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JEPPESEN

JeppView for Windows

List of pages in this Trip Kit

Trip Kit Index
Airport Information For UUWW
Terminal Charts For UUWW
Revision Letter For Cycle 13-2016
Change Notices
Notebook

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JEPPESEN
JeppView for Windows

General Information

Location: MOSCOW RUS
ICAO/IATA: UUWW / VKO
Lat/Long: N55° 35.95', E037° 16.38'
Elevation: 686 ft

Airport Use: Public
Daylight Savings: Not Observed
UTC Conversion: -3:00 = UTC
Magnetic Variation: 10.0° E

Fuel Types: Jet A-1
Repair Types: Minor Airframe, Minor Engine
Customs: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0047 Z
Sunset: 1817 Z

Runway Information

Runway: 01
Length x Width: 10039 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 633 ft
Lighting: Edge, ALS, Centerline

Runway: 06
Length x Width: 11483 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 629 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19
Length x Width: 10039 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 634 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 24
Length x Width: 11483 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 685 ft
Lighting: Edge, ALS, Centerline, TDZ

Communication Information

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ATIS: 124.450 Departure Service
ATIS: 125.875 Arrival Service Non-English
ATIS: 127.800 Departure Service Non-English
ATIS: 131.850 Arrival Service
Vnukovo Tower/Precision Tower: 129.000 Secondary
Vnukovo Tower/Precision Tower: 124.400 Secondary
Vnukovo Vipport Tower: 122.875
Vnukovo Tower/Precision Tower: 119.450 Secondary
Vnukovo Tower/Precision Tower: 118.300
Vnukovo Taxiing 1 Ground: 119.450 Secondary
Vnukovo Taxiing 1 Ground: 120.450
Vnukovo Taxiing 1 Ground: 129.000 Secondary
Vnukovo Taxing 2 Ground: 121.700
Vnukovo Taxiing 1 Ground: 124.400 Secondary
Vnukovo Delivery Clearance Delivery: 131.800
Moscow Approach Approach: 135.900
Moscow Approach Approach: 134.000
Moscow Approach Approach: 131.200
Moscow Approach Approach: 129.800
Vnukovo-Approach-1 Approach: 129.000 Secondary
Moscow Approach Approach: 127.200
Moscow Approach Approach: 125.300
Moscow Approach Approach: 124.400 Secondary
Moscow Approach Approach: 123.400
Moscow Approach Approach: 122.700
Vnukovo-Approach-1 Approach: 122.300
Moscow Approach Approach: 119.450 Secondary
Moscow Approach Approach: 128.000
Vnukovo Radar: 124.400 Secondary
Vnukovo Radar: 129.000 Secondary
Vnukovo Radar: 126.000
Vnukovo Vipport Operations: 122.875
Vnukovo Radar: 119.450
Vnukovo Transit Operations: 131.875
Vnukovo Operations: 131.125

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1. GENERAL

1.1. ATIS

ATIS Arrival	131.850
	125.875 (Russian)
ATIS Departure	124.450
	127.8 (Russian)

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. GENERAL

Noise abatement procedures shall be executed by all ACFT, but not at the expense of the reduction of flight safety.

1.2.2. NIGHTTIME RESTRICTIONS

Between 2300-0700LT departures and arrivals are allowed only for ACFT that comply with the requirements of ICAO Annex 16, Chapter 3.

1.2.3. PREFERENTIAL RWY SYSTEM

Between 2300-0700LT RWY 19 should not be used for landing in order of preference, and RWY 01 should not be used for take-off in order of preference. Deviations from the given restrictions are possible due the prohibition to use RWY 06/24, extreme weather conditions and operational restrictions.

1.2.4. REVERSE THRUST

After landing between 2300-0700LT it is recommended to use reverse thrust at idle power except for flight safety reasons.

1.2.5. USE OF APU

Between 2300-0700LT the run-up of APU is prohibited. The use of APU should be avoided and/or restricted after parking onto the stands or before taxiing out of the stands equipped with the ground APU units and the devices for air conditioning.

1.3. LOW VISIBILITY PROCEDURES

1.3.1. GENERAL

- Preparation: RVR is less than 800m and further deterioration of visibility up to the value less than 550m is expected according to weather forecast.
- Implementation: RVR is less than 550m. Flight crews will be informed by ATC or ATIS when LVP are in progress: "Low visibility procedures in progress, check your minimum".
- Termination: RVR is not less than 550m and further improvement of weather is expected according to weather forecast.

Taxiing when visibility is less than 2000m shall be carried out with air navigation lights and landing lights switched on.

When visibility is less than 350m ACFT taxiing shall be carried out along TWY only with TWY centerline lights switched on or after Follow-me car.

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1. GENERAL

1.3.2. ARRIVAL

Flight crew shall report RWY vacation to VNUKOVO Precision only after complete crossing of RWY holding position marking, painted on TWY or passing last yellow light of exit TWY centerline indicating boundary of ILS critical area.

ACFT must vacate ILS critical area as soon as possible.

After CAT IIIA in LVP conditions, the ACFT shall vacate the RWY along TWYs A1 thru A3, A5, A7 and A9 (RWY 06) or TWY A6, A8, RWY 01/19, A10, A11 and A13 (RWY 24). After reporting to VNUKOVO Precision about the vacation of ILS critical area, the flight crew shall change over to the communication with VNUKOVO Taxiing and shall continue proceeding along green TWY center line lights of TWY A1 thru A3, A5, A7, A9 and M1 thru M3 (RWY 06) or A6, A8, A10, A11, A13 and M1 thru M3 (RWY 24) under VNUKOVO Taxiing. Taxiing shall be carried out under VNUKOVO Taxiing after Follow-me car.

Flight crew shall report the presence of Follow-me car in front of the ACFT as following: "VNUKOVO Taxiing, TTF 9075, on Mike - 1, "Follow-me" vehicle in front of us".

Further ACFT taxiing shall be carried out under control of VNUKOVO Taxiing.

Flight crew shall report to VNUKOVO Taxiing about ACFT arrival at the stand as following: "TTF 9075, on stand 12".

1.3.3. DEPARTURE

When visibility is less than 350m, the flight crew of the departing ACFT shall carry out taxiing only along the TWYs equipped with green TWY centerline lights. In case of failure of TWY centerline lights or stop bar lights, when visibility is less than 350m, the flight crew must carry out taxiing after the Follow-me car only.

When visibility is less than 350m, ACFT taxiing along the apron area shall be carried out after the Follow-me car only under control of Taxiing.

During taxiing along the apron area and manoeuvring area the flight crew must constantly check the ACFT position especially in the places of TWY intersection to make sure that taxiing is carried out in the conditions of complete safety. In case of difficulty or doubt in determination of ACFT position, it is necessary to stop taxiing and report to Taxiing or Tower about it.

RWY-holding positions in front of RWY 01 on TWYs M1 and M2 and in front of RWY 06/24 on TWYs A1 thru A11 and A13 are marked by red stop bar lights.

When visibility is less than 350m, ACFT taxiing for take-off from RWY 06 or RWY 24 shall be carried out after the Follow-me car to the first TWY centerline light, [TWYs A4, M1 and M2 (RWY 06)], which is switched on. The flight crew shall continue taxiing along green lights by the instruction of Taxiing to stop bar lights on TWYs A10, A11 and A13 (RWY 06) or TWYs A1 thru A5 (RWY 24) and stop. The transfer of control from Taxiing to Tower shall be carried out at stop bar lights.

The transfer of control from Taxiing to Tower shall be carried out before the marking of RWY holding position.

It is prohibited to cross the RWY holding position line (ILS critical area) marked by stop bar lights and with DAY marking installed without the permission of Tower.

The flight crew should read back all instructions of Tower and Taxiing on holding near the RWY.

After receiving the clearance to occupy the line-up position the flight crew must start taxiing only after switching off of stop bar lights. It is prohibited to cross the stop bar lights when they are switched on.

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1. GENERAL

1.4. TAXI PROCEDURES

Taxiing along TWYs B1, B3, B6, B8, M3 (from TWY A2 to A3) and M4 at reduced speed, strictly along taxi guideline with increased CAUTION.

Taxiing on segments where TWY centerline lights and marking sign of position and movement direction are absent or on TWY C9: At NIGHT or when VIS is less than 2000m with Follow-me car only.

Taxi route from TWY C8 along hangars 9 thru 14 and between stand 54 and hangar 15 MAX wingspan 118'/36m.

1.5. PARKING INFORMATION

Enter Vnukovo I stands 32 and 34A along TWY B2 only by towing.
Enter Vnukovo I stands 51A and 64 by towing.
Exit Vnukovo I stands 1 thru 31A, 41A thru 41E and 52 thru 61 by towing.
Exit Vnukovo I stand 64 under engines power; to TWY B5 by towing.
Use Vnukovo I stands 32 thru 35A, 38 thru 41, 65 and 66 by towing.
Enter Vnukovo III stands 1 thru 5, 8 thru 10 and 74 thru 75C by towing.
Exit Vnukovo III stands 21 and 23 thru 27 by towing.
Stands 35, 42 and 43 available for helicopters.

1.6. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. APPROACH PHASE

Restrictions

Great rates of descent should be avoided (if possible) directly before the final approach.
The change of flight configuration and speed of ACFT, connected with noise abatement procedures, shall be carried out according to the requirements of the Airplane Flight Manual.
During instrument as well as visual approach, it is prohibited to fly below the ILS GS angle.
The noise abatement procedures shall not envisage the excess of the indicated rate of descent established by the Airplane Flight Manual of the given ACFT type.

2.2. CAT II/III OPERATIONS

RWYs 06 and 24 approved for CAT II/III operations, RWY 19 approved for CAT II operations, special aircrew and ACFT certification required.

2.3. RWY OPERATION

2.3.1. MINIMUM RWY OCCUPANCY TIME

The pilot must vacate the RWY as fast as possible.

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2. ARRIVAL

2.4. SPEED RESTRICTIONS

Unless otherwise instructed maintain following speeds:

- 250 KT below FL100;
- 220 KT from ADAGA, BITSA, DR, LO, OKLIT, UM or UMBEG until passing IAF (ODABI, OSTIS, ANEDA, GILIN);
- 160 KT after passing IAF, with flaps in intermediate position, landing gear retracted.

If unable to maintain the above-mentioned IAS due to the ACFT performances or meteorological conditions, the flight crew shall report it to ATS unit and maintain the recommended speeds.

2.5. TAXIING PROCEDURES

2.5.1. STANDARD TAXI ROUTES

FOR RWY 01:

Route 7: TWY M4, TR W.
Route 8: TWY M4, TWY B5, TR Z.
Route 9: TWY M4, TWY B5, TR Z, TR X, TR W.

FOR RWY 06:

Route 1: TWY M3, TWY A5, TR Z, TWY B5, TWY M4, TR W.
Route 2: TWY M3, TWY A5, TR Z (TR X, TR W).
Route 3: TWY M3, TWY A2, TR W.

FOR RWY 19:

Route 10: TWY M1, TR X, TR Z, TWY B5, TWY M4, TR W.
Route 11: TWY M1, TR X (TR Z, TR W).
Route 12: TWY M1, TWY M3, TWY A2, TR W.

FOR RWY 24:

Route 4: TWY M2, crossing of RWY 01/19 by ATC permission, TWY M1, TR X, TR Z, TWY B5, TWY M4, TR W.
Route 5: TWY M2, crossing of RWY 01/19 by ATC permission, TWY M1, TR X (TR Z, TR W).

