

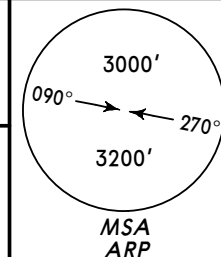
ULMM/MMK
 MURMANSK

JEPPESEN
 19 JAN 07 10-2

MURMANSK, RUSSIA
 STAR

Apt Elev
 266'

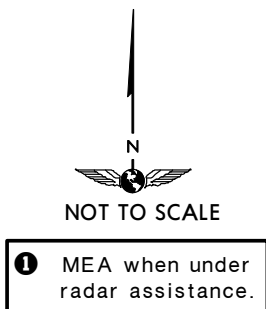
Alt Set: MM (hPa on request) QNH on request (QFE)
 Trans level: FL49
 FL59 if pressure is less than 733mm (977.3 hPa)
 Trans alt: 3220' (2979')



ASGOR 2A [ASGO2A]
 PELOR 2A [PELO2A]
 ULMER 2

ASGOR 2B [ASGO2B]
 PELOR 2B [PELO2B]
 BY ATC

RWY 14 ARRIVALS



PELOR
 N68 37.0 E031 47.0
 Between
 FL148 & FL79

KROTA
 N69 28.0 E031 52.0

ULMER
 N68 58.0 E032 31.0
 Between
 FL89 & FL79

Intercept final at
 2540' (2299')

MURMANSK
 *635 PF
 N68 49.4 E032 40.1
 At FL69

N68 56.6 E032 20.1

At 2540'
 (2299')

N68 56.1 E032 18.0

At 3220'
 (2979')

N68 54.4 E032 17.5
 At 3220'
 (2979')

22
 5250
 5120
 PELOR 2A

23
 5250
 5120
 PELOR 2B
 By ATC

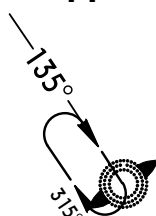
25
 515°
 ASGOR 2A

18
 315°
 ASGOR 2B
 By ATC

ASGOR
 N68 31.0 E032 46.0
 Between
 FL148 & FL59

OLADA
 N67 59.0 E032 46.0

HOLDING OVER
 PF



FL CONVERSION	
FL148	FL4500m
FL89	FL2700m
FL79	FL2400m
FL69	FL2100m
FL59	FL1800m
FL49	FL1500m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3220'	(2979' - 900m)
2540'	(2299' - 700m)

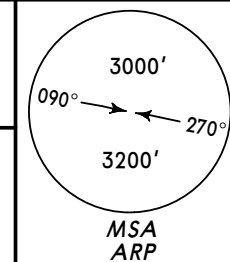
ULMM/MMK
MURMANSK

JEPPESEN
19 JAN 07 (10-2A)

MURMANSK, RUSSIA
STAR

Apt Elev
266'

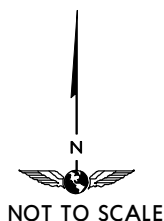
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: FL49
FL59 if pressure is less than 733mm (977.3 hPa)
Trans alt: 3220' (2954')



ASGOR 4A [ASGO4A]
PELOR 4A [PELO4A]
ULMER 4

ASGOR 4B [ASGO4B]
PELOR 4B [PELO4B]
BY ATC

RWY 32 ARRIVALS



① MEA, when under
radar assistance.

PELOR
N68 37.0 E031 47.0

Between
FL148 & FL79

058°
081°

KROTA
N69 28.0 E031 52.0

143°
33

ULMER
N68 58.0 E032 31.0
Between
FL89 & FL79

ULMER 4
5090
4760

MURMANSK
*635 RD
N68 44.6 E032 49.1
At FL69

Intercept
final at
2570'
(2304')

N68 35.5 E032 51.9
At 3220'
(2954')

24
5250
5120
PELOR 4B
By ATC

24
5250
5120
PELOR 4A

FL CONVERSION	
FL148	FL4500m
FL89	FL2700m
FL79	FL2400m
FL69	FL2100m
FL59	FL1800m
FL49	FL1500m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3220'	(2954' - 900m)
2570'	(2304' - 700m)

HOLDING
OVER
RD



ASGOR
N68 31.0 E032 46.0

ASGOR 4A
At or below
FL59

ASGOR 4B
Between
FL148 & FL59

OLADA
N67 59.0 E032 46.0

N68 36.3 E032 59.1
At 2570'
(2304')

