At LIRSU, turn right and proceed direct to ROPUV

CHANGE: OBST. FREQ (355/15, 360/15)

ZentLufTopINGA 07 JAN 2016

HI/LO ILS or LOC RWY 05
SPANGDAHLEM (ETAD)

SPANGDAHLEM (ETAD)

MIPS INSTRUMENT APPROACH CHART

HI/LO TACAN RWY 05
SPANGDAHLEM (ETAD)

AD ELEV 1197

LANGEN RADAR 340.325 125.600	SPANGDAHLEM TWR* 256.500 122.200	CLNC DEL 308.850	GND CTL 308.850 140.050	ATIS* 244.500 143.425
TACAN SPA CH32X	APP COURSE 042°	FAF ALT 2800	GS 3.09°	MDA see CAT
			THR ELEV 1128	ALS-Length UNKNOWN
				LDA 10007

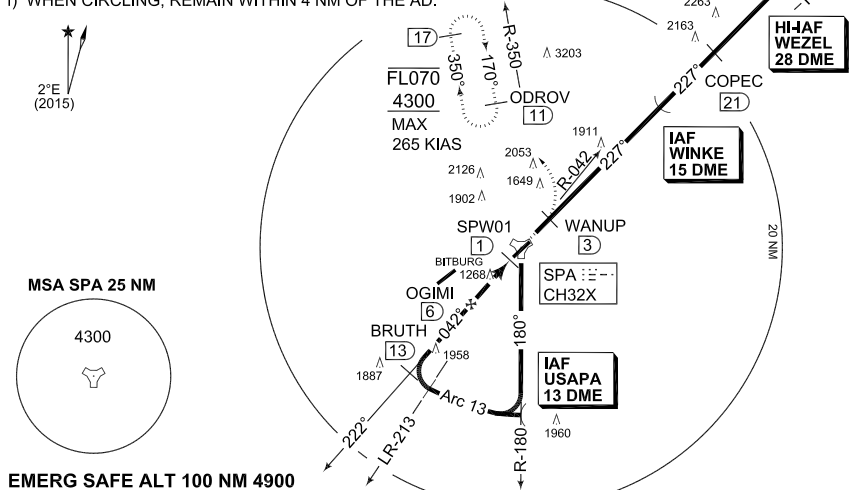
CAUTION:

- UNCONTROLLED LIGHT ACFT OPERATIONS IN THE VICINITY OF BITBURG AIRPORT AT OR BELOW 2700 FT.
- MINIMUM CLIMB GRADIENT 5.0%. IF UNABLE, REQUEST ALTERNATE ATC INSTRUCTIONS PRIOR TO COMMENCING THE APCH.
- MISSED APCH MINIMUM CLIMB RATE TO 4200 FT.
- MISSED APCH MINIMUM CLIMB RATE TO 5000 FT.

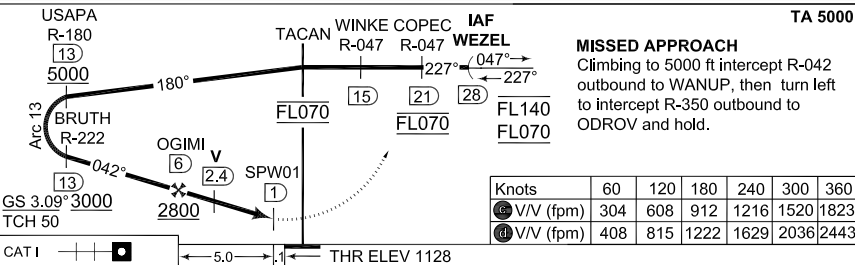
NOTE:

- WHEN ALS INOP, INCREASE CAT AB VIS TO 1600 M, CAT C VIS TO 2400 M, CAT D VIS TO 2800 M AND CAT E VIS TO 3200 M.
- WHEN CIRCLING, REMAIN WITHIN 4 NM OF THE AD.

- MAX 265 KIAS
- RADAR REQUIRED ABOVE FL140



EMERG SAFE ALT 100 NM 4900



CATEGORY	A	B	C	D	E
S-TACAN 05	1660 - 800 532 (500-0.8)		1660 - 1600 532 (500-1.6)	1660 - 2000 532 (500-2.0)	1660 - 2400 532 (500-2.4)
CIRCLING	1690 - 1600 493 (500-1.6)	1830 - 1600 633 (700-1.6)	1990 - 3600 793 (800-3.6)	2000 - 4000 803 (900-4.0)	2150 - 4800 953 (1000-4.8)

HI/LO TACAN RWY 05

49°58.59'N
006°41.91'E

SPANGDAHLEM (ETAD)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 1197

HI/LO ILS or LOC RWY 23
SPANGDAHLEM (ETAD)

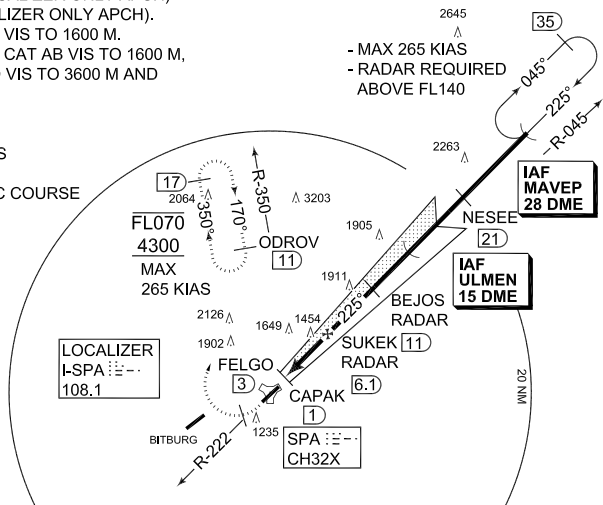
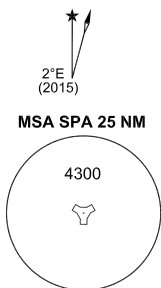
LANGEN RADAR		SPANGDAHLEM TWR*		CLNC DEL	GND CTL		ATIS*	
340.325	125.600	256.500	122.200	308.850	308.850	140.050	244.500	143.425
LOC / TACAN		APP COURSE	GS INTCP ALT	GS	MDA	THR ELEV	ALS-Length	LDA
ISPA 108.1 / TACAN CH32X		225°	3000	3.0°	see CAT	1197	730 M	10007

CAUTION:

- UNCONTROLLED LIGHT ACFT OPERATIONS IN THE VICINITY OF BITBURG AIRPORT AT OR BELOW 2700 FT.
- MINIMUM CLIMB GRADIENT 4.1%. IF UNABLE REQUEST ALTERNATE ATC INSTRUCTIONS PRIOR TO COMMENCING THE APCH.
- MISSED APCH MINIMUM CLIMB RATE TO 4300 FT.

NOTE:

- RADAR REQUIRED (FOR LOCALIZER ONLY APCH).
- DME REQUIRED (FOR LOCALIZER ONLY APCH).
- WHEN ALS INOP, INCREASE VIS TO 1600 M.
- WHEN ALS INOP, INCREASE CAT AB VIS TO 1600 M, CAT C VIS TO 3200 M, CAT D VIS TO 3600 M AND CAT E VIS TO 4000 M.
- WHEN CIRCLING, REMAIN WITHIN 4 NM OF THE AD.
- VGSI AND DESCENT ANGLES NOT COINCIDENT.
- USE SPA DME WHEN ON LOC COURSE



EMERG SAFE ALT 100 NM 4900

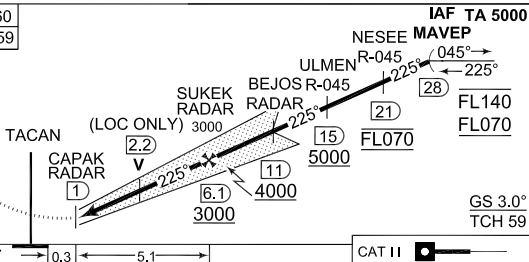
Knots	60	120	180	240	300	360
V/V (fpm)	250	499	748	997	1246	1459

MISSED APPROACH

Climbing to 5000 ft intercept R-222 outbound to FELGO, then turn right to intercept R-350 outbound to ODROV and hold.

FAF to MAP 5.1 NM

Knots	120	140	160	180	200
Min:Sec	2:33	2:11	1:55	1:42	1:32



THR ELEV 1197 → 0.3 → 5.1 → CAT II

CATEGORY	A	B	C	D	E
S-ILS 23	1397 - 800 200 (200-0.8)				1414-800 217 (300-0.8)
S-LOC 23	1700 - 800 503 (600-0.8)		1700 - 1600 503 (600-1.6)		1700 - 2000 503 (600-2.0)
CIRCLING	1700 - 1600 503 (600-1.6)	1830 - 1600 633 (700-1.6)	1990 - 3600 793 (800-3.6)	2000 - 4000 803 (900-4.0)	2150 - 4800 953 (1000-4.8)

HI/LO ILS or LOC RWY 23

49°58.59'N
006°41.91'E

SPANGDAHLEM (ETAD)

MIPS INSTRUMENT APPROACH CHART

HI/LO TACAN RWY 23
SPANGDAHLEM (ETAD)

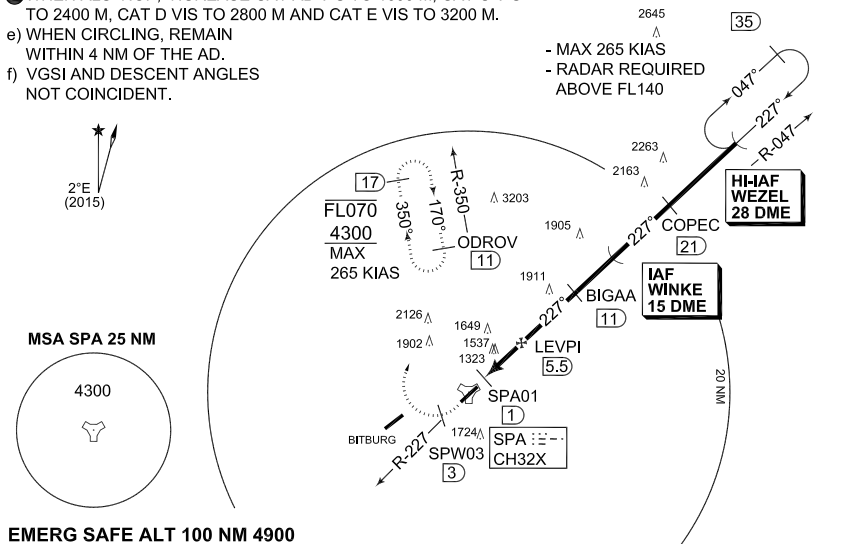
LANGEN RADAR 340.325 125.600	SPANGDAHLEM TWR* 256.500 122.200	CLNC DEL 308.850	GND CTL 308.850 140.050	ATIS* 244.500 143.425
TACAN SPA CH32X	APP COURSE 227°	FAF ALT 2800	GS 3.17°	MDA see CAT
		THR ELEV 1197	ALS-Length 730 M	LDA 10007

CAUTION:

- UNCONTROLLED LIGHT ACFT OPERATIONS IN THE VICINITY OF BITBURG AIRPORT AT OR BELOW 2700 FT.
- MINIMUM CLIMB GRADIENT 4.0% TO 4300 FT, IF UNABLE REQUEST ATC INSTRUCTIONS
- MISSED APCH MINIMUM CLIMB RATE TO 4300 FT.

NOTE:

- WHEN ALS INOP, INCREASE CAT AB VIS TO 1600 M, CAT C VIS TO 2400 M, CAT D VIS TO 2800 M AND CAT E VIS TO 3200 M.
- WHEN CIRCLING, REMAIN WITHIN 4 NM OF THE AD.
- VGSI AND DESCENT ANGLES NOT COINCIDENT.



EMERG SAFE ALT 100 NM 4900

MISSED APPROACH

Climbing to 5000 ft intercept R-227 outbound to SPW03, then turn right to intercept R-350 outbound to ODROV and hold.

Knots	60	120	180	240	300	360
V/V (fpm)	244	487	730	973	1216	1459

THR ELEV 1197	0.3	4.5	CAT II
---------------	-----	-----	--------

CATEGORY	A	B	C	D	E
S-TACAN 23	1770 - 1200 573 (600-1.2)		1770-1600 573 (600-1.6)	1770-2000 573 (600-2.0)	1770-2400 573 (600-2.4)
CIRCLING	1770 - 1600 573 (600-1.6)	1830 - 1600 633 (700-1.6)	1990 - 3600 793 (800-3.6)	2000 - 4000 803 (900-4.0)	2150 - 4800 953 (1000-4.8)

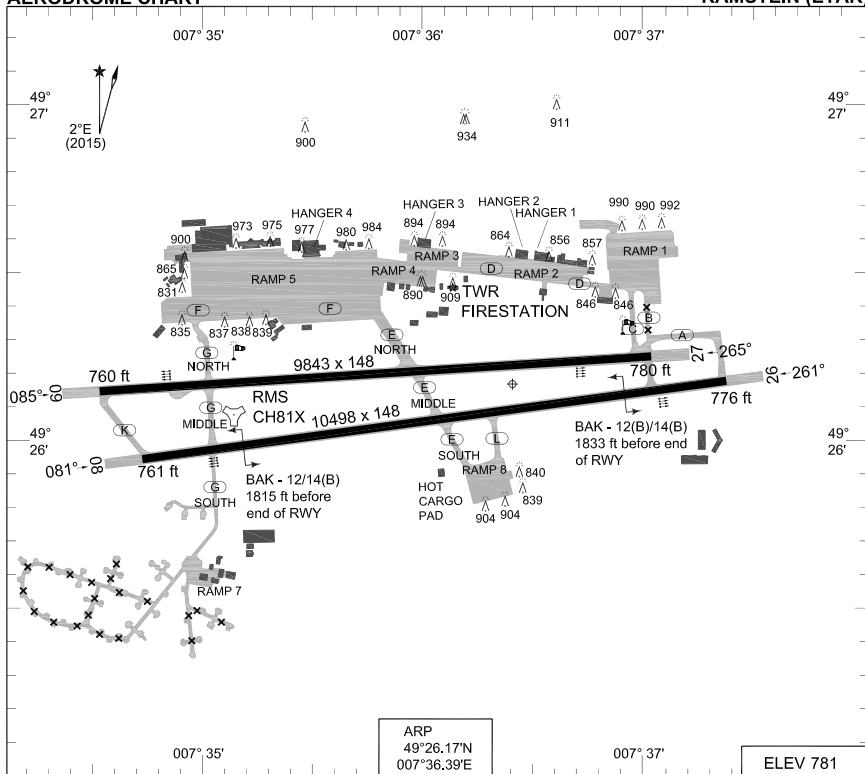
HI/LO TACAN RWY 23

49°58.59'N
006°41.91'E

SPANGDAHLEM (ETAD)

AERODROME CHART

RAMSTEIN (ETAR)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	PCN 67/R/B/W/T	10498	10498	11148	10498	3.0°	761	49°25.95'N 007°34.73'E
09	PCN 62/R/B/W/T	9843	9843	9843	9843	3.0°	760	49°26.15'N 007°34.54'E
26	PCN 67/R/B/W/T	10498	10498	11148	10498	3.0°	776	49°26.18'N 007°37.35'E
27	PCN 62/R/B/W/T	9843	9843	9843	9843	3.0°	780	49°26.26'N 007°37.02'E

RAMSTEIN TWR 386.750 133.200

MIPS

INSTRUMENT DEPARTURE CHART

AD ELEV 781

BOLKI 2
RAMSTEIN (ETAR)

LANGEN RADAR		RAMSTEIN TWR		GND CTL		ATIS*	
256.675	129.675	386.750	133.200	308.775	121.775	292.275	142.125
RWY		from - to		60	120	180	240
08		- 1600 ft		260	520	780	1040
09		- 1600 ft		310	610	920	1220
					1300	1560	1830

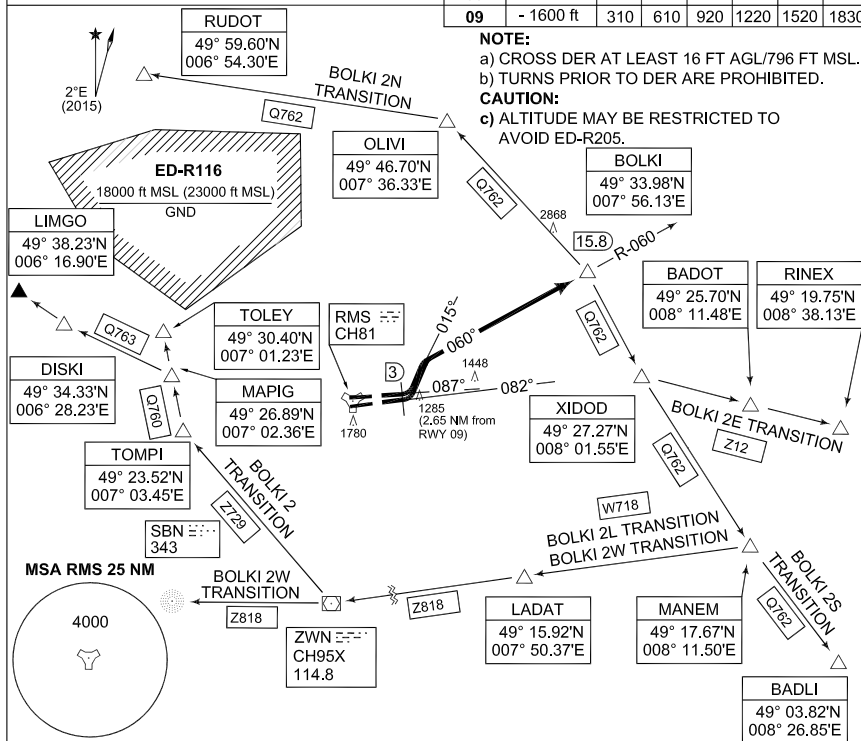
NOTE:

a) CROSS DER AT LEAST 16 FT AGL/796 FT MSL.

b) TURNS PRIOR TO DER ARE PROHIBITED.

CAUTION:

c) ALTITUDE MAY BE RESTRICTED TO AVOID ED-R205.



EMERG SAFE ALT 100 NM 7200

TA 5000

- | | |
|------------------|---|
| BOLKI 2 (RWY 08) | <ul style="list-style-type: none"> - Climbing to 5000 on track 082°, upon passing 1300 and RMS/3 DME - Turn left on track 015° to intercept RMS R-060 outbound to BOLKI (Non-TACAN equipped acft climbing to 5000 on track 082°, upon passing 1300 and RMS/3 DME, turn left track 054° direct BOLKI) - Expect further clearance prior to BOLKI or passing 4000 ft. Thence... |
| BOLKI 2 (RWY 09) | <ul style="list-style-type: none"> - Climbing to 5000 on track 087°, upon passing 1300 and RMS/3 DME - Turn left on track 015° to intercept RMS R-060 outbound to BOLKI (Non-TACAN equipped acft climbing to 5000 on track 087°. Upon passing 1300 and RMS/3 DME, turn left track 054° direct BOLKI) - Expect further clearance prior to BOLKI or passing 4000 ft. Thence... |

MUST FILE FLIGHT PLAN WITH TRANSITION; NOT PLANNABLE WITHOUT TRANSITION

TRANSITIONS

- | | |
|----------|--|
| BOLKI 2E | - for flights via RINEX, from BOLKI proceed via Q762, Z12 to RINEX. |
| BOLKI 2L | - for flights via LIMGO, from BOLKI proceed via Q762, Z818, Z729, Q760, Q763 to LIMGO. |
| BOLKI 2N | - for flights via RUDOT, from BOLKI proceed via Q762 to RUDOT. |
| BOLKI 2S | - for flights via BADLI, from BOLKI proceed via Q762 to BADLI. |
| BOLKI 2W | - for flights via SBN, from BOLKI proceed via Q762, Z818 to SBN. |

BOLKI 2

49°26.17'N
007°36.39'E

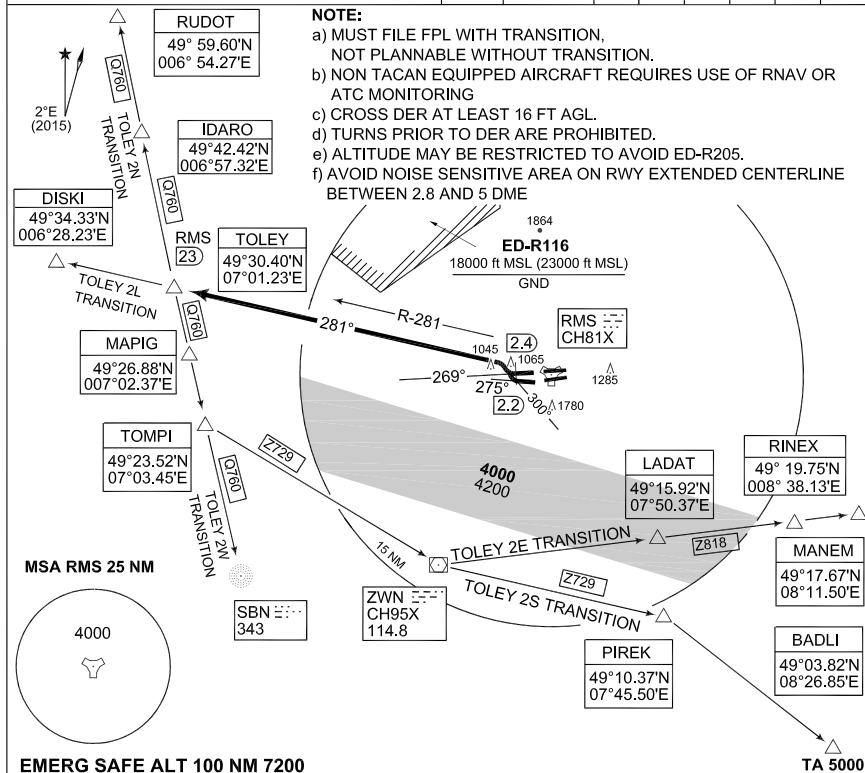
RAMSTEIN (ETAR)

INSTRUMENT DEPARTURE CHART

AD ELEV 781

**TOLEY 2E, 2L, 2N, 2S, 2W
RAMSTEIN (ETAR)**

LANGEN RADAR		RAMSTEIN TWR		GND CTL			ATIS*				
256.675	129.675	386.750	133.200	308.775 121.775			292.275 142.125				
				RWY	from - to	60	120	180	240	300	360
				27	- 1400 ft	310	610	920	1220	1520	1830



TAKE OFF RWY 26	- Climb to 5000 ft on track 275°. Upon reaching 1400 ft and passing RMS/2.2 DME turn right on track 300° to intercept RMS R-281 outbound to TOLEY - Non-TACAN equipped acft climbing to 5000 ft on track 275°. Upon reaching 1400 ft and RMS 2.2 DME turn right direct to TOLEY, thence...
TAKE OFF RWY 27	- Climb to 5000 ft on track 269°. Upon reaching 1400 ft and passing RMS/2.4 DME turn right on track 300° to intercept RMS R-281 outbound to TOLEY - Non-TACAN equipped acft climbing to 5000 ft on track 269°. Upon reaching 1400 ft and RMS 2.2 DME turn right direct to TOLEY, thence...
	TRANSITIONS
TOLEY 2E	- for flights via RINEX, from TOLEY proceed via Q760, Z729, Z818 to RINEX
TOLEY 2L	- for flights via LIMGO, from TOLEY proceed via DISKI to LIMGO
TOLEY 2N	- for flights via RUDOT from TOLEY proceed via Q760 to RUDOT
TOLEY 2S	- for flights via BADLI, from TOLEY proceed via Q760, Z729 to BADLI
TOLEY 2W	- for flights via SBN, from TOLEY proceed via Q760 to SBN

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

ILS or LOC RWY 08

RAMSTEIN (ETAR)

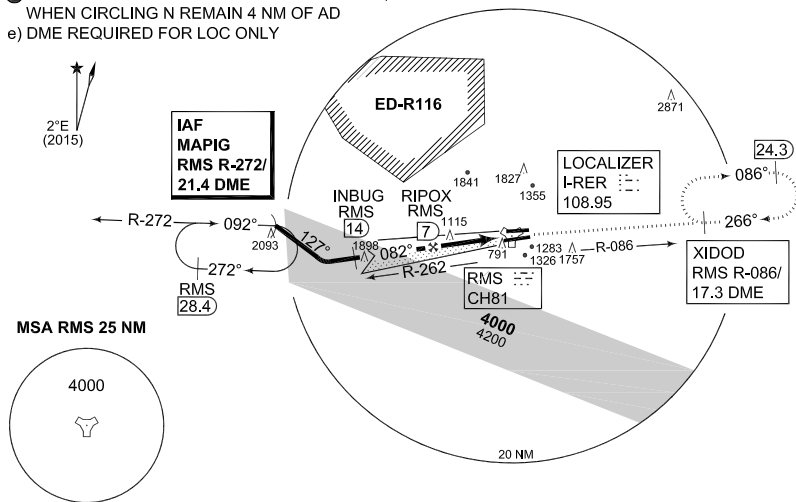
LANGEN APP CON 256.675 129.675	RAMSTEIN TWR 386.750 133.200	GND CON 308.775 121.775	ATIS* 292.275 142.125
LOCALIZER/TACAN I-RER 108.95/RMS CH81	APP COURSE 082°	GS INTCP ALT 3000	GS 3.0°
		DA see CAT	THR ELEV 761
			ALS-Length UNKNOWN
			LDA 10498

CAUTION:

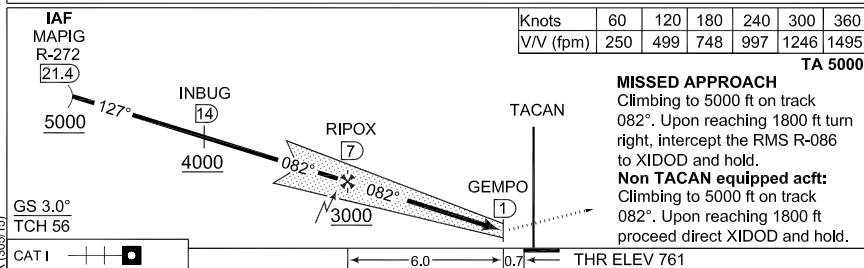
a) MISSED APCH MINIMUM CLIMB RATE TO 5000

NOTE:

- ① WHEN ALS INOP, INCREASE CAT ABC RVR/VIS 1200 M, CAT DE VIS TO 1600 M
- ② WHEN ALS INOP, INCREASE CAT AB VIS 1600 M, CAT C VIS TO 2800 M, CAT D VIS TO 3200 M AND CAT E VIS TO 3600 M
- ③ CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N REMAIN 4 NM OF AD
- e) DME REQUIRED FOR LOC ONLY



EMERG SAFE ALT 100 NM 7200



Knots	60	120	180	240	300	360
V/V (fpm)	250	499	748	997	1246	1495

TA 5000

MISSED APPROACH

Climbing to 5000 ft on track 082°. Upon reaching 1800 ft turn right, intercept the RMS R-086 to XIDOD and hold.

Non TACAN equipped acft:

Climbing to 5000 ft on track 082°. Upon reaching 1800 ft proceed direct XIDOD and hold.

GS 3.0°
TCH 56

CAT I

CATEGORY	A	B	C	D	E
① S-ILS 08	961 - 800 200 (200-0.8)			970 - 800 209 (200-0.8)	990 - 800 229 (300-0.8)
② S-LOC 08	1400 - 800 639 (700-0.8)			1400 - 2.4 639 (700-2.4)	1400 - 2800 639 (700-2.8)
③ CIRCLING	1720 - 2000 939 (1000-2.0)	1730 - 2000 949 (1000-2.0)	1870 - 4800 1089 (1100-4.8)	2260 - 4800 1479 (1500-4.8)	2440 - 4800 1659 (1700-4.8)

ILS or LOC RWY 08

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

TACAN RWY 08
RAMSTEIN (ETAR)

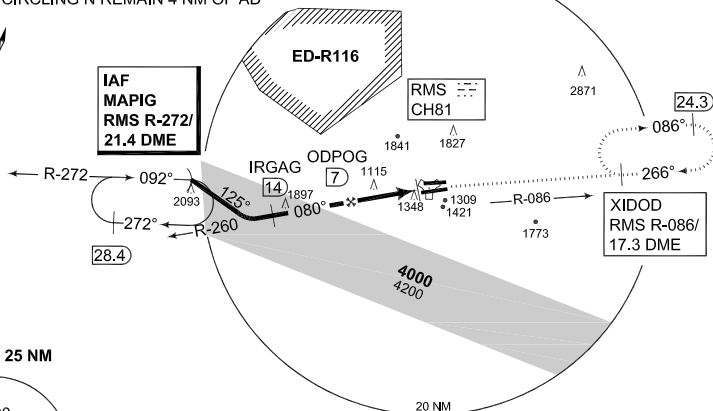
LANGEN APP CON 256.675 129.675		RAMSTEIN TWR 386.750 133.200		GND CON 308.775 121.775		ATIS* 292.275 142.125	
TACAN RMS CH81	APP COURSE 080°	FAF ALT 3000	Descent GR 3.14°	MDA 1450	THR ELEV 761	ALS-Length UNKNOWN	LDA 10498

CAUTION:

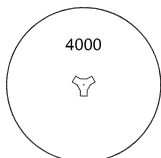
a) MISSED APCH MINIMUM CLIMB RATE TO 5000

NOTE:

- ① WHEN ALS INOP, INCREASE CAT AB VIS 1600 M, CAT C VIS TO 3200 M, CAT D VIS TO 3600 M AND CAT E VIS TO 4000 M
- ② CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N REMAIN 4 NM OF AD



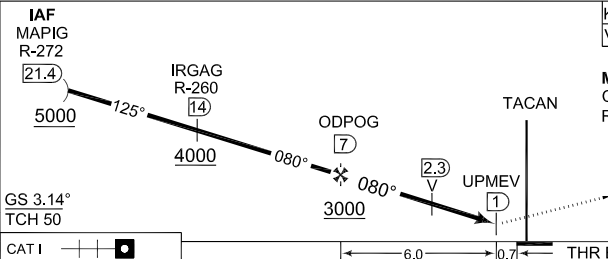
MSA RMS 25 NM



EMERG SAFE ALT 100 NM 7200

Knots	60	120	180	240
V/V (fpm)	219	438	657	875

TA 5000

MISSED APPROACHClimbing to 5000 ft intercept
RMS R-086 to XIDOD and hold.GS 3.14°
TCH 50

CAT I

THR ELEV 761

CHANGE-VAR ORIGINATOR (05/15)

CATEGORY	A	B	C	D	E
① S-TACAN 08	1450 - 800 689 (700-0.8)		1450 - 2400 689 (700-2.4)	1450 - 2800 689 (700-2.8)	1450 - 3200 689 (700-3.2)
② CIRCLING	1720 - 2000 939 (1000-2.0)	1810 - 2400 1029 (1100-2.4)	1910 - 4800 1129 (1200-4.8)		2010 - 4800 1229 (1300-4.8)

TACAN RWY 08

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

ZentrLufOp/INGA 12 NOV 2015

MIPS

INSTRUMENT APPROACH CHART

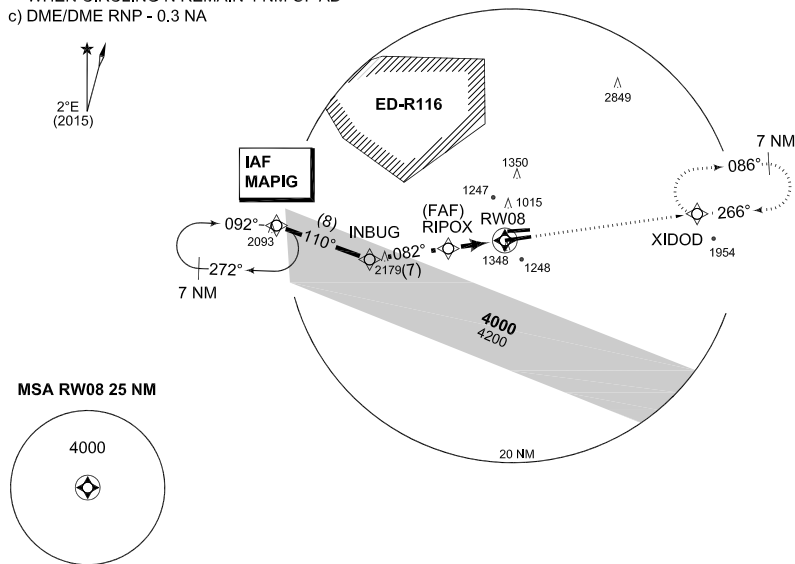
AD ELEV 781

RNAV (GPS) RWY 08
RAMSTEIN (ETAR)

LANGEN APP CON 256.675 129.675		RAMSTEIN TWR 386.750 133.200		GND CTL 308.775 121.775		ATIS* 292.275 142.125	
APP COURSE 082°		FAF ALT 3000		Descent GR 3.04°		MDA 1500	
				THR ELEV 761		ALS-Length UNKNOWN	
						LDA 10498	

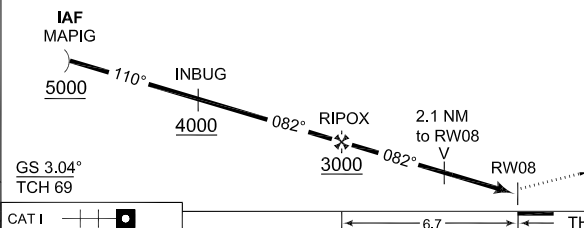
NOTE:

- ⦿ WHEN ALS INOP, INCREASE CAT AB VIS 1600 M, CAT C VIS TO 3400 M AND CAT D VIS TO 3600 M
- ⦿ CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N REMAIN 4 NM OF AD
- c) DME/DME RNP - 0.3 NA



EMERG SAFE ALT 100 NM 7200

TA 5000



MISSED APPROACH

Climbing to 5000 ft direct to
XIDOD and hold.GS 3.04°
TCH 69

CAT I

6.7 THR ELEV 761

CHANGE VAR ORIGINATOR (005/15)

CATEGORY	A	B	C	D	E
⦿ LNAV MDA	1500 - 800 739 (800-0.8)		1500 - 2700 739 (800-2.7)	1500 - 2800 739 (800-2.8)	
⦿ CIRCLING	1720 - 2000 939 (1000-2.0)	1730 - 2000 949 (1000-2.0)	1870 - 4800 1089 (1100-4.8)	2260 - 4800 1479 (1500-4.8)	

RNAV (GPS) RWY 08

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

ZentrLufOp/NGA 12 NOV 2015

INSTRUMENT APPROACH CHART

AD ELEV 781

**ILS or LOC RWY 09
RAMSTEIN (ETAR)**

LANGEN APP CON		RAMSTEIN TWR		GND CTL		ATIS*	
256.675	129.675	386.750	133.200	308.775	121.775	292.275	142.125
LOCALIZER/TACAN	APP COURSE	GS INTCP ALT	GS	MDA	THR ELEV	ALS-Length	LDA
I-REL 111.5/RMS CH81	086°	3000	3.0°	see CAT	760	UNKNOWN	9843

CAUTION:

a) MISSED APCH MINIMUM CLIMB RATE TO 5000

NOTE:

④ WHEN ALS INOP, INCREASE CAT ABCDE VIS TO 1600 M

③ WHEN ALS INOP, INCREASE CAT A VIS TO 1600 M.

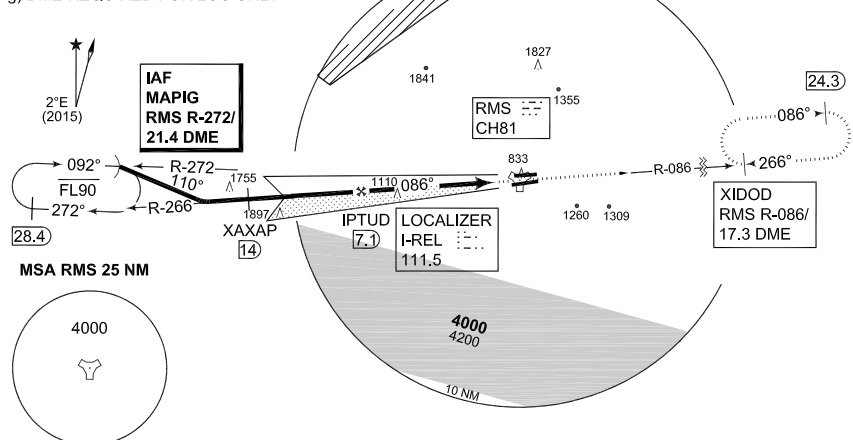
CAT B TO 2000 M, CAT C TO 3600 M, CAT D TO 4000 M CAT E TO 4400 M.

**(d) CIRCLING NOT AUTHORIZED S OF RWY 08/26,
WHEN CIRCLING N REMAIN 4 NM OF AD.**

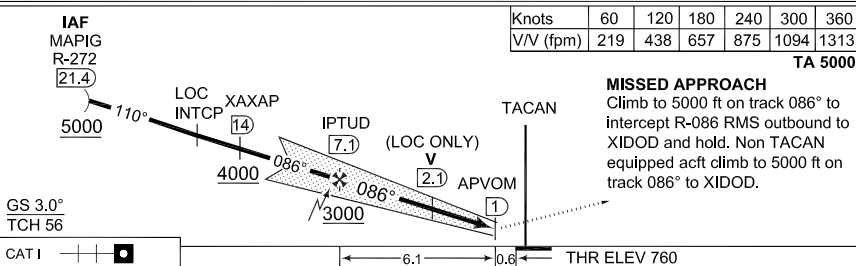
e) USAF STANDARD 200 FT/NM (3.3%) MISSED APCH CLIMB RATE REQUIRED.

f) DA NOT COINCIDENTAL WITH VGSI

q) DME REQUIRED FOR LOC ONLY



EMERG SAFE ALT 100 NM 7200



CATEGORY		A	B	C	D	E
IMPS	 S-ILS 09	972 - 800 212 (200-0.8)	982 - 800 222 (300-0.8)	991 - 800 231 (300-0.8)	1002 - 800 242 (300-0.8)	1021 - 1200 261 (300-1.2)
	 S-LOC 09	1520 - 800 760 (800-0.8)	1520 - 1200 760 (800-1.2)	1520 - 2800 760 (800-2.8)	1520 - 3200 760 (800-3.2)	1520 - 3600 760 (800-3.6)
	 CIRCLING	1660 - 1600 879 (900-1.6)	1710 - 2000 929 (1000-2.0)	1870 - 4.8 1089 (1100-4.8)	2260 - 4.8 1479 (1500-4.8)	2440 - 4.8 1659 (1700-4.8)

ILS or LOC RWY 09

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

TACAN RWY 09
RAMSTEIN (ETAR)

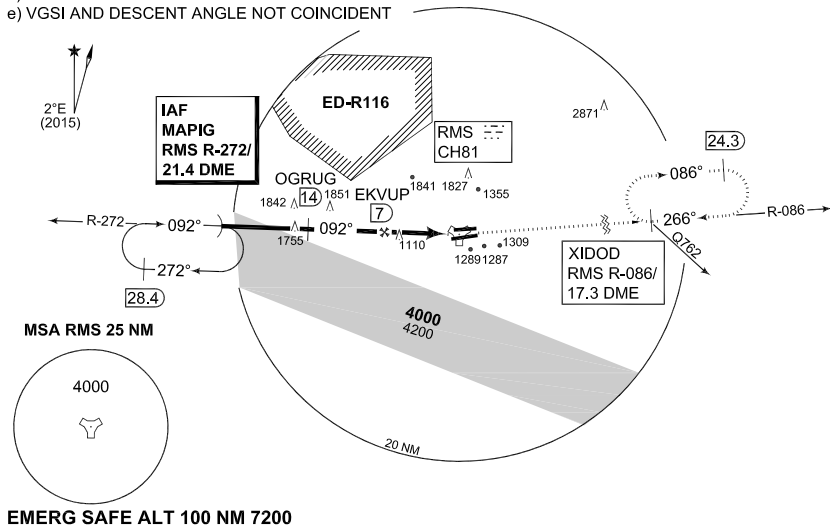
LANGEN APP CON 256.675 129.675		RAMSTEIN TWR 386.750 133.200		GND CTL 308.775 121.775		ATIS* 292.275 142.125	
TACAN RMS CH81	APP COURSE 092°	FAF ALT 3000	Descent GR 3.19°	MDA 1530	THR ELEV 760	ALS-Length UNKNOWN	LDA 9843

CAUTION:

a) MISSED APCH MINIMUM CLIMB RATE TO 5000

NOTE:

- b) WHEN ALS INOP, INCREASE CAT AB VIS 1600 M, CAT C VIS TO 3200 M, CAT D VIS TO 3600 M AND CAT E VIS TO 4000 M
- c) CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N REMAIN 4 NM OF AD
- d) RADAR REQUIRED FOR HOLDING ABOVE 14000
- e) VGSI AND DESCENT ANGLE NOT COINCIDENT



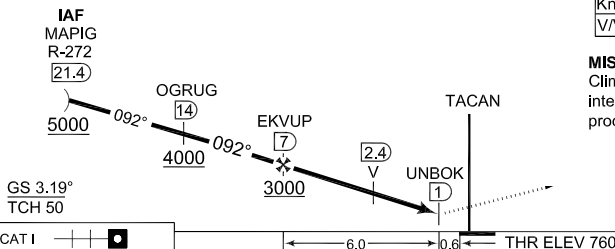
EMERG SAFE ALT 100 NM 7200

Knots	60	120	180	240
V/V (fpm)	219	438	657	876

TA 5000

MISSED APPROACH

Climb on track 086° to 5000 ft to intercept RMS R-086 outbound and proceed to XIDOD and hold.



GS 3.19°

TCH 50

CAT I

CATEGORY	A	B	C	D	E
b) S-TACAN 09	1460 - 1200 700 (700-1.2)		1460 - 2400 700 (700-2.4)	1460 - 2800 700 (700-2.8)	1460 - 3200 700 (700-3.2)
c) CIRCLING	1690 - 2000 909 (1000-2.0)	1710 - 2000 929 (1000-2.0)	1930 - 4800 1149 (1200-4.8)		

TACAN RWY 09

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

ILS or LOC RWY 26
RAMSTEIN (ETAR)

LANGEN APP CON		RAMSTEIN TWR		GND CTL		ATIS*		
256.675 129.675		386.750 133.200		308.775 121.775		292.275 142.125		
LOC/DME I-RWL		APP COURSE	GS INTCP ALT	GS	MDA	THR ELEV	ALS-Length	LDA
110.5/CH42		262°	2700	3.0°	see CAT	776	UNKNOWN	10498

CAUTION:

a) RWY 26 AND RWY 27 THR IN CLOSE PROXIMITY.

NOTE:

① WHEN ALS INOP, INCREASE CAT ABCD RVR/VIS 1200 M, CAT E VIS TO 1600 M

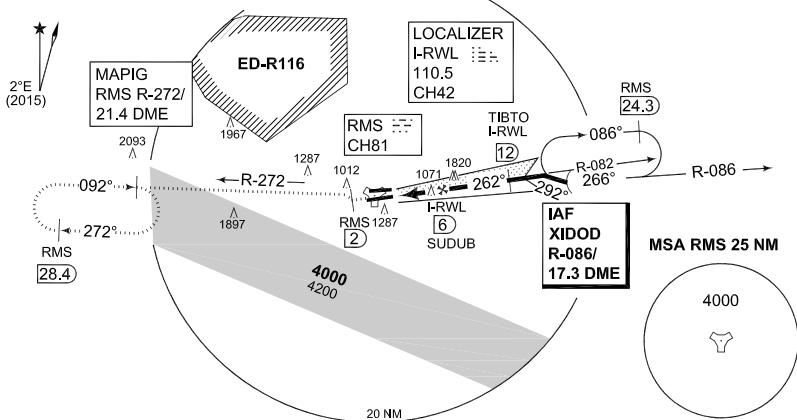
② WHEN ALS INOP, INCREASE CAT AB VIS 2000 M, CAT C VIS TO 4400 M AND CAT DE VIS TO 4800 M

③ CIRCLING NOT AUTHORIZED S OF RWY 08/26,
WHEN CIRCLING N REMAIN 4 NM OF AD

e) RADAR REQUIRED FOR NON-TACAN EQUIPPED ACFT.

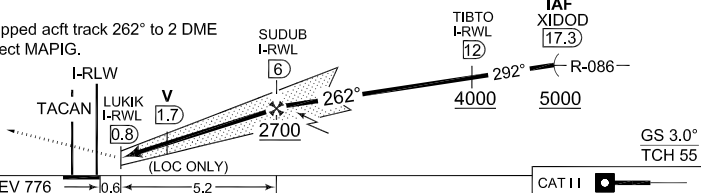
f) DME REQUIRED FOR LOC ONLY

g) USE I-RWL DME WHEN ON THE LOCALIZER COURSE.

**EMERG SAFE ALT 100 NM 7200****MISSED APPROACH**

Climb on track 262° to 5000 ft. At 2 DME turn right on heading 317° to intercept R-272 outbound direct MAPIG and hold.

Non-TACAN equipped acft track 262° to 2 DME then turn right direct MAPIG.

TA 5000

CATEGORY	A	B	C	D	E
① S-ILS 26	976 - 800 200 (200-0.8)				991 - 800 215 (300-0.8)
② S-LOC 26	1710 - 1200 929 (1000-1.2)		1710 - 3600 929 (1000-3.6)	1710 - 4000 929 (1000-4.0)	
③ CIRCLING	1710 - 2000 929 (1000-2.0)		2020 - 4800 1239 (1300-4.8)	2260 - 4.8 1479 (1500-4.8)	2440 - 4800 1659 (1700-4.8)

ILS or LOC RWY 2649°26.17'N
007°36.39'E**RAMSTEIN (ETAR)**

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

TACAN RWY 26
RAMSTEIN (ETAR)

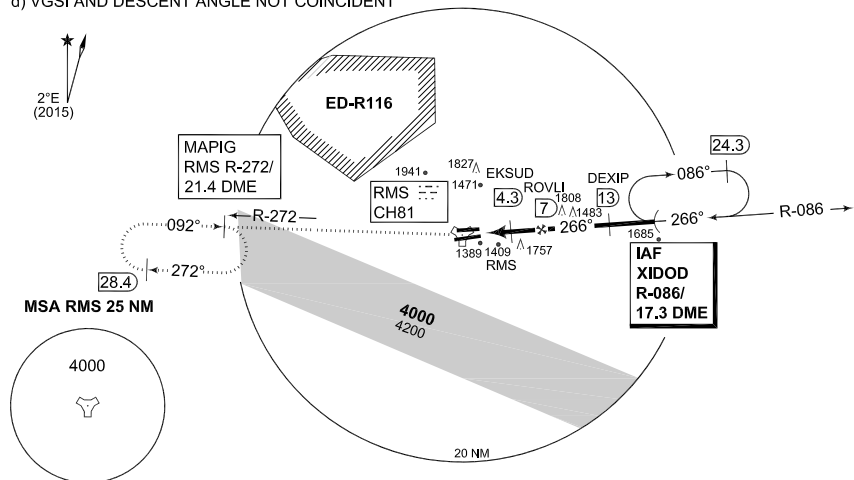
LANGEN APP CON 256.675 129.675		RAMSTEIN TWR 386.750 133.200		GND CTL 308.775 121.775		ATIS* 292.275 142.125	
TACAN RMS CH81	APP COURSE 266°	FAF ALT 2700	GS 3.31°	MDA 1530	THR ELEV 776	ALS-Length UNKNOWN	LDA 10498

CAUTION:

- a) RWY 26 AND 27 THR IN CLOSE PROXIMITY
LANDING WILL BE MADE TO THE SOUTHERN RWY.

NOTE:

- b) WHEN ALS INOP, INCREASE CAT A VIS 1600 M, CAT B VIS TO 2000 M,
CAT C VIS TO 3600 M, CAT D VIS TO 4000 M AND CAT E TO 4400 M
c) CIRCLING NOT AUTHORIZED S OF RWY 08/26,
WHEN CIRCLING N REMAIN 4 NM OF AD
d) VGSI AND DESCENT ANGLE NOT COINCIDENT

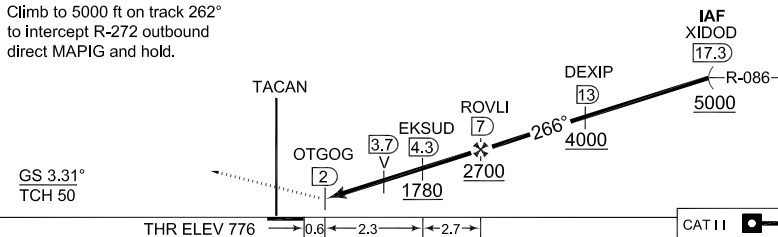


EMERG SAFE ALT 100 NM 7200

MISSED APPROACH

Climb to 5000 ft on track 262°
to intercept R-272 outbound
direct MAPIG and hold.

TA 5000



CHANGE VAR ORIGINATOR (05/15)

CATEGORY	A	B	C	D	E
b) S-TACAN 26	1530 - 800 749 (800-0.8)	1530 - 1200 749 (800-1.2)	1530 - 2800 749 (800-2.8)	1530 - 3200 749 (800-3.2)	1530 - 3600 749 (800-3.6)
c) CIRCLING	1690 - 2000 909 (1000-2.0)	1710 - 2000 929 (1000-2.0)	1870 - 4800 1089 (1100-4.8)	2260 - 4800 1479 (1500-4.8)	2440 - 4800 1659 (1700-4.8)

TACAN RWY 26

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

ZentrLuftOp/NGA 12 NOV 2015

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

RNAV (GPS) RWY 26
RAMSTEIN (ETAR)

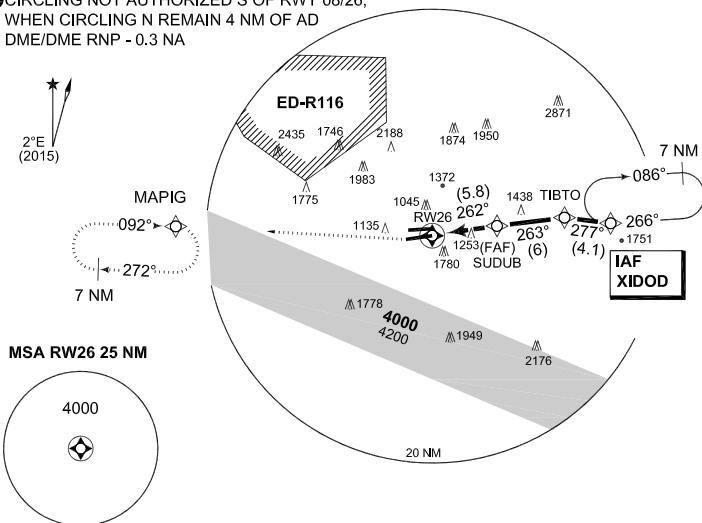
LANGEN APP CON		RAMSTEIN TWR		GND CTL		ATIS*	
256.675	129.675	386.750	133.200	308.775	121.775	292.275	142.125
APP COURSE		FAF ALT		Descent GR	MDA	THR ELEV	ALS-Length
262°		2700		3.02°	1520	776	UNKNOWN
							10498

CAUTION:

- a) RWY 26 AND 27 THR IN CLOSE PROXIMITY
LANDING WILL BE MADE TO THE SOUTHERN RWY.

NOTE:

- ① WHEN ALS INOP, INCREASE CAT A VIS 1600 M, CAT B VIS TO 2000 M, CAT C VIS TO 3600 M AND CAT D VIS TO 4000 M
② CIRCLING NOT AUTHORIZED S OF RWY 08/26,
WHEN CIRCLING N REMAIN 4 NM OF AD
d) DME/DME RNP - 0.3 NA

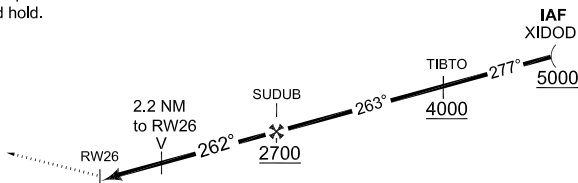


EMERG SAFE ALT 100 NM 7200

MISSED APPROACH

Climbing to 5000 ft proceed
direct MAPIG and hold.

TA 5000

GS 3.02°
TCH 55

TDZE 776

5.8

CAT II

CATEGORY	A	B	C	D	E
① LNAV MDA	1520 - 730 744 (800-0.8)	1520 - 1220 744 (800-1.2)	1520 - 2800 744 (800-2.8)	1520 - 3200 744 (800-3.2)	
② CIRCLING	1690 - 2000 909 (1000-2.0)		1870 - 4800 1089 (1100-4.8)	2260 - 4800 1479 (1500-4.8)	

RNAV (GPS) RWY 26

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 781

ILS or LOC RWY 27
RAMSTEIN (ETAR)

LANGEN APP CON 256.675 129.675	RAMSTEIN TWR 386.750 133.200	GND CTL 308.775 121.775	ATIS* 292.275 142.125
LOCALIZER/TACAN I-RWR 110.75/RMS CH81	APP COURSE 266°	GS INTCP ALT 2700	GS 3.0°
		DA see CAT	THR ELEV 780
			ALS-Length UNKNOWN
			LDA 9843

CAUTION:

a) RWY 26 AND RWY 27 THR IN CLOSE PROXIMITY.

NOTE:

① WHEN ALS INOP, INCREASE CAT ABC RVR/VIS 1200 M, CAT DE VIS TO 1600 M

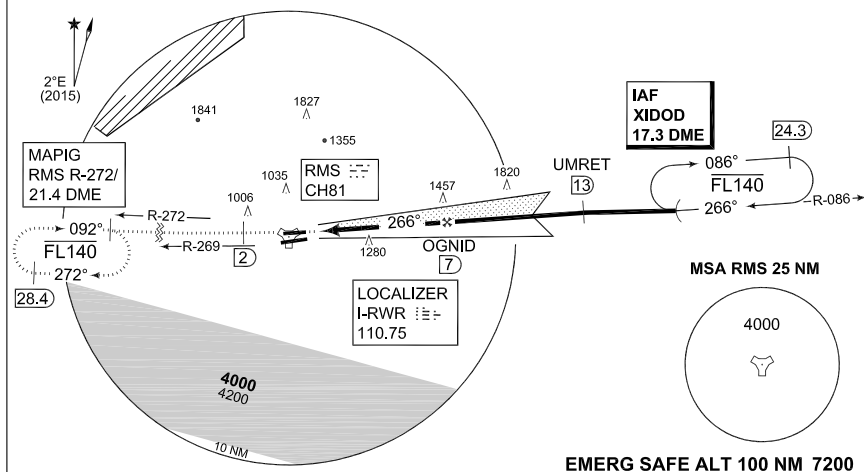
② WHEN ALS INOP, INCREASE CAT AB VIS 2000 M, CAT C VIS TO 4400 M AND CAT DE VIS TO 4800 M

③ CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N REMAIN 4 NM OF AD

e) FOR NON-TACAN EQUIPPED ACFT, MISSED APCH REQUIRES USE OF RNAV OR ATC RADAR MONITORING.

f) DME REQUIRED FOR LOC ONLY

g) ATC CLIMB RATE USAF STANDARDS 3.3% (200FT/NM).



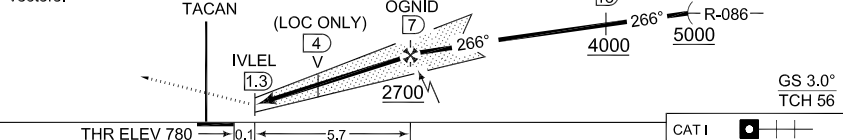
EMERG SAFE ALT 100 NM 7200

MISSED APPROACH

Climb on track 269° to 5000 ft. At 2 DME turn right to intercept R-272 outbound to MAPIG and hold.

Non-TACAN equipped acft climb on track 269° to 5000 ft.

At 2 DME turn right direct MAPIG or expect radar vectors.



TA 5000

THR ELEV 780

0.1

5.7

CAT I

GS 3.0°
TCH 56

CATEGORY	A	B	C	D	E
① S-ILS 27	985 - 800 205 (300-0.8)				1004 - 800 224 (300-0.8)
② S-LOC 27	1720 - 1200 939 (1000-1.2)		1720 - 3600 939 (1000-3.6)	1720 - 4000 939 (1000-4.0)	
③ CIRCLING	1720 - 2000 939 (1000-2.0)		1870 - 4800 1089 (1100-4.8)	2340 - 4800 1559 (1600-4.8)	2440 - 4800 1659 (1700-4.8)

ILS or LOC RWY 27

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

INSTRUMENT APPROACH CHART

AD ELEV 781

TACAN RWY 27
RAMSTEIN (ETAR)

LANGEN APP CON		RAMSTEIN TWR		GND CTL		ATIS*	
256.675	129.675	386.750	133.200	308.775	121.775	292.275	142.125
TACAN	APP COURSE	FAF ALT	Descent GR	MDA	THR ELEV	ALS-Length	LDA
RMS CH81	265°	2700	3.14°	1530	780	UNKNOWN	9843

CAUTION:

a) RWY 26 AND RWY 27 THR IN CLOSE PROXIMITY.

NOTE:

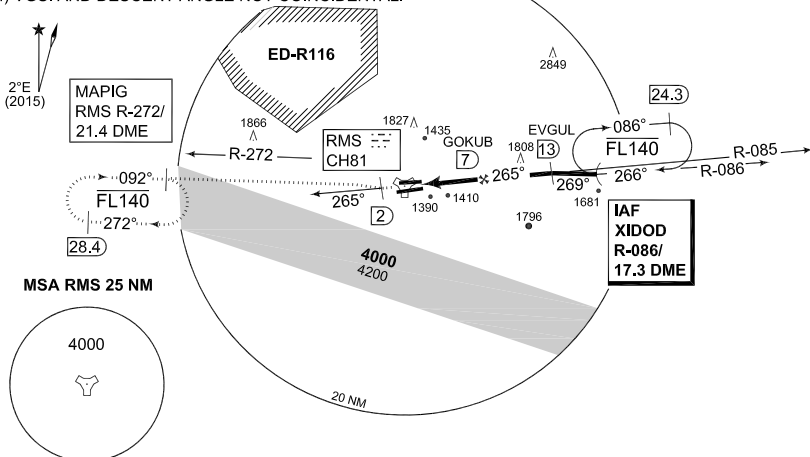
b WHEN ALS INOP, INCREASE CAT A VIS 1600 M, CAT B VIS TO 2000 M, CAT C VIS TO 3600 M. CAT D VIS TO 4000 M AND CAT E VIS TO 4400 M

**CIRCLING NOT AUTHORIZED S OF RWY 08/26, WHEN CIRCLING N
REMAIN 4 NM OF AD**

d) RADAR REQUIRED

e) ATC CLIMB RATE USAF STANDARDS 3.3% (200FT/NM).

f) VGSI AND DESCENT ANGLE NOT COINCIDENTAL.

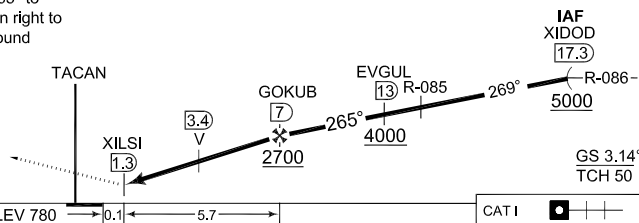


EMERG SAFE ALT 100 NM 7200

MISSED APPROACH

Climb to 5000 ft on track 265° to RMS 2 DME. At 2 DME turn right to intercept RMS R-272 outbound direct MAPIG and hold.

TA 5000



CATEGORY	A	B	C	D	E
1a S-TACAN 27	1530 - 800 749 (800-0.8)	1530 - 1200 749 (800-1.2)	1530 - 2800 749 (800-2.8)	1530 - 3200 749 (800-3.2)	1530 - 3600 749 (800-3.6)
1c CIRCLING	1690 - 2000 909 (1000-2.0)	1710 - 2000 929 (1000-2.0)	1870 - 4800 1089 (1100-4.8)	2340 - 4800 1559 (1600-4.8)	2440 - 4800 1659 (1700-4.8)

TACAN RWY 27

49°26.17'N
007°36.39'E

RAMSTEIN (ETAR)

ANSBACH (ETEB)ZentrLuftOp/NGA 12 NOV 2015

AERODROME CHART

ANSBACH (ETEB)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1533

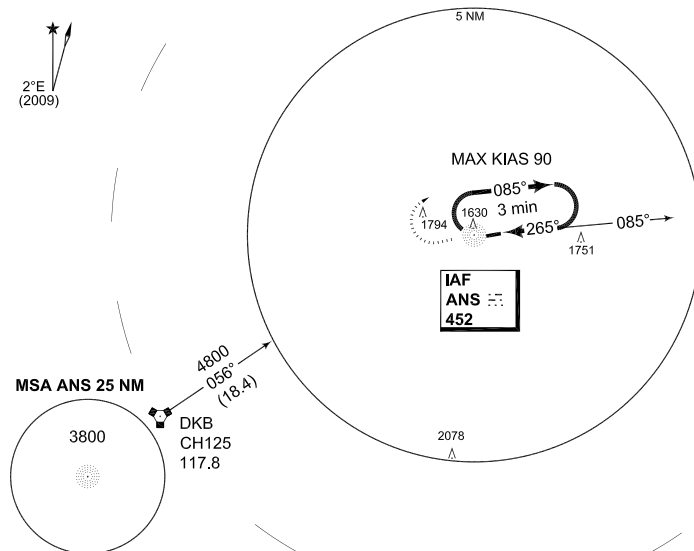
COPTER NDB 265°
ANSBACH (ETEB)

GRIFFIN APCH CTL* 290.600 138.425		MUENCHEN RADAR 298.825 129.525		ANSBACH TWR* 376.975 139.225		GND CTL 342.550	
NDB ANS 452	APP COURSE 265°			MDA 2250	TDZE 1533	ALS-Length UNKNOWN	LDA 1212

NOTE:

- a) PROCEDURE NOT AUTHORIZED
WHEN TWR NOT IN OPERATION
- b) MILITARY USE ONLY!

IAF
49°18.58'N
010°37.97'E

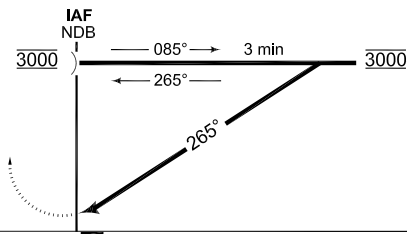


EMERG SAFE ALT 100 NM 7000

TA 5000

MISSED APPROACH

Climbing right turn to
3000 ft in ANS NDB
holding pattern.



TDZE 1533

UNKNOWN

CHANGE: OBST (360/15)

CATEGORY	COPTER
H - 265°	2250 - 1200 717 (800-1200)

COPTER NDB 265°

49°18.49'N
010°38.32'E

ANSBACH (ETEB)

ZentLuitop/NGA 07 JAN 2016

PANS-OPS
INSTRUMENT APPROACH CHART

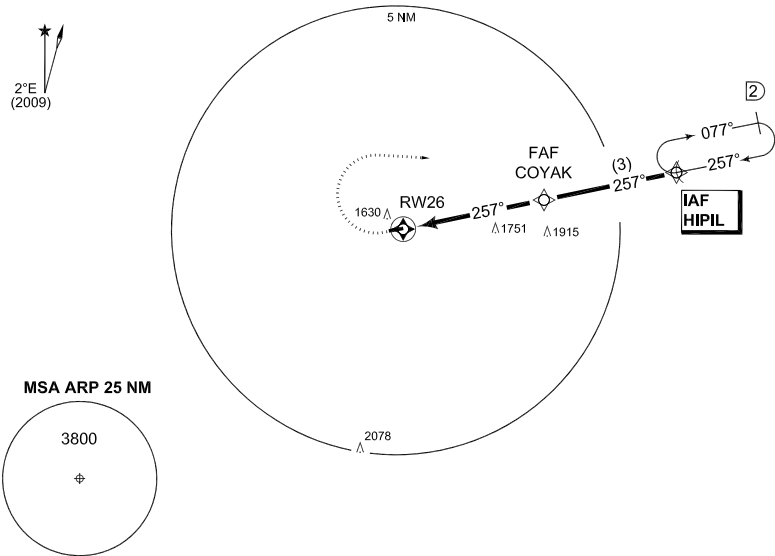
AD ELEV 1533

COPTER RNAV (GPS) RWY 26
ANSBACH (ETEB)

GRIFFIN APCH CTL*		MUENCHEN RADAR		ANSBACH TWR*		GND CTL	
290.600 138.425		298.825 129.525		376.975 139.225		342.550	
APP COURSE		FAF ALT		MDA		ALS-Length	
257°		2800		2170		UNKNOWN	
				TDZE		LDA	
				1533		1212	

NOTE:

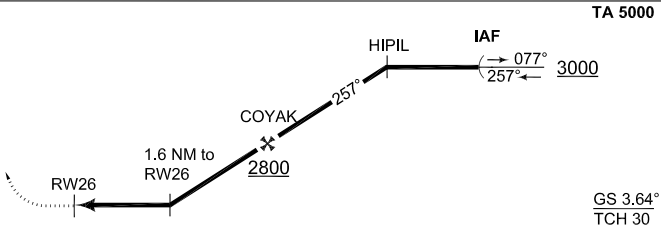
- a) LIMIT FINAL AND MISSED APCH
AIRSPEED TO 90 KIAS



EMERG SAFE ALT 100 NM 7000

MISSED APPROACH

Climbing right turn to
3000 ft direct HIPIL and
hold.



TA 5000

GS 3.64°
TCH 30

TDZE 1533

3.2

UNKNOWN

CATEGORY

COPTER

LNAV MDA

2170 - 1200 637 (700-1200)

CHANGE ORIGINATOR (008/15)

PANS-OPS

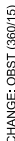
COPTER RNAV (GPS) RWY 26

49°18.49'N
010°38.32'E

ANSBACH (ETEB)

ZentrLufOp/NGA 12 NOV 2015

BUECKEBURG (ETHB)



BUECKEBURG TWR	341.250	387.750	140.400	
BUECKEBURG RADAR	389.450	124.500	123.300	SSR 4250 - 4257

ZentrLuftOp 07 JAN 2016

BUECKEBURG (ETHB)

PANS-OPS INSTRUMENT DEPARTURE CHART

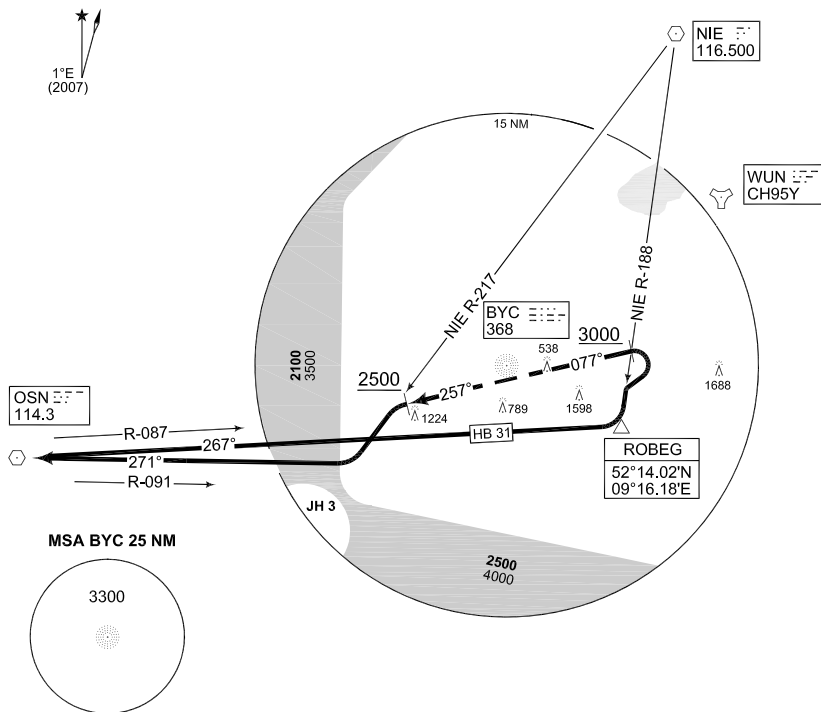
AD ELEV 230

HB 11 - 31
BUECKEBURG (ETHB)

BUECKEBURG TWR		BUECKEBURG RADAR			BREMEN RADAR							
341.250	140.400	389.450	124.500	123.300	259.725 131.325							
					RWY	from - to	60	120	180	240	300	Reason
					08	DER - 3000	400	800	1200	—	—	ATC
NOTE:					26	DER - 2500	380	760	1140	—	—	ATC

NOTE:

PROCEDURE NOT AUTHORIZED FOR
ACFT CAT C,D,E



EMERG SAFE ALT 100 NM 6100

TA 5000

HB 11 (RWY 26)	- Climb on track 257° altitude 2500 ft or above - Turn left to intercept NIE R-217 - Turn right to intercept OSN R-091 inbound - Proceed to OSN INITIAL CLIMB: 4000 FT
HB 31 (RWY 08)	Speed restriction: MAX KIAS 150 Altitude restriction: cross NIE R-188 altitude 3000 ft or above - Climb on track 077° altitude 3000 ft or above - when crossing NIE R-188 turn right to intercept NIE R-188 - Turn right to intercept OSN R-087 inbound - Proceed to OSN INITIAL CLIMB: 4000 FT

HB 11 - 31

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

CHANGE: NOTE DEPICTION NILFS (278/11, 270/11)

AFSBw 12 JAN 2012

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 230

HB 12 - 32
BUECKEBURG (ETHB)

BUECKEBURG TWR		BUECKEBURG RADAR			BREMEN RADAR					
341.250	140.400	389.450	124.500	123.300	259.725	131.325				
			RWY	From - to	60	120	180	240	300	Reason
			08	DER - 4000	400	800	1200	—	—	ATC
			26	DER - 2500	380	760	1140	—	—	ATC

NOTE:
PROCEDURE NOT
AUTHORIZED FOR
ACFT CAT C,D,E

BMN CH121Y
(117.450)

BASUM
52°46'19"N
008°47'19"E

1°E
(2007)

DP 325

NIE 116.5

WUN CH95Y

BYC 368

DLE CH99X
(115.200)

MSA BYC 25 NM

3300

JH 3

2500
4000

EMERG SAFE ALT 100 NM 6100

TA 5000

HB 12 (RWY 26)	- Climb on track 257° altitude 2500 ft or above - When crossing BMN R-173 turn right to intercept BMN R-176 inbound - Cross BMN R-176/41 DME altitude 4000 ft or above - Continue as cleared by ATC INITIAL CLIMB: 4000 ft
HB 32 (RWY 08)	Speed restriction: MAX KIAS 150 Altitude restriction: cross NIE R-192 altitude 2500 ft or above - Climb on track 077° altitude 2500 ft or above - When crossing NIE R-192 turn left to intercept NIE R-190 inbound - Cross DLE R-285 altitude 4000 ft or above - Continue as cleared by ATC INITIAL CLIMB: 4000 ft

HB 12 - 32

52°16.71"N
009°04.93"E

BUECKEBURG (ETHB)

CHANGE: NOTE DEPICTION NILFS (278/11, 270/11)

AFSBw 12 JAN 2012

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 230

HB 13 - 33
BUECKEBURG (ETHB)

BUECKEBURG TWR		BUECKEBURG RADAR			BREMEN RADAR					Reason
341.250	140.400	389.450	124.500	123.300	259.725	131.325				
RWY	From - to	60	120	180	240	300				
08	DER - 2500	400	800	1200	—	—				ATC
26	DER - 2500	380	760	1140	—	—				ATC

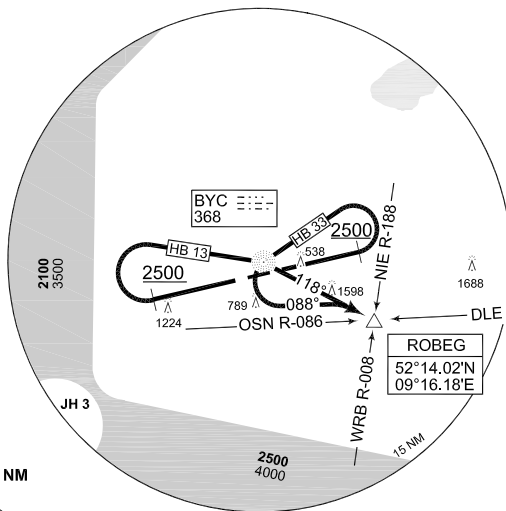
NOTE:

PROCEDURE NOT AUTHORIZED FOR
ACFT CAT C,D,E

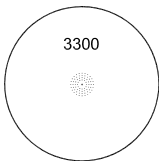


NIE 116.5

OSN 114.3



MSA BYC 25 NM



WRB CH84X (113.700)

EMERG SAFE ALT 100 NM 6100

TA 5000

HB 13 (RWY 26)	- Climb on track 257° altitude 2500 ft or above - Turn right and proceed inbound BYC NDB - When passing BYC NDB, proceed on BYC track 118° to ROBEG INITIAL CLIMB: 5000 ft
HB 33 (RWY 08)	Speed restriction: MAX KIAS 150 - Climb on track 077° altitude 2500 ft or above - Turn left and proceed inbound BYC NDB - Turn left on track 088° to intercept BYC track 118° to ROBEG INITIAL CLIMB: 5000 ft

HB 13 - 33

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

AD FI FV 230

BUECKEBURG (ETHB)

	26	DER - 2600	400	800	1200	1600	2000	ATC
--	-----------	------------	-----	-----	------	------	------	------------



EMERG SAFE ALT 100 NM 6100

52°16.71'N
009°04.93'E

AFSBw 12 JAN 2012

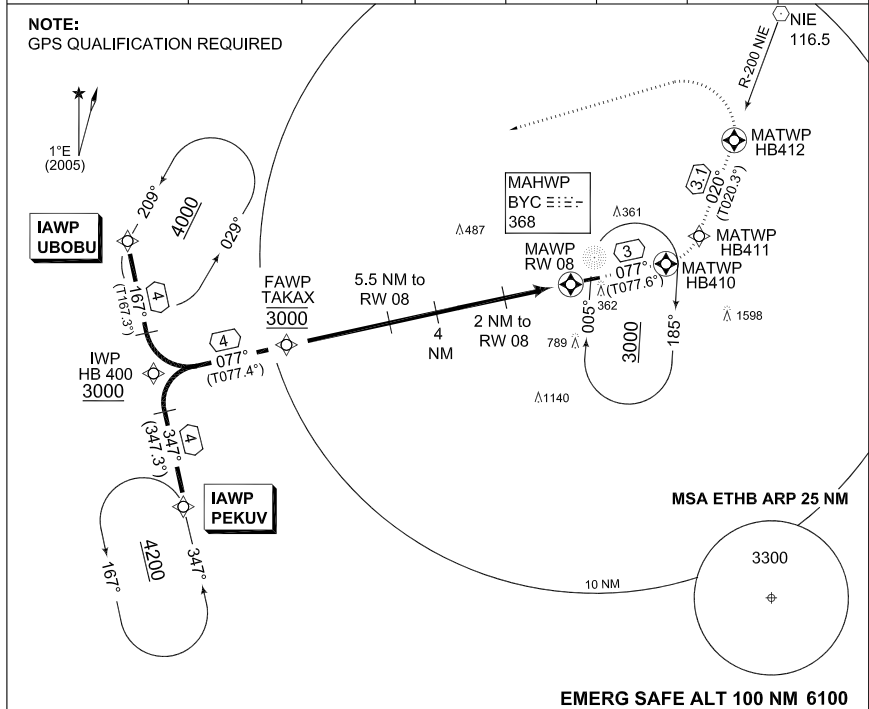
PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 230

RNAV (GPS) RWY 08
BUECKEBURG (ETHB)

BREMEN RADAR 259.725 131.325		BUECKEBURG RADAR 389.450 124.500		BUECKEBURG TWR 341.250 140.400			
NDB BYC 368	APP COURSE 077°	FAWP ALT 3000	Descent GR 3.0°/5.2%	MDA 580	THR ELEV 225	ALS-Length 590 M	LDA 5476

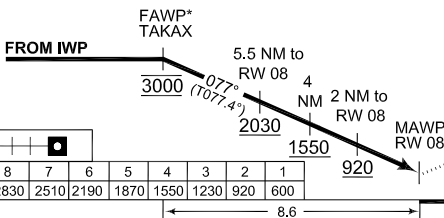
NOTE:
GPS QUALIFICATION REQUIRED



EMERG SAFE ALT 100 NM 6100

TA 5000

*VERTICAL FLY-BY APPROVED



MISSED APPROACH RNAV (GPS)

Climb on track 077° to HB410, LT via HB411 on track 020° inbound NIE to 4000 ft. When passing HB412, LT inbound IAWP UBOBU.
HB410-HB411-HB412-UBOBU [A4000]

NON RNAV

Climb straight ahead to 1500 ft. When passing R-200 NIE, LT climb inbound NIE VOR. When passing 2000 ft, LT climb to 3000 ft inbound BYC NDB.

THR ELEV 225

TCH 49								
S-ALS								
DIST THR	8	7	6	5	4	3	2	1
ALTITUDE	2830	2510	2190	1870	1550	1230	920	600

CATEGORY	A	B	C	D	E
GPS 08	580 - 0.8 355 (400-0.8/1.6)				

RNAV (GPS) RWY 08

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

CHANGE: MINIMA CRITERIA (22/14)

AFSBW 05 FEB 2015

INSTRUMENT APPROACH CHART

WAY POINT LIST RWY 08 BUECKEBURG (ETHB)

RWY 08 from UBOBU Approach RNAV (GPS)

UBOBU (IAWP)	52 17 46.1499 N	008 42 46.6169 E
HB 400 (IWP)	52 13 52.3634 N	008 44 12.6475 E
TAKAX (FAWP)	52 14 44.9412 N	008 50 33.5337 E
RW 08 (MAWP)	52 16 37.0975 N	009 04 17.0741 E
HB 410 (MATWP)	52 17 14.5485 N	009 08 54.9669 E
HB 411 (MATWP)	52 18 04.6844 N	009 10 29.0221 E
HB 412 (MATWP)	52 20 57.5492 N	009 12 13.3748 E
UBOBU (IAWP)	52 17 46.1499 N	008 42 46.6169 E

RWY 08 from PEKUV Approach RNAV (GPS)

PEKUV (IAWP)	52 09 58.5556 N	008 45 38.4281 E
HB 400 (IWP)	52 13 52.3634 N	008 44 12.6475 E
TAKAX (FAWP)	52 14 44.9412 N	008 50 33.5337 E
RW 08 (MAWP)	52 16 37.0975 N	009 04 17.0741 E
HB 410 (MATWP)	52 17 14.5485 N	009 08 54.9669 E
HB 411 (MATWP)	52 18 04.6844 N	009 10 29.0221 E
HB 412 (MATWP)	52 20 57.5492 N	009 12 13.3748 E
UBOBU (IAWP)	52 17 46.1499 N	008 42 46.6169 E

To enhance VNAV Operation for FMS aircraft, following additional data are provided:

HB 401, 5.5 NM to RW 08	52 15 25.7982 N	008 55 32.3297 E	A 2030
HB 402, 4.0 NM to RW 08	52 15 43.5134 N	008 57 47.5192 E	A 1550
HB 403, 2.0 NM to RW 08	52 16 11.2657 N	009 01 06.1965 E	A 920

PANS-OPS INSTRUMENT APPROACH CHART

RNAV (GPS) RWY 26
BUECKEBURG (ETHB)

AD ELEV 230

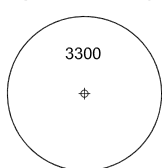
BREMEN RADAR 259.725 131.325		BUECKEBURG RADAR 389.450 124.500		BUECKEBURG TWR 341.250 140.400			
NDB BYC 368	APP COURSE 257°	FAWP ALT 2000	Descent GR 474 ft/NM / 7.8%	MDA 880	THR ELEV 213	ALS-Length 870 M	LDA 6010

NOTE:
GPS QUALIFICATION REQUIRED



IAWP/
MAHPW
BYC 368

MSA ETHB ARP 25 NM



EMERG SAFE ALT 100 NM 6100

MISSED APPROACH RNAV (GPS)

Climb on track 257° to HB 460, RT via HB 461 on track 035° inbound NIE to 3000 ft. When passing HB 462, RT via HB 463 to BYC.

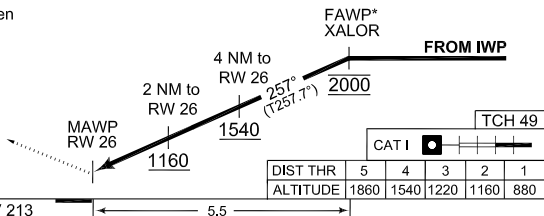
HB 460-HB 461-HB 462-HB 463-BYC [A3000]

NON RNAV

Climb straight ahead to 1500 ft. When passing R-215 NIE, RT climb inbound NIE VOR. When passing 2000 ft, RT climb to 3000 ft inbound BYC NDB.

