STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.15
DOHA APP EAST	124.775 / 120.60
DOHA DIRECTOR EAST	119.40 / 121.125
HAMAD ARRIVAL INFORMATION	126.825
HAMAD TWR WEST	118.025 / 118.225
HAMAD TWR EAST	118.525 / 118.225

DOHA/Hamad Intl. (OTHH) RNP RWY 16L/R LAEEB 1P / ORLEK 1P / TOSNA 1P / TOVOX 2P

RNP 1

2300 MSA 25 NM ARP

COM FAILURE

If Radio Com Failure occurs prior to IMGOG:
Squawk 7600, cross **IMGOG** maintaining 2500ft, turn left and proceed direct to **TOVAN**. Then continue on promulgated instrument approach procedure.

If Radio Com Failure occurs after passing IMGOG:
Squawk 7600 immediately, continue on track 336°M maintaining 2500ft for 3 minutes after selecting the squawk code, turn left and proceed direct to **TOVAN**. Then continue on promulgated instrument approach procedure.

1. Turn with MAX 250 KIAS
2. Further descent "by ATC only".
3. MAINTAIN TRACK 336°M EXPECT VECTORS
4. Expect 2500ft for OTHH RWY 16L and 3500ft for OTHH RWY 16R at IVANI (by ATC only)

TOSNA 251612.00N 0524116.00E **FL200**
KUVLA 250710.18N 0522633.99E
TOVOX 245341.54N 0522428.70E **FL180**
DINEX 245349.88N 0521548.36E
UKOBA 245816.01N 0515644.46E **11000**
KIVAM 245259.53N 0520420.77E
MUXED 250356.10N 0514832.78E
SIDMU 251131.44N 0514513.15E **8000**
NOLMA 252318.89N 0514002.12E
PUTAN 252754.71N 0513800.57E
IVANI 253302.21N 0513544.87E **3500** **2500** MAX 220 KIAS
EGNUG 251843.02N 0514203.54E
DASIK 245903.55N 0513516.76E **12000**
LAEEB 244806.38N 0513117.86E **FL170**
IMGOG 253815.65N 0513326.34E
GOLSI 253047.17N 0512929.86E
TOVAN 253109.81N 0513037.05E
LAGNO 251613.00N 0511518.00E
NADIG 240922.88N 0511819.86E
UKTON 240219.44N 0512127.25E
RUBOL 245509.40N 0512437.16E
GINTO 251605.56N 0510415.88E **FL150**
ORLEK 252542.00N 0503712.00E **FL210**

TOSNA 1P (236.0°T) 16.1
214° (216.4°T) 16.5
TOVOX 2P 7.9 268° (271.0°T)
TOSNA 1P TOVOX 2P 10.5 263° (265.5°T)
083° 8000 263°
8.7 305° (307.3°T)
9.3 305° (307.2°T)
LAEEB 1P ORLEK 1P TOSNA 1P TOVOX 2P
8.1 336° (338.3°T)
7.7 336° (338.2°T)
4.9 336° (338.2°T)
4.9 336° (338.2°T)
5.5 336° (338.2°T)
5.6 336° (338.2°T)
13.0 065° (068.0°T)
LAEEB 1P ORLEK 1P 10.4 066° (068.1°T)
LAEEB 1P 15.3 334° (336.6°T)
ORLEK 1P 7.7 156° (158.1°T)
7.6 155° (158.0°T)
7.3 155° (158.0°T)
10.0 087° (089.3°T)
087° 10000 267°
ORLEK 1P 26.3 109° (111.2°T)

SCALE 1:750000
NM -1 0 1 2 3 4 5
KM-2 0 2 4 6 8 10

VAR 2.6°E-2025
TRANSITION ALTITUDE 13000
NOT TO SCALE

WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.

When transferring from Doha Approach to Doha Director, state only: **Doha Director, (aircraft call sign)** unless otherwise instructed.

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L/R
LAEEB 1P / ORLEK 1P / TOSNA 1P / TOVOX 2P

TABULAR DESCRIPTION

RNP STAR LAEEB 1P

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	LAEEB	-	-	-2.6	-	-	+FL170	-	-	RNP 1
2	TF	RUBOL	-	334 (336.6)	-2.6	15.3	-	-	-	-	RNP 1
3	TF	DASIK	-	066 (068.1)	-2.6	10.4	-	@12000	-	-	RNP 1
4	TF	MUXED	-	065 (068.0)	-2.6	13.0	-	-	-	-	RNP 1
5	TF	SIDMU	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
6	TF	EGNUG	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
7	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
8	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
9	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+2500/-3500	-220	-	RNP 1
10	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
11	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remarks	Further descent after LAEEB and SIDMU by ATC only. Expect 2500ft for OTHH RWY 16L and 3500ft for OTHH RWY 16R at IVANI (by ATC only).										

