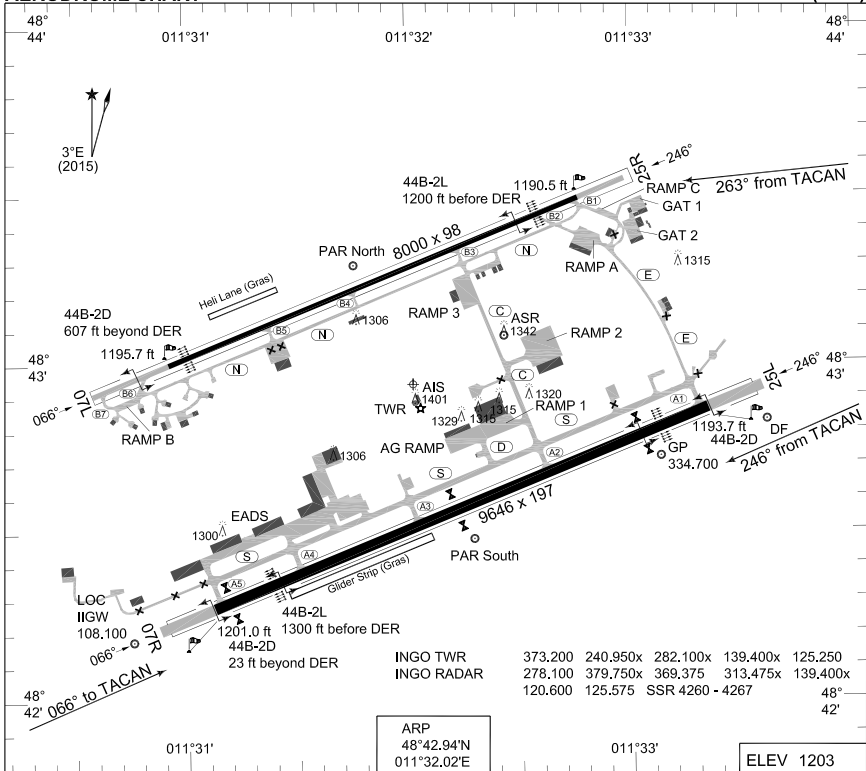


AERODROME CHART

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)
							E		1580 - 2.4 388 (400-2.4)

AERODROME CHART

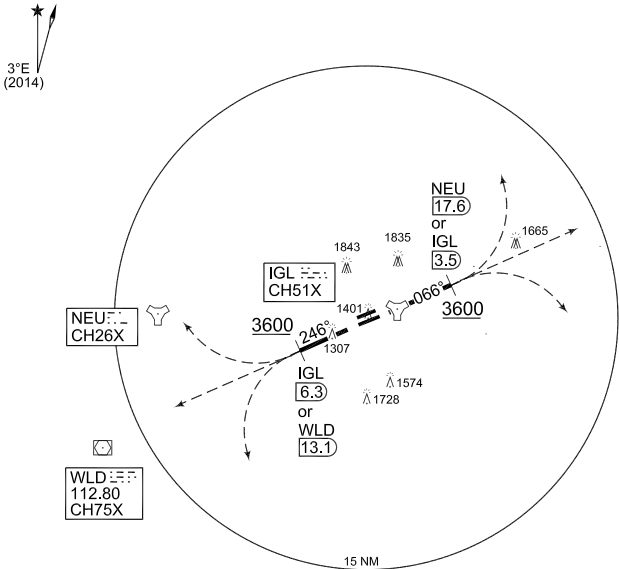
INGOLSTADT/MANCHING (ETSI)

CHANGE: ORIGINATOR (317/15)

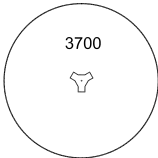
ZentrLufOp 12 NOV 2015

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

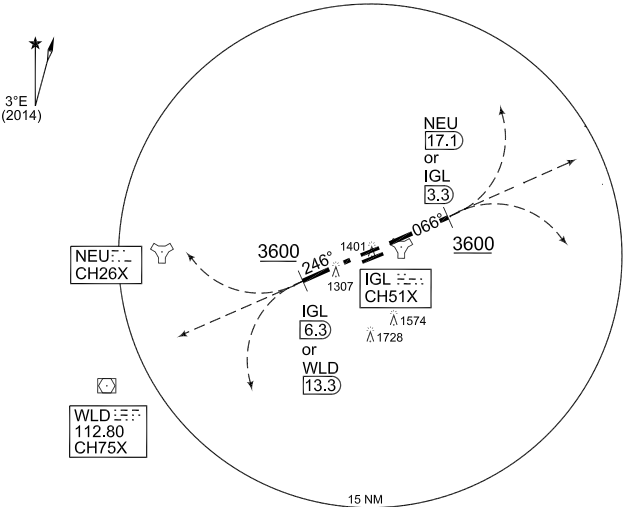
SI 125 (RWY 25L)	- Climb on track 246° to IGL/6.3 DME or WLD/13.1 DME - Cross IGL/6.3 DME or WLD/13.1 DME at 3600 ft or above - Continue as cleared by ATC
SI 107 (RWY 07R)	- Climb on track 066° to IGL/3.5 DME or NEU/17.6 - Cross IGL/3.5 DME or NEU/17.6 at 3600 ft or above - Continue as cleared by ATC