*VERTICAL FLY-BY APPROVED

TA 5000



CATEGORY		A	B	C	D	E
GPS 26		880 - 0.8 667 (700-0.8/1.6)		880 - 2.0 667 (700-2.0/2.8)		
IMPS						

RNAV (GPS) RWY 26

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

INSTRUMENT APPROACH CHART

WAY POINT LIST RWY 26 BUECKEBURG (ETHB)

RWY 26 from BYC NDB Approach RNAV (GPS)

BYC (IAWP)	52 17 27.9250 N	009 05 27.5010 E
HB 450 (TWP)	52 12 44.1305 N	009 12 38.8881 E
HB 451 (TWP)	52 13 17.8326 N	009 20 33.1891 E
HB 452 (IWP)	52 17 47.1446 N	009 20 54.5976 E
XALOR (FAWP)	52 17 58.6527 N	009 14 24.1296 E
RW 26 (MAWP)	52 16 48.7080 N	009 05 43.0722 E
HB 460 (MATWP)	52 16 09.9982 N	009 00 56.9117 E
HB 461 (MATWP)	52 17 59.0959 N	008 59 12.6323 E
HB 462 (MATWP)	52 20 50.8947 N	009 02 32 3536 E
HB 463 (MATWP)	52 19 57.1045 N	009 06 05 9209 E
BYC (MAHWP)	52 17 27.9250 N	009 05 27 5010 E

RWY 26 from VABMA Approach RNAV (GPS)

VABMA (IAWP)	52 09 18.4407 N	009 20 14.2227 E
HB 452 (IWP)	52 17 47.1446 N	009 20 54.5976 E
XALOR (FAWP)	52 17 58.6527 N	009 14 24.1296 E
RW 26 (MAWP)	52 16 48.7080 N	009 05 43.0722 E
HB 460 (MATWP)	52 16 09.9982 N	009 00 56.9117 E
HB 461 (MATWP)	52 17 59.0959 N	008 59 12.6323 E
HB 462 (MATWP)	52 20 50.8947 N	009 02 32.3536 E
HB 463 (MATWP)	52 19 57.1045 N	009 06 05.9209 E
BYC (MAHWP)	52 17 27.9250 N	009 05 27.5010 E

To enhance VNAV Operation for FMS aircraft, following additional data are provided:

HB 455, 4.0 NM to RW 26	52 17 40.0333 N	009 12 05.0675 E A 1540
HB 456, 2.0 NM to RW 26	52 17 14.4136 N	009 08 54.0393 E A 1160

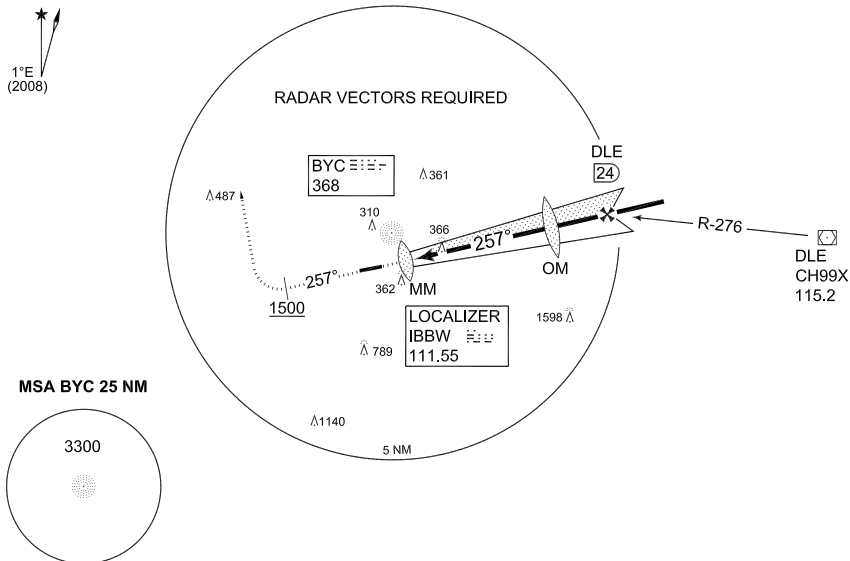
PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 230

ILS RWY 26
BUECKEBURG (ETHB)

BREMEN RADAR 259.725 131.325		BUECKEBURG RADAR 389.450 124.500		BUECKEBURG TWR 341.250 140.400			
LOCALIZER IBBW 111.55	APP COURSE 257°	FAF ALT 2000	GS 3.2°	DA see CAT	THR ELEV 213	ALS-Length 870 M	LDA 6010

CAUTION:
CIRCLING NOT AUTHORIZED S OF RWY



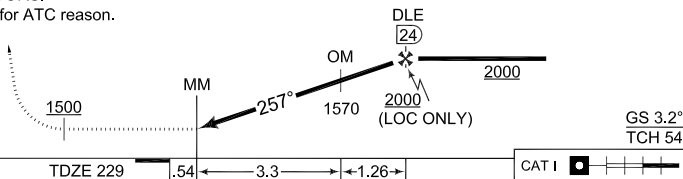
EMERG SAFE ALT 100 NM 6100

MISSED APPROACH

Climb on track 257° to 2000 ft. When passing 1500 ft turn right heading 350°. Expect RADAR VECTORS. PDG 5% (304 ft/NM) for ATC reason.

LOC: FAF - MAPt 4.56 NM				
Knots	60	90	120	150
Min:Sec	4:31	3:00	2:16	1:48

TA 5000



MPS	CATEGORY	H	A	B	C	
		ILS 26	466 - 0.8 237 (300-0.8)	483 - 0.8 254 (300-0.8/1.6)	492 - 0.8 263 (300-0.8/1.6)	502 - 0.8 273 (300-0.8/1.6)
		LOC 26	1050 - 0.8 821 (900-0.8/1.6)	1050 - 0.8 821 (900-0.8/1.6)	1050 - 1.2 821 (900-1.2/2.0)	1050 - 3.2 821 (900-3.2/4.0)
		CIRCLING	N/A	1050 - 1.6 821 (900-1.6)	1050 - 2.0 821 (900-2.0)	1180 - 4.8 951 (1000-4.8)

ILS RWY 26

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

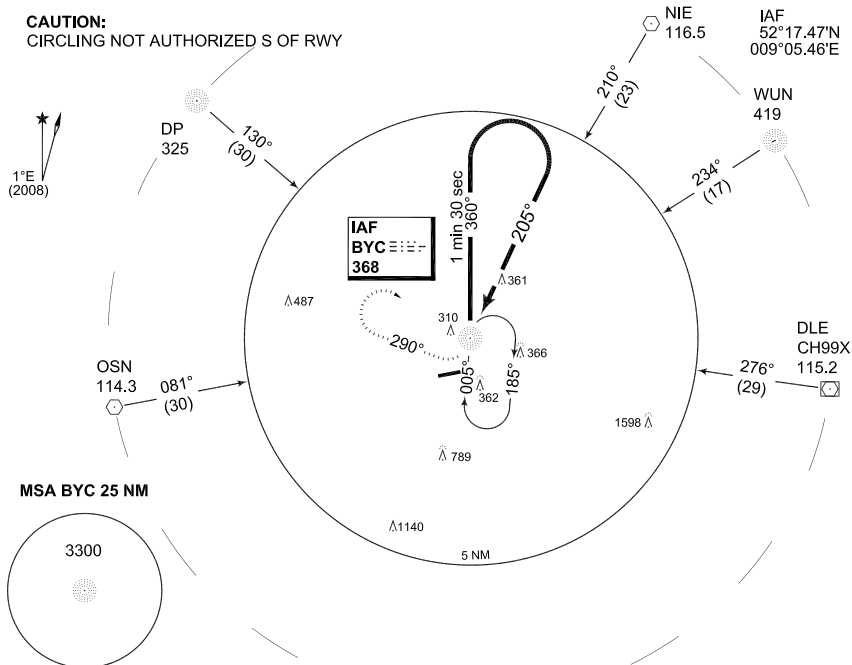
PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 230

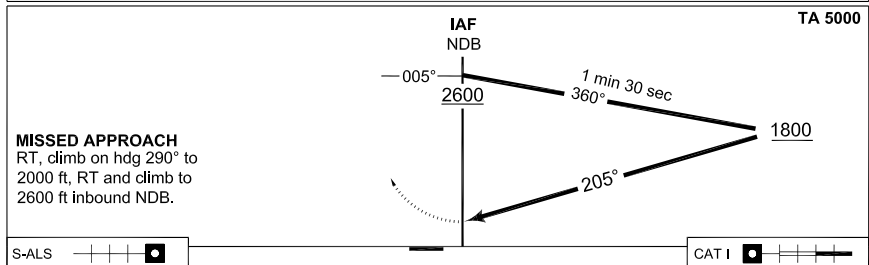
NDB A
BUECKEBURG (ETHB)

BREMEN RADAR 259.725 131.325		BUECKEBURG RADAR 389.450 124.500		BUECKEBURG TWR 341.250 140.400			
NDB BYC 368	APP COURSE 205°			MDA 820		ALS-Length 590 M/870 M	LDA 5476/6010

CAUTION:
CIRCLING NOT AUTHORIZED S OF RWY



EMERG SAFE ALT 100 NM 6100



CATEGORY		A	
STANDARD 10001 60019 MIPS	CIRCLING	820 - 1.6 590 (600-1.6)	

NDB A

52°16.71'N
009°04.93'E

BUECKEBURG (ETHB)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 230

NDB B
BUECKEBURG (ETHB)

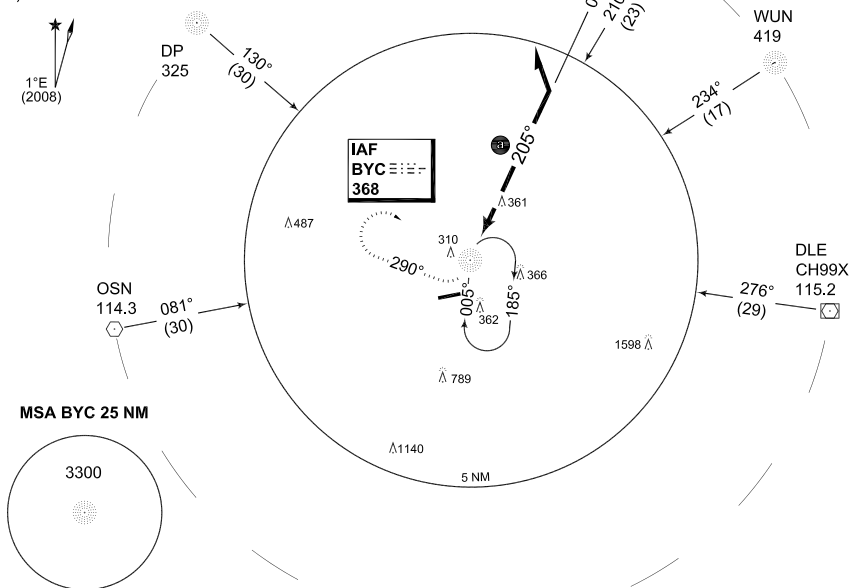
BREMEN RADAR 259.725 131.325		BUECKEBURG RADAR 389.450 124.500		BUECKEBURG TWR 341.250 140.400			
NDB BYC 368	APP COURSE 205°			MDA 820		ALS-Length 590 M/870 M	LDA 5476/6010

NOTE:

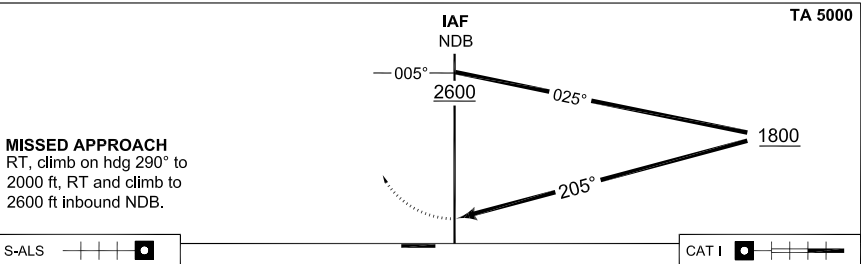
① OUTBOUND TIMING 1 MIN

CAUTION:

b) CIRCLING NOT AUTHORIZED S OF RWY



EMERG SAFE ALT 100 NM 6100



MIPS	CATEGORY	A
	CIRCLING	820 - 1.6 590 (600-1.6)

NDB B

52°16.71'N
009°04.93'E

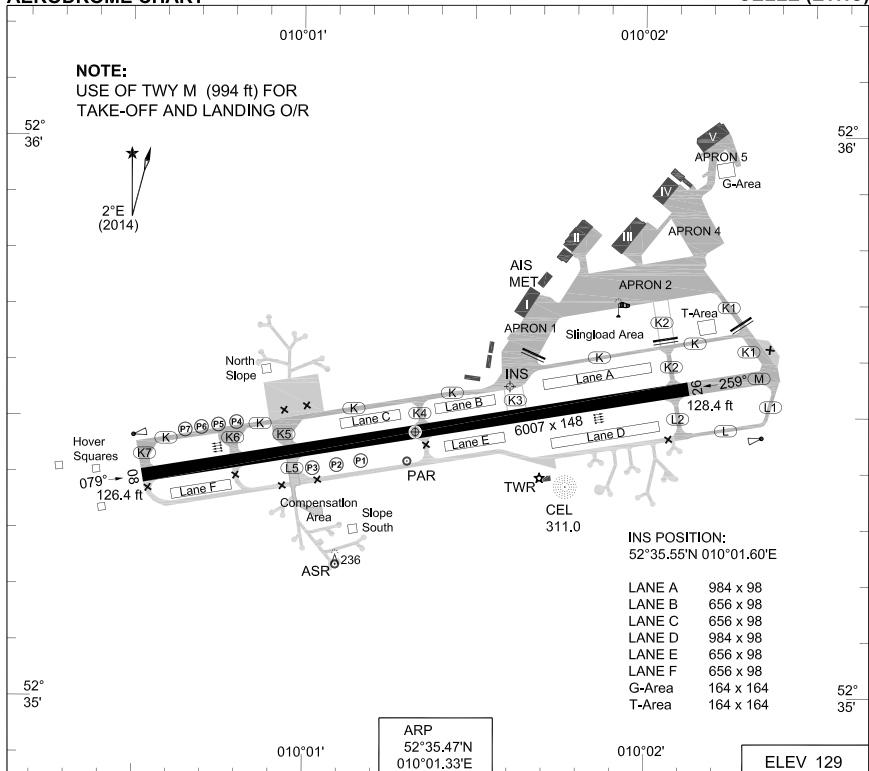
BUECKEBURG (ETHB)

CHANGE: OBST (360/15)

ZentLutOp 07 JAN 2016

AERODROME CHART

CELLE (ETHC)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	38/R/B/W/T	6007	6007	6007	6007	3.0°	129.1	52°35.39'N 010°00.53'E
26	38/R/B/W/T	6007	6007	6007	6007	3.0°	129.0	52°35.55'N 010°02.13'E

CELLE TWR	281.900	257.800	118.250	122.100
CELLE RADAR	283.925	379.275	130.500	123.300

- MISSED APCH / PDG
- 182 ft NM / 3.0% (REASON ATC)
 - 243 ft NM / 4.0% (REASON ATC)

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	PANS-OPS	08	3.0°	47			ABCD	MIPS	327 - 1.2 200 (200-1.2)
	PANS-OPS	26	3.0°	49			ABCD	MIPS	329 - 0.8 200 (200-0.8/1.2)
SRA	PANS-OPS	08	3.0°	47			AB	MIPS	560 - 1.6 433 (500-1.6)
							C		560 - 2.0 433 (500-2.0)
							D		560 - 2.4 433 (500-2.4)
SRA	PANS-OPS	26	3.0°	49			AB	MIPS	540 - 0.8 411 (500-0.8/1.6)
							CD		540 - 1.2 411 (500-1.2/2.0)

AERODROME CHART

CELLE (ETHC)

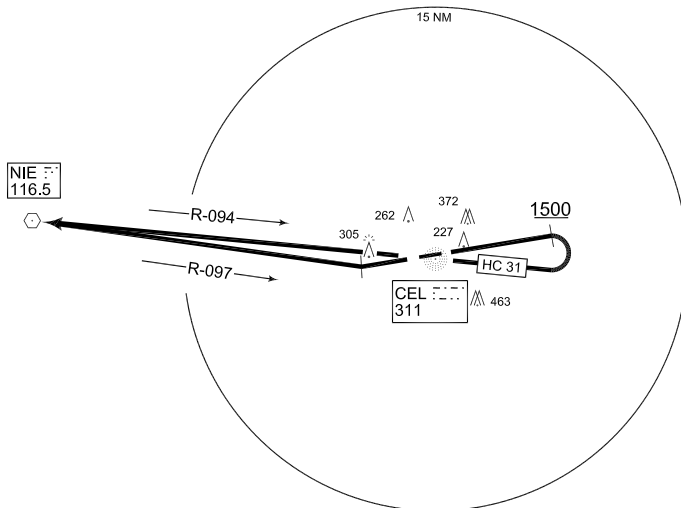
CHANGE: PAPI PSN. FREQ (370/15)

ZentrLufOp 07 JAN 2016

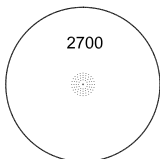
HC 11 - 31
CELLE (ETHC)

CELLE TWR		CELLE RADAR		BREMEN RADAR				
281.900	118.250	283.925	130.500	259.725x 131.325				
				RWY	from - to	60	120	Reason
				26	DER - 1700 ft	347	694	ATC

NOTE:
PROCEDURES FOR HELICOPTER ONLY



MSA CEL 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

HC 11 (RWY 26)	- Climb on RWY direction until intercepting NIE R-097 - Proceed on NIE R-097 to NIE INITIAL CLIMB ALTITUDE: 4000 ft
HC 31 (RWY 08)	- Climb on RWY direction - When passing 1500 ft, turn right to CEL - Cross CEL and intercept NIE R- 094 - Proceed to NIE INITIAL CLIMB ALTITUDE: 4000 ft

CHANGE: MSA, ESA (417/15)

ZentrLuftOp 03 MAR 2016

HC 11 - 31

52°35.47'N
010°01.33'E

CELLE (ETHC)

**PANS-OPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 129

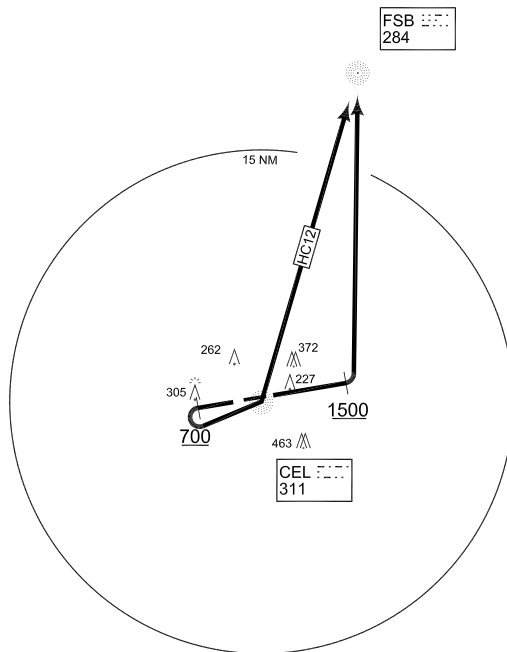
**HC 12 - 32
CELLE (ETHC)**

CELLE TWR
281.900 118.250

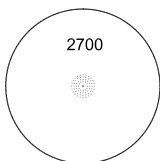
CELLE RADAR
283.925 130.500

BREMEN RADAR
259.725x 131.325

NOTE:
PROCEDURES FOR HELICOPTER ONLY



MSA CEL 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

HC 12
(RWY 26)

- Climb on RWY direction
 - When passing 700 ft , turn left to CEL
 - Cross CEL and proceed to FSB
- INITIAL CLIMB ALTITUDE: 3000 ft

HC 32
(RWY 08)

- Climb on RWY direction
 - When passing 1500 ft , turn left to FSB
 - Proceed to FSB
- INITIAL CLIMB ALTITUDE: 3000 ft

CHANGE: MSA ESA (417/15)

ZentLutOp 03 MAR 2016

HC 12 - 32

52°35.47'N
010°01.33'E

CELLE (ETHC)

**PANS-OPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 129

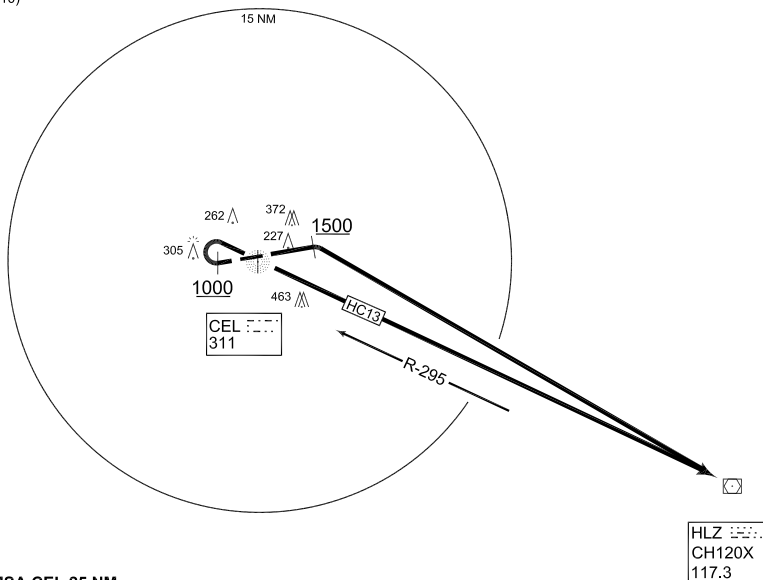
**HC 13 - 33
CELLE (ETHC)**

CELLE TWR
281.900 118.250

CELLE RADAR
283.925 130.500

BREMEN RADAR
259.725x 131.325

NOTE:
PROCEDURES FOR HELICOPTER ONLY



EMERG SAFE ALT 100 NM 6100

TA 5000

CHANGE: MSA, ESA (417/15)

HC 13
(RWY 26)

- Climb on RWY direction
 - When passing 1000 ft, turn right to CEL
 - Cross CEL and intercept HLZ R-295
 - Proceed to HLZ
- INITIAL CLIMB ALTITUDE: 4000 ft

HC 33
(RWY 08)

- Climb on RWY direction
 - When passing 1500ft turn right to HLZ
 - Proceed to HLZ
- INITIAL CLIMB ALTITUDE: 4000 ft

ZentLufTop 03 MAR 2016

HC 13 - 33

52°35.47'N
010°01.33'E

CELLE (ETHC)

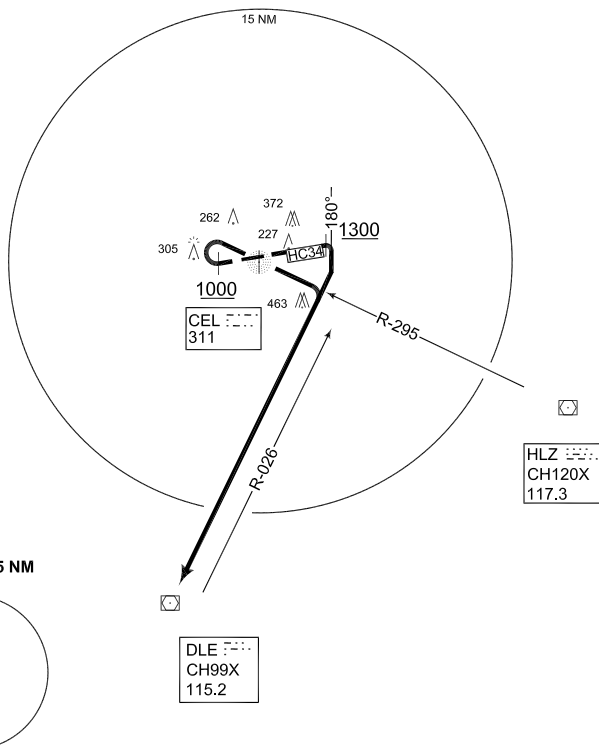
	CELLE TWR
281.900	118.250

	CELLE RADAR
283.925	130.500

BREMEN RADAR
259.725x 131.325

NOTE:

PROCEDURES FOR HELICOPTER ONLY



MSA CEL 25 NM

2700

EMERG SAFE ALT 100 NM 6100

TA 5000

HC 14 (RWY 26)	- Climb on RWY direction - When passing 1000 ft, turn right to CEL - Cross CEL and proceed on HLZ R-295 to intercept DLE R-026 - Proceed on DLE R-026 to DLE INITIAL CLIMB ALTITUDE: 4000 ft
HC 34 (RWY 08)	- Climb on RWY direction - When passing 1300 ft, turn right on heading 180° to intercept DLE R-026 - Proceed on DLE R-026 to DLE INITIAL CLIMB ALTITUDE: 4000 ft

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 129

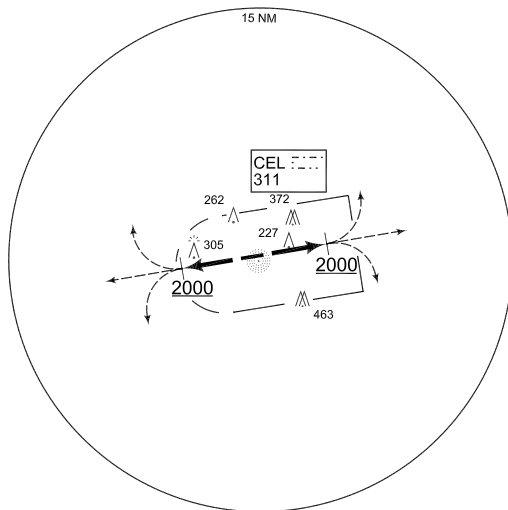
HC 108 - 126
CELLE (ETHC)

CELLE TWR
281.900 118.250

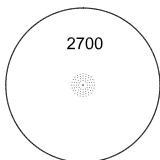
CELLE RADAR
283.925 130.500

BREMEN RADAR
259.725x 131.325

RWY	from - to	60	120	180	240	300	360	Reason
08	DER - 2000 ft	469	938	1407	1876	2345	2814	ATC
26	DER - 2000 ft	469	938	1407	1876	2345	2814	ATC



MSA CEL 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

HC 108
(RWY 08)

- Climb on RWY direction to 2000 ft
- Continue as cleared by ATC

HC 126
(RWY 26)

- Climb on RWY direction to 2000 ft
- Continue as cleared by ATC

HC 108 - 126

52°35.47'N
010°01.33'E

CELLE (ETHC)

CHANGE: MSA ESA (417/15)

ZentLufOp 03 MAR 2016

PANS-OPS
INSTRUMENT APPROACH CHART

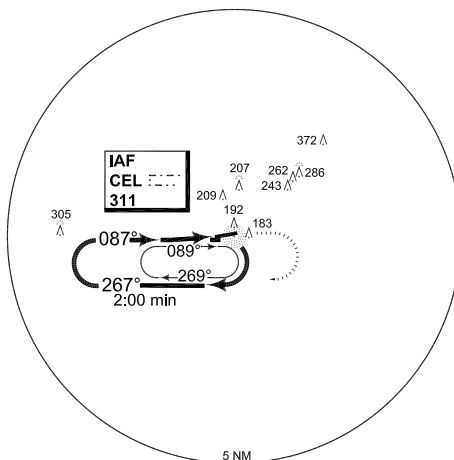
COPTER NDB RWY 08
CELLE (ETHC)

AD ELEV 129

CELLE TWR 281.900 118.250		CELLE RADAR 283.925 130.500		BREMEN RADAR 259.725x 131.325	
NDB CEL 311	APP COURSE 087°		MDA 650	TDZE 129	ALS-Length — LDA 6007

NOTE:
RADAR MONITORED ONLY

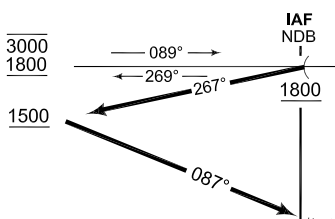
IAF
52°35.38'N
010°01.77'E



MSA CEL 25 NM

2700

EMERG SAFE ALT 100 NM 6100



MISSED APPROACH
At CEL, RT. Climb within
holding to 1800 ft.

TA 5000

NO LIGHTS

TDZE 129

MIPS	CATEGORY	COPTER
	H-RWY 08	650 - 0.8 521 (600-0.8)

COPTER NDB RWY 08

52°35.47'N
010°01.33'E

CELLE (ETHC)

CHANGE: MSA, ESA (417/15)

ZentLutOp 03 MAR 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 129

NDB RWY 26
CELLE (ETHC)

CELLE TWR 281.900 118.250		CELLE RADAR 283.925 130.500		BREMEN RADAR 259.725x 131.325	
NDB CEL 311	APP COURSE 251°		MDA 570	TDZE 129	ALS-Length 998 M
					LDA 6007

CAUTION:

a) INCREASED DESCENT RATE ON FINAL

NOTE:

b) 125 KT IAS MAX

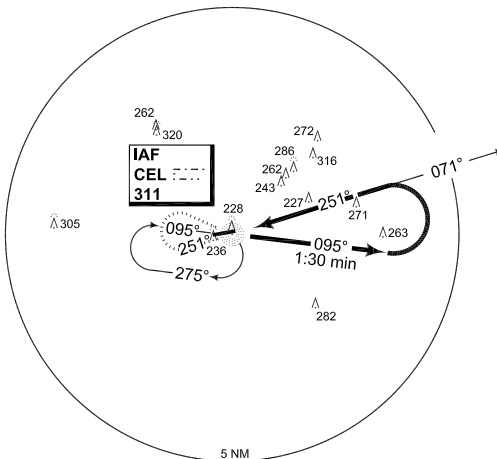
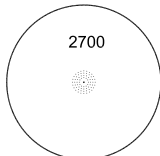
⊙ CIRCLING NORTH OF RWY 08/26
NOT AUTHORIZED

IAF
52°35.38'N
010°01.77'E



466
464
467

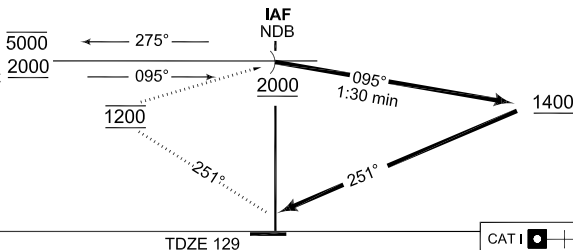
MSA CEL 25 NM



EMERG SAFE ALT 100 NM 6100

MISSED APPROACH

Climb on heading 251°
altitude 1200 ft. Turn right
inbound CEL climbing
altitude 2000 ft. Re-enter
holding at altitude 2000 ft
or as cleared by ATC.



TA 5000

TDZE 129

CAT I

CATEGORY	A	B
NDB RWY 26	570 - 0.8 441 (500-0.8/1.6)	
⊙ CIRCLING	570 - 1.9 441 (500-1.9)	630 - 2.8 501 (600-2.8)

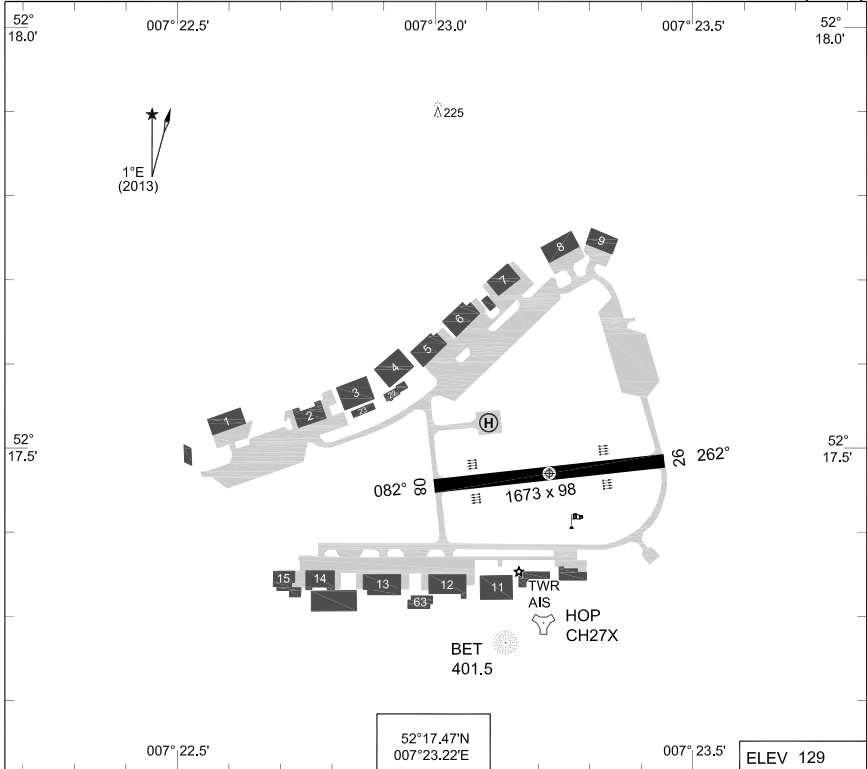
NDB RWY 26

52°35.47'N
010°01.33'E

CELLE (ETHC)

AERODROME CHART

RHEINE - BENTLAGE (ETHE)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	30	1673	1673	1673	1673	4.8°	128.3	52°17.45'N 007°23.00'E
26	30	1673	1673	1673	1673	4.0°	128.3	52°17.48'N 007°23.44'E

BENTLAGE TWR 254.700 257.800 122.100 42.400
 BREMEN RADAR 372.550 125.025 SSR 4450 - 4457

CHANGE: MINIMA CRITERIA REMOVED (247/14)

AFSBw 05 FEB 2015

AERODROME CHART

RHEINE - BENTLAGE (ETHE)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 129

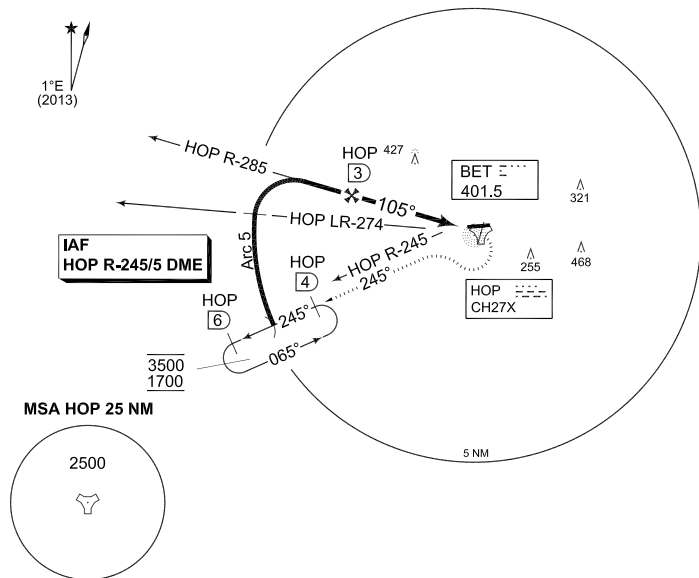
COPTER TACAN RWY 08 RHEINE - BENTLAGE (ETHE)

BREMEN RADAR 372.550 125.025					BENTLAGE TWR 254.700 257.800 122.100 42.400			
TACAN HOP CH27X	APP COURSE 105°	FAF ALT 1000	Descent GR 5.2%	MDA 500	TDZE 128	ALS-Length 600 M	LDA 1673	

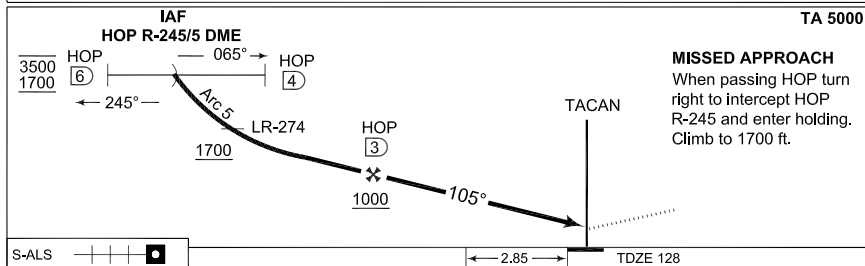
NOTE:

- TIMING NOT AUTHORIZED FOR DEFINING THE MAPt.
- NO TURN BEFORE MAPt.
- PROCEDURE NOT AUTHORIZED WHEN ED-R 37A ACTIVATED.

IAF
52°15.26'N
007°15.78'E



EMERG SAFE ALT 100 NM 4200



S-ALS	2.85	TDZE 128
CATEGORY	H	
S-TACAN 08	500 - 0.4 371 (400-0.4/0.8)	

COPTER TACAN RWY 08

52°17.47'N
007°23.22'E

RHEINE - BENTLAGE (ETHE)

CHANGE: OBST (360/15)

ZentLutOp 07 JAN 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 129

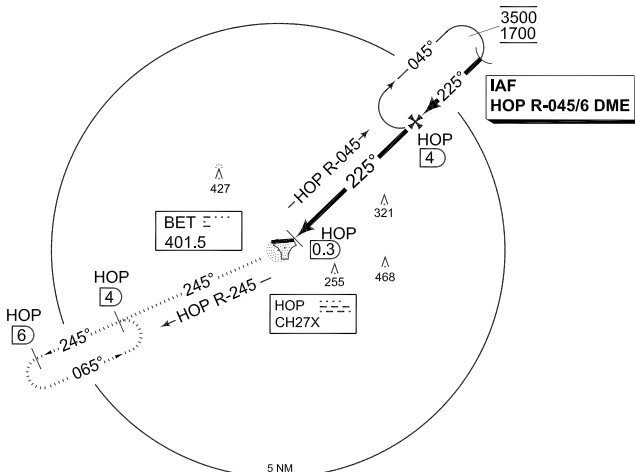
COPTER TACAN 225 RHEINE - BENTLAGE (ETHE)

BREMEN RADAR 372.550 125.025				BENTLAGE TWR 254.700 257.800 122.100 42.400			
TACAN HOP CH27X	APP COURSE 225°	FAF ALT 1700	Descent GR 6.7%	MDA 540	TDZE 128	ALS-Length —	LDA 1673

NOTE:

- TIMING NOT AUTHORIZED FOR DEFINING THE MAPt.
- NO TURN BEFORE MAPt.

IAF
52°20.81'N
007°32.45'E



MSA HOP 25 NM

2500

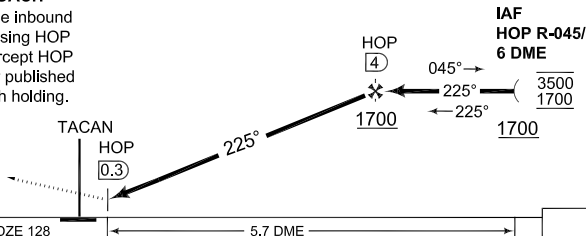
5 NM

EMERG SAFE ALT 100 NM 4200

MISSED APPROACH

At MAPt continue inbound HOP. When passing HOP turn right to intercept HOP R-245 and enter published missed approach holding. Climb to 1700 ft.

TA 5000



TDZE 128

5.7 DME

NO LIGHTS

CATEGORY

H

COPTER
TACAN-225

540 - 0.8 411 (500-0.8)

52°17.47'N
007°23.22'E

RHEINE - BENTLAGE (ETHE)

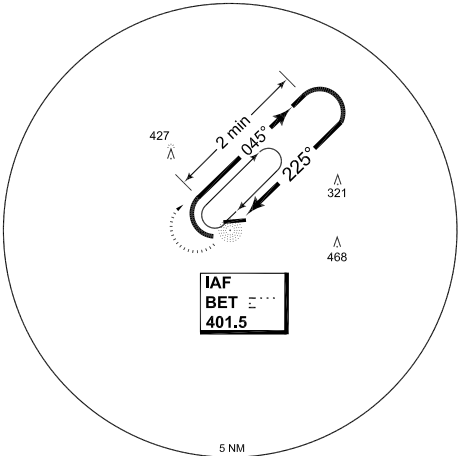
CHANGE: OBST (360/15)

MIPS

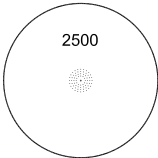
ZentLutOp 07 JAN 2016

BREMEN RADAR 372.550 125.025				BENTLAGE TWR 254.700 257.800 122.100 42.400			
NDB BET 401.5	APP COURSE 225°			MDA 590	TDZE 128	ALS-Length —	LDA 1673

IAF
52°17.27'N
007°23.14'E

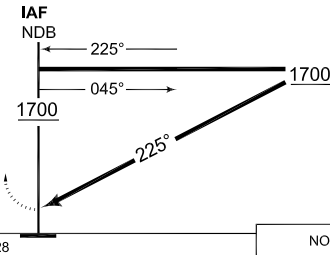


MSA BET 25 NM



EMERG SAFE ALT 100 NM 4200

MISSED APPROACH
Turn right and climb within
holding to 1700 ft MSL.



TA 5000

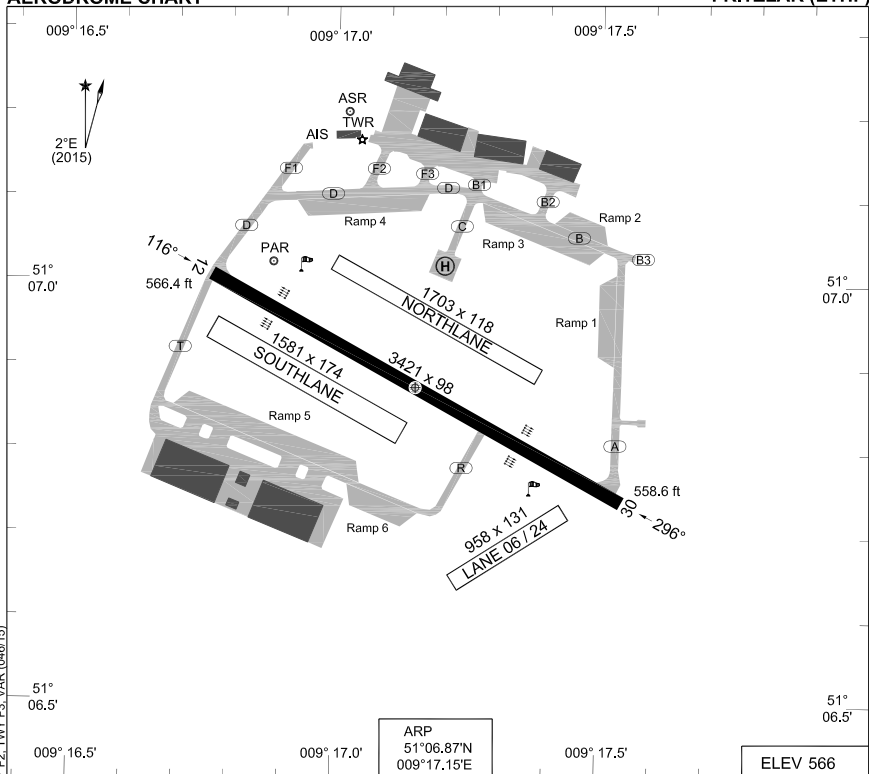
NO LIGHTS

CATEGORY	H	
COPTER NDB-225	590 - 0.8 461 (500-0.8)	

AERODROME CHART

FRITZLAR (ETHF)

CHANGE: PCN, MAG BRG, NORTHLANE, SOUTHLANE, LANE 06/24, TWY F1, TWY F2, TWY F3, VAR (046/15)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
12	25/F/B/W/U	3421	3421	3421	3421	4.4°	566.4	51°07.01'N 009°16.76'E
30	25/F/B/W/U	3421	3421	3421	3421	3.3°	565.4	51°06.74'N 009°17.54'E

FRITZLAR TWR 284.600
FRITZLAR RADAR 253.500 135.600 123.300 SSR 7060 - 7067

MISSED APCH / PDG

304 fpm / 5.0% (REASON ATC)

511 fpm / 8.4% (REASON ATC)

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	MIPS	30	3.3°	36			A - C	MIPS	765 - 1.2 200 (200-1.2)
	MIPS	298	3.3°	36			COPTER	MIPS	665 - 1.2 100 (100-1.2)
SRA	MIPS	30					AB	MIPS	1060 - 1.2 494 (500-1.2/1.6)
	MIPS	300					C	MIPS	1060 - 1.6 494 (500-1.6/2.0)
							COPTER	MIPS	1020 - 0.4 454 (500-0.4/0.8)

AERODROME CHART

FRITZLAR (ETHF)

AFSBw 02 APR 2015

TERPS INSTRUMENT DEPARTURE CHART

AD ELEV 566

HF 81 - 91
FRITZLAR (ETHF)

FRITZLAR TWR 284.600 122.100		FRITZLAR RADAR 253.500 123.300 135.600			LANGEN RADAR 379.900 127.725					
BREMEN RADAR 372.300 126.650			RWY	Knots	60	120	180	240	300	to
			12	V/V (fpm)	298	596	894	1192	1490	700 ft
			30	V/V (fpm)	440	880	1320	1760	2200	1700 ft

NOTE:

NOT USABLE FOR JET AIRCRAFT



WRB
CH84X
113.7



R-169

20 NM

5000

349°

5000

328°

5000

2000

1326 1050

976

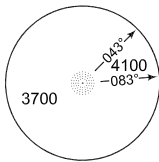
689

1385

2000

FTZ
468

MSA FTZ 25 NM



ED-R97 B
FL 80
GND

ED-R97 A
12000 ft
GND

EMERG SAFE ALT 100 NM 6100

TA 5000

CHANGE: VAR, FREQ. (102/14)

HF 81
(RWY 30)
(24)

- Climb straight ahead
- When passing 2000 ft turn right to intercept WRB R-169 and proceed to WRB

HF 91
(RWY 12)
(31)

- Climb straight ahead
- When passing 2000 ft turn left on heading 328° to intercept WRB R-169 and proceed to WRB

HF 81 - 91

51°06.87'N
009°17.15'E

FRITZLAR (ETHF)

AFSBW 26 JUN 2014

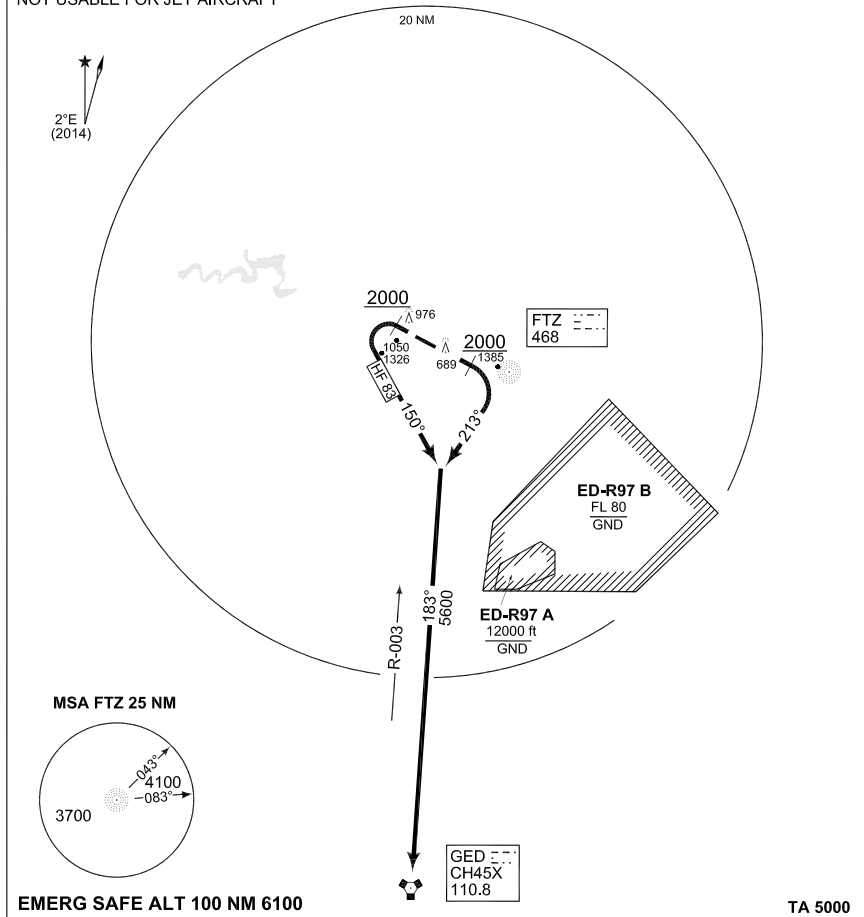
**TERPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 566

**HF 83 - 93
FRITZLAR (ETHF)**

FRITZLAR TWR		FRITZLAR RADAR			LANGEN RADAR					
284.600	122.100	253.500	123.300	135.600	379.900	127.725				
		RWY			Knots	60	120	180	240	300
		12			V/V (fpm)	251	502	753	1004	1255
		30			V/V (fpm)	440	880	1320	1760	2200
										to
										700ft
										1700 ft

NOTE:
NOT USABLE FOR JET AIRCRAFT



CHANGE: VAR (102/14)

HF 83 (RWY 30)	(47)	-	Climb straight ahead
		-	When passing 2000 ft turn left on heading 150° to intercept GED R-003 and proceed to GED
HF 93 (RWY 12)	(47)	-	Climb straight ahead
		-	When passing 2000 ft turn right on heading 213° to intercept GED R-003 and proceed to GED

HF 83 - 93

51°06.87'N
009°17.15'E

FRITZLAR (ETHF)

AFSBW 26 JUN 2014

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 566

NDB RWY 30
FRITZLAR (ETHF)

LANGEN RADAR		FRITZLAR RADAR			FRITZLAR TWR			
379.900	127.725	253.500	123.300	135.600	284.600	122.100		
NDB	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-Length	LDA	
FTZ 468	288°	2900	7.6%	see CAT	565	600 M	3421	

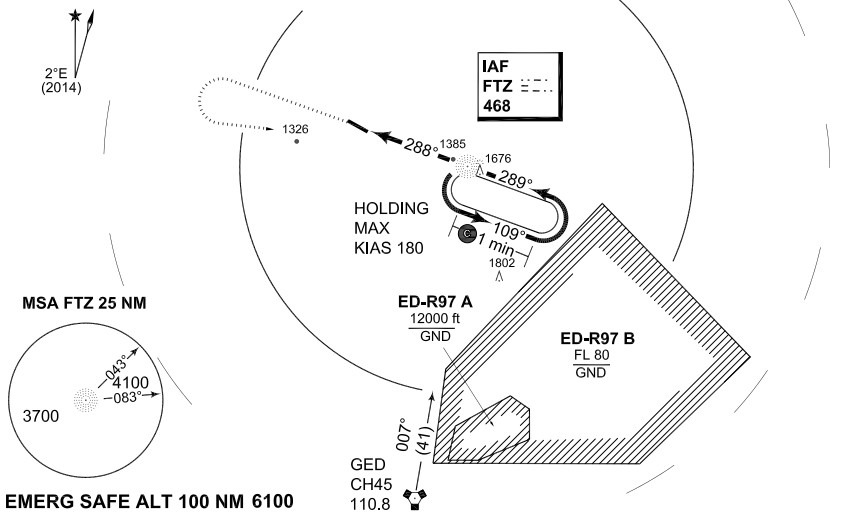
WARNING:

- a) DESCENT GRADIENT
GREATER THAN 6.5%.

NOTE:

- b) SPEED RESTRICTIONS:
HOLDING: MAX KIAS 180
FINAL: MAX KIAS 130
MISSED APCH TURN: MAX KIAS 160
● RACETRACK PROCEDURE TURN 1 MIN

IAF
51°05.06'N
009°24.91'E

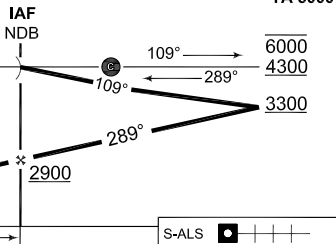


LOC: FAF - MAPt 4.94 NM

Knots	70	90	110	130
Min:Sec	4:14	3:18	2:42	2:10

MISSED APPROACH

Climb to 4300 ft on track 288°, when passing 2500 ft turn left inbound FTZ NDB. Missed approach turn limited to 160kt IAS. Minimum PDG 5% (304 ft/NM).



CATEGORY	A	B	C
NDB 30	1400 - 1.2 834 (900-1.2/1.6)	1400 - 1.6 834 (900-1.6/2.0)	1430 - 3.6 864 (900-3.6/4.0)

NDB RWY 30

51°06.87'N
009°17.15'E

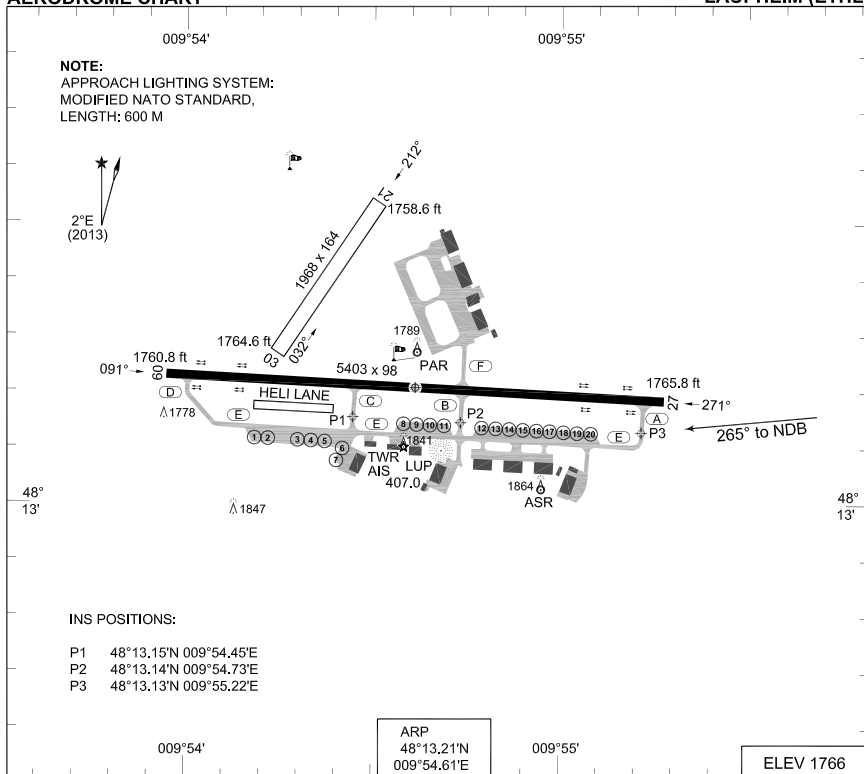
FRITZLAR (ETHF)

**COPTER NDB RWY 30
FRITZLAR (ETHF)**

FRITZLAR (ETHF)

AERODROME CHART

LAUPHEIM (ETHL)



RWY	LCN	TORA	ASDA	TODA	LDA	VASIS	TDZE	THR PSN
09	30	5403	5403	5403	5403	3.0°	1766.1	48°13.23'N 009°53.95'E
27	30	5403	5403	5403	5403	3.0°	1766.2	48°13.18'N 009°55.28'E
03								48°13.27'N 009°54.24'E
21								48°13.54'N 009°54.51'E

LIMA TWR 376.100 138.750x
LIMA RADAR 371.800 281.350 120.450 138.450x SSR 7050 - 7057

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	09	3.0°	36		651	ABC	TERPS	1966 - 1.2 200 (200-1.2)
	TERPS	27	3.0°	34		653	AB	TERPS	1966 - 0.8 200 (200-0.8/1.2)
	TERPS	275	3.0°			653	C	TERPS	1966 - 1.2 200 (200-1.2)
	TERPS	095	3.0°			651	COPTER	TERPS	1866 - 0.4 100 (100-0.4/0.8)
SRA	TERPS	09					ABC	TERPS	2160 - 1.6 394 (400-1.6)
	TERPS	27					AB	TERPS	2220 - 0.8 454 (500-0.8/1.6)
	TERPS						C	TERPS	2220 - 1.2 454 (500-1.2/2.0)

AERODROME CHART

LAUPHEIM (ETHL)

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 1766

HL 11 - 31
LAUPHEIM (ETHL)

LIMA TWR		LIMA RADAR		MUNICHEN RADAR							
376.100	138.750 x	371.800	120.450	259.000	129.450						
RWY		to	60	120	180	240	300	360	Reason		
27		5000 ft	360	720	1080	1440	1800	2160	ATC		

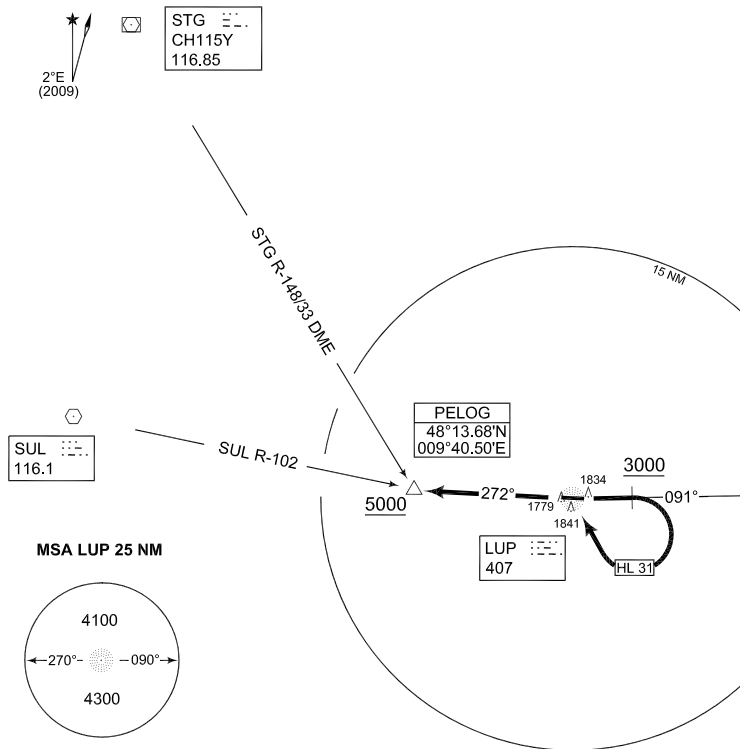
CAUTION:

CLOSE IN OBSTACLE:

TWR 198 M S OF RWY 1841 FT

NOTE:

NOT USABLE FOR ACFT CAT D AND E



EMERG SAFE ALT 100 NM 14400

TA 5000

HL 11 (RWY 27)	-	Climb on LUP track 272° to reach PELOG (STG R-148) at 5000 ft or above
HL 31 (RWY 09)	-	Climb on track 091°
	-	When passing 3000 ft or above turn right inbound LUP NDB and continue climb to 5000 ft
	-	When crossing LUP NDB intercept track 272° to cross PELOG (STG R-148) at 5000 ft or above
NOTE:		
	-	Departure turn limited to Max KIAS 180
	-	No turn before DER

HL 11 - 31

48°13.21'N
009°54.61'E

LAUPHEIM (ETHL)

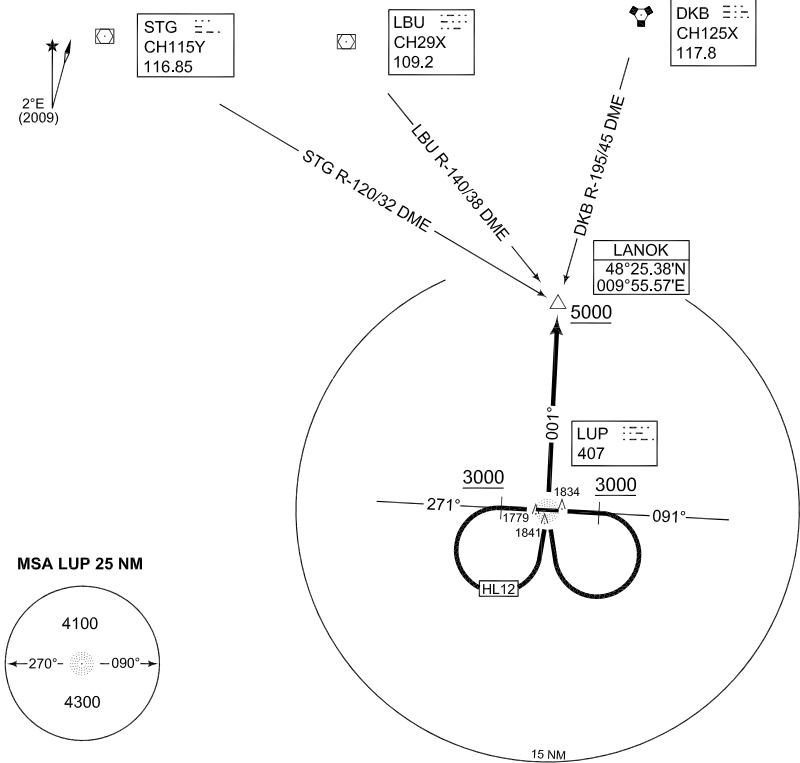
CHANGE MINIMA CRITERIA (239/14)

AFSBw 05 FEB 2015

LIMA TWR 376.100 138.750 x	LIMA RADAR 371.800 120.450	MUENCHEN RADAR 259.000 129.450

CAUTION:
CLOSE IN OBSTACLE:
TWR 198 M S OF RWY 1841 FT

NOTE:
a) NOT USABLE FOR ACFT CAT D AND E
b) DEPARTURE TURN LIMITED TO MAX KIAS 180
c) NO TURN BEFORE DER



EMERG SAFE ALT 100 NM 14400		TA 5000
HL 12 (RWY 27)	- Climb on track 271° - When passing 3000 ft or above turn left inbound LUP NDB and continue climb to 5000 ft - When crossing LUP NDB intercept track 001° to cross LANOK (STG R-120) at 5000 ft or above	
HL 32 (RWY 09)	- Climb on track 091° - When passing 3000 ft or above turn right inbound LUP NDB and continue climb to 5000 ft - When crossing LUP NDB intercept track 001° to cross LANOK (STG R-120) at 5000 ft or above	

CHANGE: MINIMA CRITERIA (239/14)

AFSBw 05 FEB 2015

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 1766

HL 13 - 33
LAUPHEIM (ETHL)

LIMA TWR		LIMA RADAR		MUENCHEN RADAR							
376.100	138.750 x	371.800	120.450	259.000	129.450						
		RWY	to	60	120	180	240	300	360	Reason	
		09	5000 ft	260	520	1040	1300	1560	1820	ATC	

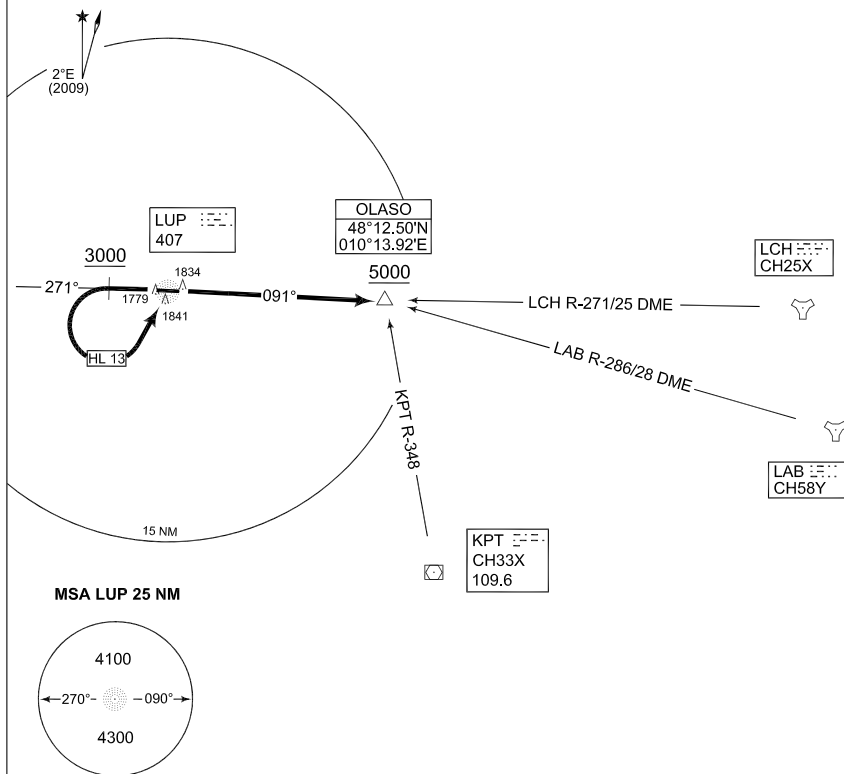
CAUTION:

CLOSE IN OBSTACLE:

TWR 198 M S OF RWY 1841 FT

NOTE:

NOT USABLE FOR ACFT CAT D AND E



EMERG SAFE ALT 100 NM 14400

TA 5000

HL 13 (RWY 27)	- Climb on track 271° - When passing 3000 ft or above turn left inbound LUP NDB and continue climb to 5000 ft - When crossing LUP NDB intercept track 091° to cross OLASO at 5000 ft or above
NOTE: - Departure turn limited to Max KIAS 180 - No turn before DER	
HL 33 (RWY 09)	Climb on LUP NDB track 091° to reach OLASO at 5000 ft or above

HL 13 - 33

48°13.21'N
009°54.61'E

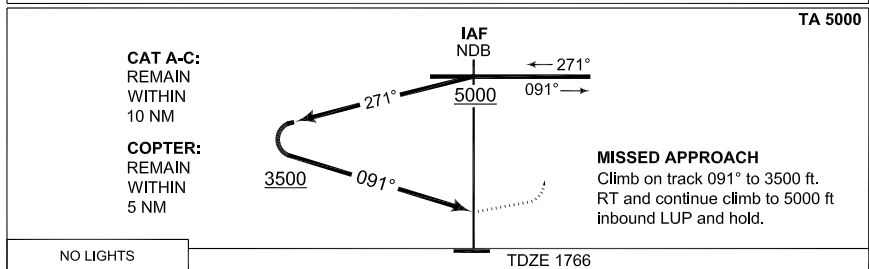
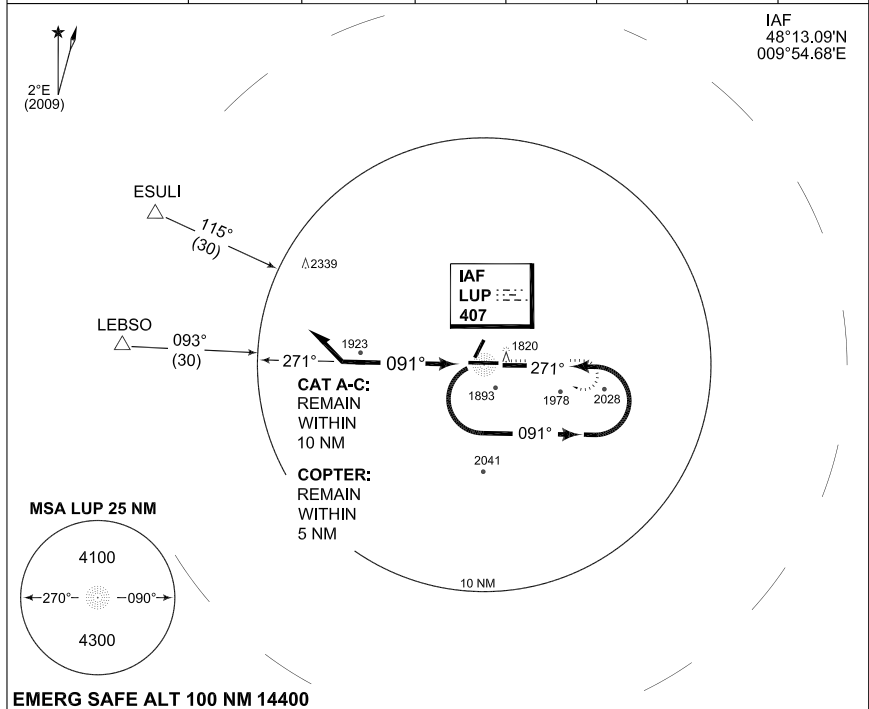
LAUPHEIM (ETHL)

TERPS INSTRUMENT APPROACH CHART

NDB RWY 09/COPTER NDB 091
LAUPHEIM (ETHL)

AD ELEV 1766

MUNCHEN RADAR 259.000 129.450		LIMA RADAR 371.800 120.450		LIMA TWR 376.100 138.750x			
NDB LUP 407	APP COURSE 091°			MDA 2280	TDZE 1766	ALS-Length —	LDA 5403



CATEGORY	A	B	C	D	E
S-NDB 09	2280 - 1.6 514 (600-1.6)		2280 - 2.4 514 (600-2.4)		
CATEGORY	COPTER				
H-091°	2200 - 0.8 434 (500-0.8)				

NDB RWY 09/COPTER NDB 091

48°13.21'N
009°54.61'E

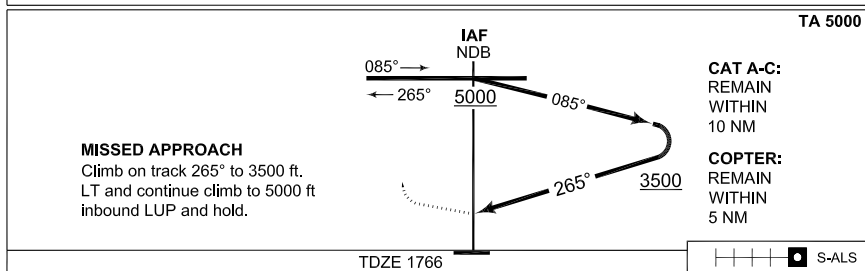
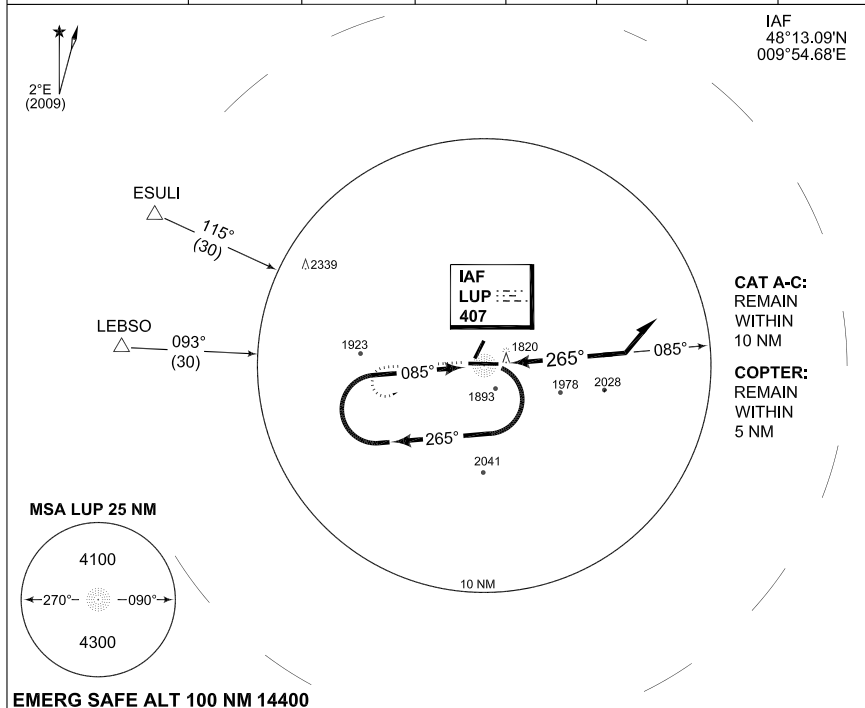
LAUPHEIM (ETHL)

TERPS INSTRUMENT APPROACH CHART

NDB RWY 27/COPTER NDB 265
LAUPHEIM (ETHL)

AD ELEV 1766

MUNICHEN RADAR 259.000 129.450		LIMA RADAR 371.800 120.450		LIMA TWR 376.100 138.750x			
NDB LUP 407	APP COURSE 265°			MDA 2280	TDZE 1766	ALS-Length 600 M	LDA 5403



CATEGORY	A	B	C	D	E
S-NDB 27	2280 - 0.8 514 (600-0.8/1.6)		2280 - 1.6 514 (600-1.6/2.4)		
CATEGORY	COPTER				
H-265°	2280 - 0.4 514 (600-0.4/0.8)				

NDB RWY 27/COPTER NDB 265

48°13.21'N
009°54.61'E

LAUPHEIM (ETHL)

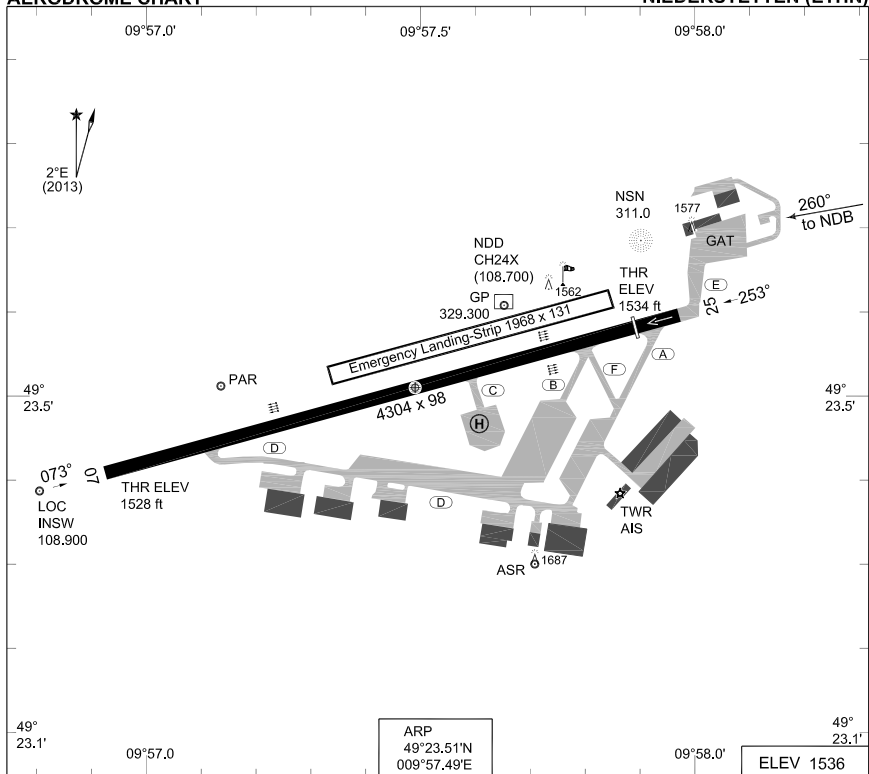
CHANGE: OBST (360/15)

TERPS

ZentLutOp 07 JAN 2016

AERODROME CHART

NIEDERSTETTEN (ETHN)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
07	55	4304	4367	4941	4304	3.0°	1536.1	49°23.41'N 009°56.93'E
25	55	4304	4304	4501	3976	3.4°	1536.1	49°23.58'N 009°57.89'E

STETTEN TWR 280.600 122.100
 STETTEN RADAR 251.250 369.000 139.300 123.300 SSR 4260 - 4267

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	25	3.4"	49		825	AB C	TERPS	1734 - 0.8 200 (200-0.8/1.2) 1734 - 1.2 200 (200-1.2)
SRA	TERPS	07					AB C	TERPS	1940 - 1.6 404 (500-1.6) 1940 - 2.0 404 (500-2.0)
	TERPS	255					COPTER	TERPS	1900 - 0.4 366 (400-0.4/0.8)

AERODROME CHART

NIEDERSTETTEN (ETHN)

CHANGE: MINIMA CRITERIA (243/14)

AFSBw 06 FEB 2015

TERPS

OPERATIONAL INSTRUMENT DEPARTURE CHART

AD ELEV 1536

HN 107 - 125

NIEDERSTETTEN (ETHN)

STETTEN TWR		STETTEN RADAR				LANGEN RADAR				
280.600	122.100	251.250	139.300	123.300		398.650	135.725			
		RWY	Knots	60	120	180	240	300	to	
		07	V/V (fpm)	370	740	1110	1480	1850	3500 ft	
		25	V/V (fpm)	401	802	1203	1604	2005	3500 ft	



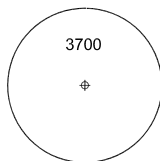
WUR : 110.2

NSN : 311

DKB : CH 125X
117.8

TA 5000

MSA ARP ETHN 25 NM



EMERG SAFE ALT 100 NM 6400

HN 107
(RWY 07)

- Departure end crossing altitude 1570 ft MSL
- Climb straight ahead to 3500 ft
- Continue as cleared by ATC

HN 125
(RWY 25)

- Departure end crossing altitude 1570 ft MSL
- Climb straight ahead to 3500 ft
- Continue as cleared by ATC

HN 107 - 125

49°23.51'N
009°57.49'E

NIEDERSTETTEN (ETHN)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1536

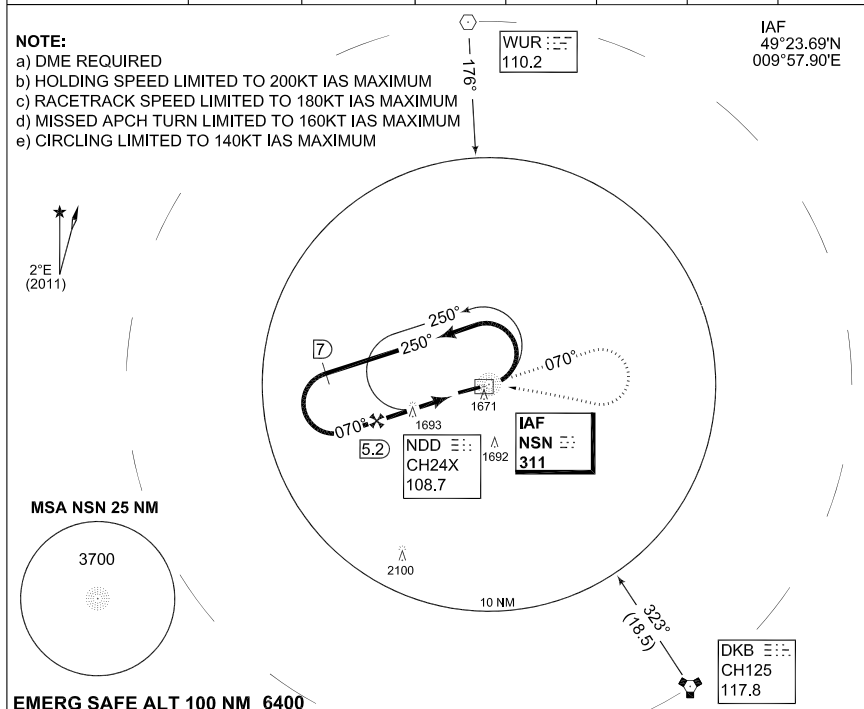
NDB RWY 07
NIEDERSTETTEN (ETHN)

LANGEN RADAR		STETTEN RADAR			STETTEN TWR	
398.650	135.725	251.250	139.300	135.600	280.600	122.100
NDB NSN 311	APP COURSE 070°	FAF ALT 3000	Descent GR 5.2%/3.0°	MDA 1940	TDZE 1536	ALS-Length — LDA 4299

NOTE:

- DME REQUIRED
- HOLDING SPEED LIMITED TO 200KT IAS MAXIMUM
- RACETRACK SPEED LIMITED TO 180KT IAS MAXIMUM
- MISSED APCH TURN LIMITED TO 160KT IAS MAXIMUM
- CIRCLING LIMITED TO 140KT IAS MAXIMUM

IAF
49°23.69'N
009°57.90'E



EMERG SAFE ALT 100 NM 6400

MISSED APPROACH

Climb on NSN NDB track
070° to 4000 ft. When
passing 2500 ft turn right
inbound NSN NDB.

FAF - MAPt 4.2 NM					
Knots	60	90	120	150	180
Min:Sec	4:12	2:48	2:06	1:41	1:24

NO LIGHTS

CATEGORY	A	B	C
NDB 07	1940 - 1.6 404 (500-1.6)		1940 - 2.0 404 (500-2.0)
CIRCLING	1970 - 1.6 434 (500-1.6)	1990 - 1.6 454 (500-1.6)	2100 - 2.4 564 (600-2.4)

NDB RWY 07

49°23.51'N
009°57.49'E

NIEDERSTETTEN (ETHN)

**ILS or LOC RWY 25
NIEDERSTETTEN (ETHN)**

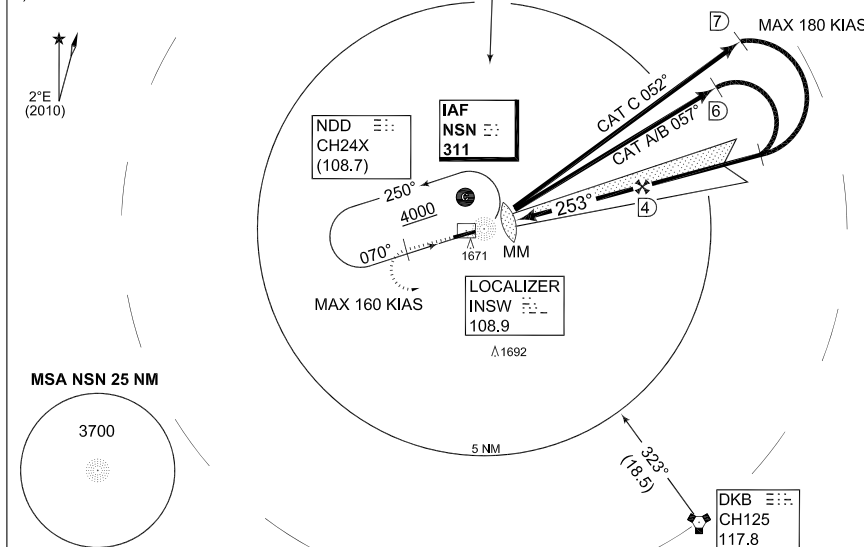
NOTE:

- a) MISSED APCH TURM MAX KIAS 160.
- b) CIRCLING CAT C MAX KIAS 140.
- c) HOLDING SPEED MAX KIAS 200.
- d) BASE TURN MAX KIAS 180.
- e) DME REQUIRED

176°

WUR 110.2

IAF 49°23.69'N 009°57.90'E

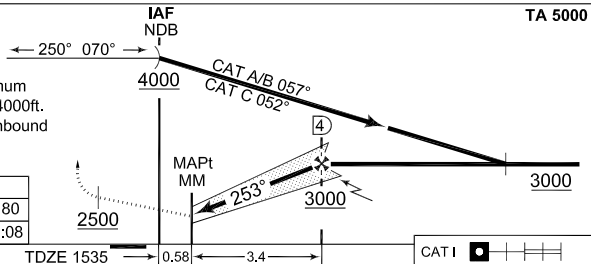


EMERG SAFE ALT 100 NM 6400

2

Climb straight ahead with minimum climb rate of 3% (182ft/NM) to 4000ft. When passing 2500ft turn left inbound NSN NDB.