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3. DEPARTURE

3.1. START-UP, TOWING & TAXI PROCEDURES

3.1.1. START-UP

General

Engine start-up, towing and taxiing of ACFT to RWY holding position shall be carried out on the flight crew's request and by clearance of Taxiing.

When requesting for start-up clearance from Taxiing, the flight crews of departing ACFT shall advise call sign and stand number.

When towing of ACFT to engine start-up position is required, the flight crew shall advise stand number and request for towing clearance from Taxiing.

Engine start-up shall be carried out at start-up points by the instruction of the technical specialist.

Flight crew can carry out engine start-up during towing of ACFT if this procedure is envisaged by Airplane Flight Manual and coordinated with the technical personnel of the tow-team.

Procedure

A pilot-in-command shall request the ATC clearance 5 minutes prior to engines start-up or ACFT towing to the start-up point by passing the following information to Delivery:

- flight number;
- the destination aerodrome;
- the ACFT stand number;
- ATIS information index.

Delivery can elaborate the ACFT type, registration number, apron, flight level and other necessary information.

When the ACFT is completely ready for departure, the pilot-in-command must report to Delivery:

- "COMPLETELY READY FOR DEPARTURE",

obtain the ATC clearance and the instruction to change over to communication with Taxiing 1.

Note: "COMPLETELY READY FOR DEPARTURE" means that all formalities are observed, the preparation works are completed, all passengers are on board, the entrance and cargo doors of the ACFT are closed, the stairs are taken away (the aerobridge is disconnected and is in a retracted position), a tow bar is connected (when towing is required), the procedure of de-icing treatment is completed, ground personnel are ready for towing (taxiing) and have established radio contact with the pilot-in-command.

For ACFT on aprons of Vnukovo III sector:

Obtained ATC clearance is the permission to start up engines on the stand, to start up engines during towing, for towing and to start up engines at start-up point. Taxiing of ACFT shall be carried out only after getting clearance from Taxiing-1.

3.1.2. STANDARD TAXI ROUTES

FOR RWY 01:

Route 19: TR W, TWY M4, TWY B5, TR Z, TR X, TWY M1, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

Route 20: TR W (TR Z), TR X, TWY M1, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

Route 21: TR W, TWY A2, TWY M3, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

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3. DEPARTURE

FOR RWY 06:

Route 13: TR W, TWY M4, TWY B5, TR Z, TR X, TWY M1, crossing of RWY 01/19 by ATC permission, TWY M2.

Route 14: TR W (TR Z), TR X, TWY M1, crossing of RWY 01/19 by ATC permission, TWY M2.

FOR RWY 19:

Route 22: TR W, TWY M4.

Route 23: TR W, TR X, TR Z, TWY B5, TWY M4.

FOR RWY 24:

Route 16: TR W, TWY M4, TWY B5, TR Z, TWY A3.

Route 17: TR Z, TWY A3.

Route 18: TR W, TWY A2.

3.2. NOISE ABATEMENT PROCEDURES

Flight crews shall strictly adhere to the established departure procedure to avoid overflying the settlements.

TAKE-OFF AND CLIMBING PHASE

Restrictions

A displacement of THR shall not be used as a noise abatement measure.

A change of flight course direction after take-off is permitted only after reaching 1080'(394').

Turns initiated between 1080'(394') and 1670'(984') shall be executed with a bank angle of 15°.

Turns initiated between 1670'(984') and 3640'(2954') shall be executed with a bank angle of 20°.

Turns initiated at or above 3640'(2954') shall be executed with 25° bank or with angular speed of turn of 3°/sec.

Noise Abatement Procedures NADP1 and NADP2

Two methods of noise abatement during climbing are used by the flight crews: NADP1 for RWYs 01 & 06 and NADP2 for RWYs 19 & 24 (ICAO Doc 8168, Volume 1).

3.3. RWY OPERATION

3.3.1. MINIMUM RWY OCCUPANCY TIME

After obtaining line-up clearance the flight crew must execute taxiing to the assigned position on the RWY without delay.

Cockpit checks must be completed, if possible, before occupation of line-up position and the checks which have to be done on the RWY shall be executed as soon as possible.

The flight crew shall provide the beginning of take-off run immediately after obtaining clearance for its execution.

If unable to execute the above mentioned requirements, the flight crews must inform Tower about it.

3.4. OTHER INFORMATION

3.4.1. TAKE-OFF FROM INTERSECTION

Flight crew must report chosen line-up position during communication with GND controller.

If the pilot-in-command is ready to carry out take-off without stop on RWY, he has to report his decision to Tower at first contact at RWY holding position, whereas the pilot shall obtain take-off clearance simultaneously with line-up clearance.

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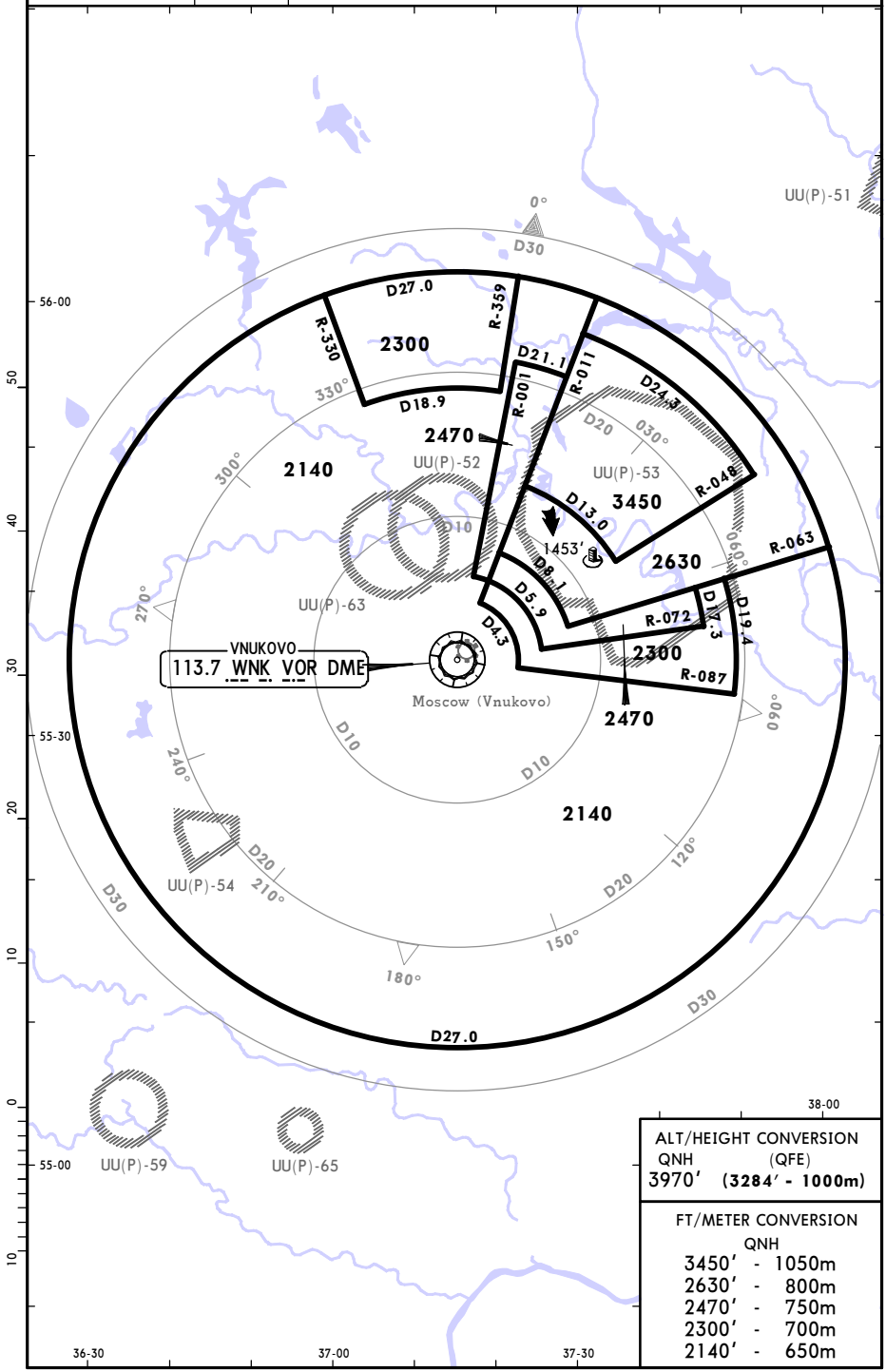
UUWW/VKO
VNUKOVO

JEPPESEN
6 MAY 16 (10-1R)

MOSCOW, RUSSIA
RADAR MINIMUM ALTITUDES

VNUKOVO Radar	Apt Elev	Alt Set: MM (hPa on request)	QNH on request (QFE)
126.0	686′	Trans level: By ATC Trans alt: 3970′	(3284′)



ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970′	(3284′ - 1000m)

FT/METER CONVERSION	
QNH	
3450′	- 1050m
2630′	- 800m
2470′	- 750m
2300′	- 700m
2140′	- 650m

CHANGES: Reissue.

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TRANSITION DESIGNATION	REFER TO CHART
BOGDANOVO 1W, 2W, 3W, NAMIN 1W, 2W, 3W, 4W	10-2B
LARIONOVO 1W, 2W	10-2C
RELTO 1W, 2W, TIKBI 1W, 2W	10-2D
OKTYABRSKIY 1W, 2W, SUKHOTINO 1W	10-2E
GAGARIN 1W, 2W, 3W, 4W, 5W, SODRU 1W, SUGIR 1W	10-2F

RNAV STAR DESIGNATION	REFER TO CHART
BITSA 3R, KLIMOVSK 3R, SKURYGINO 3R, 5R, UMBEG 3R	10-2H
BITSA 2R, KLIMOVSK 2R, SKURYGINO 2R, 5R, UMBEG 2R	10-2J
BITSA 4R, KLIMOVSK 4R, SKURYGINO 4R, 5R, UMBEG 4R	10-2K
BITSA 1R, KLIMOVSK 1R, SKURYGINO 1R, 5R, UMBEG 1R	10-2L
ADAGA 4P, BITSA 4P, IVANOVSKOYE 4P, KLIMOVSK 4P, OKLIT 4P, SKURYGINO 4P	10-2M

FOR STAR DESIGNATION REFER TO PAGE 10-2A

CHANGES: Transitions and RNAV STARs revised.

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STAR DESIGNATION	REFER TO CHART
BITSA Ø1A, Ø1M	10-2P
KLIMOVSK Ø1A, Ø1M	10-2Q
SKURYGINO Ø1A, Ø1M	10-2S
UMBEG Ø1B, Ø1K	10-2T
BITSA Ø6A, KLIMOVSK Ø6A, SKURYGINO Ø6A, UMBEG Ø6A, Ø6B	10-2U
BITSA Ø6B, KLIMOVSK Ø6B, SKURYGINO Ø6B	10-2V
BITSA 19B	10-2W
BITSA 19M, OKLIT 19K	10-2X
KLIMOVSK 19A, SKURYGINO 19A, UMBEG 19A	10-2X1
IVANOVSKOYE 19K, KLIMOVSK 19K, SKURYGINO 19K	10-2X2
BITSA 24B	10-2X3
KLIMOVSK 24A, SKURYGINO 24A, UMBEG 24A	10-2X4

CHANGES: STARs revised.