CHANGE: DELETE ED-R 138 (122/16)

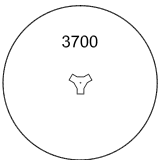
ZentLufTop 28 APR 2016

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. DELETE ED-R 138 (09/16, 12/16)

ZentLufOp 28 APR 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

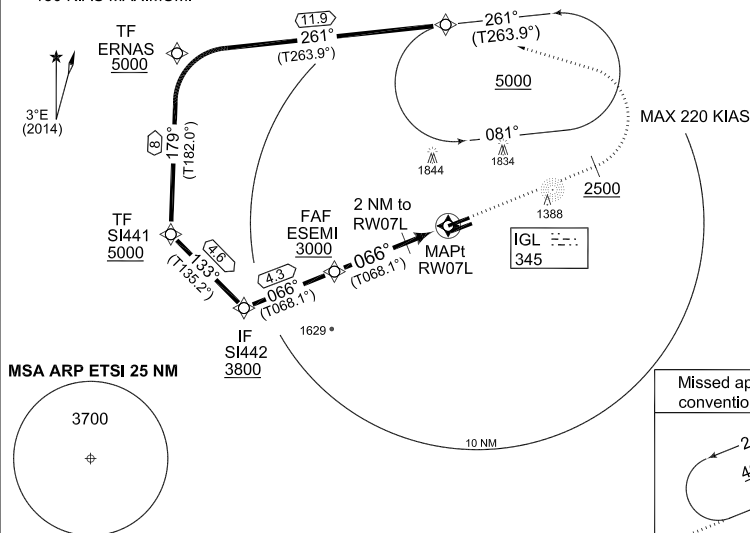
RNAV (GNSS) RWY 07L
INGOLSTADT/MANCHING (ETSI)

MUNCHEN 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

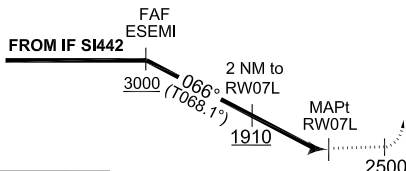
TA 5000

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 1427 (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

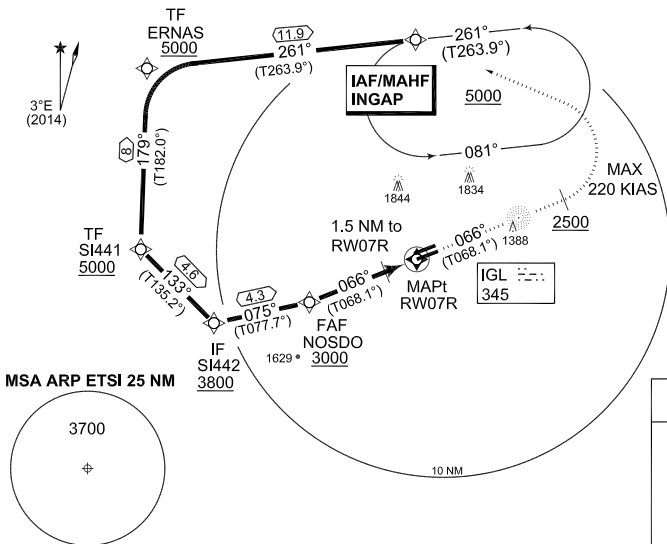
AD ELEV 1203

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

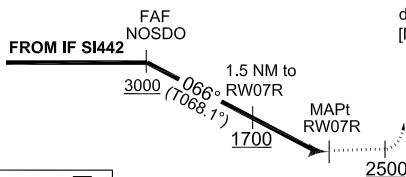
TA 5000

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
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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

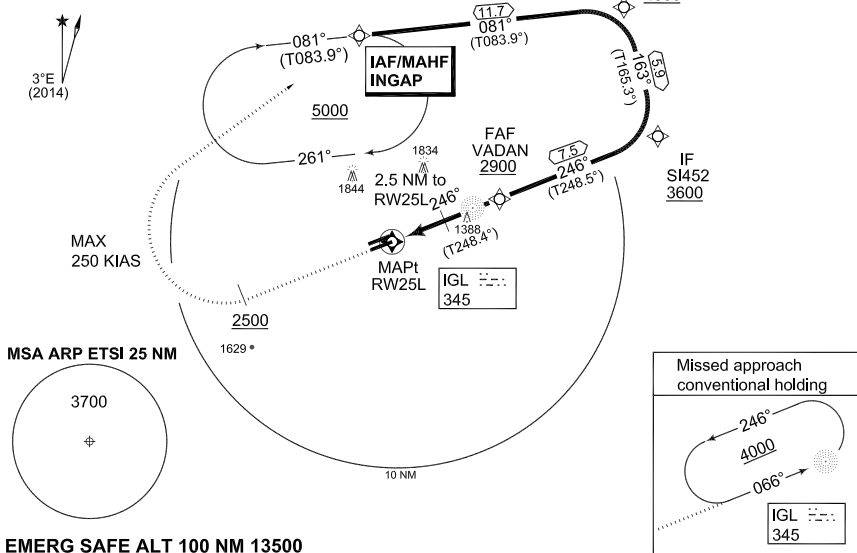
AD ELEV 1203

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

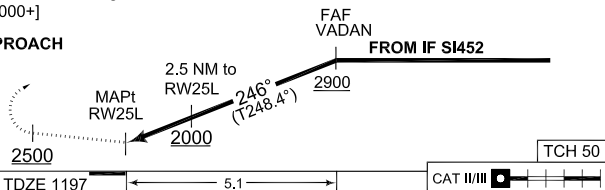
Climb on track 246°, when passing 2500 ft turn right direct INGAP. Climb to 5000 ft and enter holding.
[M246, A2500+; R] - INGAP [A5000+]