LOC: FAF - MAPt (MM) 3.4 NM					
Knots	60	90	120	150	180
Min:Sec	3:24	2:16	1:42	1:22	1:08



CATEGORY	A	B	C
ILS 25	1735 - 0.8/750 200 (200-0.8/1.2)	1749 - 0.8/800 214 (300-0.8/1.2)	1758 - 0.8/800 223 (300-0.8/1.2)
LOC 25	1910 - 0.8 375 (400-0.8/1.6)		1910 - 1.2 375 (400-1.2/1.6)
CIRCLING	1970 - 1.6 434 (500-1.6)	1990 - 1.6 454 (500-1.6)	2100 - 2.4 564 (600-2.4)

ILS or LOC RWY 25

49°23.51'N
009°57.49'E

NIEDERSTETTEN (ETHN)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1536

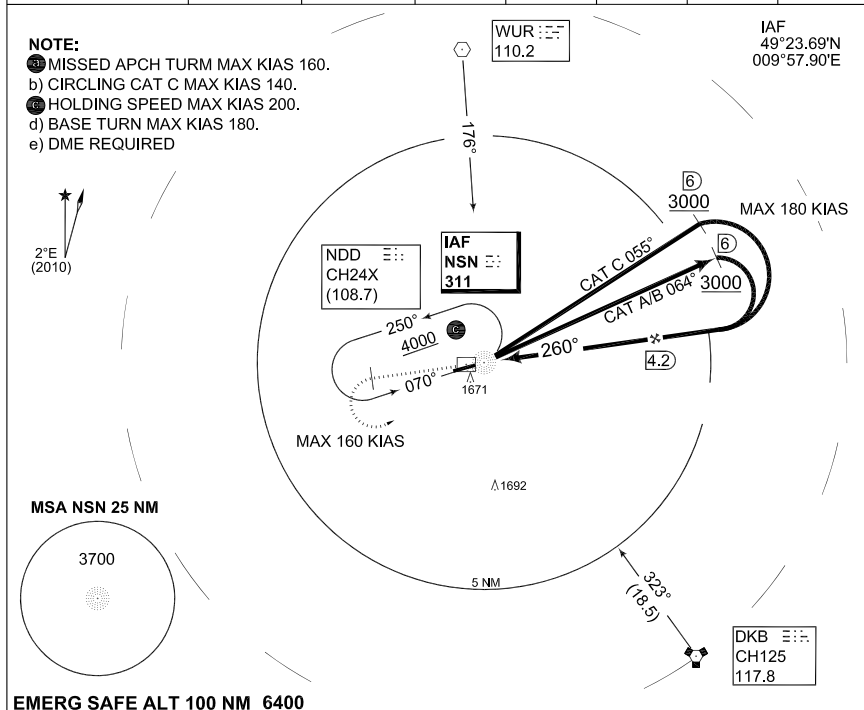
NDB RWY 25
NIEDERSTETTEN (ETHN)

LANGEN RADAR		STETTEN RADAR			STETTEN TWR	
398.650	135.725	251.250	139.300	135.600	280.600	122.100
NDB NSN 311	APP COURSE 260°	FAF ALT 3000	Descent GR 5.9%/3.4°	MDA see CAT	TDZE 1535	ALS-Length 600 M LDA 3979

NOTE:

- 1. MISSED APCH TURM MAX KIAS 160.
- 2. CIRCLING CAT C MAX KIAS 140.
- 3. HOLDING SPEED MAX KIAS 200.
- 4. BASE TURN MAX KIAS 180.
- 5. DME REQUIRED

IAF
49°23.69'N
009°57.90'E



EMERG SAFE ALT 100 NM 6400

MISSED APPROACH

- 1. Climb on NSN NDB track 260° to 4000 ft. When passing 2500 ft turn left inbound NSN NDB.

FAF - MAPt 3.7 NM

Knots	60	90	120	150	180
Min:Sec	3:43	2:28	1:51	1:29	1:14

TDZE 1535

CAT I

CATEGORY	A	B	C
NDB 25	1970 - 1.2 435 (500-1.2/1.6)		2000 - 1.6 465 (500-1.6/2.0)
CIRCLING	1970 - 1.6 434 (500-1.6)	1990 - 1.6 454 (500-1.6)	2100 - 2.4 564 (600-2.4)

NDB RWY 25

49°23.51'N
009°57.49'E

NIEDERSTETTEN (ETHN)

PANS-OPS INSTRUMENT APPROACH CHART

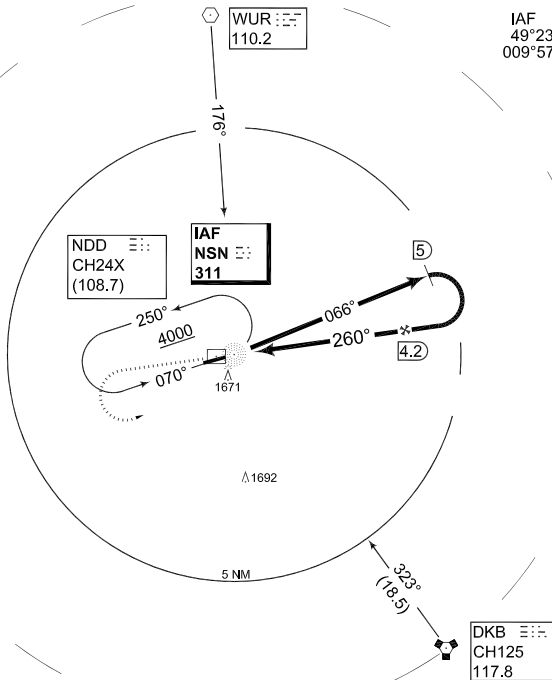
AD ELEV 1536

COPTER NDB RWY 25
NIEDERSTETTEN (ETHN)

LANGEN RADAR		STETTEN RADAR			STETTEN TWR		
398.650	135.725	251.250	139.300	135.600	280.600	122.100	
NDB NSN 311	APP COURSE 260°	FAF ALT 3000	Descent GR 5.9%/3.4°	MDA 1920	TDZE 1535	ALS-Length 600 M	LDA 3979

NOTE:
DME REQUIRED

IAF
49°23.69'N
009°57.90'E



MSA NSN 25 NM

3700

EMERG SAFE ALT 100 NM 6400

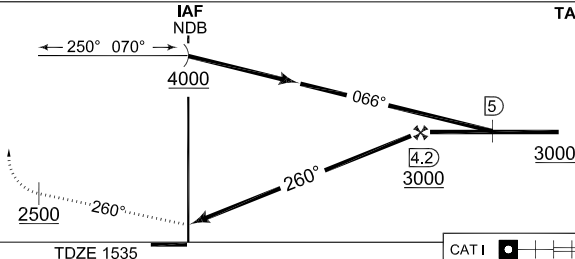
TA 5000

MISSED APPROACH

Climb on NSN NDB track
260° to 4000 ft. When
passing 2500 ft turn left
inbound NSN NDB.

FAF - MAPt 3.7 NM

Knots	60	90
Min:Sec	3:43	2:28



TDZE 1535

CAT I

CATEGORY

H

COPTER NDB 25

1920 - 0.4 395 (400-0.4/0.8)

CHANGE: MINIMA CRITERIA (243/14)

COPTER NDB RWY 25

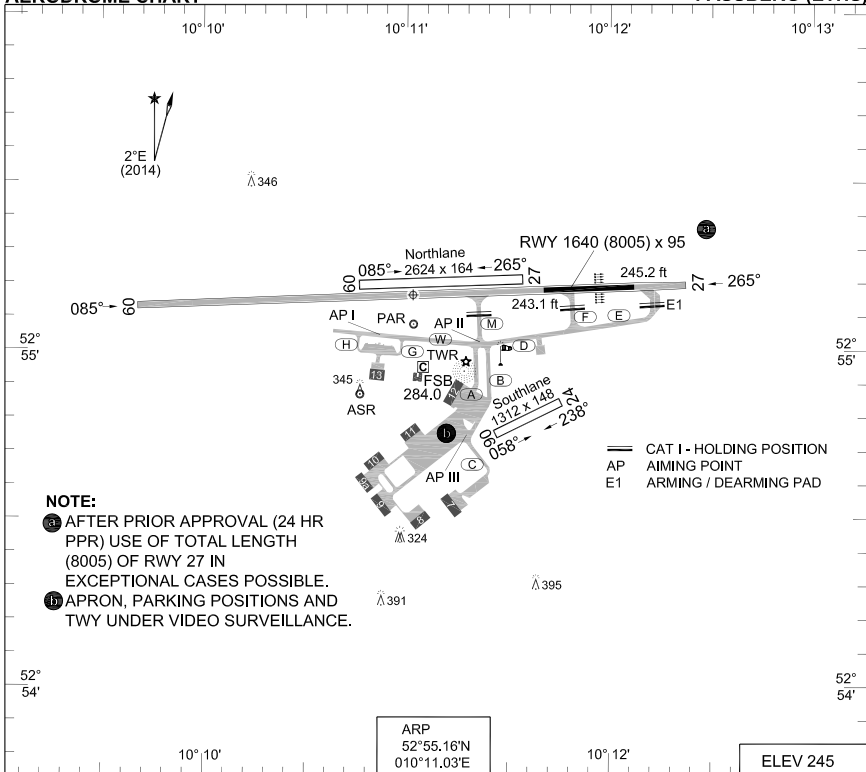
49°23.51'N
009°57.49'E

NIEDERSTETTEN (ETHN)

AFSBW 05 FEB 2015

AERODROME CHART

FASSBERG (ETHS)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN	
09	63	1640	1640	1640	1640	—	245	52°55.17'N 010°11.67'E	
27	63	1640 (8005)	8005	8005	1640 (8005)	3.0°	245	52°55.19'N 010°12.12'E	
FASSBERG TWR 338.075 118.525 FASSBERG RADAR 379.075 278.325 122.425 SSR 7020 - 7027									
	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	27	3.0°	38		750	ABCDE	TERPS	445 - 0.8 200 (200-0.8/1.2)
	TERPS	265	3.0°			750	COPTER	TERPS	345 - 0.4 100 (100-0.4/0.8)
SRA	TERPS	27					AB C DE	TERPS	680 - 0.8 435 (500-0.8/1.6) 680 - 1.2 435 (500-1.2/2.0) 680 - 1.6 435 (500-1.6/2.4)
	TERPS	265					COPTER	TERPS	680 - 0.4 435 (500-0.4/0.8)

AERODROME CHART

FASSBERG (ETHS)

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 245

HS 13 - 33
FASSBERG (ETHS)

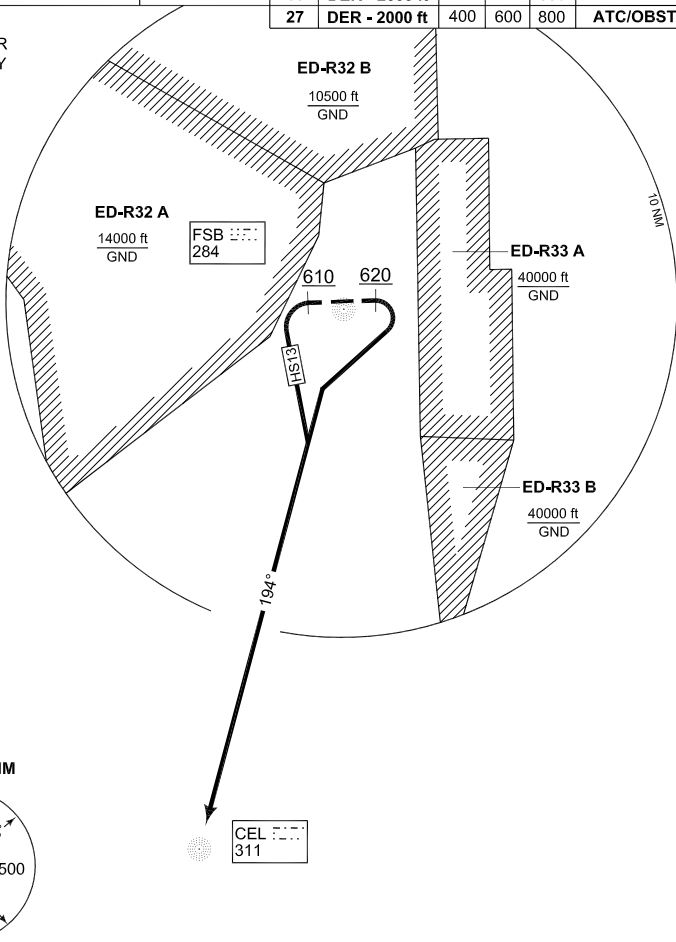
FASSBERG TWR
338.075 118.525

FASSBERG RADAR
379.075 122.425

BREMEN RADAR
259.725 131.325

RWY	from - to	60	90	120	Reason
09	DER - 2000 ft	425	637	850	ATC/OBST
27	DER - 2000 ft	400	600	800	ATC/OBST

NOTE:
PROCEDURES FOR
HELICOPTER ONLY



EMERG SAFE ALT 100 NM 6100

TA 5000

HS 13 (RWY 27)	- Climb on track 265° until passing 610 ft MSL - When passing 610 ft MSL turn left to intercept FSB track 194° outbound to CEL - INITIAL CLIMB ALTITUDE: 4000 ft
HS 33 (RWY 09)	- Climb on track 085° until passing 620 ft MSL - When passing 620 ft MSL turn right to intercept FSB track 194° outbound to CEL - INITIAL CLIMB ALTITUDE: 4000 ft

HS 13 - 33

52°55.16'N
010°11.03'E

FASSBERG (ETHS)

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 245

HS 109 - 127
FASSBERG (ETHS)

FASSBERG TWR
338.075 118.525

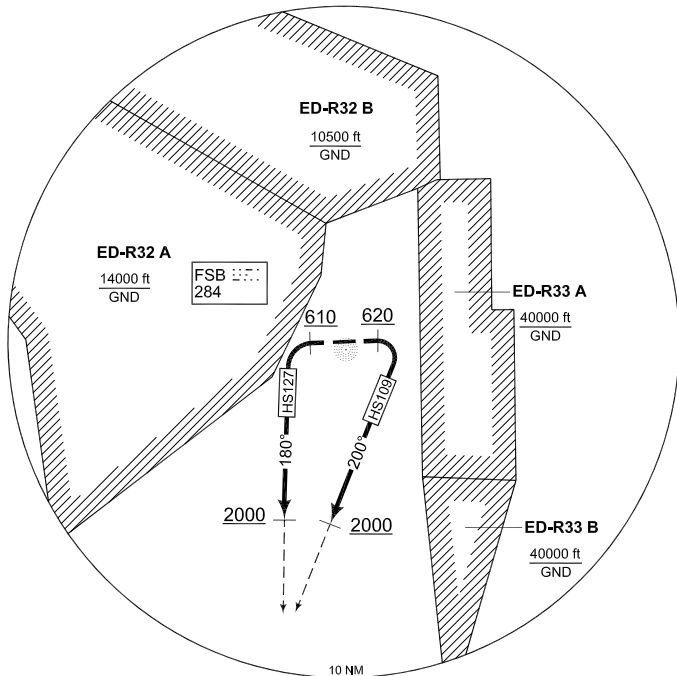
FASSBERG RADAR
379.075 122.425

BREMEN RADAR
259.725 131.325

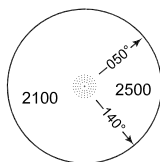
RWY	Knots	60	90	120	to
09	V/V (fpm)	425	638	850	2000 ft
27	V/V (fpm)	400	600	800	2000 ft

NOTE:

- PROCEDURES FOR HELICOPTER ONLY
- ONLY USABLE WITH FASSBERG RADAR



MSA FSB 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

HS 127 (RWY 27)	- Climb on track 265° - When passing 610 ft turn left on track 180° - When reachin 2000 ft continue as cleared by ATC.
HS 109 (RWY 09)	- Climb on track 085° - When passing 620 ft turn right on track 200° - When reachin 2000 ft continue as cleared by ATC.

HS 109 - 127

52°55.16'N
010°11.03'E

FASSBERG (ETHS)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 245

COPTER NDB 014
FASSBERG (ETHS)

BREMEN RADAR 259.725 131.325		FASSBERG RADAR 379.075 122.425		FASSBERG TWR 338.075 118.525			
NDB CEL 311 / FSB 284	APP COURSE 014°			MDA 750		ALS-Length —	LDA 1640

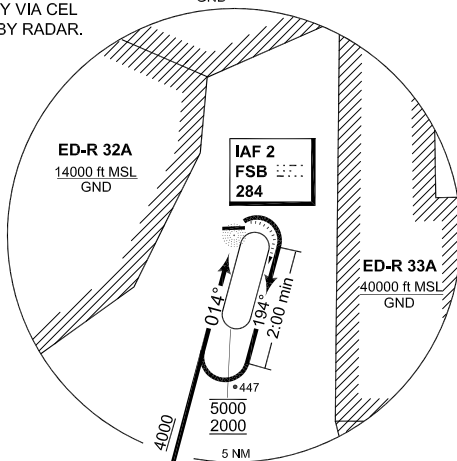
NOTE:

- RADAR MONITORED ONLY.
- ENTER FSB HOLDING ONLY VIA CEL NDB UNLESS VECTORED BY RADAR.

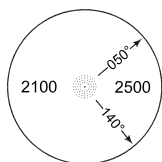
ED-R 32B
10500 ft MSL
GND

IAF 1 CEL
52°35.38'N
010°01.77'E

IAF 2 FSB
52°54.94'N
010°11.28'E

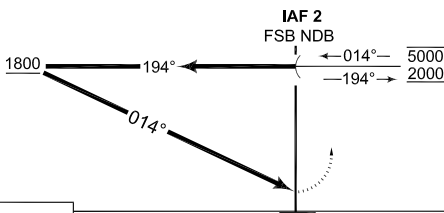


MSA FSB 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000



MISSED APPROACH

Turn right and climb within
FSB holding to 2000 ft MSL.

NO LIGHTS

CHANGE: MINIMA CRITERIA (226/14)

CATEGORY		COPTER
IMPS	H-014°	750 - 0.8 505 (600-0.8)

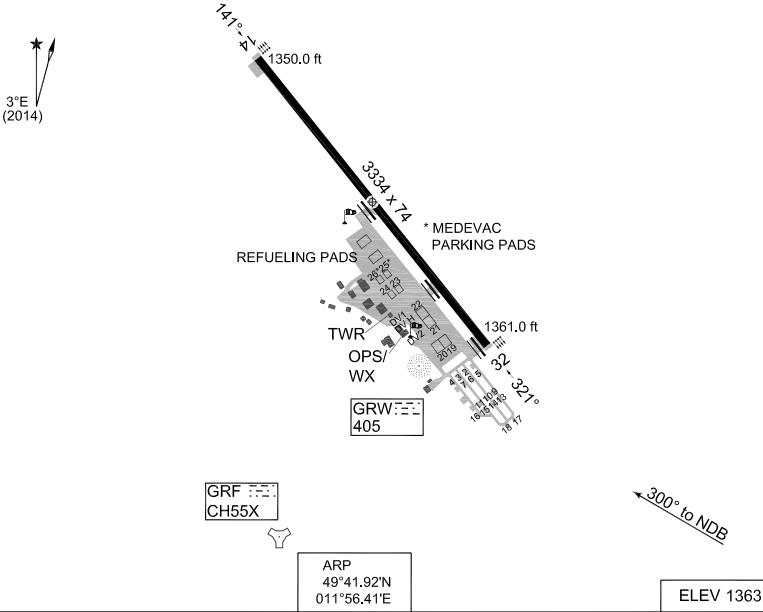
COPTER NDB 014

52°55.16'N
010°11.03'E

FASSBERG (ETHS)

AFSBW 05 FEB 2015

- NOTE:**
- a) REFUELING PADS ARE FOR REFUELING ONLY - NO PARKING.
 - b) FORMER PADS 1,8 AND 12 ARE PERMANENTLY CLOSED.



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
14	75/F/A/W/T	3300	3300	3300	3300	3.0°	1363	49°42.14'N 011°56.16'E
32	75/F/A/W/T	3300	3300	3300	3300	3.0°	1363	49°41.70'N 011°56.66'E

GRAFENWOEHR TWR* 242.400 141.925 30.100

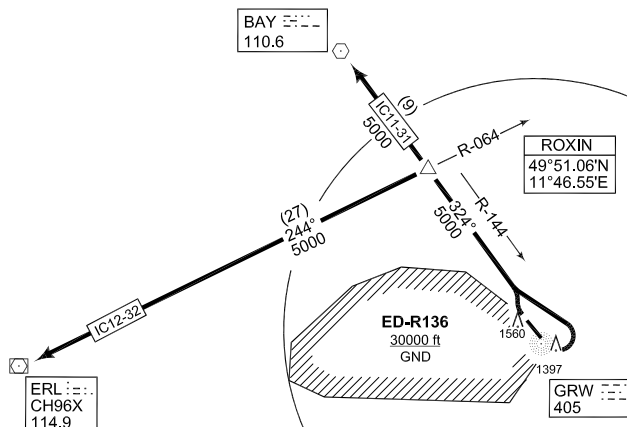
	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	32	3.0°	35		670	ABC	TERPS	1611 - 1200 250 (300-1.2/1.6)

**TERPS
INSTRUMENT DEPARTURE CHART**

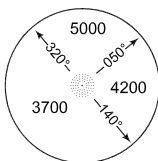
**IC 11 - 31 - 12 - 32
GRAFENWOEHR (ETIC)**

AD ELEV 1363

GRAFENWOEHR TWR 242.400 141.925 30.100	MUENCHEN RADAR 298.825 129.525	MUENCHEN INFO 125.800 372.225					
GRAF RADAR 138.425 378.650		RWY	Knots	60	120	180	240
		14	V/V (fpm)	263	526	789	1052
		32	V/V (fpm)	331	662	993	1324
							to
							3000 ft
							3000 ft



MSA GRW 25 NM



TA 5000

IC 11 (RWY 32)	- Climbing right turn heading 360° to intercept BAY R-144 - Proceed via BAY R-144 to ROXIN - Proceed via BAY R-144 to BAY
IC 31 (RWY 14)	- Climbing left turn to intercept BAY R-144 - Proceed via BAY R-144 to ROXIN - Proceed via BAY R-144 to BAY
IC 12 (RWY 32)	- Climbing right turn heading 360° to intercept BAY R-144 - Proceed via BAY R-144 to ROXIN - Proceed via ERL R-064 to ERL
IC 32 (RWY 14)	- Climbing left turn to intercept BAY R-144 - Proceed via BAY R-144 to ROXIN - Proceed via ERL R-064 to ERL

IC 11 - 31 - 12 - 32

49°41.97'N
011°56.47'E

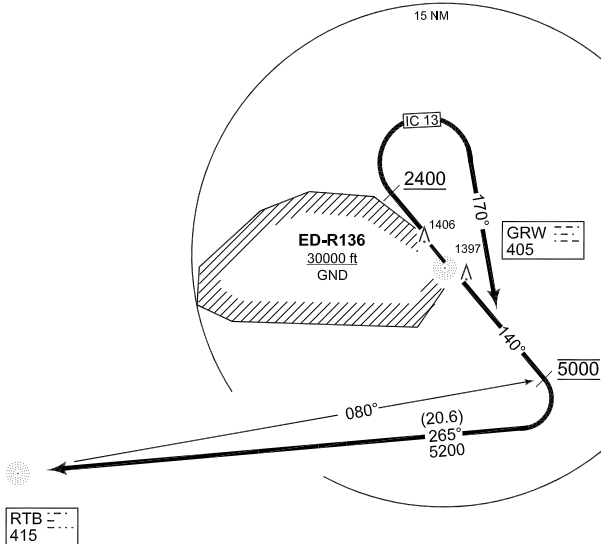
GRAFENWOEHR (ETIC)

TERPS

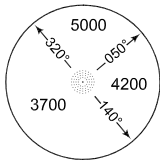
IC 13 - 33

GRAFENWOEHR TWR 242.400 141.925 30.100			MUENCHEN RADAR 298.825 129.525			MUENCHEN INFO 125.800 372.225				
GRAF RADAR 138.425 378.650			RWY	Knots	60	120	180	240	to	
			14	V/V (fpm)	360	720	1080	1440	5000 ft	
			32	V/V (fpm)	400	800	1200	1600	5000 ft	

NOTE:



MSA GRW 25 NM



TA 5000

IC 13 (RWY 32)	Climb straight ahead until passing 2400 ft, then continue climbing right turn heading 170° to intercept 140° bearing from GRW to cross RTB 080° bearing at 5000 ft, thence climbing right turn to 5200 ft via 085° bearing and proceed to RTB
IC 33 (RWY 14)	Climb via 140° bearing from GRW to cross RTB 080° bearing at 5000 ft, thence climbing right turn to 5200 ft via 085° bearing and proceed to RTB

IC 13 - 33

49°41.97'N
011°56.47'E

GRAFENWOEHR (ETIC)

ZentrLuftOp/NGA 12 NOV 2015

IC 16 - 36
GRAFENWOEHR (ETIC)

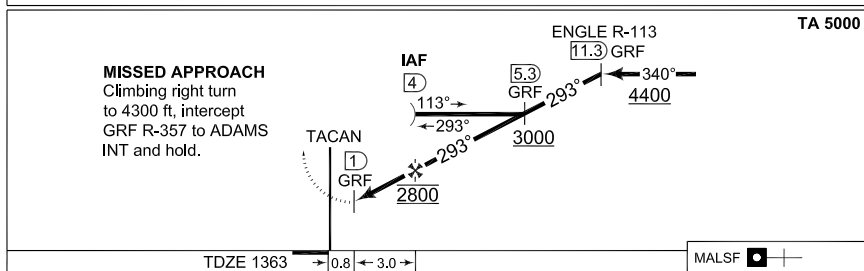
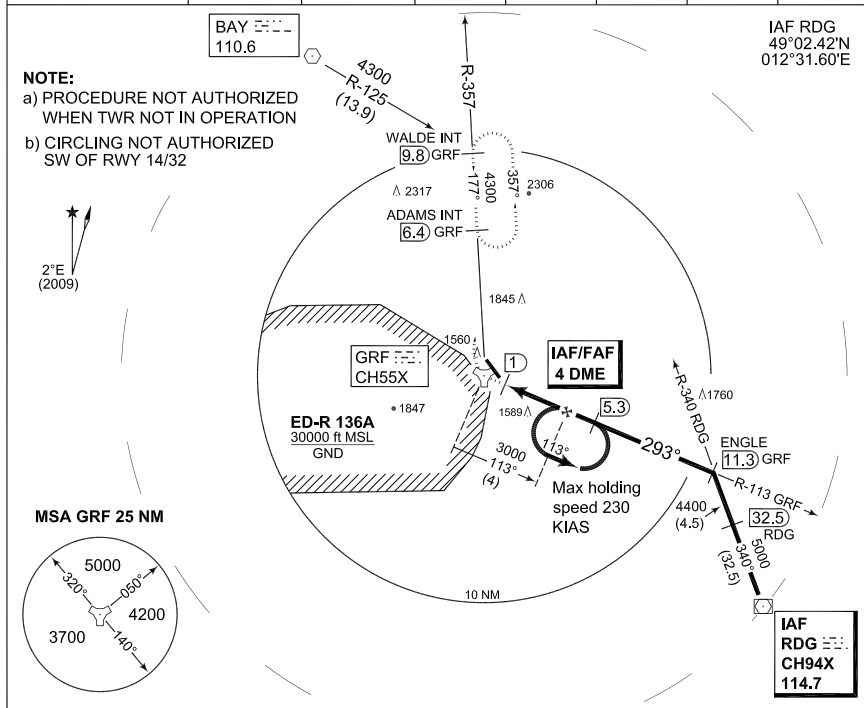
GRAFENWOEHR (ETIC)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 1363

TACAN RWY 32
GRAFENWOEHR (ETIC)

MUENCHEN RADAR		GRAF RADAR		GRAFENWOEHR TWR*		
298.825	129.525	138.425	378.650	242.400	141.925	30.100
TACAN	APP COURSE	FAF ALT	MDA	TDZE	ALS-Length	LDA
GRF CH55X	293°	2800	1840	1363	427 M	3300



CATEGORY	A	B	C
S-32	1840 - 1.6 477 (500-1.6)		1840 - 2.0 477 (500-2.0)
CIRCLING	1900 - 1.6 537 (600-1.6)		1900 - 2.4 537 (600-2.4)

TACAN RWY 32

49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

**NDB/DME RWY 32
GRAFENWOEHR (ETIC)**

NOTE:

- CIRCLING NOT AUTHORIZED SW OF RWY 14/32
- FOR INOP ALS INCREASE VIS CAT A,B TO 1600 M CAT C TO 2400 M.
- PROCEDURE NOT AUTHORIZED WHEN TWR NOT IN OPERATION

BAY 110.6

WALDE INT 9.8 GRF
△ 2317

ADAMS INT 6.4 GRF

ED-R 136A
30000 ft MSL
GND

GRF CH55X

GRW 405
GRF 5.3

LUCKE INT 12.7 GRF

R-125 BAY

R-134 BAY

R-340 RDG

300°

340°

5000

4200

3700

320°

140°

10 NM

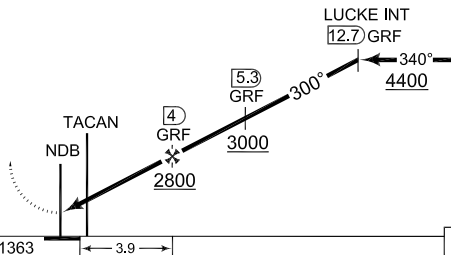
IAF
RDG
CH94X
114.7

2°E (2009)

IAF
49°02.42'N
012°31.60'E

Climbing right turn
to 4300 ft, intercept
GRW 358° to ADAMS
INT and hold.

TA 5000



TDZE 1363

MALSF

CATEGORY		A	B	C
TERPS	S-32 	1900 - 1.2 537 (600-1.2)		1900 - 2.0 537 (600-2.0)
	CIRCLING	1900 - 1.6 537 (600-1.6)		1900 - 2.4 537 (600-2.4)

NDB/DME RWY 32

49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 1363

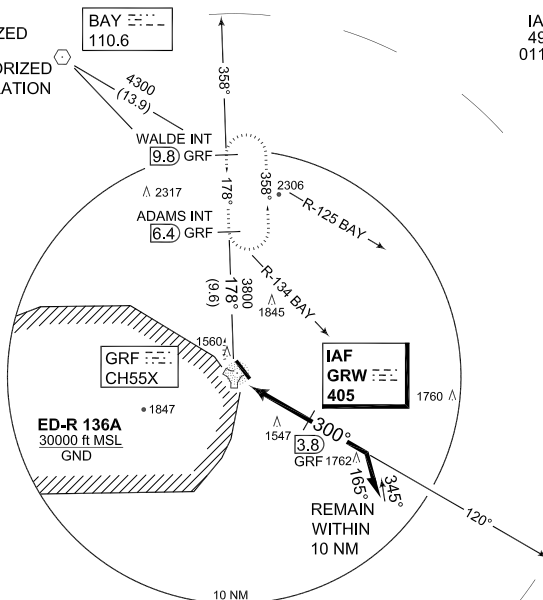
NDB/VOR RWY 32
GRAFENWOEHR (ETIC)

MUNICH RADAR		GRAF RADAR		GRAFENWOEHR TWR*		
298.825	129.525	138.425	378.650	242.400	141.925	30.100
NDB	APP COURSE		MDA	TDZE	ALS-Length	LDA
GRW 405	300°		2120	1363	427 M	3300

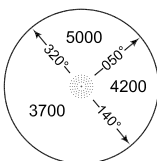
NOTE:

- CIRCLING NOT AUTHORIZED SW OF RWY 14/32
- PROCEDURE NOT AUTHORIZED WHEN TWR NOT IN OPERATION

IAF
49°41.67'N
011°56.50'E



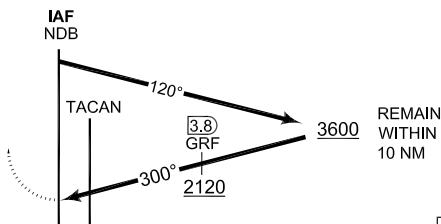
MSA GRW 25 NM



TA 5000

MISSED APPROACH

Climbing right turn to 4300 ft, intercept GRW 358° to ADAMS INT and hold.



TDZE 1363

MALSF

TERPS	CATEGORY	A	B	C
	S-32	2120 - 1200 757 (800-1.2/1.6)	2120 - 1600 757 (800-1.6/2.0)	2120 - 3200 757 (800-3.2/3.6)
	CIRCLING	2120 - 1.6 757 (800-1.6)	2120 - 2.0 757 (800-2.0)	2120 - 3.6 757 (800-3.6)
	S-32 DME	1900 - 1200 537 (600-1.2/1.6)		1900 - 2000 537 (600-2.0/2.4)
	CIRCLING DME	1900 - 1.6 537 (600-1.6)		1900 - 2.4 537 (600-2.4)

NDB/VOR RWY 32

49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 1363

NDB/VOR A
GRAFENWOEHR (ETIC)

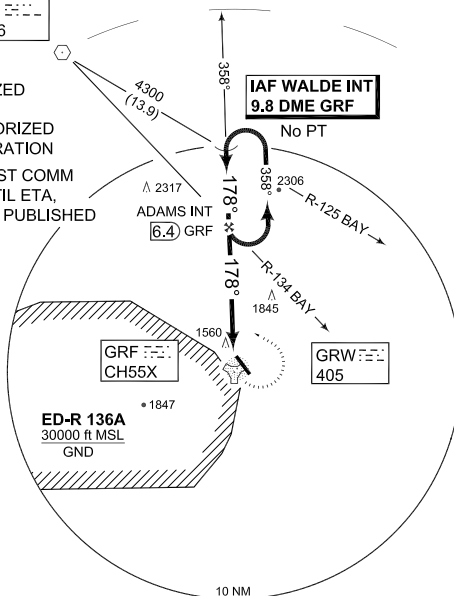
MUENCHEN RADAR 298.825 129.525		GRAF RADAR 138.425 378.650		GRAFENWOEHR TWR* 242.400 141.925 30.100		
NDB GRW 405	APP COURSE 178°	FAF ALT 3400		MDA 2160	TDZE 1363	ALS-Length 427 M LDA 3300

BAY 110.6

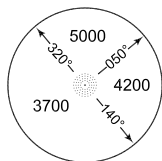
IAF
49°51.76'N
011°55.83'E

NOTE:

- CIRCLING NOT AUTHORIZED SW OF RWY 14/32
- PROCEDURE NOT AUTHORIZED WHEN TWR NOT IN OPERATION
- ACFT EXPERIENCING LOST COMM HOLD AT ADAMS INT UNTIL ETA, THENCE PROCEED WITH PUBLISHED APPROACH

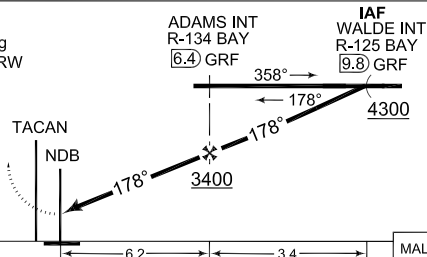


MSA GRW 25 NM



MISSED APPROACH

Climbing left turn to 4300 ft remaining within 5NM to hdg 300°. Intercept GRW 358° to ADAMS INT and hold.



TA 5000

CATEGORY	A	B	C
CIRCLING	2160 - 1.6 797 (800-1.6)	2160- 2.0 797 (800-2.0)	2160- 3.6 797 (800-3.6)

NDB/VOR A

49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 1363

COPTER NDB/VOR 178°
GRAFENWOEHR (ETIC)

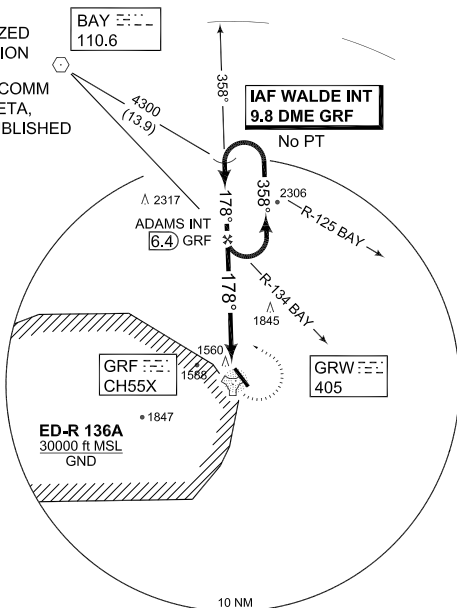
MUENCHEN RADAR 298.825 129.525		GRAF RADAR 138.425 378.650		GRAFENWOEHR TWR* 242.400 141.925 30.100		
NDB GRW 405	APP COURSE 178°	FAF ALT 3400		MDA 2160	TDZE 1363	ALS-Length 427 M LDA 3300

NOTE:

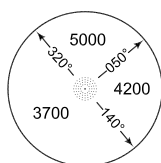
- PROCEDURE NOT AUTHORIZED WHEN TWR NOT IN OPERATION
- ACFT EXPERIENCING LOST COMM HOLD AT ADAMS INT UNTIL ETA, THENCE PROCEED WITH PUBLISHED APPROACH

IAF
49°51.76'N
011°55.83'E

2°E
(2009)

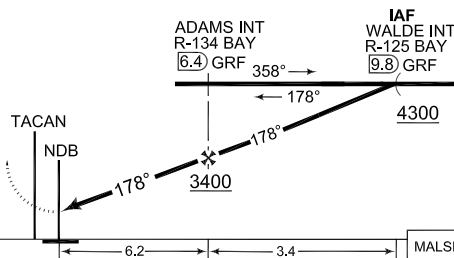


MSA GRW 25 NM



MISSED APPROACH

Climbing left turn to 4300 ft remaining within 5NM to hdg 300°. Intercept GRW 358° to ADAMS INT and hold.



TA 5000

CATEGORY	COPTER
H-178°	2160 - 1200 797 (800-1.2)

COPTER NDB/VOR 178°

49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

CHANGE: OBST (360/15)

TERPS

ZentLutOp/INGA 07 JAN 2016

TERPS INSTRUMENT APPROACH CHART

COPTER NDB 300°
GRAFENWOEHR (ETIC)

MUNICH RADAR		AD ELEV 1363		GRAFENWOEHR TWR*		
298.825	129.525	138.425 378.650		242.400	141.925	30.100
NDB	APP COURSE		MDA	TDZE	ALS-Length	LDA
GRW 405	300°		1940	1363	427 M	3300

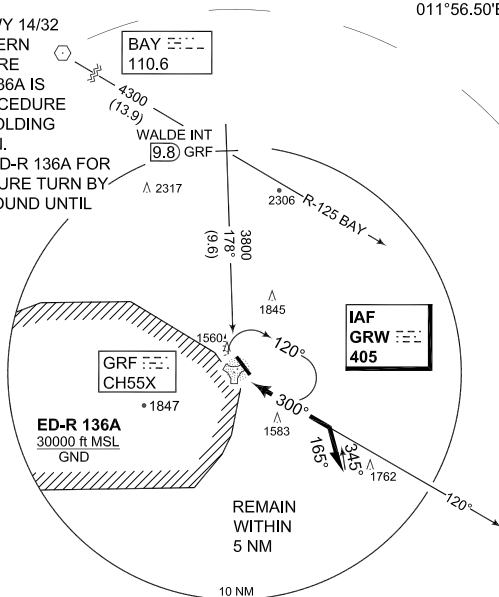
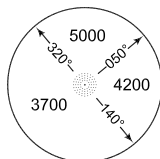
NOTE:

- PROCEDURE NOT AUTHORIZED WHEN TWR NOT IN OPERATION
- CIRCLING NOT AUTHORIZED SW OF RWY 14/32
- LEFT TURNS FROM THE HOLDING PATTERN TO INITIATE A COURSE REVERSAL ARE NOT AUTHORIZED. ENTRY INTO ED-R 136A IS LIMITED TO THE PORTION OF THE PROCEDURE THAT OVERFLIES THE NDB FOR THE HOLDING PATTERN AND THE WALDE TRANSITION.
- AIRCRAFTS SHALL REMAIN CLEAR OF ED-R 136A FOR THE COURSE RESERVAL AND PROCEDURE TURN BY REMAINING ON THE 120° TRACK OUTBOUND UNTIL THE PROCEDURE TURN IS INITIATED.

IAF
49°41.67'N
011°56.50'E

2°E
(2009)

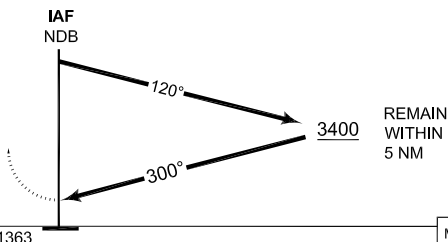
MSA GRW 25 NM



TA 5000

MISSED APPROACH

Climbing right turn
to 4300 ft, in GRW
holding pattern.



TDZE 1363

MALSF

CHANGE: OBST (360/15)

CATEGORY	COPTER
H-300°	1940 - 800 577 (600-0.8)

COPTER NDB 300°

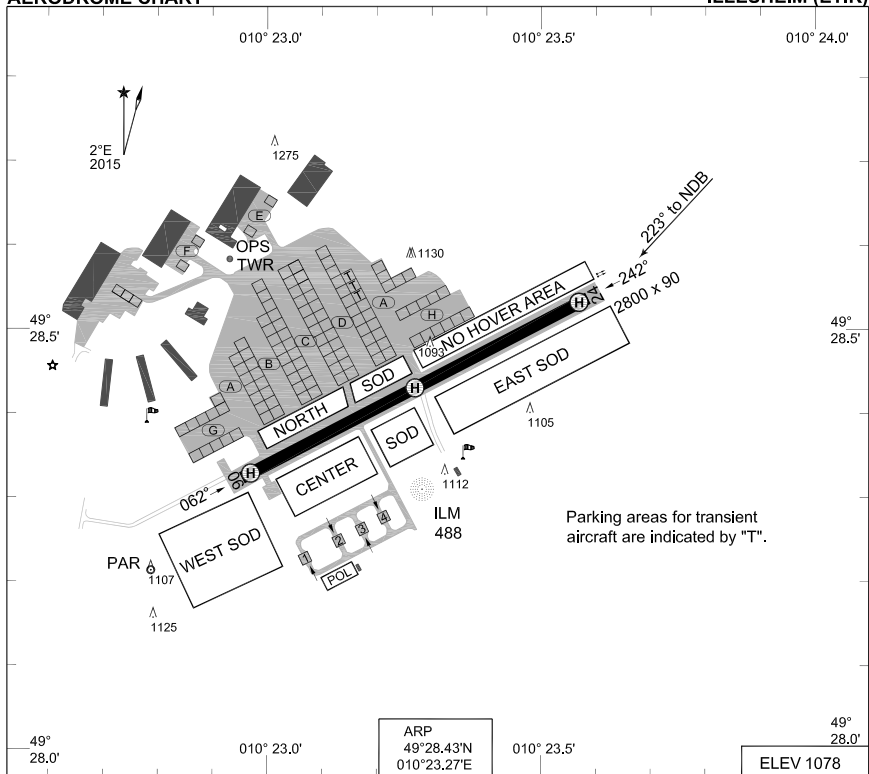
49°41.92'N
011°56.41'E

GRAFENWOEHR (ETIC)

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AERODROME CHART

ILLESHEIM (ETIK)



RWY	PCN	TORA	ASDA	TODA	LDA	VASIS	TDZE	THR PSN
06	31 F/C/W/T	2800	2800	2800	2800		1078.0	49°28.33'N 010°22.95'E
24	31 F/C/W/T	2800	2800	2800	2800	3.5°	1072.0	49°28.53'N 010°23.59'E

ILLESHEIM TWR* 283.950 141.250
 GRIFFIN APPROACH 344.850 140.725
 ILLESHEIM GND CTL 356.875 138.725

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	PANS-OPS	H-242	3.5°	89		1337	COPTER	PANS-OPS	1443 - 1.6 377 (400-1.6)
PAR W/O GS	PANS-OPS	H-242					COPTER	PANS-OPS	1470 - 1.6 392 (400-1.6)

AERODROME CHART

ILLESHEIM (ETIK)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1078

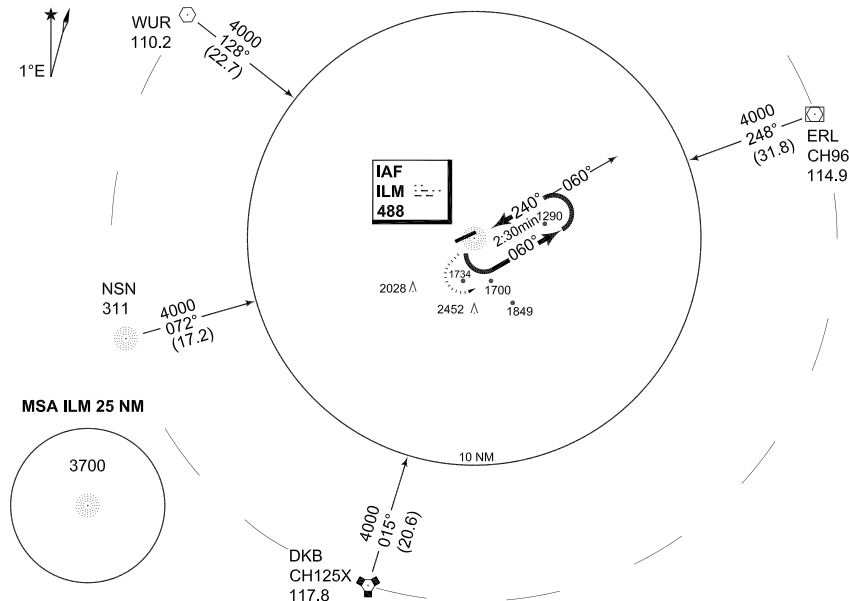
COPTER NDB 240°
ILLESHEIM (ETIK)

LANGEN RADAR		ILLESHEIM TWR*		GND CTL		GRIFFIN APP*	
398.650	135.725	283.950	141.250	356.875	138.725	344.850	140.725
NDB	APP COURSE			MDA	THR ELEV	ALS-Length	LDA
ILM 488	240°			2080	1066	UNKNOWN	2882

NOTE:

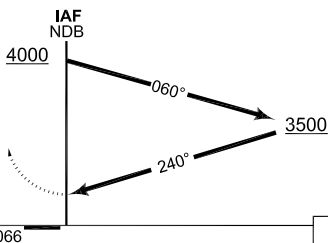
- a) PROCEDURE NOT AUTHORIZED WHEN TWR CLSD.
- b) MILITARY USE ONLY
- c) LIMITED AIRSPEED TO 90 KIAS

IAF
49°28.31'N
010°23.28'E



MISSED APPROACH

Climbing left turn to
4000 ft in ILM NDB
holding pattern.



TA 5000

THR ELEV 1066

UNKNOWN

CHANGE: OBST (360/15)

CATEGORY	COPTER
H-240°	2080 - 1600 1014 (1100-1.6)

COPTER NDB 240°

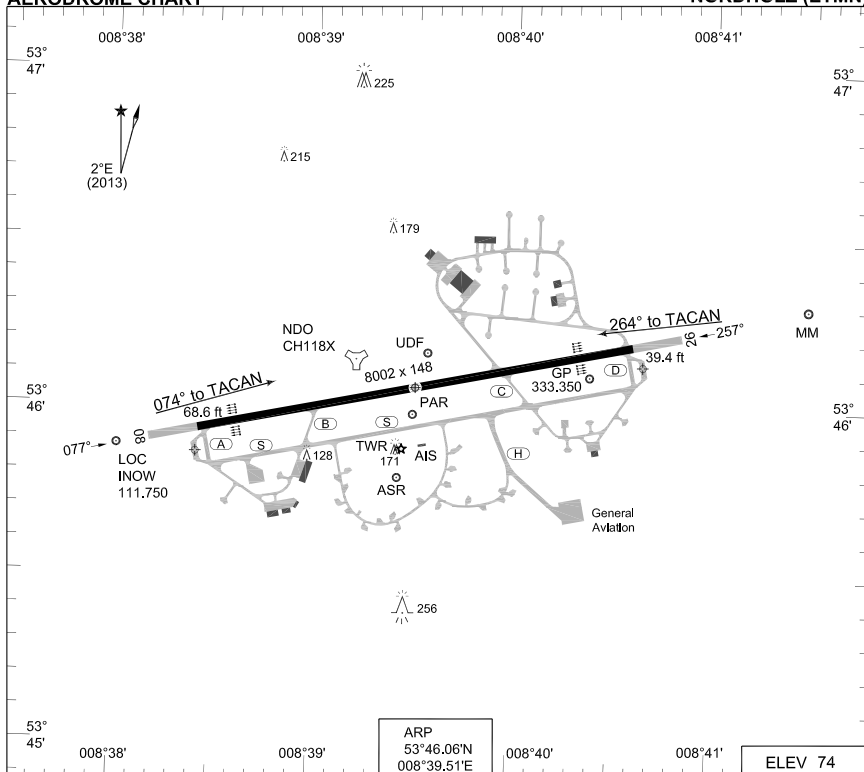
49°28.43'N
010°23.27'E

ILLESHEIM (ETIK)

ZentLuitOp/INGA 07 JAN 2016

AERODROME CHART

NORDHOLZ (ETMN)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	120	8002	8002	8002	8002	3.0°	72.5	53°45.93'N 008°38.42'E
26	120	8002	8002	8002	8002	3.0°	52.2	53°46.19'N 008°40.60'E

NORDHOLZ TWR 315.700 142.900
 NORDHOLZ RADAR 278.350 356.125 376.125 129.850 SSR 4240 - 4247

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	08	3.0°	43		751	ABCDE	TERPS	274 - 0.8 200 (200-0.8/1.2)
	TERPS	26	3.0°	68		1085	ABCDE	TERPS	267 - 0.8 200 (200-0.8/1.2)
	TERPS	079	3.0°				COPTER	TERPS	174 - 0.4 100 (100-0.4/0.8)
SRA	TERPS	08					AB	TERPS	440 - 0.8 366 (400-0.8/1.6)
							C		440 - 1.2 366 (400-1.2/1.6)
							DE		440 - 1.2 366 (400-1.2/2.0)
	TERPS	26					AB	TERPS	420 - 0.8 353 (400-0.8/1.6)
							C		420 - 1.2 353 (400-1.2/1.6)
							DE		420 - 1.2 353 (400-1.2/2.0)

AERODROME CHART

NORDHOLZ (ETMN)

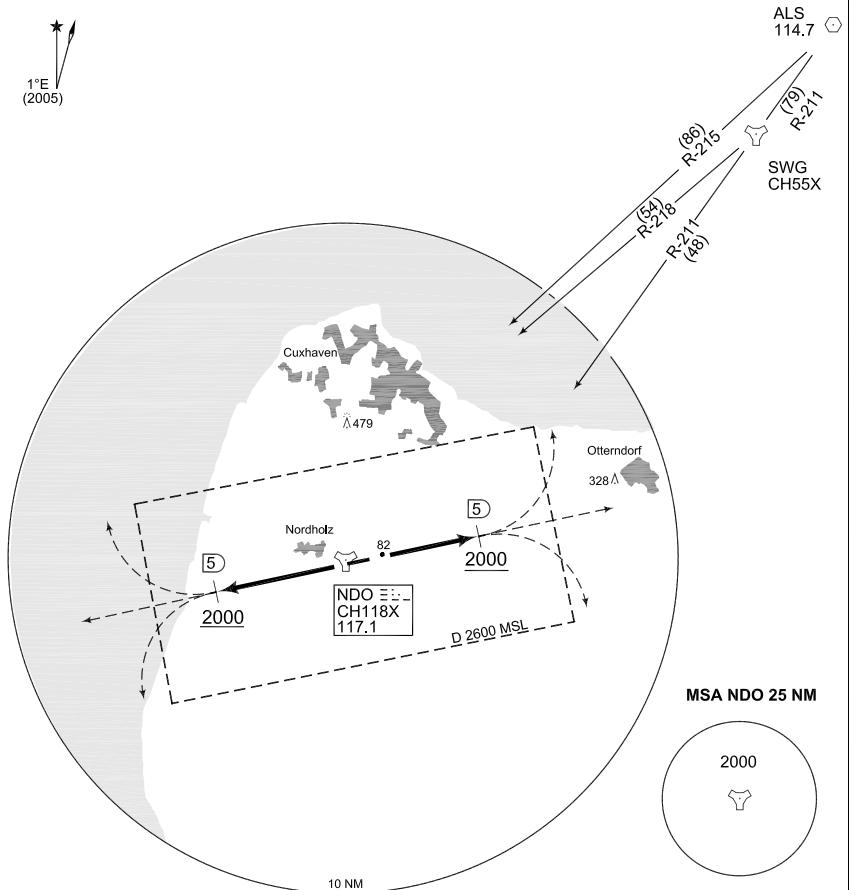
CHANGE: MINIMA CRITERIA (246/14)

AFSBw 05 FEB 2015

TERPS OPERATIONAL INSTRUMENT DEPARTURE CHART

**MN 108 - 126
NORDHOLZ (ETMN)**

NORDHOLZ TWR 315.700	NORDHOLZ RADAR 278.350 129.850					BREMEN RADAR 371.750 124.075				
		RWY	60	120	180	240	300	360	to	
		08	468	936	1404	1872	2340	2808	2000 ft	
		26	430	860	1290	1720	2150	2580	2000 ft	



TA 5000

EMERG SAFE ALT 100 NM 2700

CHANGE: OBST (360/15)

MN 108 (RWY 08)	- Climb on heading 080° up to 2000 ft - Pass 2000 ft within NDO/5 DME - Continue as cleared by ATC
MN 126 (RWY 26)	- Climb on heading 260° up to 2000 ft - Pass 2000 ft within NDO/5 DME - Continue as cleared by ATC

MN 108 - 126

53°46.06'N
008°39.51'E

NORDHOLZ (ETMN)

ZentLufTop 07 JAN 2016

TERPS INSTRUMENT APPROACH CHART

AD ELEV 74

TACAN RWY 08
NORDHOLZ (ETMN)

BREMEN RADAR 371.750 124.075		NORDHOLZ RADAR 278.350 129.850		NORDHOLZ TWR 315.700 142.900			
TACAN NDO CH118X	APP COURSE 074°	FAF ALT 1600		MDA 400	TDZE 74	ALS-Length 900 M	LDA 8002

CAUTION:

CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE



SWG
CH55X

213°
(55)

R-289

7.5

R-254

7.5

078°
(35)

MSA NDO 25 NM

2000

WTM
CH82X

NDO CH118X

HIRTA
Radius 0.11NM
760 ft MSL
GND

IAF
5 DME

10

353°

R-173

250°

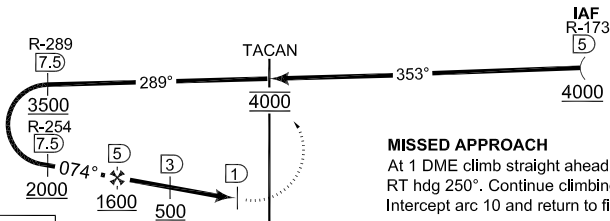
173°

20 NM

IAF
53°41.19'N
008°40.39'E

EMERG SAFE ALT 100 NM 2700

TA 5000



MISSED APPROACH

At 1 DME climb straight ahead to 1000 ft,
RT hdg 250°. Continue climbing to 2500 ft.
Intercept arc 10 and return to final.

CHANGE: MINIMA CRITERIA (258/14)

CAT I					TDZE 74
-------	--	--	--	--	---------

CATEGORY	A	B	C	D	E
S-TACAN 08	400 - 0.8 326 (400-0.8/1.6)		400 - 1.2 326 (400-1.2/1.6)		400 - 1.2 326 (400-1.2/2.0)
CIRCLING	560 - 1.6 486 (500-1.6)		560 - 2.4 486 (500-2.4)	640 - 3.2 566 (600-3.2)	780 - 4.0 706 (800-4.0)
PAR 08	274 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 08

53°46.06'N
008°39.51'E

NORDHOLZ (ETMN)

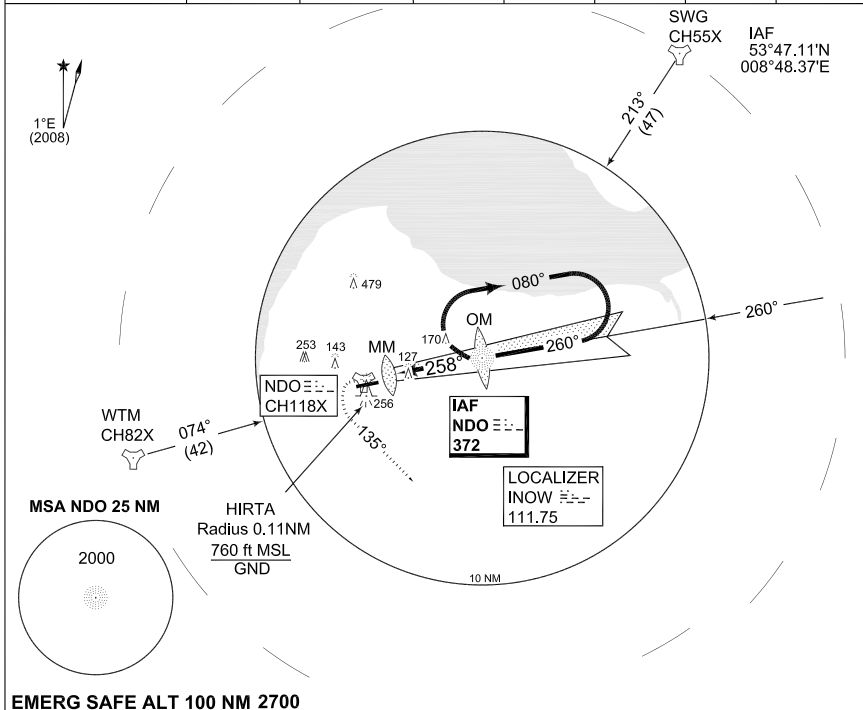
AFSBW 05 FEB 2015

TERPS INSTRUMENT APPROACH CHART

AD ELEV 74

ILS RWY 26
NORDHOLZ (ETMN)

BREMEN RADAR 371.750 124.075		NORDHOLZ RADAR 278.350 129.850		NORDHOLZ TWR 315.700 142.900			
LOCALIZER INOW 111.75	APP COURSE 258°	GS INTCP ALT 1600	GS 3.0°	DA 267	TDZE 67	ALS-Length 900 M	LDA 8002



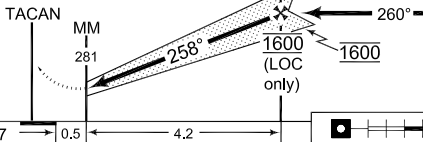
MISSED APPROACH

Climb straight ahead to 1000 ft. LT hdg 135°. Continue climbing to 2000 ft. Intercept arc 9 or proceed as cleared by ATC.

TA 5000

FAF - MAP 4.2 NM					
Knots	60	90	120	150	180
Min:Sec	4:12	2:48	2:06	1:41	1:24

GS 3.0°
TCH 59



CATEGORY	A	B	C	D	E
S-ILS 26	267 - 0.8 200 (200-0.8/1.2)				
S-LOC 26	380 - 0.8 313 (400-0.8/1.6)		380 - 1.2 313 (400-1.2/1.6)		
CIRCLING	560 - 1.6 486 (500-1.6)		560 - 2.4 486 (500-2.4)		

ILS RWY 26

53°46.06'N
008°39.51'E

NORDHOLZ (ETMN)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 74

TACAN RWY 26
NORDHOLZ (ETMN)

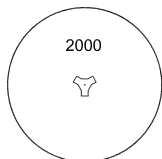
BREMEN RADAR 371.750 124.075		NORDHOLZ RADAR 278.350 129.850		NORDHOLZ TWR 315.700 142.900			
TACAN NDO CH118X	APP COURSE 264°	FAF ALT 1600		MDA 380	TDZE 67	ALS-Length 900 M	LDA 8002

CAUTION:

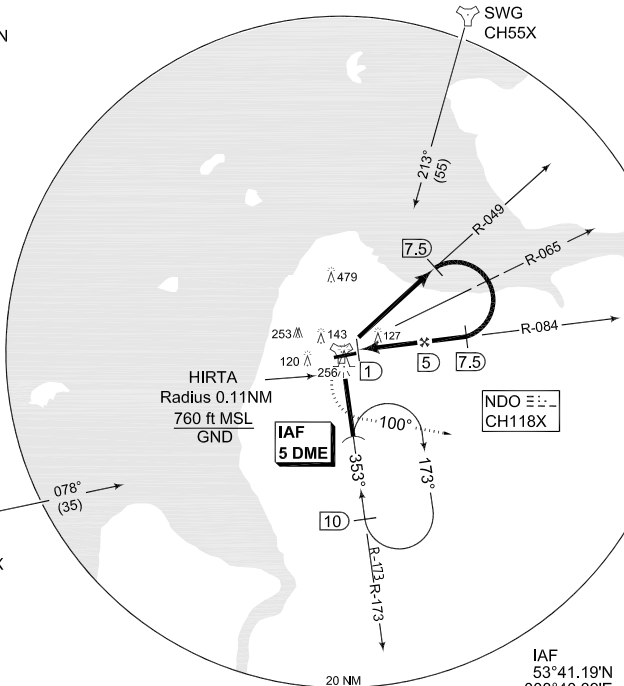
CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE



MSA NDO 25 NM



WTM
CH82X



EMERG SAFE ALT 100 NM 2700

TA 5000

IAF
R-173

5

4000

TACAN

4000

R-049

7.5

3500

R-065

3000

R-084

7.5

2000

MISSED APPROACH

At 1 DME turn left climbing
to 2500 ft on heading 100°
and intercept arc 10.

TDZE 67

4.2

CAT I

CATEGORY	A	B	C	D	E
S-TACAN 26	380 - 0.8 313 (400-0.8/1.6)		380 - 1.2 313 (400-1.2/1.6)		
CIRCLING	560 - 1.6 486 (500-1.6)		560 - 2.4 486 (500-2.4)	640 - 3.2 566 (600-3.2)	780 - 4.0 706 (800-4.0)
PAR 26	267 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 26

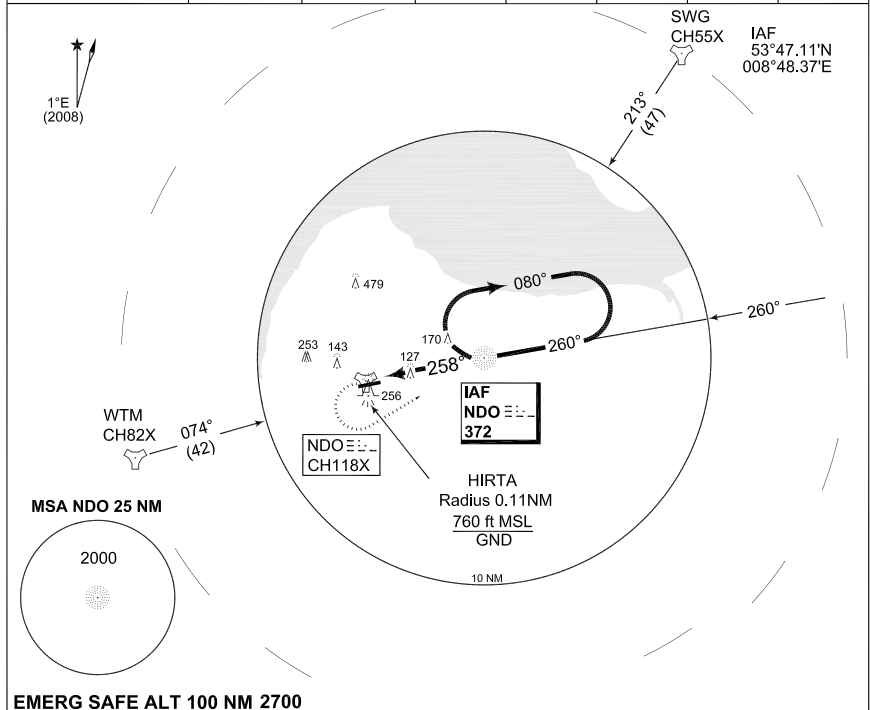
53°46.06'N
008°39.51'E

NORDHOLZ (ETMN)

TERPS INSTRUMENT APPROACH CHART

**NDB RWY 26
NORDHOLZ (ETMN)**

BREMEN RADAR 371.750 124.075		NORDHOLZ RADAR 278.350 129.850		NORDHOLZ TWR 315.700 142.900			
NDB NDO 372	APP COURSE 258°	FAF ALT 1600		MDA 480	TDZE 67	ALS-Length 900 M	LDA 8002

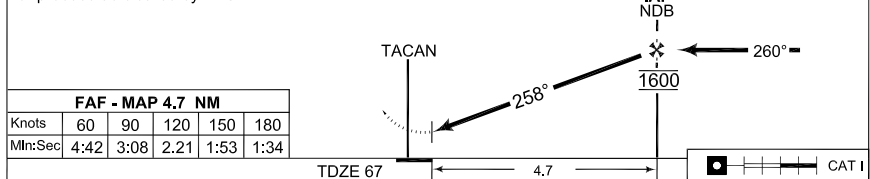


EMERG SAFE ALT 100 NM 2700

MISSED APPROACH

Climb straight ahead to 1600 ft
before turning left to rehome NDB
or proceed as cleared by ATC.

TA 5000



FAF - MAP 4.7 NM						
Knots	60	90	120	150	180	
Min:Sec	4:42	3:08	2:21	1:53	1:34	
CATEGORY	A	B	C	D	E	
S-NDB 26	480 - 0.8 413 (500-0.8/1.6)		480 - 1.2 413 (500-1.2/2.0)			
CIRCLING	560 - 1.6 486 (500-1.6)		560 - 2.4 486 (500-2.4)			

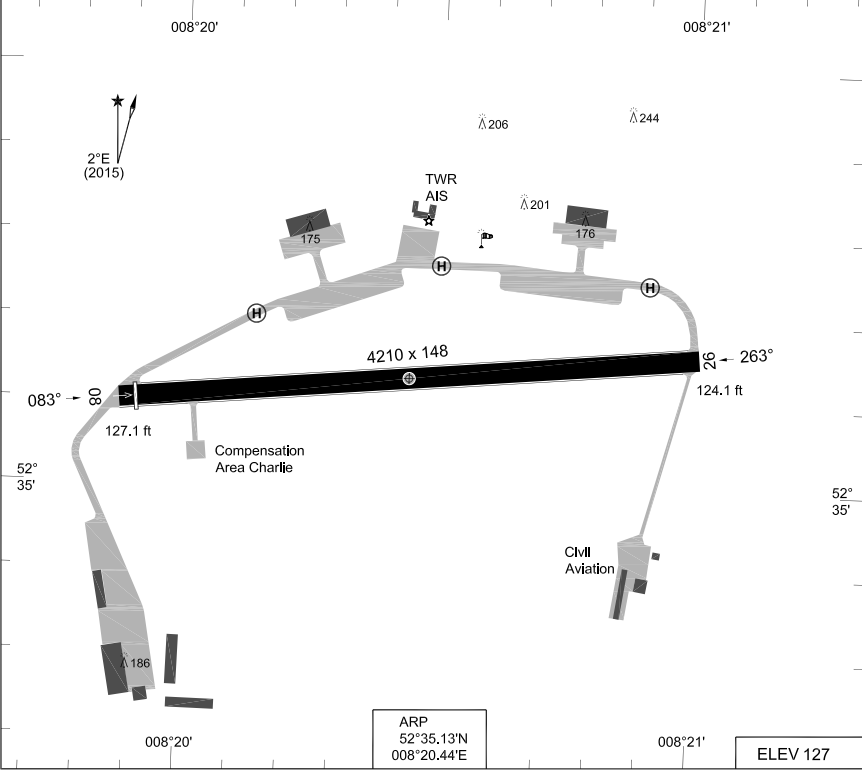
NDB RWY 26

53°46.06'N
008°39.51'E

NORDHOLZ (ETMN)

AERODROME CHART

DIEPHOLZ (ETND)



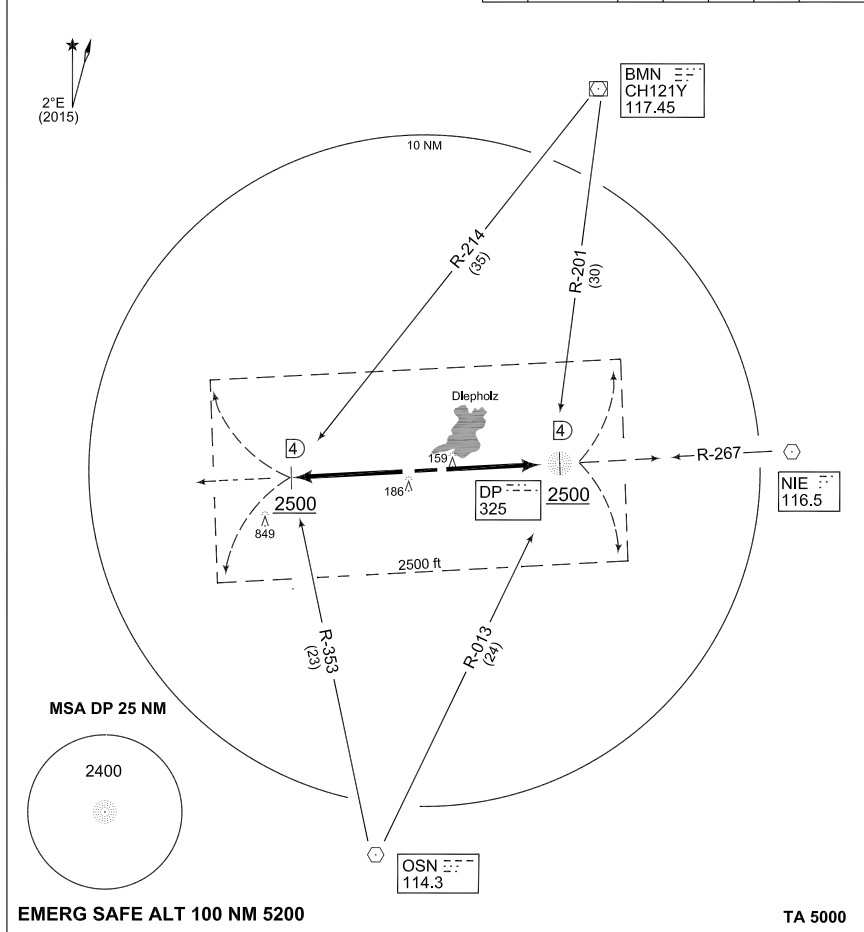
RWY	LCN	TORA	ASDA	TODA	LDA		TDZE	THR PSN
08	120	4210	4210	4210	4090		127.1	52°35.10'N 008°19.91'E
26	120	4210	4210	4210	4210		126.1	52°35.16'N 008°21.01'E

DIEPHOLZ TWR 379.300 140.600

PANS-OPS
OPERATIONAL INSTRUMENT DEPARTURE CHART

ND 108 - 126
DIEPHOLZ (ETND)

DIEPHOLZ TWR 379.300 140.600		BREMER RADAR 372.550 125.025		AD ELEV 127						
				RWY	from - to	60	120	180	240	Reason
				08 26	DER - 2500 ft	590	1180	1770	2360	ATC



ND 108 (RWY 08)	- Climb straight ahead to 2500 ft - Continue as cleared by ATC
ND 126 (RWY 26)	- Climb straight ahead to 2500 ft - Continue as cleared by ATC
ND 108 - 126	- Climbout restrictions: Reach 2500 ft within 4NM

CHANGE: VAR, OBST (356/15)

ZentLufTop 07 JAN 2016

PANS-OPS INSTRUMENT APPROACH CHART

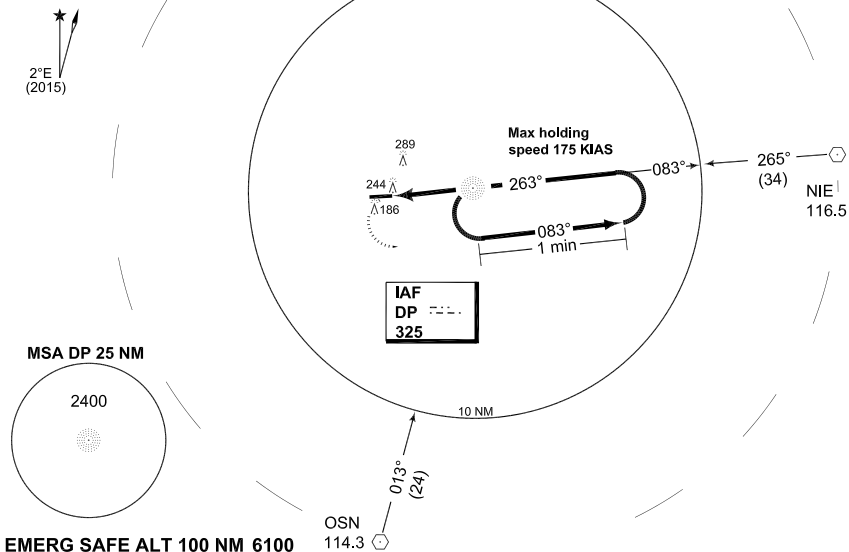
AD ELEV 127

NDB RWY 26
DIEPHOLZ (ETND)

BREMEN RADAR 372.550 125.025		DIEPHOLZ TWR 379.300 140.600					
NDB DP 325	APP COURSE 263°	FAF ALT 1550	Descent GR 5.97%/3.4°	MDA 530	TDZE 126	ALS-Length 780 M	LDA 4210

NOTE:

- CIRCLING NOT AUTHORIZED
N OF RWY 26/08.
- PROCEDURE NOT AUTHORIZED
WHEN NLFS IS ACTIVE.
- HOLDING AND RACETRACK
LIMITET TO KIAS 175 MAXIMUM.

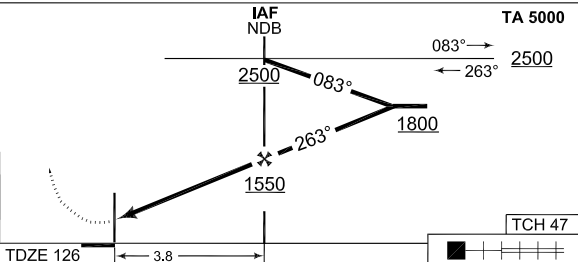


EMERG SAFE ALT 100 NM 6100

MISSED APPROACH

Left turn climbing to 2500 ft
and rehome NDB. Missed approach
turn limited to 160 kt IAS max.

NDB: MAP at THR					
NDB to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16



CATEGORY	A	B	C
NDB 26	530 - 0.8 404 (500-0.8/1.6)	530 - 1.2 404 (500-1.2/2.0)	
CIRCLING	540 - 1.6 413 (500-1.6)	680 - 1.6 553 (600-1.6)	1010 - 4.4 883 (900-4.4)

NDB RWY 26

52°35.13'N
008°20.44'E

DIEPHOLZ (ETND)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 127

COPTER NDB RWY 26
DIEPHOLZ (ETND)

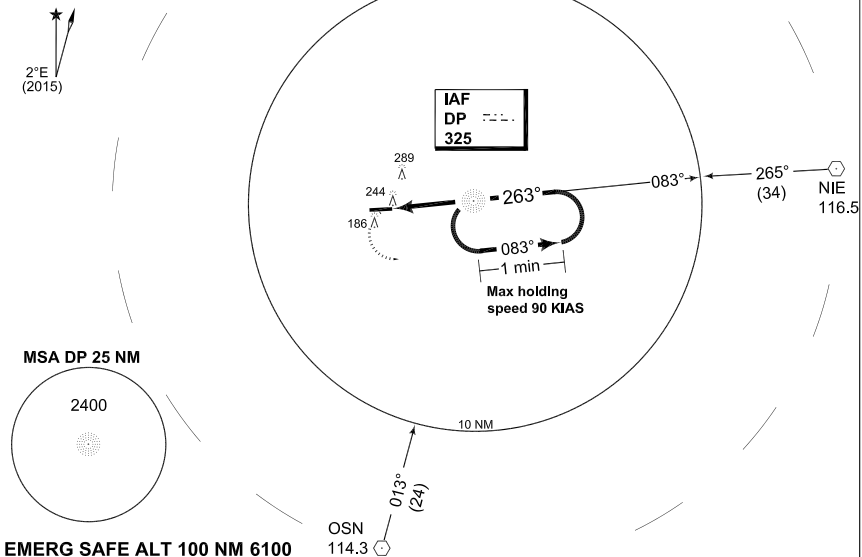
BREMEN RADAR 372.550 125.025		DIEPHOLZ TWR 379.300 140.600					
NDB DP 325	APP COURSE 263°	FAF ALT 1550	Descent GR 5.97%/3.4°	MDA 530	TDZE 126	ALS-Length 780 M	LDA 4210

NOTE:

a) HOLDING AND RACETRACK
LIMIT TO KIAS 90 MAXIMUM.

BMN
CH121y
117.45

IAF
52°35.50'N
008°27.21'E



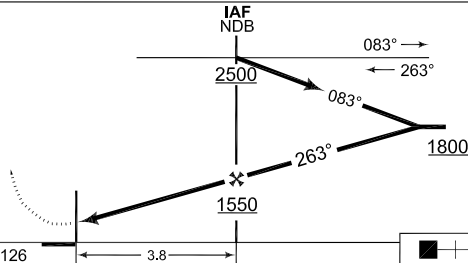
MISSED APPROACH

Left turn climbing to 2500 ft
and rehome DP NDB.