N68 35.2 E032 53.3
At 3220'
(2954')

ULMM/MMK
MURMANSK

JEPPESEN
21 JUL 06 **10-3** **Eff 3 Aug**

MURMANSK, RUSSIA

SID

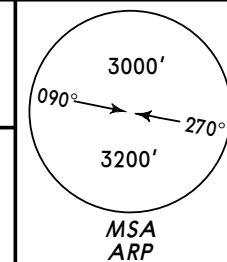
Apt Elev
266'

QNH on request **(QFE)**

Trans level: FL49

FL59 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3220' **(2954')**



ASGOR 1, ASGOR 3
PELOR 1, PELOR 3
ULMER 1, ULMER 3
RWYS 14, 32 DEPARTURES

ALT/HEIGHT CONVERSION	
QNH	(QFE)
680'	(414' - 125m)
1090'	(824' - 250m)
1910'	(1644' - 500m)
3220'	(2954' - 900m)

FL CONVERSION	
FL39	FL1200m
FL49	FL1500m
FL59	FL1800m
FL79	FL2400m
FL89	FL2700m

PELOR
N68 37.0 E031 47.0

At or above
FL79



These SIDs require minimum climb gradients of

Rwy 14

Aircraft with more than 162 KT, 383' per NM (6.3%) up to 1090' **(824')**, then 273' per NM (4.5%) up to FL39, Aircraft with less than 162 KT, 383' per NM (6.3%) up to 680' **(414')**, then 273' per NM (4.5%) up to FL39.

Rwy 32

243' per NM (4%) up to 1910' **(1644')**, then 213' per NM (3.5%) up to FL39.

Further climb according to Flight Operation Manual.

If unable to reach assigned FL climb in the established rectangular traffic pattern and by ATC instruction.