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



TDZE 1197

5.1

CAT II/III

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)

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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PANS-OPS INSTRUMENT APPROACH CHART

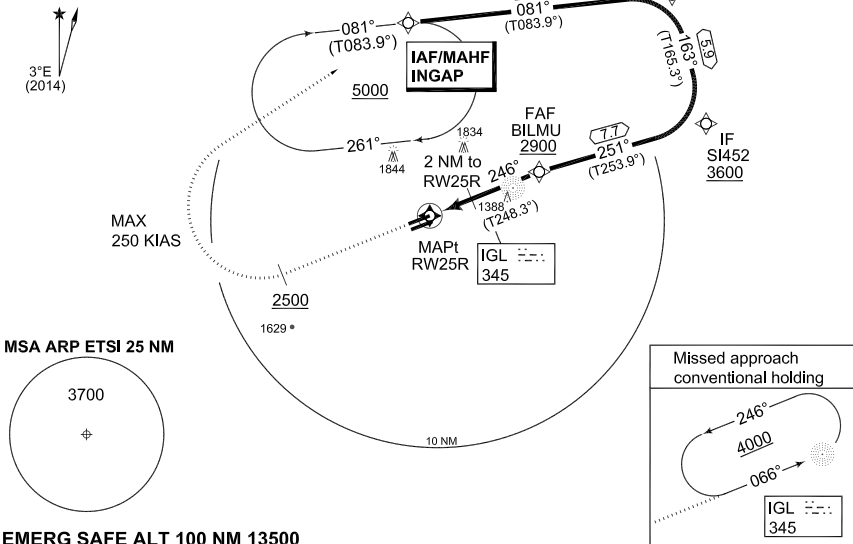
AD ELEV 1203

RNAV (GNSS) RWY 25R
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 1191	ALS-Length 900 M	LDA 8000

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

TDZE 1192

5.1

CAT I

TCH 50

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

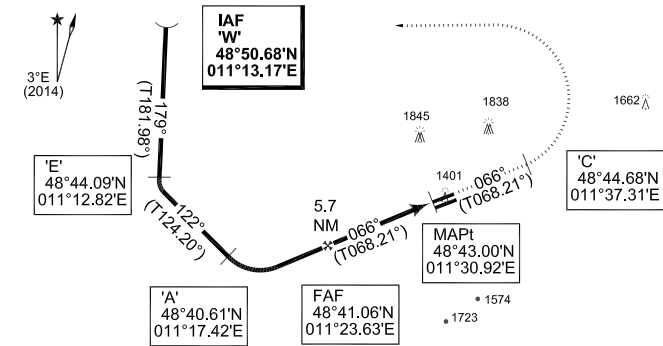
INGOLSTADT/MANCHING (ETSI)

IAA RWY 07L

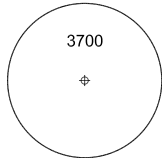
MUENCHEN RADAR 242.200	INGO RADAR 278.100	120.600	125.575	INGO TWR 373.200	125.250			
		APP COURSE 066°	FAF ALT 3000	Descent GR 5.2%	MDA see CAT	TDZE 1196	ALS-Length 900 M	LDA 8000

- NOTE:
- a) DISREGARD PAPI.

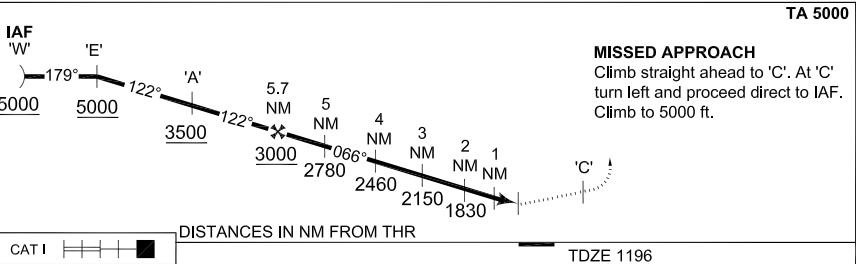
b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.