IAF
NDB

TA 5000

NDB: MAP at THR					
NDB to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16



CATEGORY		COPTER	
MIPS	H-NDB 264°	530 - 0.4 404 (500-0.4/0.8)	

COPTER NDB RWY 26

52°35.13'N
008°20.44'E

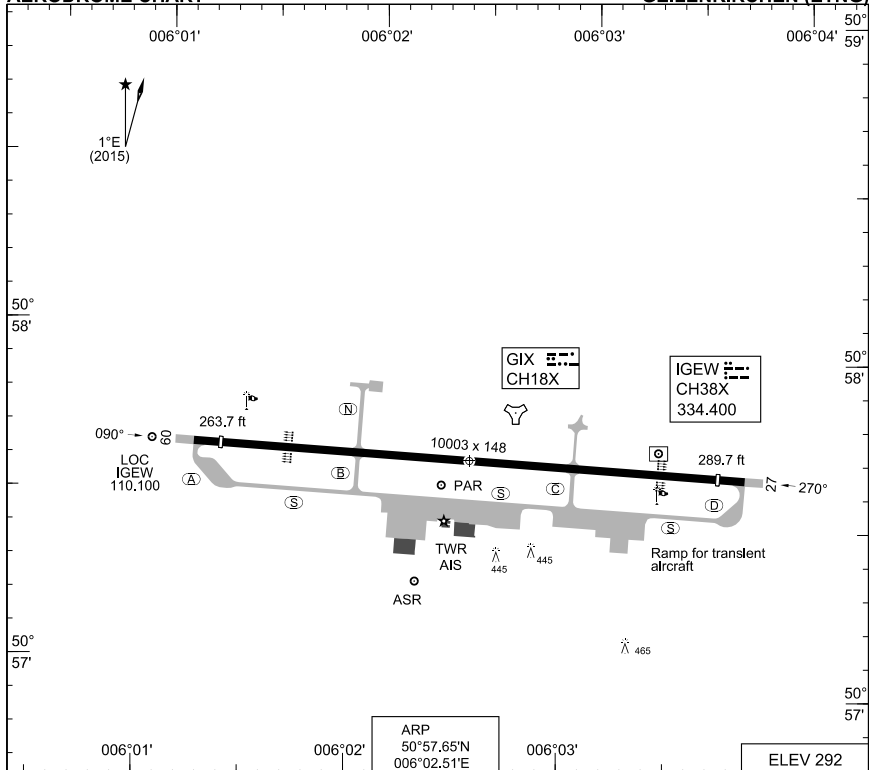
DIEPHOLZ (ETND)

CHANGE: VAR. NOTE (356/15)

ZenturLufOp 07 JAN 2016

AERODROME CHART

GEILENKIRCHEN (ETNG)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
09	75 F/B/X/T	10003	10003	10003	9514	3.0°	264	50°57.66'N 006°01.33'E
27	75 F/B/X/T	10003	10003	10003	9518	3.0°	290	50°57.64'N 006°03.68'E

FRISBEE TWR 378.575 257.800 140.075 122.100 120.050
 FRISBEE RADAR 244.550 123.725 378.050x SSR 4460 - 4467

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	09	3.0°	64		1300	AB CDE	TERPS	464-0.8 200 (200-0.8) 464-1.2 200 (200-1.2)
	TERPS	27	3.0°	56		1180	ABCDE	TERPS	490-0.8 200 (200-0.8/1.2)
SRA	TERPS	09					AB C DE	TERPS	700-1.2 436 (500-1.2/1.6) 700-1.6 436 (500-1.6/2.0) 700-2.0 436 (500-2.0/2.4)
	TERPS	27					AB C DE	TERPS	740-0.8 450 (500-0.8/1.6) 740-1.2 450 (500-1.2/2.0) 740-1.6 450 (500-1.6/2.4)

AERODROME CHART

GEILENKIRCHEN (ETNG)

**TERPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 292

**NG 12 - 32
GEILENKIRCHEN (ETNG)**

FRISBEE TWR			FRISBEE RADAR			LANGEN RADAR						
378.575	140.075	120.050	244.550 123.725			337.850 128.500						
BEEK RADAR				RWY	from - to	60	120	180	240	300	360	Reason
278.500	123.975			27	DER - 2000 ft	548	1096	1644	2192	2740	3288	ATC
CAUTION:				09	DER - 2000 ft	499	998	1497	1996	2495	2994	ATC

CAUTION:

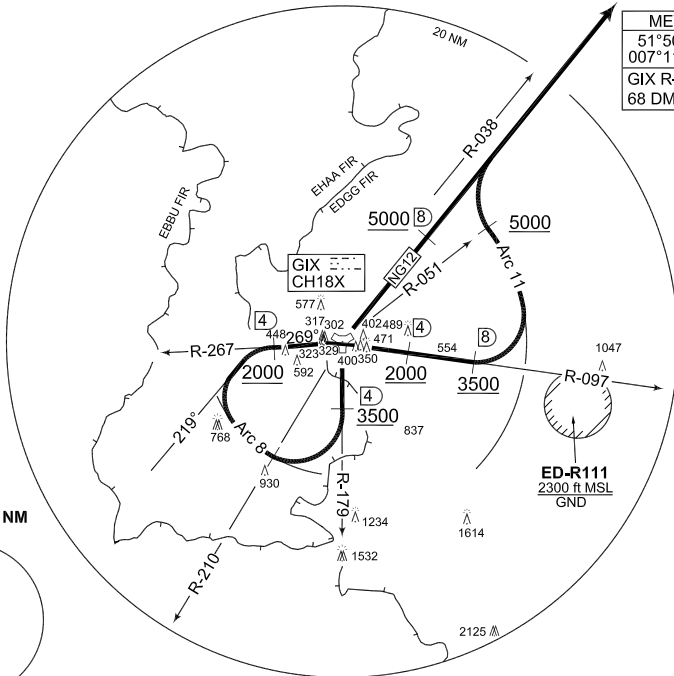
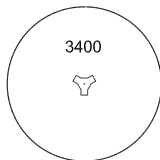
CLOSE IN OBSTACLES

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT
TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT
TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT
TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT
TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT



MEVEL
51°50.92'N
007°11.45'E
GIX R-038/ 68 DME

MSA GIX 25 NM



ED-R111
2300 ft MSL
GND

TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

EMERG SAFE ALT 100 NM 4200

CHANGE: OBST (360/15.363/15)

NG 12 (RWY 27)	- Climb on track 269° (GIX R-267) to GIX/4 DME, pass GIX/4 DME at 2000 ft or above - Turn left on heading 219° to intercept GIX arc 8 - When crossing GIX R-210 turn left and proceed on GIX R-179 to GIX - Cross GIX R-179/4 DME at 3500 ft or above - Proceed on GIX R-038 to MEVEL - Cross GIX R-038/8 DME at 5000 ft or above
NG 32 (RWY 09)	- Climb on GIX R-097 outbound, pass GIX/4 DME at 2000 ft or above - Pass GIX/8 DME at 3500 ft or above and turn left to intercept GIX Arc 11 - Cross GIX R-051 at 5000 ft or above - Turn right and proceed on GIX R-038 to MEVEL

NG 12 - 32

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

ZeitLufTop 07 JAN 2016

TERPS INSTRUMENT DEPARTURE CHART

AD ELEV 292

NG 13-33
GEILENKIRCHEN (ETNG)

FRISBEE TWR 378.575 140.075 120.050			FRISBEE RADAR 244.550 123.725			LANGEN RADAR 337.850 128.500					
BEEK RADAR 278.500 123.975			RWY	from - to	60	120	180	240	300	360	Reason
			27	DER - 2000 ft	548	1096	1644	2192	2740	3288	ATC
			09	DER - 2000 ft	499	998	1497	1996	2495	2994	ATC

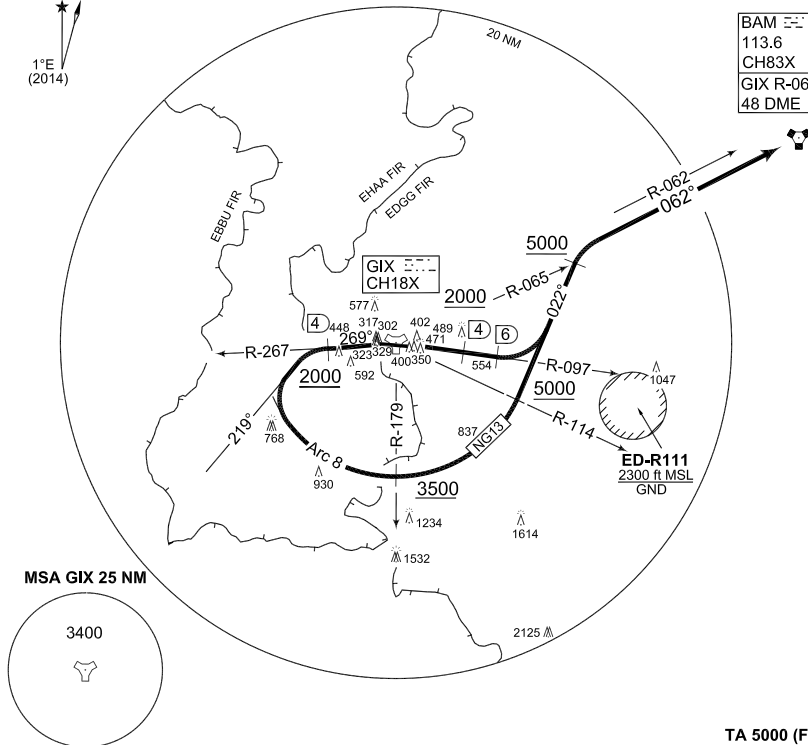
CAUTION:

CLOSE IN OBSTACLES

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT
TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT
TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT
TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT
TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT



BAM	113.6
CH83X	
GIX R-062	48 DME



EMERG SAFE ALT 100 NM 4200

TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

NG 13 (RWY 27)	- Climb on track 269° (GIX R-267) to GIX/4 DME, pass GIX/4 DME at 2000 ft or above - Turn left on heading 219° to intercept GIX arc 8 - Cross GIX R-179 at 3500 ft or above - Cross GIX R-114 at 5000 ft or above and proceed on track 022° - When crossing GIX R-065 turn right and proceed on GIX R-062 to BAM
NG 33 (RWY 09)	- Climb on GIX R-097 outbound, pass GIX/4 DME at 2000 ft or above - At GIX/6 DME turn left and proceed on track 022° - Cross GIX R-065 at 5000 ft or above and turn right to proceed on GIX R-062 to BAM

NG 13 - 33

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

CHANGE: OBST (360/15.363/15)

ZentLuf07 JAN 2016

TERPS INSTRUMENT DEPARTURE CHART

AD ELEV 292

NG 86 - 96
GEILENKIRCHEN (ETNG)

FRISBEE TWR			FRISBEE RADAR			LANGEN RADAR					
378.575	140.075	120.050	244.550 123.725			337.850 128.500					
BEEK RADAR			RWY	from - to	60	120	180	240	300	360	Reason
278.500 123.975			27	DER - 2000 ft	548	1096	1644	2192	2740	3288	ATC
CAUTION: CLOSE IN OBSTACLES			09	DER - 2000 ft	499	998	1497	1996	2495	2994	ATC
			09	2000 - 5000 ft	270	540	810	1080	1350	1620	ATC

CAUTION:

CLOSE IN OBSTACLES

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT

TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT

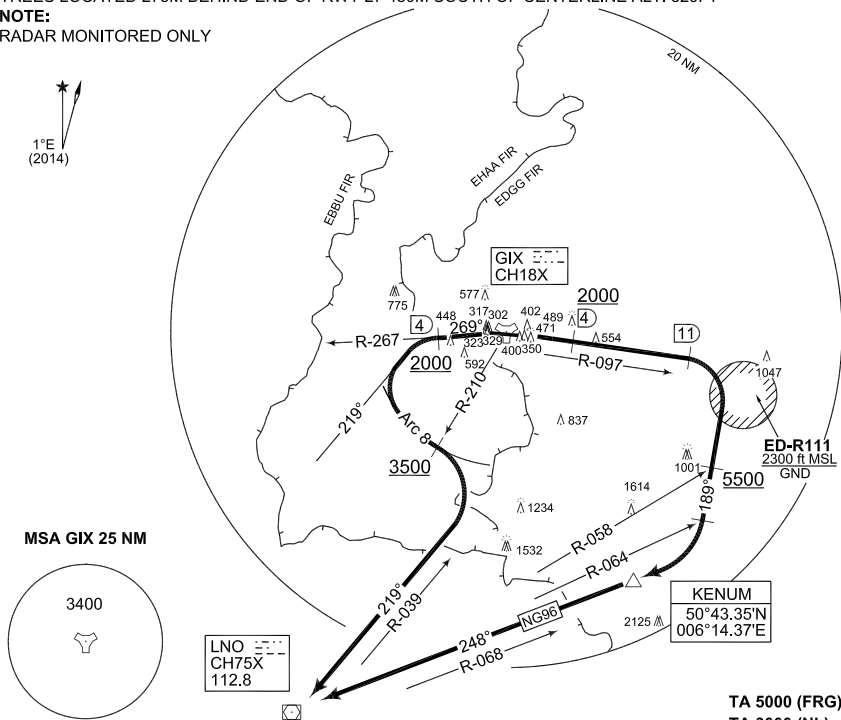
TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT

TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT

TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT

NOTE:

RADAR MONITORED ONLY



EMERG SAFE ALT 100 NM 4200

TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

NG 86 (RWY 27)	DO NOT EXCEED GIX ARC 8 - Climb on track 269° (GIX R-267) to GIX/4 DME, pass GIX/4 DME at 2000 ft or above - Turn left on heading 219° to intercept ARC 8 GIX - Pass GIX R-210 at 3500 ft or above and turn right to intercept LNO R-039 - Proceed inbound LNO
NG 96 (RWY 09)	- Climb on GIX R-097 outbound, to GIX/11 DME, pass GIX/4 DME at 2000 ft or above - At GIX/11 DME turn right to heading 189° - Pass LNO R-058 at 5500 ft or above - When passing LNO R-064 turn right to intercept LNO R-068 - Proceed inbound LNO

NG 86 - 96

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

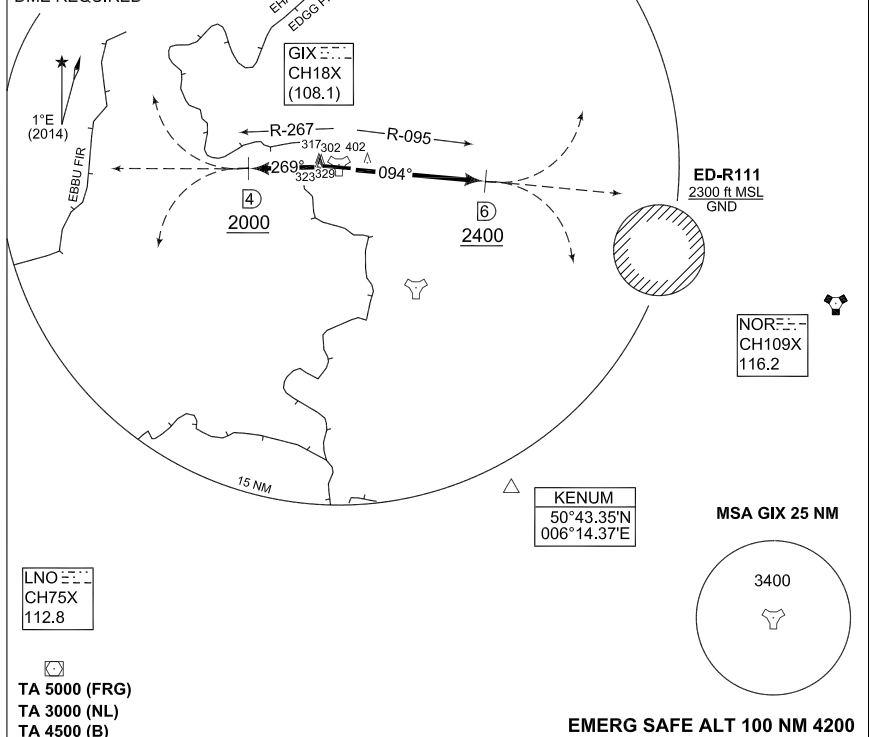
FRISBEE TWR			FRISBEE RADAR			LANGEN RADAR					
378.575	140.075	120.050	244.550	123.725		337.850	128.500				
BEEK RADAR			RWY	from - to	60	120	180	240	300	360	Reason
278.500	123.975		09	DER - 2400 ft	395	790	1185	1580	1975	2370	ATC
			27	DER - 2000 ft	558	1116	1674	2232	2790	3345	ATC

CAUTION:**CLOSE IN OBSTACLES**

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT
 TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT
 TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT
 TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT
 TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT

NOTE:

DME REQUIRED



NG 109
(RWY 09)

- Climb on track 094° (GIX R-095°) to GIX/6 DME
- Pass GIX/6 DME at 2400 ft or above
- Continue as cleared by ATC

NG 127
(RWY 27)

- Climb on track 269° (GIX R-267°) to GIX/4 DME
- Pass GIX/4 DME at 2000 ft or above
- Continue as cleared by ATC

**KENUM 1A - 1B
GEILENKIRCHEN (ETNG)**

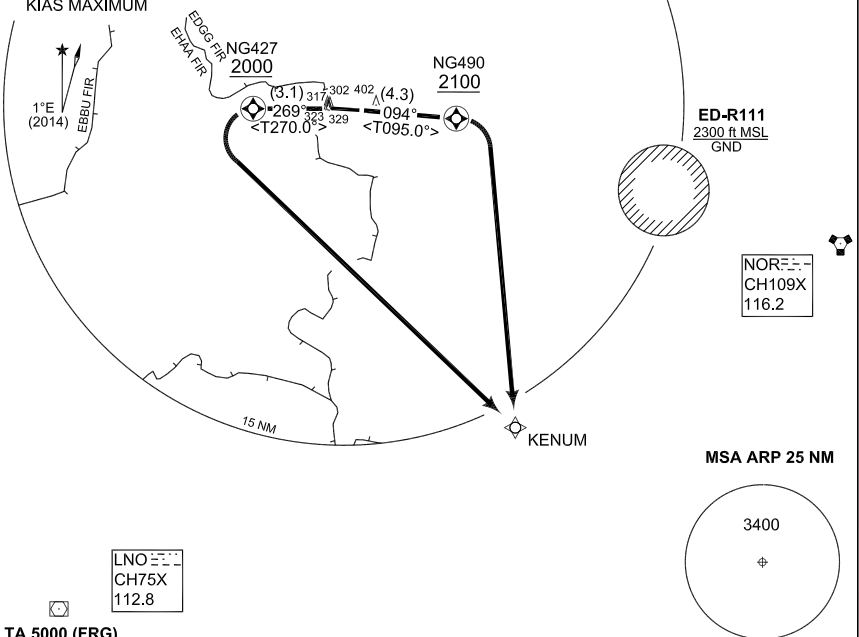
FRISBEE TWR 378.575 140.075 120.050			FRISBEE RADAR 244.550 123.725			BEEK RADAR 278.500 123.975					
LANGEN RADAR 337.850 128.500			RWY	from - to	60	120	180	240	300	360	Reason
			09	DER - 2100 ft	414	828	1242	1656	2070	2484	ATC
			27	DER - 2000 ft	559	1118	1677	2236	2795	3354	ATC

CLOSE IN OBSTACLES

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT
TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT
TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT
TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT
TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT

NOTE:

- a) RNAV 1 NAVIGATION APPLICATION:
- GNSS REQUIRED
- DME/DME NOT AUTHORIZED
b) DEPARTURE TURN LIMITED TO 220
KIAS MAXIMUM



TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

EMERG SAFE ALT 100 NM 4200

KENUM 1A (RWY 27)	- Climb on track 269° to NG427 - Pass NG427 at 2000 ft or above, turn left and proceed direct KENUM - Continue as cleared by ATC GPS/FMS RNAV: - <u>NG427</u> [M269; K220-; A2000+; L] - KENUM.
KENUM 1B (RWY 09)	- Climb on track 094° to NG490 - Pass NG490 at 2100 ft or above, turn right and proceed direct KENUM - Continue as cleared by ATC GPS/FMS RNAV: - <u>NG490</u> [M094; K220-; A2100+; R] - KENUM.

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 292

MILGI 1A - 1B
GEILENKIRCHEN (ETNG)

FRISBEE TWR 378.575 140.075 120.050			FRISBEE RADAR 244.550 123.725			BEEK RADAR 278.500 123.975					
LANGEN RADAR 337.850 128.500			RWY	from - to	60	120	180	240	300	360	Reason
			09	DER - 2100 ft	414	828	1242	1656	2070	2484	ATC
			27	DER - 2000 ft	559	1118	1677	2236	2795	3354	ATC

CAUTION:

CLOSE IN OBSTACLES

TREES LOCATED 1000M BEHIND END OF RWY 09 480M NORTH OF CENTERLINE ALT. 402FT
TREES LOCATED 165M BEHIND END OF RWY 27 180M NORTH OF CENTERLINE ALT. 302FT
TREES LOCATED 420M BEHIND END OF RWY 27 261M NORTH OF CENTERLINE ALT. 317FT
TREES LOCATED 390M BEHIND END OF RWY 27 145M SOUTH OF CENTERLINE ALT. 323FT
TREES LOCATED 275M BEHIND END OF RWY 27 480M SOUTH OF CENTERLINE ALT. 329FT

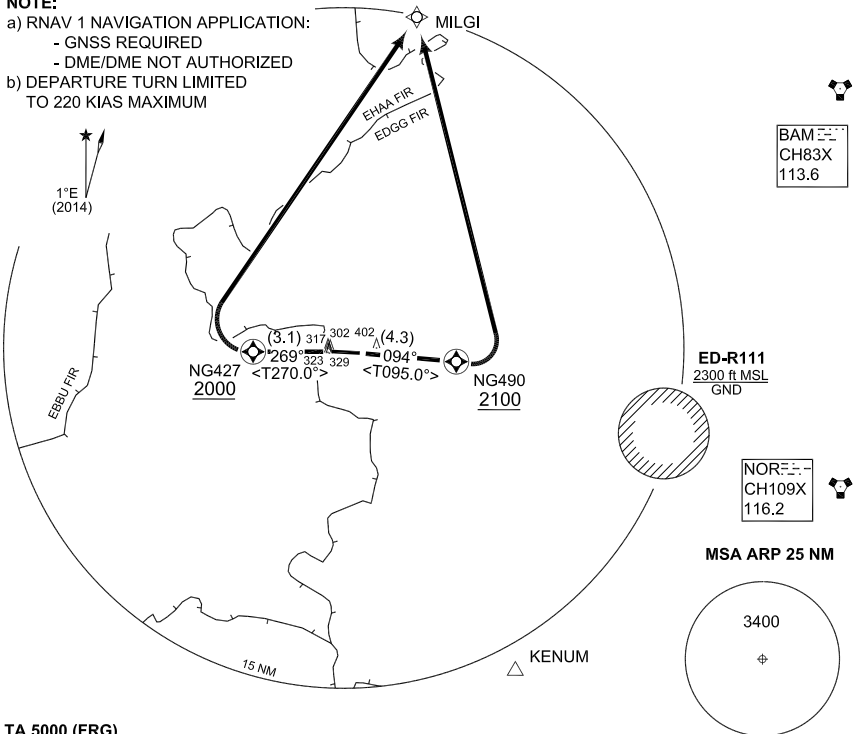
NOTE:

a) RNAV 1 NAVIGATION APPLICATION:

- GNSS REQUIRED
- DME/DME NOT AUTHORIZED

b) DEPARTURE TURN LIMITED

TO 220 KIAS MAXIMUM



TA 5000 (FRG)

TA 3000 (NL)

TA 4500 (B)

EMERG SAFE ALT 100 NM 4200

MILGI 1A (RWY 27)	- Climb on track 269° to NG427 - Pass NG427 at 2000 ft or above, turn right and proceed direct MILGI - Continue as cleared by ATC GPS/FMS RNAV: - NG427 [M269; K220-; A2000+; R] - MILGI.
MILGI 1B (RWY 09)	- Climb on track 094° to NG490 - Pass NG490 at 2100 ft or above, turn left and proceed direct MILGI - Continue as cleared by ATC GPS/FMS RNAV: - NG490 [M094; K220-; A2100+; L] - MILGI.

MILGI 1A - 1B

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

KENUM 1A RNAV DEPARTURE

	CODING	DISPLAY
NG427	50 57 39.775N 005 56 18.096E	50 57.663N 005 56.301E
KENUM	50 43 21.000N 006 14 22.000E	50 43.350N 006 14.366E

KENUM 1B RNAV DEPARTURE

	CODING	DISPLAY
NG490	50 57 15.662N 006 10 34.951E	50 57.261N 006 10.582E
KENUM	50 43 21.000N 006 14 22.000E	50 43.350N 006 14.366E

MILGI 1A RNAV DEPARTURE

	CODING	DISPLAY
NG427	50 57 39.775N 005 56 18.096E	50 57.663N 005 56.301E
MILGI	51 11 49.200N 006 07 30.000E	51 11.820N 006 07.500E

MILGI 1B RNAV DEPARTURE

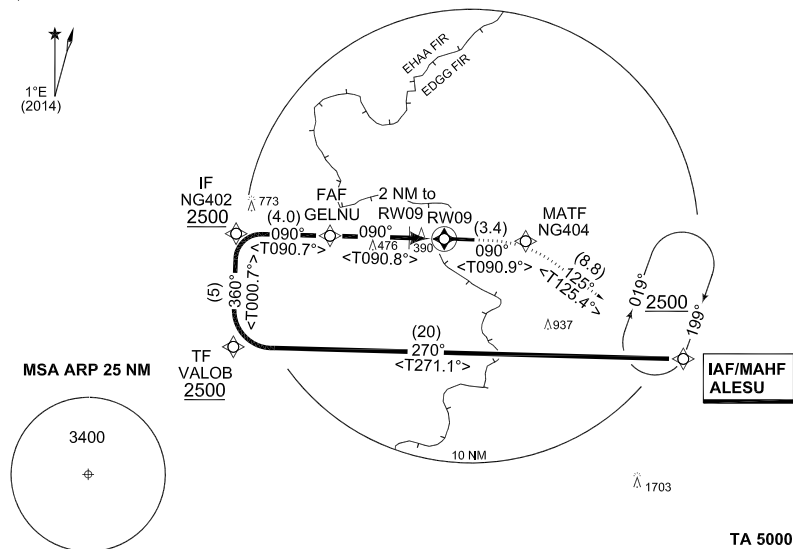
	CODING	DISPLAY
NG490	50 57 15.662N 006 10 34.951E	50 57.261N 006 10.582E
MILGI	51 11 49.200N 006 07 30.000E	51 11.820N 006 07.500E

**RNAV (GNSS) RWY 09
GEILENKIRCHEN (ETNG)**

LANGEN RADAR		FRISBEE RADAR		FRISBEE TWR			ATIS	
337.850	128.500	244.550	123.725	378.575	140.075	120.050	278.200	
BEEK RADAR		APP COURSE	FAF ALT	Descent GR	DA/MDA	TDZE	ALS-Length	LDA
278.500	123.975	090°	2000	3.0°/5.2%	640	264	560 M	9514

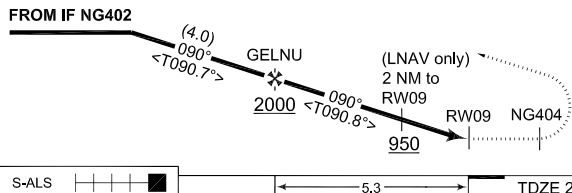
IAF ALESU
50°52.48'N
006°18.10'E

- a) GNSS REQUIRED
- b) PROCEDURE LIMITED TO 220 KT IAS MAXIMUM
- c) BARO/VNAV NOT AUTHORIZED BELOW -15°C
- d) TIMING NOT AUTHORIZED FOR DEFINING MAPt



EMERG SAFE ALT 100 NM 4200

TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)



Climb on course 090° inbound
NG404, turn right to ALESU.
Climb to 2500 ft.
NG404[M090]-ALESU[A2500]

					TCH 50
DIST THR	5	4	3	2	1
ALTITUDE	1900	1580	1260	950	630

CATEGORY		A	B	C	D	E
MIPS	LNAV	640 - 1.2 376 (400-1.2/1.6)			640 - 1.2 376 (400-1.2/2.0)	
	LNAV / VNAV	640 - 1.2 376 (400-1.2/1.6)			640 - 1.2 376 (400-1.2/2.0)	

RNAV (GNSS) RWY 09

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

RWY 09 from ALESU APPROACH RNAV (GNSS)

	CODING	DISPLAY
ALESU (IAF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E
VALOB (TF)	50 52 47.985 N 005 46 31.254 E	50 52.800 N 005 46.521 E
NG402 (IF)	50 57 47.620 N 005 46 37.206 E	50 57.794 N 005 46.620 E
GELNU (FAF)	50 57 44.438 N 005 52 56.779 E	50 57.741 N 005 52.946 E
RW09 (MAPt)	50 57 39.692 N 006 01 19.907 E	50 57.662 N 006 01.332 E
NG404 (MATF)	50 57 36.296 N 006 06 44.374 E	50 57.605 N 006 06.740 E
ALESU (MAHF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E

Threshold Coordinates

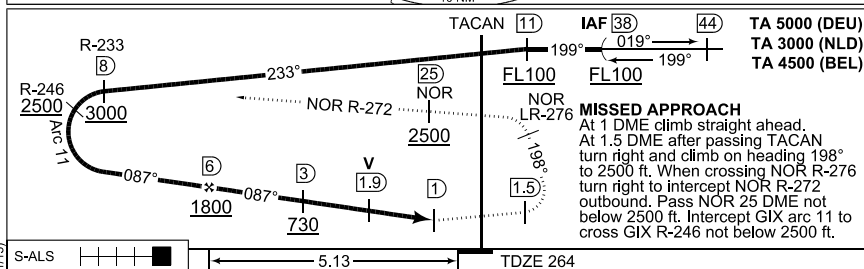
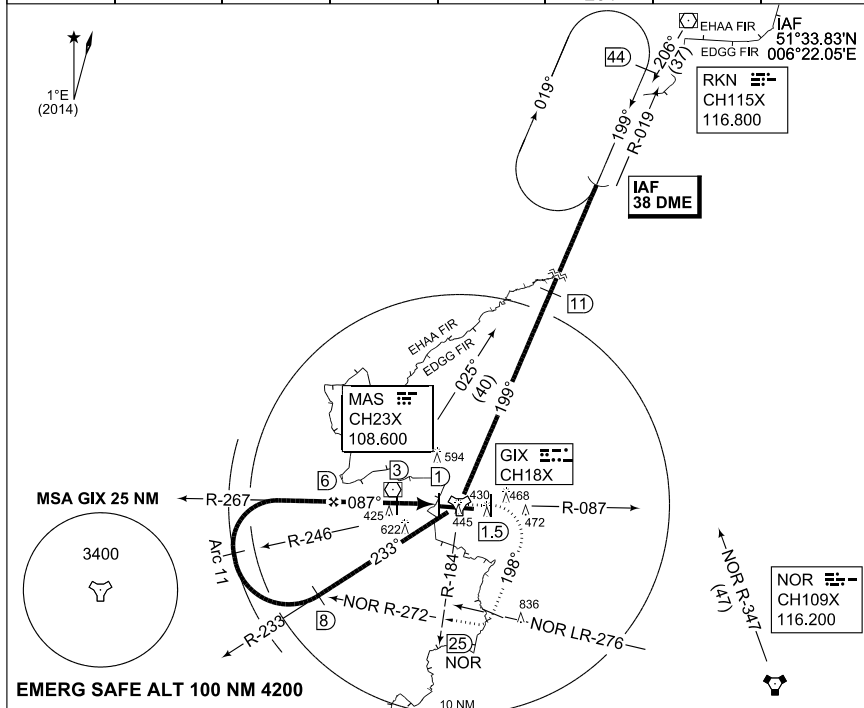
RWY 09	50 57 39.692 N 006 01 19.907 E	50 57.662 N 006 01.332 E
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TERPS INSTRUMENT APPROACH CHART

AD ELEV 292

TACAN RWY 09
GEILENKIRCHEN (ETNG)

LANGEN RADAR		FRISBEE RADAR		FRISBEE TWR			BEEK RADAR		ATIS
337.850	128.500	244.550	123.725	378.575	140.075	120.050	278.500	123.975	278.200
TACAN	APP COURSE	FAF ALT		MDA	TDZE	ALS-LENGTH		LDA	
GIX CH18X	087°	1800		640	264	560 M		9514	



S-ALS		5.13	TDZE 264		
CATEGORY	A	B	C	D	E
S-TACAN 09	640 - 1.2 376 (400-1.2/1.6)	640 - 1.2 376 (400-1.2/1.6)	640 - 1.2 376 (400-1.2/1.6)	640 - 1.6 376 (400-1.6/2.0)	640 - 1.6 376 (400-1.6/2.0)
PAR 09	464 - 0.8 200 (200-0.8) GS 3.0°	464 - 0.8 200 (200-0.8) GS 3.0°	464 - 1.2 200 (200-1.2) GS 3.0°	464 - 1.2 200 (200-1.2) GS 3.0°	464 - 1.2 200 (200-1.2) GS 3.0°

TACAN RWY 09

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

CHANGE: TDZE, MINIMA (04/1/15)

TERPS

AFSBW 02 APR 2015

PANS-OPS INSTRUMENT APPROACH CHART

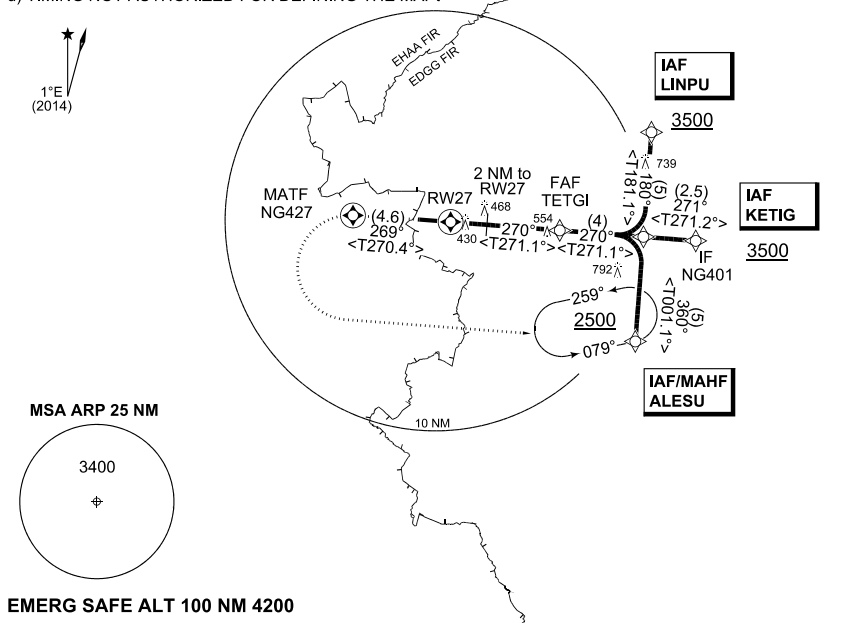
AD ELEV 292

RNAV (GNSS) RWY 27
GEILENKIRCHEN (ETNG)

LANGEN RADAR	FRISBEE RADAR	FRISBEE TWR	BEEK RADAR	ATIS
337.850 128.500	244.550 123.725	378.575 140.075 120.050	278.500 123.975	278.200
APP COURSE 270°	FAF ALT 2000	Descent GR 3.0°/5.2%	MDA see CAT	TDZE 290
			ALS-LENGTH 900 M	LDA 9518

NOTE:

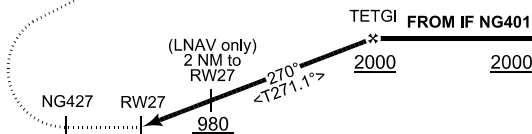
- GNSS REQUIRED
- PROCEDURE LIMITED TO 220 KT IAS MAXIMUM
- BARO/VNAV NOT AUTHORIZED BELOW -15°C
- TIMO NOT AUTHORIZED FOR DEFINING THE MAP



MISSED APPROACH

Climb on course 269° inbound
NG427, turn left direct to
ALESU. Climb to 2500 ft.
NG427[L]-ALESU[A2500]

TA 5000 (DEU)
TA 3000 (NLD)
TA 4500 (BEL)



CHANGE VAR. TDZE, MINIMA (04/15)

DISP THR	1	2	3	4	5
ALTITUDE	660	980	1290	1610	1930

TDZE 290

5.2

CAT I

TCH 50

CATEGORY	A	B	C	D	E
LNAV	720 - 0.8 430 (500-0.8/1.6)	720 - 0.8 430 (500-0.8/1.6)	720 - 1.2 430 (500-1.2/2.0)	720 - 1.6 430 (500-1.6/2.4)	
LNAV / VNAV	680 - 0.8 390 (400-0.8/1.6)	680 - 0.8 390 (400-0.8/1.6)	680 - 1.2 390 (400-1.2/1.6)	680 - 1.2 390 (400-1.2/2.0)	

RNAV (GNSS) RWY 27

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

AFSBw 02 APR 2015

RWY 27 from LINPU APPROACH RNAV (GNSS)

	CODING	DISPLAY
LINPU (IAF)	51 02 27.771 N 006 18 25.073 E	51 02.463 N 006 18.418 E
NG401 (IF)	50 57 28.176 N 006 18 15.617 E	50 57.470 N 006 18.260 E
TETGI (FAF)	50 57 32.769 N 006 11 56.115 E	50 57.546 N 006 11.935 E
RW27 (MAPt)	50 57 38.247 N 006 03 40.884 E	50 57.637 N 006 03.681 E
NG427 (MATF)	50 57 39.775 N 005 56 18.096 E	50 57.663 N 005 56.302 E
ALESU (MAHF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E

RWY 27 from KETIG APPROACH RNAV (GNSS)

	CODING	DISPLAY
KETIG (IAF)	50 57 25.131 N 006 22 12.795 E	50 57.419 N 006 22.213 E
NG401 (IF)	50 57 28.176 N 006 18 15.617 E	50 57.470 N 006 18.260 E
TETGI (FAF)	50 57 32.769 N 006 11 56.115 E	50 57.546 N 006 11.935 E
RW27 (MAPt)	50 57 38.247 N 006 03 40.884 E	50 57.637 N 006 03.681 E
NG427 (MATF)	50 57 39.775 N 005 56 18.096 E	50 57.663 N 005 56.302 E
ALESU (MAHF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E

RWY 27 from ALESU APPROACH RNAV (GNSS)

	CODING	DISPLAY
ALESU (IAF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E
NG401 (IF)	50 57 28.176 N 006 18 15.617 E	50 57.470 N 006 18.260 E
TETGI (FAF)	50 57 32.769 N 006 11 56.115 E	50 57.546 N 006 11.935 E
RW27 (MAPt)	50 57 38.247 N 006 03 40.884 E	50 57.637 N 006 03.681 E
NG427 (MATF)	50 57 39.775 N 005 56 18.096 E	50 57.663 N 005 56.302 E
ALESU (MAHF)	50 52 28.577 N 006 18 06.194 E	50 52.476 N 006 18.103 E

Threshold Coordinates

RW27	50 57 38.247 N 006 03 40.884 E	50 57.637 N 006 03.681 E
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PANS-OPS INSTRUMENT APPROACH CHART

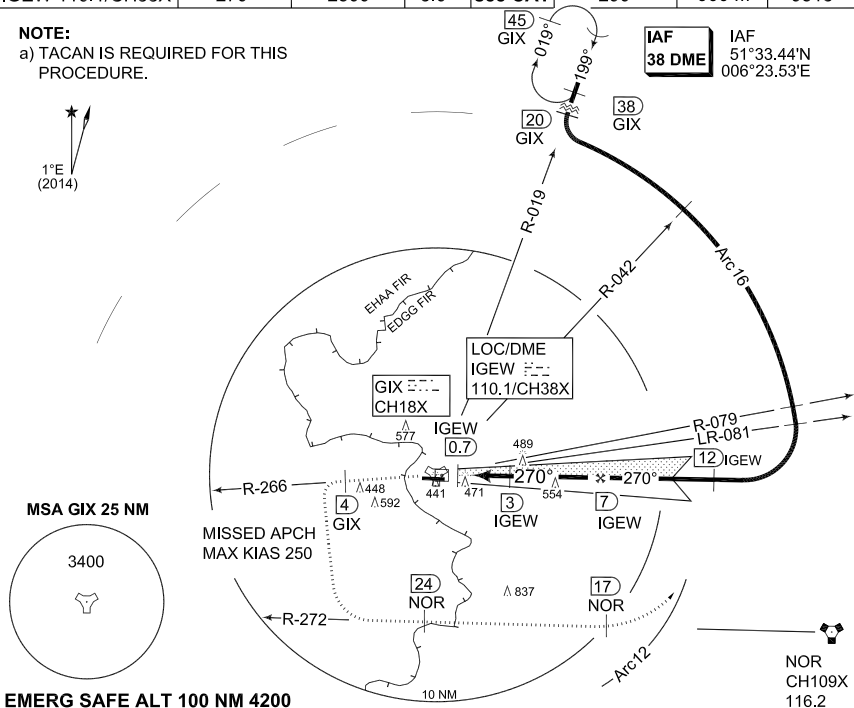
AD ELEV 292

ILS RWY 27
GEILENKIRCHEN (ETNG)

LANGEN RADAR 337.850 128.500	FRISBEE RADAR 244.550 123.725	FRISBEE TWR 378.575 140.075 120.050	BEEK RADAR 278.500 123.975	ATIS 278.200
LOCALIZER/DME IGEW 110.1/CH38X	APP COURSE 270°	GS INTCP ALT 2500	GS 3.0°	DA see CAT
			TDZE 290	ALS-Length 900 M
				LDA 9518

NOTE:

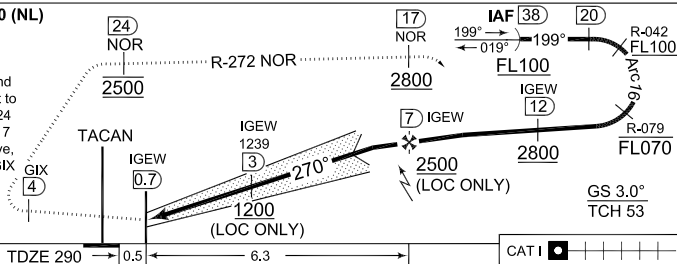
a) TACAN IS REQUIRED FOR THIS PROCEDURE.



TA 5000 (FRG), TA 3000 (NL)
TA 4500 (B)

MISSED APPROACH

Climb on R-266 GIX outbound to 2500 ft. At 4 DME turn left to Intercept R-272 NOR, pass 24 DME NOR at 2500 ft. Pass 17 DME NOR at 2800 ft or above, turn left to intercept arc 12 GIX and return to final.



CHANGE: OBST (360/15)	CATEGORY	A	B	C	D	E
MPS	ILS 27		490 - 0.8/550 200 (200-0.8/1.2)			505 - 0.8/550 215 (300-0.8/1.6)
	LOC 27	710 - 0.8 420 (500-0.8/1.6)		710 - 1.2 420 (500-1.2/2.0)		710 - 1.6 420 (500-1.6/2.4)
	PAR 27		490 - 0.8 200 (200-0.8/1.2) GS 3.0°			

ILS RWY 27

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 292

ILS Y or LOC RWY 27
GEILENKIRCHEN (ETNG)

LANGEN RADAR		FRISBEE RADAR		FRISBEE TWR			BEEK RADAR		ATIS
337.850	128.500	244.550	123.725	378.575	140.075	120.050	278.500	123.975	278.200
LOCALIZER/DME		APP COURSE	GS INTCP ALT	GS		DA	TDZE	ALS-Length	LDA
IGEW 110.1/CH38X		270°	1900	3.0°(5.2 %)		see CAT	290	900 M	9518

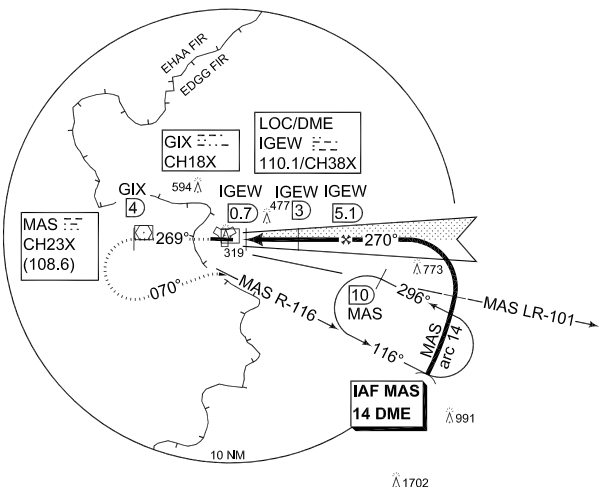
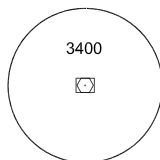
NOTE:

- DME REQUIRED
- PROCEDURE LIMITED TO 220KT IAS MAXIMUM
- CIRCLING NOT AUTHORIZED S OF RWY 09/27
- TIMING NOT AUTHORIZED FOR DEFINING MAPt

IAF
50°52.04'N
006°17.39'E



MSA MAS 25 NM

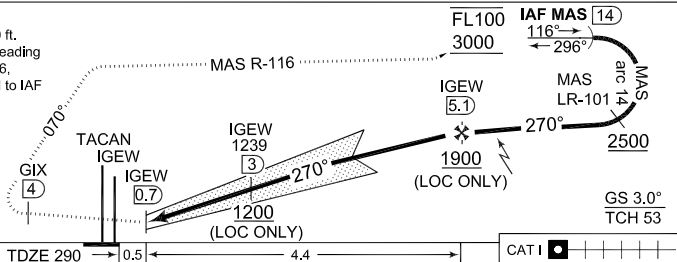


TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

EMERG SAFE ALT 100 NM 4200

MISSED APPROACH

Climb on track 269° to 2500 ft.
At GIX 4 DME turn left on heading
070° to intercept MAS R-116,
climb to 3000ft and proceed to IAF
or Inbound holding.



CHANGE: LDA, TDZE, MINIMA (04/11/15)

CATEGORY	A	B	C	D	E
ILS 27	490 - 0.8/550 200 (200-0.8/1.2)				505 - 0.8/550 215 (300-0.8/1.6)
LOC 27	710 - 0.8 420 (500-0.8/1.6)		710 - 1.2 420 (500-1.2/2.0)		710 - 1.6 420 (500-1.6/2.4)
CIRCLING	780 - 1.6/488 (500-1.6)	890 - 1.6/598 (600-1.6)	1270 - 4.8/978 (1000-4.8)		1390 - 4.8 1098 (1100-4.8)

ILS Y or LOC RWY 27

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

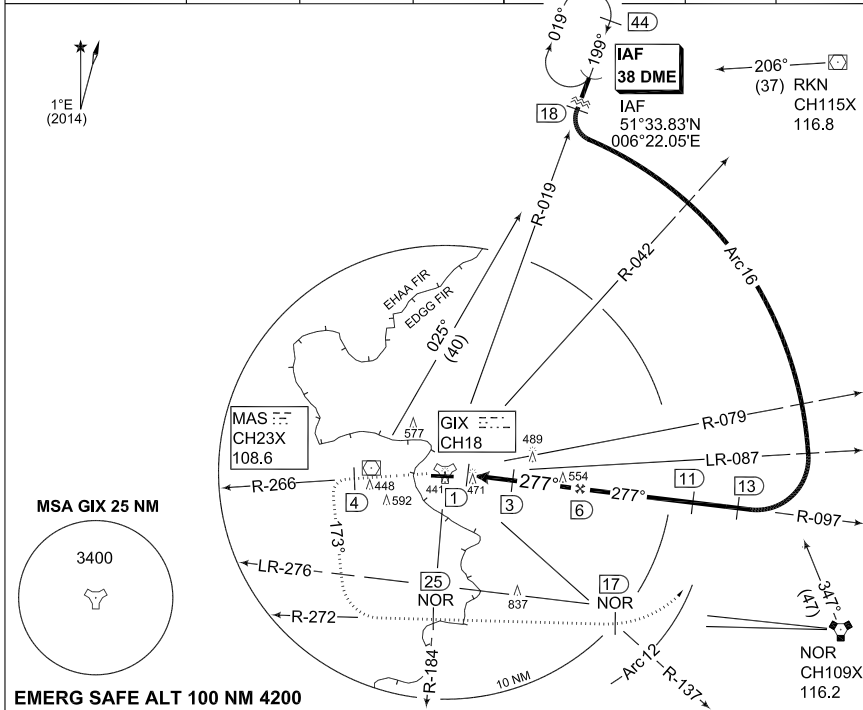
AFSBw 02 APR 2015

TERPS INSTRUMENT APPROACH CHART

AD ELEV 292

TACAN RWY 27 GEILENKIRCHEN (ETNG)

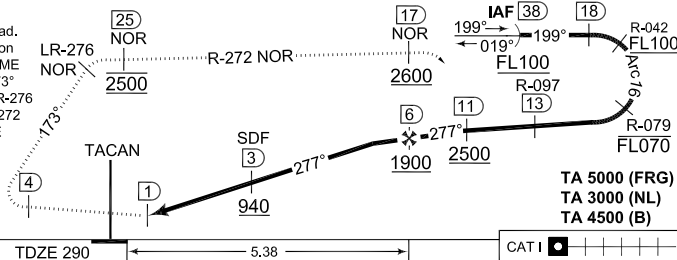
LANGEN RADAR 337.850 128.500	FRISBEE RADAR 244.550 123.725	FRISBEE TWR 378.575 140.075 120.050	BEEK RADAR 278.500 123.975	ATIS 278.200
TACAN GIX CH18	APP COURSE 277°	FAF ALT 1900	MDA 740	TDZE 290
			ALS-Length 900 M	LDA 9518



EMERG SAFE ALT 100 NM 4200

MISSED APPROACH

At 1 DME climb straight ahead.
After passing TACAN climb on R-266 GIX outbound. At 4 DME turn left and climb on hdg 173° to 2500 ft. When crossing LR-276 NOR turn left to Intercept R-272 NOR inbound. Pass 25 DME NOR at 2500 ft and climb to 2600 ft or above.
At 17 DME NOR turn left to Intercept arc 12 GIX not below 2600 ft.



TA 5000 (FRG)
TA 3000 (NL)
TA 4500 (B)

	CATEGORY	A	B	C	D	E
TERPS	S-TACAN 27	740 - 0.8 450 (500-0.8/1.6)		740 - 1.2 450 (500-1.2/2.0)	740 - 1.6 450 (500-1.6/2.4)	
	PAR 27	490 - 0.8 200 (200-0.8/1.2) GS 3.0°				

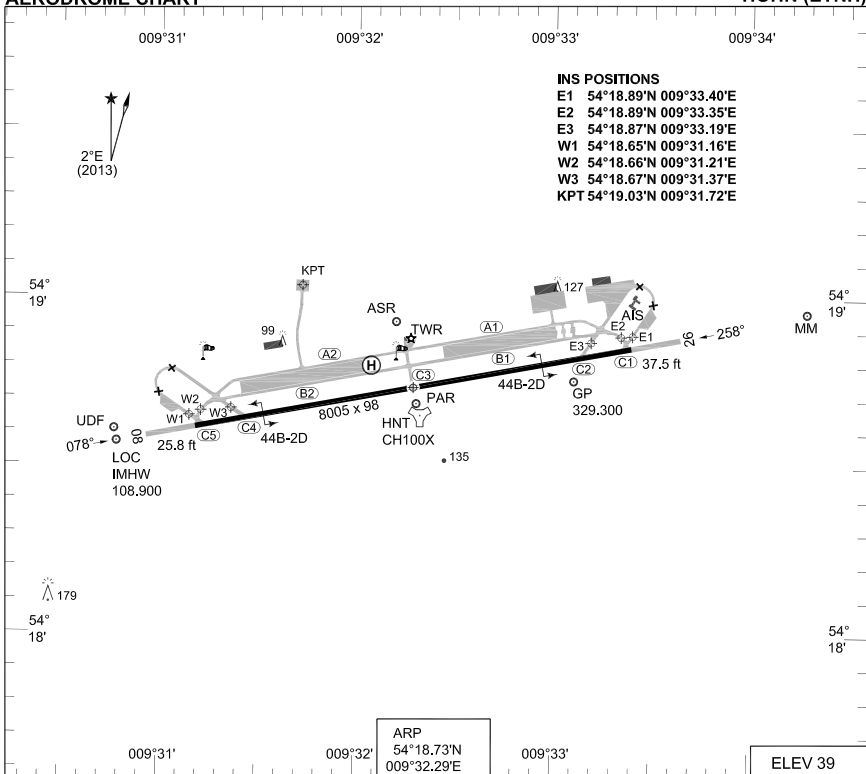
TACAN RWY 27

50°57.65'N
006°02.51'E

GEILENKIRCHEN (ETNG)

AERODROME CHART

HOHN (ETNH)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	84	8005	8005	8005	8005	3.0°	31.5	54°18.61'N 009°31.18'E
26	84	8005	8005	8005	8005	3.0°	37.5	54°18.85'N 009°33.39'E

HOHN TWR 369.300 141.700
HOHN RADAR 279.050 375.500 141.100 SSR 4270 - 4277

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS TERPS	08 26	3.0° 3.0°	45 56		699 1134	ABCDE ABCDE	TERPS TERPS	231- 0.8 200 (200-0.8/1.2) 238- 0.8 200 (200-0.8/1.2)
SRA	TERPS TERPS	08 26					AB CD E AB CD E	TERPS TERPS	440- 0.8 409 (500-0.8/1.6) 440- 1.2 409 (500-1.2/2.0) 440- 1.6 409 (500-1.6/2.4) 440- 0.8 402 (500-0.8/1.6) 440- 1.2 402 (500-1.2/2.0) 440- 1.6 402 (500-1.6/2.4)

AERODROME CHART

HOHN (ETNH)

CHANGE: MINIMA CRITERIA (233/14)

AFSBW 05 FEB 2015

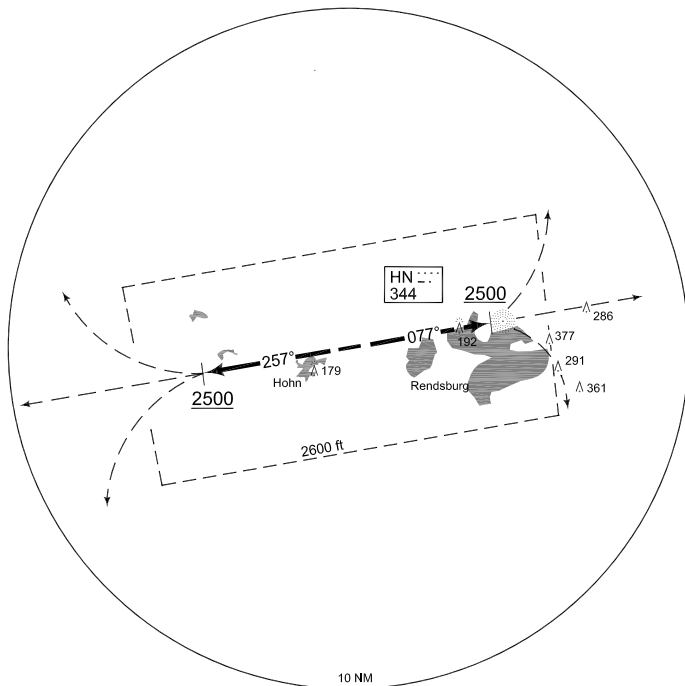
MIPS
OPERATIONAL INSTRUMENT DEPARTURE CHART

AD ELEV 39

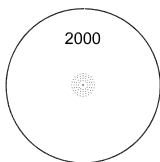
**NH 108 - 126
 HOHN (ETNH)**

HOHN TWR 369.300 141.700		HOHN RADAR 279.050 141.100		BREMEN RADAR 371.750 124.075					
		RWY	From - to	60	120	180	240	300	Reason
		08	DER - 2500ft	608	1216	1824	2432	3040	ATC
		26	DER - 2500ft	608	1216	1824	2432	3040	ATC

NOTE:
 NO TURN BEFORE DER



MSA HN 25 NM



EMERG SAFE ALT 100 NM 2500

TA 5000

NH 108 (RWY 08)	- Climb straight ahead 2500 ft - Continue as cleared by ATC - No turn before DER
NH 126 (RWY 26)	- Climb straight ahead to 2500 ft - Continue as cleared by ATC - No turn before DER

NH 108 - 126

54°18.73'N
 009°32.29'E

HOHN (ETNH)

CHANGE: NEW PROCEDURE (119/15)

AFSBw 28 MAY 2015

MIPS INSTRUMENT APPROACH CHART

AD ELEV 39

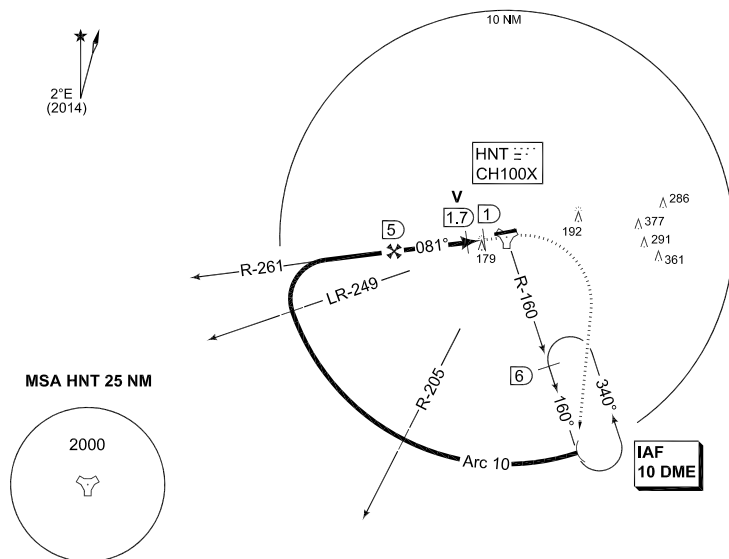
TACAN RWY 08
HOHN (ETNH)

HOHN TWR 369.300 141.700		HOHN RADAR 279.050 141.100			BREMEN RADAR 371.750 124.075		
TACAN HNT CH100X	APP COURSE 081°	FAF ALT 1500	Descent GR 5.4%	MDA 430	TDZE 31	ALS-Length 900 M	LDA 8005

NOTE:

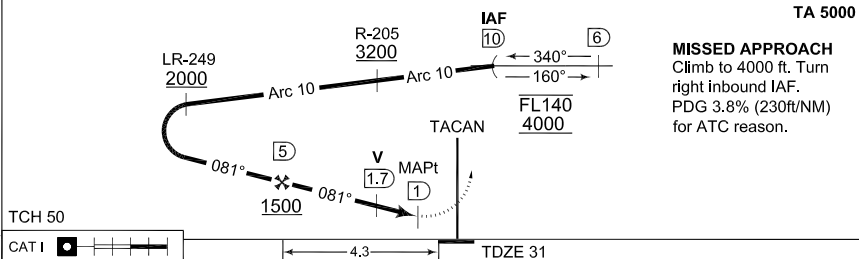
- a) CIRCLING CAT C LIMITED TO 140 KIAS
- b) DISREGARD PAPI

IAF
54°09.16'N
009°37.62'E



EMERG SAFE ALT 100 NM 2500

TA 5000



MISSED APPROACH
Climb to 4000 ft. Turn
right inbound IAF.
PDG 3.8% (230ft/NM)
for ATC reason.

TCH 50

CAT I

4.3

TDZE 31

CATEGORY	A	B	C	D	E
TACAN 08	430 - 0.8 404 (500-0.8/1.6)		430 - 1.2 404 (500-1.2/2.0)		
CIRCLING	480 - 1.6 441 (500-1.6)	540 - 1.6 501 (600-1.6)	630 - 2.4 591 (600-2.4)	1080 - 4.8 1041 (1100-4.8)	
PAR 08	231 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 08

54°18.73'N
009°32.29'E

HOHN (ETNH)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 39

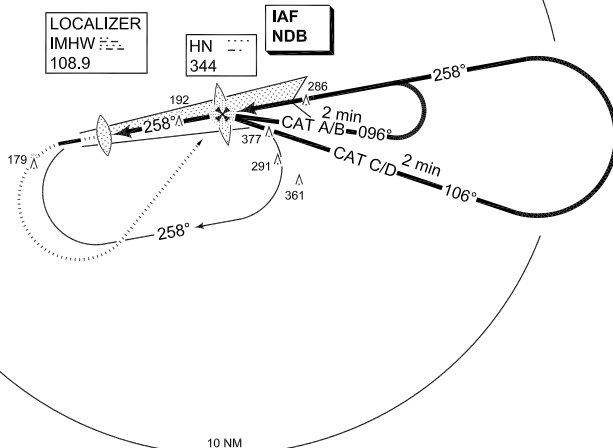
ILS or LOC RWY 26
HOHN (ETNH)

HOHN TWR 369.300 141.700		HOHN RADAR 279.050 141.100		BREMEN RADAR 371.750 124.075	
LOC/NDB IMHW 108.9/HN 344	APP COURSE 258°	GS INTCP ALT 2000	GS 3.0°	MDA see CAT	TDZE 38
					ALS-Length 900 M
					LDA 8005

NOTE:

● CIRCLING CAT C LIMITED TO 140 KIAS

IAF
54°19.58'N
009°40.22'E



MSA HN 25 NM

2000

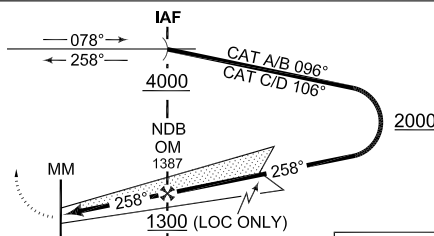
10 NM

EMERG SAFE ALT 100 NM 2500

MISSED APPROACH

Climb straight ahead to 2000 ft. When passing 500 ft turn left inbound IAF.

TA 5000



FAF to MAPt 3.5 NM					
Knots	60	90	120	150	180
Min:Sec	3:30	2:20	1:45	1:24	1:10

TDZE 38

4.0

TCH 56

CAT I

CATEGORY	A	B	C	D	E
ILS 26	238 - 0.8 200 (200-0.8/1.6)				
LOC 26	440 - 0.8 402 (500-0.8/1.6)		440 - 1.2 402 (500-1.2/2.0)		
● CIRCLING	480 - 1.6 441 (500-1.6)	540 - 1.6 501 (600-1.6)	630 - 2.4 591 (600-2.4)	1080 - 4.8 1041 (1100-4.8)	

ILS or LOC RWY 26

54°18.73'N
009°32.29'E

HOHN (ETNH)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 39

TACAN RWY 26
HOHN (ETNH)

HOHN TWR 369.300 141.700		HOHN RADAR 279.050 141.100			BREMEN RADAR 371.750 124.075		
TACAN HNT CH100X	APP COURSE 254°	FAF ALT 1600	Descent GR 5.2%	MDA 400	TDZE 38	ALS-Length 900 M	LDA 8005

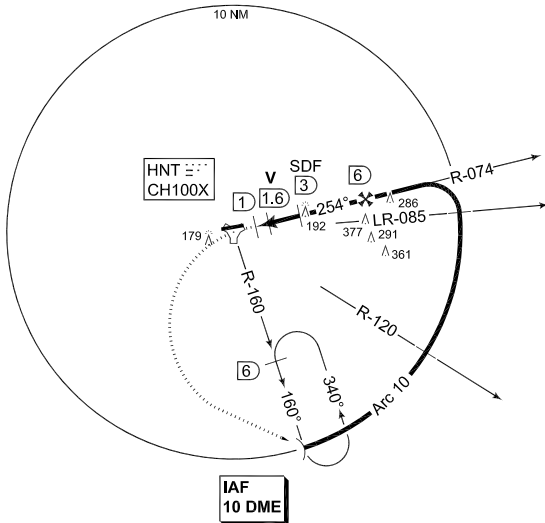
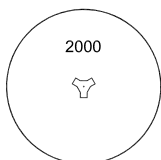
NOTE:

CIRCLING CAT C LIMITED TO 140 KIAS

IAF
54°09.16'N
009°37.62'E



MSA HNT 25 NM

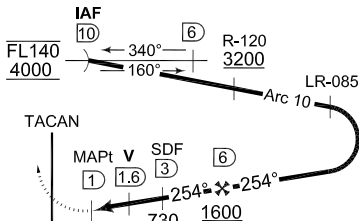


EMERG SAFE ALT 100 NM 2500

MISSED APPROACH

Climb to 4000 ft. Turn left inbound IAF.
PDG 3.6% (220ft/NM)
for ATC reason.

TA 5000



TCH 56

TDZE 38

CAT I

CATEGORY	A	B	C	D	E
TACAN 26	400 - 0.8 362 (400-0.8/1.6)			400 - 1.2 362 (400-1.2/2.0)	
CIRCLING	480 - 1.6 441 (500-1.6)	540 - 1.6 501 (600-1.6)	630 - 2.4 591 (600-2.4)	1080 - 4.8 1041 (1100-4.8)	
PAR 26	238 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 26

54°18.73'N
009°32.29'E

HOHN (ETNH)

NDB RWY 26
HOHN (ETNH)

HOHN TWR		HOHN RADAR			BREMEN RADAR		
369.300	141.700	279.050	141.100		371.750	124.075	
NDB	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-Length	LDA
HN 344	258°	1300	5.1%	440	38	900 M	8005

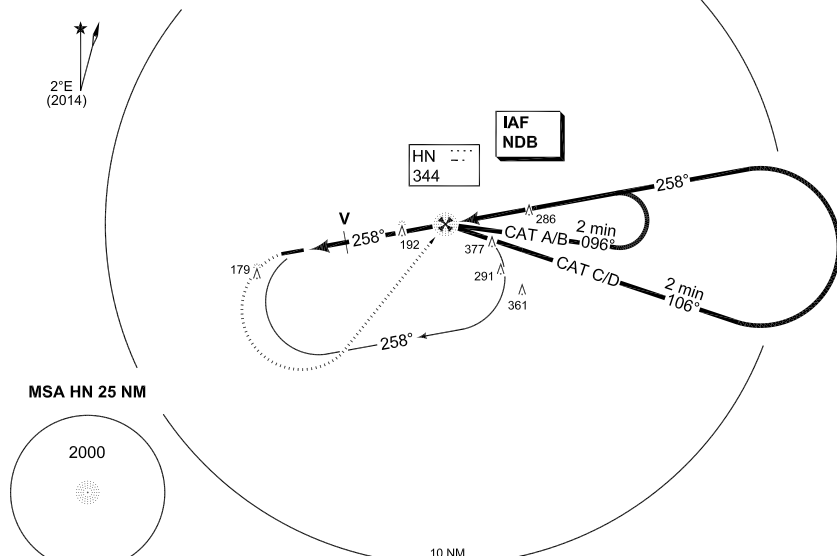
CAUTION:

a) DISREGARD PAPI

NOTE:

b) CIRCLING CAT C LIMITED TO 140 KIAS

IAF
54°19.58'N
009°40.22'E



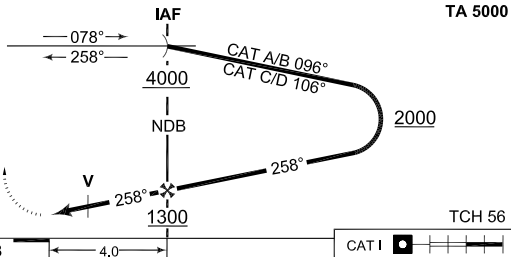
EMERG SAFE ALT 100 NM 2500

MISSED APPROACH

Turn left, climbing to
2000 ft inbound IAF.

FAF to VDP 3.0 NM					
Knots	60	90	120	150	180
Min:Sec	3:00	2:00	1:30	1:20	1:00

FAF to MAPt 4.0 NM					
Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20



CATEGORY		A	B	C	D	E
MIPS	NDB 26	440 - 0.8 402 (500-0.8/1.6)		440 - 1.2 402 (500-1.2/2.0)		
	B CIRCLING	480 - 1.6 441 (500-1.6)	540 - 1.6 501 (600-1.6)	630 - 2.4 591 (600-2.4)	1080 - 4.8 1041 (1100-4.8)	
	PAR 26	238 - 0.8 200 (200-0.8/1.2) GS 3.0°				

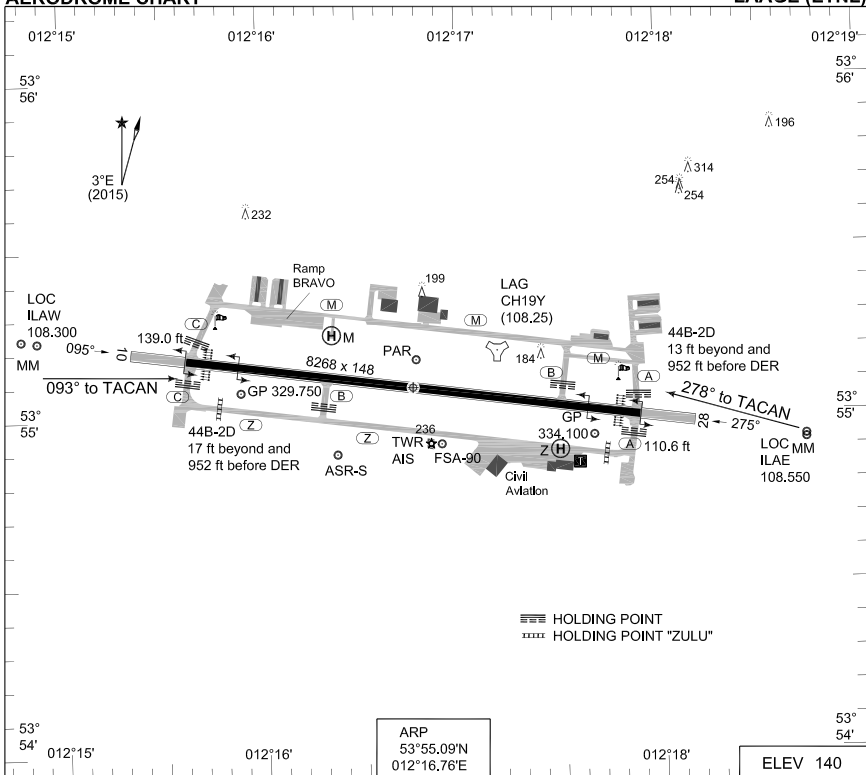
NDB RWY 26

54°18.73'N
009°32.29'E

HOHN (ETNH)

AERODROME CHART

LAAGE (ETNL)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
10	88	8268 (8924*)	9268	10282 (10938*)	8268	3.0°	139.0	53°55.18'N 012°15.62'E
28	R/B/W/T	8268 (8924*)	9268	9908 (10564*)	8268	3.0°	132.8	53°54.99'N 012°17.90'E

*SWY available for TKOF on request via backtrack (PCN 66)

LAAGE TWR 336.400 257.800 118.425
 LAAGE RADAR 358.650 133.625 SSR 7040 - 7047

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	10	3.0°	23		459	ABCDE	TERPS	339 - 0.8 200 (200-0.8/1.2)
	TERPS	28	3.0°	29		460	ABCDE	TERPS	333 - 0.8 200 (200-0.8/1.2)
SRA	TERPS	10					AB	TERPS	560 - 1.2 421 (500-1.2/1.7)
							CD		560 - 1.2 421 (500-1.2/2.0)
							E		560 - 1.6 421 (500-1.6/2.4)
	TERPS	28					AB	TERPS	530 - 1.0 397 (400-1.0/1.8)
							C		530 - 1.2 397 (400-1.2/1.8)
							D		530 - 1.2 397 (400-1.2/2.0)
							E		560 - 1.6 427 (500-1.6/2.4)

AERODROME CHART

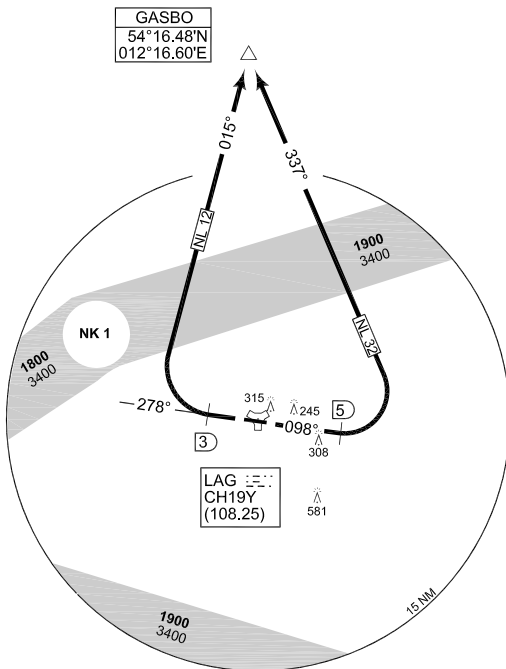
LAAGE (ETNL)

TERPS
INSTRUMENT DEPARTURE CHART

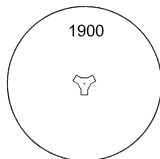
AD ELEV 140

NL 12 - 32
LAAGE (ETNL)

LAAGE TWR		LAAGE RADAR				BREMEN RADAR					
336.400	118.425	358.650	133.625			259.825	124.175				
		RWY	Knots	60	120	180	240	300	360	to	
		28	V/V (fpm)	270	540	810	1080	1350	1620	1420 ft	
		10	V/V (fpm)	230	460	690	820	1050	1280	1800 ft	



MSA LAG 25 NM



EMERG SAFE ALT 100 NM 3500

TA 5000

CHANGE: VAR (007/14)

NL 12 (RWY 28)	- Climb on track 278° to LAG/3 DME - Turn right and proceed on track 015° to GASBO - INITIAL CLIMB: 4000 ft
NL 32 (RWY 10)	- Climb on track 098° to LAG/5 DME - Turn left and proceed on track 337° to GASBO - INITIAL CLIMB: 4000 ft

NL 12 - 32

53°55.09' N
012°16.76' E

LAAGE (ETNL)

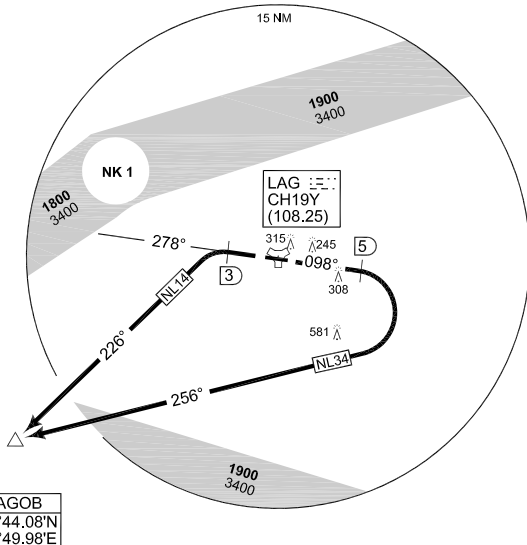
AFSBW 06 MAR 2014

**TERPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 140

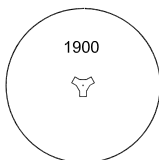
**NL 14 - 34
LAAGE (ETNL)**

LAAGE TWR		LAAGE RADAR				BREMEN RADAR					
336.400	118.425	358.650	133.625			259.825	124.175				
		RWY	Knots	60	120	180	240	300	360	to	
		28	V/V (fpm)	250	500	750	1000	1250	1500	3500 ft	
		10	V/V (fpm)	230	460	690	920	1150	1380	1800 ft	



TAGOB
53°44.08'N
011°49.98'E

MSA LAG 25 NM



EMERG SAFE ALT 100 NM 3500

TA 5000

CHANGE: VAR (007/14)

NL 14 (RWY 28)	- Climb on track 278° to LAG/3 DME. - Turn left and proceed on track 226° to TAGOB - INITIAL CLIMB: 4000 ft
NL 34 (RWY 10)	- Climb on track 098° to LAG/5 DME - Turn right and proceed on track 256° to TAGOB - INITIAL CLIMB: 4000 ft

NL 14 - 34

53°55.09' N
012°16.76' E

LAAGE (ETNL)

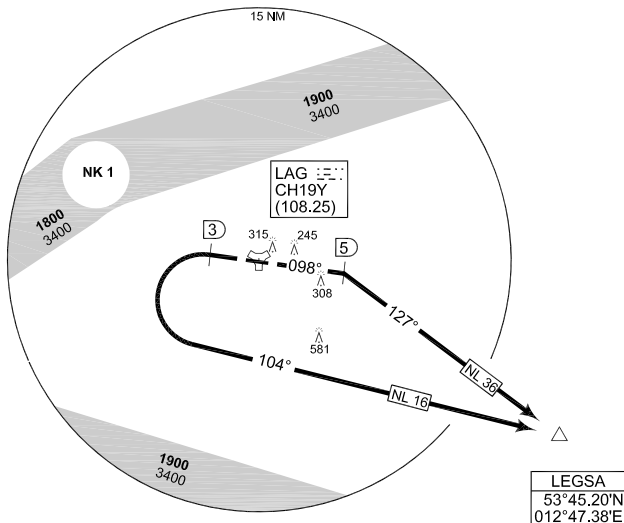
AFSBW 06 MAR 2014

TERPS INSTRUMENT DEPARTURE CHART

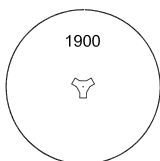
AD ELEV 140

NL 16 - 36
LAAGE (ETNL)

LAAGE TWR		LAAGE RADAR				BREMEN RADAR						
336.400	118.425	358.650	133.625			259.825	124.175					
		RWY	Knots	60	120	180	240	300	360	to		
		28	V/V (fpm)	250	500	750	1000	1250	1500	3500 ft		
		10	V/V (fpm)	230	460	690	920	1150	1380	1800 ft		



MSA LAG 25 NM



EMERG SAFE ALT 100 NM 3500

TA 5000

NL 16 (RWY 28)	- Climb on track 278° to LAG/3 DME - Turn left and proceed on track 104° to LEGSA - INITIAL CLIMB: 4000 ft
NL 36 (RWY 10)	- Climb on track 098° to LAG/5 DME - Turn right and proceed on track 127° to LEGSA - INITIAL CLIMB: 4000 ft

CHANGE VAR (007/14)

NL 16 - 36

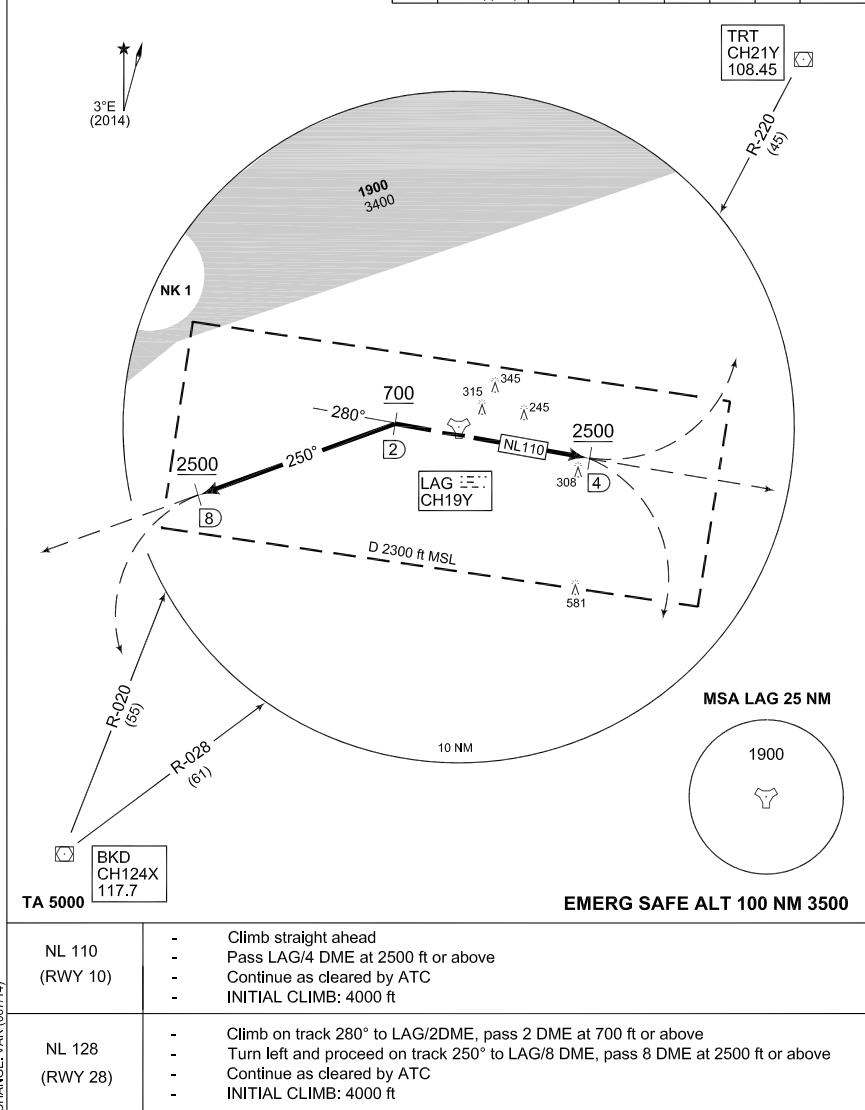
53°55.09' N
012°16.76' E

LAAGE (ETNL)

AFSBW 06 MAR 2014

NL 110 - 128
LAAGE (ETNL)

LAAGE TWR		LAAGE RADAR				BREMEN RADAR				
336.400	118.425	358.650	133.625			259.825	124.175			
		RWY	Knots	60	120	180	240	300	360	to
		10	V/V (fpm)	271	542	813	1084	1355	1626	1800 ft
		28	V/V (fpm)	230	460	690	920	1150	1380	1900 ft



CHANGE: VAR (007/14)

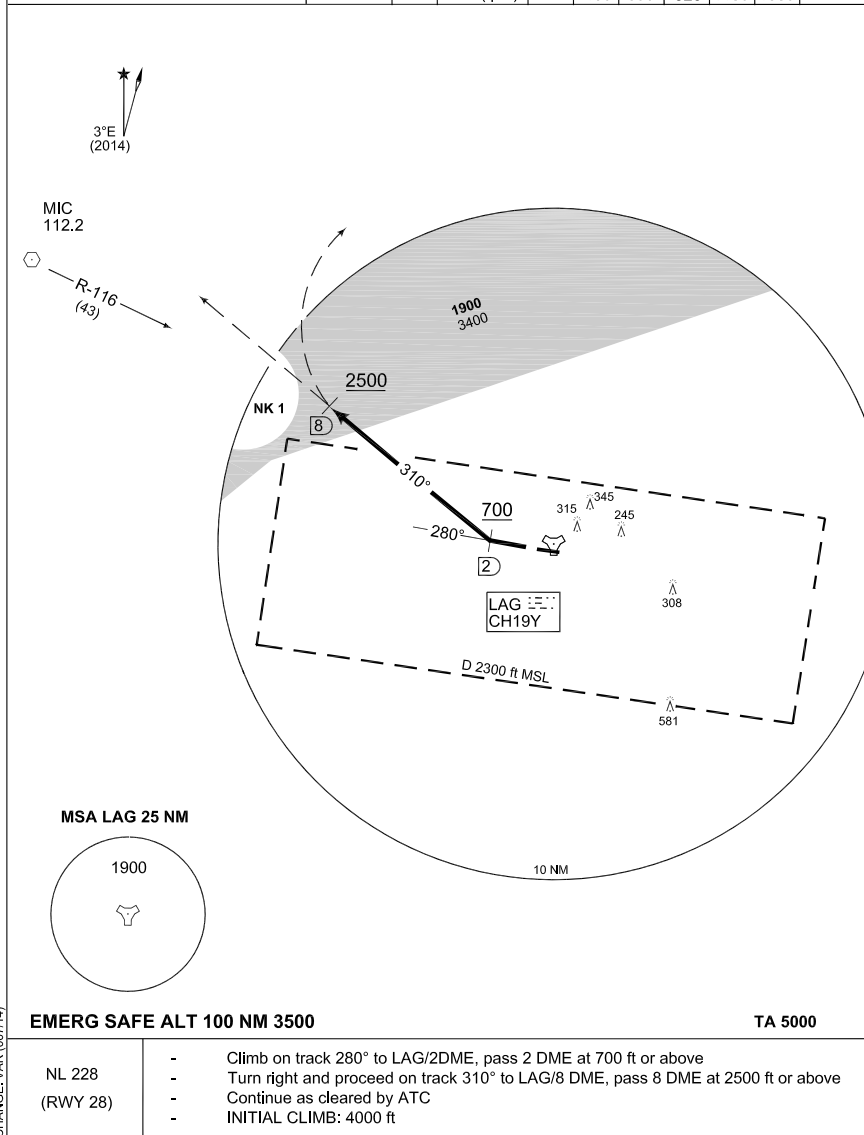
FSBW 06 MAR 2014

TERPS
OPERATIONAL INSTRUMENT DEPARTURE CHART

AD ELEV 140

NL 228
LAAGE (ETNL)

LAAGE TWR		LAAGE RADAR		BREMEN RADAR						
336.400	118.425	358.650	133.625	259.825	124.175					
		RWY	Knots	60	120	180	240	300	360	to
		28	V/V (fpm)	230	460	690	920	1150	1380	1900 ft



CHANGE: VAR (007/14)

AFSBW 06 MAR 2014

NL 228

53°55.09' N
012°16.76' E

LAAGE (ETNL)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 140

ILS or LOC Y RWY 10
LAAGE (ETNL)

BREMEN RADAR 259.825 124.175		LAAGE RADAR 358.650 133.625		LAAGE TWR 336.400 257.800 118.425	
TACAN/LLZ	APP COURSE	GS INCPT ALT	GS	DA	TDZE
LAG CH19Y/ILAE 108.55	095°	2000	3.0°	see CAT	139
					ALS-Length 900 M
					LDA 8268

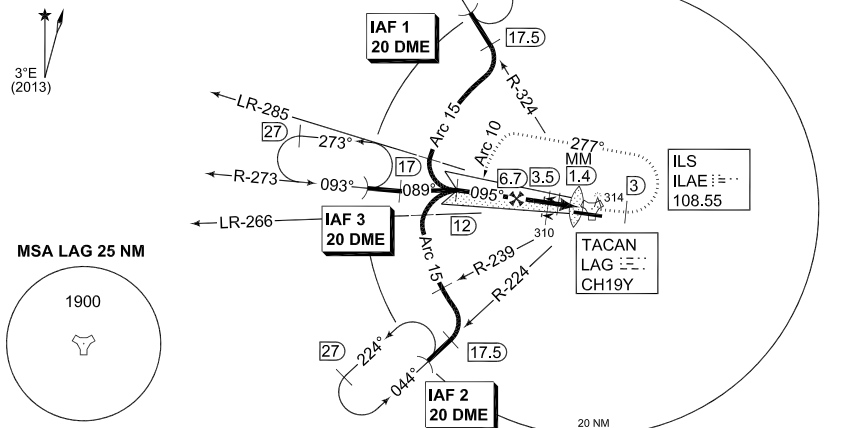
NOTE:

- TIMING NOT AUTHORIZED FOR DEFINING THE MAP
- NON STANDARD PROCEDURE (DEAD RECKONING INTERCEPTS LOC WITH 6.0° ONLY)
- FOR MILITARY USE ONLY
- PAPI AND ILS GLIDEPATH DO NOT COINCIDE
- TACAN REQUIRED
- MISSED APCH TURN LIMITED TO 250KT IAS MAX
- CIRCLING CAT C LIMITED TO 155KT IAS MAX
CIRCLING CAT D LIMITED TO 180KT IAS MAX
CIRCLING NOT AUTHORIZED N OF RWY 28/10

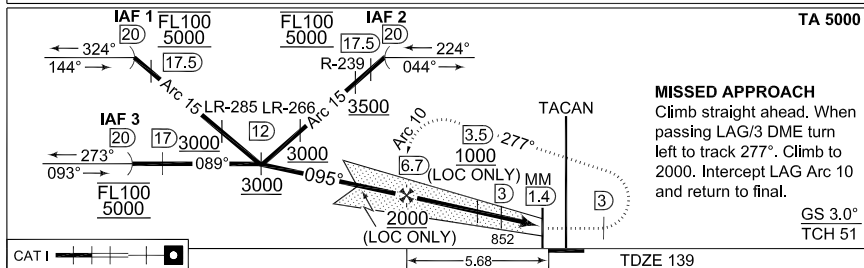
IAF 1
54°11.91'N
011°58.64'E

IAF2
53°41.53'N
011°52.58'E

IAF3
53°57.03'N
011°43.49'E



EMERG SAFE ALT 100 NM 3500



TA 5000					
MISSED APPROACH Climb straight ahead. When passing LAG/3 DME turn left to track 277°. Climb to 2000. Intercept LAG Arc 10 and return to final.					
GS 3.0° TCH 51					
CAT I					
TDZE 139					
CATEGORY	A	B	C	D	E
ILS Y 10	339 - 0.8/550 200 (200-0.8/1.2)				358 - 0.8/550 216 (300-0.8/1.6)
LOC Y 10	490 - 0.8 351 (400-0.8/1.6)		490 - 1.2 351 (400-1.2/1.6)		490 - 1.2 351 (400-1.2/2.0)
CIRCLING	550 - 1.6 410 (500-1.6)	640 - 1.6 500 (500-1.6)	1160 - 4.8 1020 (1100-4.8)	1170 - 4.8 1030 (1100-4.8)	1420 - 4.8 1280 (1300-4.8)

ILS or LOC Y RWY 10

53°55.09'N
012°16.76'E

LAAGE (ETNL)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 140

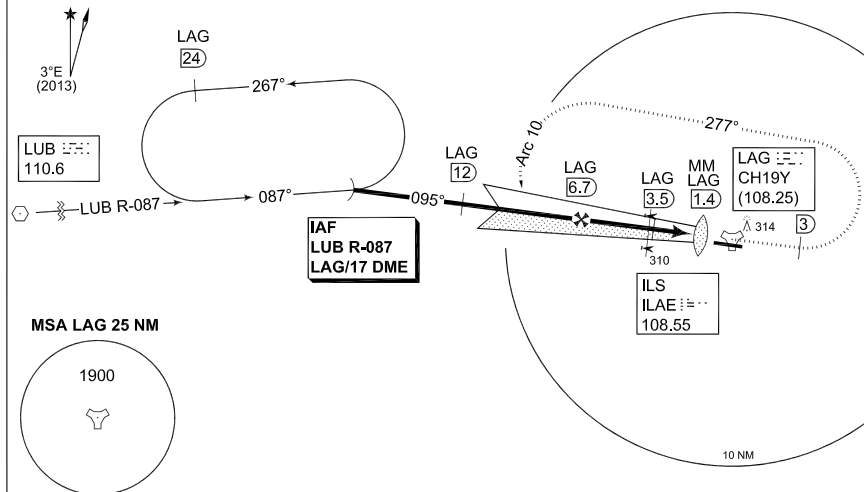
ILS or LOC Z RWY 10
LAAGE (ETNL)

BREMEN RADAR 259.825 124.175		LAAGE RADAR 358.650 133.625		LAAGE TWR 336.400 257.800 118.425		
TACAN/LLZ	APP COURSE	GS INCPT ALT	GS	DA	TDZE	ALS-Length
LAG CH19Y/ILAE 108.55	095°	2000	3.0°	see CAT	139	900 M
				LDA		8268

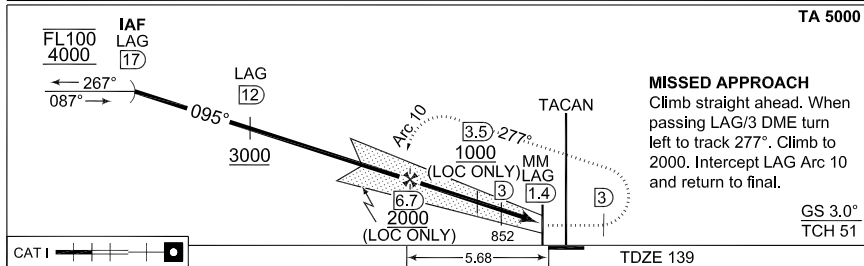
NOTE:

- a) PAPI AND ILS GLIDEPATH DO NOT COINCIDE
- b) DME REQUIRED
- c) MISSED APCH TURN LIMITED TO 250KT IAS MAX
- d) CIRCLING CAT C LIMITED TO 155KT IAS MAX
CIRCLING CAT D LIMITED TO 180KT IAS MAX
CIRCLING NOT AUTHORIZED N OF RWY 28/10

IAF
53°57.26'N
011°48.64'E



EMERG SAFE ALT 100 NM 3500



TA 5000

MISSED APPROACH

Climb straight ahead. When passing LAG/3 DME turn left to track 277°. Climb to 2000. Intercept LAG Arc 10 and return to final.