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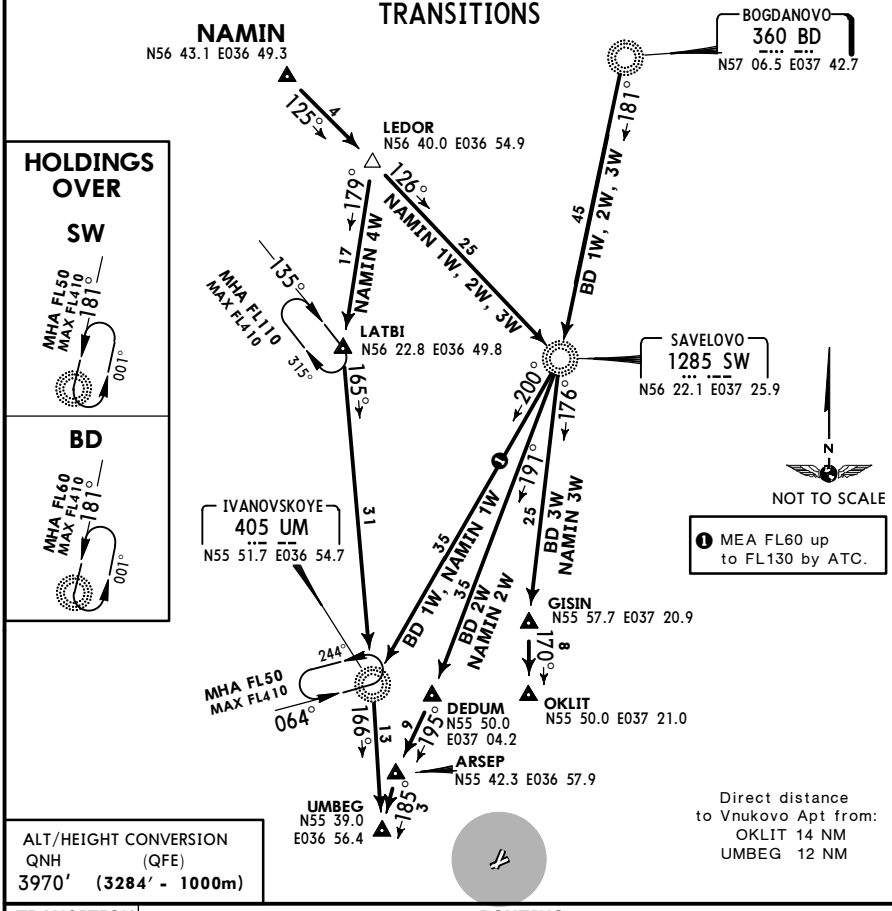
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)

BOGDANOVO 1W (BD 1W), BOGDANOVO 2W (BD 2W)
NAMIN 1W [NAM1W] , NAMIN 2W [NAM2W]
NAMIN 4W [NAM4W]
TO UMBEG

BOGDANOVO 3W (BD 3W), NAMIN 3W [NAM3W]
TO OKLIT

TRANSITIONS



ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3284′ - 1000m)

TRANSITION	ROUTING
BD 1W	To SW, then to UM, then to UMBEG.
BD 2W By ATC	To SW, then to DEDUM, then to ARSEP, then to UMBEG.
BD 3W By ATC	To SW, then to GISIN, then to OKLIT.
NAMIN 1W	To LEDOR, then to SW, then to UM, then to UMBEG.
NAMIN 2W By ATC	To LEDOR, then to SW, then to DEDUM, then to ARSEP, then to UMBEG.
NAMIN 3W By ATC	To LEDOR, then to SW, then to GISIN, then to OKLIT.
NAMIN 4W By ATC	To LEDOR, then to LATBI, then to UM, then to UMBEG.

CHANGES: Transition availability.

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UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 (10-2C)

MOSCOW, RUSSIA
TRANSITION

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)

LARIONOVO 1W (MF 1W)
TO BITSA

LARIONOVO 2W (MF 2W)
TO UMBEG

TRANSITIONS

LARIONOVO 478 MF
N56 01.6 E039 38.1

35 238° MF 2W 1W

MHA FL50 MAX FL410 058°

ITINA
N55 48.7 E038 39.8

16

MARYINO 493 RW
N55 42.7 E038 13.7

13 243°

GEKLA
N55 39.0 E037 52.1

10 230°

BITSA
N55 34.0 E037 36.9

323° MF 2W 29

BADNI
N55 16.5 E036 56.7

12 247°

ERMAL
N55 13.7 E036 36.5

280° 19

KULEG
N55 19.8 E036 05.6

11 001° 240°

ADAGA
N55 31.0 E036 09.2

12 060°

DINEL
N55 35.2 E036 29.0

066° 16

UMBEG
N55 39.0 E036 56.4

060° MHA FL110 MAX FL410

N
NOT TO SCALE

Direct distance to Vnukovo Apt from:
BITSA 12 NM
UMBEG 12 NM

ALT/HEIGHT CONVERSION (QFE)
QNH 3970′ (3284′ - 1000m)

HOLDING OVER MF
238° MHA FL60 MAX FL410 058°

TRANSITION	ROUTING
MF 1W	To ITINA, then to RW, then to GEKLA, then to BITSA.
MF 2W By ATC	To ITINA, then to RW, then to GEKLA, then to BITSA, then to BADNI, then to ERMAL, then to KULEG, then to ADAGA, then to DINEL, then to UMBEG.

CHANGES: MF 2W transition availability.

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UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 (10-2D)

MOSCOW, RUSSIA
TRANSITION

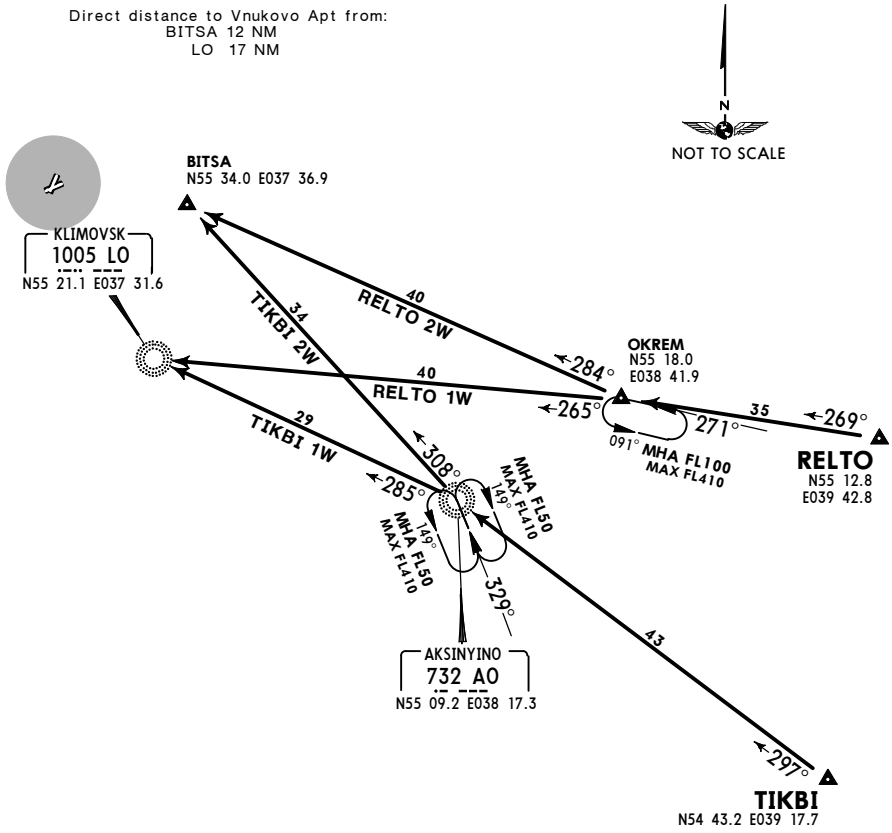
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)

RELTO 1W [REL1W], TIKBI 1W [TIK1W]
TO LO

RELTO 2W [REL2W], TIKBI 2W [TIK2W]
TO BITSA

TRANSITIONS
BY ATC

Direct distance to Vnukovo Apt from:
BITSA 12 NM
LO 17 NM



ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3284′ - 1000m)

TRANSITION	ROUTING
RELTO 1W	To OKREM, then to LO.
RELTO 2W	To OKREM, then to BITSA.
TIKBI 1W	To AO, then to LO.
TIKBI 2W	To AO, then to BITSA.

CHANGES: None.

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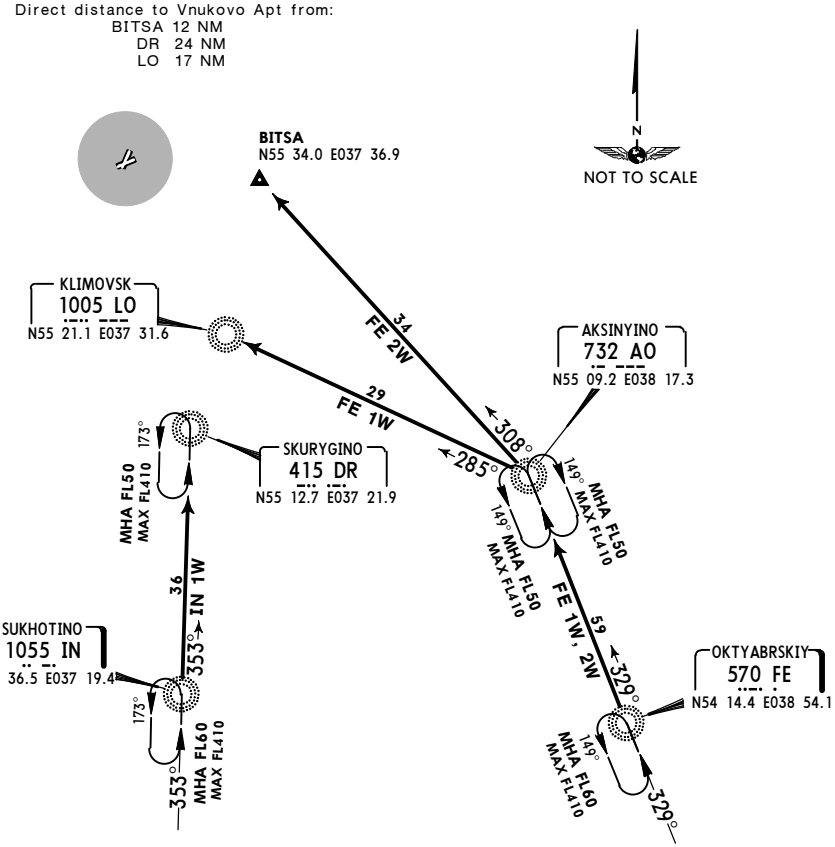
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)

OKTYABRSKIY 1W (FE 1W)
TO LO

OKTYABRSKIY 2W (FE 2W)
TO BITSA

SUKHOTINO 1W (IN 1W)
TO DR

TRANSITIONS



ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970′	(3284′ - 1000m)

TRANSITION	ROUTING
FE 1W By ATC	To AO, then to LO.
FE 2W By ATC	To AO, then to BITSA.
IN 1W	To DR.

CHANGES: Reissue.

