

**STANDARD ARRIVAL CHART
INSTRUMENT (STAR) - ICAO**

TRANSITION LEVEL: by ATC
TRANSITION ALTITUDE: 6000

Alt set: - hPa (mm on req)
-QNH (QFE on req)

MINSK APP	125.900
MINSK RADAR	125.250
MINSK TOWER	130.400 PRI 118.300 SRY
MINSK-2 ATIS	128.850 EN 135.850 RUS

**MINSK-2
RNAV RWY 31R**

DAKWI2H, DAKWI2J
KIZIR2H, KOLOS2H
LENOK2H, PENAL2H
RAFMA2H, RUHAL2H
TIWOK2H

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FT
VAR 9° E 2019

UMR258 & UMR269 ARE NOT APPLICABLE
FOR ACFT PERFORMING TAKE OFF AND
LANDING AT AD MINSK-2

RNAV 1 approval required. Otherwise advise ATC.
ALT / FL / SPEED restrictions must always be followed as published unless explicitly cancelled by ATC. If unable to comply restrictions report at first contact with MINSK APP.
Descent planning: expect base turn normally abeam 10-15 NM final. Actual descent clearance will be as directed by ATC.
Expect direct routing/shortcuts by ATC whenever possible (especially during off-peak hours).
Holdings at GIFLI, DUZIK used for RWY configuration change and during unexpected events.

RADIO COMMUNICATION FAILURE PROCEDURE
If available call +375172157600

RNAV 1 approved aircraft:
If STAR was assigned and acknowledged by flight crew:
continue with assigned STAR;
set transponder to 7600 and in 2 minutes start descending in accordance with vertical restrictions specified on chart;
execute approach and land.

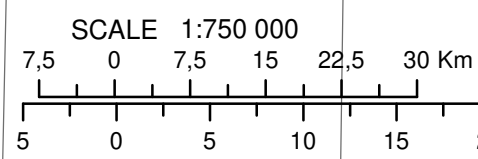
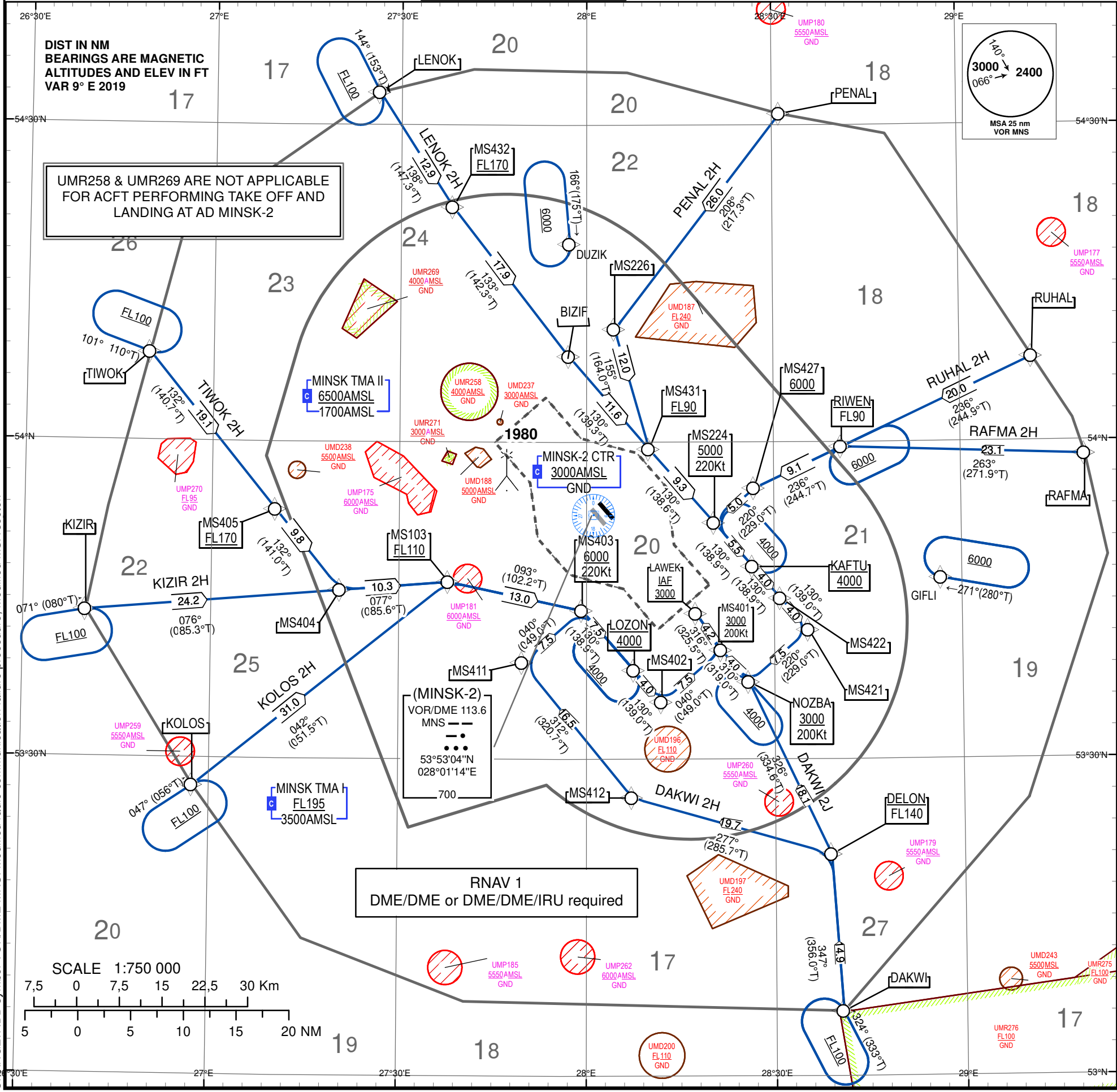
If STAR was assigned, acknowledged by flight crew and vectoring was initiated:
continue on assigned heading, adhering to last assigned and acknowledged altitude;
set transponder to 7600 and in 2 minutes start descending and proceed to initial approach fix (IAF) in accordance with vertical restrictions;
execute approach and land.