GS 3.0°
TCH 51

CATEGORY	A	B	C	D	E
ILS Z 10	339 - 0.8/550 200 (200-0.8/1.2)				358 - 0.8/550 216 (300-0.8/1.6)
LOC Z 10	490 - 0.8 351 (400-0.8/1.6)		490 - 1.2 351 (400-1.2/1.6)	490 - 1.2 351 (400-1.2/2.0)	
CIRCLING	550 - 1.6 410 (500-1.6)	640 - 1.6 500 (500-1.6)	1160 - 4.8 1020 (1100-4.8)	1170 - 4.8 1030 (1100-4.8)	1420 - 4.8 1280 (1300-4.8)

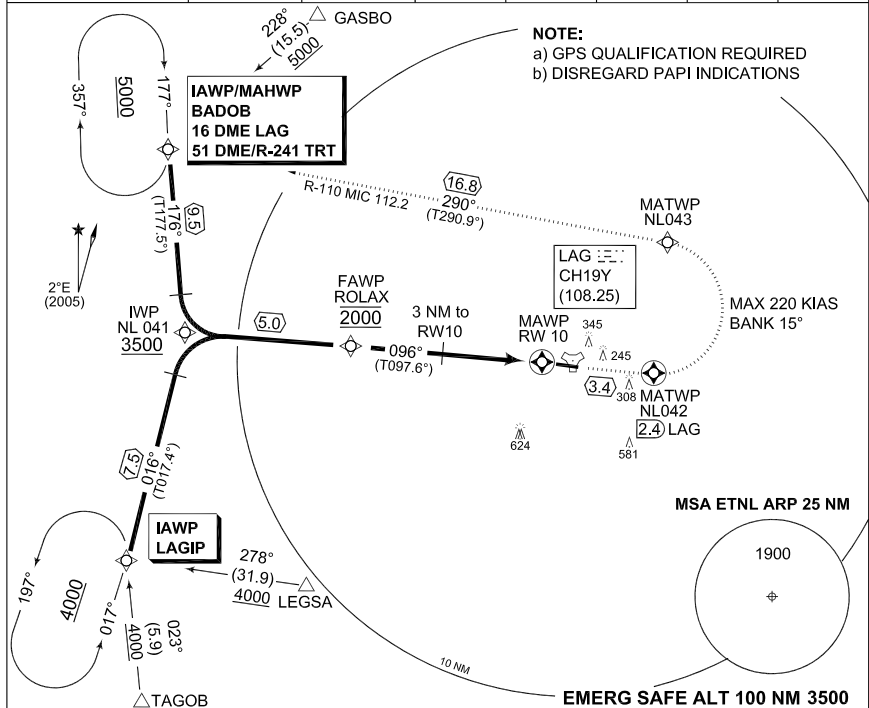
ILS or LOC Z RWY 10

53°55.09'N
012°16.76'E

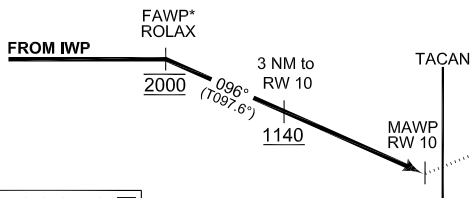
LAAGE (ETNL)

RNAV (GPS) RWY 10
LAAGE (ETNL)

BREMEN RADAR		LAAGE RADAR		LAAGE TWR			
259.825	124.175	358.650	133.625		336.400	257.800	118.425
TACAN	APP COURSE	FAWP ALT	Descent GR	MDA	THR ELEV	ALS-Length	LDA
LAG CH19Y (108.25)	096°	2000	3.0°/5.2%	560	139	900 M	8268



*VERTICAL FLY-BY APPROVED



MISSED APPROACH

TA 5000

1. Non TACAN equipped acft:
Climb straight ahead to 2.4 DME LAG,
LT, to intercept R-110 MIC, on R-110
MIC to BADOB climbing to 5000 ft.
2. TACAN equipped acft:
Execute TACAN missed approach.

GPS: NL042-NL043-BADOB [A5000]

					TCH 42
DIST THR	5	4	3	2	1
ALTITUDE	1780	1460	1140	820	500

CATEGORY	A	B	C	D	E
GPS 10	560 - 0.8 421 (500-0.8/1.6)		560 - 1.2 421 (500-1.2/2.0)		560 - 1.6 421 (500-1.6/2.4)

CHANGE: MA (232/15)

AFSBW 23 JUL 2015

RNAV (GPS) RWY 10

53°55.09'N
012°16.76'E

LAAGE (ETNL)

RWY 10 from BADOB APPROACH RNAV (GPS)

BADOB (IAWP)	54 06 06.32 N	011 56 55.95 E
NL 041 (IWP)	53 56 35.05 N	011 57 38.83 E
ROLAX (FAWP)	53 55 55.94 N	012 06 02.27 E
RW 10 (MAWP)	53 55 10.56 N	012 15 37.01 E
NL 042 (MATWP 2.4 DME LAG)	53 54 43.53 N	012 21 14.87 E
NL 043 (MATWP)	54 00 08.99 N	012 23 36.26 E
BADOB (MAHWP)	54 06 06.32 N	011 56 55.95 E

RWY 10 from LAGIP APPROACH RNAV (GPS)

LAGIP (IAWP)	53 49 29.16 N	011 53 53.20 E
NL 041 (IWP)	53 56 35.05 N	011 57 38.83 E
ROLAX (FAWP)	53 55 55.94 N	012 06 02.27 E
RW 10 (MAWP)	53 55 10.56 N	012 15 37.01 E
NL 042 (MATWP 2.4 DME LAG)	53 54 43.53 N	012 21 14.87 E
NL 043 (MATWP)	54 00 08.99 N	012 23 36.26 E
BADOB (MAHWP)	54 06 06.32 N	011 56 55.95 E

To enhance VNAV Operation for FMS aircraft, following additional data are provided:

RWY 10 - NL 710, 3 NM to RW 10	53 55 34.48 N	012 10 35.25 E A 1140
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Threshold Coordinates

RWY 10	53 55 10.56 N	012 15 37.01 E
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PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 140

TACAN RWY 10
LAAGE (ETNL)

BREMEN RADAR 259.825 124.175		LAAGE RADAR 358.650 133.625		LAAGE TWR 336.400 257.800 118.425		
TACAN LAG CH19Y	APP COURSE 093°	FAF ALT 1800	Descent GR 5.2%	MDA 530	TDZE 139	ALS-Length 900 M
				LDA 8268		

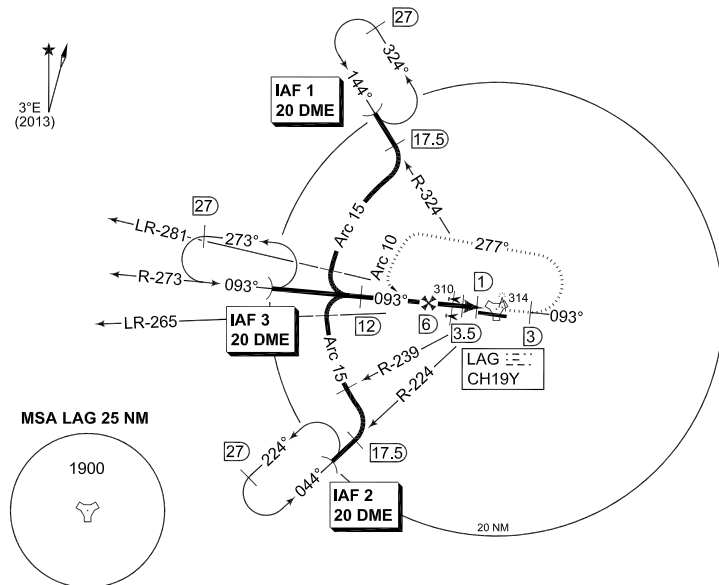
NOTE:

- a) TIMING NOT AUTHORIZED FOR DEFINING THE MAP
b) MISSED APCH TURN LIMITED TO 250KT IAS MAXIMUM

IAF 1
54°11.91'N
011°58.64'E

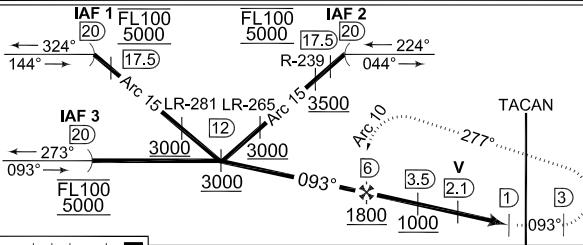
IAF2
53°41.53'N
011°52.58'E

IAF3
53°57.03'N
011°43.49'E



EMERG SAFE ALT 100 NM 3500

TA 5000



MISSED APPROACH

Climb straight ahead.
Continue outbound on LAG R-093. When passing LAG R-093/3 DME turn left to track 277°. Climb to 1800ft. Intercept LAG Arc 10 and return to final.

CHANGE: MINIMA CRITERIA (237/14)

CAT I		5.08		TDZE 139	
CATEGORY	A	B	C	D	E
TACAN 10	530 - 1.2 391 (400-1.2/1.6)			530 - 1.2 391 (400-1.2/2.0)	530 - 1.6 391 (400-1.6/2.4)
PAR 10	339 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 10

53°55.09'N
012°16.76'E

LAAGE (ETNL)

AFSBW 05 FEB 2015

ILS or LOC Y RWY 28
LAAGE (ETNL)

AFSBw 28 MAY 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 140

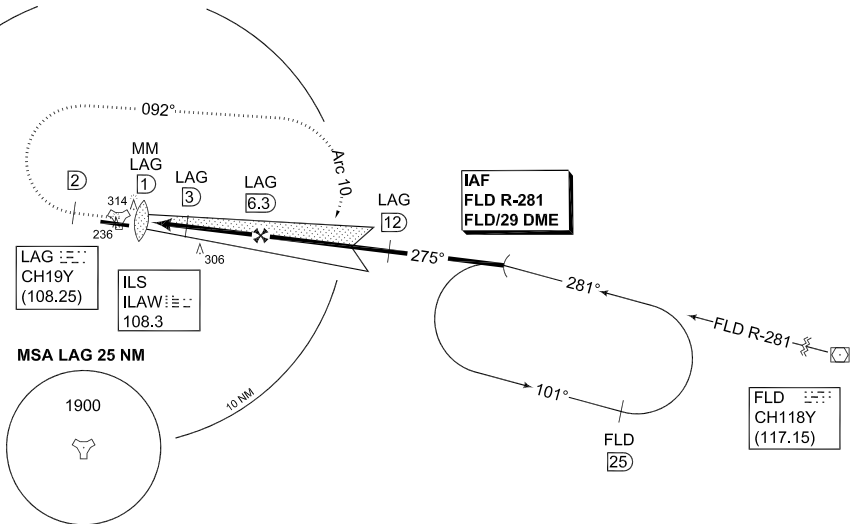
ILS or LOC Z RWY 28
LAAGE (ETNL)

BREMEN RADAR 259.825 124.175		LAAGE RADAR 358.650 133.625		LAAGE TWR 336.400 257.800 118.425		
TACAN/LOC LAG CH19Y/ILAW 108.3	APP COURSE 275°	GS INCPT ALT 2000	GS 3.0°(5.2%)	DA see CAT	TDZE 133	ALS-Length 900 M
				LDA 8268		

NOTE:

- a) PAPI AND ILS GLIDEPATH DO NOT COINCIDE
- b) DME REQUIRED
- c) MISSED APCH TURN LIMITED TO 250KT IAS MAX
- d) CIRCLING CAT C LIMITED TO 155KT IAS MAX
CIRCLING CAT D LIMITED TO 180KT IAS MAX
CIRCLING NOT AUTHORIZED N OF RWY 28/10

IAF
53°52.71'N
012°45.61'E

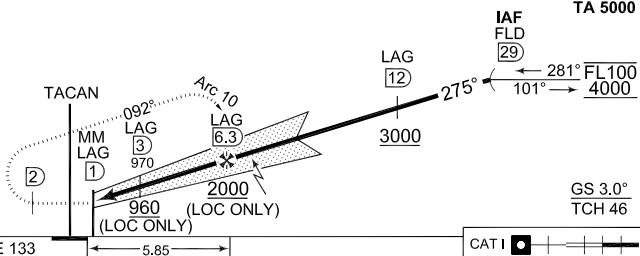


EMERG SAFE ALT 100 NM 3500

MISSED APPROACH

Climb straight ahead. When passing LAG/2 DME turn right to track 092°. Climb to 2000. Intercept Arc 10 and return to final.

TA 5000



CHANGE NAV ID FREQ (23/15)

TDZE 133		5.85		CAT I	
CATEGORY	A	B	C	D	E
ILS Z 28	333 - 550 200 (200-0.8/1.2)				363 - 550 230 (300-0.8/1.6)
LOC Z 28	450 - 0.8 317 (400-0.8/1.6)		450 - 1.2 317 (400-1.2/1.6)		450 - 1.2 317 (400-1.2/2.0)
CIRCLING	550 - 1.6 410 (500-1.6)	640 - 1.6 500 (500-1.6)	1160 - 4.8 1020 (1100-4.8)	1170 - 4.8 1030 (1100-4.8)	1420 - 4.8 1280 (1300-4.8)

ILS or LOC Z RWY 28

53°55.09'N
012°16.76'E

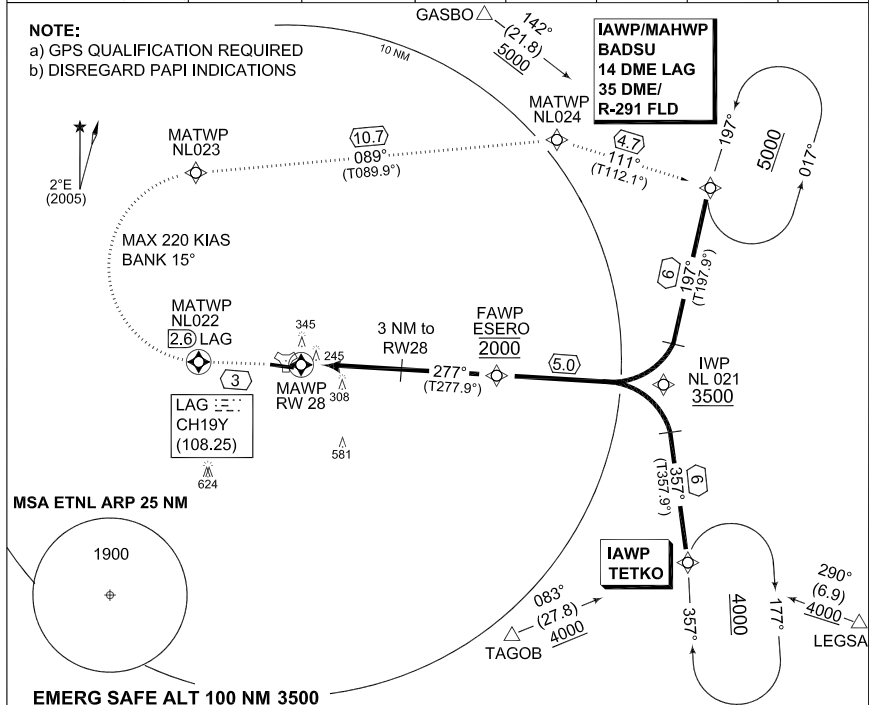
LAAGE (ETNL)

AFSBw 23 JUL 2015

RNAV (GPS) RWY 28
LAAGE (ETNL)

BREMEN RADAR		LAAGE RADAR		LAAGE TWR			
259.825	124.175	358.650	133.625		336.400	257.800	118.425
TACAN	APP COURSE	FAWP ALT	Descent GR	MDA	THR ELEV	ALS-Length	LDA
LAG CH19Y (108.25)	277°	2000	3.0°/5.2%	560	111	900 M	8268

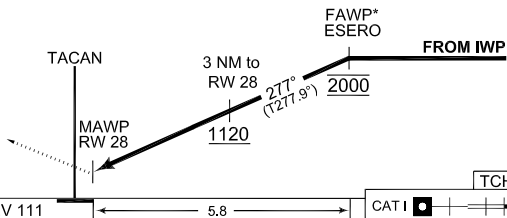
NOTE:
a) GPS QUALIFICATION REQUIRED
b) DISREGARD PAPI INDICATIONS



*VERTICAL FLY-BY APPROVED

TA 5000

2. TACAN equipped acft:
Execute TACAN missed approach.
GPS: NL022-NL023-NL024-BADSU
[A5000]



DIST THR	5	4	3	2	1
ALTITUDE	1750	1430	1120	800	480

CATEGORY		A	B	C	D	E
IMPS	GPS 28	560 - 0.8 449 (500-0.8/1.6)		560 - 1.2 449 (500-1.2/2.0)	560 - 1.6 449 (500-1.6/2.4)	

CHANGE: MINIMA CRITERIA (237/14)

AFSBw 05 FEB 2015

RNAV (GPS) RWY 28

53°55.09'N
012°16.76'E

LAAGE (ETNL)

RWY 28 from BADSU APPROACH RNAV (GPS)

BADSU (IAWP)	53 59 13.16 N	012 39 09.83 E
NL 021 (IWP)	53 53 31.28 N	012 36 01.89 E
ESERO (FAWP)	53 54 12.42 N	012 27 39.55 E
RW 28 (MAWP)	53 54 59.64 N	012 17 53.86 E
NL 022 (MATWP 2.6 DME LAG)	53 55 23.66 N	012 12 52.14 E
NL 023 (MATWP)	54 00 59.54 N	012 13 28.48 E
NL 024 (MATWP)	54 00 59.97 N	012 31 46.02 E
BADSU (MAHWP)	53 59 13.16 N	012 39 09.83 E

RWY 28 from TETKO APPROACH RNAV (GPS)

TETKO (IAWP)	53 47 32.06 N	012 36 23.60 E
NL 021 (IWP)	53 53 31.28 N	012 36 01.89 E
ESERO (FAWP)	53 54 12.42 N	012 27 39.55 E
RW 28 (MAWP)	53 54 59.64 N	012 17 53.86 E
NL 022 (MATWP 2.6 DME LAG)	53 55 23.66 N	012 12 52.14 E
NL 023 (MATWP)	54 00 59.54 N	012 13 28.48 E
NL 024 (MATWP)	54 00 59.97 N	012 31 46.02 E
BADSU (MAHWP)	53 59 13.16 N	012 39 09.83 E

To enhance VNAV Operation for FMS aircraft, following additional data are provided:

RWY 28 - NL 728, 3 NM to RW 28 53 54 35.42 N 012 22 55.48 E A 1120

Threshold Coordinates

RWY 28 53 54 59.64 N 012 17 53.86 E

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 140

TACAN RWY 28
LAAGE (ETNL)

BREMEN RADAR 259.825 124.175		LAAGE RADAR 358.650 133.625		LAAGE TWR 336.400 257.800 118.425		
TACAN LAG CH19Y	APP COURSE 278°	FAF ALT 1900	Descent GR 5.2%	MDA 530	TDZE 133	ALS-Length 900 M
				LDA 8268		

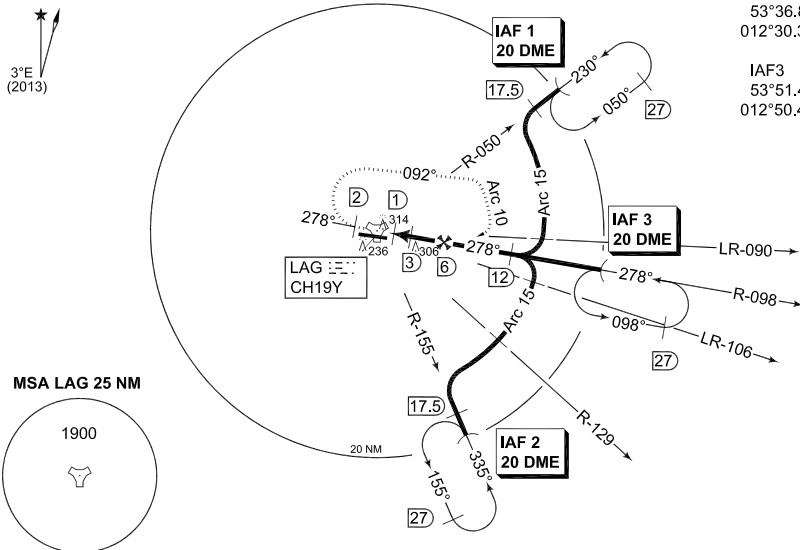
NOTE:

- a) TIMING NOT AUTHORIZED FOR DEFINING THE MAP
b) MISSED APCH TURN LIMITED TO 250KT IAS MAXIMUM

IAF 1
54°07.43'N
012°43.97'E

IAF2
53°36.80'N
012°30.31'E

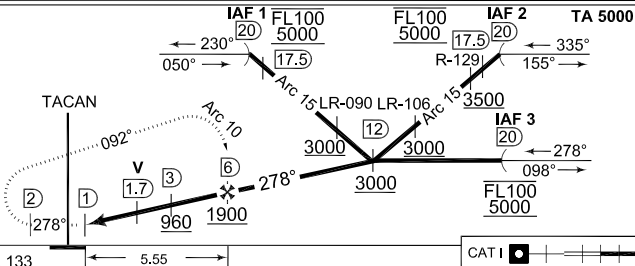
IAF3
53°51.48'N
012°50.40'E



EMERG SAFE ALT 100 NM 3500

MISSED APPROACH

Climb straight ahead.
Continue outbound on LAG R-278. When passing LAG R-278/2 DME turn right to track 092°. Climb to 1900ft. Intercept LAG Arc 10 and return to final.



CHANGE: MINIMA CRITERIA (237/14)

TDZE 133		5.55		CAT I	
CATEGORY	A	B	C	D	E
TACAN 28	530 - 0.8 397 (400-0.8/1.6)		530 - 1.2 397 (400-1.2/1.6)	530 - 1.2 397 (400-1.2/2.0)	530 - 1.6 397 (400-1.6/2.4)
PAR 28	333 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 28

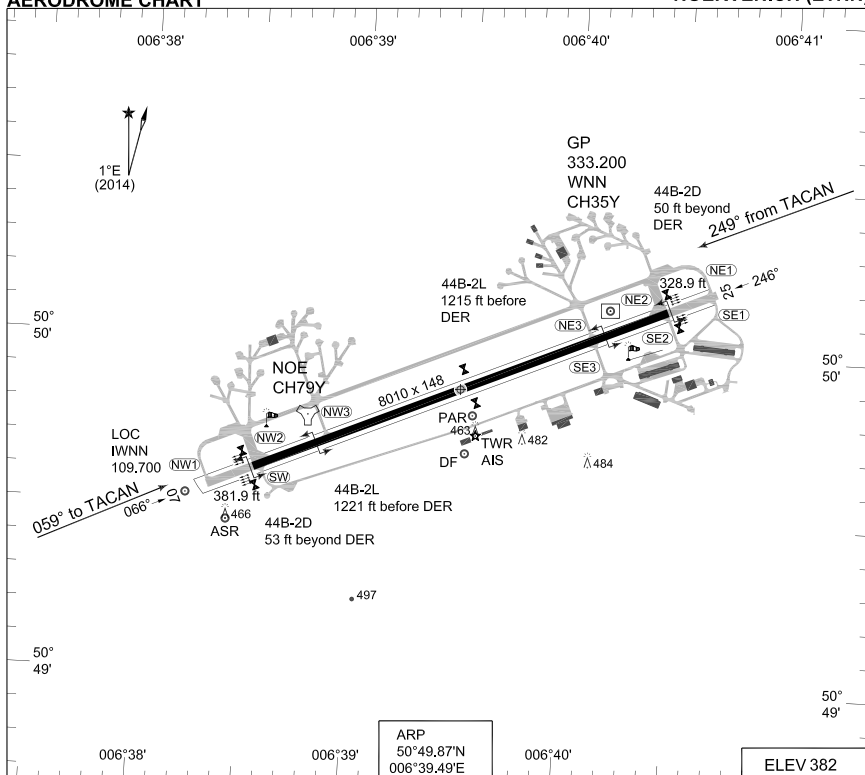
53°55.09'N
012°16.76'E

LAAGE (ETNL)

AFSBW 05 FEB 2015

AERODROME CHART

NOERVENICH (ETNN)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
07	81	8010	8010	8010	8010	3.0°	382	50°49.61'N 006°38.53'E
25	81	8010	8010	8010	8010	3.0°	348	50°50.13'N 006°40.44'E

NOERVENICH TWR 251.100 122.100 136.200
 NOERVENICH RADAR 281.900 379.250 123.300 129.050 338.075x 138.200x SSR 4450 - 4457

*beyond of threshold

- MA 3.0%
- MA 2.5%

	PROC. CRITERIA	RWY	GS	TCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	PANS-OPS PANS-OPS	07 25	3.0° 3.0°	49.2 51.2	1019.64* 902.33*	ABCDE ABCDE	MIPST MIPST	582 - 0.8 200 (200-0.8/1.2) 529 - 0.8 200 (200-0.8/1.2) 534 - 0.8 205 (300-0.8/1.2)
SRA	TERPS TERPS	07 25	 	 	 	AB C DE AB CD E	TERPS TERPS	760 - 0.8 375 (400-0.8/1.6) 760 - 1.2 375 (400-1.2/1.6) 760 - 1.2 375 (400-1.2/2.0) 680 - 0.8 332 (400-0.8/1.6) 680 - 1.2 332 (400-1.2/1.6) 680 - 1.2 332 (400-1.2/2.0)

AERODROME CHART

NOERVENICH (ETNN)

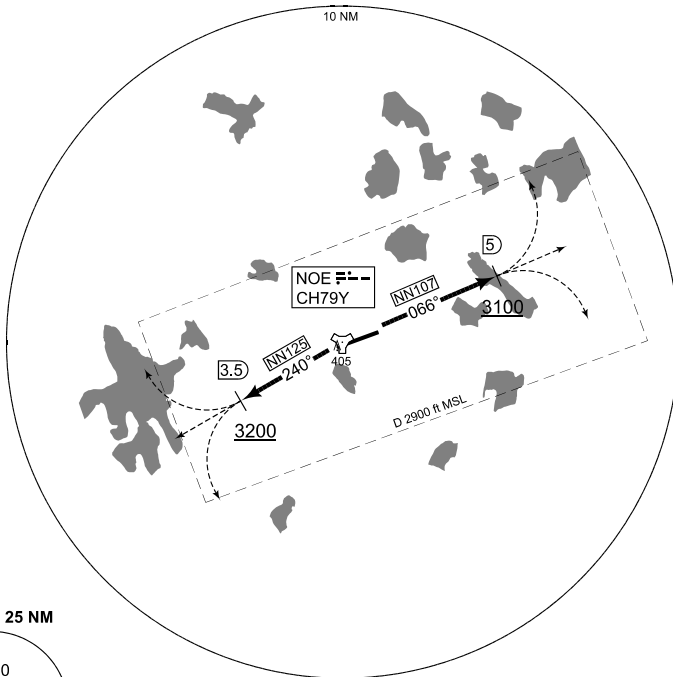
PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 382

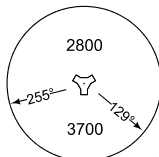
NN 107 - 125
NOERVENICH (ETNN)

LANGEN RADAR		NOERVENICH RADAR				NOERVENICH TOWER					
344.550	135.350	281.900	129.050	123.300		251.100	136.200	122.100			
		RWY	from-to	60	120	180	240	300	360	Reason	
		07	DER - 3100	711	1421	2131	2841	3551	4259	ATC	
		25	DER - 3200	801	1602	1678	3203	4003	4807	ATC	

NOTE:
NO TURN BEFORE DER



MSA NOE 25 NM



EMERG SAFE ALT 100 NM 4200

TA 5000

NN 107 (RWY 07)	- Climb on track 066° to 3100 ft within NOE/5 DME - When passing 3100 ft, continue as cleared by ATC
NN 125 (RWY 25)	- Climb on track 240° to 3200 ft within NOE/3.5 DME - When passing 3200 ft, continue as cleared by ATC

NN 107 - 125

50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

CHANGE NEW PROCEDURE (37/1/15)

ZentrLufOp 07 JAN 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 382

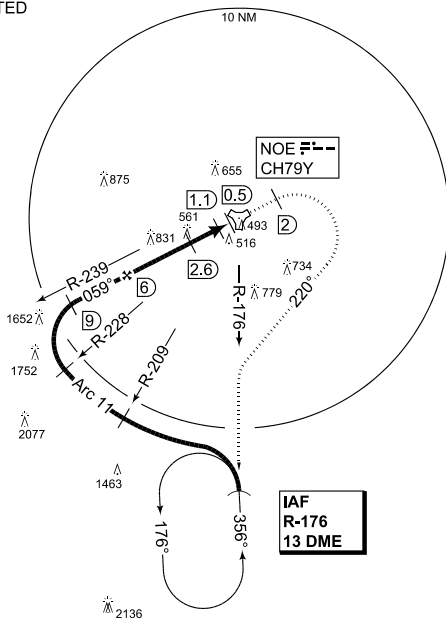
TACAN RWY 07
NOERVENICH (ETNN)

LANGEN RADAR		NOERVENICH RADAR			NOERVENICH TOWER		
344.550	135.350	281.900	129.050	123.300	251.100	136.200	122.100
TACAN	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-LENGTH	LDA
NOE CH79Y	059°	2200	5.2%	see CAT	382	1226 M	8010

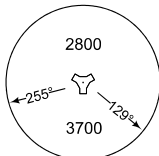
NOTE:

- MISSED APPROACH TURN LIMITED TO 250KT IAS MAXIMUM.
- TACAN REQUIRED

IAF
50°36.81'N
006°39.85'E

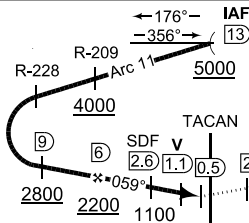


MSA NOE 25 NM



EMERG SAFE ALT 100 NM 4200

TA 5000



MISSED APPROACH

Climb straight ahead to 4000 ft. At NOE/2 DME turn right on track 220° to intercept NOE R-176 inbound IAF and enter Holding.

CAT I

5.75

TDZE 382

TCH 50

CATEGORY	A	B	C	D	E
TACAN 07	720 - 0.8 338 (400-0.8/1.6)	720 - 0.8 338 (400-0.8/1.6)	720 - 1.2 338 (400-1.2/1.6)	730 - 1.2 348 (400-1.2/2.0)	740 - 1.2 358 (400-1.2/2.0)
CIRCLING	820 - 1.9 438 (500-1.9)	950 - 2.8 568 (600-2.8)	1470 - 3.7 1088 (1100-3.7)	1540 - 4.6 1158 (1200-4.6)	1670 - 6.5 1288 (1200-6.5)

TACAN RWY 07

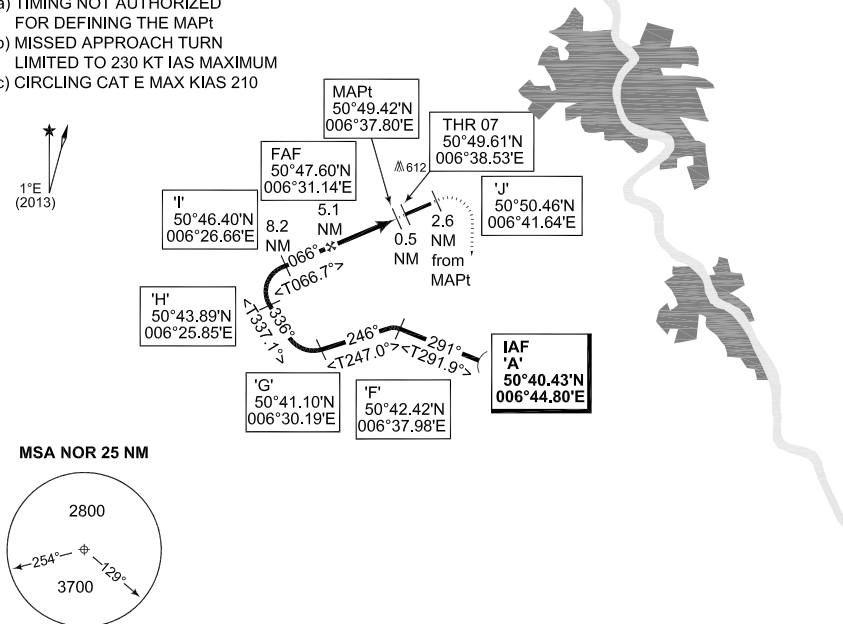
50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

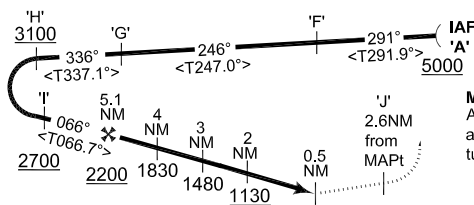
IAA RWY 07
NOERVENICH (ETNN)

LANGEN RADAR		NOERVENICH RADAR			NOERVENICH TWR		
344.550	135.350	281.900	129.050		251.100	136.200	
	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-L length	LDA
	066°	2200	5.76%	760	382	1226 M	8010

- a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPt
- b) MISSED APPROACH TURN LIMITED TO 230 KT IAS MAXIMUM
- c) CIRCLING CAT E MAX KIAS 210



EMERG SAFE ALT 100 NM 4200



TA 5000

MISSED APPROACH
At 0.5 NM climb straight ahead to 3100 ft. At point 'J', turn right inbound point 'A'.

TCH 50

CAT I =

DISTANCES IN NM FROM THR

TDZE 382

CATEGORY		D	E
MIPS	IAA 07	760 - 1.2 378 (400-1.2/2.0)	
	CIRCLING	1520 - 4.6 1135 (1200-4.6)	1530 - 6.5 1145 (1200-6.5)
	PAR 07	582 - 0.8 200 (200-0.8/1.2) GS 3.0°	

IAA RWY 07

50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 382

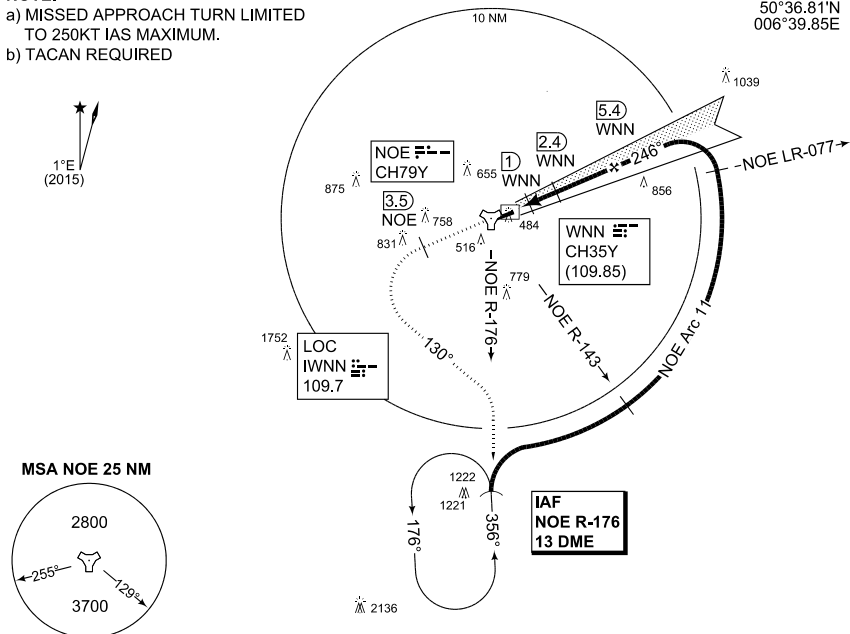
ILS or LOC RWY 25
NOERVENICH (ETNN)

LANGEN RADAR 344.550 135.350	NOERVENICH RADAR 281.900 129.050 123.300			NOERVENICH TOWER 251.100 136.200 122.100			
TACAN/LOC NOE CH79Y/IWNN109.7	APP COURSE 246°	GS INTCTPT ALT 2000	Descent GR 5.2%	MDA see CAT	TDZE 348	ALS-LENGTH 1215 M	LDA 8010

NOTE:

- MISSED APPROACH TURN LIMITED TO 250KT IAS MAXIMUM.
- TACAN REQUIRED

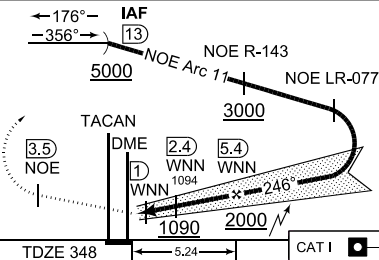
IAF
50°36.81'N
006°39.85'E



MISSED APPROACH

Climb straight ahead to 4000 ft. At NOE/3.5 DME turn left on track 130° to intercept NOE R-176 inbound IAF and enter Holding.

TA 5000



CHANGE NEW PROCEDURE (371/15)

CATEGORY	A	B	C	D	E
ILS 25	529 - 0.8 200 (200-0.8/1.2)	529 - 0.8 200 (200-0.8/1.2)	529 - 0.8 200 (200-0.8/1.2)	529 - 0.8 200 (200-0.8/1.2)	605 - 1.2 276 (300-1.2/1.6)
LOC 25	630 - 0.8 301 (400-0.8/1.6)	630 - 0.8 301 (400-0.8/1.6)	630 - 0.8 301 (400-0.8/1.6)	630 - 0.8 301 (400-0.8/1.6)	630 - 0.8 301 (400-0.8/1.6)
CIRCLING	820 - 1.9 438 (500-1.9)	950 - 2.8 568 (600-2.8)	1470 - 3.7 1088 (1100-3.7)	1540 - 4.6 1158 (1200-4.6)	1670 - 6.5 1288 (1200-6.5)

ILS or LOC RWY 25

50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

ZentLufOp 07 JAN 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 382

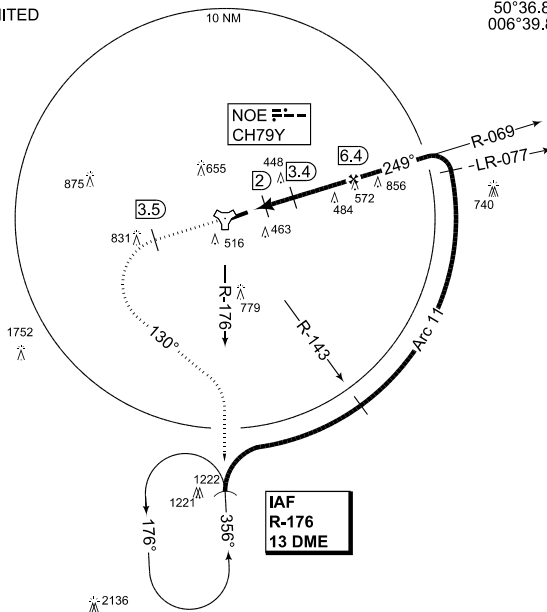
**TACAN RWY 25
NOERVENICH (ETNN)**

LANGEN RADAR		NOERVENICH RADAR			NOERVENICH TOWER		
344.550	135.350	281.900	129.050	123.300	251.100	136.200	122.100
TACAN	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-LENGTH	LDA
NOE CH79Y	249°	2000	5.2%	see CAT	348	1215 M	8010

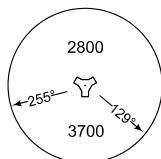
NOTE:

- MISSED APPROACH TURN LIMITED TO 250KT IAS MAXIMUM.
- TACAN REQUIRED

IAF
50°36.81'N
006°39.85'E



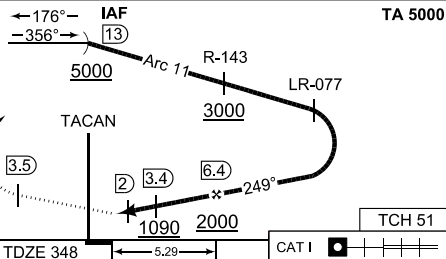
MSA NOE 25 NM



EMERG SAFE ALT 100 NM 4200

MISSED APPROACH

Climb straight ahead to 4000 ft. At NOE/3.5 DME turn left on track 130° to intercept NOE R-176 inbound IAF and enter Holding.



CHANGE NEW PROCEDURE (37/1/15)

CATEGORY	A	B	C	D	E
TACAN 25	650 - 0.8 321 (400-0.8/1.6)	650 - 0.8 321 (400-0.8/1.6)	680 - 1.2 351 (400-1.2/1.6)	700 - 1.2 371 (400-1.2/1.6)	710 - 1.2 381 (400-1.2/2.0)
CIRCLING	820 - 1.9 438 (500-1.9)	950 - 2.8 568 (600-2.8)	1470 - 3.7 1088 (1100-3.7)	1540 - 4.6 1158 (1200-4.6)	1670 - 6.5 1288 (1200-6.5)

TACAN RWY 25

50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

ZentLufOp 07 JAN 2016

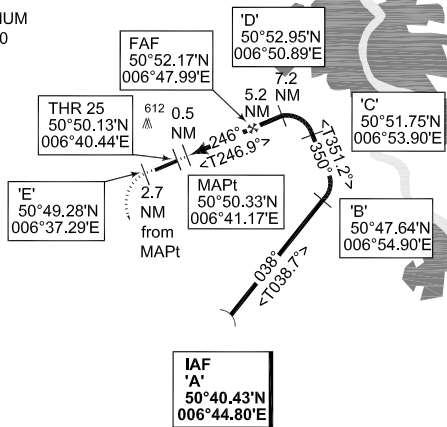
MIPS INSTRUMENT APPROACH CHART

IAA RWY 25
NOERVENICH (ETNN)

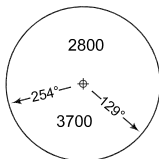
LANGEN RADAR 344.550 135.350		NOERVENICH RADAR 281.900 129.050		NOERVENICH TWR 251.100 136.200	
APP COURSE 246°		FAF ALT 2000	Descent GR 5.28%	MDA 730	TDZE 348
					ALS-Length 1215 M
					LDA 8010

NOTE:

- a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPt
- b) MISSED APPROACH TURN LIMITED TO 230 KT IAS MAXIMUM
- c) CIRCLING CAT E MAX KIAS 210



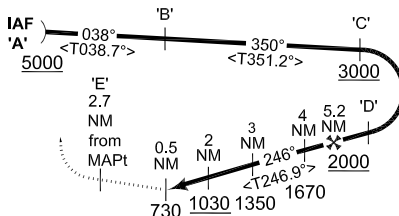
MSA NOR 25 NM



EMERG SAFE ALT 100 NM 4200

MISSED APPROACH

At 0.5 NM climb straight ahead to 3000 ft. At point 'E' turn left inbound point 'A'.



TA 5000

DISTANCES IN NM FROM THR

TDZE 348

TCH 50

CAT I

CATEGORY	D	E
IAA 25	730 - 1.2 400 (400-1.2/2.0)	
CIRCLING	1520 - 4.6 1135 (1200-4.6)	1530 - 6.5 1145 (1200-6.5)
PAR 25	529 - 0.8 200 (200-0.8/1.2) MA 3.0%	
	534 - 0.8 205 (300-0.8/1.2) MA 2.5%	

IAA RWY 25

50°49.87'N
006°39.49'E

NOERVENICH (ETNN)

CHANGE: AD ELEV. PAR 25 (257/15)

AFSBw 17 SEP 2015

SCHLESWIG (ETNS)



SCHLESWIG TWR	358.900	135.150			
SCHLESWIG RADAR	244.450	313.475	240.975	142.050	SSR 4230 - 4237

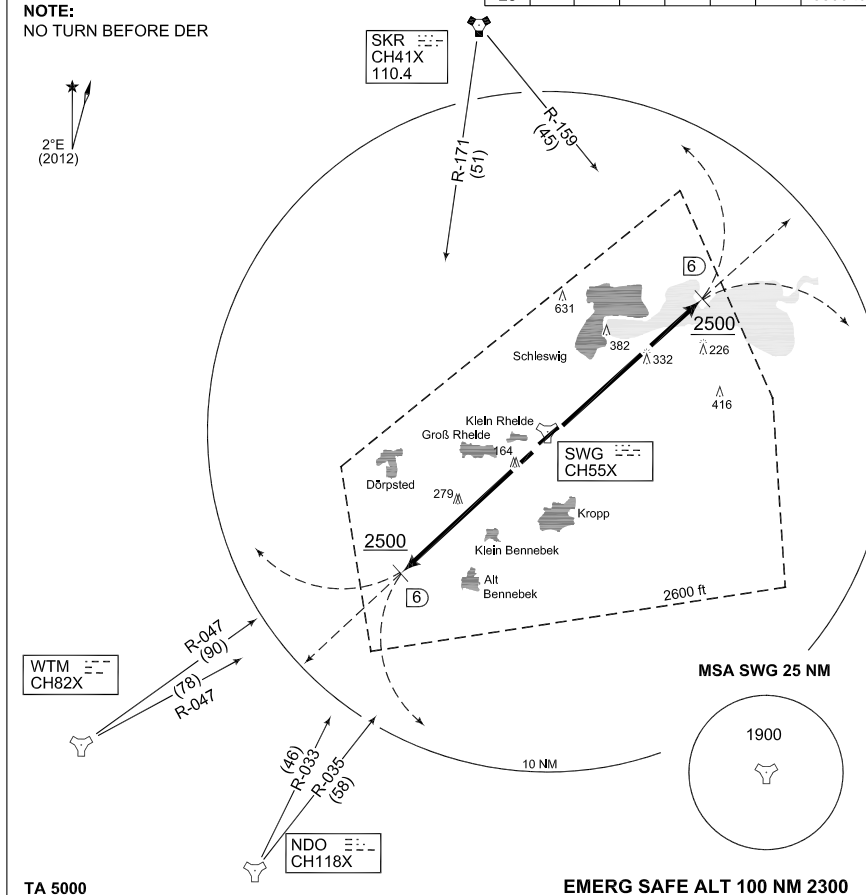
AFSBw 17 SEP 2015

SCHLESWIG (ETNS)

NS 105 - 123
SCHLESWIG (ETNS)

BREMEN RADAR		SCHLESWIG RADAR		SCHLESWIG TWR							
371.750	124.075	244.450	142.050	358.900	135.150						
				RWY	60	120	180	240	300	360	to
				05	437	874	1311	1748	2185	2622	3500 ft
				23	468	936	1404	1872	2340	2808	3500 ft

NOTE:
NO TURN BEFORE DER



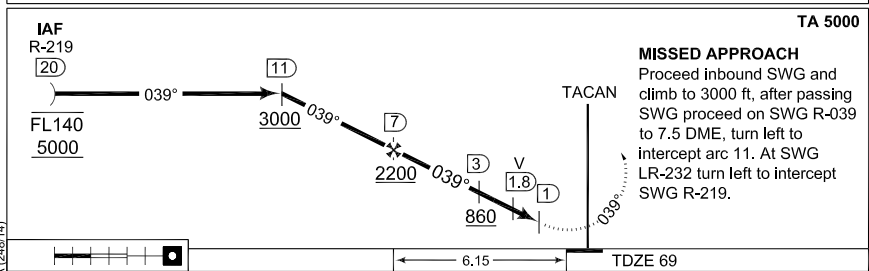
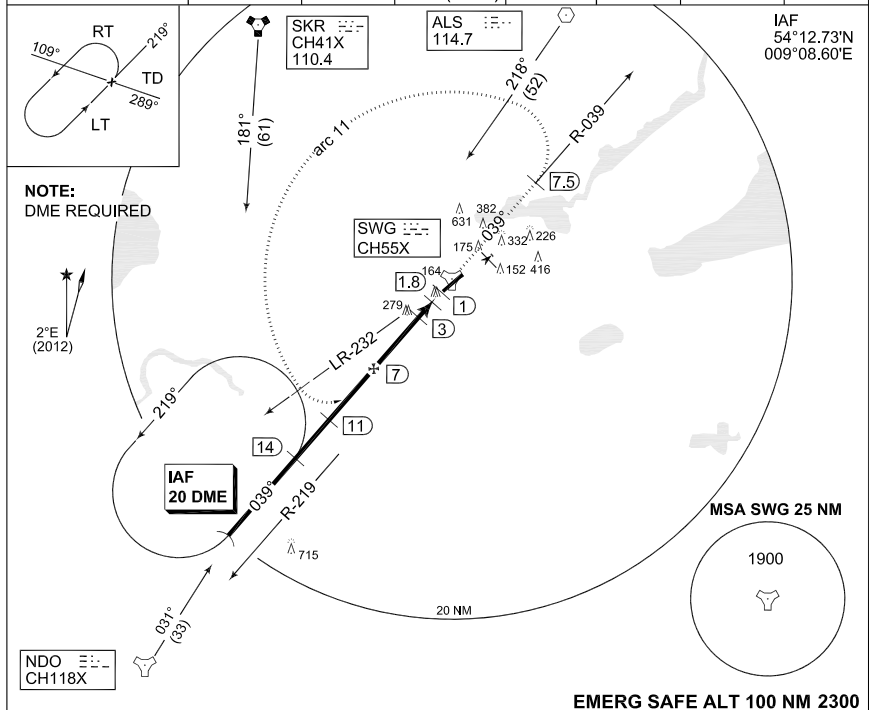
NS 105 (RWY 05)	- Climb straight ahead to 2500 ft - Continue as cleared by ATC CLIMBOUT RESTRICTION: Reach 2500 ft within 6 DME - INITIAL CLIMB: 4000ft
NS 123 (RWY 23)	- Climb straight ahead to 2500 ft - Continue as cleared by ATC CLIMBOUT RESTRICTION: Reach 2500 ft within 6 DME - INITIAL CLIMB: 4000ft

PANS-OPS **INSTRUMENT APPROACH CHART**

AD ELEV 73

TACAN RWY 05
SCHLESWIG (ETNS)

BREMEN RADAR 371.750 124.075	SCHLESWIG RADAR 244.450 142.050	SCHLESWIG TWR 358.900 135.150					
TACAN SWG CH55X	APP COURSE 039°	FAF ALT 2200	Descent GR 3.2° (5.7%)	MDA 420	TDZE 69	ALS-Length 900 M	LDA 8003



CATEGORY	A	B	C	D	E
TACAN 05	420 - 0.8 351 (400-0.8/1.6)		420 - 1.2 351 (400-1.2/1.6)	420 - 1.2 351 (400-1.2/2.0)	
PAR 05	269 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 05

54°27.56'N
009°30.98'E

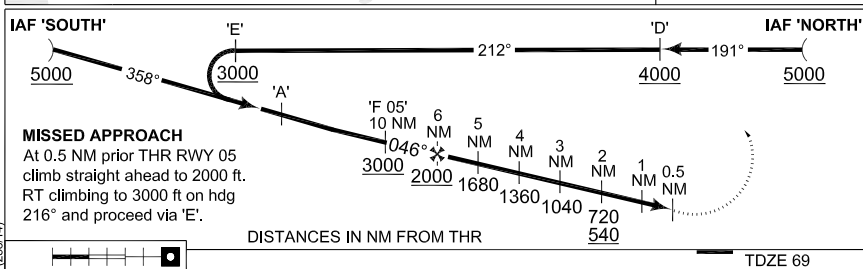
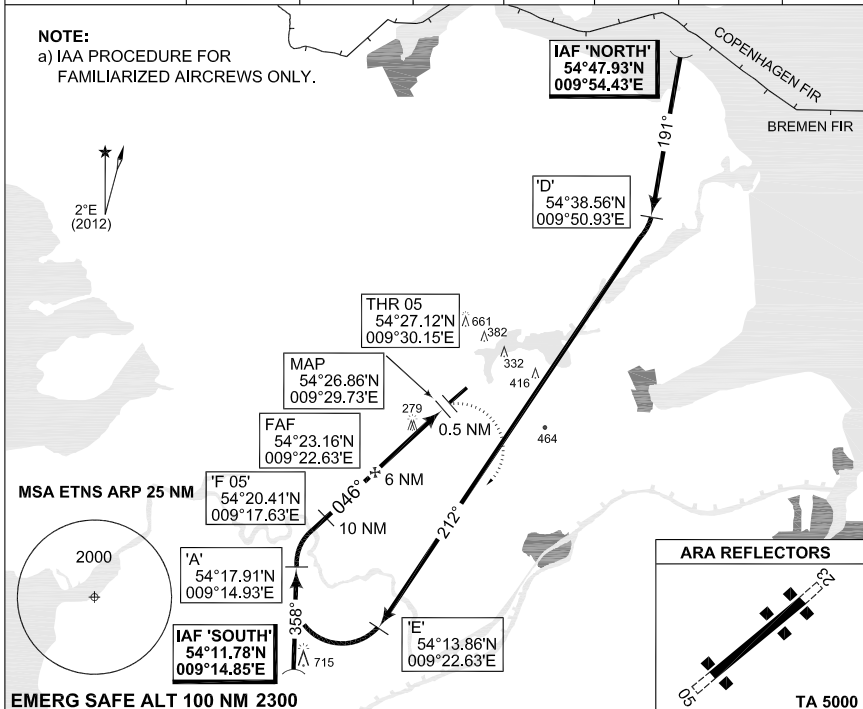
SCHLESWIG (ETNS)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 73

ARA/IAA RWY 05
SCHLESWIG (ETNS)

BREMEN RADAR 371.750 124.075	SCHLESWIG RADAR 244.450 142.050	SCHLESWIG TWR 358.900 135.150	
APP COURSE 046°	FAF ALT 2000	MDA 440	TDZE 69
		ALS-Length 900 M	LDA 8003



CATEGORY	A	B	C	D	E
S-IAA 05	440 - 0.8 371 (400-0.8/1.6)			440 - 1.2 371 (400-1.2/2.0)	

ARA/IAA RWY 05

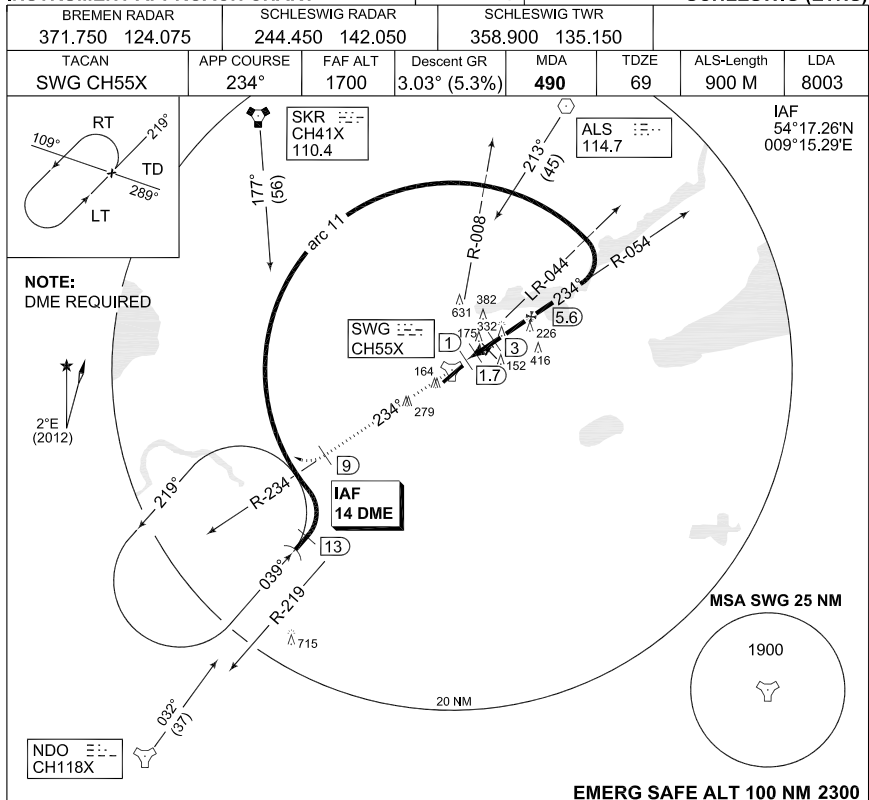
54°27.56'N
009°30.98'E

SCHLESWIG (ETNS)

PANS-OPS **INSTRUMENT APPROACH CHART**

AD ELEV 73

TACAN RWY 23
SCHLESWIG (ETNS)



MISSED APPROACH

Proceed inbound SWG and climb to 4000 ft, after passing SWG proceed on SWG R-234. At SWG 9 DME, turn right to intercept arc 11.

IAF
R-219

14 13

039°

Arc 11

FL140

5000

TACAN

Arc 11

R-008

LR-044

4000

1700

V

1 1.7 3

234°

920

234°

1700

TDZE 69

5.09

CATEGORY		A	B	C	D	E
MPS	TACAN 23	490 - 0.8 421 (500-0.8/1.6)		490 - 1.2 421 (500-1.2/2.0)		490 - 1.6 421 (500-1.6/2.4)
	PAR 23	269 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 23

54°27.56'N
009°30.98'E

SCHLESWIG (ETNS)

TERPS INSTRUMENT APPROACH CHART

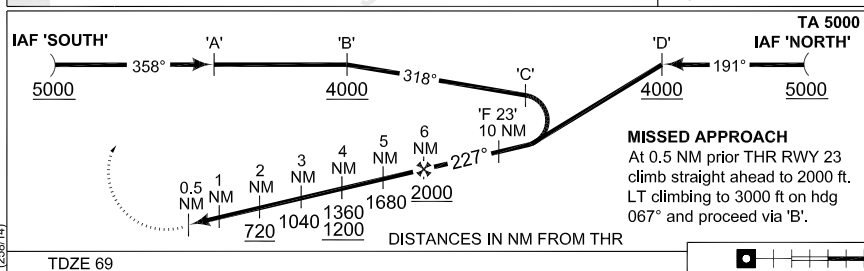
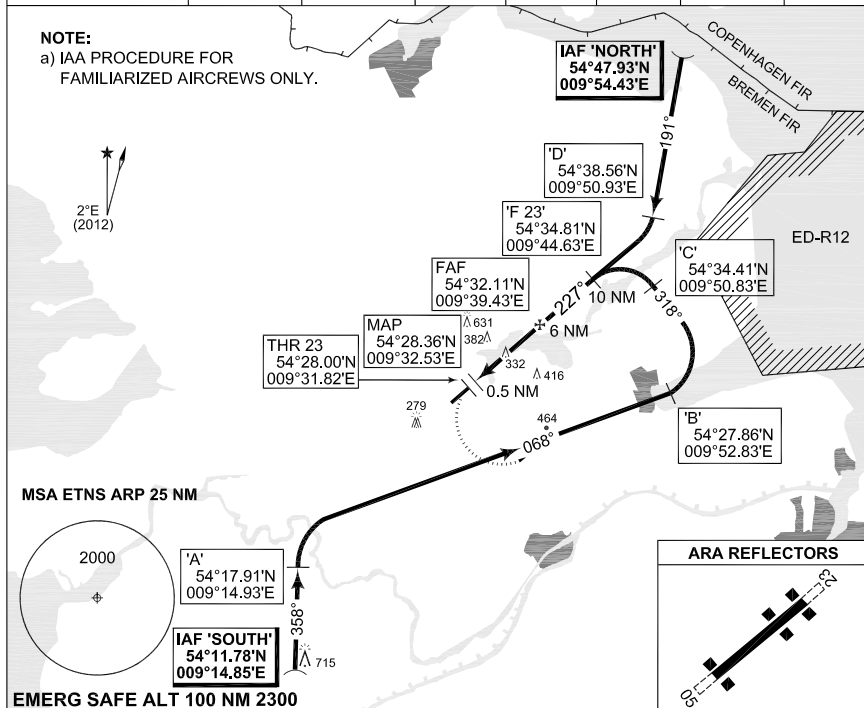
AD ELEV 73

ARA/IAA RWY 23
SCHLESWIG (ETNS)

BREMEN RADAR 371.750 124.075	SCHLESWIG RADAR 244.450 142.050	SCHLESWIG TWR 358.900 135.150	
APP COURSE 227°	FAF ALT 2000	MDA 500	TDZE 69
		ALS-Length 900 M	LDA 8003

NOTE:

a) IAA PROCEDURE FOR
FAMILIARIZED AIRCREWS ONLY.



TDZE 69				
CATEGORY	A	B	C	D
S-IAA 23	500 - 0.8 431 (500-0.8/1.6)		500 - 1.2 431 (500-1.2/2.0)	500 - 1.6 431 (500-1.6/2.4)

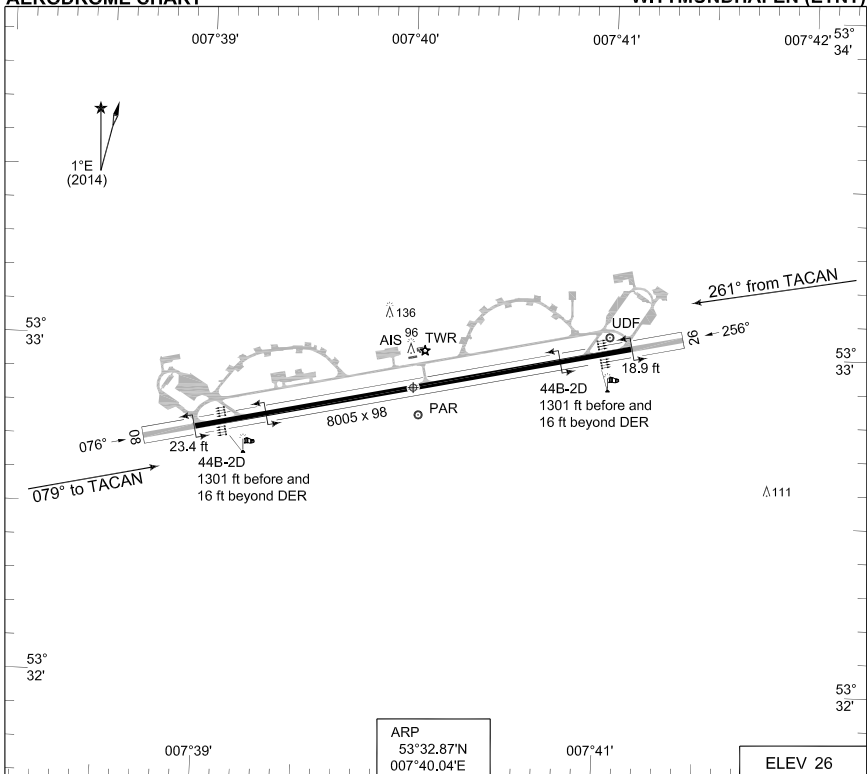
ARA/IAA RWY 23

54°27.56'N
009°30.98'E

SCHLESWIG (ETNS)

AERODROME CHART

WITTMUNDHAFEN (ETNT)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
08	50	8005	8005	8005	8005	3.0°	25.9	53°32.74'N 007°38.96'E
26	50	8005	8005	8005	8005	3.0°	23.0	53°33.01'N 007°41.12'E

WITTMUND TWR 386.875
WITTMUND RADAR 248.050 SSR 4450 - 4457 4270-4277

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS TERPS	08 26	3.0° 3.0°	32 32		584 590	ABCDE ABCDE	TERPS TERPS	226 - 0.8 200 (200-0.8) 223 - 0.8 200 (200-0.8)

AERODROME CHART

WITTMUNDHAFEN (ETNT)

CHANGE: MINIMA CRITERIA (25/1/14)

AFSBw 05 FEB 2015

**TERPS
INSTRUMENT DEPARTURE CHART**

AD ELEV 26

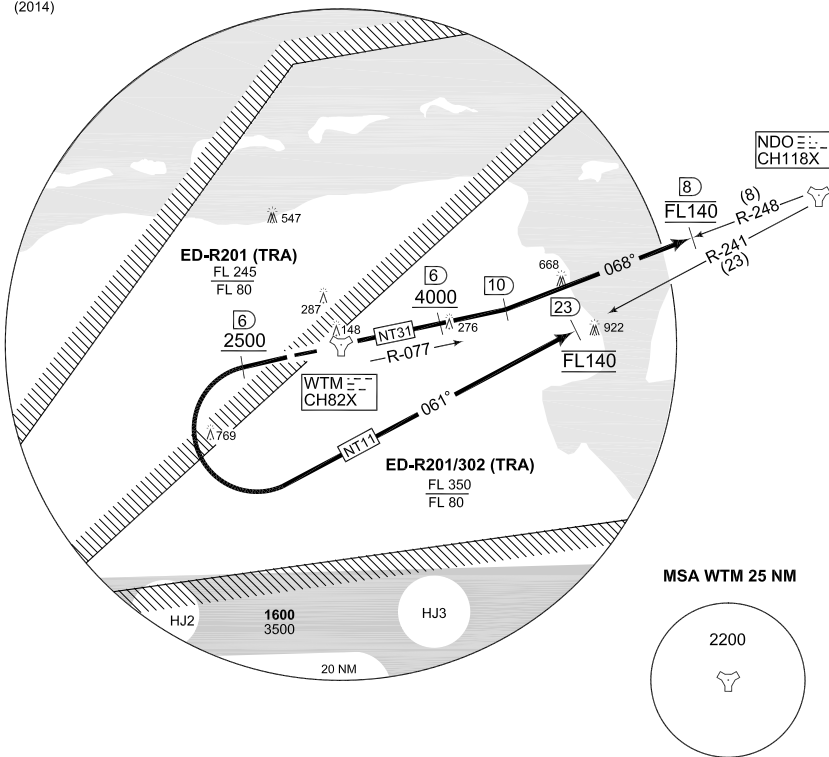
**NT 11 - 31
WITTMUNDHAFEN (ETNT)**

WITTMUND TWR
386.875 118.725

WITTMUND RADAR
248.050 123.600

BREMEN RADAR
313.225 120.225

RWY	Knots	120	180	240	300	360	to
26	V/V (fpm)	480	720	960	1200	1440	1300 ft
08	V/V (fpm)	426	639	852	1065	1278	100 ft



TA 5000

EMERG SAFE ALT 100 NM 2700

NT 11
(RWY 26)
42

- Climb straight ahead to WTM/6 DME, pass 6 DME at 2500 ft or above
- Turn left to intercept NDO R-241 inbound
- Proceed to NDO R-241/23 DME, pass 23 DME at FL 140 or as cleared by ATC

NT 31
(RWY 08)
29

- Climb straight ahead inbound WTM
- Proceed on WTM R-077 to 10 DME, pass 6 DME at 4000 ft or above
- At WTM R-077/10 DME turn left to intercept NDO R-248 inbound
- Proceed to NDO R-248/8 DME, pass 8 DME at FL 140 or as cleared by ATC

NT 11 - 31

53°32.87'N
007°40.04'E

WITTMUNDHAFEN (ETNT)

WITTMUND TWR
386.875 118.725WITTMUND RADAR
248.050 123.600BREMEN RADAR
313.225 120.225

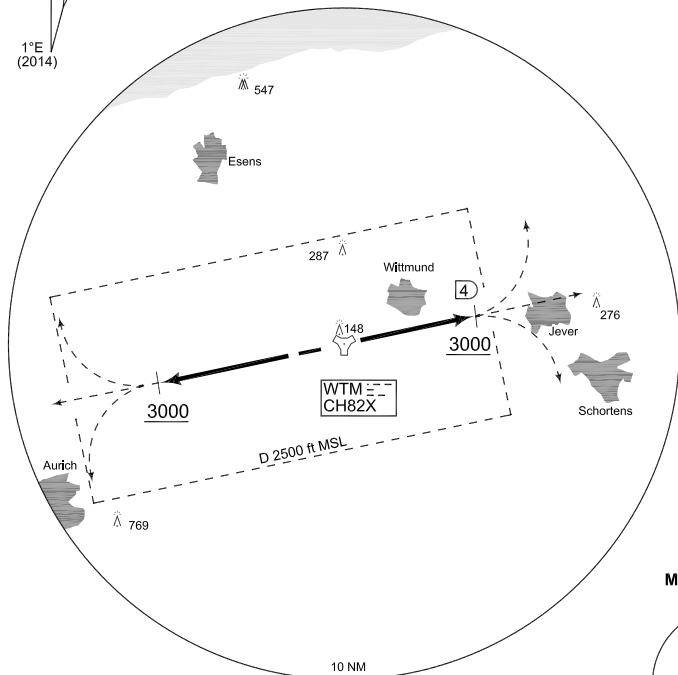
RWY	From - to	60	120	180	240	300	360	Reason
26	DER - 3000 ft	698	1396	2094	2792	3490	4188	ATC
08	DER - 3000 ft	545	1090	1635	2180	2725	3270	ATC

NOTE:

NT108 (RWY 08) FOR HOMEBASED AIRCRAFT ONLY

NDO
CH118X

1°E
(2014)



MSA WTM 25 NM

2200



TA 5000

EMERG SAFE ALT 100 NM 2700

NT 108
(RWY 08)

- Climb straight ahead to WTM/4 DME
 - Continue as cleared by ATC
- CLIMBOUT RESTRICTION: Reach 3000 ft within 4DME

NT 126
(RWY 26)

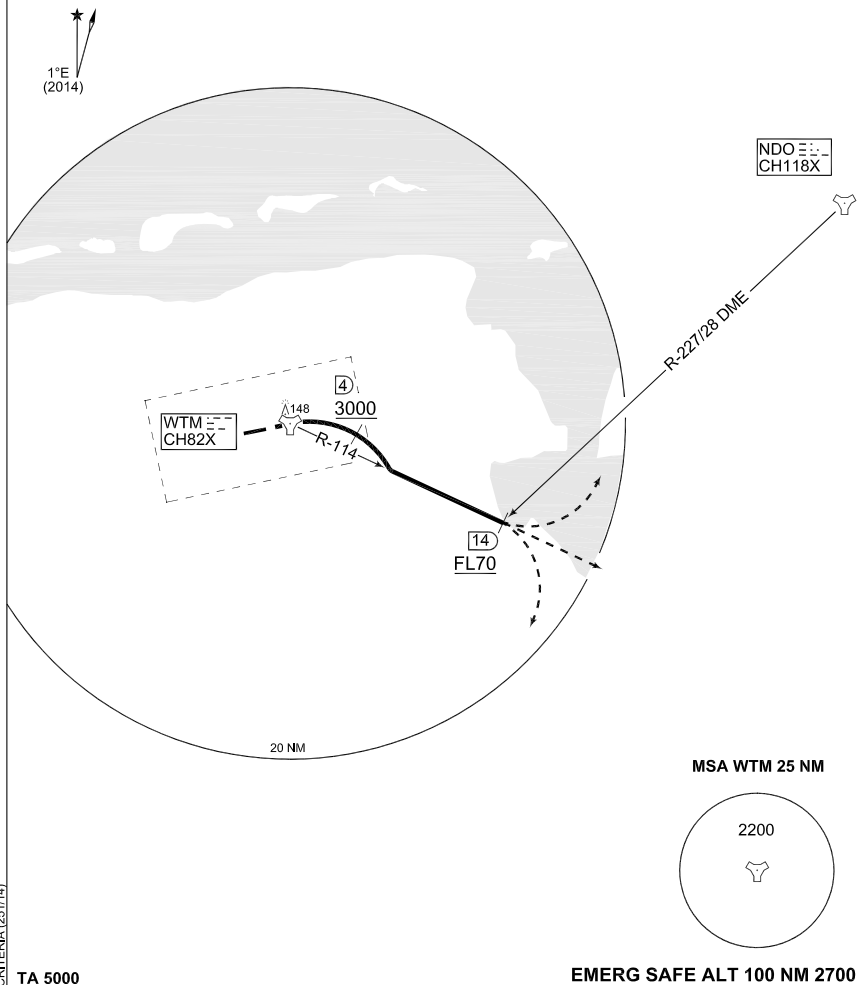
- Climb straight until passing 3000 ft MSL
 - Continue as cleared by ATC
- CLIMBOUT RESTRICTION: Reach 3000 ft within 7 DME

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 26

NT 208
WITTMUNDHAFEN (ETNT)

WITTMUND TWR 386.875 118.725		WITTMUND RADAR 248.050 123.600					BREMEN RADAR 313.225 120.225				
		RWY	From - To	60	120	180	240	300	360	Reason	
		08	DER - 3000 ft	545	1090	1635	2180	2725	3270	ATC	
		08	3000 ft - FL70	400	800	1200	1600	2000	2400	ATC	

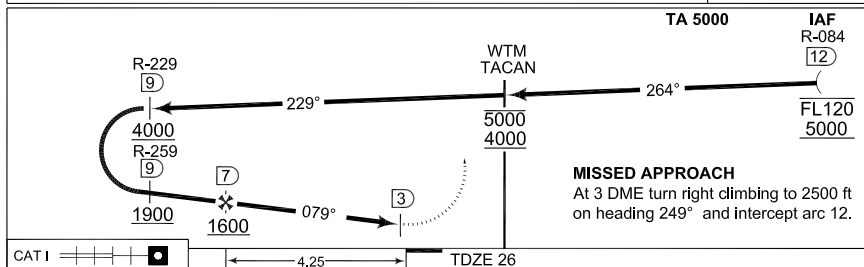
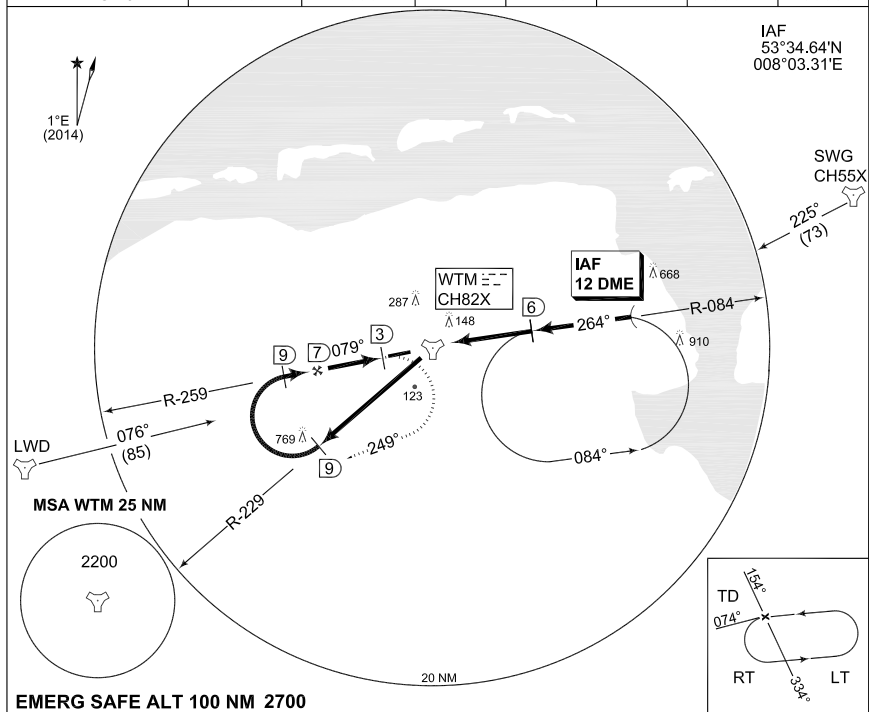


CHANGE MINIMA CRITERIA (25/1/14)

CLIMBOUT RESTRICTION: Pass WTM/4 DME at 3000 ft or above	
- Climb straight ahead to WTM - At WTM turn right to intercept WTM R-114 - Pass WTM R-114/14 DME at FL070 or as cleared by ATC	

**TACAN RWY 08
WITTMUNDHAFEN (ETNT)**

BREMEN RADAR		WITTMUND RADAR		WITTMUND TWR		WITTMUND EN (ENCL)	
313.225	120.225	248.050		386.875			
TACAN WTM CH82X	APP COURSE 079°	FAF ALT 1600		MDA 440	TDZE 26	ALS-Length 900 M	LDA 8005



CATEGORY		A	B	C	D	E
TERPS	S-TACAN 08	440-0.8 414 (500-0.8/1.6)		440-1.2 414 (500-1.2/2.0)		440- 1.6 414 (500-1.6/2.4)
	PAR 08	226- 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 08

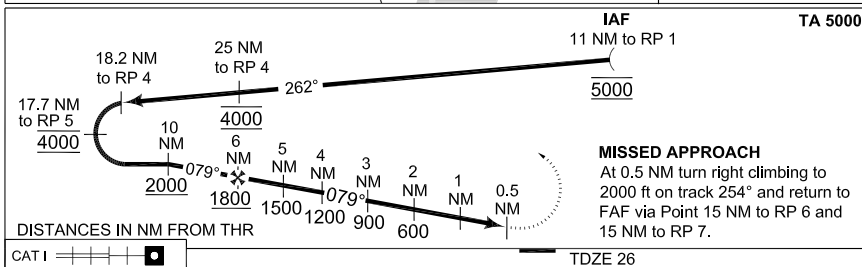
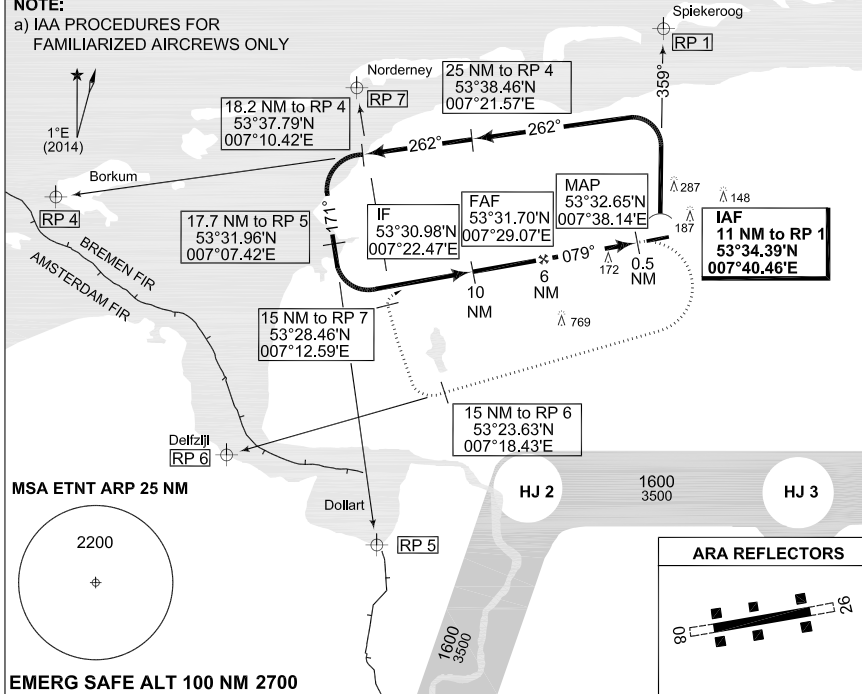
53°32.87'N
007°40.04'E

WITTMUNDHAFEN (ETNT)

ARA/IAA RWY 08
WITTMUNDHAFEN (ETNT)

NOTE:

a) IAA PROCEDURES FOR FAMILIARIZED AIRCREWS ONLY



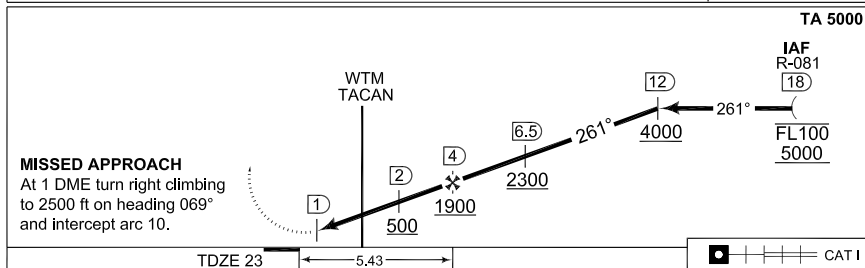
CATEGORY		A	B	C	D	E
TERPS	ARA/IAA 08	440 -0.8 414 (500-0.8/1.6)		440 -1.2 414 (500-1.2/2.0)		440 -1.6 414 (500-1.6/2.4)

ARA/IAA RWY 08

53°32.87'N
007°40.04'E

WITTMUNDHAFEN (ETNT)

**TACAN RWY 26
WITTMUNDHAFEN (ETNT)**

[illegible]

CATEGORY	A	B	C	D	E
S-TACAN 26	440-0.8 417 (500-0.8/1.6)		440-1.2 417 (500-1.2/2.0)		440- 1.6 417 (500-1.6/2.4)
PAR 26	223 - 0.8 200 (200-0.8/1.2) GS 3.0°				

WITTMUNDHAFEN (ETNT)

TERPS INSTRUMENT APPROACH CHART

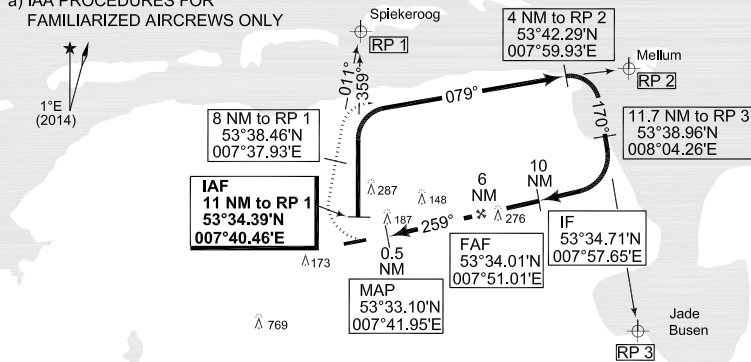
AD ELEV 26

ARA/IAA RWY 26
WITTMUNDHAFEN (ETNT)

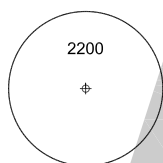
BREMEN RADAR 313.225 120.225	WITTMUND RADAR 248.050	WITTMUND TWR 386.875	
TACAN WTM CH82	APP COURSE 259°	FAF ALT 1800	MDA 440
		TDZE 23	ALS-Length 900 M
			LDA 8005

NOTE:

a) IAA PROCEDURES FOR
FAMILIARIZED AIRCREWS ONLY



MSA ETNT ARP 25 NM



EMERG SAFE ALT 100 NM 2700

HJ 2

1600
3500

HJ 3

1900
3500

2500
3500

JJ
1

ARA REFLECTORS



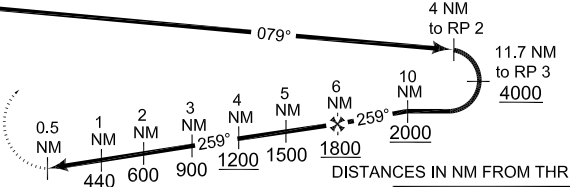
IAF
11 NM to RP 1

5000

TA 5000

MISSED APPROACH

At 0.5 NM turn right climbing to 2000 ft on track 011°. At 8 NM to RP 1 turn right on track 079° to follow the standard procedure.