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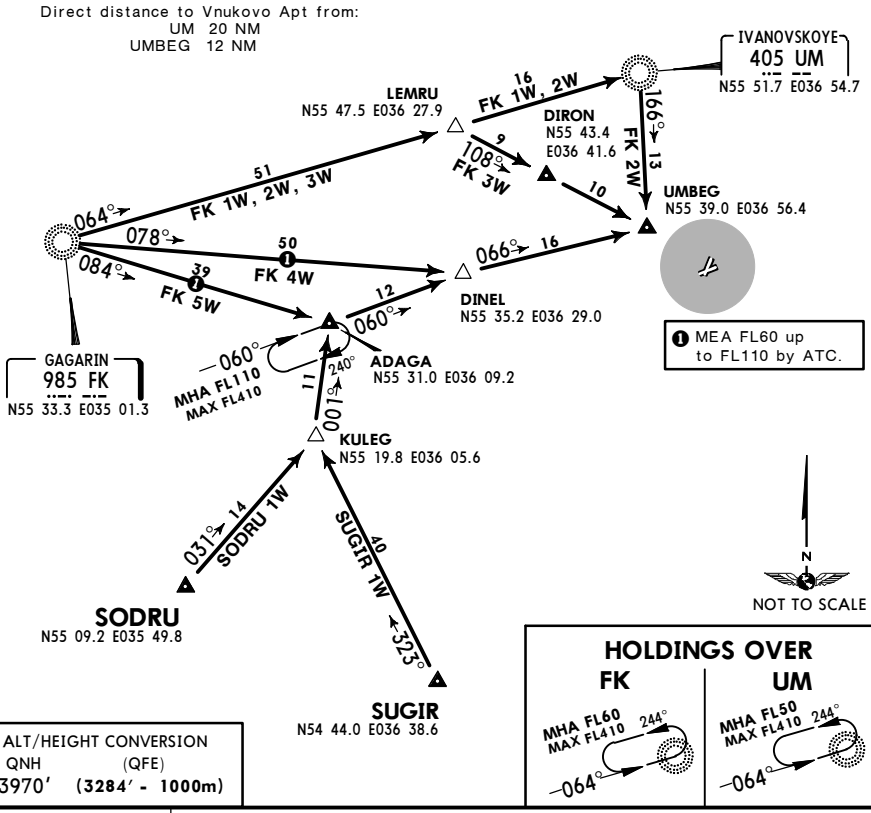
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)

GAGARIN 1W (FK 1W)
TO UM
GAGARIN 2W (FK 2W) , GAGARIN 3W (FK 3W)
GAGARIN 4W (FK 4W) , GAGARIN 5W (FK 5W)
SODRU 1W [SOD1W] , SUGIR 1W [SUG1W]
TO UMBEG
TRANSITIONS



ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3284′ - 1000m)

HOLDINGS OVER

TRANSITION	ROUTING
FK 1W By ATC	To LEMRU, then to UM.
FK 2W	To LEMRU, then to UM, then to UMBEG.
FK 3W By ATC	To LEMRU, then to DIRON, then to UMBEG.
FK 4W By ATC	To DINEL, then to UMBEG.
FK 5W By ATC	To ADAGA, then to DINEL, then to UMBEG.
SODRU 1W By ATC	To KULEG, then to ADAGA, then to DINEL, then to UMBEG.
SUGIR 1W By ATC	

CHANGES: Reissue.

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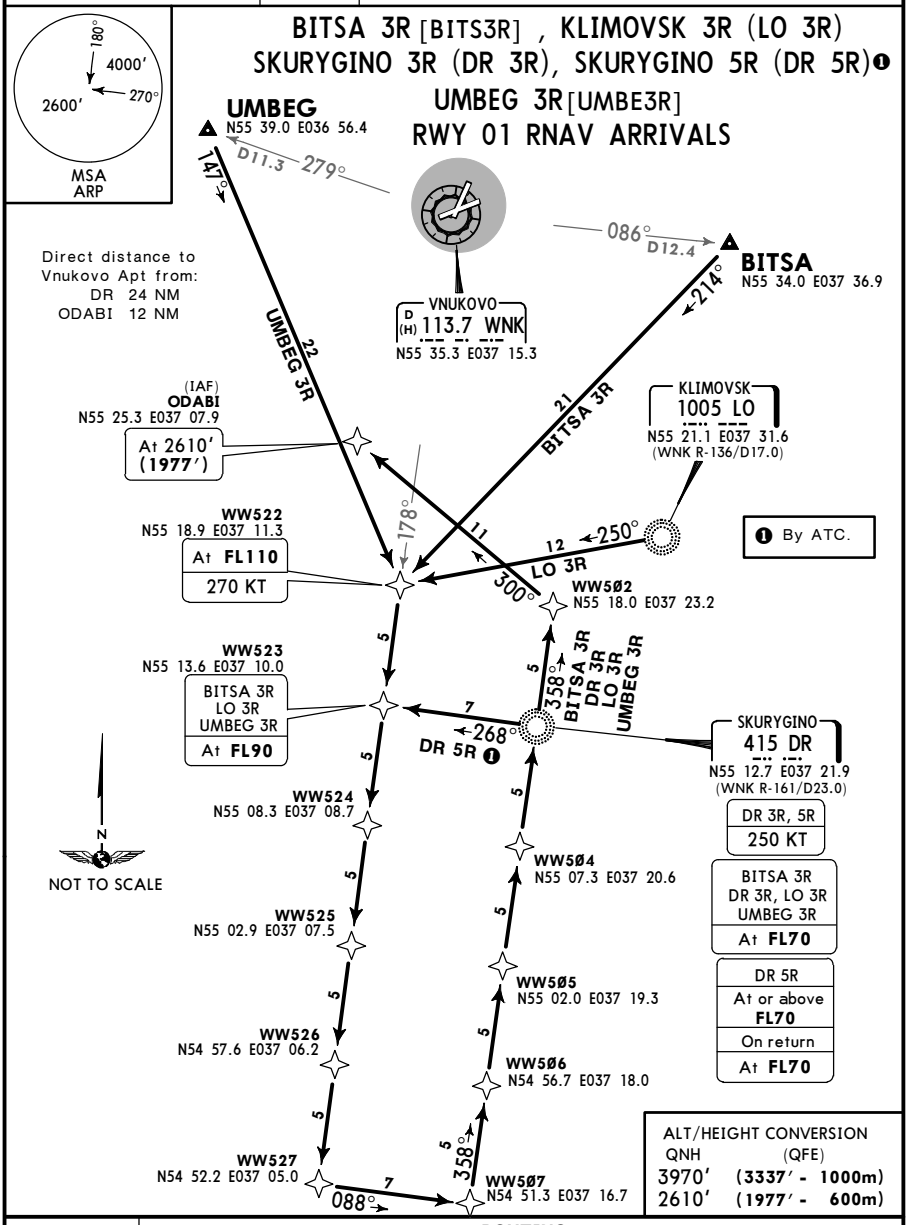
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (10-2H) Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3337′)
		RNAV (GNSS)

BITSA 3R [BITS3R] , KLIMOVSK 3R (LO 3R)
SKURYGINO 3R (DR 3R), SKURYGINO 5R (DR 5R) ❶
UMBEG 3R [UMBE3R]
RWY 01 RNAV ARRIVALS



STAR	ROUTING
BITSA 3R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610′).
DR 3R	DR (FL70; K250) - WW502 - ODABI (2610′).
DR 5R ❶	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 3R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610′).
UMBEG 3R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610′).

CHANGES: IAS at DR and WW522 revised.

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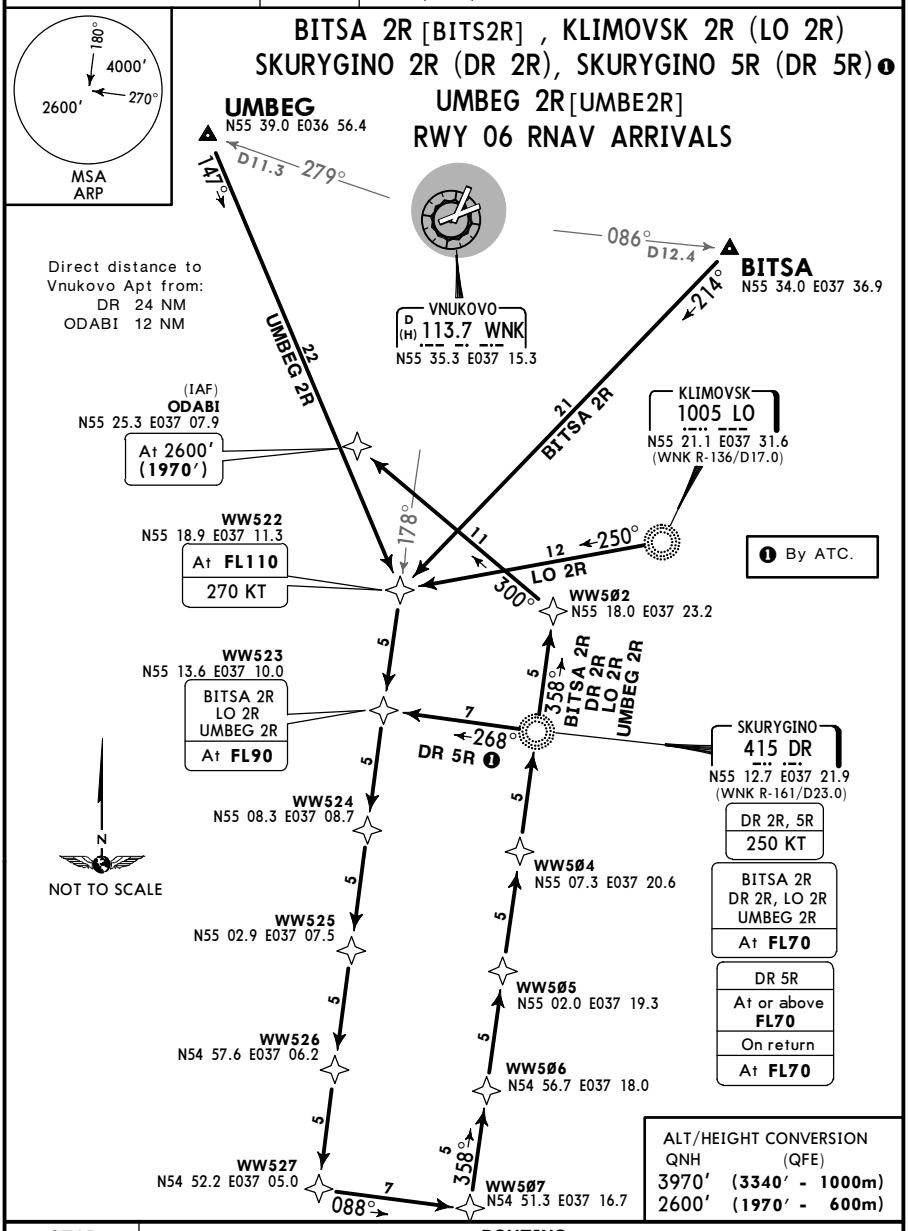
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (10-2J) Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3340′)
		RNAV (GNSS)

BITSA 2R [BITS2R] , KLIMOVSK 2R (LO 2R)
SKURYGINO 2R (DR 2R), SKURYGINO 5R (DR 5R) ❶
UMBEG 2R [UMBE2R]
RWY 06 RNAV ARRIVALS



STAR	ROUTING
BITSA 2R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600′).
DR 2R	DR (FL70; K250) - WW502 - ODABI (2600′).
DR 5R ❶	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 2R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600′).
UMBEG 2R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600′).