KROTA
N69 28.0 E031 52.0

ULMER
N68 58.0 E032 31.0

ULMER 1
Between FL79 & FL89
ULMER 3
At or above FL59

N68 53.0 E032 33.7

At or above
1910' **(1644')**
but not before
6.5 NM from
THR RWY 14

N68 41.8 E032 54.3

At or above
1910' **(1644')**
but not before
5.4 NM from
THR RWY 32

ASGOR
N68 31.0 E032 46.0

ASGOR 1
Between FL59 & FL79
ASGOR 3
Between FL79 & FL89

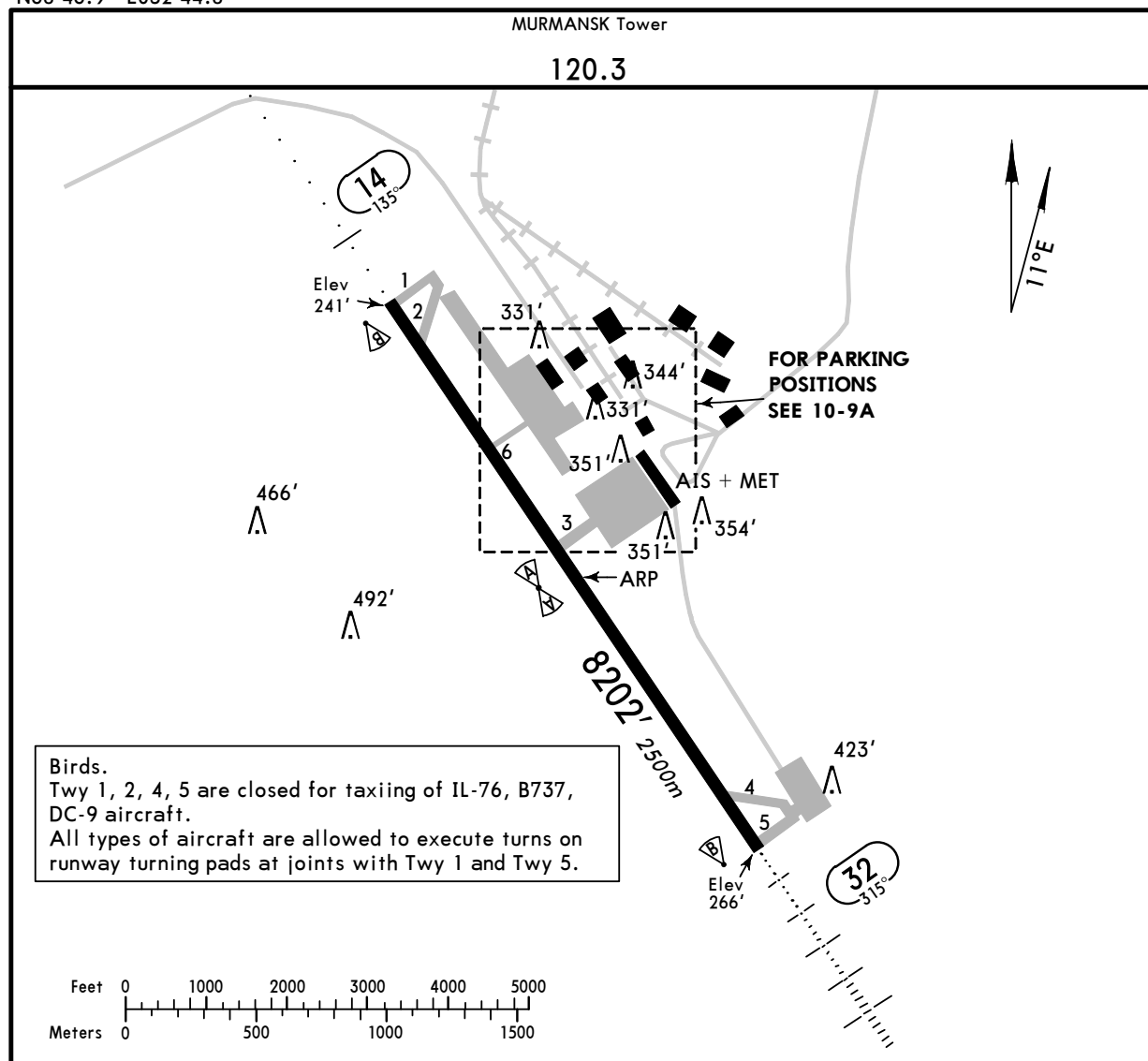
OLADA
N67 59.0 E032 46.0

Gnd speed-KT	75	100	150	200	250	300
383' per NM	479	638	957	1276	1595	1914
273' per NM	342	456	684	911	1139	1367
243' per NM	304	405	608	810	1013	1215
213' per NM	266	354	532	709	886	1063