DISTANCES IN NM FROM THR

TDZE 23

CAT I

CATEGORY	C	D	E
ARA/IAA 26	440 - 1.6 417 (500-1.6/2.0)		440 - 1.6 417 (500-1.6/2.4)

ARA/IAA RWY 26

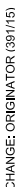
53°32.87'N
007°40.04'E

WITTMUNDHAFEN (ETNT)

CHANGE: OBST (360/15)

ZentLutOp 07 JAN 2016

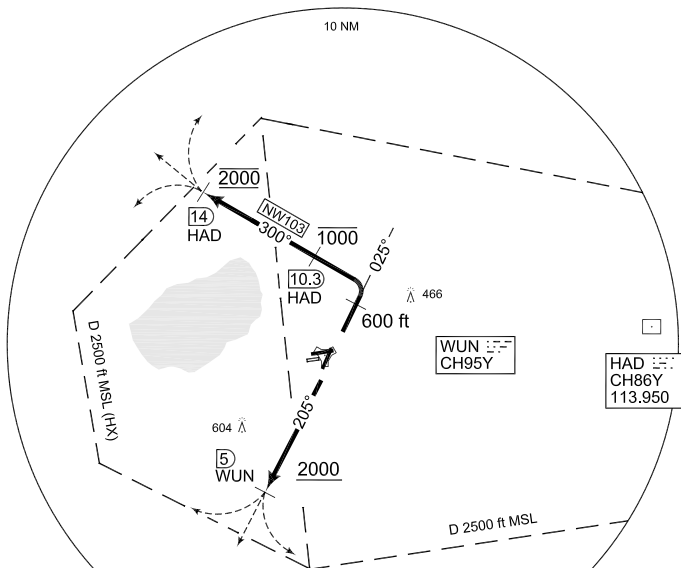
WUNSTORF (ETNW)

ZentrLuftOp 07 JAN 2016ZentrLuftOp 07 JAN 2016ZentrLuftOp 07 JAN 2016

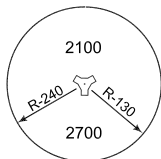
WUNSTORF (ETNW)

NW 103 - 121
WUNSTORF (ETNW)

WUNSTORF TWR		WUNSTORF RADAR			BREMEN RADAR					
282.000	138.600	389.400	123.300		259.725	131.325				
		RWY	From - to	60	120	180	240	300	360	Reason
		03	1000ft-2000ft	262	524					ATC
		21	DER - 2000ft	407	814	1221	1628	2035	2442	ATC



MSA WUN 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

NW 103 (RWY 03)	NOTE: NW103 restricted to CAT A and B only Departure turn limited to Max KIAS 150 - After takeoff climb on track 025° - When passing 600 ft turn left to track 300° - Pass HAD/10.3 DME not above 1000 ft - Pass HAD/14 DME at 2000 ft - Proceed as cleared by ATC
NW 121 (RWY 21)	NOTE: NW121 restricted to CAT A-D only - After takeoff climb on track 205° to WUN/5 DME - Pass WUN/5 DME at 2000 ft or above - Continue as cleared by ATC

CHANGE: ORIGINATOR (391/15)

ZentrLuftOp 07 JAN 2016

NW 103 - 121

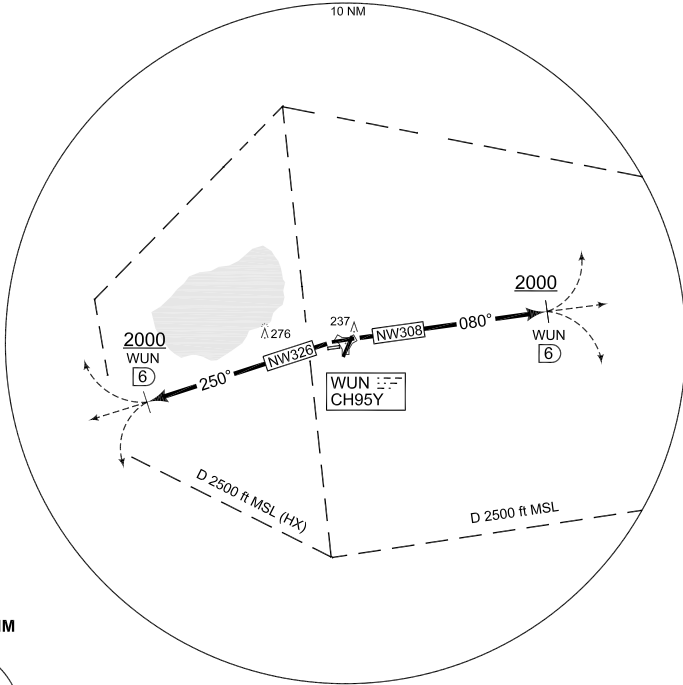
52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

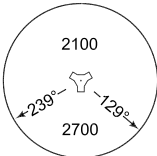
WUNSTORF TWR 282.000 138.600		WUNSTORF RADAR 389.400 123.300			BREMEN RADAR 259.725 131.325					
		RWY	Knots	60	120	180	240	300	360	to
		08	V/V (fpm)	340	680	1020	1380	1720	2080	2000 ft
		26	V/V (fpm)	334	668	1002	1336	1670	2004	2000 ft

CAUTION:
NW 308:
CLOSE-IN OBSTACLE; TREES 215 M NE OF DER
237 FT MSL / 63 FT GND

NOTE:
NO TURN BEFORE DER



MSA WUN 25 NM



EMERG SAFE ALT 100 NM 6100

TA 5000

NW 308 (RWY 08)	- Climb on track 080° to 2000 ft - Continue as cleared by ATC CLIMB RESTRICTION: Reach 2000 ft within WUN 6 DME
NW 326 (RWY 26)	- Climb on track 250° to 2000 ft - Continue as cleared by ATC CLIMB RESTRICTION: Reach 2000 ft within WUN 6 DME

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 187

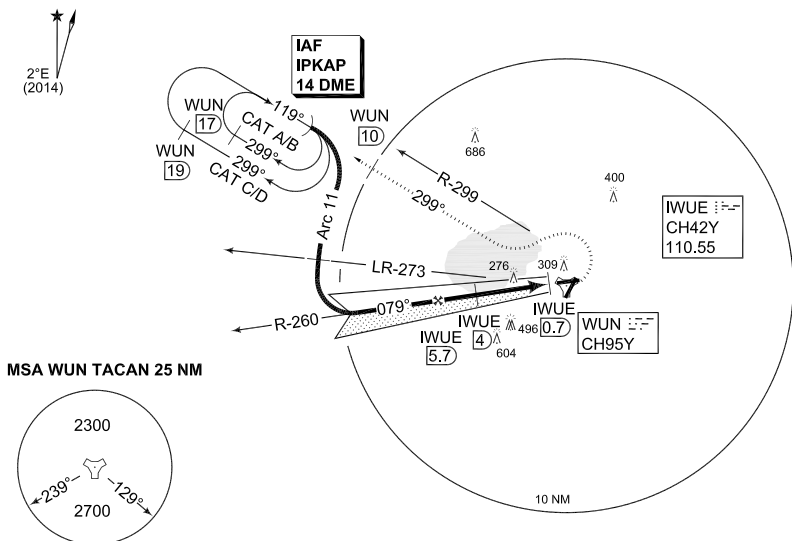
ILS Z or LOC RWY 08
WUNSTORF (ETNW)

BREMEN RADAR 259.725 131.325	WUNSTORF RADAR 389.400 124.650 123.300	WUNSTORF TWR 282.000 138.600
TACAN/LLZ WUN CH95Y/IWUE 110.55	APP COURSE 079°	GS INTCP ALT 2000
	GS 3°/5.2%	DA/MDA 373/530
		TDZE 173
		ALS-Length 900 M
		LDA 7385

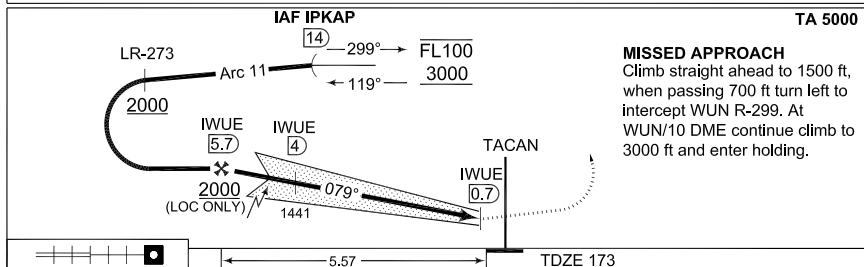
NOTE:

- NO TURN BEFORE MAPt
- TIMING NOT AUTHORIZED FOR DEFINING MAPt
- MISSED APCH TURN LIMITED TO MAX 220 KT IAS
- TACAN REQUIRED

IAF IPKAP
52°34.37'N
009°06.62'E



EMERG SAFE ALT 100 NM 6100



CATEGORY	A	B	C	D	E
ILS Z 08 CAT I	373 - 0.8/550 200 (200-0.8/1.2)				
LOC Z 08	530 - 0.8 357 (400-0.8/1.2)		530 - 1.2 357 (400-1.2/1.6)	530 - 1.2 357 (400-1.2/2.0)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	

ILS Z or LOC RWY 08

52°27.44'N
009°25.63'E

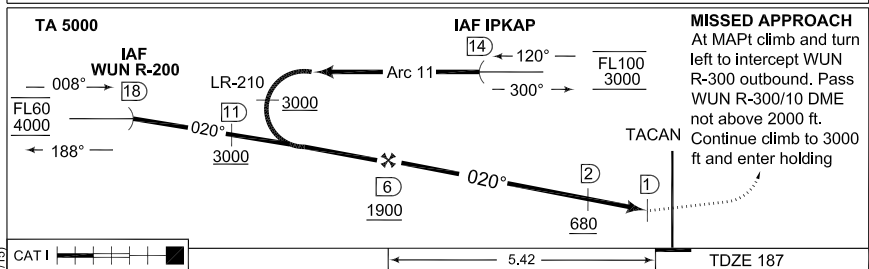
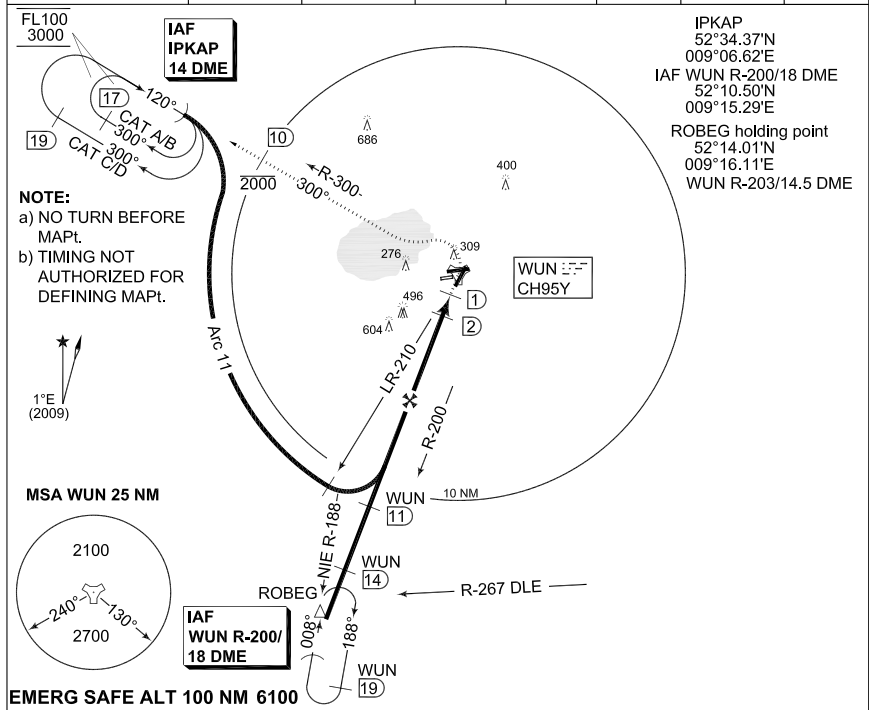
WUNSTORF (ETNW)

CHANGE: OBST (39/15)

ZentLufOp 07 JAN 2016

TACAN RWY 03
WUNSTORF (ETNW)

BREMEN RADAR		WUNSTORF RADAR			WUNSTORF TWR			
259.725	131.325	389.400	124.650	123.300	282.000	138.600		
TACAN WUN CH95Y	APP COURSE 020°	FAF ALT 1900	Descent GR 5.2%	MDA 560	TDZE 187	ALS-Length UNKNOWN	LDA 5573	



CATEGORY	A	B	C	D
S-TACAN 03	560 - 0.8 373 (400-0.8/1.6)		560 - 1.2 373 (400-1.2/1.6)	560 - 1.2 373 (400-1.2/2.0)
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)
PAR 03	387 - 0.8 200 (200-0.8/1.2) GS 3.0°			

TACAN RWY 03

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 187

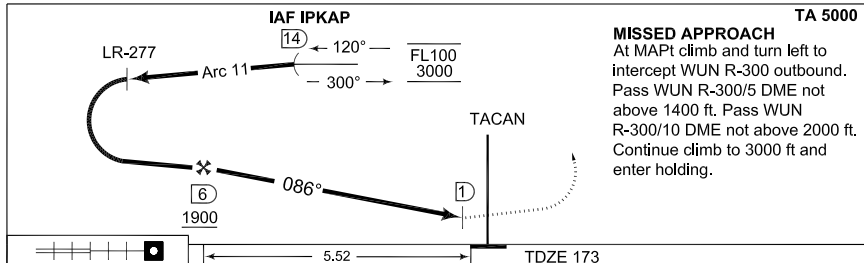
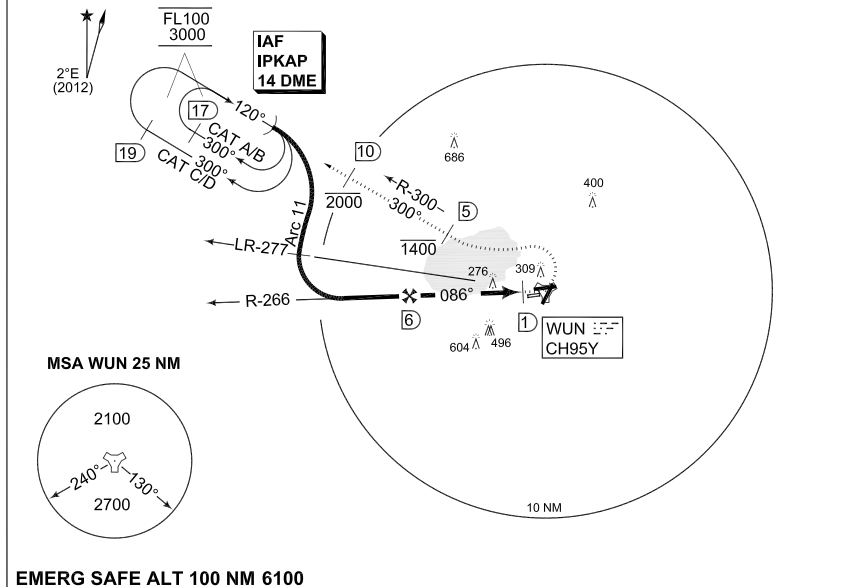
TACAN RWY 08
WUNSTORF (ETNW)

BREMEN RADAR 259.725 131.325		WUNSTORF RADAR 389.400 124.650 123.300			WUNSTORF TWR 282.000 138.600			
TACAN WUN CH95Y	APP COURSE 086°	FAF ALT 1900	Descent GR 5.2%	MDA 550	TDZE 173	ALS-Length 900 M	LDA 7385	

NOTE:

- a) NO TURN BEFORE MAPt.
- b) TIMING NOT AUTHORIZED FOR DEFINING MAPt.
- c) MISSED APCH TURN LIMITED TO MAX KIAS 220.

IAF
52°34.37'N
009°06.62'E



CHANGE: DIST (001/16)

CATEGORY	A	B	C	D	E
TACAN 08	550 - 0.8 377 (400-0.8/1.6)		550 - 1.2 377 (400-1.2/1.6)	550 - 1.2 377 (400-1.2/2.0)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	

TACAN RWY 08

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

ZentLufTop 03 MAR 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 187

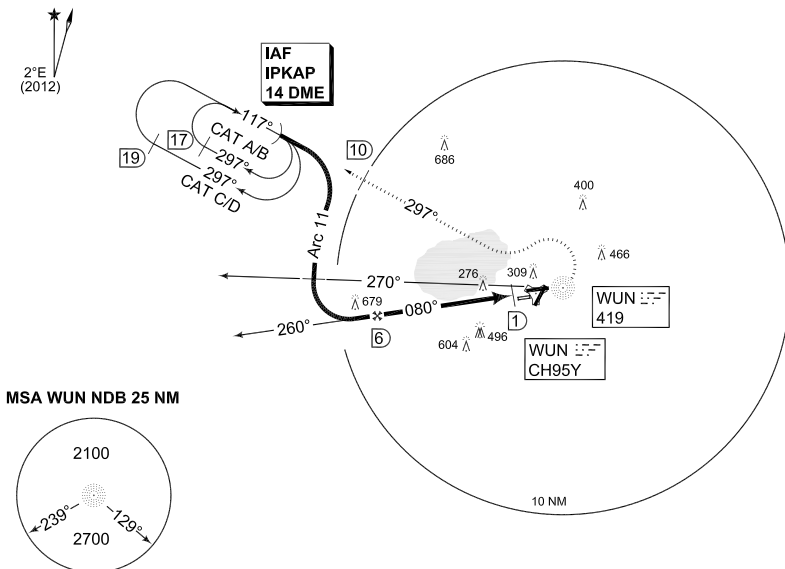
NDB RWY 08
WUNSTORF (ETNW)

BREMEN RADAR 259.725 131.325		WUNSTORF RADAR 389.400 124.650 123.300			WUNSTORF TWR 282.000 138.600		
NDB WUN 419	APP COURSE 080°	FAF ALT 2000	Descent GR 5.3%	MDA 650	TDZE 173	ALS-Length 900 M	LDA 7385

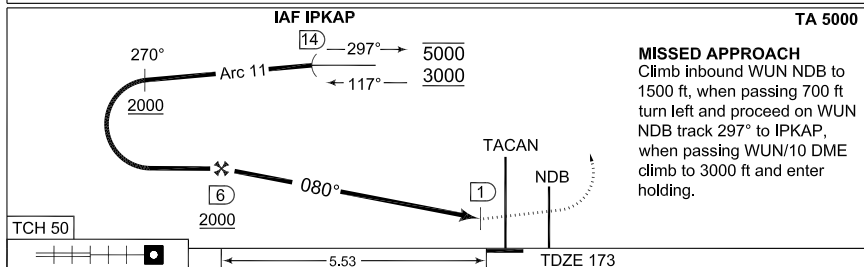
NOTE:

- a) DME REQUIRED
- b) TIMING NOT AUTHORIZED FOR DEFINING MAP
- c) HOLDING SPEED LIMITED TO 220 KT IAS

IAF IPKAP
52°34.37'N
009°06.62'E



EMERG SAFE ALT 100 NM 6100



MISSED APPROACH

Climb inbound WUN NDB to 1500 ft, when passing 700 ft turn left and proceed on WUN NDB track 297° to IPKAP, when passing WUN/10 DME climb to 3000 ft and enter holding.

CATEGORY	A	B	C	D	E
NDB 08	650 - 0.8 477 (500-0.8/1.6)		650 - 1.2 477 (500-1.2/2.0)	650 - 1.2 477 (500-1.6/2.4)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	

NDB RWY 08

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 187

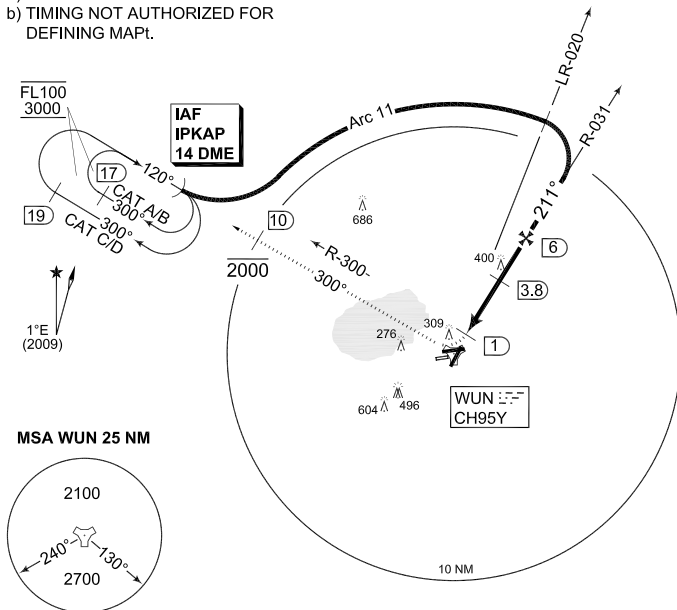
TACAN RWY 21
WUNSTORF (ETNW)

BREMEN RADAR 259.725 131.325		WUNSTORF RADAR 389.400 124.650 123.300			WUNSTORF TWR 282.000 138.600		
TACAN WUN CH95Y	APP COURSE 211°	FAF ALT 2000	Descent GR 5.24%	MDA 560	TDZE 180	ALS-Length UNKNOWN	LDA 5573

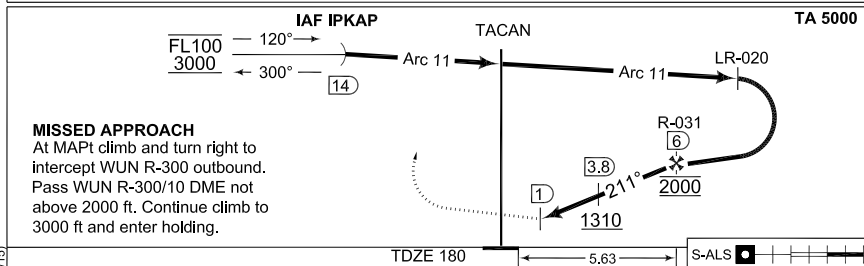
NOTE:

- NO TURN BEFORE MAPt.
- TIMING NOT AUTHORIZED FOR
DEFINING MAPt.

IAF
52°34.37'N
009°06.62'E



EMERG SAFE ALT 100 NM 6100



CATEGORY	A	B	C	D	E
TACAN 21	560 - 0.8 380 (400-0.8/1.6)		560 - 1.2 380 (400-1.2/1.6)	560 - 1.2 380 (400-1.2/2.0)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	
PAR 21	380 - 0.8 200 (200-0.8/1.2) GS 3.0°		380 - 1.2 200 (200-1.2) GS 3.0°		

TACAN RWY 21

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

**ILS Z or LOC RWY 26
WUNSTORF (ETNW)**

IAF IPKAP
52°34.37'N
009°06.62'E



The diagram illustrates the WUN Arc 11 instrument approach procedure. It begins at the IAF IPKAP, located 120° from the runway axis. The initial descent path follows the WUN Arc 11, which is a circular arc centered on the runway axis. The altitude at this point is 3000 feet. The procedure continues along the arc until it reaches the final approach fix (FAF) at 260°. At this point, the altitude is 3000 feet. The final approach segment is a straight line leading to the runway threshold. The altitude at the FAF is 3000 feet. The minimum descent altitude (MDA) is 174 feet. The distance from the FAF to the runway threshold is 5.57 miles. The diagram also shows the TACAN station at WUN, which is 1128 feet above the ground. The final approach segment is labeled with a distance of 1600 feet (LOC ONLY). The diagram includes various navigational aids and waypoints, such as IWUW, IWUW, and IWUW, which are used to define the approach path.

WUNSTORF (ETNW)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 187

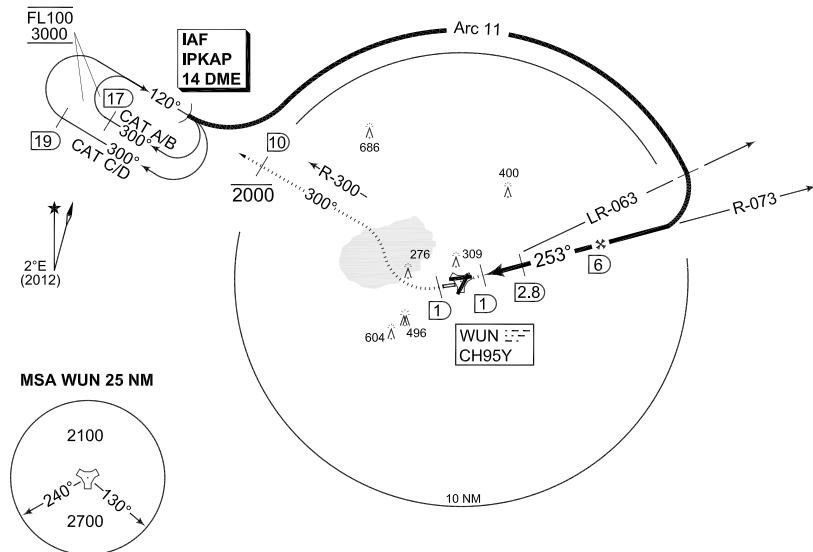
TACAN RWY 26
WUNSTORF (ETNW)

BREMEN RADAR 259.725 131.325		WUNSTORF RADAR 389.400 124.650 123.300			WUNSTORF TWR 282.000 138.600		
TACAN WUN CH95Y	APP COURSE 253°	FAF ALT 1900	Descent GR 5.2%	MDA 490	TDZE 174	ALS-Length 900 M	LDA 7457

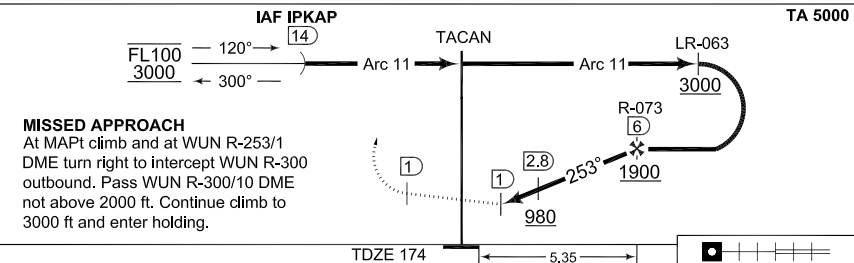
NOTE:

a) NO TURN BEFORE MAPt.

IAF
52°34.37'N
009°06.62'E



EMERG SAFE ALT 100 NM 6100



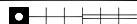
TA 5000

MISSED APPROACH

At MAPt climb and at WUN R-253/1 DME turn right to intercept WUN R-300 outbound. Pass WUN R-300/10 DME not above 2000 ft. Continue climb to 3000 ft and enter holding.

TDZE 174

5.35



CATEGORY	A	B	C	D	E
TACAN 26	490 - 0.8 316 (400-0.8/1.6)		490 - 1.2 316 (400-1.2/1.6)	490 - 1.2 316 (400-1.2/2.0)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	

TACAN RWY 26

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

CHANGE: OBST (360/15.39/115)

ZentLufTop 07 JAN 2016

PANS-OPS
INSTRUMENT APPROACH CHART

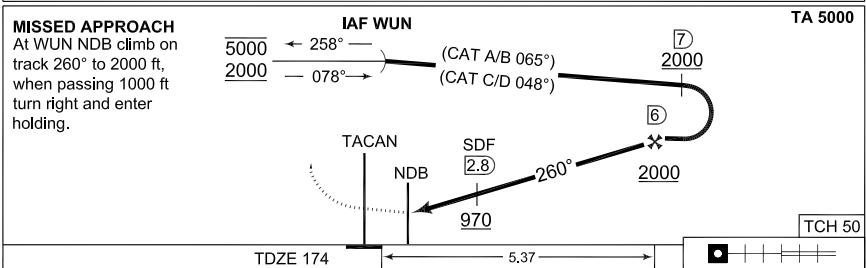
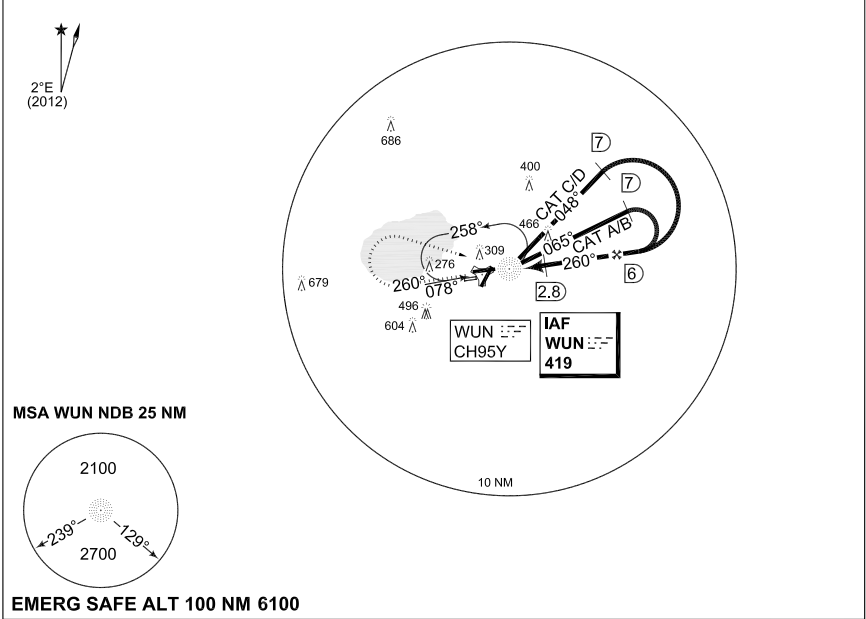
AD ELEV 187

NDB RWY 26
WUNSTORF (ETNW)

BREMEN RADAR		WUNSTORF RADAR			WUNSTORF TWR		
259.725 131.325		389.400	124.650	123.300	282.000 138.600		
NDB WUN 419	APP COURSE 260°	FAF ALT 2000	Descent GR 5.6%	MDA 560	TDZE 174	ALS-Length 900 M	LDA 7457

NOTE:
a) DME REQUIRED
b) TIMING NOT AUTHORIZED FOR DEFINING MAPt
c) NO TURN BEFORE MAPt

IAF WUN
52°27.56'N
009°27.28'E



CATEGORY	A	B	C	D	E
NDB 26	560 - 0.8 386 (400-0.8/1.6)		560 - 1.2 386 (400-1.2/1.6)	560 - 1.2 386 (400-1.2/2.0)	
CIRCLING	680 - 1.6 493 (500-1.6)	800 - 1.6 613 (700-1.6)	1000 - 4.0 813 (900-4.0)	1030 - 4.8 843 (900-4.8)	

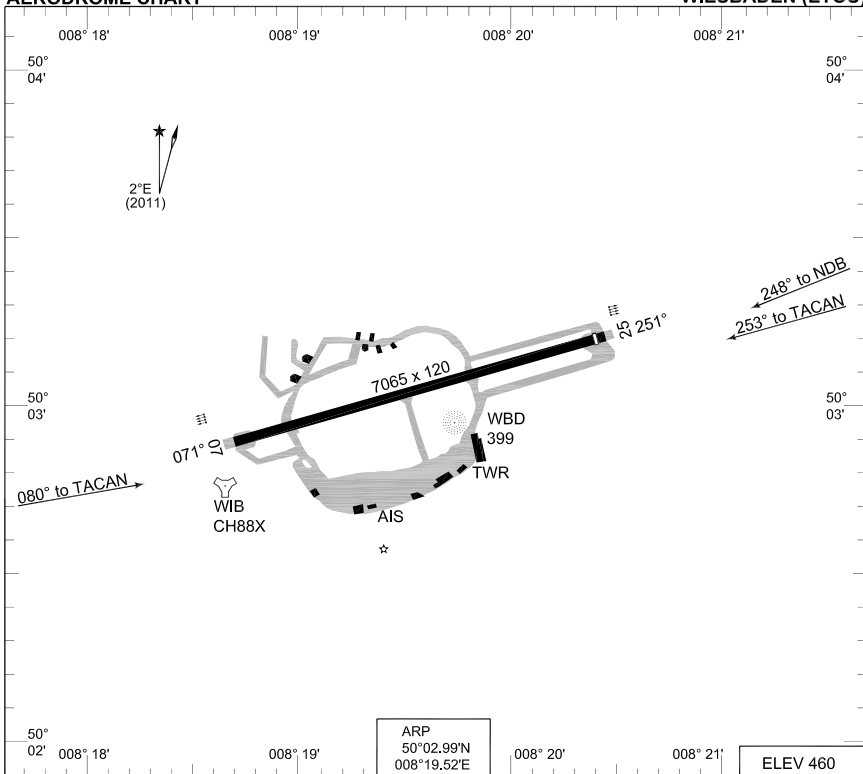
NDB RWY 26

52°27.44'N
009°25.63'E

WUNSTORF (ETNW)

AERODROME CHART

WIESBADEN (ETOU)



RWY	PCN	LDA	PAPI	TDZE
07	74	7065	3.0°	457
25	F/B/W/T	6944	3.0°	460

WIESBADEN TWR* 240.950 142.350 30.100
 WIESBADEN RADAR 278.925 140.950 123.300 344.000

- 4 NM SDF 1780 FT OR ABOVE
- 2.6 NM SDF 1450 FT OR ABOVE
- MISSED APCH MINIMUM CLIMB RATE TO 5000 FT

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	PANS-OPS	07	3.0°	52		957	ABCD	PANS-OPS	704 - 1600 250 (300-1.6)
	PANS-OPS	25	3.0°	43		840	ABCD	PANS-OPS	709 - 800 250 (300-0.8)
SRA	PANS-OPS	07					AB	PANS-OPS	1110 - 1600 656 (700-1.6)
							C		1110 - 2400 656 (700-2.4)
							D		1110 - 2800 656 (700-2.8)
	PANS-OPS	25					AB	PANS-OPS	1210 - 1200 751 (800-1.2)
							C		1210 - 2800 751 (800-2.8)
							D		1210 - 3200 751 (800-3.2)

AERODROME CHART

WIESBADEN (ETOU)

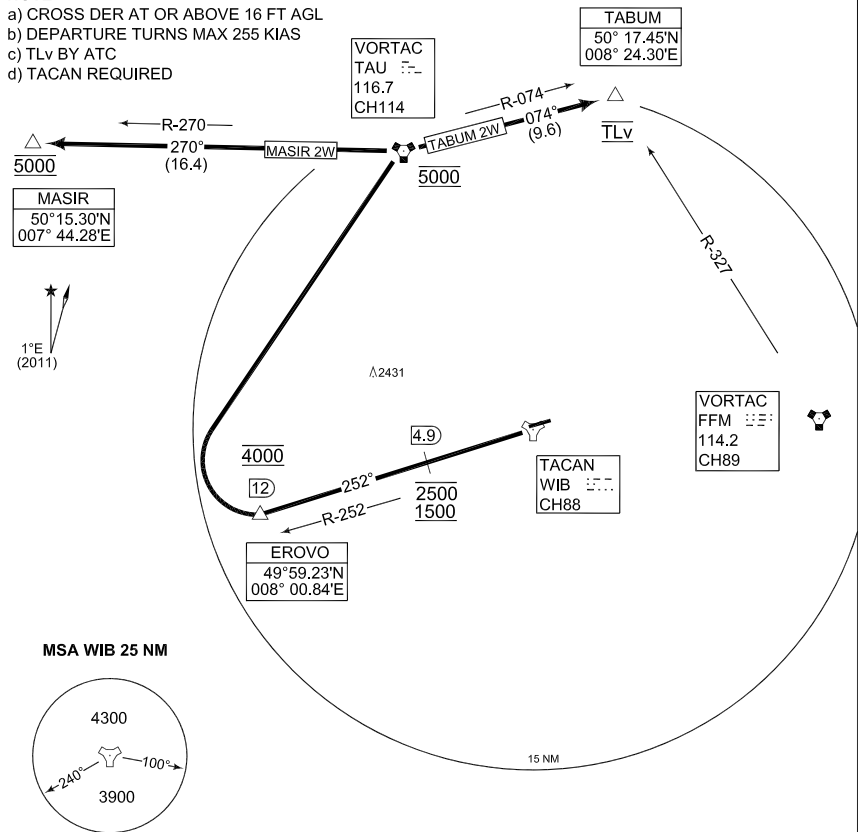
PANS-OPS INSTRUMENT DEPARTURE CHART

MASIR 2W, TABUM 2W
WIESBADEN (ETOU)

ATIS 138.975 292.750		GND CTL 138.550 313.550		WIESBADEN TWR 30.100 142.350 240.950					
LANGEN DEP 120.800 277.800		RWY	from - to		60	120	180	240	Reason
		25	ATC Climb Rate to 4000		213	425	638	851	ATC

NOTE:

- CROSS DER AT OR ABOVE 16 FT AGL
- DEPARTURE TURNS MAX 255 KIAS
- TLv BY ATC
- TACAN REQUIRED



EMERG SAFE ALT 100 NM 6400

TA 5000

MASIR 2W (RWY 25)	For flights to UK (except London TMA) and beyond intending to use upper airspace. Filed route MASIR DCT DITAM DCT OBOKA DCT BIBTI. Flights must cross BIBTI at or above FL250. - Climb on WIB R-252, cross WIB/4.9 DME between 1500 and 2500, to cross EROVO/ WIB 12 DME at 4000. - Then climbing right turn to 5000 direct TAU VOR DME, cross TAU at 5000. - Then turn left via TAU R-270 to MASIR, cross MASIR at 5000.
TABUM 2W (RWY 25)	All flights to the North (except those using MASIR). - Climb on WIB R-252, cross WIB/4.9 DME between 1500 and 2500, to cross EROVO/ WIB 12 DME at 4000. - Then climbing right turn to 5000 direct TAU VOR DME, cross TAU at 5000. - Then turn right via TAU R-074 to TABUM, cross TABUM at TLv.

MASIR 2W, TABUM 2W

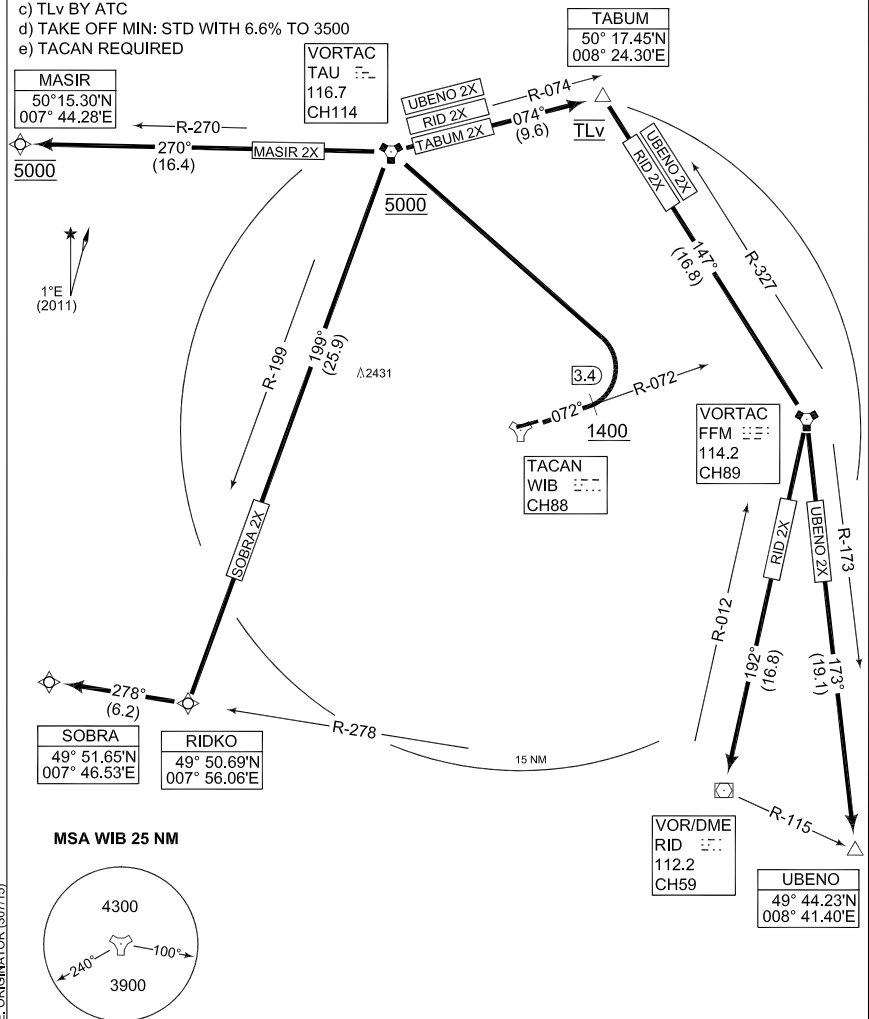
50°02.99'N
008°19.52'E

WIESBADEN (ETOU)

MASIR 2X,RID 2X,SOBRA 2X,TABUM 2X,UBENO 2X
WIESBADEN (ETOU)

ATIS 138.975 292.750		GND CTL 138.550 313.550		WIESBADEN TWR 30.100 142.350 240.950					
LANGEN DEP 120.800 277.800		RWY	from - to		60	120	180	240	Reason
		07	Minimum Climb Rate to 3500		401	802	1203	1604	ATC

a) CROSS DER AT OR ABOVE 16 FT AGL
b) DEPARTURE TURNS MAX 230 KIAS
c) TLv BY ATC
d) TAKE OFF MIN: STD WITH 6.6% TO 3500
e) TACAN REQUIRED



TA 5000

WIESBADEN (ETOU)

PANS-OPS
INSTRUMENT DEPARTURE CHART

MASIR 2X,RID 2X,SOBRA 2X,TABUM 2X,UBENO 2X
WIESBADEN (ETOU)

		RWY	from - to	60	120	180	240	Reason
		07	Minimum Climb Rate to 3500	401	802	1203	1604	ATC
NOTE: a) CROSS DER AT OR ABOVE 16 FT AGL b) DEPARTURE TURNS MAX 230 KIAS c) TLv BY ATC d) TAKE OFF MIN: STD WITH 6.6% TO 3500 e) TACAN REQUIRED								
MASIR 2X (RWY 07)	For flights to UK (except London TMA) and beyond intending to use upper airspace. Filed route MASIR DCT DITAM DCT OBOKA DCT BIBTI. Flights must cross BIBTI at or above FL250. - Climb on WIB R-072, cross WIB/3.4 DME at or above 1400, - Then climbing left turn direct to TAU, cross TAU at 5000. - Then turn left via TAU R-270 to MASIR. Cross MASIR at 5000.							
RID 2X (RWY 07)	All flights South using upper airspace (FL245 or above) and flights to ETOR. - Climb on WIB R-072, cross WIB/3.4 DME at or above 1400, - Then climbing left turn direct to TAU, cross TAU at 5000. - Then turn right via TAU R- 074 to TABUM. Cross TABUM at TLv. - Then right turn via FFM R-327 to FFM. - Then via RID VOR/DME R-012 to RID.							
SOBRA 2X (RWY 07)	All flights West including London TMA. - Climb on WIB R-072, cross WIB/3.4 DME at or above 1400, - Then climbing left turn direct to TAU, cross TAU at 5000. - Then turn left via TAU R-199 to RIDKO. - Then turn right via RID R-278 to SOBRA.							
TABUM 2X (RWY 07)	All flights to the North (except those using MASIR). - Climb on WIB R-072, cross WIB/3.4 DME at or above 1400, - Then climbing left turn direct to TAU, cross TAU at 5000. - Then turn right via TAU R-074 to TABUM. Cross TABUM at TLv.							
UBENO 2X (RWY 07)	All flights South in lower airspace (below FL245) all flights East. - Climb on WIB R-072, cross WIB/3.4 DME at or above 1400, - Then climbing left turn direct to TAU, cross TAU at 5000. - Then turn right via TAU R-074 to TABUM. Cross TABUM at TLv. - Then right turn via FFM R-327 to FFM. - Then proceed via FFM R-173 to UBENO.							

CHANGE: ORIGINATOR (307/15)

ZentrLufOp/NGA 12 NOV 2015

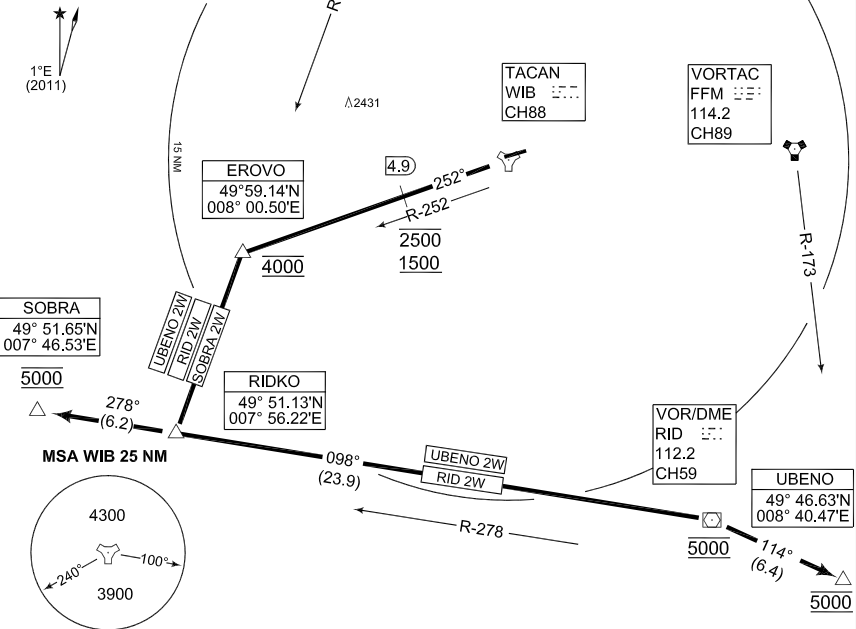
PANS-OPS INSTRUMENT DEPARTURE CHART

RID 2W,SOBRA 2W,UBENO 2W
WIESBADEN (ETOU)

AD ELEV 460						
ATIS 138.975 292.750		GND CTL 138.550 313.550		WIESBADEN TWR 30.100 142.350 240.950		
LANGEN DEP 120.800 277.800		RWY 25	from - to	60	120	180
		Minimum Climb Rate to 4000		210	420	630
				240	840	Reason
				ATC		

NOTE:

- CROSS DER AT OR ABOVE 16 FT AGL
- DEPARTURE TURNS MAX 255 KIAS
- TLv BY ATC
- TACAN REQUIRED
- RNAV EQUIPMENT REQUIRED



EMERG SAFE ALT 100 NM 6400

TA 5000

RID 2W (RWY 25)	All flights South using upper airspace (FL245 or above). - Climb on WIB R-252, cross WIB/4.9 DME between 1500 and 2500, to cross EROVO/WIB 12 DME at 4000. - Then turn left via TAU R-199 to RIDKO. - Then turn left via RID R-278 to RID. Cross RID at 5000
SOBRA 2W (RWY 25)	All flights West including London TMA. - Climb on WIB R-252, cross WIB/4.9 DME between 1500 and 2500, to cross EROVO/WIB 12 DME at 4000. - Then turn left via TAU R-199 to RIDKO. - Then turn right via RID R-278 to SOBRA. Cross SOBRA at 5000
UBENO 2W (RWY 25)	All flights South in lower airspace (below FL245) all flights East. - Climb on WIB R-252, cross WIB/4.9 DME between 1500 and 2500, to cross EROVO/WIB 12 DME at 4000. - Then turn left via TAU R-199 to RIDKO. - Then turn left via RID R-278 to RID. Cross RID at 5000 - Then proceed via RID R-114 to UBENO. Cross UBENO at 5000

RID 2W,SOBRA 2W,UBENO 2W

50°02.99'N
008°19.52'E

WIESBADEN (ETOU)

**TACAN RWY 07
WIESBADEN (ETOU)**

WIESBADEN (ETOU)

PANS-OPS INSTRUMENT APPROACH CHART

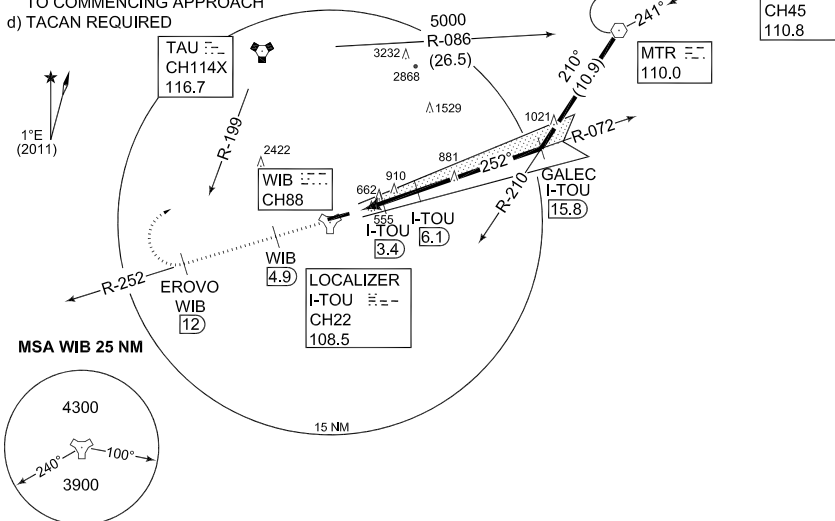
AD ELEV 460

ILS or LOC/DME RWY 25
WIESBADEN (ETOU)

LANGEN ARRIVAL		WIESBADEN TWR*			GND CTL		ATIS*	
252.450	120.800	240.950	142.350	30.100	313.550	138.550	138.975	292.750
LOC / TACAN		APP COURSE	GS INCT ALT	GS	MDA	THR ELEV	ALS-Length	LDA
I-TOU 108.5/CH22		252°	2100	3.00°	see CAT	459	UNKNOWN	6944

NOTE:

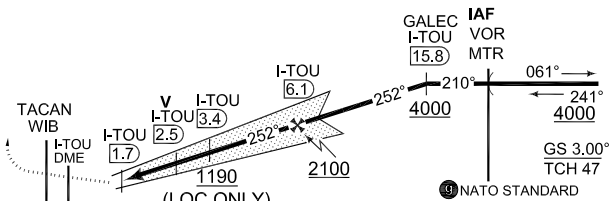
- NO TURNS PRIOR MAPT, USE I-TOU DME ON FINAL AND WIB TACAN DME WHEN ON MISSED APPROACH
- MISSED APPROACH REQUIRES 3.3% CLIMB TO 3400, GS UNUSABLE FOR COUPLED APPROACHES BELOW 900 MSL
- DESCENT TO 4000 IN MTR VOR HOLDING PATTERN PRIOR TO COMMENCING APPROACH
- TACAN REQUIRED



EMERG SAFE ALT 100 NM 6400

MISSED APPROACH

Climb on WIB R-252 to cross WIB/4.9 DME between 1500 and 2500, then on WIB R-252 to cross EROVO/12 DME at 4000, then climb right turn to 5000 direct TAU, continue on TAU R-086 to MTR and hold.



TA 5000

THR ELEV 459

1.3 1.7 2.7

4000 4000 4000 4000 4000 4000

CATEGORY	A	B	C	D
S-ILS 25	671 - 800 212 (300-0.8)	681 - 800 222 (300-0.8)	690 - 800 231 (300-0.8)	700 - 800 241 (300-0.8)
S-LOC 25	910 - 800 451 (500-0.8)			
CIRCLING	1070 - 1600 610 (700-1.6)	1270 - 2000 810 (900-2.0)	1810 - 4800 1350 (1400-4.8)	

ILS or LOC/DME RWY 25

50°02.99'N
008°19.52'E

WIESBADEN (ETOU)

CHANGE-ORIGINATOR (007/15)

PANS-OPS

ZentrLuftOp/NGA 12 NOV 2015

PANS-OPS INSTRUMENT APPROACH CHART

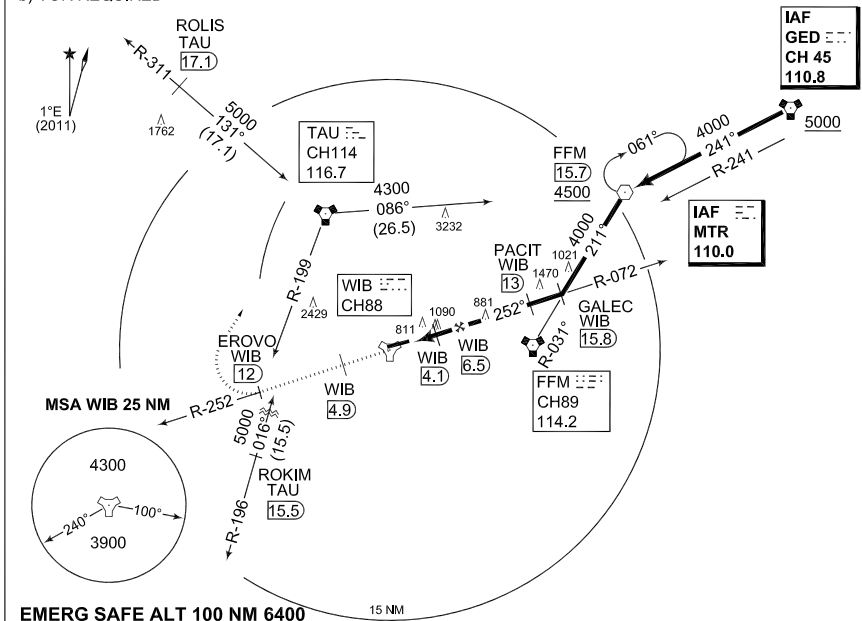
AD ELEV 460

TACAN RWY 25
WIESBADEN (ETOU)

LANGEN ARRIVAL		WIESBADEN TWR*			GND CTL		ATIS*	
252.450	120.800	240.950	142.350	30.100	313.550	138.550	138.975	292.750
TACAN WIB CH88		APP COURSE 252°	FAF ALT 2200	GS 3.02°	MDA 1140	TDZE 460	ALS-Length UNKNOWN	LDA 6944

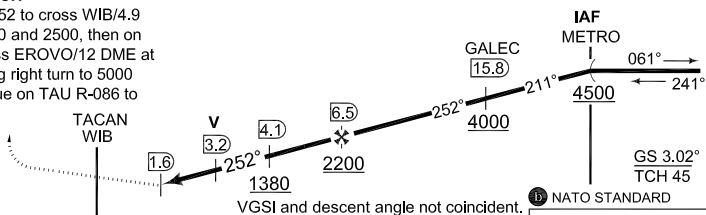
NOTE:

- DESCEND TO 4000 IN MTR HOLDING PATTERN PRIOR TO COMMENCING APPROACH
- VOR REQUIRED



MISSED APPROACH

Climb on WIB R-252 to cross WIB/4.9 DME between 1500 and 2500, then on WIB R-252 to cross EROVO/12 DME at 4000, then climbing right turn to 5000 direct TAU, continue on TAU R-086 to MTR and hold.



TDZE 460 0.5 2.5 2.4

CATEGORY	A	B	C	D
S-25	1140 -800 680 (700-0.8)		1140 -2400 680 (700-2.4)	1140 -2800 680 (700-2.8)
CIRCLING	1140 -1600 680 (700-1.6)	1270 -2000 810 (900-2.0)	1810 -4800 1350 (1400-4.8)	

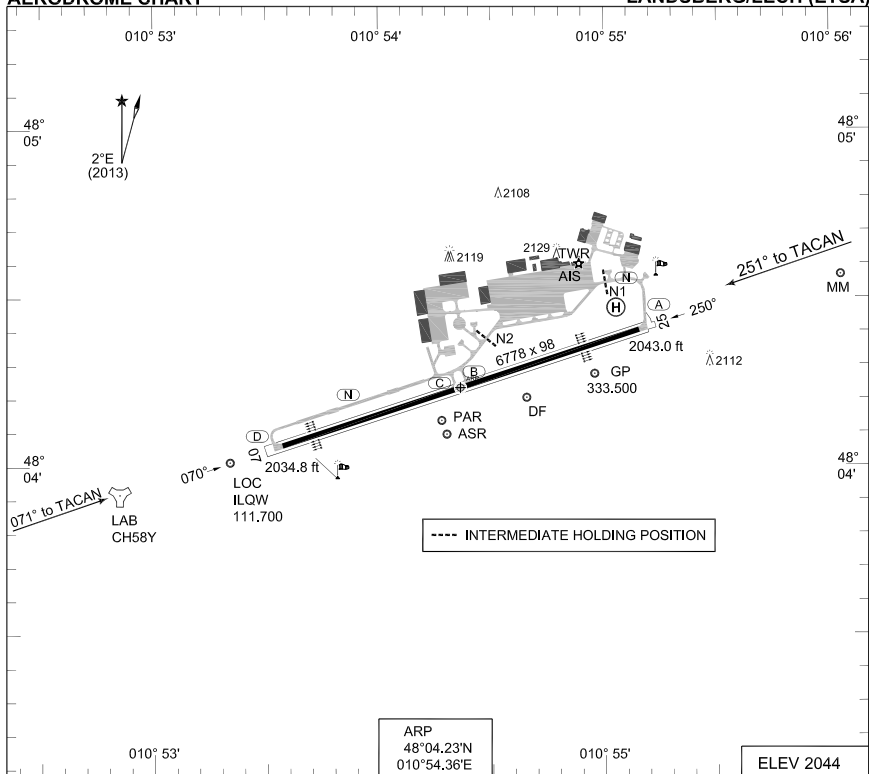
TACAN RWY 25

50°02.99'N
008°19.52'E

WIESBADEN (ETOU)

AERODROME CHART

LANDSBERG/LECH (ETSA)



RWY	LCN	TORA	TODA	ASDA	LDA	PAPI	TDZE	THR PSN
07	73	6778	6778	6778	6778	3.0°	2034.8	48°04.06'N 010°53.57'E
25	73	6778	6778	6778	6778	3.0°	2043.0	48°04.40'N 010°55.15'E

LANDSBERG TWR 315.700 140.075
 LANDSBERG RADAR 278.900 309.200 130.500 SSR 4240 - 4247

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	07	3.0°	32		608	ABCDE	TERPS	2235 - 0.8 200 (200-0.8/1.2)
	TERPS	25	3.0°	50		995	ABCDE	TERPS	2243 - 0.8 200 (200-0.8/1.2)
	TERPS	070	3.0°			608	COPTER	TERPS	2185 - 0.4 150 (200-0.4/0.8)
	TERPS	250	3.0°	50		995	COPTER	TERPS	2143 - 0.4 100 (100-0.4/0.8)
SRA	TERPS	07					AB	TERPS	2480 - 0.8 445 (500-0.8/1.6)
							C		2480 - 1.2 445 (500-1.2/2.0)
							DE		2480 - 1.6 445 (500-1.6/2.4)
	TERPS	25					AB	TERPS	2420 - 0.8 377 (400-0.8/1.6)
							C		2420 - 1.2 377 (400-1.2/1.6)
							DE		2420 - 1.6 377 (400-1.6/2.0)

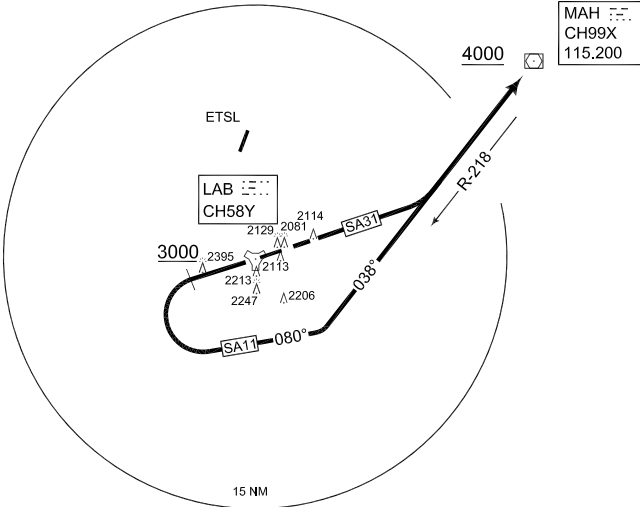
AERODROME CHART

LANDSBERG/LECH (ETSA)

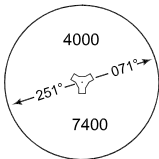
CHANGE: MINIMA CRITERIA (238/14)

AFSBW 05 FEB 2015

LANDSBERG TWR			LANDSBERG RADAR			MUENCHEN RADAR				
315.700	140.075	122.100	278.900	309.200	123.300	259.000	129.450			
RWY	from - to	60	90	120	180	240	300	360	Reason	
07	DER - 3500 ft	262	393	524	786	1048	1310	1572	ATC	
25	DER - 4000 ft	262	393	524	786	1048	1310	1572	ATC	



MSA LAB 25 NM



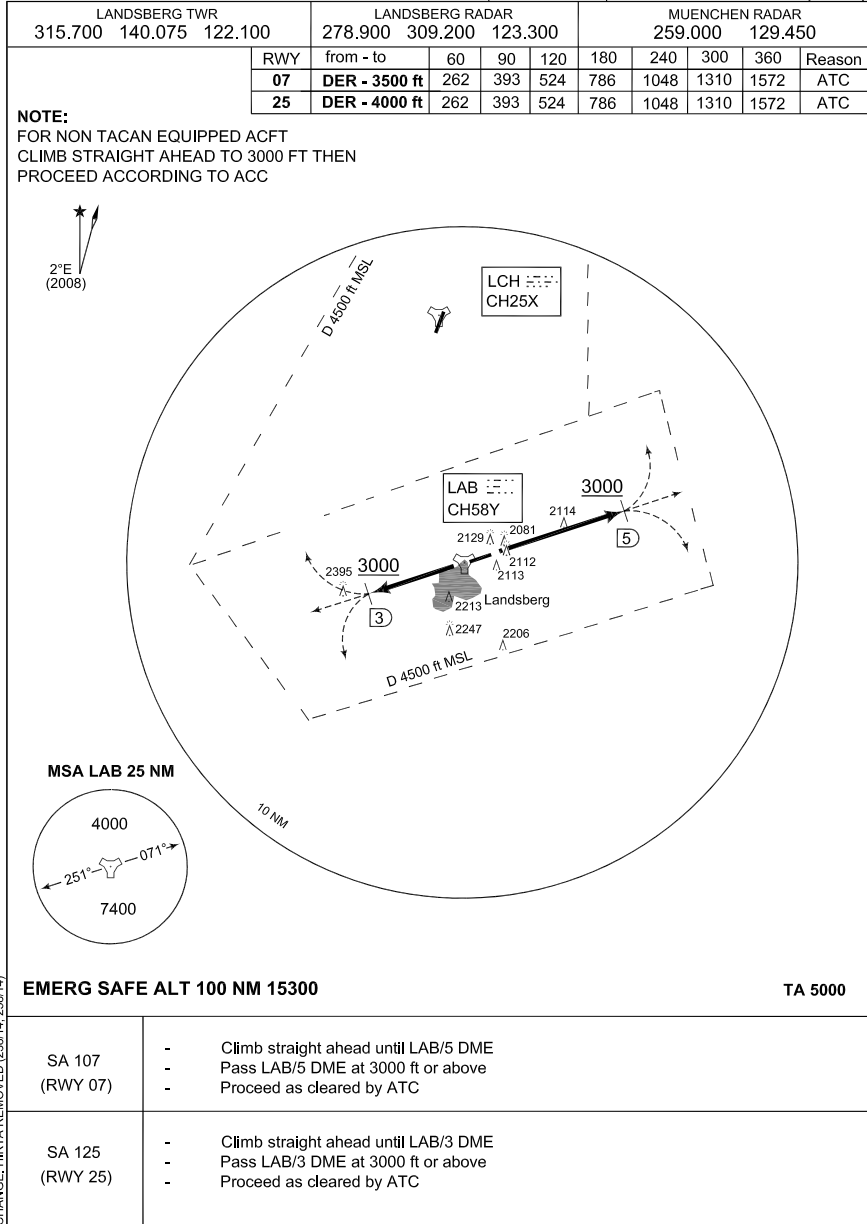
EMERG SAFE ALT 100 NM 15300

TA 5000

SA 11 (RWY 25)	- Climb straight ahead until passing 3000 ft - Turn left on track 080° to intercept MAH R-218 inbound - Pass MAH at 4000 ft or above NOTE: - Max KIAS 220 until established on MAH R-218 - No turn before DER
SA 31 (RWY 07)	- Climb straight ahead until intercepting MAH R-218 inbound - Cross MAH at 4000 ft or above - Max KIAS 220 until established on MAH R-218
SA 11 - 31	INITIAL CLIMB: 4000 ft

CHANGE: HIRTA REMOVED (238/14, 258/14)

AFSBw 05 FEB 2015



CHANGE: HIRTA REMOVED (238/14, 258/14)

AFSBW 05 FEB 2015

TERPS INSTRUMENT APPROACH CHART

AD ELEV 2444

TACAN 1 RWY 07
LANDSBERG/LECH (ETSA)

MUENCHEN RADAR 259.000 129.450	LANDSBERG RADAR 278.900 309.200	LANDSBERG TWR 315.700 140.075			
TACAN LAB CH58Y	APP COURSE 071°	FAF ALT 3500	MDA 2480	TDZE 2035	ALS-Length 726 M
			LDA 6778		

WARNING

CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE

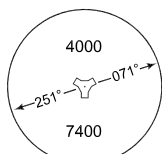
DKB CH125X 117.8
NEU CH26X
IGL CH51X

IAF
48°17.08'N
010°45.66'E

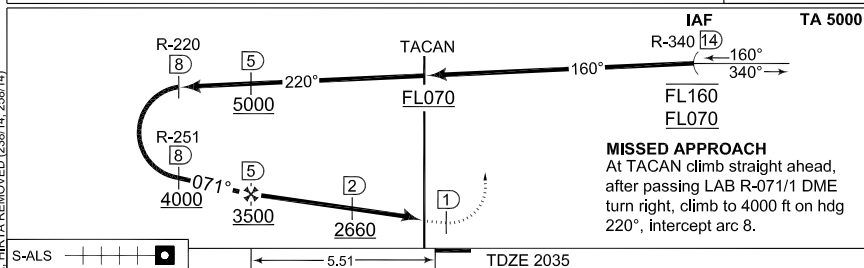


IAF
14 DME

MSA LAB 25 NM



EMERG SAFE ALT 100 NM 15300



S-ALS	5.51	TDZE 2035			
CATEGORY	A	B	C	D	E
S-TACAN 07	2480 - 0.8 445 (500-0.8/1.6)		2480 - 1.2 445 (500-1.2/2.0)	2480 - 1.6 445 (500-1.6/2.4)	
CIRCLING	2520 - 1.6 476 (500-1.6)		2520 - 2.4 476 (500-2.4)	2600 - 3.2 556 (600-3.2)	2700 - 3.6 656 (700-3.6)
PAR 07	2235 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN 1 RWY 07

48°04.23'N
010°54.36'E

LANDSBERG/LECH (ETSA)

TERPS INSTRUMENT APPROACH CHART

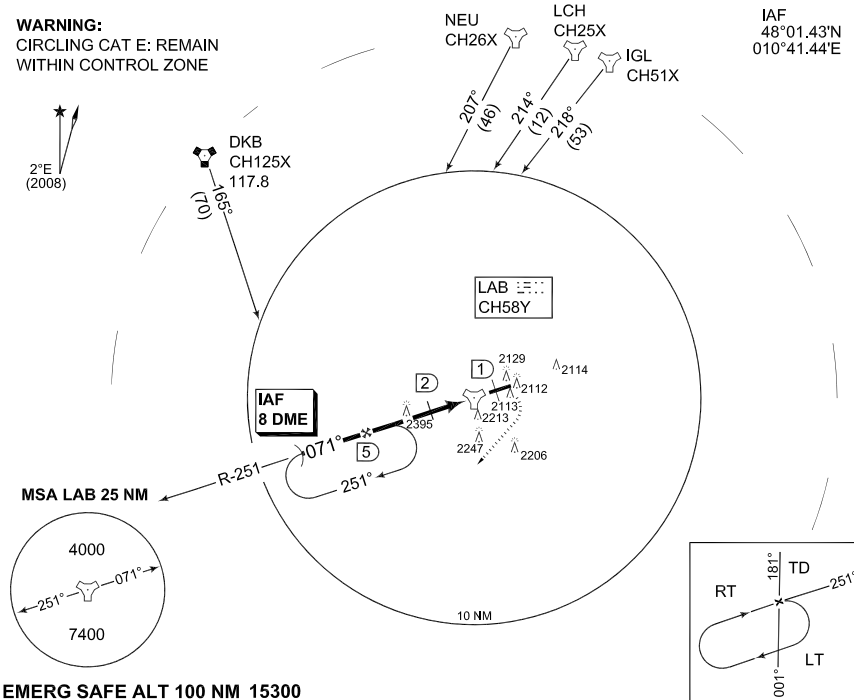
AD ELEV 2044

TACAN 2 RWY 07
LANDSBERG/LECH (ETSA)

MUENCHEN RADAR 259.000 129.450	LANDSBERG RADAR 278.900 309.200	LANDSBERG TWR 315.700 140.075			
TACAN LAB CH58Y	APP COURSE 071°	FAF ALT 3500	MDA 2480	TDZE 2035	ALS-Length 726 M
			LDA 6778		

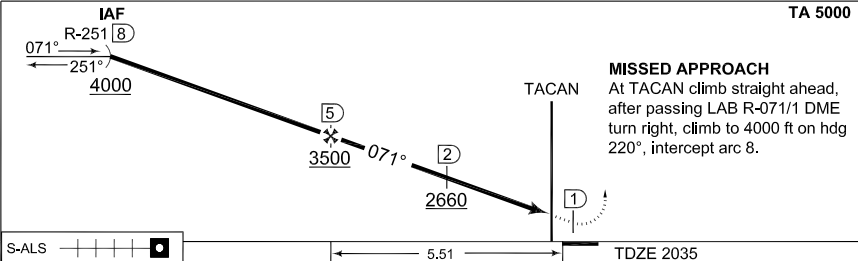
WARNING:
CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE

IAF
48°01.43'N
010°41.44'E



EMERG SAFE ALT 100 NM 15300

TA 5000



MISSED APPROACH

At TACAN climb straight ahead, after passing LAB R-071/1 DME turn right, climb to 4000 ft on hdg 220°, intercept arc 8.

TERPS	CATEGORY	A	B	C	D	E
S-TACAN 07		2480 - 0.8 445 (500-0.8/1.6)		2480 - 1.2 445 (500-1.2/2.0)	2480 - 1.6 445 (500-1.6/2.4)	
CIRCLING		2520 - 1.6 476 (500-1.6)		2520 - 2.4 476 (500-2.4)	2600 - 3.2 556 (600-3.2)	2700 - 3.6 656 (700-3.6)
PAR 07		2235 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN 2 RWY 07

48°04.23'N
010°54.36'E

LANDSBERG/LECH (ETSA)

CHANGE IAF ALT (04/21/15)

AFSBw 02 APR 2015

TERPS INSTRUMENT APPROACH CHART

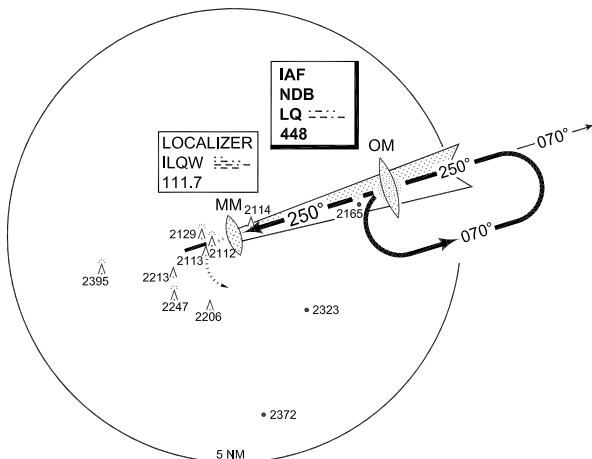
AD ELEV 2044

**NDB/ILS RWY 25
LANDSBERG/LECH (ETSA)**

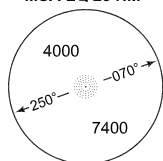
MUENCHEN RADAR		LANDSBERG RADAR				LANDSBERG TWR	
259.000 129.450		278.900 309.200 130.500				315.700 140.075	
NDB / LOCALIZER	APP COURSE	GS INTCP ALT	GS	DA	TDZE	ALS-Length	LDA
LQ 448 / ILQW 111.7	250°	3500	3.0°	2243	2043	445 M	6778

WARNING:
CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE

IAF
48°05.69'N
011°01.13'E



MSA LQ 25 NM



EMERG SAFE ALT 100 NM 15300

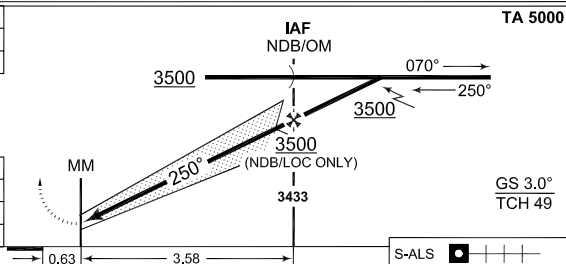
LOC: FAF - MAP 3.58 NM					
Knots	60	90	120	150	180
Min:Sec	3:35	2:23	1:47	1:26	1:11

MISSED APPROACH

Turn left, climbing to
3500 ft and rehome NDB.