CHANGES: IAS at DR and WW522 revised.

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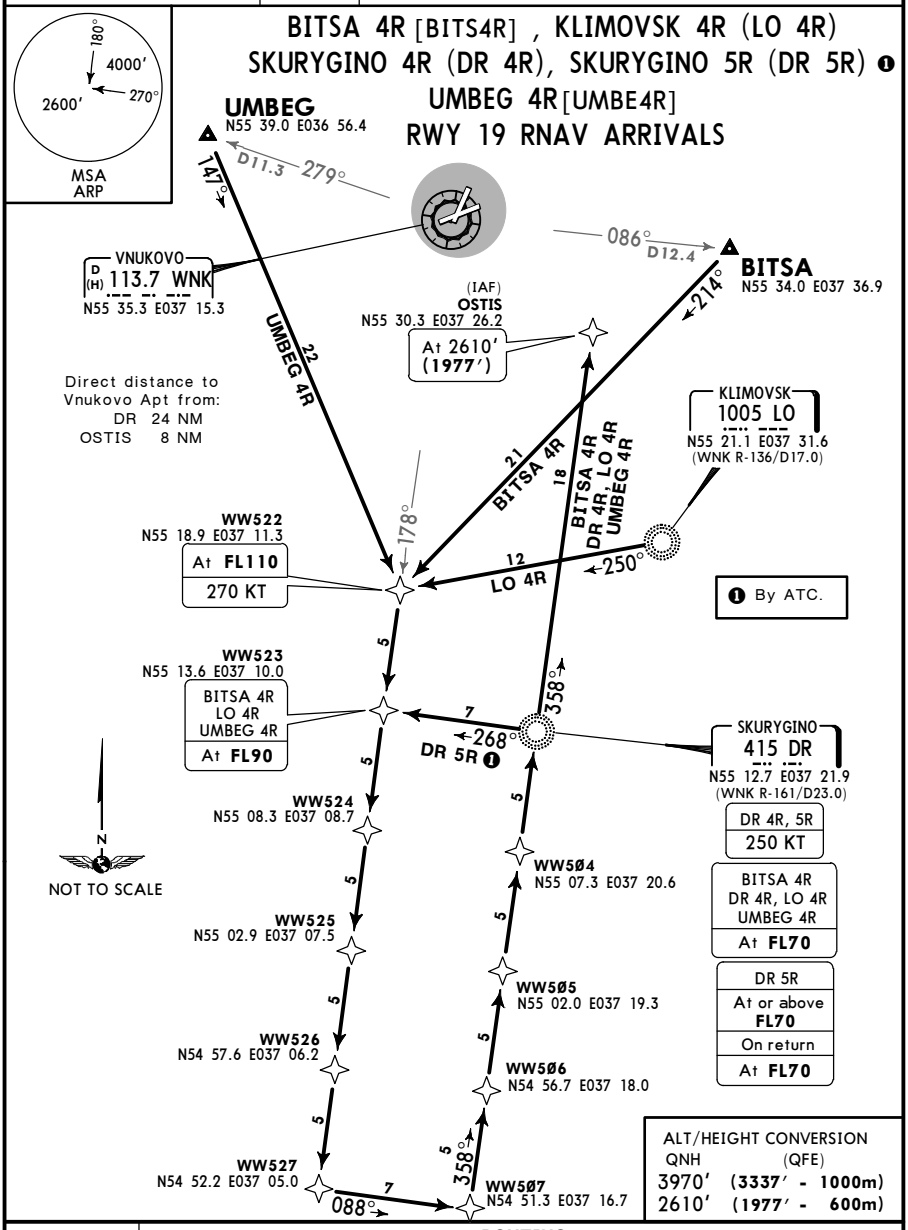
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (10-2K) Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3337′)
		RNAV (GNSS)

BITSA 4R [BITS4R] , KLIMOVSK 4R (LO 4R) SKURYGINO 4R (DR 4R), SKURYGINO 5R (DR 5R) ❶
UMBEG 4R [UMBE4R]
RWY 19 RNAV ARRIVALS



STAR	ROUTING
BITSA 4R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610′).
DR 4R	DR (FL70; K250) - OSTIS (2610′).
DR 5R ❶	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 4R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610′).
UMBEG 4R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610′).

CHANGES: IAS at DR and WW522 revised.

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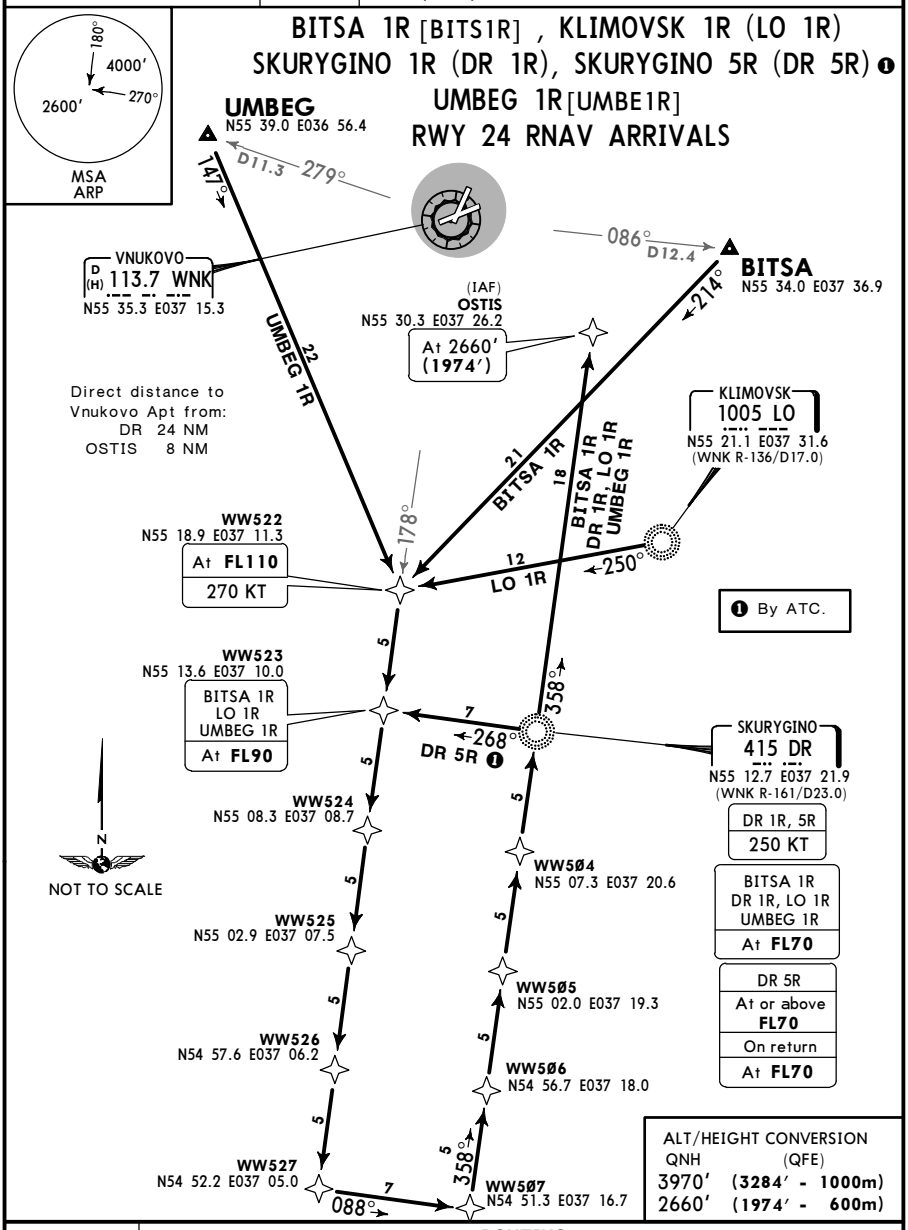
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (10-2L) Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3284′)
		RNAV (GNSS)

BITSA 1R [BITS1R] , KLIMOVSK 1R (LO 1R)
SKURYGINO 1R (DR 1R), SKURYGINO 5R (DR 5R) ❶
UMBEG 1R [UMBE1R]
RWY 24 RNAV ARRIVALS



STAR	ROUTING
BITSA 1R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660′).
DR 1R	DR (FL70; K250) - OSTIS (2660′).
DR 5R ❶	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 1R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660′).
UMBEG 1R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660′).

CHANGES: IAS at DR and WW522 revised.

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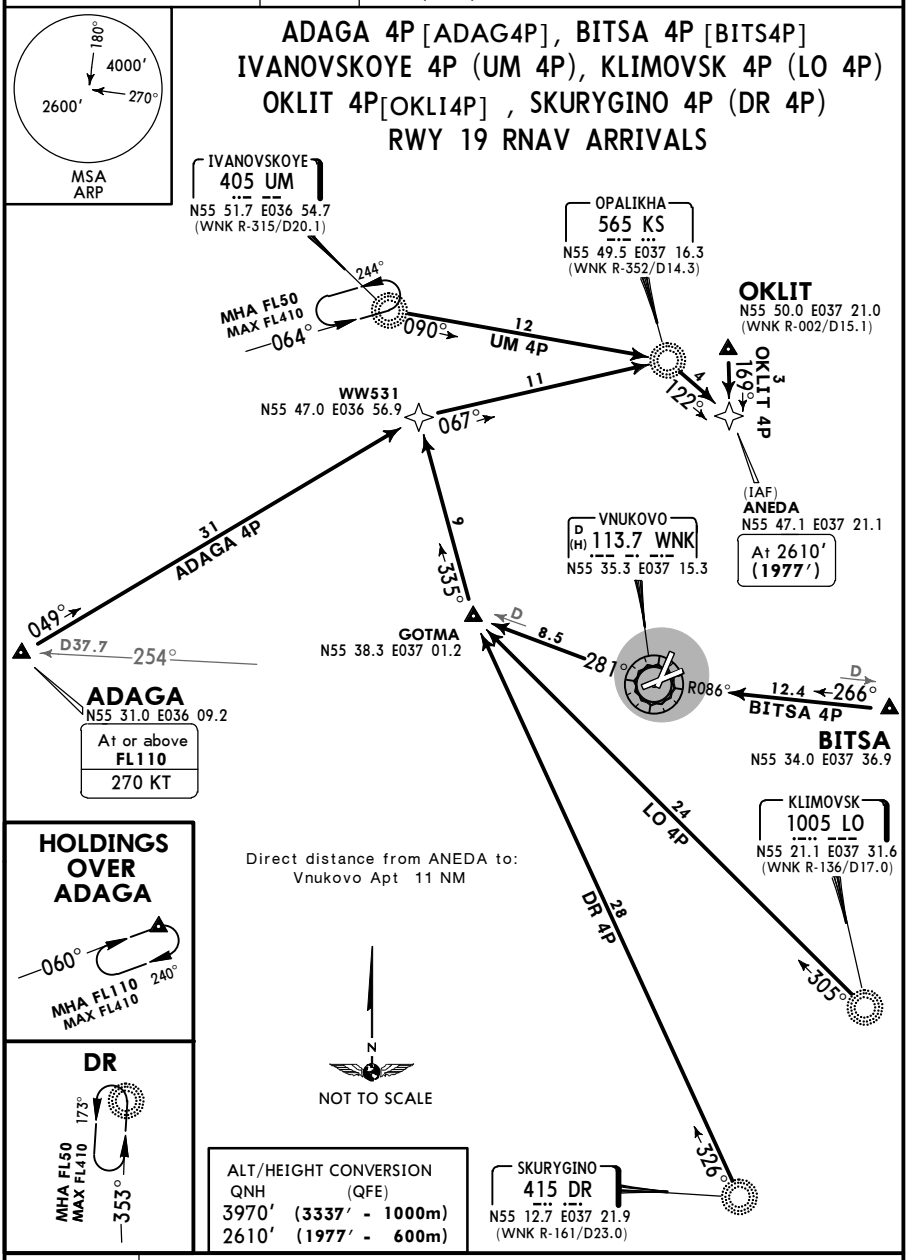
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (10-2M) Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ (3337′)
		RNAV (GNSS)