RNP STAR ORLEK 1P

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	ORLEK	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	GINTO	-	109 (111.2)	-2.6	26.3	-	@FL150	-	-	RNP 1
3	TF	LAGNO	-	087 (089.3)	-2.6	10.0	-	-	-	-	RNP 1
4	TF	NADIG	-	155 (158.0)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	UKTON	-	155 (158.0)	-2.6	7.6	-	-	-	-	RNP 1
6	TF	RUBOL	-	156 (158.1)	-2.6	7.7	-	-	-	-	RNP 1
7	TF	DASIK	-	066 (068.1)	-2.6	10.4	-	@12000	-	-	RNP 1
8	TF	MUXED	-	065 (068.0)	-2.6	13.0	-	-	-	-	RNP 1
9	TF	SIDMU	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
10	TF	EGNUG	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
11	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
12	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
13	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+2500/-3500	-220	-	RNP 1
14	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
15	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remarks	Further descent after GINTO and SIDMU by ATC only. Expect 2500ft for OTHH RWY 16L and 3500ft for OTHH RWY 16R at IVANI (by ATC only).										

RNP STAR TOSNA 1P

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	KUVLA	-	233 (236.0)	-2.6	16.1	-	-	-	-	RNP 1
3	TF	DINEX	-	214 (216.4)	-2.6	16.5	-	-	-	-	RNP 1
4	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-250	-	RNP 1
5	TF	UKOBA	-	305 (307.3)	-2.6	8.7	-	@11000	-	-	RNP 1
6	TF	MUXED	-	305 (307.2)	-2.6	9.3	-	-	-	-	RNP 1
7	TF	SIDMU	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
8	TF	EGNUG	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
9	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
10	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
11	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+2500/-3500	-220	-	RNP 1
12	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
13	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remarks	Further descent after SIDMU by ATC only. Expect 2500ft for OTHH RWY 16L and 3500ft for OTHH RWY 16R at IVANI (by ATC only).										

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RNP STAR TOVOX 2P											
Serial Num	**Path Descriptor**	**Waypoint Identifier**	**Fly-over**	**Course °M(°T)**	**Magnetic Variation(°)**	**Distance (NM)**	**Turn Direction**	**Altitude (ft)**	**Speed (kt)**	**VPA(°)/ TCH(ft)**	**Navigation Specification**
1	IF	**TOVOX**	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	**DINEX**	-	268 (271.0)	-2.6	7.9	-	-	-	-	RNP 1
3	TF	**KIVAM**	-	263 (265.5)	-2.6	10.5	-	-	-250	-	RNP 1
4	TF	**UKOBA**	-	305 (307.3)	-2.6	8.7	-	@11000	-	-	RNP 1
5	TF	**MUXED**	-	305 (307.2)	-2.6	9.3	-	-	-	-	RNP 1
6	TF	**SIDMU**	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
7	TF	**EGNUG**	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
8	TF	**NOLMA**	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
9	TF	**PUTAN**	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
10	TF	**IVANI**	-	336 (338.2)	-2.6	5.5	-	+2500/-3500	-220	-	RNP 1
11	TF	**IMGOG**	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
12	FM	**IMGOG**	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remarks	Further descent after SIDMU by ATC only. Expect 2500ft for OTHH RWY 16L and 3500ft for OTHH RWY 16R at IVANI (by ATC only).										

WAYPOINT LIST

RNP STAR LAEEB 1P / ORLEK 1P / TOSNA 1P / TOVOX 2P	
Waypoint Identifier	**Coordinates**
TOSNA	251612.00N 0524116.00E
KUVLA	250710.18N 0522633.99E
DINEX	245349.88N 0521548.36E
KIVAM	245259.53N 0520420.77E
UKOBA	245816.01N 0515644.46E
MUXED	250356.10N 0514832.78E
SIDMU	251131.44N 0514513.15E
EGNUG	251843.02N 0514203.54E
NOLMA	252318.89N 0514002.12E
PUTAN	252754.71N 0513800.57E
IVANI	253302.21N 0513544.87E

RNP STAR LAEEB 1P / ORLEK 1P / TOSNA 1P / TOVOX 2P	
Waypoint Identifier	**Coordinates**
IMGOG	253815.65N 0513326.34E
TOVOX	245341.54N 0522428.70E
LAEEB	244106.38N 0513117.86E
RUBOL	245509.40N 0512437.16E
DASIK	245903.55N 0513516.76E
ORLEK	252542.00N 0503712.00E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
NADIG	250922.88N 0511819.86E
UKTON	250219.44N 0512127.25E

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