NDB: MAP at THR					
FAF - MAP 4.21 NM					
Knots	60	90	120	150	180
Min:Sec	4:13	2:48	2:06	1:41	1:24

TDZE 2043



CATEGORY	A	B	C	D	E
S-ILS 25	2243 - 0.8 200 (200-0.8/1.2)				N/A
S-LOC 25	2450 - 0.8 407 (500-0.8/1.6)		2450 - 1.2 407 (500-1.2/1.6)		N/A
S-NDB 25	2480 - 0.8 437 (500-0.8/1.6)		2480 - 1.2 437 (500-1.2/2.0)	2480 - 1.6 437 (500-1.6/2.4)	
CIRCLING	2520 - 1.6 476 (500-1.6)		2520 - 2.4 476 (500-2.4)	2600 - 3.2 556 (600-3.2)	2700 - 3.6 656 (700-3.6)

NDB/ILS RWY 25

48°04.23'N
010°54.36'E

LANDSBERG/LECH (ETSA)

TERPS INSTRUMENT APPROACH CHART

AD ELEV 244

TACAN 1 RWY 25
LANDSBERG/LECH (ETSA)

MUNICHEN RADAR 259.000 129.450		LANDSBERG RADAR 278.900 309.200		LANDSBERG TWR 315.700 140.075			
TACAN LAB CH58Y	APP COURSE 251°	FAF ALT 3500		MDA 2420	TDZE 2043	ALS-Length 445 M	LDA 6778

WARNING:
CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE

DKB
CH125X
117.8

NEU
CH26X

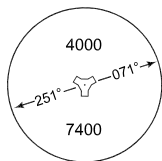
IGL
CH51X

IAF
48°17.08'N
010°45.66'E

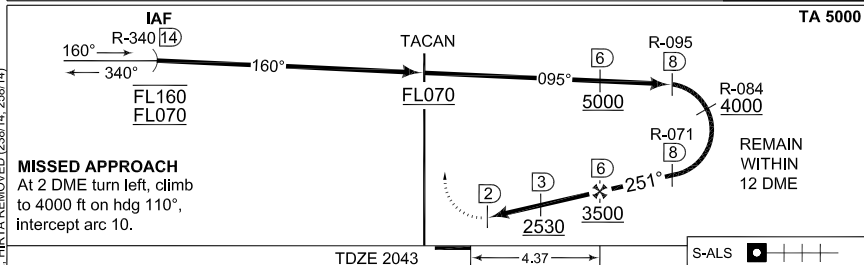


IAF
14 DME

MSA LAB 25 NM



EMERG SAFE ALT 100 NM 15300



CATEGORY	A	B	C	D	E
S-TACAN 25	2420 - 0.8 377 (400-0.8/1.6)		2420 - 1.2 377 (400-1.2/1.6)	2420 - 1.2 377 (400-1.2/2.0)	
CIRCLING	2520 - 1.6 476 (500-1.6)		2520 - 2.4 476 (500-2.4)	2600 - 3.2 556 (600-3.2)	2700 - 3.6 656 (700-3.6)
PAR 25	2243 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN 1 RWY 25

48°04.23'N
010°54.36'E

LANDSBERG/LECH (ETSA)

**TACAN 2 RWY 25
LANDSBERG/LECH (ETSA)**

WARNING:
CIRCLING CAT E: REMAIN
WITHIN CONTROL ZONE

2°E
(2008)

LCH
CH25X

DKB
CH125X

NEU
CH26X

IGL
CH51X

IAF
48°02.53'N
010°58.48'E

153°
(10)

156°
(13)

193°
(41)

208°
(46)

LAB 15:00
CH58Y

2395

2213

2247

2206

2129

2112

2114

2113

251°

110°

290°

R-071

R-084

R-110

10 NM

MSA LAB 25 NM

4000

7400

251°

071°

EMERG SAFE ALT 100 NM 15300

RT

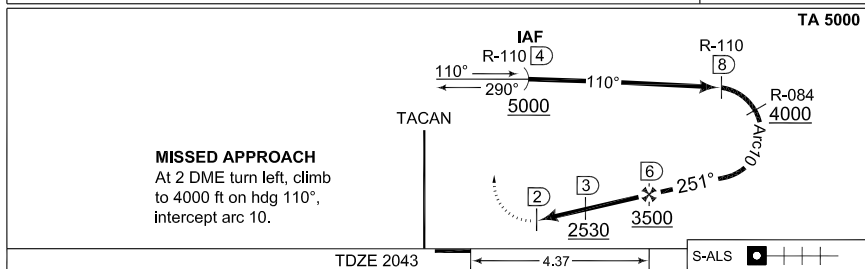
TD

LT

200°

290°

040°

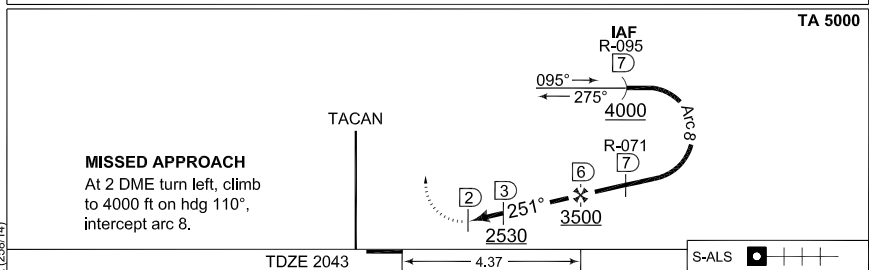
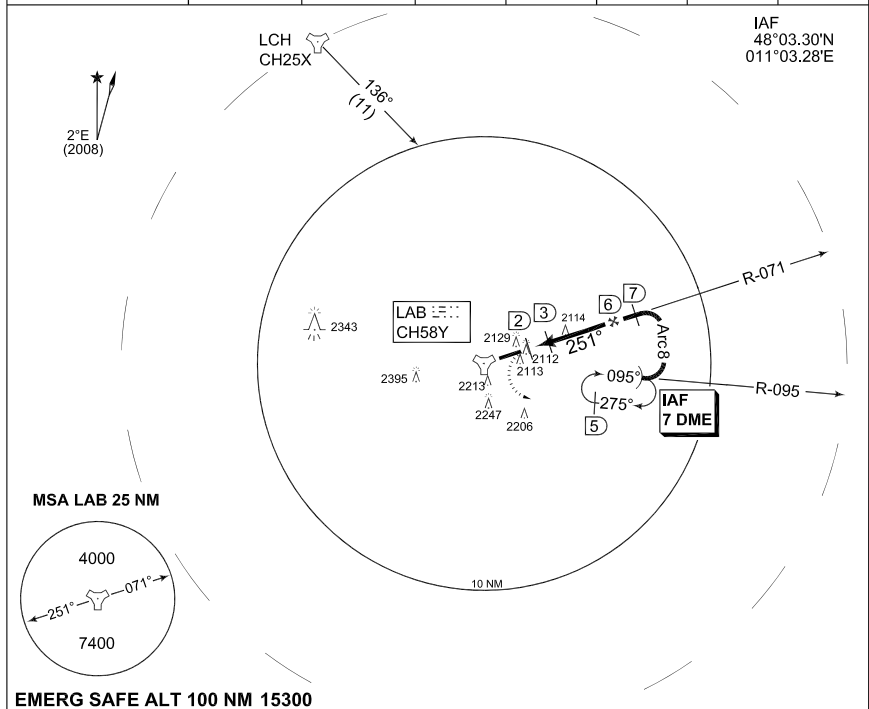


TERPS	CATEGORY	A	B	C	D	E
	S-TACAN 25	2420 - 0.8 377 (400-0.8/1.6)		2420 - 1.2 377 (400-1.2/1.6)	2420 - 1.2 377 (400-1.2/2.0)	
	CIRCLING	2520 - 1.6 476 (500-1.6)		2520 - 2.4 476 (500-2.4)	2600 - 3.2 556 (600-3.2)	2700 - 3.6 656 (700-3.6)
	PAR 25	2243 - 0.8 200 (200-0.8/1.2) GS 3.0°				

LANDSBERG/LECH (ETSA)

COPTER TACAN 251
LANDSBERG/LECH (ETSA)

MUEENCHEN RADAR 259.000 129.450		LANDSBERG RADAR 278.900 309.200		LANDSBERG TWR 315.700 140.075			
TACAN LAB CH58Y		APP COURSE 251°	FAF ALT 3500		MDA 2420	TDZE 2043	ALS-Length 445 M
							LDA 6778



CATEGORY		COPTER
TERPS	H - 251	2420 - 0.4 377 (400-0.4/0.8)

COPTER TACAN 251

48°04.23'N
010°54.36'E

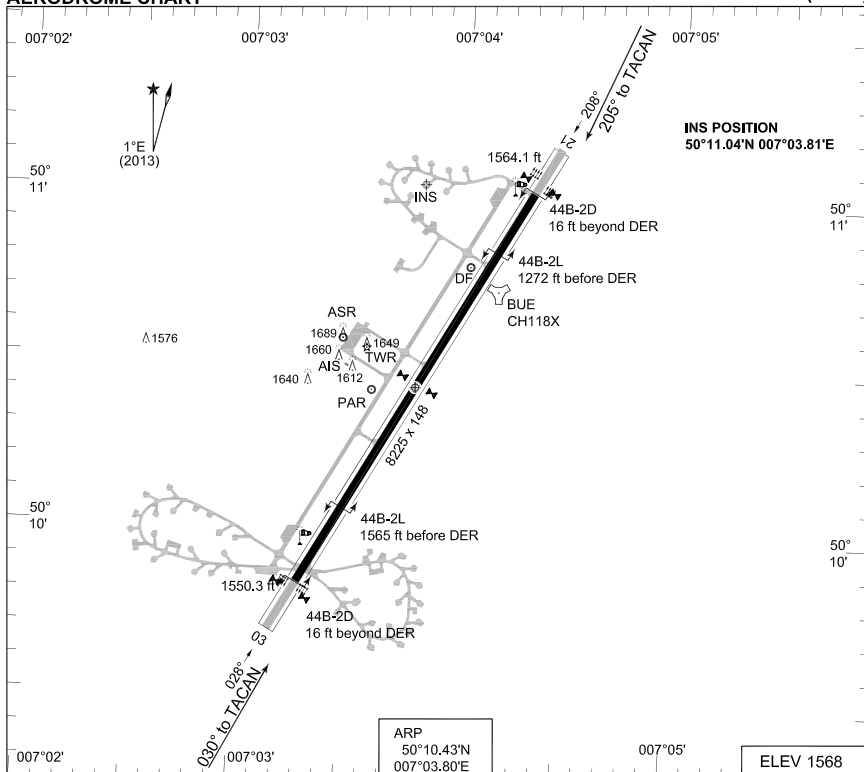
LANDSBERG/LECH (ETSA)

CHANGE: MINIMA CRITERIA (258/14)

AFSBw 05 FEB 2015

AERODROME CHART

BUECHEL (ETSB)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
03	41/F/A/WT	8225	8225	8225	8225	3.0°	1555.6	50°09.84'N 007°03.29'E
21	41/F/A/WT	8225	8225	8225	8225	3.0°	1567.8	50°11.02'N 007°04.32'E

BUECHEL TWR 275.450 257.800 140.450
 BUECHEL RADAR 254.550 336.850 344.625 371.350 139.250x 130.150x SSR 4240 - 4247

*In front of threshold

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	21	3.0°		39	105*	ABCDE	TERPS	1768 - 0.8 200 (200-0.8/1.2)
	TERPS	03	3.0°		47	26	ABCDE	TERPS	1756 - 1.2 200 (200-1.2/1.6)

AERODROME CHART

BUECHEL (ETSB)

PANS-OPS OPERATIONAL INSTRUMENT DEPARTURE CHART

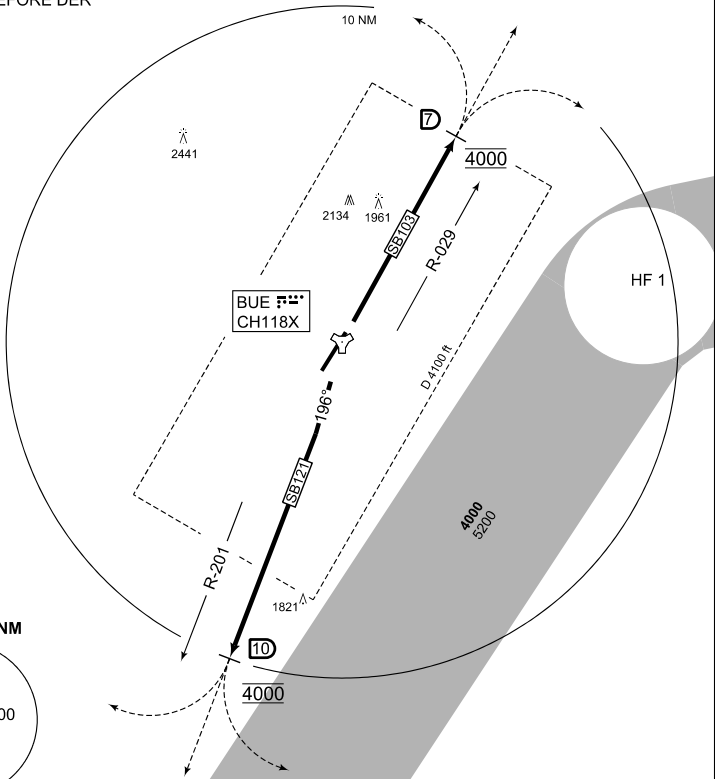
AD ELEV 1568

SB 103 - 121
BUECHEL (ETSB)

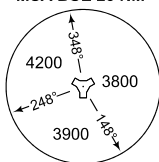
BUECHEL TWR		BUECHEL RADAR					LANGEN RADAR				
275.450	140.450	254.550	336.850	344.625	371.350		375.700	125.600			
RWY	from - to	60	120	180	240	300	360	Reason			
03	DER - 4000 ft	362	724	1086	1448	1810	2172	ATC			
21	DER - 4000 ft	271	542	813	1084	1355	1626	ATC			

NOTE:

- ③ RWY 03 CLOSE-IN OBSTACLE 480 FT EAST OF THR
21 IS NOT CONSIDERED FOR CLIMB GRADIENT.
- b) NO TURN BEFORE DER



MSA BUE 25 NM



EMERG SAFE ALT 100 NM 5400

TA 5000

- | | |
|--------------------|--|
| SB 103
(RWY 03) | <ul style="list-style-type: none"> Climb and turn right to intercept BUE R-029 to 4000 ft Cross BUE 7 DME at 4000 ft Continue as cleared by ATC |
| SB 121
(RWY 21) | <ul style="list-style-type: none"> Climb on track 196° to intercept BUE R-201 to 4000 ft Cross BUE 10 DME at 4000 ft Continue as cleared by ATC |

SB 103 - 121

50°10.43'N
007°03.80'E

BUECHEL (ETSB)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1568

TACAN RWY 03
BUECHEL (ETSB)

LANGEN RADAR		BUECHEL RADAR				BUECHEL TWR	
375.700	125.600	254.550	336.850	344.625	371.350	275.450	140.450
TACAN	APP COURSE	FAF ALT	Descent GR		MDA	TDZE	LDA
BUE CH118X	030°	2800	5.2%/3.0°/316ft/NM		1900	1556	8225

CAUTION:

- a) CIRCLING NOT AUTHORIZED
WEST OF RWY 03/21

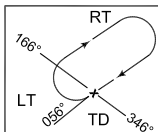
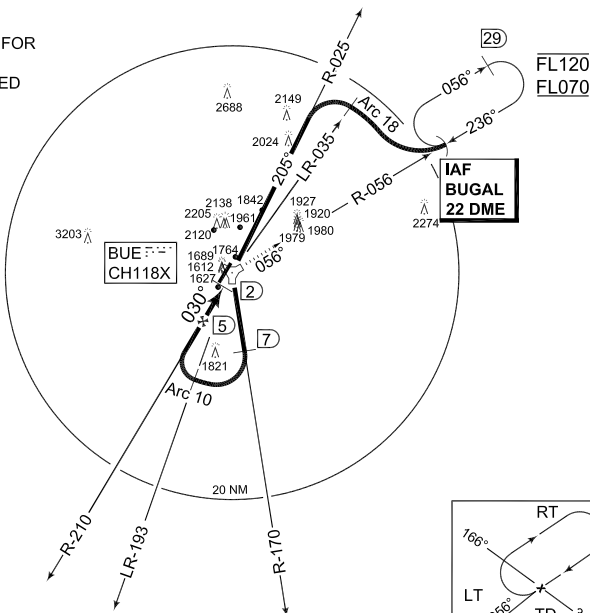
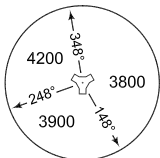
IAF
50°22.40'N
007°32.69'E

NOTE:

- b) TIMING NOT AUTHORIZED FOR
DEFINING THE MAPt
c) MISSED APCH TURN LIMITED
TO KIAS 250 MAX
d) NO TURN BEFORE MAPt

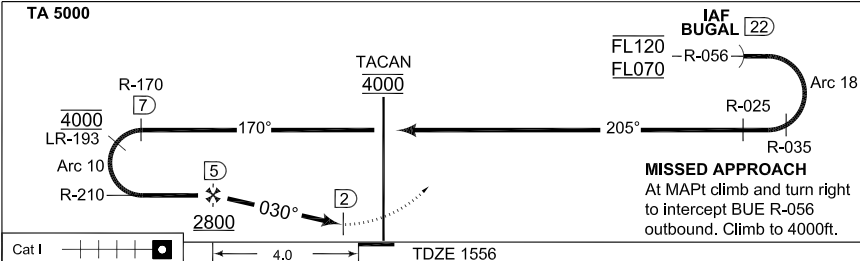


MSA BUE 25 NM



EMERG SAFE ALT 100 NM 5400

TA 5000



CATEGORY	A	B	C	D	E
TACAN 03	1900 - 1.2 332 (400-1.2/1.6)			1900 - 1.2 332 (400-1.2/2.0)	
CIRCLING	1970 - 1.6 402 (500-1.6)	2230 - 1.6 662 (700-1.6)	2390 - 4.0 822 (900-4.0)	2390 - 4.4 822 (900-4.4)	2600 - 4.8 1032 (1100-4.8)
PAR 03	1756 - 1.2 200 (200-1.2/1.6) GS 3.0°				

TACAN RWY 03

50°10.43'N
007°03.80'E

BUECHEL (ETSB)

CHANGE: OBST (360/15)

ZentLunTop 07 JAN 2016

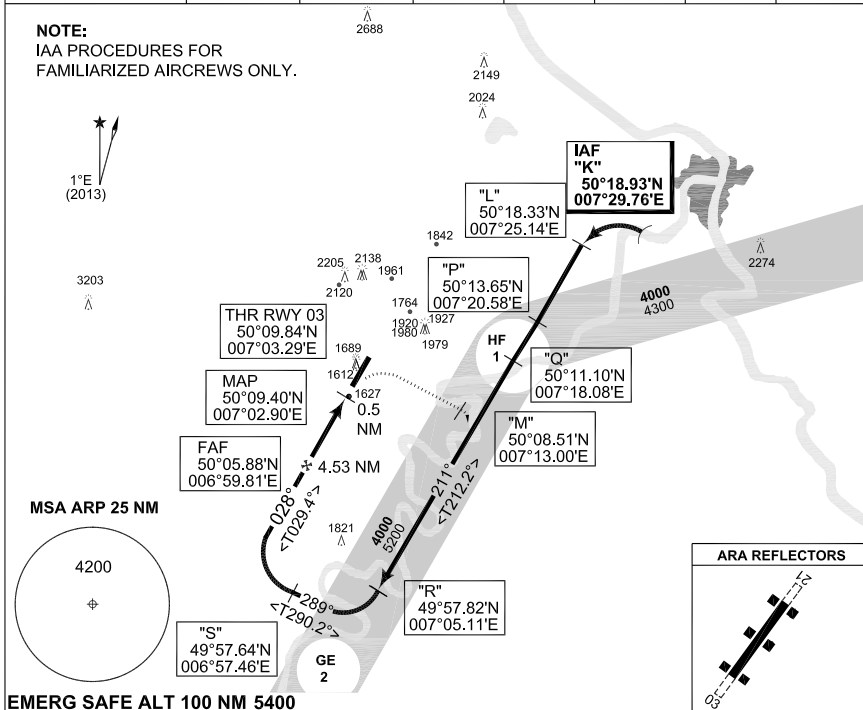
TERPS INSTRUMENT APPROACH CHART

AD ELEV 1568

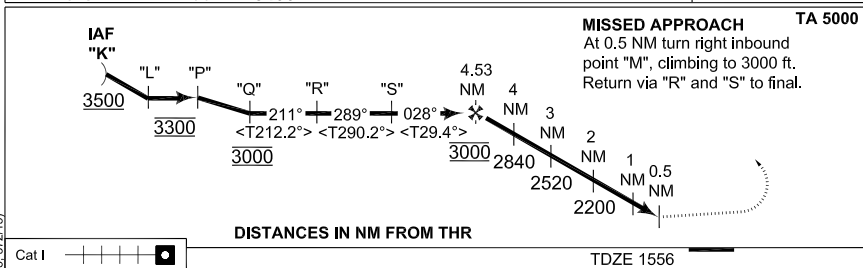
ARA/IAA RWY 03
BUECHEL (ETSB)

LANGEN RADAR		BUECHEL RADAR				BUECHEL TWR	
375.700	125.600	254.550	336.850	344.625	371.350	275.450	140.450
APP COURSE		FAF ALT		MDA		TDZE	ALS-Length
029°		3000		1900		1555.6	LDA
						1200 M	8225

NOTE:
IAA PROCEDURES FOR
FAMILIARIZED AIRCREWS ONLY.



EMERG SAFE ALT 100 NM 5400



Cat I		DISTANCES IN NM FROM THR		TDZE 1556	
CATEGORY	A	B	C	D	E
ARA/IAA 03	1900 - 1.2 344 (400-1.2/1.6)			1900 - 1.2 344 (400-1.2/2.0)	

ARA/IAA RWY 03

50°10.43'N
007°03.80'E

BUECHEL (ETSB)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1568

TACAN RWY 21
BUECHEL (ETSB)

LANGEN RADAR		BUECHEL RADAR				BUECHEL TWR	
375.700	125.600	254.550	336.850	344.625	371.350	275.450	140.450
TACAN	APP COURSE	FAF ALT	Descent GR		MDA	TDZE	ALS-Length
BUE CH118X	205°	3000	5.2%/3.0°/316ft/NM		1920	1568	LDA
							8225

CAUTION:

- a) CIRCLING NOT AUTHORIZED
WEST OF RWY 03/21

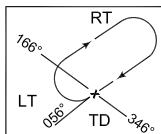
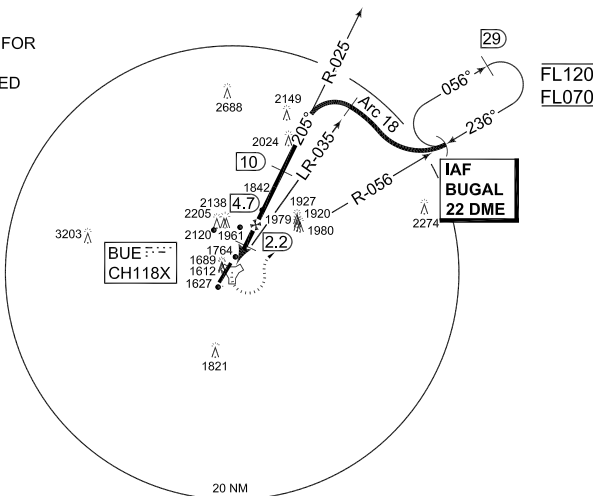
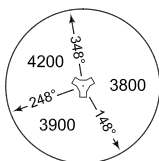
IAF
50°22.40'N
007°32.69'E

NOTE:

- b) TIMING NOT AUTHORIZED FOR
DEFINING THE MAPt
c) MISSED APCH TURN LIMITED
TO KIAS 250 MAX
d) NO TURN BEFORE MAPt



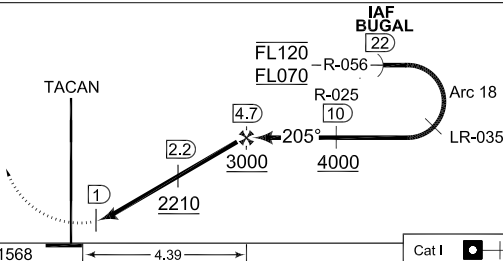
MSA BUE 25 NM



EMERG SAFE ALT 100 NM 5400

MISSED APPROACH

At MAPt climb and turn left to
intercept BUE R-056 outbound.
Climb to 4000 ft.



TA 5000

MPS	CATEGORY	A	B	C	D	E
	TACAN 21	1920 - 1.2 352 (400-1.2/1.6)			1920 - 1.2 352 (400-1.2/2.0)	
	CIRCLING	1970 - 1.6 402 (500-1.6)	2230 - 1.6 662 (700-1.6)	2390 - 4.0 822 (900-4.0)	2390 - 4.4 822 (900-4.4)	2600 - 4.8 1032 (1100-4.8)
	PAR 21	1768 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 21

50°10.43'N
007°03.80'E

BUECHEL (ETSB)

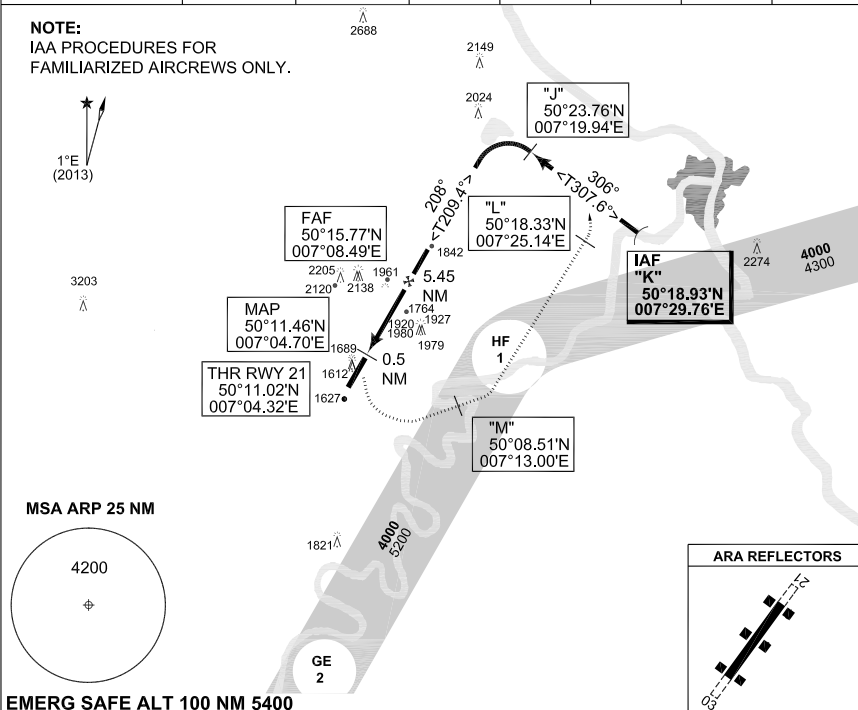
TERPS INSTRUMENT APPROACH CHART

AD ELEV 1568

ARA/IAA RWY 21
BUECHEL (ETSB)

LANGEN RADAR		BUECHEL RADAR				BUECHEL TWR	
375.700	125.600	254.550	336.850	344.625	371.350	275.450	140.450
APP COURSE		FAF ALT	Descent GR	MDA	TDZE	ALS-Length	LDA
209°		3300	320ft/NM	1820	1567.8	1200 M	8225

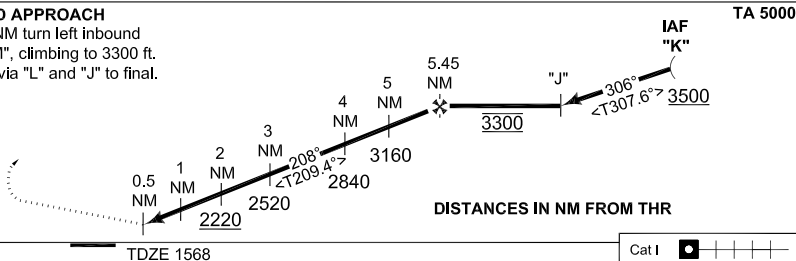
NOTE:
IAA PROCEDURES FOR
FAMILIARIZED AIRCREWS ONLY.



EMERG SAFE ALT 100 NM 5400

MISSSED APPROACH

At 0.5 NM turn left inbound
point "M", climbing to 3300 ft.
Return via "L" and "J" to final.



CATEGORY	A	B	C	D	E
ARA/IAA 21	1820 - 0.8 252 (300-0.8/1.6)		1820 - 1.2 252 (300-1.2/1.6)	1820 - 1.2 252 (300-1.2/2.0)	

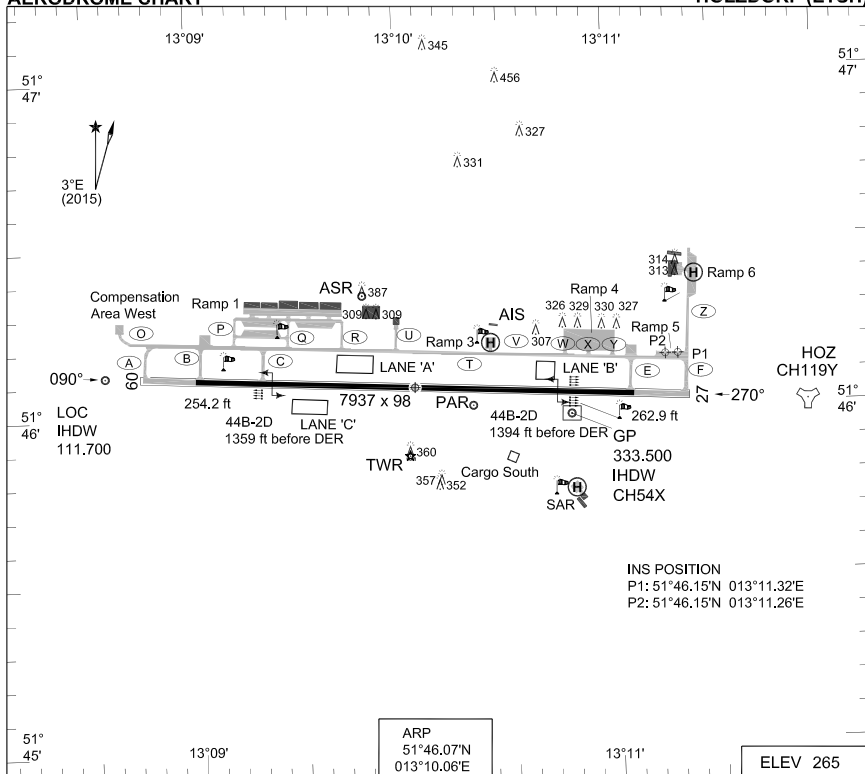
ARA/IAA RWY 21

50°10.43'N
007°03.80'E

BUECHEL (ETSB)

AERODROME CHART

HOLZDORF (ETSH)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
09	120/R/A/W/T	7937	8889	8889	7937	3.0°	260.0	51°46.11'N 013°09.01'E
27	120/R/A/W/T	7937	8889	8889	7937	3.0°	265.0	51°46.03'N 013°11.11'E

HOLZDORF TWR 267.400 130.500 122.100
HOLZDORF RADAR 277.100 278.075 123.300 129.850 SSR 7060 - 7067

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	09	3.0°	46		867	ABCDE	TERPS	460 - 0.8 200 (200-0.8/1.2)
	TERPS	27	3.0°	47		902	ABCDE	TERPS	465 - 0.8 200 (200-0.8/1.2)
	TERPS	091					COPTER	TERPS	360 - 0.4 100 (100-0.4/0.8)
	TERPS	271					COPTER	TERPS	365 - 0.4 100 (100-0.4/0.8)
SRA	TERPS	09					AB C D E	TERPS	660 - 0.8 400 (400-0.8/1.6) 660 - 1.2 400 (400-1.2/1.6) 660 - 1.2 400 (400-1.2/2.0) 660 - 1.6 400 (400-1.6/2.4)
	TERPS	27					AB C D E	TERPS	660 - 0.8 400 (400-0.8/1.6) 660 - 1.2 400 (400-1.2/1.6) 660 - 1.2 400 (400-1.2/2.0) 660 - 1.6 400 (400-1.6/2.4)

AERODROME CHART

HOLZDORF (ETSH)

PANS-OPS
OPERATIONAL INSTRUMENT DEPARTURE CHART

SH 109 - 127
HOLZDORF (ETSH)

AD ELEV 265

HOLZDORF TWR
 267.400 130.500

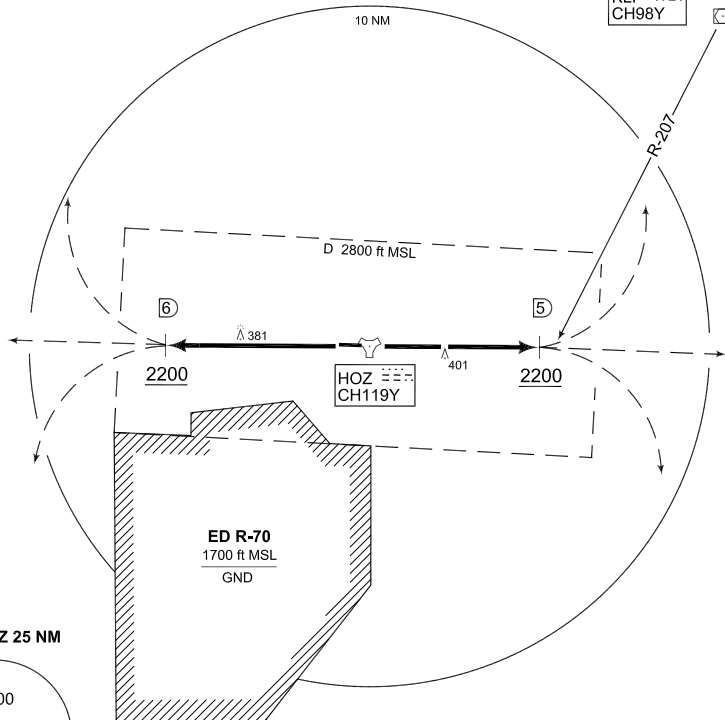
HOLZDORF RADAR
 277.100 129.850

BREMEN RADAR
 398.575 126.425

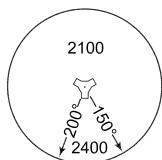
RWY	from - to	60	120	180	240	300	360	Reason
09	DER - 2200 ft	359	718	1077	1436	1795	2154	ATC
27	DER - 2200 ft	480	960	1440	1920	2400	2880	ATC



KLF
 CH98Y



MSA HOZ 25 NM



EMERG SAFE ALT 100 NM 6400

TA 5000

SH 109
 (RWY 09)

- Climb straight ahead to HOZ/5 DME
- Pass HOZ/5 DME at 2200 ft or above
- Continue as cleared by ATC

SH 127
 (RWY 27)

- Climb straight ahead to HOZ/6 DME
- Pass HOZ/6 DME at 2200 ft or above
- Continue as cleared by ATC

CHANGE: OBST (360/15)

ZentLutOp 07 JAN 2016

SH 109 - 127

51°46.07'N
 013°10.06' E

HOLZDORF (ETSH)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

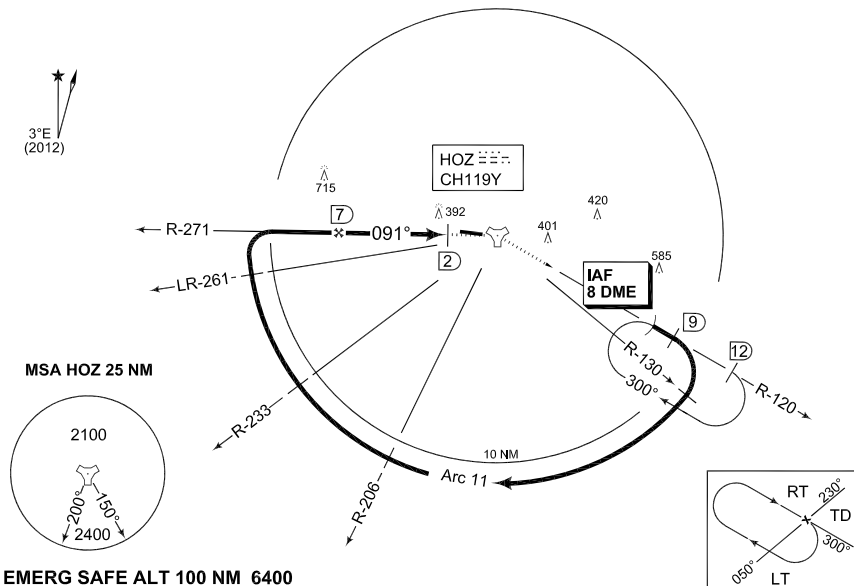
TACAN 1 RWY 09
HOLZDORF (ETSH)

BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
TACAN HOZ CH119Y	APP COURSE 091°	FAF ALT 1900	Descent GR 5.2%	MDA 670	TDZE 260	ALS-Length 900 M	LDA 7937	

NOTE:

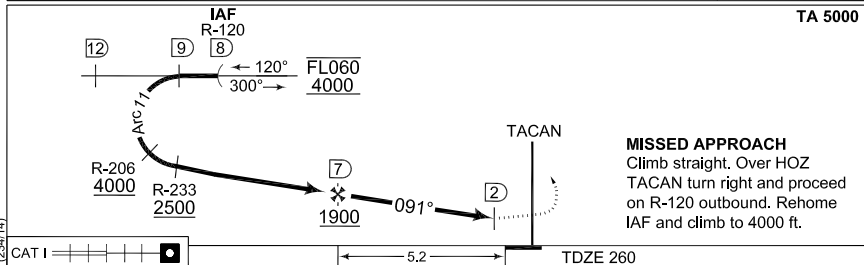
- ⑩ CIRCLING CAT B NOT AUTHORIZED
SOUTH OF RWY 27/09.
- b) TIMING NOT AUTHORIZED FOR
DEFINING THE MAP.

IAF
51°41.76'N
013°22.84'E



EMERG SAFE ALT 100 NM 6400

TA 5000



CHANGE: MINIMA CRITERIA (234/14)

CATEGORY		A	B	C	D	E
IMPS	S-TACAN 09	670 - 0.8 410 (500-0.8/1.6)		670 - 1.2 410 (500-1.2/2.0)		670 -1.6 410 (500-1.6/2.4)
	CIRCLING	760 - 1.6 495 (500-1.6)	⑩ 760 - 1.6 495 (500-1.6)	No circling allowed		
	S-PAR 09	460 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN 1 RWY 09

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AFSBw 05 FEB 2015

PANS-OPS INSTRUMENT APPROACH CHART

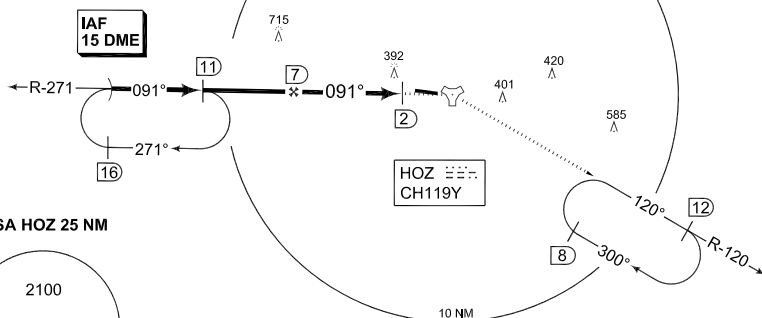
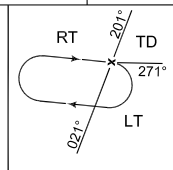
AD ELEV 265

TACAN 2 RWY 09
HOLZDORF (ETSH)

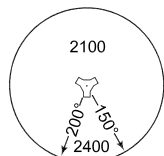
BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
TACAN HOZ CH119Y	APP COURSE 091°	FAF ALT 1900	Descent GR 5.2%	MDA 670	TDZE 260	ALS-Length 900 M	LDA 7937	

NOTE:

- CIRCLING CAT B NOT AUTHORIZED SOUTH OF RWY 27/09
- b) TIMING NOT AUTHORIZED FOR DEFINING THE MAP.



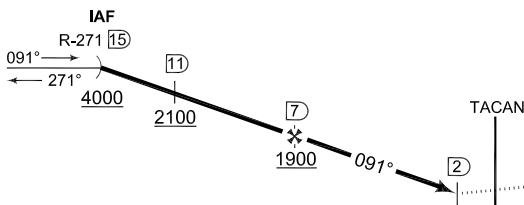
MSA HOZ 25 NM



IAF
51°46.84'N
012°47.83'E

EMERG SAFE ALT 100 NM 6400

TA 5000



MISSED APPROACH

Climb straight ahead. Over HOZ TACAN turn right and proceed on R-120 outbound. Rehome holding TACAN 1 RWY 09 and climb to 4000 ft.

CHANGE: MINIMA CRITERIA (234/14)

CAT I	5.2	TDZE 260
-------	-----	----------

CATEGORY	A	B	C	D	E
S-TACAN 09	670 - 0.8 410 (500-0.8/1.6)		670 - 1.2 410 (500-1.2/2.0)		670 - 1.6 410 (500-1.6/2.4)
CIRCLING	760 - 1.6 495 (500-1.6)	 760 - 1.6 495 (500-1.6)	No circling allowed		
S-PAR 09	460 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN 2 RWY 09

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AFSBW 05 FEB 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

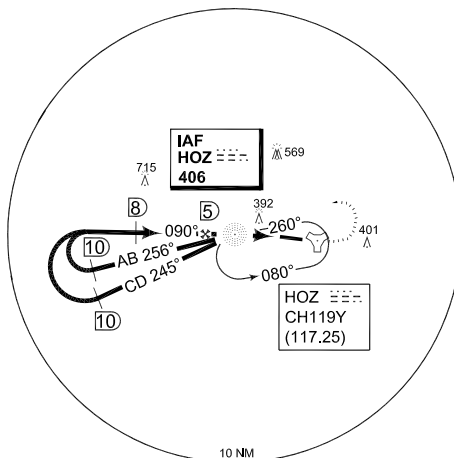
NDB RWY 09
HOLZDORF (ETSH)

BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
NDB HOZ 406	APP COURSE 090°	FAF ALT 1400	Descent GR 5.7%	MDA 640	TDZE 260	ALS-Length 900 M	LDA 7937	

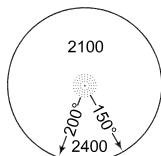
NOTE:

- CIRCLING CAT B NOT AUTHORIZED SOUTH OF RWY 27/09.
- b) FOR CAT C/D ACFT: MAX KIAS 200
- c) MISSE APCH: MAX KIAS 200
- d) DME REQUIRED

IAF
51°46.22'N
013°05.87'E



MSA HOZ 25 NM



EMERG SAFE ALT 100 NM 6400

FAF to MAP 3 NM						IAF/NDB		TA 5000	
Knots	60	90	120	150	180			MISSED APPROACH Climb straight ahead to 1500 ft. Turn left inbound HOZ NDB and climb to 2200 ft.	
Min:Sec	3:00	2:00	1:30	1:12	1:00				

CAT I

3.20 TDZE 260

CATEGORY	A	B	C	D	E
NDB 09	640 - 0.8 380 (400-0.8/1.6)		640 - 1.2 380 (400-1.2/1.6)	640 - 1.2 380 (400-1.2/2.0)	
CIRCLING	760 - 1.6 495 (500-1.6)	760 - 1.6 495 (500-1.6)	No circling allowed		

NDB RWY 09

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

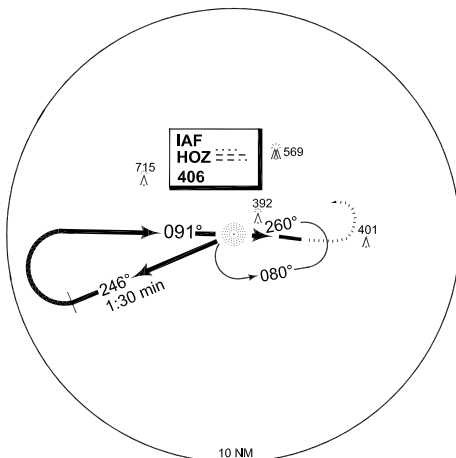
PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

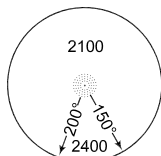
COPTER NDB RWY 09
HOLZDORF (ETSH)

BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
NDB HOZ 406	APP COURSE 091°	FAF ALT 1000	Descent GR 5.9%	MDA 640	TDZE 260	ALS-Length 900 M	LDA 7937	

IAF
51°46.22'N
013°05.87'E



MSA HOZ 25 NM

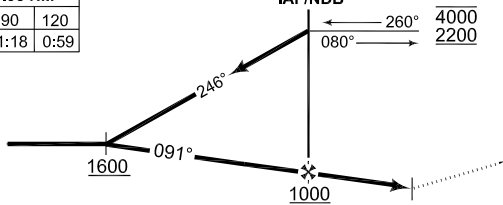


EMERG SAFE ALT 100 NM 6400

FAF to MAP 1.95 NM			
Knots	60	90	120
Min:Sec	1:57	1:18	0:59

IAF/NDB

TA 5000



MISSED APPROACH
Climb straight ahead to 1000 ft. Turn left inbound HOZ NDB and climb to 2200 ft.

CAT I

1.95 TDZE 260

CATEGORY	H
COPTER NDB 09	640 - 0.4 380 (400-0.4/0.8)

COPTER NDB RWY 09

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

CHANGE: MINIMA CRITERIA (234/14)

AFSBw 05 FEB 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

ILS RWY 27
HOLZDORF (ETSH)

BREMEN RADAR		HOLZDORF RADAR				HOLZDORF TWR		
398.575	126.425	277.100	278.075	123.300	129.850	267.400	130.500	122.100
LOCALIZER / DME		APP COURSE	GS INTCP ALT	GS	DA	TDZE	ALS-Length	LDA
IHDW 111.7/CH54X		271°	2700	3.0°	465	265	900 M	7937

NOTE:

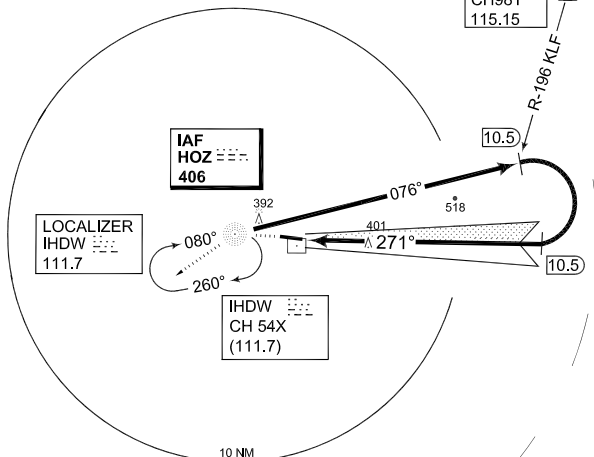
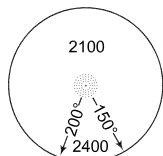
- CIRCLING CAT B NOT AUTHORIZED
SOUTH OF RWY 27/09
- b) SPEED RESTRICTION:
BASETURN MAX KIAS 220
- c) NDB REQUIRED

IAF
51°46.22'N
013°05.87'E

KLF
CH98Y
115.15



MSA HOZ 25 NM



EMERG SAFE ALT 100 NM 6400

FAF - MAP 7 NM						IAF/NDB		TA 5000	
Knots	60	90	120	150	180	080°			
Min:Sec	7:00	4:40	3:30	2:48	2:20	260°			
						4000			
						3000			
						3000			
						076°			
						1533			
						7.7			
						MAPt			
						0.7			
						1530			
						(LOC only)			
						2700			
						(LOC only)			
						2700			
						GS 3.0°			
						TCH 55			
						TDZE 265			
						0.54			
						CAT I			

MISSED APPROACH

Climb inbound HOZ NDB to 3000 ft and enter holding.

CHANGE: MINIMA CRITERIA (234/14)

CATEGORY	A	B	C	D	E
S-ILS 27	465 - 0.8 200 (200-0.8/1.2)				
S-LOC 27	650 - 0.8 385 (400-0.8/1.6)		650 - 1.2 385 (400-1.2/1.6)		650 - 1.2 385 (400-1.2/2.0)
CIRCLING	760 - 1.6 495 (500-1.6)	760 - 1.6 495 (500-1.6)			

ILS RWY 27

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AFSBW 05 FEB 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

TACAN RWY 27
HOLZDORF (ETSH)

BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
TACAN HOZ CH119Y	APP COURSE 271°	FAF ALT 2000	Descent GR 5.2%	MDA 650	TDZE 265	ALS-Length 900 M	LDA 7937	

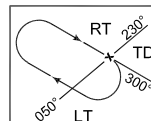
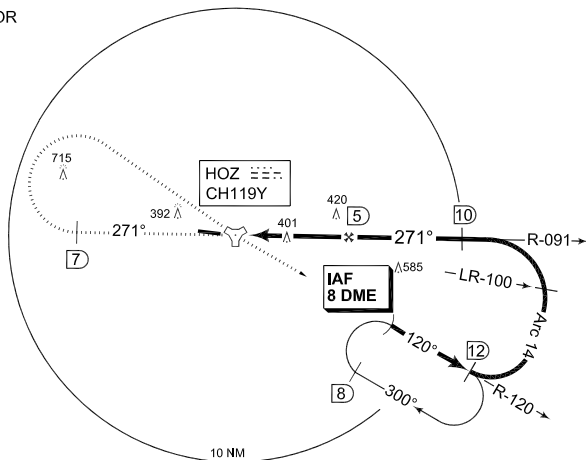
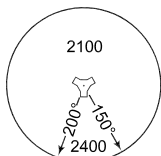
NOTE:

- a) CIRCLING CAT B NOT AUTHORIZED SOUTH OF RWY 27/09.
- b) MISSED APCH TURN LIMITED MAX KIAS 250.
- c) MISSED APCH MINIMUM KIAS 210 AND MINIMUM BANK 20°.
- d) TIMING NOT AUTHORIZED FOR DEFINING THE MAPt.

IAF
51°41.76'N
013°22.84'E



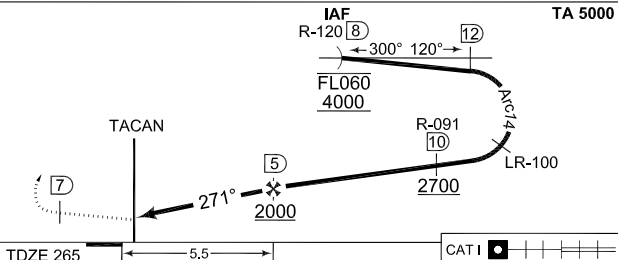
MSA HOZ 25 NM



EMERG SAFE ALT 100 NM 6400

MISSED APPROACH

Climb to 4000 ft on HOZ
R-271. At HOZ R-271 7 DME
turn right and proceed inbound
HOZ. At HOZ proceed on
R-120 outbound to IAF.



CHANGE-MINIMA CRITERIA (23/14)

CATEGORY		A	B	C	D	E
MPS	S-TACAN 27	650 - 0.8 385 (400-0.8/1.6)		650 - 1.2 385 (400-1.2/1.6)	650 - 1.2 385 (400-1.2/2.0)	
	CIRCLING	760 - 1.6 495 (500-1.6)	760 - 1.6 495 (500-1.6)			
	S-PAR 27	465 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 27

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AFSBW 05 FEB 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

COPTER ILS RWY 27 HOLZDORF (ETSH)

BREMEN RADAR		HOLZDORF RADAR				HOLZDORF TWR		
398.575	126.425	277.100	278.075	123.300	129.850	267.400	130.500	122.100
LOCALIZER/DME IHDW 111.7/CH54X		APP COURSE 271°	GS INTCP ALT 1600	GS 3.0°	DA 465	TDZE 265	ALS-Length 900 M	LDA 7937

NOTE:

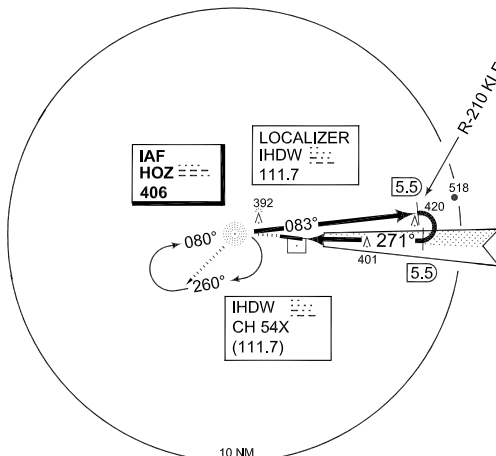
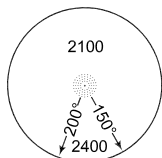
a) NDB REQUIRED

IAF
51°46.22'N
013°05.87'E

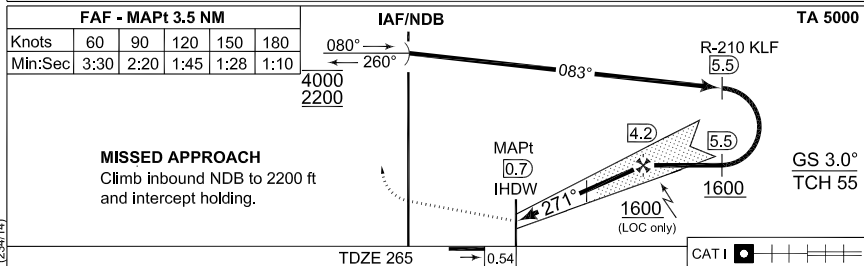
KLF
CH98Y
115.15



MSA HOZ 25 NM



EMERG SAFE ALT 100 NM 6400



CHANGE: MINIMA CRITERIA (23/1/14)

CATEGORY		COPTER
MIPS	H-ILS 27	465 - 0.6 200 (200-0.6/0.8)
	H-LOC 27	650 - 0.6 385 (400-0.6/1.0)

COPTER ILS RWY 27

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AFSBw 05 FEB 2015

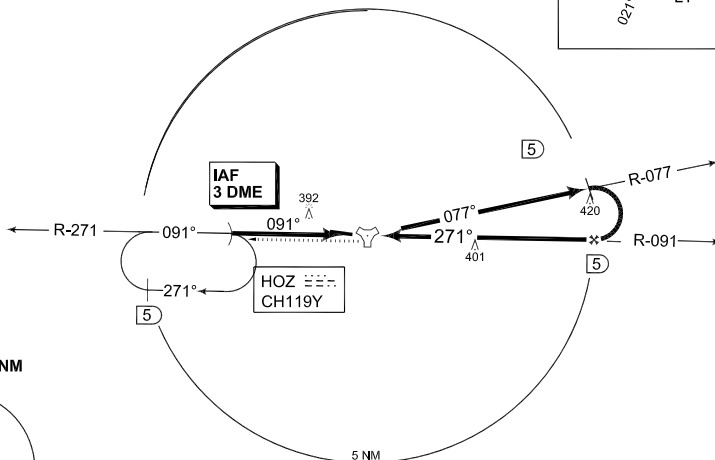
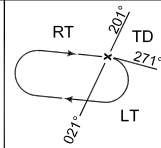
PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 265

COPTER TACAN RWY 27 HOLZDORF (ETSH)

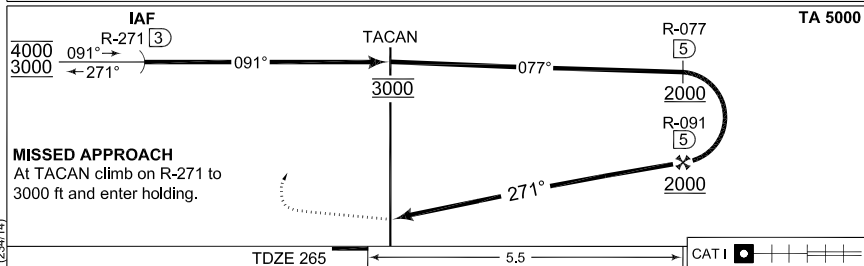
BREMEN RADAR 398.575 126.425		HOLZDORF RADAR 277.100 278.075 123.300 129.850				HOLZDORF TWR 267.400 130.500 122.100		
TACAN HOZ CH119Y	APP COURSE 271°	FAF ALT 2000	Descent GR 5.2%	MDA 650	TDZE 265	ALS-Length 900 M	LDA 7937	

NOTE:
a) TIMING NOT AUTHORIZED FOR
DEFINING THE MAPL



IAF
51°46.18'N
013°07.12'E

EMERG SAFE ALT 100 NM 6400



MISSED APPROACH
At TACAN climb on R-271 to
3000 ft and enter holding.

CATEGORY	COPTER
COPTER TACAN 27	650 - 0.6 385 (400-0.6/1.0)
H-PAR 27	365 - 0.4 100 (100-0.4/0.8) GS 3.0°

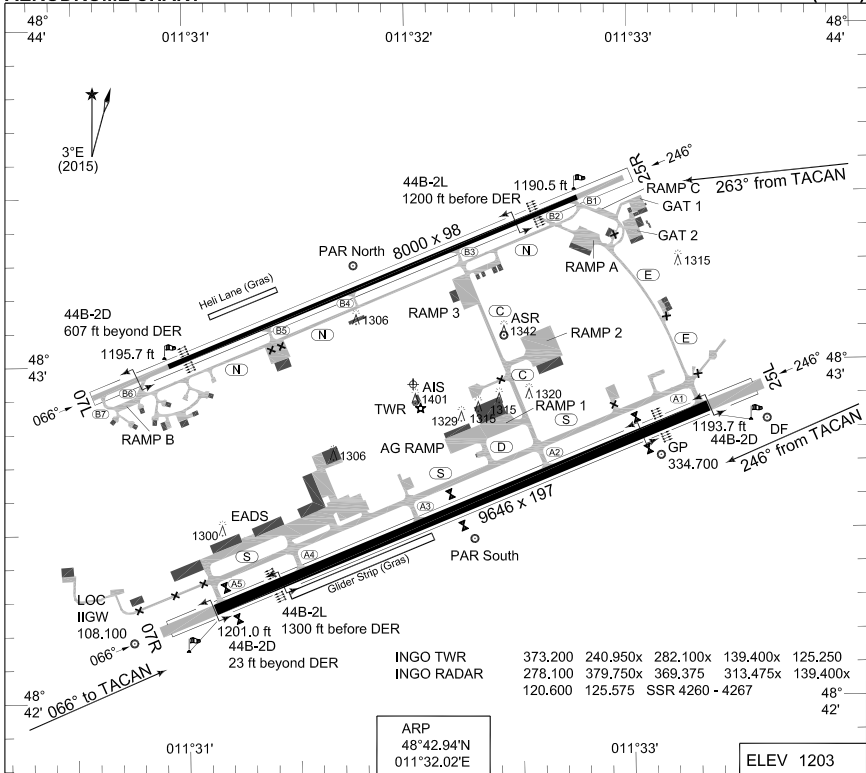
COPTER TACAN RWY 27

51°46.07'N
013°10.06'E

HOLZDORF (ETSH)

AERODROME CHART

INGOLSTADT/MANCHING (ETSI)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
07R	92	9646	10443	10709	9646	3.0°	1201.0	48°42.27'N 011°31.12'E
25L	92	9646	10666	10709	9646	3.0°	1196.6	48°42.86'N 011°33.35'E
07L	92	8000	8000	8000	8000	3.0°	1195.7	48°43.00'N 011°30.92'E
25R	92	8000	8000	8000	8000	3.0°	1191.5	48°43.49'N 011°32.77'E

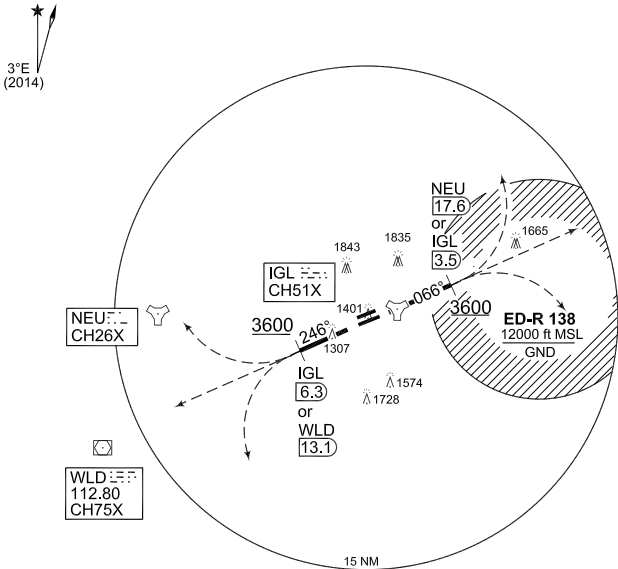
	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS	07R	3.0°	52		1034	ABCDE	TERPS	1401 - 0.8 200 (200-0.8/1.2)
	TERPS	25L	3.0°	56		1050	ABCDE	TERPS	1397 - 0.8 200 (200-0.8/1.2)
	TERPS	07L	3.0°	39		745	ABCDE	TERPS	1397 - 0.8 200 (200-0.8/1.2)
	TERPS	25R	3.0°	32		610	ABCDE	TERPS	1440 - 1.6 250 (300-1.6)
SRA	TERPS	07R					AB	TERPS	1620 - 0.8 425 (500-0.8/1.6)
							CD		1620 - 1.2 425 (500-1.2/2.0)
							E		1620 - 1.6 425 (500-1.6/2.4)
							ABC		1560 - 1.6 363 (400-1.6/1.6)
	TERPS	25L					DE	TERPS	1560 - 1.6 363 (400-1.6/2.0)
							AB		1580 - 0.8 383 (400-0.8/1.6)
							C		1580 - 1.2 383 (400-1.2/1.6)
							D		1580 - 1.2 383 (400-1.2/2.0)
	TERPS	07L					E	TERPS	1600 - 1.6 403 (500-1.6/2.4)
							ABCD		1570 - 1.6 378 (400-1.6)
	TERPS	25R					E	TERPS	1580 - 2.4 388 (400-2.4)

AERODROME CHART

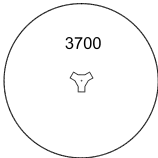
INGOLSTADT/MANCHING (ETSI)

INGO TWR		INGO RADAR			MUENCHEN RADAR				
373.200	125.250	278.100	120.600	125.575	242.200	VHF O/R			
		RWY	From - to	60	120	180	240	300	REASON
		25L	DER - 3600	608	1216	1824	2432	3040	ATC
		07R	DER - 3600	608	1216	1824	2432	3040	ATC

NOTE:
SI 125
CHECK FOR CLOSE-IN OBSTACLE (BUILDING
327M 221° BEYOND DER, 1243FT MSL)



MSA IGL 25 NM



EMERG SAFE ALT 100 NM 13500 TA 5000

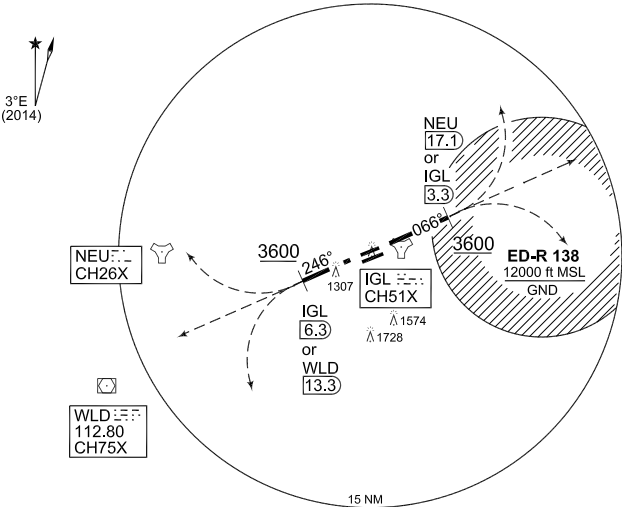
SI 125 (RWY 25L)	- Climb on track 246° to IGL/6.3 DME or WLD/13.1 DME - Cross IGL/6.3 DME or WLD/13.1 DME at 3600 ft or above - Continue as cleared by ATC
SI 107 (RWY 07R)	- Climb on track 066° to IGL/3.5 DME or NEU/17.6 - Cross IGL/3.5 DME or NEU/17.6 at 3600 ft or above - Continue as cleared by ATC

CHANGE: OBST. NOTE (053/16)

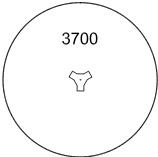
ZentLufTop 03 MAR 2016

INGO TWR		INGO RADAR			MUENCHEN RADAR				
373.200	125.250	278.100	120.600	125.575	242.200	VHF O/R			
		RWY	From - to	60	120	180	240	300	REASON
		25R	DER - 3600	608	1216	1824	2432	3040	ATC
		07L	DER - 3600	608	1216	1824	2432	3040	ATC

NOTE:
SI 207
CHECK FOR CLOSE-IN OBSTACLE (BUILDING 295M
103° BEYOND DER, 1230FT MSL AND SEVERAL
TREES LEFT SIDE OF TRACK, MAX 1247FT MSL)
SI 225
CHECK FOR CLOSE-IN OBSTACLE (BUILDING 843M
271° BEYOND DER, 1273FT MSL)



MSA IGL 25 NM



EMERG SAFE ALT 100 NM 13500 TA 5000

SI 225 (RWY 25R)	- Climb on track 246° to IGL/6.3 DME or WLD/13.3 DME - Cross IGL/6.3 DME or WLD/13.3 DME at 3600 ft or above - Continue as cleared by ATC
SI 207 (RWY 07L)	- Climb on track 066° to IGL/3.3 DME or NEU/17.1 - Cross IGL/3.3 DME or NEU/17.1 at 3600 ft or above - Continue as cleared by ATC

CHANGE: OBST. NOTE (053/16)

ZentLufOp 03 MAR 2016

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 1203

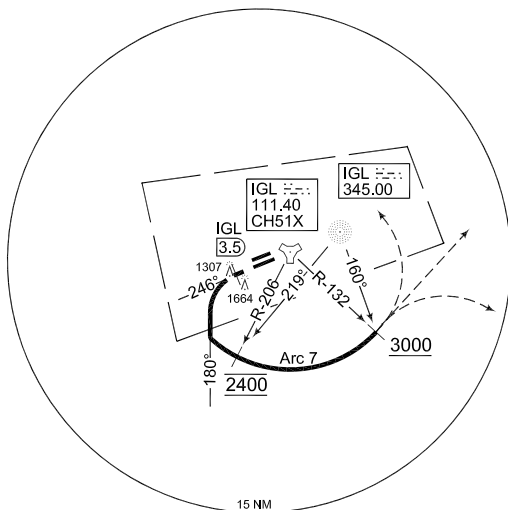
INGOLSTADT/MANCHING (ETSI)

SI 325

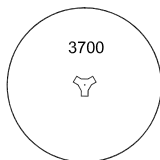
INGO TWR		INGO RADAR			MUENCHEN RADAR					
373.200	125.250	278.100	120.600	125.575	242.200	VHF O/R				
		RWY	From - to	60	120	180	240	300	REASON	
		25L	DER - 2400	456	912	1368	1824	2280	ATC	

NOTE:

- a) NOT FOR CIVIL USE
- b) DEP TURN LIMITED TO MAX KIAS 250
- c) NON TACAN EQUIPPED ACFT HAVE TO BE RADAR MONITORED
- d) NOT FOR CLOSE FORMATION



MSA IGL 25 NM



EMERG SAFE ALT 100 NM 13500

TA 5000

SI 325
(RWY 25L)

- Climb on track 246° to 2400 ft
- At IGL/3.5 DME, turn left HDG 180° to intercept ARC 7 IGL
- Pass IGL R206 at 2400 ft
(Non TACAN equipped acft: pass IGL NDB QDR 219 at 2400 ft)
- Pass IGL R-132 at 3000 ft or above
(Non TACAN equipped acft: pass IGL NDB QDR 160 at 3000 ft or above)
- Continue as cleared by ATC

CHANGE: MSA ORIGINATOR (317/15)

ZentrLufOp 12 NOV 2015

SI 325

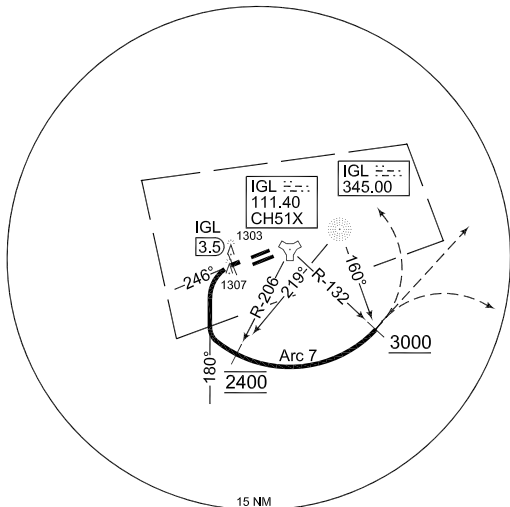
48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

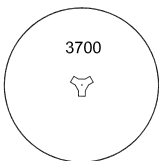
INGO TWR 373.200 125.250		INGO RADAR 278.100 120.600 125.575				MUENCHEN RADAR 242.200 VHF O/R				
		RWY	From - to	60	120	180	240	300	360	REASON
		25R	DER - 1700	486	972	1458	1944	2430	2916	OBST

NOTE:

- a) NOT FOR CIVIL USE
- b) DEP TURN LIMITED TO MAX KIAS 250
- c) NON TACAN EQUIPPED ACFT HAVE TO BE RADAR MONITORED
- d) NOT FOR CLOSE FORMATION
- e) CHECK FOR CLOSE IN OBSTACLES (TREES 703m 254° BEHIND DER, 381m MSL)
SEVERAL TREES NORTH OF TRACK MAX. 380m MSL



MSA IGL 25 NM



EMERG SAFE ALT 100 NM 13500

TA 5000

SI 425
(RWY 25R)

- Minimum PDG for obstacles 8,0% (486ft/NM)
- Climb on track 246° to 2400 ft
- At IGL/3.5 DME, turn left HDG 180° to intercept ARC 7 IGL
- Pass IGL R-206 at 2400 ft
- (Non TACAN equipped acft: pass IGL NDB QDR 219 at 2400 ft)
- Pass IGL R-132 at 3000 ft or above
- (Non TACAN equipped acft: pass IGL NDB QDR 160 at 3000 ft or above)
- Continue as cleared by ATC

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

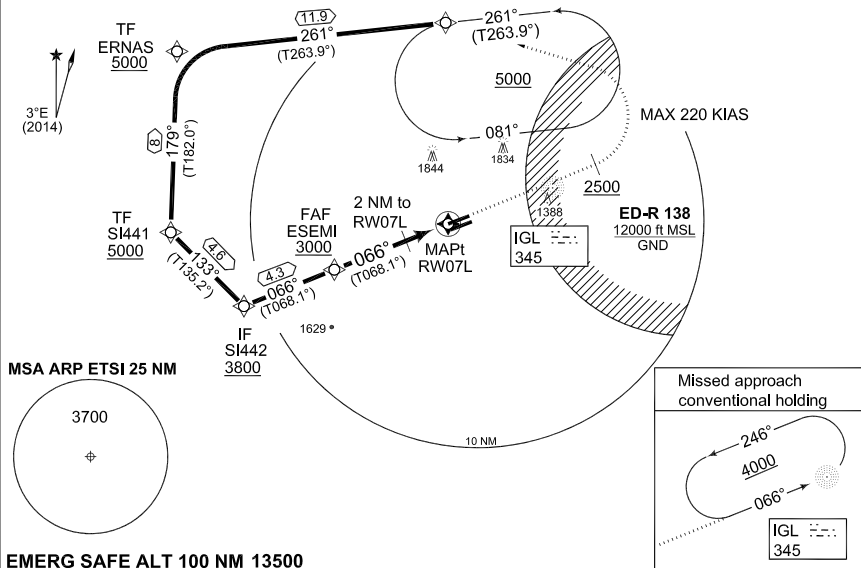
RNAV (GNSS) RWY 07L INGOLSTADT/MANCHING (ETSI)

MUNICHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250			
NDB IGL 345	APP COURSE 066°	FAF ALT 3000	GS 3.1°	MDA see CAT	TDZE 1196	ALS-Length 900 M	LDA 8000	

NOTE:

- GPS QUALIFICATION REQUIRED.
- MISSED APCH TURN LIMITED TO KIAS 220.
- NO TURN BEFORE MAPt.
- CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.

**IAF/MAHF
INGAP**



EMERG SAFE ALT 100 NM 13500

Distance THR	5	4	3	2	1
Altitude	2930	2590	2250	1910	1570

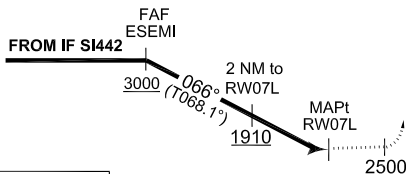
TA 5000

MISSED APPROACH

Climb on track 066°. When passing 2500 ft turn left direct INGAP. Climb to 5000 ft and enter holding.
[M066,A2500+;L] - **INGAP** [A5000+]

CONVENTIONAL MISSED APPROACH

Climb inbound IGL NDB. Climb within published holding to 4000 ft.



CAT I	■	5.2	TDZE 1196	TCH 50
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CATEGORY	A	B	C	D	E
GNSS 07L	1580 - 0.8 384 (400-0.8/1.6)		1590 - 1.2 394 (400-1.2/1.6)	1610 - 1.2 414 (500-1.2/2.0)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

RNAV (GNSS) RWY 07L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

RWY 07L from INGAP APPROACH RNAV (GNSS)

INGAP (IAWP)	48 51 58.000 N	011 31 06.000 E
ERNAS (TWP)	48 50 41.000 N	011 13 10.000 E
SI441 (TWP)	48 42 43.000 N	011 12 45.000 E
SI442 (IWP)	48 39 27.901 N	011 17 37.013 E
ESEMI (FAWP)	48 41 04.093 N	011 23 38.150 E
RW07L (MAWP)	48 42 59.998 N	011 30 55.384 E
INGAP (MAHWP)	48 51 58.000 N	011 31 06.000 E

Threshold Coordinates

RWY 07L	48 42 59.998 N	011 30 55.384 E
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PANS-OPS INSTRUMENT APPROACH CHART

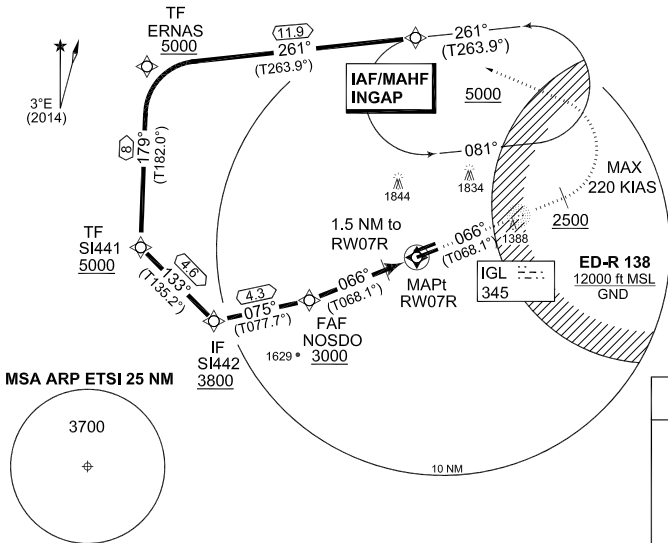
AD ELEV 1203

RNAV (GNSS) RWY 07R INGOLSTADT/MANCHING (ETSI)

MUNICHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250			
NDB IGL 345	APP COURSE 066°	FAF ALT 3000	GS 3.2°	MDA see CAT	TDZE 1201	ALS-Length 855 M	LDA 9646	

NOTE:

- GPS QUALIFICATION REQUIRED.
 - MISSED APCH TURN LIMITED TO KIAS 220.
 - NO TURN BEFORE MAPt.
 - CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
- CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.



EMERG SAFE ALT 100 NM 13500

Distance THR	5	4	3	2	1
Altitude	2960	2620	2280	1940	1600

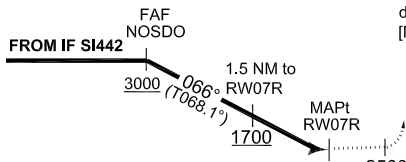
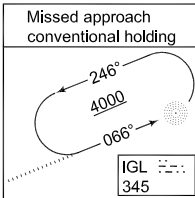
TA 5000

MISSED APPROACH

Climb on track 066°. When passing 2500 ft turn left direct INGAP. Climb to 5000 ft and enter holding.
[M066, A2500+; L] - INGAP [A5000+]

CONVENTIONAL MISSED APPROACH

Climb straight ahead inbound IGL NDB.
Climb within published holding to 4000 ft.



CAT I

5.1 TDZE 1201

TCH 50

CATEGORY	A	B	C	D	E
GNSS 07R	1560 - 0.8 359 (400-0.8/1.6)		1560 - 1.2 359 (400-1.2/1.6)	1580 - 1.2 379 (400-1.2/2.0)	1620 - 1.6 419 (500-1.6/2.4)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

RNAV (GNSS) RWY 07R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

RWY 07R from INGAP APPROACH RNAV (GNSS)

INGAP (IAWP)	48 51 58.000 N	011 31 06.000 E
ERNAS (TWP)	48 50 41.000 N	011 13 10.000 E
SI441 (TWP)	48 42 43.000 N	011 12 45.000 E
SI442 (IWP)	48 39 27.901 N	011 17 37.013 E
NOSDO (FAWP)	48 40 22.844 N	011 23 58.508 E
RW07R (MAWP)	48 42 16.475 N	011 31 07.260 E
INGAP (MAHWP)	48 51 58.000 N	011 31 06.000 E

Threshold Coordinates

RWY 07R	48 42 16.475 N	011 31 07.260 E
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PANS-OPS INSTRUMENT APPROACH CHART

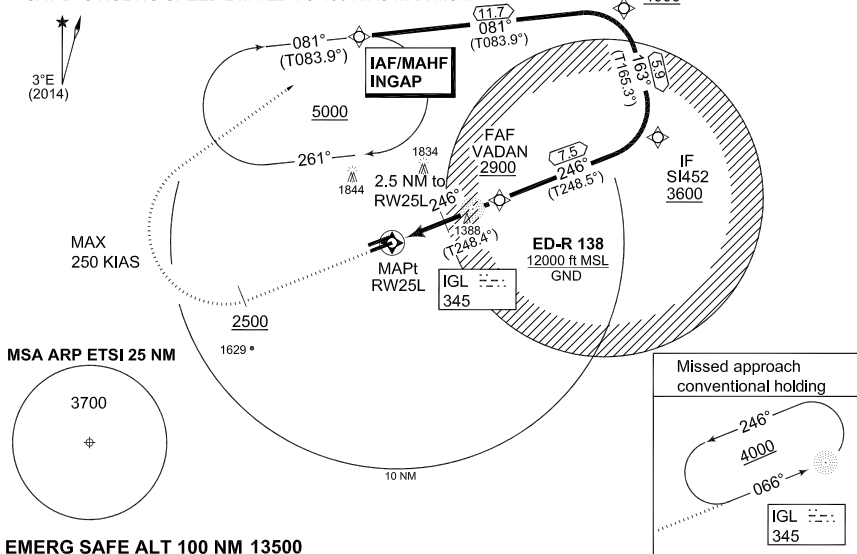
AD ELEV 1203

RNAV (GNSS) RWY 25L INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250		
NDB IGL 345	APP COURSE 246°	FAF ALT 2900	GS 3.1°	MDA see CAT	TDZE 1197	ALS-Length 900 M	LDA 9646

NOTE:

- GPS QUALIFICATION REQUIRED.
- MISSED APCH TURN LIMITED TO KIAS 250.
- NO TURN BEFORE MAPt.
- MISSED APCH:
- CIRCLING: CLIMB WITH MINIMUM 3% (183FT/NM) FOR ATC REASON.
CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

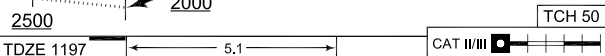
Climb on track 246°, when passing 2500 ft turn right direct INGAP. Climb to 5000 ft and enter holding.
[M246, A2500+; R] - INGAP [A5000+]

CONVENTIONAL MISSED APPROACH

Climb on track 246°, when passing 2500 ft turn right inbound IGL NDB and enter published holding at 4000 ft.

TA 5000

1	2	3	4	5	Distance THR
1550	1880	2210	2540	2870	Altitude



CHANGE:MSA ORIGINATOR (317/15)

CATEGORY	A	B	C	D	E
GNSS 25L	1570 - 0.8 373 (400-0.8/1.6)		1570 - 1.2 373 (400-1.2/1.6)	1570 - 1.2 373 (400-1.2/2.0)	1610 - 1.6 413 (500-1.6/2.4)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

RNAV (GNSS) RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

ZentriLufOp 12 NOV 2015

RWY 25L from INGAP APPROACH RNAV (GNSS)

INGAP (IAWP)	48 51 58.000 N	011 31 06.000 E
SI451 (TWP)	48 53 11.000 N	011 48 47.000 E
SI452 (IWP)	48 47 30.243 N	011 51 02.812 E
VADAN (FAWP)	48 44 44.805 N	011 40 30.291 E
RW25L (MAWP)	48 42 51.757 N	011 33 20.837 E
INGAP (MAHWP)	48 51 58.000 N	011 31 06.000 E

Threshold Coordinates

RWY 25L	48 42 51.757 N	011 33 20.837 E
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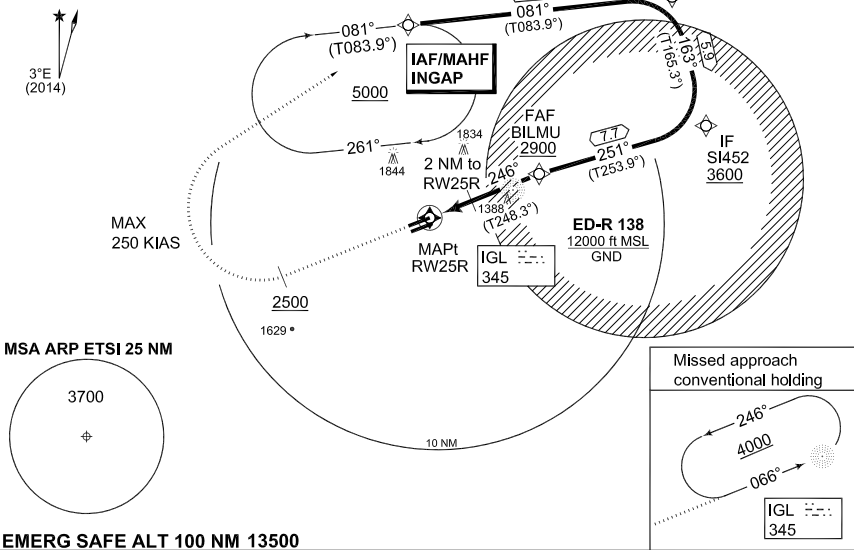
RNAV (GNSS) RWY 25R
INGOLSTADT/MANCHING (ETSI)

NOTE:

- a) GPS QUALIFICATION REQUIRED.
- b) MISSED APCH TURN LIMITED TO KIAS 250.
- c) NO TURN BEFORE MAPT.
- d) MISSED APCH:
- e) CIRCLING: CLIMB WITH MINIMUM 3% (183FT/NM) FOR ATC REASON.
CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.

TF
SI451
4000

(117)

3°E
(201

EMERG SAFE ALT 100 NM 13500

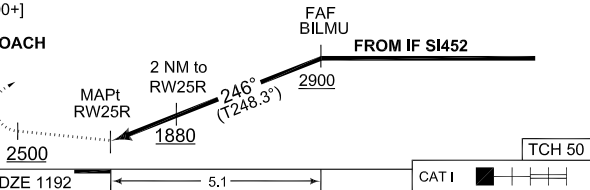
TA 5000

Climb on track 246°, when passing 2500 ft turn right
direct INGAP. Climb to 5000 ft and enter holding.
[M246, A2500+; R] - INGAP [A5000+]

1	2	3	4	5	Distance THR
1550	1880	2210	2540	2870	Altitude

FAF
BILMU
2900
FROM IF SI452

Climb on track 246°, when passing 2500 ft turn right inbound IGL NDB and enter published holding at 4000 ft.