ADAGA 4P [ADAG4P], BITSA 4P [BITS4P]
IVANOVSKOYE 4P (UM 4P), KLIMOVSK 4P (LO 4P)
OKLIT 4P [OKLI4P] , SKURYGINO 4P (DR 4P)
RWY 19 RNAV ARRIVALS



STAR	ROUTING
ADAGA 4P	ADAGA (FL110+; K270) - WW531 - KS - ANEDA (2610′).
BITSA 4P	BITSA - WNK - GOTMA - WW531 - KS - ANEDA (2610′).
DR 4P	DR - GOTMA - WW531 - KS - ANEDA (2610′).
LO 4P	LO - GOTMA - WW531 - KS - ANEDA (2610′).
OKLIT 4P	OKLIT - ANEDA (2610′).
UM 4P	UM - KS - ANEDA (2610′).

CHANGES: IAS at AGADA revised.

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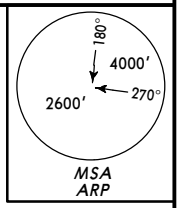
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3337′)*

BITSA Ø1A *[BITØ1A]*
BITSA Ø1M *[BITØ1M]*
RWY 01 ARRIVALS



VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

D3.7 WNK
N55 35.7 E037 08.7

3.7
266°
094°
R086°

BITSA
N55 34.0
E037 36.9

12.4
BITSA 01M
D
266°

193°
11
219°

949 OE
N55 34.7 E037 15.1

(IAF)
ODABI
N55 25.3 E037 07.9

At 2610′
(1977′)

D10.9
192°

216°
17
BITSA 01A

D12.2 WNK
N55 27.3 E036 59.1
(040° brg to OE)

8
058°

328°
176°
169°

D13.7 WNK
N55 21.7 E037 12.8
(355° brg to OE)

D13.1 WNK
N55 22.3 E037 15.7
(348° brg to OE)

N

NOT TO SCALE

ALT/HEIGHT CONVERSION

QNH	*(QFE)*
3970′	***(3337′ - 1000m)***
2610′	***(1977′ - 600m)***

CHANGES: STARs completely revised; RNAV STARs transferred.

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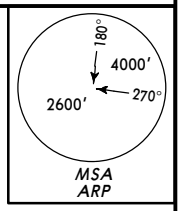
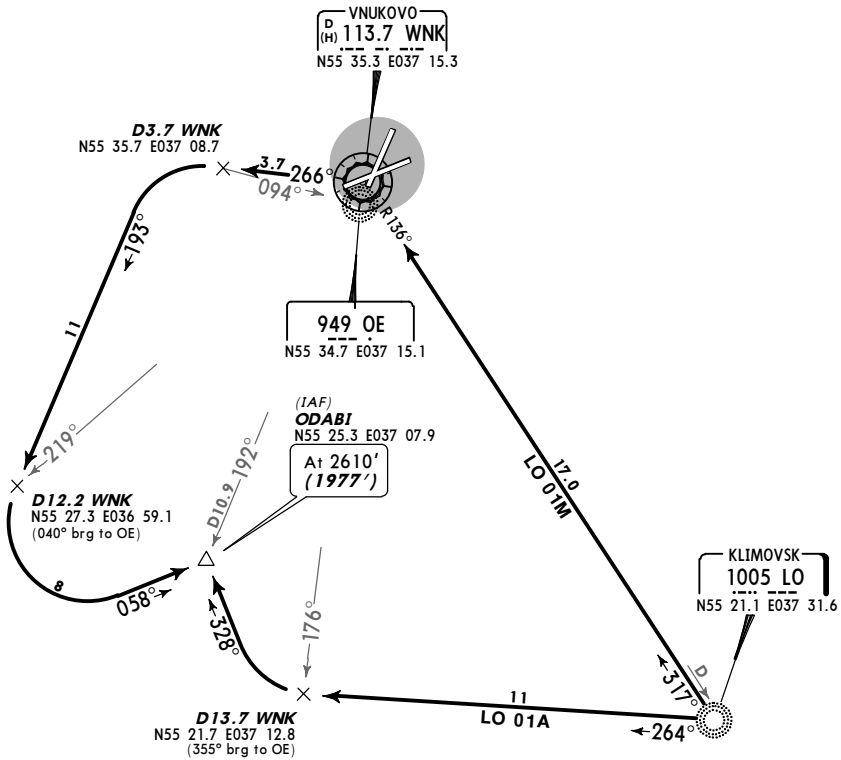
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3337′)*

KLIMOVSK Ø1A (LO Ø1A)
KLIMOVSK Ø1M (LO Ø1M)
RWY 01 ARRIVALS





ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	***(3337′ - 1000m)***
2610′	***(1977′ - 600m)***

CHANGES: STARs completely revised; RNAV STARs transferred.

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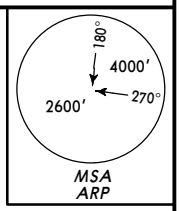
UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 (10-2S) Eff 27 Jun

MOSCOW, RUSSIA
STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3337′)*

SKURYGINO Ø1A (DR Ø1A)
SKURYGINO Ø1M (DR Ø1M)
RWY 01 ARRIVALS



VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

D3.7 WNK
N55 35.7 E037 08.7

3.7
266°
094°
193°
11
219°
R160°

949 OE
N55 34.7 E037 15.1

D12.2 WNK
N55 27.3 E036 59.1
(040° brg to OE)

8
058°

D10.9
192°

(IAF)
ODABI
N55 25.3 E037 07.9

At 2610′
(1977′)

3
328°
183°

D13.1 WNK
N55 22.6 E037 09.9
(003° brg to OE)

23.0
DR 01M

12
DR 01A

SKURYGINO
415 DR
N55 12.7 E037 21.9

141°
316°
D
173°
MHA FL50
MAX FL410
353°

N
NOT TO SCALE

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	*(3337′ - 1000m)*
2610′	*(1977′ - 600m)*

CHANGES: STARs completely revised; RNAV STARs transferred.

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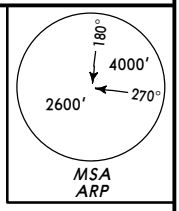
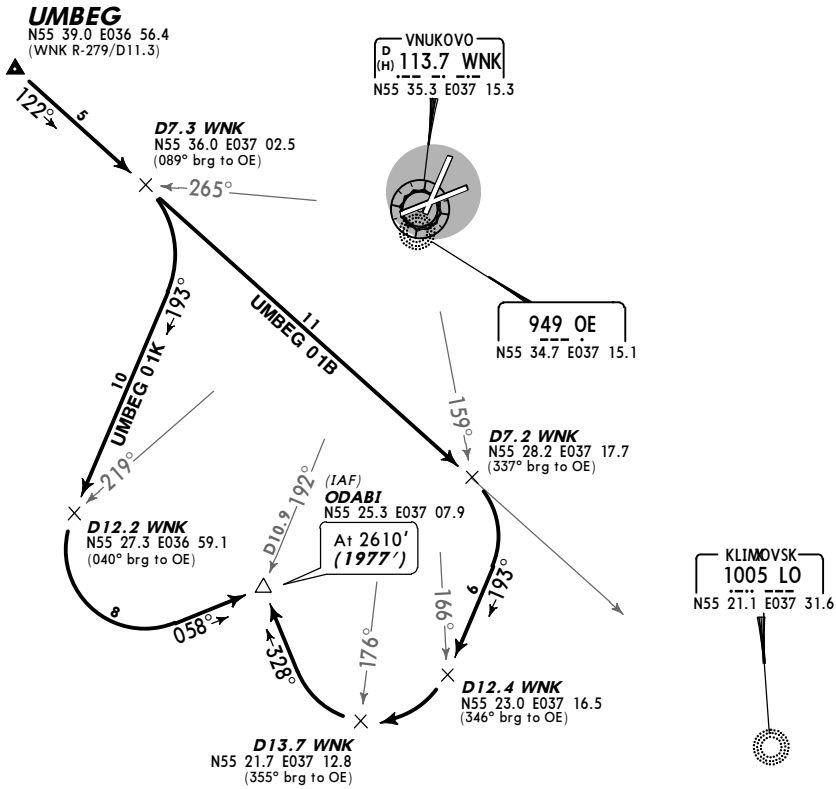
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3337′)*

UMBEG Ø1B *[UMBØ1B]*
UMBEG Ø1K *[UMBØ1K]*
RWY 01 ARRIVALS





ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	*(3337′ - 1000m)*
2610′	*(1977′ - 600m)*

CHANGES: STARs completely revised; RNAV STARs transferred.

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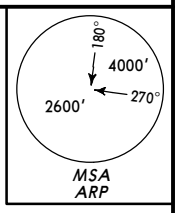
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3341′)*

BITSA Ø6A *[BITØ6A]*
KLIMOVSK Ø6A (LO Ø6A)
SKURYGINO Ø6A (DR Ø6A)
UMBEG Ø6A *[UMBØ6A]*, UMBEG Ø6B *[UMBØ6B]*
RWY 06 ARRIVALS



UMBEG
N55 39.0 E036 56.4

VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

D
099°
11.3
UMBEG 06B
R279°
151°
UMBEG 06A
4
D9.3 257°

(IAF)
GILIN
N55 34.9 E036 58.9
At 2600′
(1971′)

138° 4.3
D4.3 WNK
N55 31.7 E037 19.2

BITSA
N55 34.0
E037 36.9
086°
D12.4
232°

10
18
BITSA 06A
D10.9 192°

(IAF)
ODABI
N55 25.3 E037 07.9
At 2600′
(1971′)

KLIMOVSK
1005 LO
N55 21.1 E037 31.6
(WNK R-136/D17.0)

14
LO 06A
278°

15
DR 06A
318°

SKURYGINO
415 DR
N55 12.7 E037 21.9
(WNK R-160/D23.0)

173°
MHA FL50
MAX FL410
353°

N
NOT TO SCALE

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	***(3341′ - 1000m)***
2600′	***(1971′ - 600m)***

CHANGES: STARs rwy 06 established; RNAV STARs transferred.