If STAR was not assigned:
continue according to FPL;
set transponder to 7600 and in 2 minutes start descending in accordance with vertical restrictions specified on chart;
execute approach and land.

RNAV 1 not approved aircraft:
maintain last assigned and acknowledged altitude/flight level;
set transponder to 7600;
proceed to MNS VOR/DME;
hold over MNS VOR/DME descending to altitude 4000 (all turn LEFT, 1 min, inbound course 130°);
then proceed to TP (R 106,2° D12.3 MNS VOR/DME) descending to 3000;
execute turn final intercept IMN LOC, approach and land.
If landing is not possible, climb on track 310° to 3000, turn LEFT to MNS VOR/DME and follow crew decision.

SPEED RESTRICTION
IAS 200 KT on base leg/closing heading to final approach up to 12 NM to touchdown.
IAS 180 KT on final approach course within 12 NM to 6 NM to touchdown.
IAS 160 KT on final approach course within 6NM to 4NM to touchdown.
These speeds are applied for ATC separation purposes and are mandatory.
All speed restrictions are to be flown as accurately as possible.
Aircraft unable to confirm to these speeds should inform ATC and state what speeds to be used.

CHANGE: ADD symbol VOR/DME MNS. Modified radio communication failure procedure; Modified MSA sector.



RNAV 1
DME/DME or DME/DME/IRU required

(MINSK-2)
VOR/DME 113.6
MNS
53°53'04"N
028°01'14"E
700

TABULAR DESCRIPTION

DAKWI2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	DAKWI	-	-	9	-	-	-	-	RNAV1
002	TF	DELON	-	347(356.0)	9	14.9	-	-FL140	-	RNAV1
003	TF	MS412	-	277(285.7)	9	19.7	-	-	-	RNAV1
004	TF	MS411	-	312(320.7)	9	16.5	-	-	-	RNAV1
005	TF	MS403	-	040(049.0)	9	7.5	-	+6000	-220	RNAV1
006	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
007	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
DAKWI2J										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	DAKWI	-	-	9	-	-	-	-	RNAV1
002	TF	DELON	-	347(356.0)	9	14.9	-	-	-	RNAV1
003	TF	NOZBA	-	326(334.6)	9	18.1	-	+3000	-200	RNAV1
004	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
005	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
KIZIR2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	KIZIR	-	-	9	-	-	-	-	RNAV1
002	TF	MS404	-	076(085.3)	9	24.2	-	-	-	RNAV1
004	TF	MS103	-	077(085.6)	9	10.3	-	+FL110	-	RNAV1
005	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
006	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
007	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
KOLOS2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	KOLOS	-	-	9	-	-	-	-	RNAV1
002	TF	MS103	-	042(051.5)	9	31.0	-	+FL110	-	RNAV1
003	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
004	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
005	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
006	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
007	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
LENOK2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	LENOK	-	-	9	-	-	-	-	RNAV1
002	TF	MS432	-	138(147.3)	9	12.9	-	+FL170	-	RNAV1
003	TF	BIZIF	-	133(142.3)	9	17.9	-	-	-	RNAV1
004	TF	MS431	-	130(139.3)	9	11.6	-	+FL90	-	RNAV1
005	TF	MS224	-	130(138.6)	9	9.3	-	+5000	-220	RNAV1
006	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
007	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
008	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
009	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
010	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
011	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1