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)

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

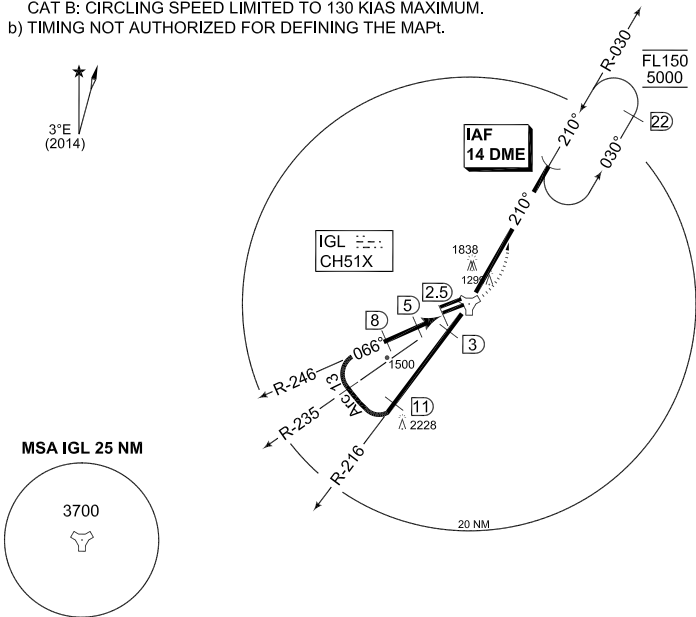
NOTE:

- 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 MAPL.

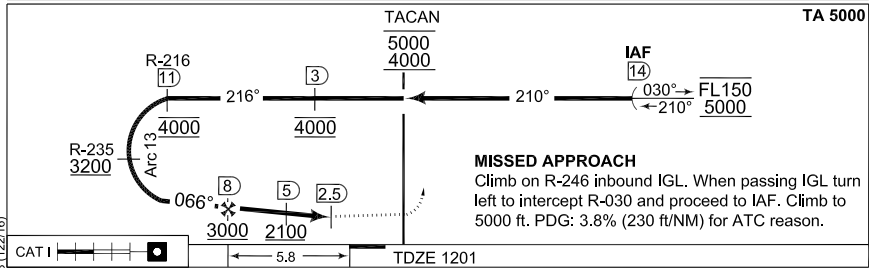
IAF

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)

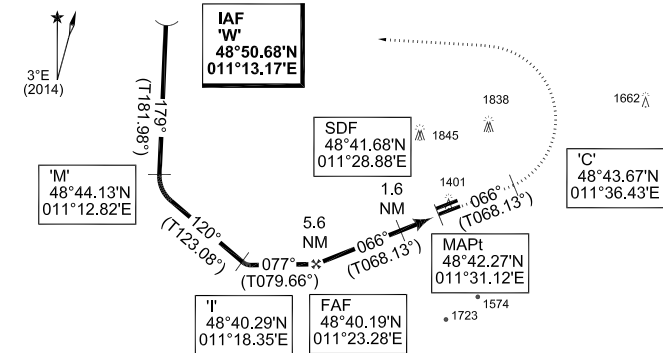
IAA RWY 07R

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

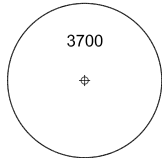
- NOTE:
- a) DISREGARD PAPI.

b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.

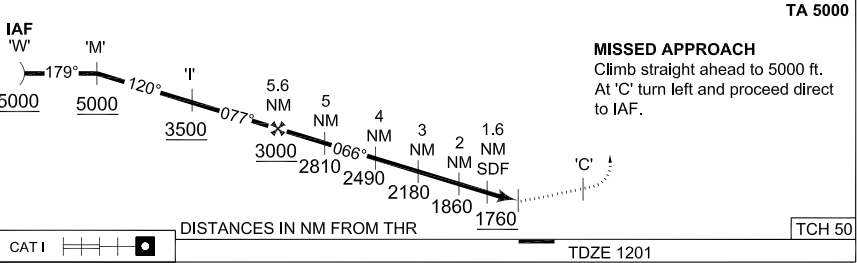
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.



MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500



PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

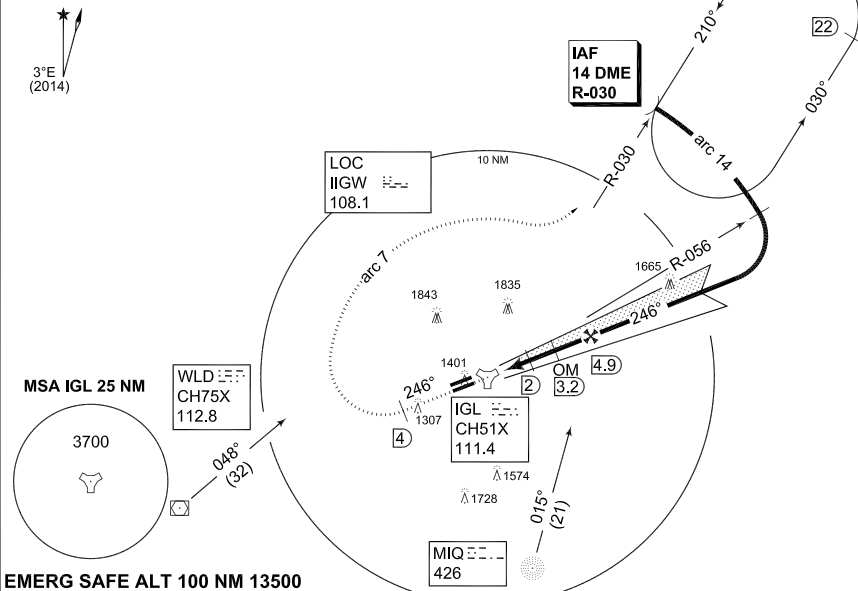
ILS X or LOC RWY 25L
INGOLSTADT/MANCHING (ETSI)