ULMM/MMK
Apt Elev **266'**
N68 46.9 E032 44.8

JEPPESEN
6 FEB 09 **(10-9)**

MURMANSK, RUSSIA
MURMANSK



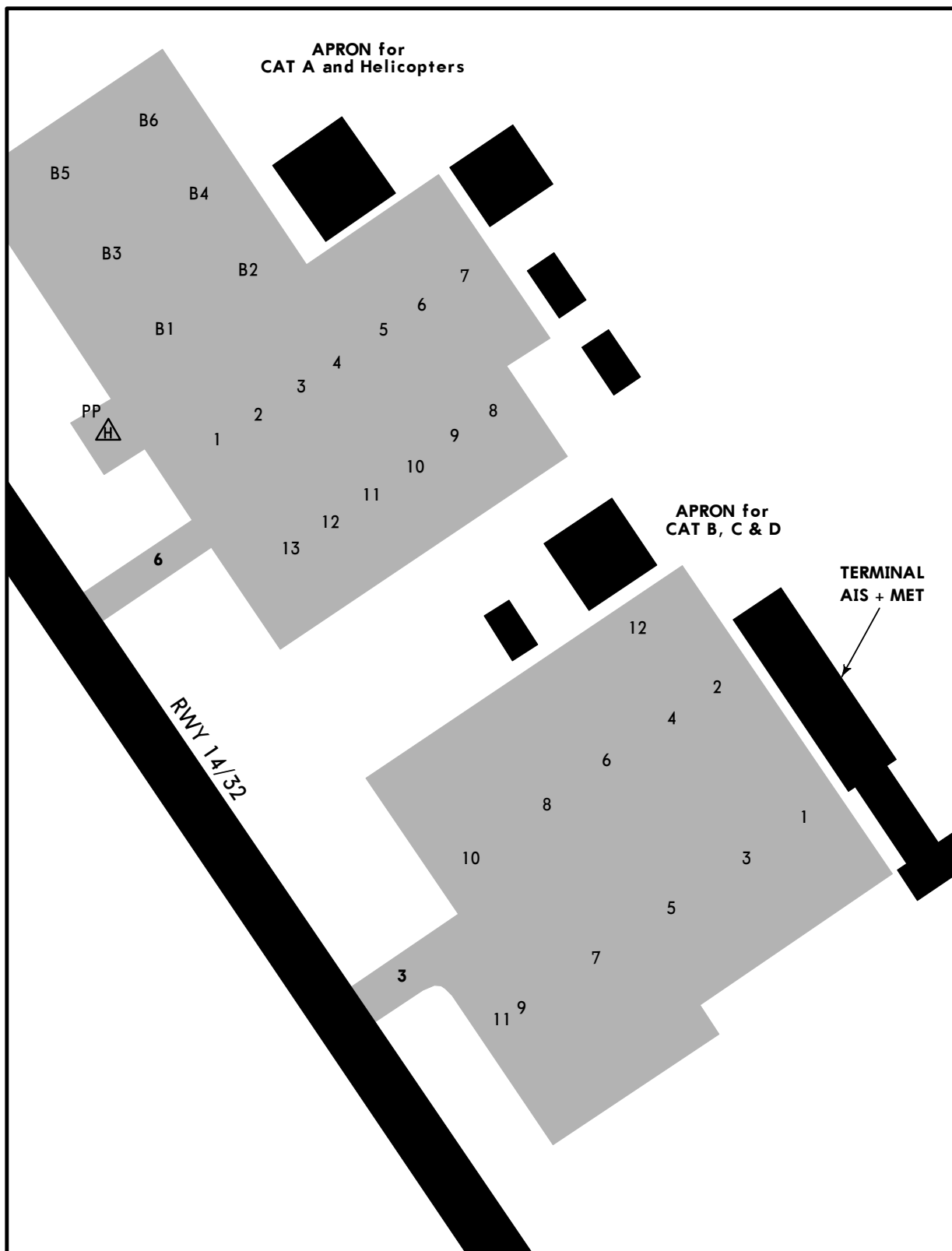
ADDITIONAL RUNWAY INFORMATION						
RWY					USABLE LENGTHS	
					LANDING BEYOND	
					Threshold	TAKE-OFF
14	HIRL (60m)	ALS		RVR		7382' 2250m
32	HIRL (60m)	HIALS	PAPI (angle 3.0°)	RVR		7482' 2281m

TAKE-OFF	
AIR CARRIER (JAA)	
All Rwys	
	LVP must be in force RCLM (DAY only) or RL
A	
B	250m
C	
D	300m

ULMM/MMK

JEPPESEN
 6 FEB 09 (10-9A)

MURMANSK, RUSSIA
 MURMANSK



INS COORDINATES

APRON for CAT B, C & D		APRON for CAT A	
STAND No.	COORDINATES	STAND No.	COORDINATES
3 thru 8	N68 47.0 E032 45.1	PP	N68 47.2 E032 44.6

Stand PP for helicopters only.

On the apron for acft CAT A stands 1-13 & B1-B6 for helicopters.

On the apron for acft CAT B, C & D:

1. When facing SE acft with an operating radius of 72'/22m or less shall taxi out of stands 3, 5, 7 and 9 under own power only, other acft shall be towed.
2. When facing NW acft with an operating radius of 72'/22m or less shall taxi out of stands 4, 6, 8 and 10 under own power only, other acft shall be towed.

ULMM/MMK

JEPPESEN

3 NOV 00

10-9X

JAA MINIMUMS

MURMANSK, RUSSIA
MURMANSK

STRAIGHT-IN RWY		A	B	C	D
14	ILS	505' (262')	505' (262')	505' (262')	505' (262')
		R900m	R900m	R900m	R900m
	ALS out	R1200m	R1200m	R1200m	R1200m
	NDB	720' (477')	720' (477')	720' (477')	720' (477')
32		R1500m	R1500m	R1800m	R2000m
	ALS out	R1500m	R1500m	R2000m	R2000m
	ILS	466' (200')	466' (200')	466' (200')	466' (200')
		R550m	R550m	R550m	R550m
	ALS out	R1000m	R1000m	R1000m	R1000m
	NDB	1010' (744')	1010' (744')	1010' (744')	1010' (744')
		R1200m	R1400m	R1400m	R1800m
	ALS out	R1500m	R1500m	R2000m	R2000m