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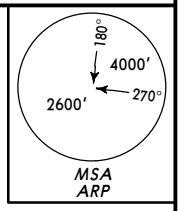
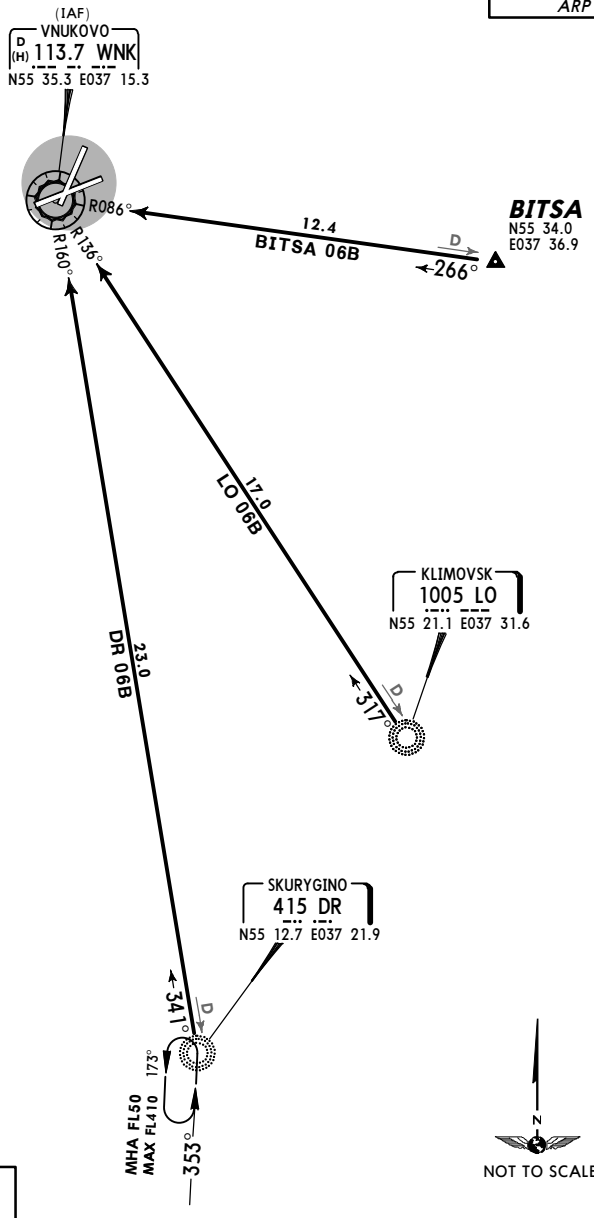
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3341′)*

BITSA Ø6B *[BITØ6B]*
KLIMOVSK Ø6B (LO Ø6B)
SKURYGINO Ø6B (DR Ø6B)
RWY 06 ARRIVALS





ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	***(3341′ - 1000m)***

CHANGES: New chart.

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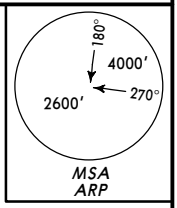
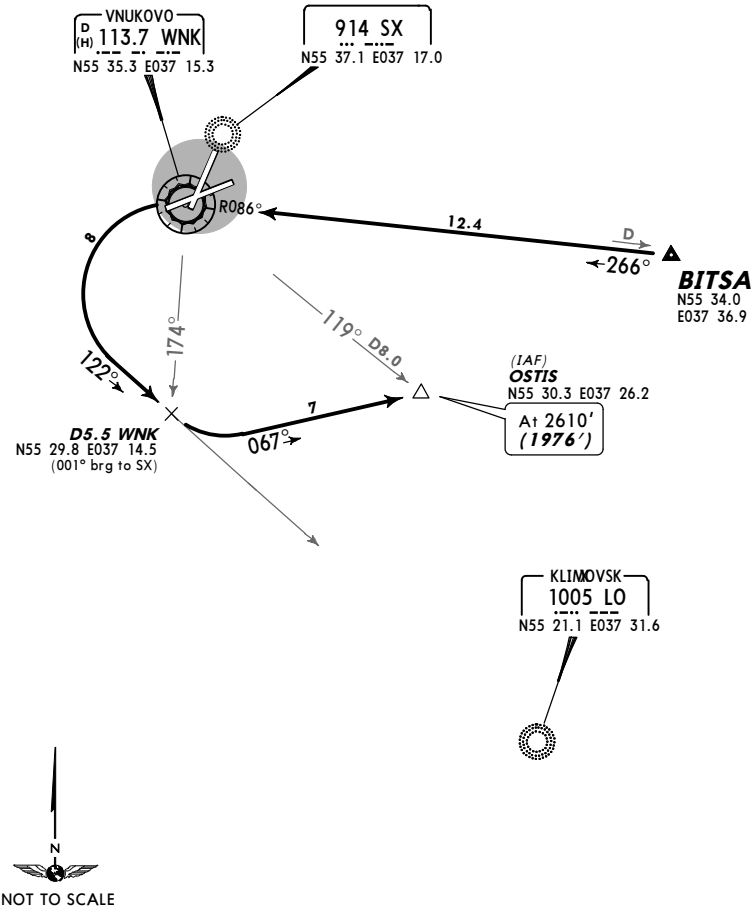
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3336′)*

BITSA 19B *[BIT19B]*
RWY 19 ARRIVAL





ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	*(3336′ - 1000m)*
2610′	*(1976′ - 600m)*

CHANGES: STARs revised & transferred.

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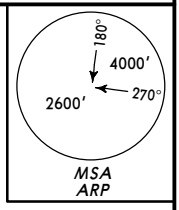
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3336′)*

BITSA 19M *[BIT19M]*
OKLIT 19K *[OKL19K]*
RWY 19 ARRIVALS



OPALIKHA
565 KS
N55 49.5 E037 16.3
(WNK R-352/D14.3)

IVANOVSKOYE
405 UM
N55 51.7 E036 54.7

OKLIT
N55 50.0 E037 21.0
(WNK R-002/D15.1)

OKLIT 19K
169°
3

12
067°
122°
4

(IAF)
ANEDA
N55 47.1 E037 21.1
At 2610′
(1976′)

D12.3
005°

054°
304°

D13.5 WNK
N55 44.6
E036 58.1

6
335°

VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

GOTMA
N55 38.3 E037 01.2

D
8.5
281°

R086°
12.4
BITSA 19M
D
266°

BITSA
N55 34.0
E037 36.9

N
NOT TO SCALE

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	*(3336′ - 1000m)*
2610′	*(1976′ - 600m)*

CHANGES: STARs established & transferred.

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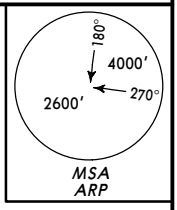
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3336′)*

KLIMOVSK 19A (LO 19A)
SKURYGINO 19A (DR 19A)
UMBEG 19A *[UMB19A]*
RWY 19 ARRIVALS



UMBEG
N55 39.0 E036 56.4

D11.3
279°
122°
14
UMBEG 19A

VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

914 SX
N55 37.1 E037 17.0

174°

119° D8.0

(IAF)
OSTIS
N55 30.3 E037 26.2
At 2610′
(1976′)

7
067°

D5.5 WNK
N55 29.8 E037 14.5
(001° brg to SX)

10
LO 19A
332°

KLIMOVSK
1005 LO
N55 21.1 E037 31.6
(WNK R-136/D17.0)

18
DR 19A

SKURYGINO
415 DR
N55 12.7 E037 21.9
(WNK R-160/D23.0)

358°

173°
MHA FL50
MAX FL410

353°

N
NOT TO SCALE

ALT/HEIGHT CONVERSION

QNH	*(QFE)*
3970′	***(3336′ - 1000m)***
2610′	***(1976′ - 600m)***

CHANGES: STARs established, revised & transferred.

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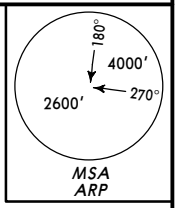
UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 (10-2X2) Eff 27 Jun

MOSCOW, RUSSIA
STAR

ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3336′)*

IVANOVSKOYE 19K (UM 19K)
KLIMOVSK 19K (LO 19K)
SKURYGINO 19K (DR 19K)
RWY 19 ARRIVALS



090° 12 UM 19K

IVANOVSKOYE
405 UM
N55 51.7 E036 54.7
(WNK R-315/D20.1)

12 067° 122° 4

(IAF)
ANEDA
N55 47.1 E037 21.1
At 2610′
(1976′)

OPALIKHA
565 KS
N55 49.5 E037 16.3
(WNK R-352/D14.3)

D12.3 005° 054° 304°

D13.5 WNK
N55 44.6
E036 58.1

6 335°

VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

GOTMA
N55 38.3 E037 01.2

D8.5 281°

N
NOT TO SCALE

HOLDINGS OVER DR
MHA FL50
MAX FL410
173°
353°

UM
MHA FL50
MAX FL410
244°
064°

24 LO 19K

28 DR 19K

KLIMOVSK
1005 LO
N55 21.1 E037 31.6
(WNK R-136/D17.0)

SKURYGINO
415 DR
N55 12.7 E037 21.9
(WNK R-160/D23.0)

305° 326°

ALT/HEIGHT CONVERSION

QNH	*(QFE)*
3970′	*(3336′ - 1000m)*
2610′	*(1976′ - 600m)*

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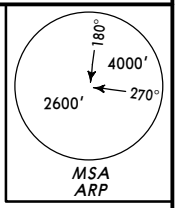
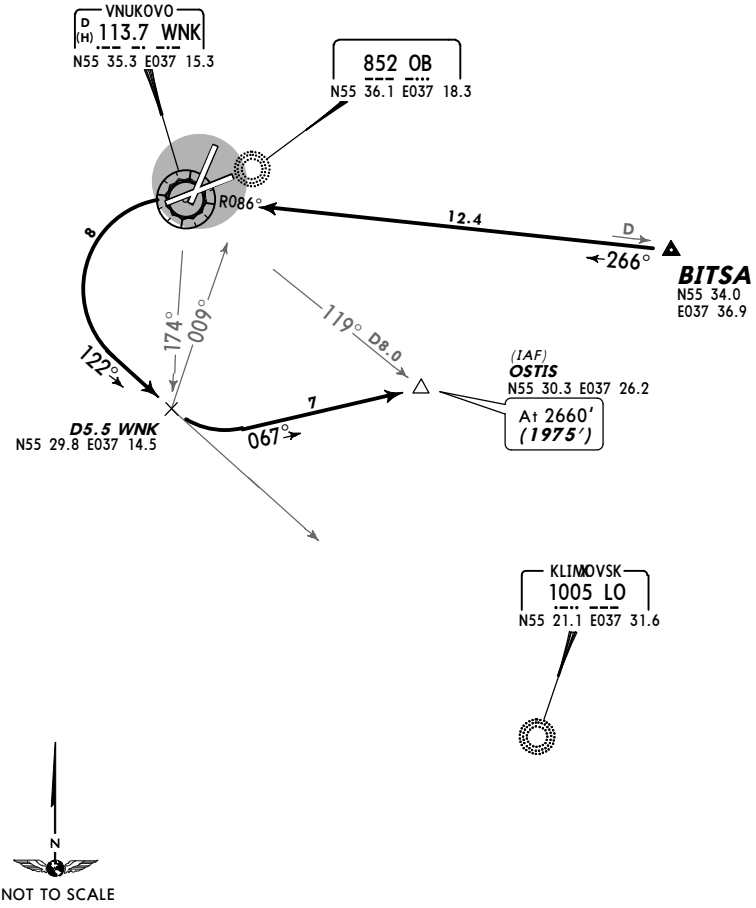
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3285′)*

BITSA 24B *[BIT24B]*
RWY 24 ARRIVAL





ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	***(3285′ - 1000m)***
2660′	***(1975′ - 600m)***

CHANGES: STARs rwy 24 established & transferred.