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:

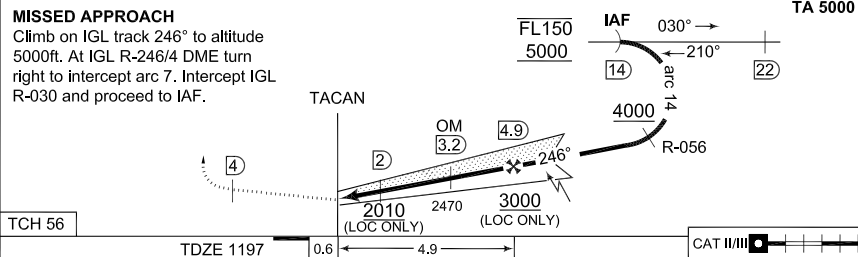
- MISSED APCH TURN LIMITED TO 230 KIAS MAXIMUM.
- CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO 130 KIAS.
- DME REQUIRED

IAF
48°54.94'N
011°45.43'E



MISSED APPROACH

Climb on IGL track 246° to altitude 5000ft. At IGL R-246/4 DME turn right to intercept arc 7. Intercept IGL R-030 and proceed to IAF.



CATEGORY	A	B	C	D	E
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)

ILS X or LOC RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

INSTRUMENT APPROACH CHART

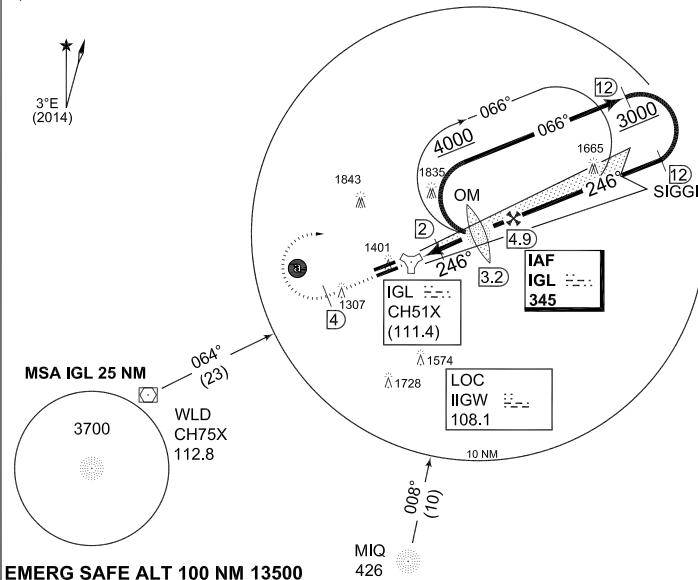
**ILS Y or LOC RWY 25L
INGOLSTADT/MANCHING (ETSI)**

[illegible]

NOTE:

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

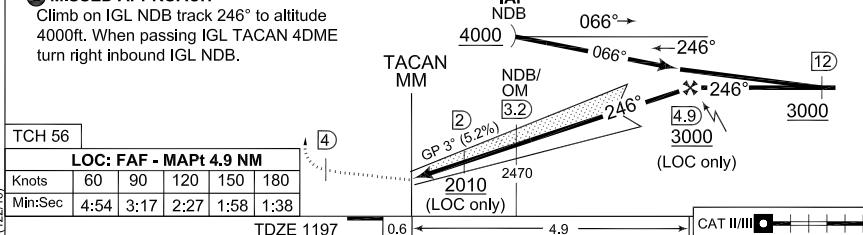
IAF
48°44.26'N
011°38.67'E



a MISSED 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

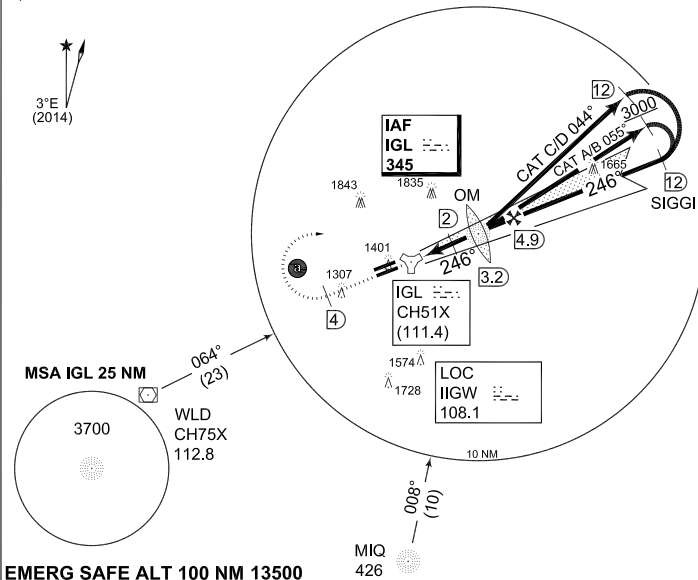
ILS Z or LOC RWY 25L
INGOLSTADT/MANCHING (ETSI)