TAKE-OFF RWY 14, 32

LVP must be in Force			
RCLM (DAY only) or RL		RCLM (DAY only) or RL	NIL (DAY only)
A	250m	400m	500m
B			
C			
D	300m		

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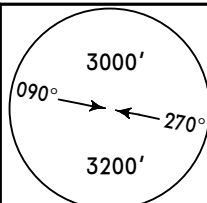
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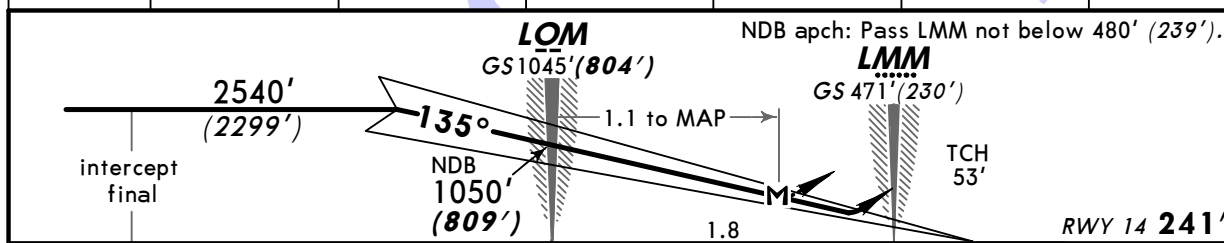
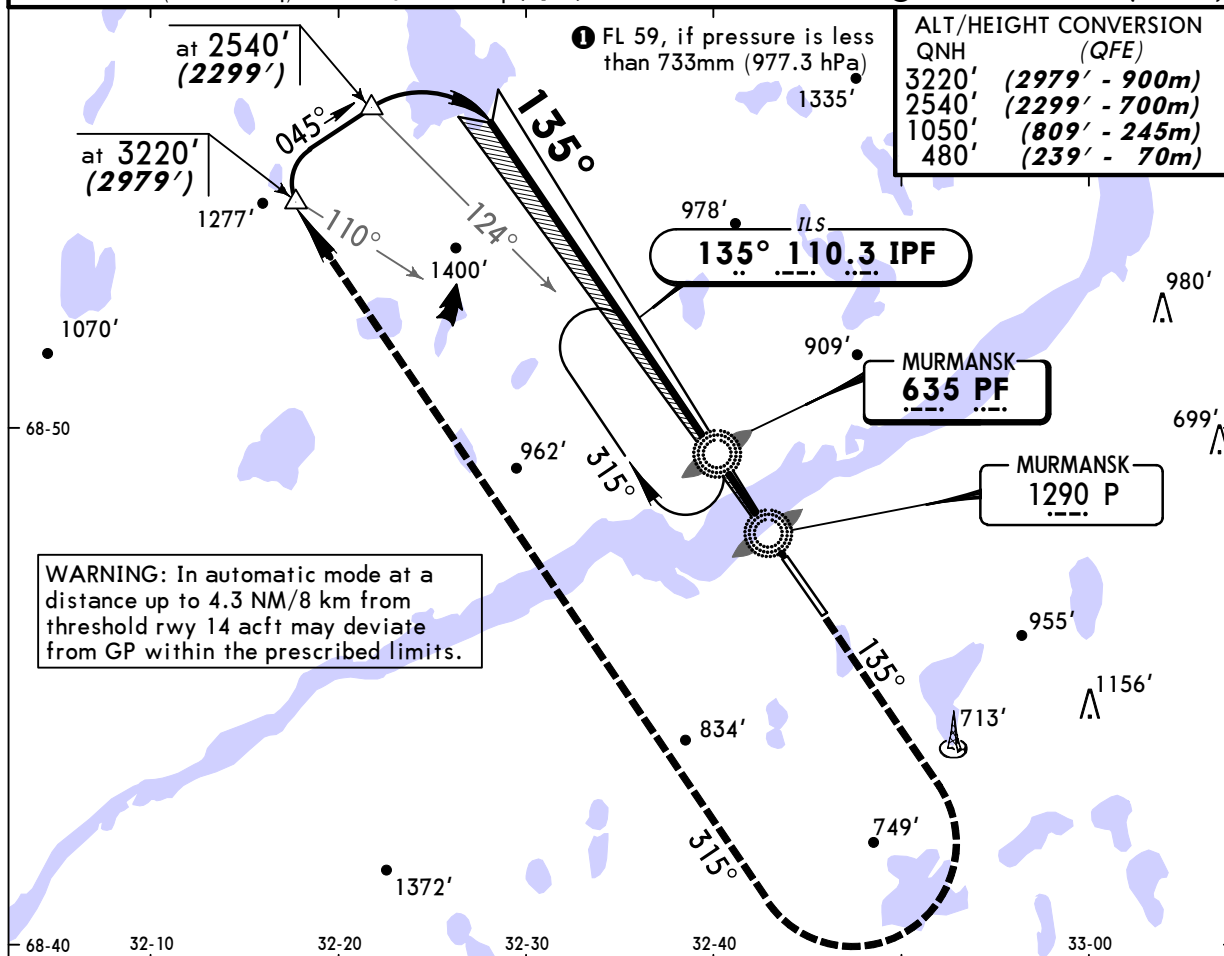
10 NOV 06
Eff 23 Nov