CATEGORY	A	B	C	D	E
GNSS 25R	1590 - 1.6 398 (400-1.6)			1610 - 2.0 418 (400-2.0)	1650 - 2.4 458 (500-2.4)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

RNAV (GNSS) RWY 25R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

RWY 25R from INGAP APPROACH RNAV (GNSS)

INGAP (IAF)	48 51 58.000 N	011 31 06.000 E
SI451 (TF)	48 53 11.000 N	011 48 47.000 E
SI452 (IF)	48 47 30.243 N	011 51 02.812 E
BILMU (FAF)	48 45 22.416 N	011 39 55.808 E
RW25R (MAPt)	48 43 29.275 N	011 32 46.195 E
INGAP (MAHF)	48 51 58.000 N	011 31 06.000 E

Threshold Coordinates

RWY 25R	48 43 29.275 N	011 32 46.195 E
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MIPS

INSTRUMENT APPROACH CHART

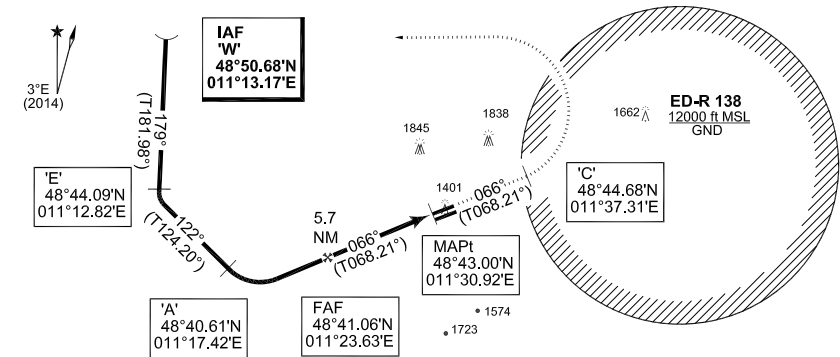
AD ELEV 1203

INGOLSTADT/MANCHING (ETSI)

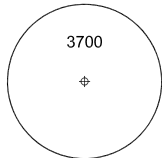
IAA RWY 07L

MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	INGO TWR 373.200	125.250				
		APP COURSE 066°	FAF ALT 3000	Descent GR 5.2%	MDA see CAT	TDZE 1196	ALS-Length 900 M	LDA 8000	

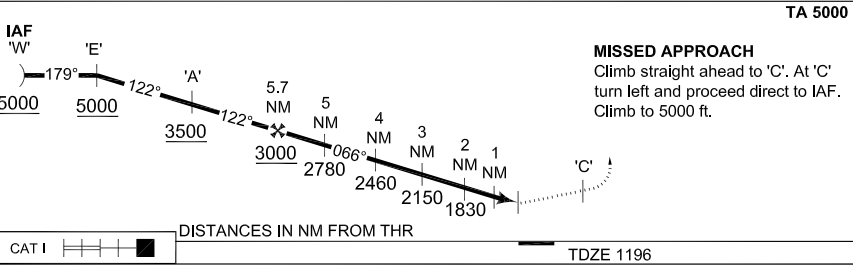
- NOTE:**
- a) DISREGARD PAPI.
 - b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.



MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500



CATEGORY	A	B	C	D	E
IAA 07L 3.4%	1650 - 0.8/454 (500-0.8/1.6)		1650 - 1.2/454 (500-1.2/2.0)	1650 - 1.6/454 (500-1.6/2.4)	
IAA 07L 2.5%	1650 - 0.8/454 (500-0.8/1.6)		1670 - 1.2/474 (500-1.2/2.0)	1690 - 1.6/494 (500-1.6/2.4)	1720 - 2.0/524 (600-2.0/2.8)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

IAA RWY 07L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

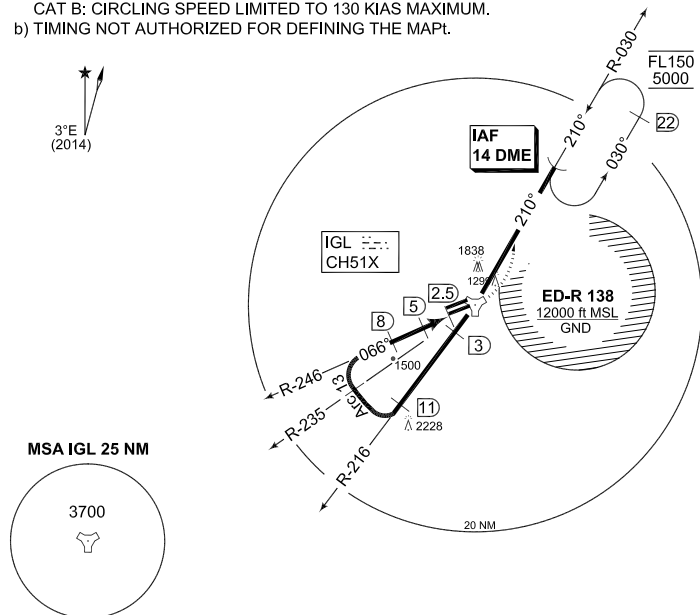
TACAN RWY 07R
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250			
TACAN IGL CH51X	APP COURSE 066°	FAF ALT 3000	Descent GR 5.2%	MDA see CAT	TDZE 1201	ALS-Length 855 M	LDA 9646

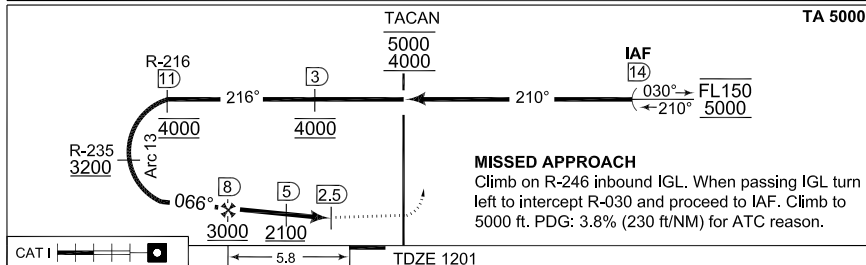
NOTE:

- a) CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.
b) TIMING NOT AUTHORIZED FOR DEFINING THE MAP.

IAF
48°54.94'N
011°45.43'E



EMERG SAFE ALT 100 NM 13500



CATEGORY	A	B	C	D	E
TACAN 07R	1560 - 0.8 359 (400-0.8/1.6)		1560 - 1.2 359 (400-1.2/1.6)	1560 - 1.2 359 (400-1.2/2.0)	1570 - 1.2 369 (400-1.2/2.0)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)
PAR 07R	1401 - 0.8 200 (200-0.8/1.2)			GS 3.0°	

TACAN RWY 07R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

MIPS

INSTRUMENT APPROACH CHART

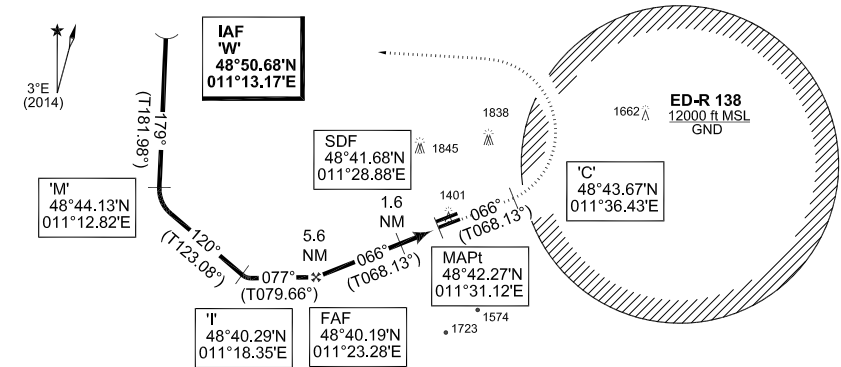
AD ELEV 1203

INGOLSTADT/MANCHING (ETSI)

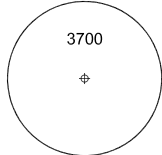
IAA RWY 07R

MUENCHEN RADAR 242.200	INGO RADAR 278.100 120.600 125.575	INGO TWR 373.200 125.250			
	APP COURSE 066°	FAF ALT 3000	Descent GR 5.2%	MDA 1650	TDZE 1201
					ALS-Length 900 M
					LDA 9646

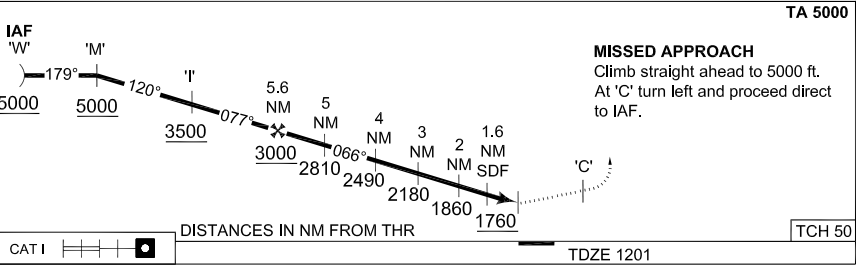
NOTE:
a) DISREGARD PAPI.
b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.



MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500



CATEGORY	A	B	C	D	E
IAA 07R	1650 - 0.8/449 (500-0.8/1.6)		1650 - 1.2/449 (500-1.2/2.0)	1650 - 1.6/449 (500-1.6/2.4)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

IAA RWY 07R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

ILS X or LOC RWY 25L

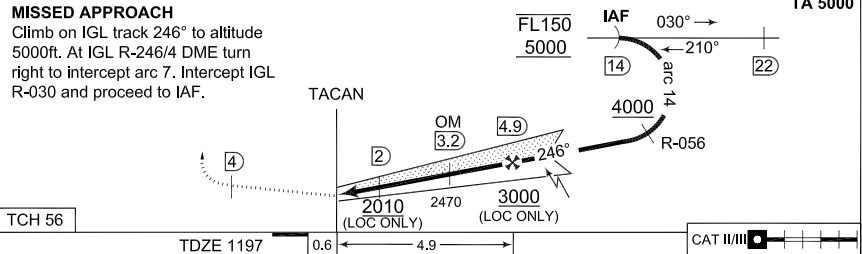
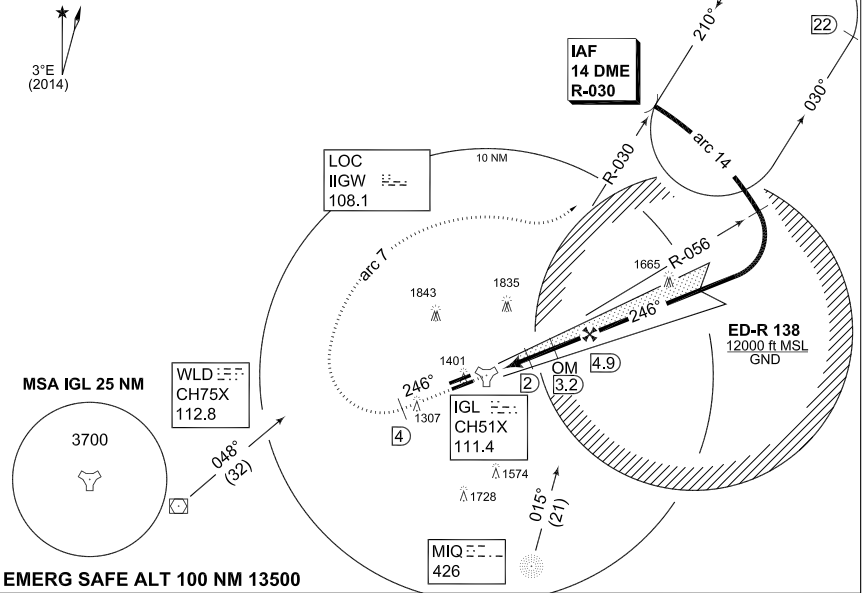
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100 120.600 125.575	INGO TWR 373.200 125.250			
TACAN / LOCALIZER IGL CH51X / IIGW 108.1	APP COURSE 246°	GS INTCP ALT 3000	GS 3.0°/5.2%	DA see CAT	TDZE 1197
					ALS-Length 900 M
					LDA 9646

NOTE:

- a) MISSED APCH TURN LIMITED TO 230 KIAS MAXIMUM.
b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO 130 KIAS.
c) DME REQUIRED

IAF
48°54.94'N
011°45.43'E



	CATEGORY	A	B	C	D	E
MPS	ILS 25L	1397 - 0.8 550 200 (200-0.8/1.2)				1443 - 0.8 550 246 (300-0.8/1.6)
	LOC 25L	1550 - 0.8 353 (400-0.8/1.6)		1550 - 0.8 353 (400-1.2/1.6)	1550 - 1.2 353 (400-1.2/2.0)	
	CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

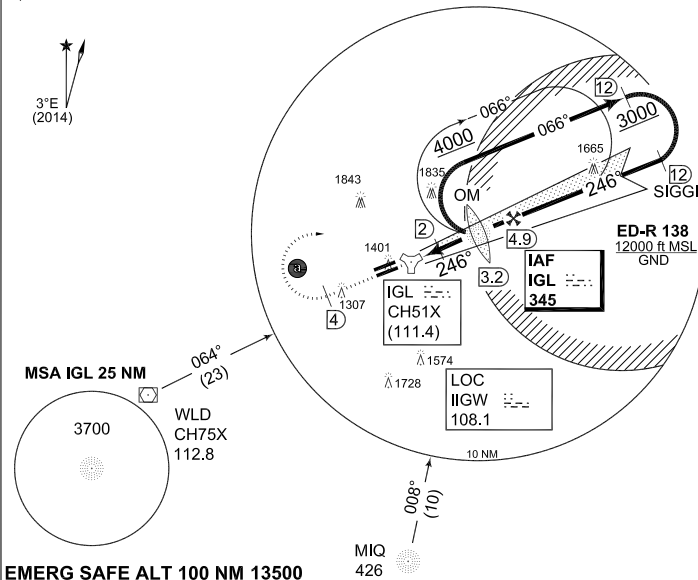
ILS Y or LOC RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	INGO TWR 373.200	125.250				
NDB/TACAN/LOCALIZER	APP COURSE 246°	GS INTCP ALT 3000	GS 3.0°/5.2%	DA see CAT	TDZE 1197	ALS-Length 900 M	LDA 9646		
IGL 345/IGL CH51X/IIGW 108.1									

NOTE:

- MISSSED APCH TURN LIMITED TO KIAS 210.
- CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.
- BASE TURN MAX KIAS 210.
- DME REQUIRED

IAF
48°44.26'N
011°38.67'E

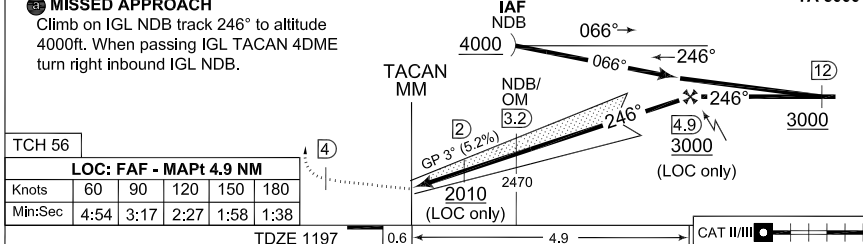


EMERG SAFE ALT 100 NM 13500

MISSSED APPROACH

Climb on IGL NDB track 246° to altitude 4000ft. When passing IGL TACAN 4DME turn right inbound IGL NDB.

TA 5000



CATEGORY	A	B	C	D	E
ILS 25L	1397 - 0.8/550 200 (200-0.8/1.2)				
LOC 25L	1550 - 0.8 353 (400-0.8/1.6)		1550 - 0.8 353 (400-1.2/1.6)	1550 - 1.2 353 (400-1.2/2.0)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

ILS Y or LOC RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

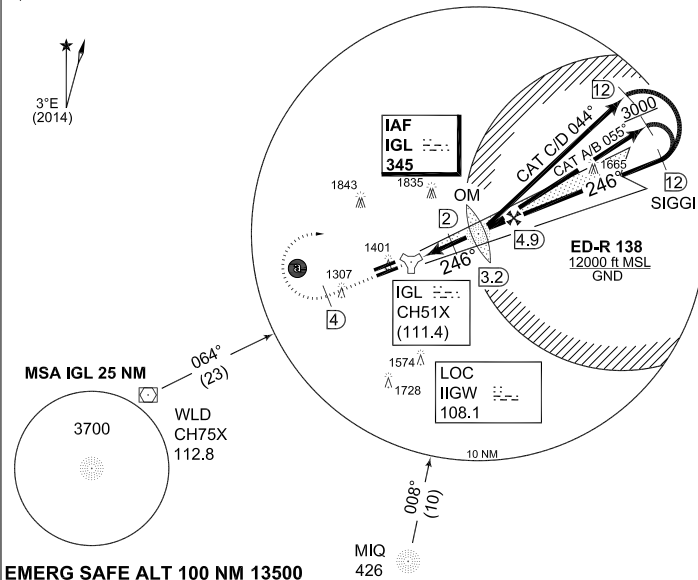
ILS Z or LOC RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	373.200	125.250				
NDB/TACAN/LOCALIZER IGL 345/IGL CH51X/IIGW 108.1	APP COURSE 246°	GS INTCPT ALT 3000	GS 3.0°/5.2%	DA see CAT	TDZE 1197	ALS-Length 900 M	LDA 9646		

NOTE:

- MISSED APCH TURN LIMITED TO KIAS 210.
- CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.
- BASE TURN MAX KIAS 210.
- DME REQUIRED

IAF
48°44.26'N
011°38.67'E

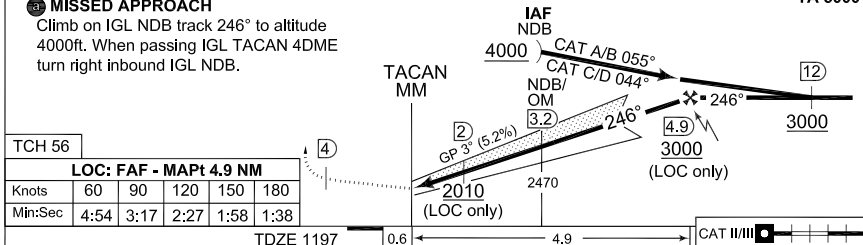


EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

Climb on IGL NDB track 246° to altitude 4000ft. When passing IGL TACAN 4DME turn right inbound IGL NDB.

TA 5000



CHANGE: OBST (053/16)

CATEGORY	A	B	C	D	E
ILS 25L	1397 - 0.8/550 200 (200-0.8/1.2)				
LOC 25L	1550 - 0.8 353 (400-0.8/1.6)		1550 - 0.8 353 (400-1.2/1.6)	1550 - 1.2 353 (400-1.2/2.0)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

ILS Z or LOC RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

ZentLufTop 03 MAR 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

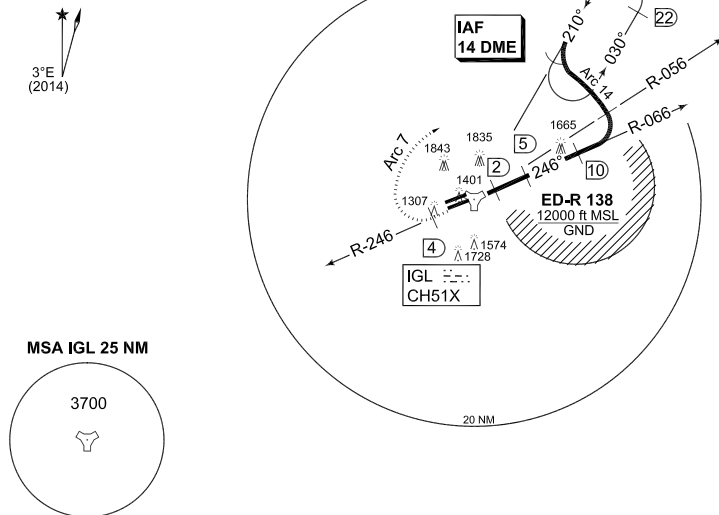
TACAN RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUNICHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250		
TACAN IGL CH51X	APP COURSE 246°	FAF ALT 3000	Descent GR 5.2%	MDA 1570	TDZE 1197	ALS-Length 900 M	LDA 9646

NOTE:

- CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAXIMUM.
- TIMING NOT AUTHORIZED FOR DEFINING THE MAPL.
- MISSED APCH TURN MAX KIAS 230.

IAF
48°54.94'N
011°45.43'E



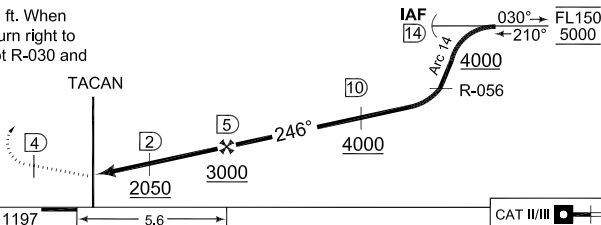
MSA IGL 25 NM

3700

EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

Climb on R-246 to 5000 ft. When passing R-246/4 DME turn right to intercept Arc 7. Intercept R-030 and proceed to IAF.



TA 5000

TDZE 1197

5.6

CAT II/III

CATEGORY	A	B	C	D	E
TACAN 25L	1570 - 0.8 373 (400-0.8/1.6)		1570 - 1.2 373 (400-1.2/1.6)	1570 - 1.2 373 (400-1.2/2.0)	1570 - 1.2 373 (400-1.2/2.0)
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)
PAR 25L	1397 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 25L

48°54.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

INGOLSTADT/MANCHING (ETSI)

IAA RWY 25L

MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	INGO TWR 373.200	125.250				
		APP COURSE 246°	FAF ALT 2900	Descent GR 5.2%	MDA 1650	TDZE 1197	ALS-Length 900 M	LDA 9646	

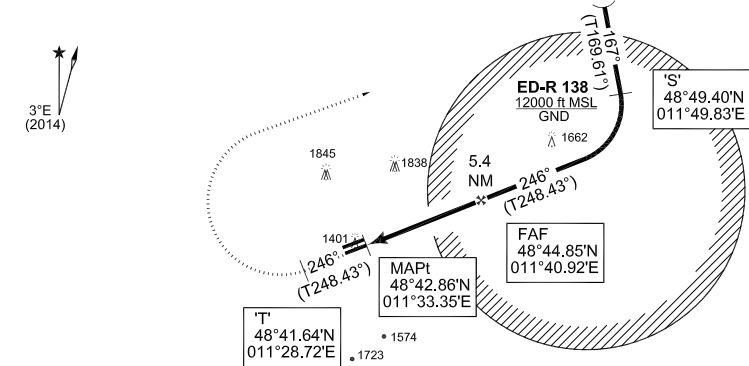
- NOTE:
- a) DISREGARD PAPI.
 - b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.

IAF

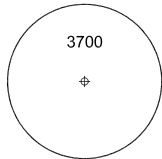
'N'

48°53,18'N

011°48,78'E

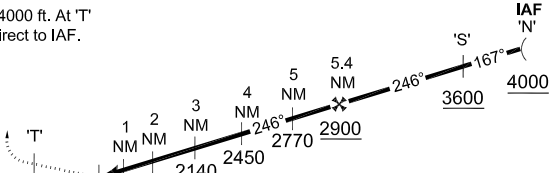


MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH
Climb straight ahead to 4000 ft. At 'T' turn right and proceed direct to IAF.



TA 5000

TDZE 1197		DISTANCES IN NM FROM THR		TCH 50
				CAT II/III

CATEGORY	A	B	C	D	E
ARA/IAA 25L	1650 - 0.8/453 (500-0.8/1.6)		1650 - 1.2/453 (500-1.2/2.0)	1650 - 1.6/453 (500-1.6/2.4)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

IAA RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

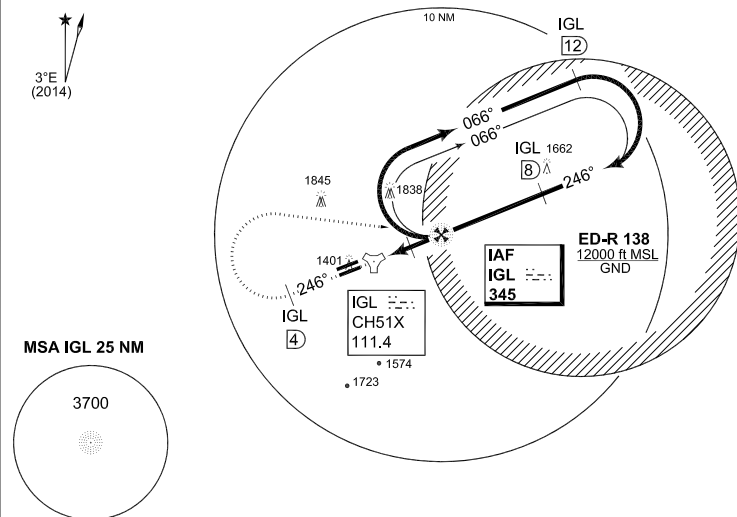
NDB Y RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	278.100	INGO RADAR 120.600 125.575	INGO TWR 373.200 125.250					
TACAN / NDB IGL CH51X / IGL 345.0		APP COURSE 246°	FAF ALT 2400	Descent GR 5.2%	MDA 1650	TDZE 1197	ALS-Length 900 M	LDA 9646

NOTE:

- MISSED APCH TURN LIMITED TO 210 KIAS MAXIMUM.
- CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO 130 KIAS.
- RACETRACK SPEED LIMITED TO 210 KIAS MAXIMUM.
- DME REQUIRED

IAF
48°44.26'N
011°38.67'E



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

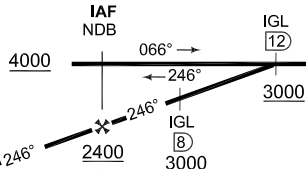
Climb on IGL NDB track 246° to altitude 4000 ft. When passing IGL TACAN 4 DME turn right inbound IGL NDB.

FAF - MAPt 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16



TDZE 1197

TACAN



TA 5000

CATEGORY	A	B	C	D	E
S-NDB 25L	1650 - 0.8/453 (500-0.8/1.6)		1650 - 1.2/453 (500-1.2/2.0)	1650 - 1.6/453 (500-1.6/2.4)	
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	

NDB Y RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

CentrLuftOp 12 NOV 2015

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

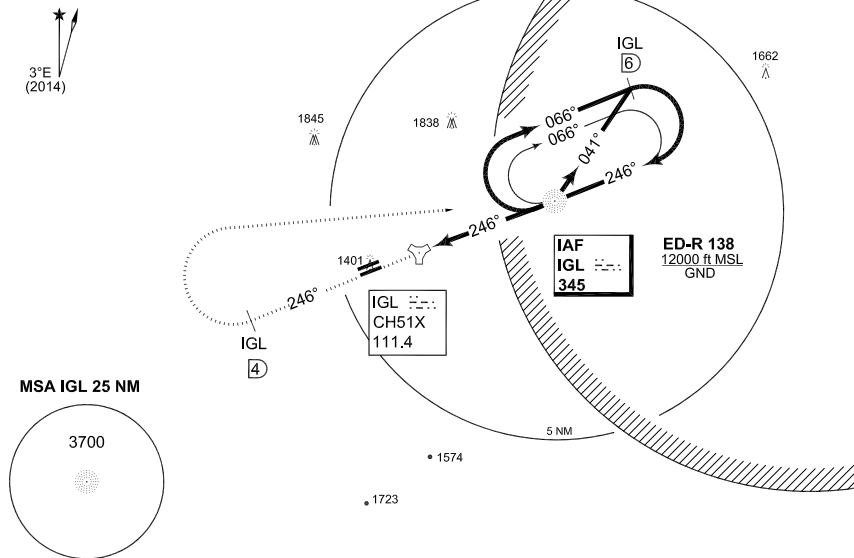
COPTER NDB RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	278.100	INGO RADAR 120.600 125.575	INGO TWR 373.200 125.250					
TACAN / NDB IGL CH51X / IGL 345.0		APP COURSE 246°	FAF ALT 2400	Descent GR 5.2%	MDA 1650	TDZE 1197	ALS-Length 900 M	LDA 9646

NOTE:

- a) DME REQUIRED
- b) DISREGARD PAPI

IAF
48°44.26'N
011°38.67'E



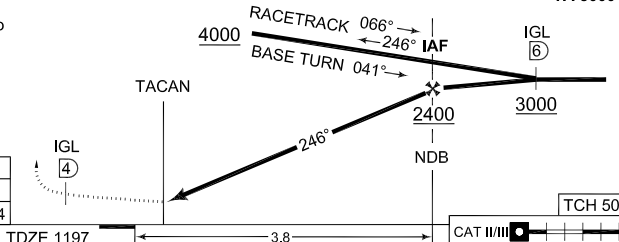
EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

Climb on IGL NDB track 246° to IGL 4 DME. Turn right inbound IGL NDB and enter Holding. Climb to 4000 ft.

TA 5000

FAF - MAPt 3.8 NM				
Knots	50	70	90	110
Min:Sec	4:34	3:15	2:31	2:04



CATEGORY		H
COPTER NDB 25L		1650 - 0.4/453 (500-0.4/0.8)
MIPS		

COPTER NDB RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

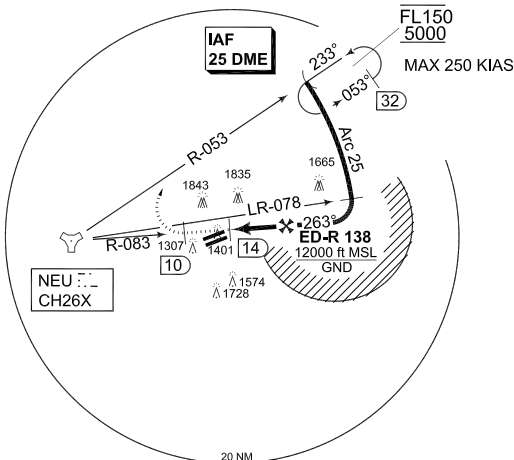
TACAN RWY 25R
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250		
TACAN NEU CH26X	APP COURSE 263°	FAF ALT 3000	Descent GR 5.2%	MDA 1960	TDZE 1192	ALS-Length 900 M	LDA 8000

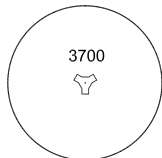
NOTE:

- CIRCLING NOT AUTHORIZED N OF RWY 07L/25R.
CAT B: CIRCLING SPEED LIMITED TO 130 KIAS MAX.
- TIMING NOT AUTHORIZED FOR DEFINING THE MAPL.
- MISSSED APPROACH TURN LIMITED TO 230 KIAS MAX.

IAF
48°56.65'N
011°44.10'E



MSA NEU 25 NM

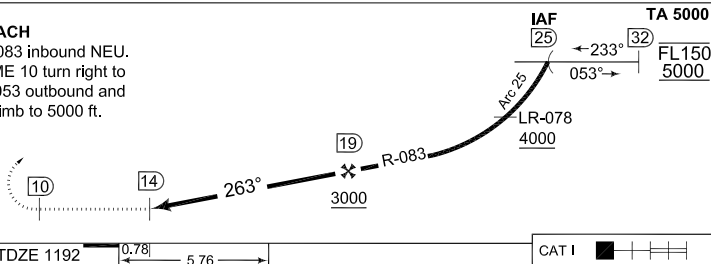


EMERG SAFE ALT 100 NM 13500

MISSSED APPROACH

Climb on NEU R-083 inbound NEU.
When passing DME 10 turn right to
intercept NEU R-053 outbound and
proceed to IAF, climb to 5000 ft.

NEU
TACAN



TDZE 1192

0.78

5.76

CAT I

CATEGORY	A	B	C	D	E
TACAN 25R	1960 - 1.6 768 (800-1.6)	1960 - 2.0 768 (800-2.0)	1960 - 3.6 768 (800-3.6)	1960 - 4.0 768 (800-4.0)	1960 - 4.4 768 (800-4.4)
CIRCLING	1960 - 1.6 797 (800-1.6)	1960 - 1.6 797 (800-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)

TACAN RWY 25R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

MIPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

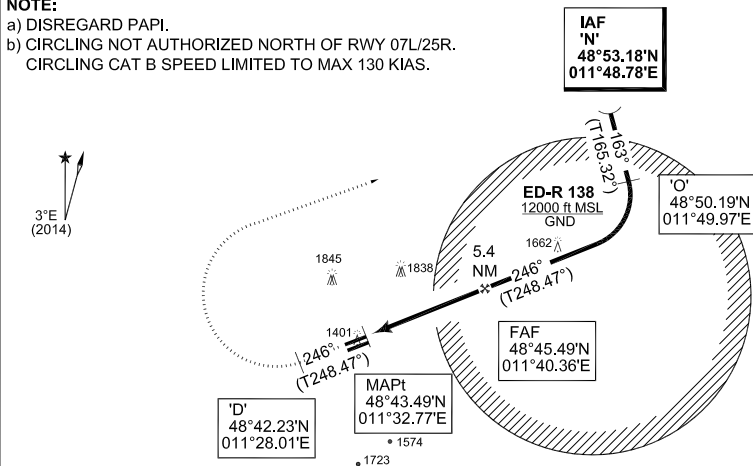
INGOLSTADT/MANCHING (ETSI)

IAA RWY 25R

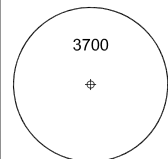
MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	INGO TWR 373.200	125.250				
		APP COURSE 246°	FAF ALT 2900	Descent GR 5.2%	MDA 1650	TDZE 1192	ALS-Length 900 M	LDA 8000	

NOTE:

- a) DISREGARD PAPI.
b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.



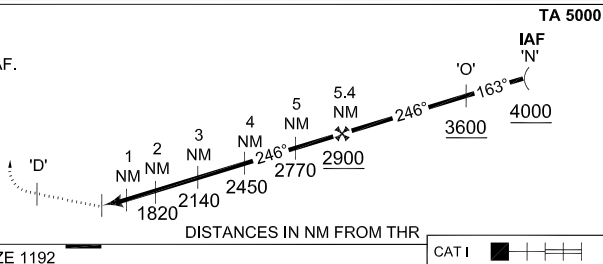
MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

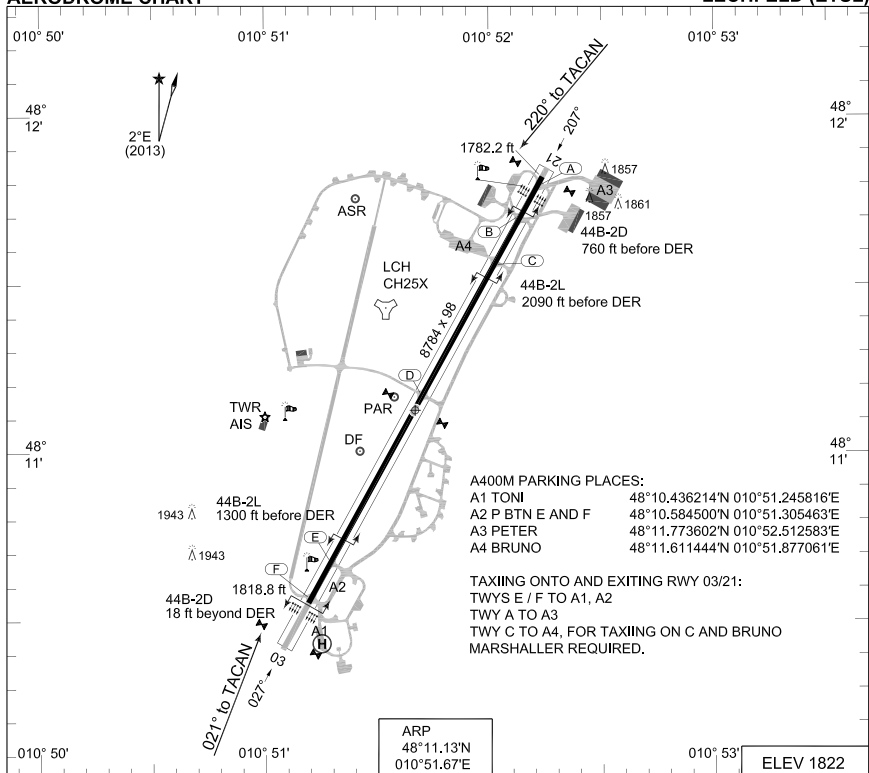
Climb straight ahead to 'D'. At 'D' turn right and proceed direct to IAF. Climb to 4000 ft.



TDZE 1192		DISTANCES IN NM FROM THR					CAT I	
CATEGORY	A	B	C	D	E			
IAA 25R	1650 - 1.6/458 (500-1.6)		1650 - 2.0/458 (500-2.0)	1650 - 2.4/458 (500-2.4)	1650 - 2.8/458 (500-2.8)			
CIRCLING	1700 - 1.6 497 (500-1.6)	1700 - 1.6 497 (500-1.6)	2480 - 4.8 1277 (1300-4.8)	2630 - 4.8 1427 (1500-4.8)	2630 - 4.8 1427 (1500-4.8)			

AERODROME CHART

LECHFELD (ETSL)



RWY	LCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
03	50	8784	8784	8784	8784	3.0°	1821.7	48°10.55'N 010°51.19'E
21	50	8784	8784	8784	8784	3.0°	1795.9	48°11.81'N 010°52.24'E

LECHFELD TWR 296.725 135.150
 LECHFELD RADAR 358.650 278.050 385.400 344.000 129.025 138.350x 138.900x SSR 4270 - 4277

*in front of threshold

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	TERPS TERPS	03 21	3.0° 3.0°	49	42	123° 876	ABCDE ABCDE	TERPS TERPS	2022 - 0.8 200 (200-0.8/1.2) 1996 - 0.8 200 (200-0.8/1.2)
SRA	TERPS TERPS	03 21					AB C DE AB C D E	TERPS TERPS	2280 - 0.8 458 (500-0.8/1.6) 2280 - 1.2 458 (500-1.2/2.0) 2280 - 1.6 458 (500-1.6/2.4) 2220 - 0.8 424 (400-0.8/1.6) 2220 - 1.2 424 (400-1.2/1.6) 2220 - 1.2 424 (400-1.2/2.0) 2220 - 1.6 424 (400-1.6/2.4)

AERODROME CHART

LECHFELD (ETSL)

PANS-OPS INSTRUMENT DEPARTURE CHART

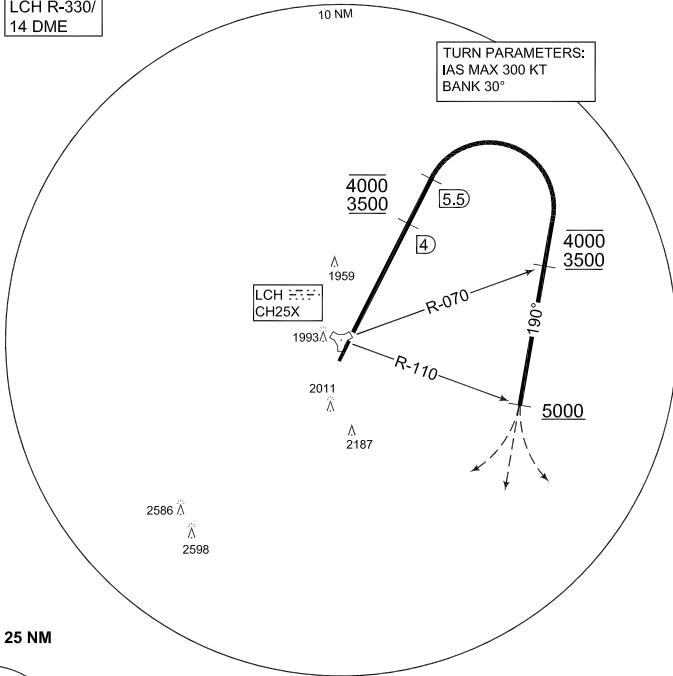
AD ELEV 1822

SL 303
LECHFELD (ETSL)

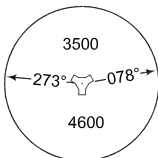
LECHFELD TWR 296.725 135.150	LANDSBERG RADAR 278.900 309.200 344.000	LECHFELD RADAR 358.650 278.050 129.025
MUENCHEN RADAR 259.000 129.450	RWY 03	from - to 60 120 180 240 300 Reason DER - 3500 ft 496 992 1488 1984 2480 ATC



PESIM
48°23.95'N
010°41.23'E
LCH R-330/ 14 DME



MSA LCH 25 NM



EMERG SAFE ALT 100 NM 14 800

TA 5000

SL 303
(RWY 03)

- Climb straight ahead to LCH/5.5 DME (Pass LCH/4 DME between 3500 ft and 4000 ft)
- At LCH/5.5 DME turn right heading 190°
- Pass LCH R-070 between 3500 ft and 4000 ft
- Pass LCH R-110 not below 5000 ft

SL 303

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

CHANGE: OBST (212/15)

AFSBw 23 JUL 2015

PANS-OPS
INSTRUMENT DEPARTURE CHART

AD ELEV 1822

SL 403
LECHFELD (ETSL)

LECHFELD TWR 296.725 135.150		LANDSBERG RADAR 278.900 309.200 344.000			LECHFELD RADAR 358.650 278.050 129.025					
MUENCHEN RADAR 259.000 129.450		RWY		from - to	60	120	180	240	300	Reason
		03		DER - 3500 ft	496	992	1488	1984	2480	ATC



PESIM
48°23.95'N
010°41.23'E
LCH R-330/
14 DME

5000

282°

TURN PARAMETERS:
IAS MAX 300 KT
BANK 30°

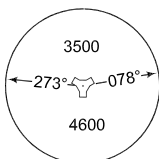
R-340

④ 3500

LCH
CH25X

2586
2598

MSA LCH 25 NM



10 NM

EMERG SAFE ALT 100 NM 14 800

TA 5000

- SL 403 (RWY 03)
- Climb straight ahead to LCH/4 DME (Pass LCH/4 DME not below 3500 ft)
 - At LCH/4 DME turn left on track 282° (Pass LCH R-340 not below 5000ft)

SL 403

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

CHANGE OBST (212/15)

AFSBw 23 JUL 2015

PANS-OPS INSTRUMENT DEPARTURE CHART

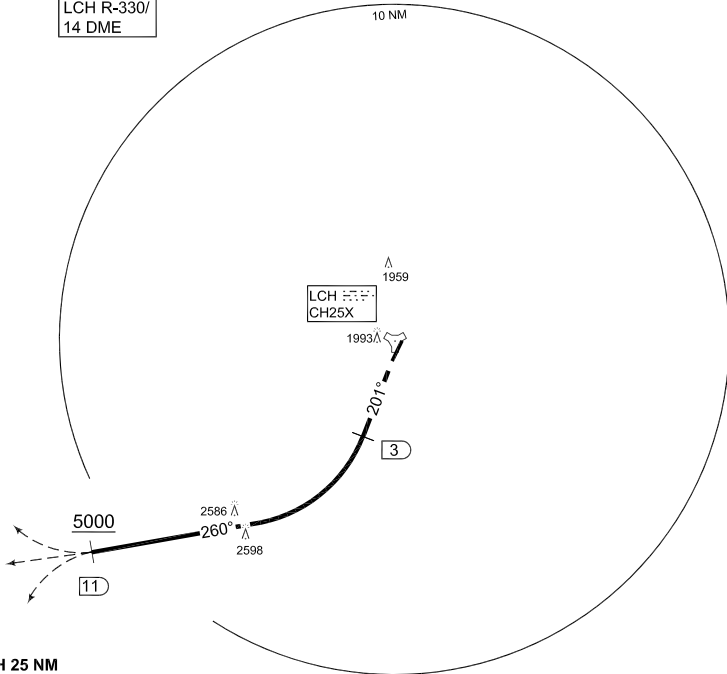
AD ELEV 1822

SL 621
LECHFELD (ETSL)

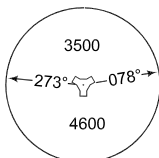
LECHFELD TWR 296.725 135.150		LANDSBERG RADAR 278.900 309.200 344.000			LECHFELD RADAR 358.650 278.050 129.025					
MUENCHEN RADAR 259.000 129.450		RWY		from - to	60	120	180	240	300	Reason
		21		DER - 5000 ft	278	556	834	1112	1390	ATC



PESIM
48°23.95'N
010°41.23'E
LCH R-330/ 14 DME



MSA LCH 25 NM



EMERG SAFE ALT 100 NM 14 800

TA 5000

SL 621
(RWY 21)

- Turn left to track 201° and proceed to LCH/3 DME
- Turn right on track 260° until passing LCH/11 DME
- Pass LCH/11 DME not below 5000 ft
- Proceed to PESIM and climb to FL70 or continue as cleared by ATC

CHANGE OBST (212/15)

SL 621

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

AFSBw 23 JUL 2015

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 1822

SL 721
LECHFELD (ETSL)

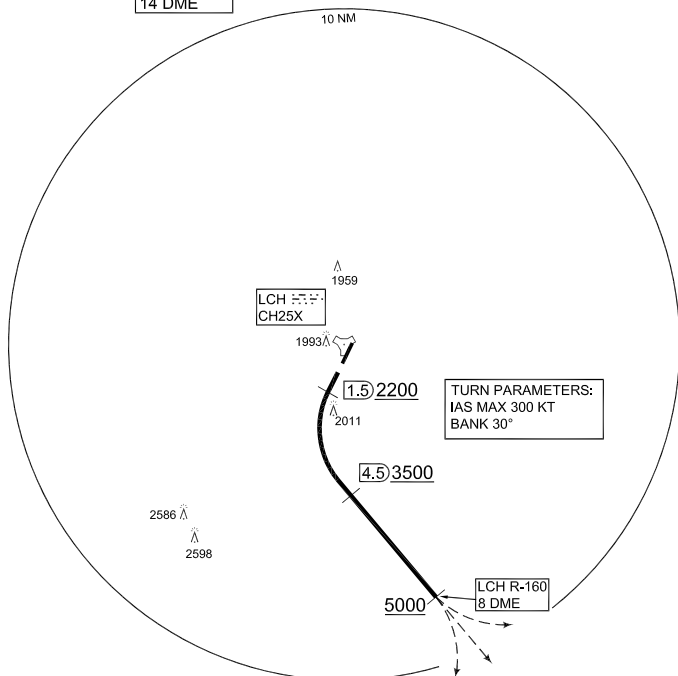
LECHFELD TWR		LANDSBERG RADAR				LECHFELD RADAR			
296.725	135.150	278.900	309.200	344.000		358.650	278.050	129.025	
MUENCHEN RADAR		RWY 21	from - to	60	120	180	240	300	Reason
259.000	129.450		DER - 2200 ft	606	1212	1818	2424	3030	ATC
			2200 - 5000 ft	395	790	1185	1580	1975	ATC
NOTE									

NOTE:

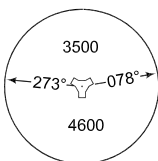
FORMATION TAKE-OFF
FOR FAMILIARIZED
AIRCREWS ONLY



PESIM
48°23.95'N
010°41.23'E
LCH R-330/
14 DME



MSA LCH 25 NM



EMERG SAFE ALT 100 NM 14 800

TA 5000

CHANGE OBST (212/15)

SL 721 (RWY 21)	- Climb straight ahead to LCH/1.5 DME (Pass LCH/1.5 DME not below 2200 ft) - At LCH/1.5 DME turn left and proceed on track 140° to LCH R-160/8 DME - Pass LCH/4.5 DME not below 3500 ft - Pass LCH/8 DME not below 5000 ft
--------------------	---

SL 721

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

AFSBw 23 JUL 2015

PANS-OPS INSTRUMENT DEPARTURE CHART

AD ELEV 1822

SL 921
LECHFELD (ETSL)

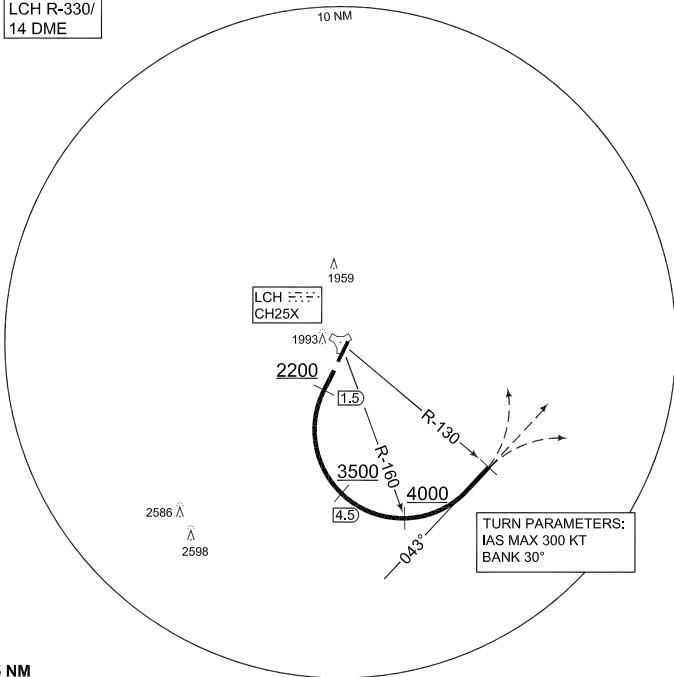
LECHFELD TWR 296.725 135.150		LANDSBERG RADAR 278.900 309.200 344.000			LECHFELD RADAR 358.650 278.050 129.025				
MUENCHEN RADAR 259.000 129.450		RWY 21	from - to	60	120	180	240	300	Reason
			DER - 2200 ft	606	1212	1818	2424	3030	ATC
NOTE:			2200 - 4000 ft	390	780	1170	1560	1950	ATC

NOTE:

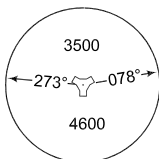
NOT FOR CLOSE FORMATION



PESIM
48°23.95'N
010°41.23'E
LCH R-330/ 14 DME



MSA LCH 25 NM



EMERG SAFE ALT 100 NM 14 800

TA 5000

SL 921
(RWY 21)

- Climb straight ahead to LCH/1.5 DME (Pass LCH/1.5 DME not below 2200 ft)
- Turn left to heading 043° (Pass LCH/4.5 DME not below 3500 ft)
- Cross R-160 not below 4000 ft
- Maintain heading 043° until R-130

SL 921

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 1822

**TACAN RWY 03
LECHFELD (ETSL)**

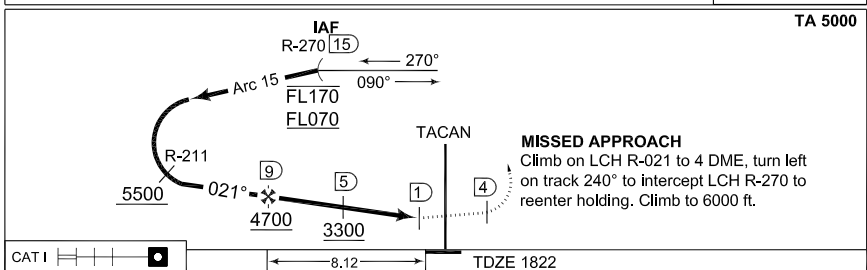
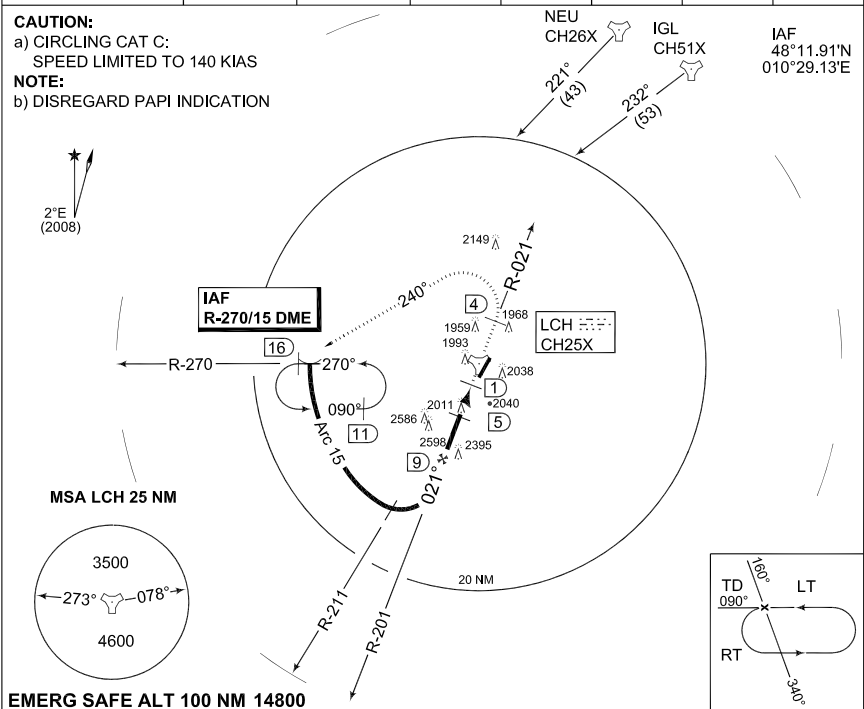
MUENCHEN RADAR 259.000 129.450		358.650	LECHFELD RADAR 278.050 129.025 123.300			LECHFELD TWR 296.725 135.150 122.100		
TACAN LCH CH25X	APP COURSE 021°	FAF ALT 4700	Descent GR 5.7%/3.3°	MDA 2260		TDZE 1822	ALS-Length 700 M	LDA 8784

CAUTION:

- a) CIRCLING CAT C:
SPEED LIMITED TO 140 KIAS

NOTE:

- b) DISREGARD PAPI INDICATION



CATEGORY	A	B	C	D	E
S-TACAN 03	2260 - 0.8 438 (500-0.8/1.6)		2260 - 1.2 438 (500-1.2/2.0)	2260 - 1.6 438 (500-1.6/2.4)	
CIRCLING	NOT AUTHORIZED		2440 - 2.8 618 (700-2.8)	2970 - 4.8 1148 (1200-4.8)	3010 - 4.8 1188 (1200-4.8)
PAR 03	2022 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 03

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 1822

**TACAN RWY 21
LECHFELD (ETSL)**

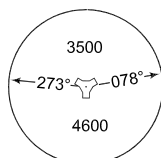
MUNCHEN RADAR 259.000 129.450		LECHFELD RADAR 358.650 278.050 129.025 123.300				LECHFELD TWR 296.725 135.150 122.100		
TACAN LCH CH25X	APP COURSE 220°	FAF ALT 3500	Descent GR 5.2%/3°	MDA 2150	TDZE 1796	ALS-Length 750 M	LDA 8784	

CAUTION:

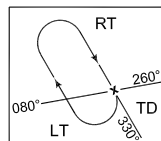
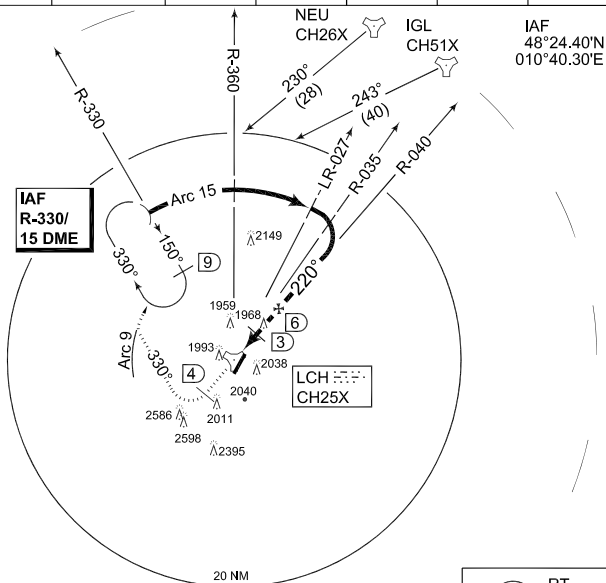
CIRCLING CAT C:
SPEED LIMITED TO 140 KIAS



MSA LCH 25 NM

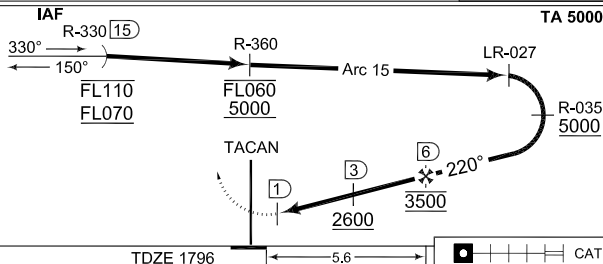


EMERG SAFE ALT 100 NM 14800



MISSED APPROACH

Climb on LCH R-220 to 4 DME, turn right on track 330° to intercept LCH ARC 9 to reenter holding. Climb to 5000 ft.



CATEGORY	A	B	C	D	E
S-TACAN 21	2150 - 0.8 354 (400-0.8/1.6)		2150 - 1.2 354 (400-1.2/1.6)	2150 - 1.2 354 (400-1.2/2.0)	
CIRCLING	NOT AUTHORIZED		2440 - 2.8 618 (700-2.8)	2970 - 4.8 1148 (1200-4.8)	3010 - 4.8 1188 (1200-4.8)
PAR 21	1996 - 0.8 200 (200-0.8/1.2) GS 3.0°				

TACAN RWY 21

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

CHANGE: OBST (212/15)

AFSBw 23 JUL 2015

MIPS INSTRUMENT APPROACH CHART

AD ELEV 1822

ARA/IAA RWY 21
LECHFELD (ETSL)

MUENCHEN RADAR 259.000 129.450	LECHFELD RADAR 358.650 278.050 129.025			LECHFELD TWR 296.725 135.150		
	APP COURSE 207°	FAF ALT 3500		MDA 2160	TDZE 1796	ALS-Length 750 M LDA 8784

CAUTION:

a) CIRCLING CAT C:
SPEED LIMITED TO 140 KIAS

NOTE:

b) IAA PROCEDURE FOR FAMILIARIZED
AIRCREWS ONLY.



PESIM
48°23.95'N
010°41.23'E

AUGSBURG

2149

8 NM

5.2 NM

'S'
48°22.66'N
010°57.31'E

IAF
'Q'
48°18.80'N
010°58.05'E

FAF
48°16.36'N
010°56.01'E

RESERVOIR
KÖNIGSBUNN
CENTER OF DAM
1623 ft MSL
48°15.98'N
010°56.22'E

RPI
48°11.69'N
010°52.13'E

1959

1968

0.5 NM

1993

2040

2011

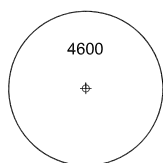
2586

2598

2395

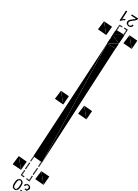
ETSA

MSA ETSL ARP 25 NM



EMERG SAFE ALT 100 NM 14800

ARA REFLECTORS



TA 5000

MISSED APPROACH

At 0.5 NM turn left climb to 5000 ft
and proceed via PESIM to 'R'.

TURN PARAMETER:

- MAX. KIAS 250

- 20° BANK.

PESIM Δ

0.5 NM

1 NM

207°

2 NM

2490

3 NM

2810

4 NM

3130

5 NM

3450

5.2 NM

3500

207°

<T209.1°>

8 NM

IAF 'Q'

3500

160°

<T158.0°>

4500

'S'

5000

IAF 'R'

DISTANCES IN NM FROM THR

TDZE 1796

CAT I

CATEGORY	C	D	E
S-ARA/IAA 21	2160 - 1.2 364 (400-1.2/1.6)	2160 - 1.2 364 (400-1.2/2.0)	
CIRCLING	2440 - 2.8 618 (700-2.8)	2970 - 4.8 1148 (1200-4.8)	3010 - 4.8 1188 (1200-4.8)

ARA/IAA RWY 21

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

CHANGE: OBST (212/15)

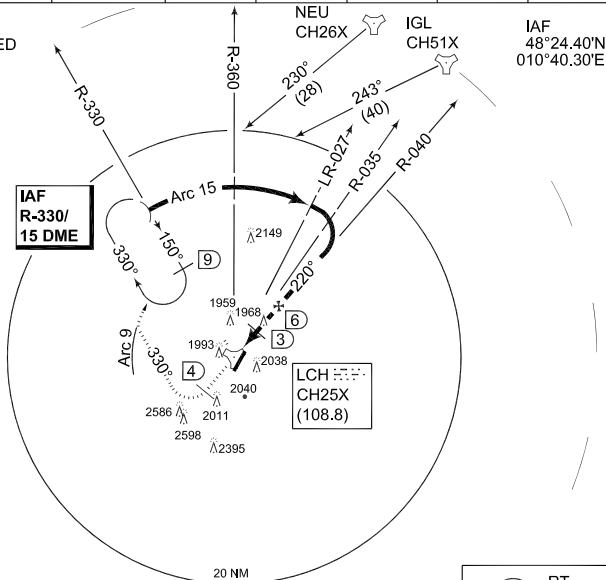
AFSBw 23 JUL 2015

HPMA TACAN RWY 21
LECHFELD (ETSL)

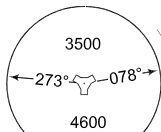
MUENCHEN RADAR		LECHFELD RADAR				LECHFELD TWR		
259.000	129.450	358.650	278.050	129.025	123.300	296.725	135.150	122.100
TACAN	APP COURSE	FAF ALT	Descent GR	MDA		TDZE	ALS-Length	LDA
LCH CH25X	220°	3500	3.0°/5.2%	2150		1796	750 M	8784

a) CIRCLING NOT AUTHORIZED
WEST OF RWY 03/21

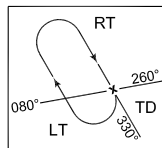
b) DME REQUIRED



MSA LCH 25 NM

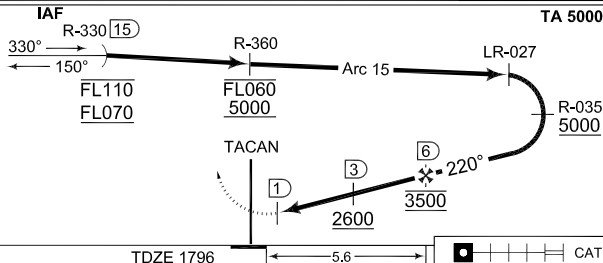


EMERG SAFE ALT 100 NM 14800



MISSED APPROACH

Climb on LCH R-220 to 4 DME, turn right on track 330° to intercept LCH ARC 9 to reenter holding. Climb to 5000 ft.



MIPS	CATEGORY	HPMA
	HPMA TACAN 21	2150 - 1.2 354 (400-1.2/2.0)
	HPMA CIRCLING	2380 - 3.2 558 (600-3.2)

HPMA TACAN RWY 21

48°11.13'N
010°51.67'E

LECHFELD (ETSL)

MIPS INSTRUMENT APPROACH CHART

AD ELEV 1822

HPMA ARA/IAA RWY 21
LECHFELD (ETSL)

MUENCHEN RADAR 259.000 129.450		LECHFELD RADAR 358.650 278.050 129.025 123.300				LECHFELD TWR 296.725 135.150 122.100		
APP COURSE 207°		FAF ALT 3500	Descent GR 5.27%	MDA 2160		TDZE 1796	ALS-Length 750 M	LDA 8784

NOTE:

- CIRCLING NOT AUTHORIZED WEST OF RWY 03/21.
- IAA PROCEDURE FOR FAMILIARIZED AIRCREWS ONLY.
- MAX MISSED APCH SPEED 250 KIAS



PESIM
48°23.95'N
010°41.23'E

AUGSBURG

8 NM

5.2 NM

207°

<T209.1°

0.5 NM

RPI
48°11.69'N
010°52.13'E

1959

1968

1993

2040

2586

2598

2395

ETSA

IAF
'R'
48°25.51'N
010°55.90'E

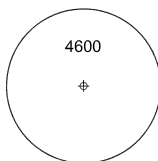
'S'
48°22.66'N
010°57.31'E

IAF
'Q'
48°18.80'N
010°58.05'E

FAF
48°16.36'N
010°56.01'E

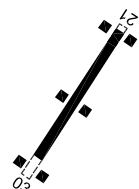
RESERVOIR
KÖNIGSBRUNN
CENTER OF DAM
1623 ft MSL
48°15.98'N
010°56.22'E

MSA ETSL ARP 25 NM



EMERG SAFE ALT 100 NM 14800

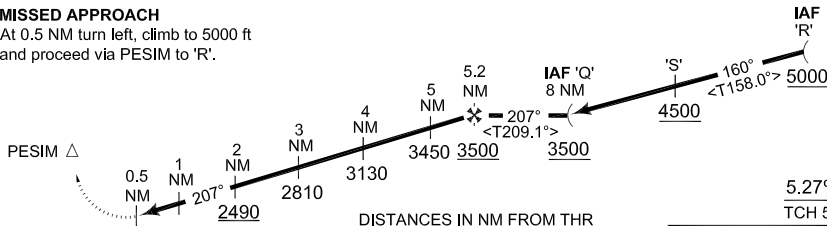
ARA REFLECTORS



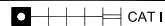
TA 5000

MISSED APPROACH

At 0.5 NM turn left, climb to 5000 ft and proceed via PESIM to 'R'.



TDZE 1796



CATEGORY	HPMA
HPMA ARA/IAA RWY 21	2160 - 1.2 364 (400-1.2/2.0)
HPMA CIRCLING	2380 - 3.2 558 (600-3.2)

HPMA ARA/IAA RWY 21

48°11.13'N
010°51.67'E

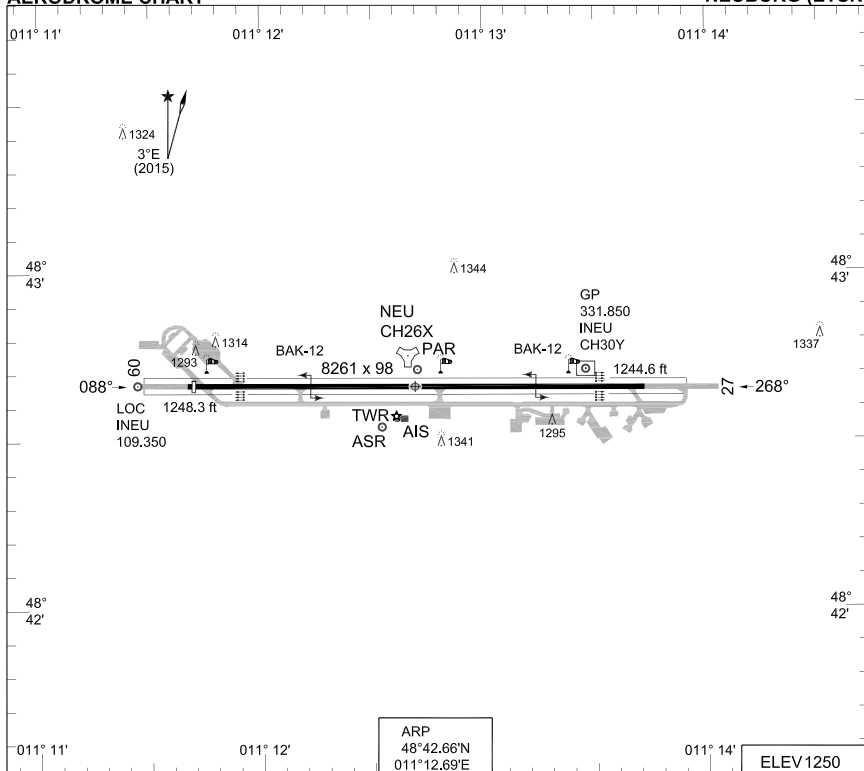
LECHFELD (ETSL)

CHANGE: OBST (212/15)

AFSBw 23 JUL 2015

AERODROME CHART

NEUBURG (ETSN)



RWY	PCN	TORA	ASDA	TODA	LDA	PAPI	TDZE	THR PSN
09	62 R/B/W/T	8261	8261	8261	8149	3.0°	1248.3	48°42.67'N 011°11.70'E
27	62 R/B/W/T	8261	8261	8261	8261	3.0°	1244.6	48°42.65'N 011°13.72'E

DONAU TWR 369.100 129.850
 DONAU RADAR 275.650 284.275x 281.475x 314.375x 138.800x SSR 4220 - 4227

	PROC. CRITERIA	RWY	GS	TCH	OTCH	RPI	CAT	MINIMA CRITERIA	MINIMA
PAR	PANS-OPS PANS-OPS	09 27	3.0° 3.0°	52.5 51.5			ABCDE ABCDE	MIPS MIPS	1449 - 0.8 200 (200-0.8/1.2) 1445 - 0.8 200 (200-0.8/1.2)
SRA	MIPS MIPS	09 27					AB C D E AB CD E	MIPS MIPS	1860 - 0.8 610 (700-0.8/1.6) 1860 - 2.0 610 (700-2.0/2.8) 1860 - 2.4 610 (700-2.4/3.2) 1860 - 2.8 610 (700-2.8/3.6) 1650 - 0.8 403 (400-0.8/1.6) 1650 - 1.2 403 (400-1.2/2.0) 1650 - 1.6 403 (400-1.6/2.4)

AERODROME CHART

NEUBURG (ETSN)

**PANS-OPS
OPERATIONAL INSTRUMENT DEPARTURE CHART**

AD ELEV 1250

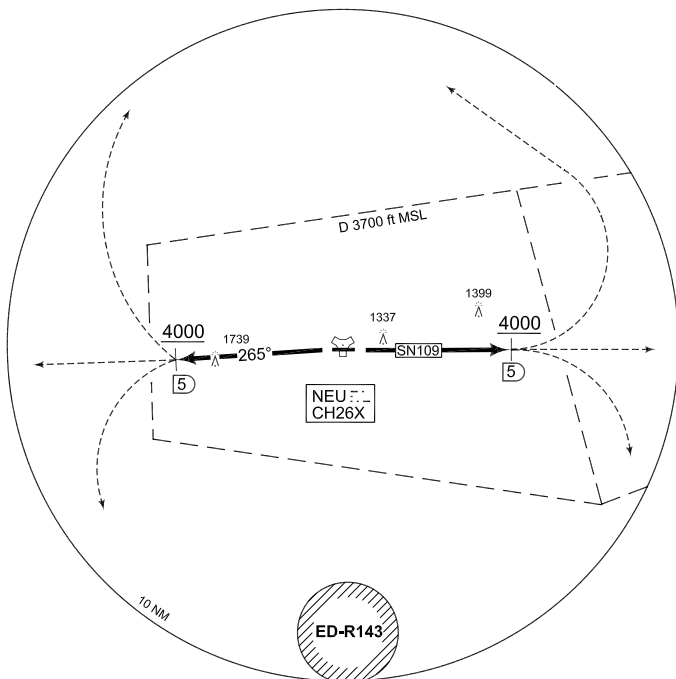
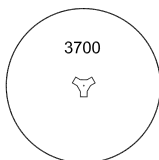
**SN 109 - 127
NEUBURG (ETSN)**

DONAU TWR 369.100 129.850		DONAU RADAR 275.650 130.150		MUENCHEN RADAR 242.200 VHF O/R						
		RWY	From - to	120	180	240	300	360	REASON	
		09	DER - 4000 ft	658	1316	1974	2632	3290	ATC	
		27	DER - 4000 ft	627	1254	1881	2508	3135	ATC	



DONIX
48°41.58'N
010°45.28'E
NEU R-267/ 18 DME

MSA NEU 25 NM



EMERG SAFE ALT 100 NM 13500

TA 5000

CHANGE: OBST (360/15)

SN 109 (RWY 09)	- Climb straight ahead to NEU/5 DME - Pass NEU/5 DME at 4000 ft or above - Continue as cleared by ATC
SN 127 (RWY 27)	- No turn before DER - Climb on track 265° to NEU/5 DME - Pass NEU/5 DME at 4000 ft or above - Continue as cleared by ATC

SN 109 - 127

48°42.66'N
011°12.69'E

NEUBURG (ETSN)

ZentLufTop 07 JAN 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1250

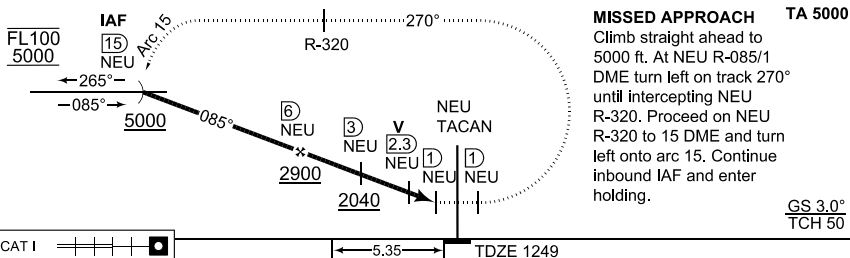
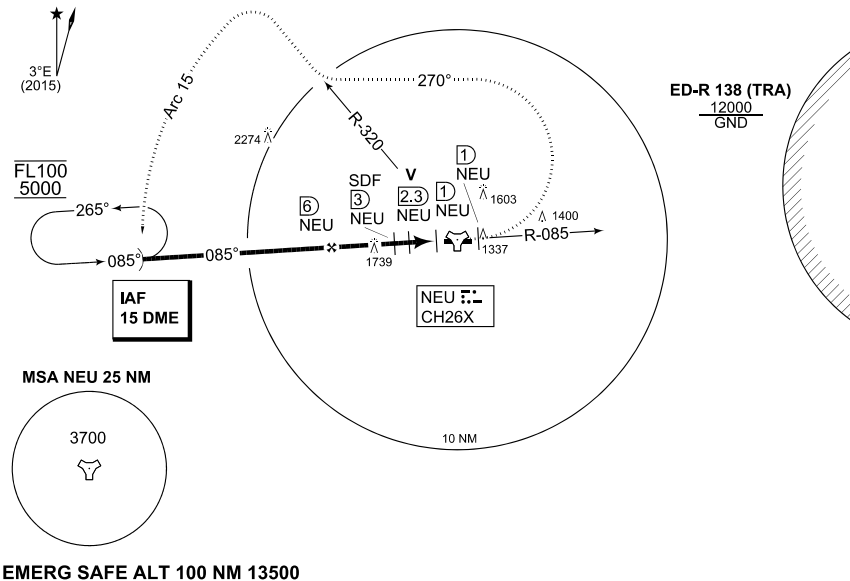
TACAN RWY 09
NEUBURG (ETSN)

MUENCHEN RADAR 242.200		DONAU RADAR 275.650 130.150		DONAU TWR 369.100 129.850			
TACAN	APP COURSE	FAF ALT	GS	MDA	TDZE	ALS-LENGTH	LDA
NEU CH26X	085°	2900	3.0°(5.2%)	1830	1249	975 M	8149

NOTE:

- a) CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27
- b) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT
- c) CIRCLING CAT C MAX 170 KIAS

IAF
48°41.93'N
010°50.05'E



CATEGORY	A	B	C	D	E
TACAN 09	1830 - 0.8 580 (600 - 0.8/1.6)	1830 - 0.8 580 (600 - 0.8/1.6)	1830 - 1.6 580 (600 - 1.6/2.4)	1830 - 2.0 580 (600 - 2.0/2.8)	
CIRCLING	1830 - 1.6 580 (600 - 1.6)	1960 - 1.6 710 (800 - 1.6)	2140 - 4.4 1085 (1100 - 3.7)	2520 - 4.8 1270 (1300 - 4.8)	
PAR 09	1449 - 0.8 200 (200 - 0.8/1.2)	1449 - 0.8 200 (200 - 0.8/1.2)	1449 - 0.8 200 (200 - 0.8/1.2)	1449 - 0.8 200 (200 - 0.8/1.2)	1449 - 0.8 200 (200 - 0.8/1.2)

TACAN RWY 09

48°42.66'N
011°12.69'E

NEUBURG (ETSN)

PANS-OPS
INSTRUMENT APPROACH CHART

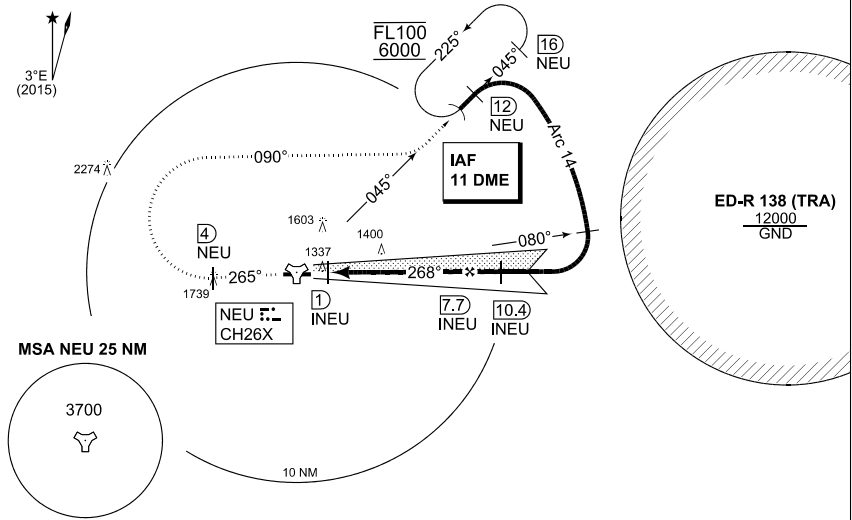
AD ELEV 1250

ILS or LOC RWY 27
NEUBURG (ETSN)

MUENCHEN RADAR 242.200	DONAU RADAR 275.650 130.150	DONAU TWR 369.100 129.850			
TACAN/LOC NEUCH26X/INEU109.35	APP COURSE 268°	GS INTCP ALT 3700	GS 3.0° (5.2%)	DA 1445	TDZE 1245
		ALS-LENGTH 975 M	LDA 8261		

- NOTE:
- a) CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27
 - b) MISSED APPROACH TURN LIMITED TO 230 KIAS MAXIMUM
 - c) CIRCLING CAT C MAX 170 KIAS
 - d) TACAN REQUIRED
 - e) DME REQUIRED

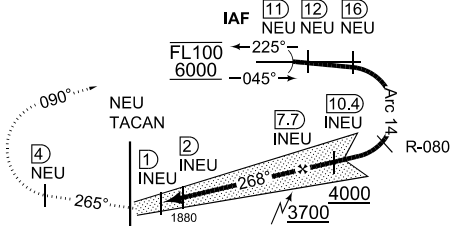
IAF
48°50.24'N
011°24.84'E



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

Climb on track 265° to 6000 ft. At NEU 4 DME turn right on track 090° to intercept NEU R-045 inbound IAF and enter holding.



TA 5000

GS 3.0°
TCH 52

TDZE 1245

7.54

CAT I

CATEGORY	A	B	C	D	E
ILS RWY 27	1445 - 0.8 200 (200 - 0.8/1.2)	1445 - 0.8 200 (200 - 0.8/1.2)	1445 - 0.8 200 (200 - 0.8/1.2)	1455 - 0.8 210 (300 - 0.8/1.6)	
LOC RWY 27	1520 - 0.8 270 (300 - 0.8/1.6)	1550 - 0.8 300 (300 - 0.8/1.6)	1570 - 1.2 320 (400 - 1.2/1.6)	1590 - 1.2 343 (400 - 1.2/2.0)	
CIRCLING	1740 - 1.6 490 (500 - 1.6)	1960 - 1.6 710 (800 - 1.6)	2140 - 4.4 1085 (1100 - 3.7)	2520 - 4.8 1270 (1300 - 4.8)	

ILS or LOC RWY 27

48°42.66'N
011°12.69'E

NEUBURG (ETSN)

CHANGE NEW PROCEDURE (354/15)

ZentrLufOp 07 JAN 2016

TACAN RWY 27
NEUBURG (ETSN)

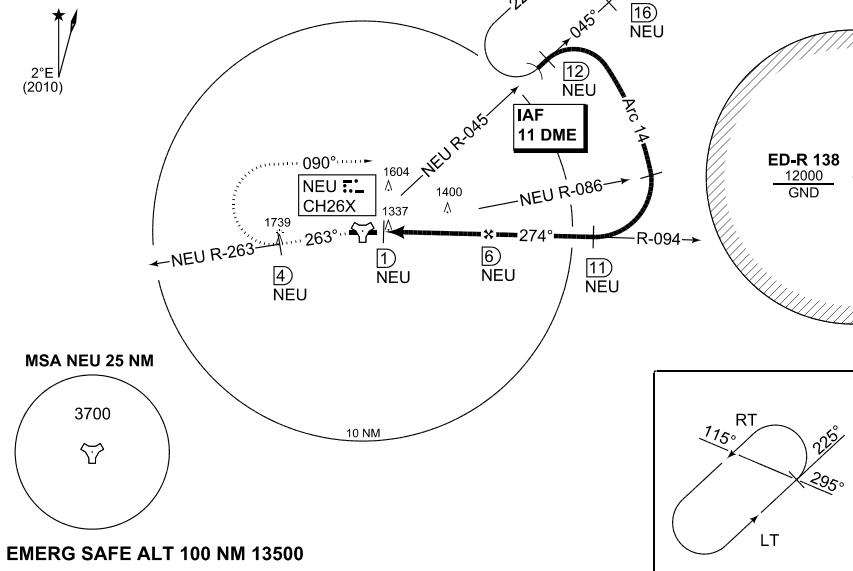
MUENCHEN RADAR		DONAU RADAR		DONAU TWR			
242.200		275.650 130.150		369.100 129.850			
TACAN	APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-LENGTH	LDA
NEU CH26X	274°	2900	5.2%	1590	1247	975 M	8261

IAF
48°50.24'N
011°24.84'E

NOTE:

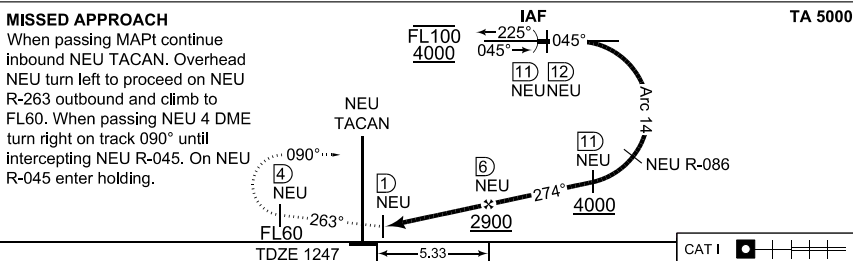
b) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT

CAT C MAX CIRCLING SPEED 170 KIAS.



TA 5000

When passing MAPt continue inbound NEU TACAN. Overhead NEU turn left to proceed on NEU R-263 outbound and climb to FL60. When passing NEU 4 DME turn right on track 090° until intercepting NEU R-045. On NEU R-045 enter holding.



CATEGORY		A	B	C	D	E
MIPS	TACAN 27	1590 - 0.8 343 (400-0.8/1.6)	1590 - 0.8 343 (400-0.8/1.6)	1590 - 1.2 343 (400-1.2/1.6)	1590 - 1.2 343 (400-1.2/2.0)	1590 - 1.2 343 (400-1.2/2.0)
	CIRCLING	1740 - 1.6 490 (500-1.6)	1960 - 1.6 710 (800-1.6)	2140 - 4.8 890 (900-4.4)	2520 - 4.8 1270 (1300-4.8)	2620 - 4.8 1370 (1400-4.8)
	PAR 27	1445 - 0.8 200 (200-0.8/1.2)	1445 - 0.8 200 (200-0.8/1.2)	1445 - 0.8 200 (200-0.8/1.2)	1445 - 0.8 200 (200-0.8/1.2)	1445 - 0.8 200 (200-0.8/1.2)

CHANGE: EDITORIAL (354/15)

CentrLuftOp 07 JAN 2016

TACAN RWY 27

48°42.66'N
011°12.69'E

NEUBURG (ETSN)