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:

- 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

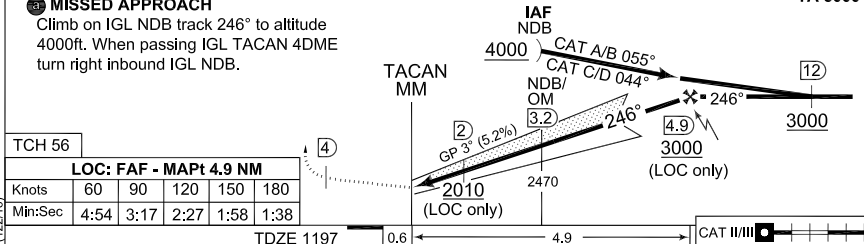


EMERG SAFE ALT 100 NM 13500

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 Z or LOC RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

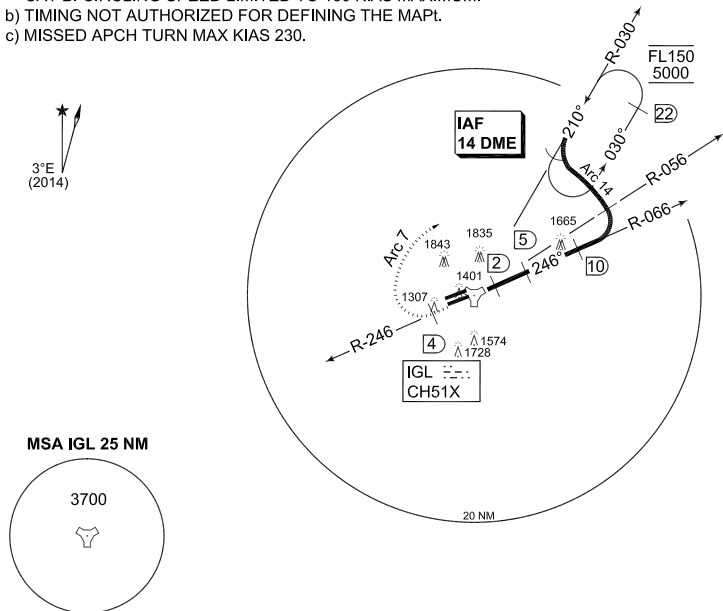
TACAN RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200		INGO RADAR 278.100 120.600 125.575			INGO TWR 373.200 125.250		
TACAN IGL CH51X	APP COURSE 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.

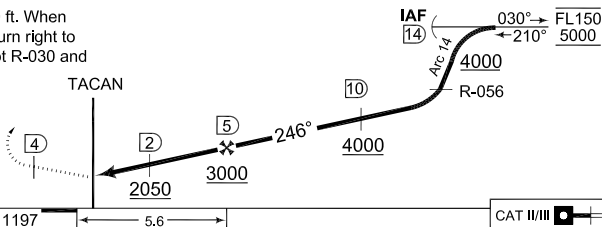
IAF
48°54.94'N
011°45.43'E



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

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)	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)

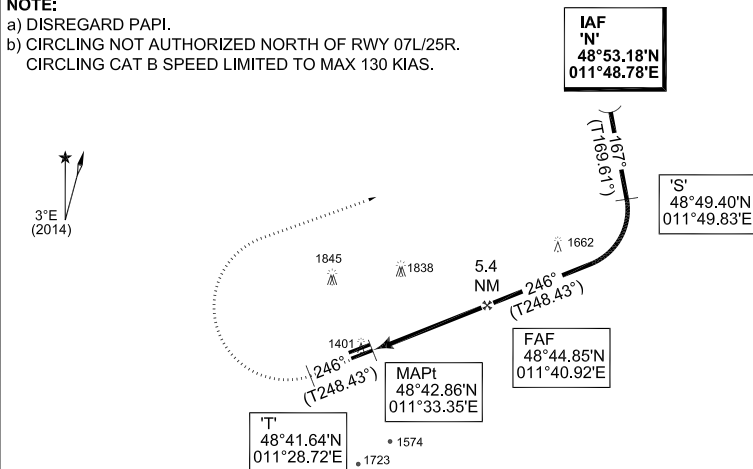
INSTRUMENT APPROACH CHART

IAA RWY 25L
INGOLSTADT/MANCHING (ETSI)

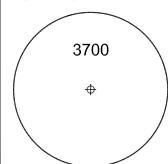
MUENCHEN RADAR		INGO RADAR		INGO TWR				
242.200	278.100	120.600	125.575	373.200	125.250			
		APP COURSE	FAF ALT	Descent GR	MDA	TDZE	ALS-Length	LDA
		246°	2900	5.2%	1650	1197	900 M	9646

NOTE:

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



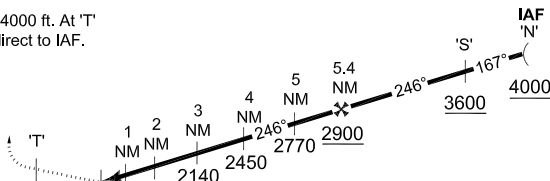
MSA ETSI ARP 25 NM



EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

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



TA 5000

DISTANCES IN NM FROM THR

TCH 50

TDZE 1197

CAT II/III ●

CATEGORY		A	B	C	D	E
MIPS	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)