11-1

MURMANSK, RUSSIA
ILS or 2 NDB Rwy 14

BRIEFING STRIP

MURMANSK Tower 120.3					
LOC IPF 110.3	Final Apch Crs 135°	GS LOM 1045' (804')	ILS DA(H) 505' (264')	Apt Elev 266' RWY 241'	
NDB PF 635		Minimum Alt LOM 1050' (809')	NDB MDA(H) 720' (479')		
MISSED APCH: Climb on 135° to 2540' (2299'), then turn RIGHT onto 315° climbing to 3220' (2979'), then according to chart.					MSA ARP
Alt Set: MM (hPa on req)		QNH on req (QFE)	Trans level: FL 49 1	Trans alt: 3220' (2979')	



Gnd speed-Kts	70	90	100	120	140	160	ALS	2540' (2299')	135°	315°	3220' (2979')
ILS GS 3.00° or NDB Descent Gradient 5.2%	377	484	538	646	753	861					
LOM to MAP	1.1	0:57	0:44	0:40	0:33	0:28	0:25				

STRAIGHT-IN LANDING RWY 14							
ILS DA(H) 505' (264')		LOC (GS out)		NDB MDA(H) 720' (479')			
FULL	ALS out				ALS out		
A							
B							
C							
D							

PANS OPS

CHANGES: Procedure.

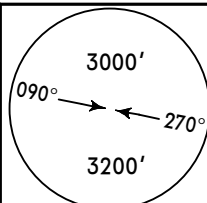
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ULMM/MMK
MURMANSK