STANDARD ARRIVAL CHART
INSTRUMENT (STAR) – ICAOMINSK-2
RNAV RWY 31R

PENAL2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	PENAL	-	-	9	-	-	-	-	RNAV1
002	TF	MS226	-	208(217.3)	9	26.0	-	-	-	RNAV1
003	TF	MS431	-	155(164.0)	9	12.0	-	+FL90	-	RNAV1
004	TF	MS224	-	130(138.6)	9	9.3	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
RAFMA2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	RAFMA	-	-	9	-	-	-	-	RNAV1
002	TF	RIWEN	-	263(271.9)	9	23.1	-	-FL90	-	RNAV1
003	TF	MS427	-	236(244.7)	9	9.1	-	+6000	-	RNAV1
004	TF	MS224	-	220(229.0)	9	5.0	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
RUHAL2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	RUHAL	-	-	9	-	-	-	-	RNAV1
002	TF	RIWEN	-	236(244.9)	9	20.0	-	-FL90	-	RNAV1
003	TF	MS427	-	236(244.7)	9	9.1	-	+6000	-	RNAV1
004	TF	MS224	-	220(229.0)	9	5.0	-	+5000	-220	RNAV1
005	TF	KAFTU	-	130(138.9)	9	5.5	-	@4000	-	RNAV1
006	TF	MS422	-	130(138.9)	9	4.0	-	-	-	RNAV1
007	TF	MS421	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	NOZBA	-	220(229.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	MS401	-	310(319.0)	9	4.0	-	-	-	RNAV1
010	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1
TIWOK2H										
Serial Number	Path Descriptor	Waypoint Identifier	Fly - over	Course °M(°T)	Magnetic Variation	Distance NM	Turn Direction	Altitude FT	Speed KT	Navigation Specification
001	IF	TIWOK	-	-	9	-	-	-	-	RNAV1
002	TF	MS405	-	132(140.9)	9	19.1	-	+FL170	-	RNAV1
003	TF	MS404	-	132(141.0)	9	9.8	-	-	-	RNAV1
004	TF	MS103	-	077(085.6)	9	10.3	-	+FL110	-	RNAV1
005	TF	MS403	-	093(102.2)	9	13.0	-	+6000	-220	RNAV1
006	TF	LOZON	-	130(138.9)	9	7.5	-	@4000	-	RNAV1
007	TF	MS402	-	130(139.0)	9	4.0	-	-	-	RNAV1
008	TF	MS401	-	040(049.0)	9	7.5	-	+3000	-200	RNAV1
009	TF	LAWEK	-	316(325.5)	9	4.2	-	@3000	-	RNAV1

RNAV HOLDING INDIFICATION

Path Descriptor	Holding Fix	Inbound MAG Track° (True Track°)	Altitude (ft) / Flight Level	Time / Distance outbound	Turn Direction
HM	BIZIF	310(319.1)	+4000	1MIN	R
HM	DAKWI	324(333.0)	+FL100	1MIN	L
HM	DUZIK	166(175.0)	+6000	1.5MIN	R
HM	GIFLI	271(280.0)	+6000	1.5MIN	R
HM	KAFTU	130(138.9)	+4000	1MIN	L
HM	KIZIR	071(080.0)	+FL100	1MIN	R
HM	KOLOS	047(056.0)	+FL100	1MIN	R
HM	LENOK	144(153.0)	+FL100	1MIN	R
HM	LOZON	130(138.9)	+4000	1MIN	R
HM	NOZBA	310(319.0)	+4000	1MIN	L
HM	RIWEN	236(244.9))	+6000	1MIN	L
HM	TIWOK	101(110.0)	+FL100	1MIN	L

WAYPOINT LIST

Waypoint Identifier	Coordinates	
BIZIF	540807.2N	0275712.1E
DAKWI	530607.0N	0284037.0E
DELON	532059.0N	0283853.0E
KAFTU	534814.6N	0282637.0E
KIWUL	534301.1N	0281629.9E
KIZIR	534352.4N	0264004.0E
KOLOS	532723.0N	0265723.0E
LAWEK	534347.2N	0281731.8E
LENOK	543305.0N	0272629.0E
LOZON	533825.2N	0280737.4E
MS103	534646.4N	0273757.1E
MS224	535222.7N	0282030.3E
MS226	541041.5N	0280431.5E
MS401	534019.6N	0282132.1E
MS402	533524.4N	0281202.0E
MS403	534403.8N	0275919.7E
MS404	534557.3N	0272038.9E
MS405	535333.4N	0271014.1E
MS406	540204.4N	0265828.0E
MS411	533908.6N	0274948.7E
MS412	532621.6N	0280718.1E
MS421	534213.1N	0283528.2E
MS422	534513.9N	0283102.9E
MS427	535539.4N	0282654.5E
MS431	535921.0N	0281003.8E
MS432	542214.9N	0273826.7E
NOZBA	533718.6N	0282556.5E
PENAL	543105.0N	0283117.0E
RAFMA	535841.0N	0291959.0E
RIWEN	535932.9N	0284054.6E
RUHAL	540758.0N	0291142.0E
TIWOK	540820.0N	0264945.0E