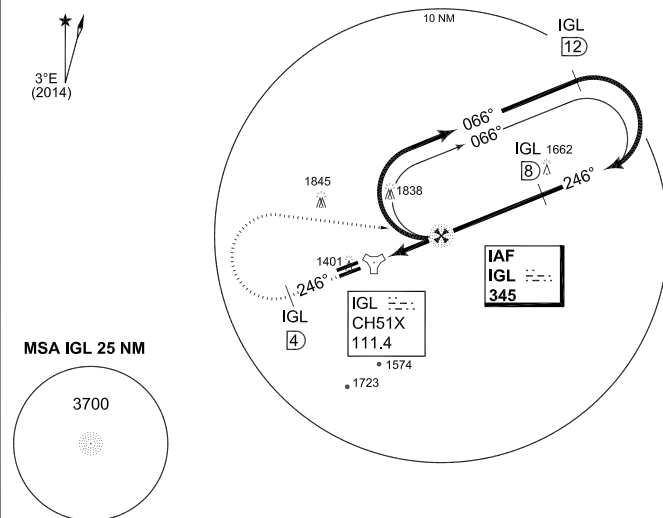
NDB Y RWY 25L
INGOLSTADT/MANCHING (ETSI)

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:

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

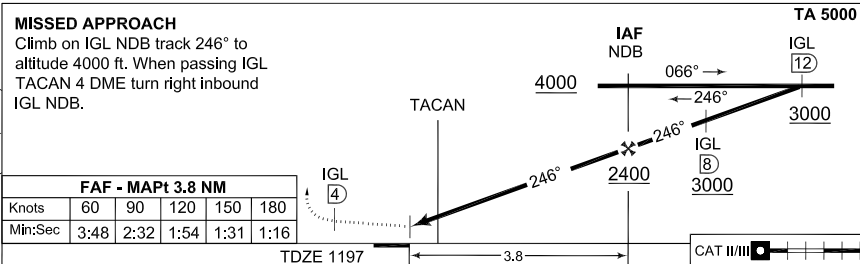
IAF
48°44.26'N
011°38.67'E



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.



CATEGORY		A	B	C	D	E
MPS	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)

PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

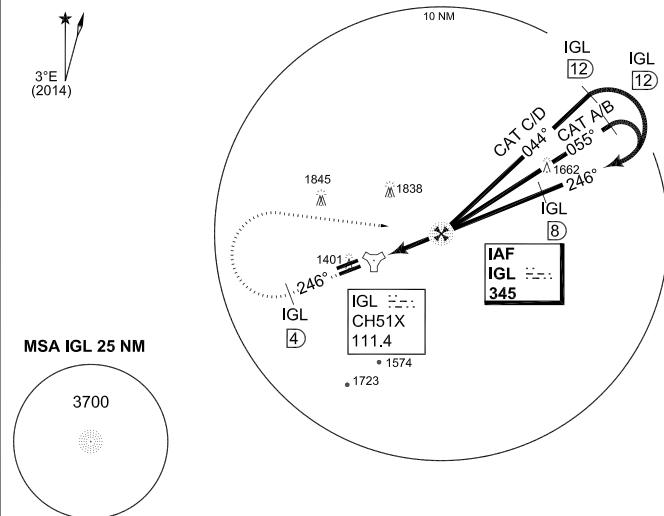
NDB Z RWY 25L
INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100 120.600 125.575	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.
- BASE TURN SPEED LIMITED TO 210 KIAS MAXIMUM.
- DME REQUIRED

IAF
48°44.26'N
011°38.67'E



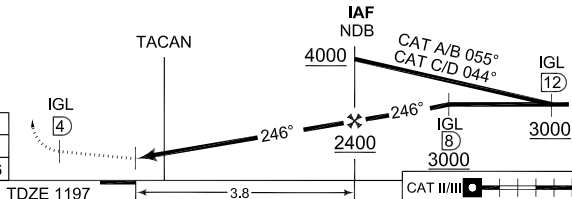
EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

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

TA 5000

FAF - MAPt 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	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 Z RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

PANS-OPS

INSTRUMENT APPROACH CHART

AD ELEV 1203

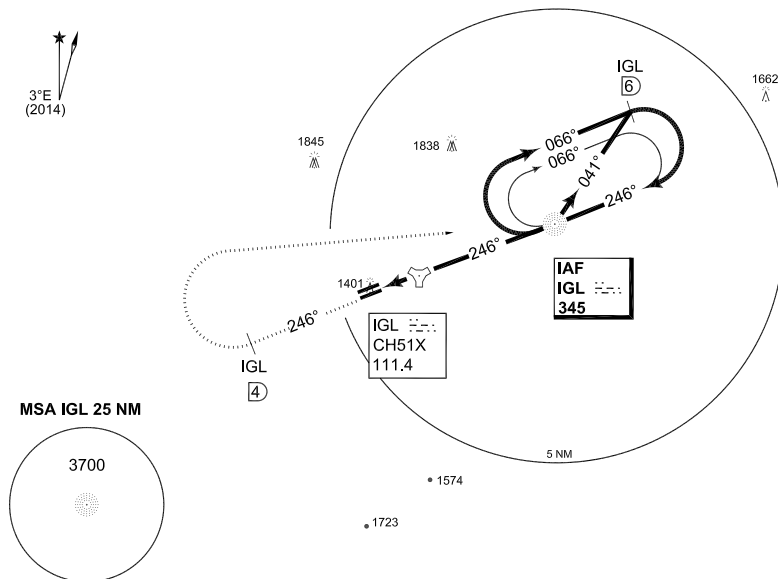
COPTER NDB RWY 25L INGOLSTADT/MANCHING (ETSI)