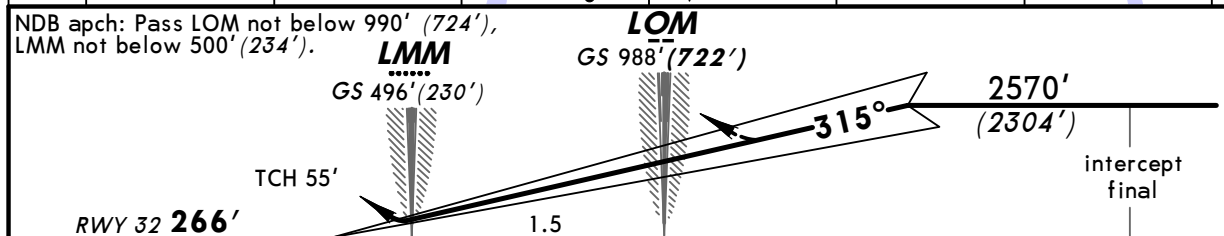
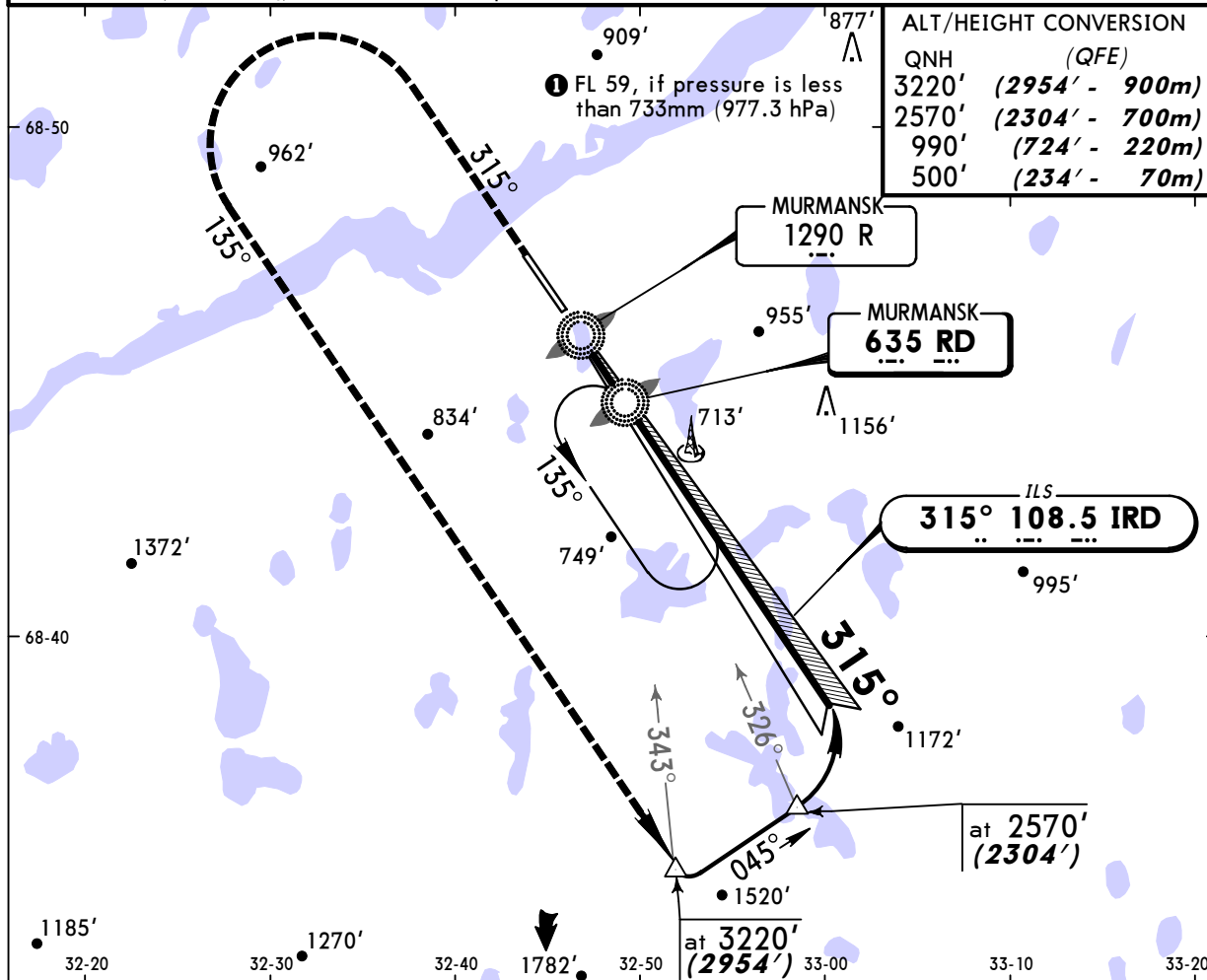
JEPPESEN
10 NOV 06
Eff 23 Nov 11-2

MURMANSK, RUSSIA
ILS or 2 NDB Rwy 32

BRIEFING STRIP

MURMANSK Tower 120.3					
LOC IRD 108.5	Final Apch Crs 315°	GS LOM 988' (722')	ILS DA(H) 466' (200')	Apt Elev 266' RWY 266'	
NDB RD 635		Minimum Alt No FAF	NDB MDA(H) 1010' (744')		
MISSED APCH: Climb on 315° to 2570'(2304') then turn LEFT onto 135° climbing to 3220'(2954') then according to chart.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 49 ① Trans alt: 3220' (2954')



Gnd speed-Kts	70	90	100	120	140	160	HIALS	2570' (2304')	135°	3220' (2954')
ILS GS 3.00° or	377	484	538	646	753	861	PAPI	on 315°	LT	↑
NDB Descent Gradient 5.2%										

STRAIGHT-IN LANDING RWY 32					
ILS DA(H) 466' (200')		LOC (GS out)		NDB MDA(H) 1010' (744')	
FULL	ALS out			ALS out	
A					
B	RVR 720m	1200m	NOT AUTHORIZED		3200m
C	VIS 800m				3200m 3600m
D					3600m 4000m

PANS OPS