MUENCHEN RADAR 242.200	INGO RADAR 278.100 120.600 125.575	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.

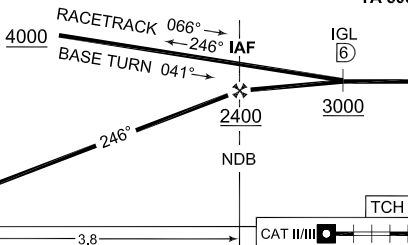
TA 5000

CHANGE: APCH TRACK, DELETE ED-R 138 (082/16, 122/16)

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



TACAN



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

COPTER NDB RWY 25L

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)

ZentLutOp 28 APR 2016

PANS-OPS INSTRUMENT APPROACH CHART

AD ELEV 1203

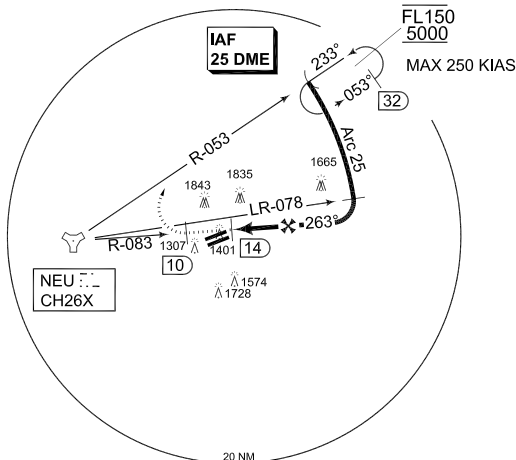
TACAN RWY 25R
INGOLSTADT/MANCHING (ETSI)

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

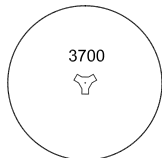
NOTE:

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

IAF
48°56.65'N
011°44.10'E



MSA NEU 25 NM

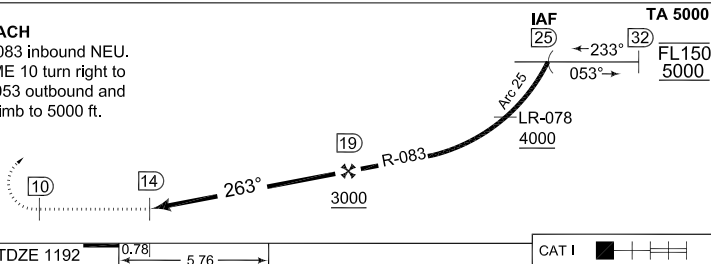


EMERG SAFE ALT 100 NM 13500

MISSED 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)

**IAA RWY 25R
INGOLSTADT/MANCHING (ETSI)**

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

NOTE:

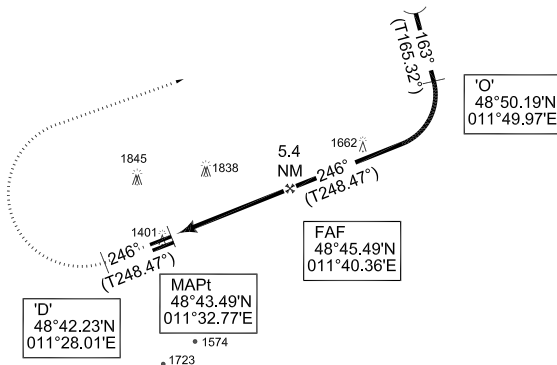
- a) DISREGARD PAPI.
b) CIRCLING NOT AUTHORIZED NORTH OF RWY 07L/25R.
CIRCLING CAT B SPEED LIMITED TO MAX 130 KIAS.

IAF

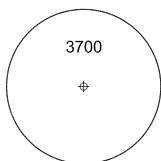
'N'

48°53.18'N

011°48.78'E



MSA ETSI ARP 25 NM

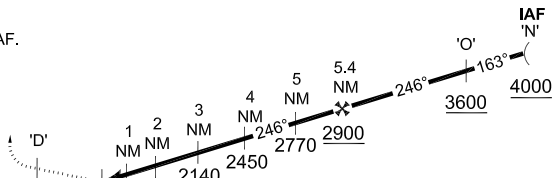


EMERG SAFE ALT 100 NM 13500

MISSED APPROACH

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

TA 5000



TDZE 1192

DISTANCES IN NM FROM THR

CAT I 

CATEGORY		A	B	C	D	E
MIPS	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)

IAA RWY 25R

48°42.94'N
011°32.02'E

INGOLSTADT/MANCHING (ETSI)