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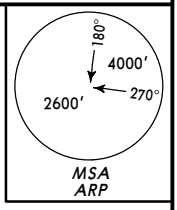
ATIS	Apt Elev	Alt Set: MM (hPa on request) QNH on request (QFE)
131.85 (Russian 125.87)	686′	Trans level: By ATC Trans alt: 3970′ *(3285′)*

KLIMOVSK 24A (LO 24A)
SKURYGINO 24A (DR 24A)
UMBEG 24A *[UMB24A]*
RWY 24 ARRIVALS



UMBEG
N55 39.0 E036 56.4

D11.3
279°
122°
14
UMBEG 24A

VNUKOVO
D (H) 113.7 WNK
N55 35.3 E037 15.3

852 OB
N55 36.1 E037 18.3

(IAF)
OSTIS
N55 30.3 E037 26.2
At 2660′
(1975′)

119° D8.0
174°
009°

D5.5 WNK
N55 29.8 E037 14.5

7
067°

KLIMOVSK
1005 LO
N55 21.1 E037 31.6
(WNK R-136/D17.0)

10
LO 24A
332°

18
DR 24A

SKURYGINO
415 DR
N55 12.7 E037 21.9
(WNK R-160/D23.0)

358°
173°
MHA FL50
MAX FL410
353°

N
NOT TO SCALE

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	*(3285′ - 1000m)*
2660′	*(1975′ - 600m)*

CHANGES: STARs rwy 24 established & transferred.

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RNAV SID DESIGNATION	REFER TO CHART
DEDUM 1D, IVANOVSKOYE 1D	10-3B
DEDUM 2D, 2E, IVANOVSKOYE 2D, 2E	10-3C
DEDUM 3D, 3E, IVANOVSKOYE 3D, 3E	10-3D
DEDUM 4D, IVANOVSKOYE 4D	10-3E
BITSA 1D, 1E, KLIMOVSK 1D, 1E	10-3F
BITSA 2D, 2E, 2F, KLIMOVSK 2D, 2E, 2F, OKLIT 2D	10-3G
BITSA 3D, 3E, KLIMOVSK 3D, 3E, OKLIT 3D	10-3H
BITSA 4D, 4E, KLIMOVSK 4D, 4E, OKLIT 4E	10-3J
BADNI 1E, KAMENKA 1E	10-3K
BADNI 2D, 2E, KAMENKA 2D, 2E	10-3L
BADNI 3D, 3E, KAMENKA 3D, 3E	10-3M
BADNI 4D, KAMENKA 4D	10-3N

FOR SID AND TRANSITION DESIGNATION
REFER TO PAGE 10-3A

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SID DESIGNATION	REFER TO CHART
DEDUM 01D, 01E, IVANOVSKOYE 01D, 01E	10-3P
DEDUM 06D, 06E, IVANOVSKOYE 06D, 06E	10-3Q
DEDUM 19D, IVANOVSKOYE 19D	10-3S
DEDUM 24D, IVANOVSKOYE 24D	10-3T
BITSA 01D, 01E, KLIMOVSK 01D, 01E, OKLIT 01D	10-3U
BITSA 06D, 06E, 06F	10-3V
KLIMOVSK 06D, 06E, 06F, OKLIT 06D	10-3V1
BITSA 19D, 19E, KLIMOVSK 19D, 19E, OKLIT 19E	10-3W
BITSA 24D, 24E, KLIMOVSK 24D, 24E	10-3X
BADNI 01D, 01E, KAMENKA 01D, 01E	10-3X1
BADNI 06D, 06E, KAMENKA 06D, 06E	10-3X2
BADNI 19D, KAMENKA 19D	10-3X3
BADNI 24E, KAMENKA 24E	10-3X4

TRANSITION DESIGNATION	REFER TO CHART
NERL 1W, 2W, TIMIG 1W, 2W	10-3X5
CHERUSTI 1W, RELTO 3W TIKBI 3W, VENEV 1W	10-3X6
ADETI 1W, ROLUN 1W, SODRU 2W, SUGIR 2W	10-3X7
BELAG 1W, KARMANOVO 1W, OBELU 1W	10-3X8

CHANGES: SIDs and Transitions revised.

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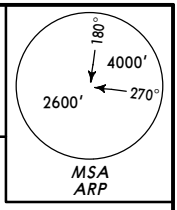
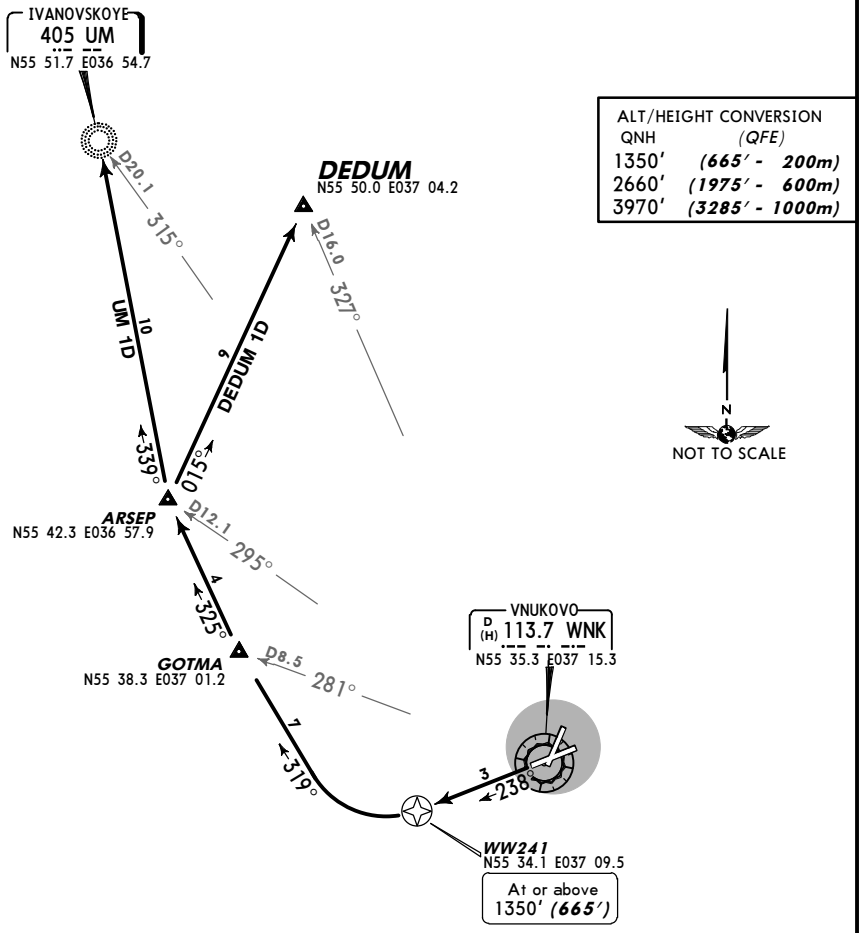
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3285′)*** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 1D *[DEDU1D]*
IVANOVSKOYE 1D (UM 1D)
RWY 24 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



Initial climb clearance 2660′ ***(1975′)***

SID	ROUTING
DEDUM 1D	DER24 - WW241 (1350′+) - GOTMA - ARSEP - DEDUM.
UM 1D	DER24 - WW241 (1350′+) - GOTMA - ARSEP - UM.

CHANGES: RNAV SIDs established & transferred.

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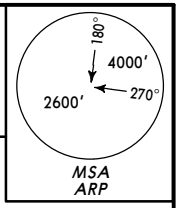
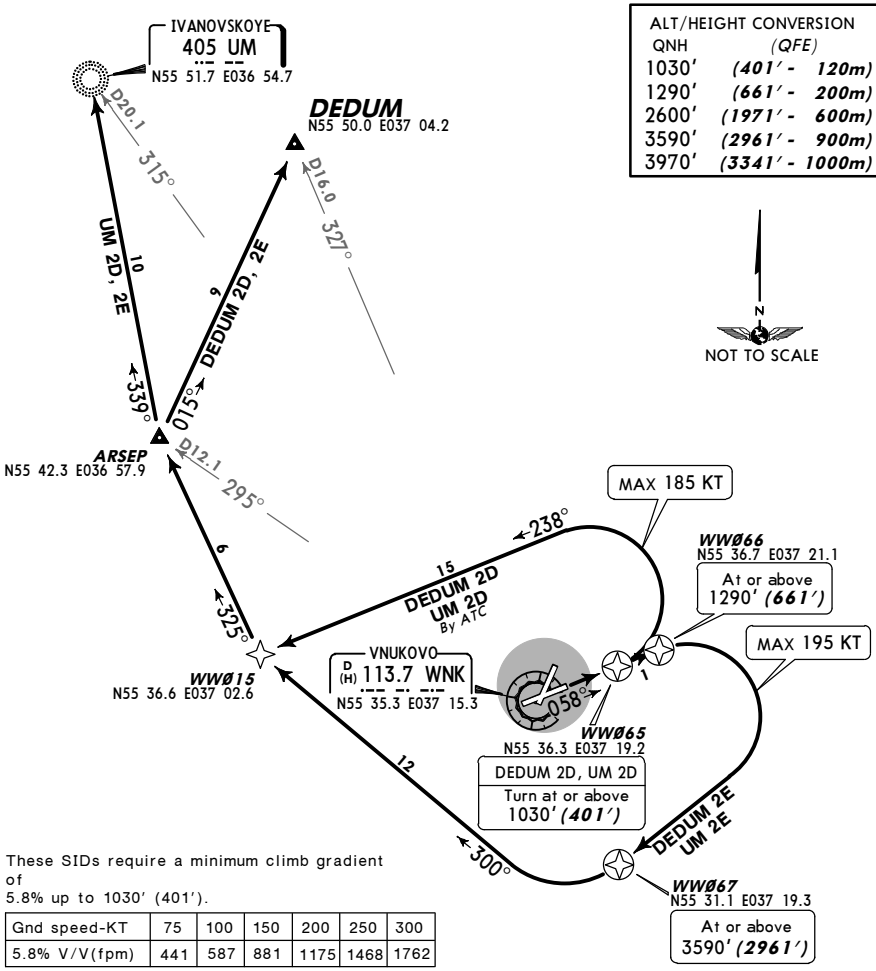
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3341′)*** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 2D *[DEDU2D]* , DEDUM 2E *[DEDU2E]*
IVANOVSKOYE 2D (UM 2D)
IVANOVSKOYE 2E (UM 2E)
RWY 06 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1030′	***(401′ - 120m)***
1290′	***(661′ - 200m)***
2600′	***(1971′ - 600m)***
3590′	***(2961′ - 900m)***
3970′	***(3341′ - 1000m)***



These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ ***(1971′)***

SID	ROUTING
DEDUM 2D By ATC	DER06 - WW065 (1030′+; K185-) - WW015 - ARSEP - DEDUM.
DEDUM 2E	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - WW015 - ARSEP - DEDUM.
UM 2D By ATC	DER06 - WW065 (1030′+; K185-) - WW015 - ARSEP - UM.
UM 2E	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - WW015 - ARSEP - UM.

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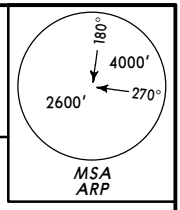
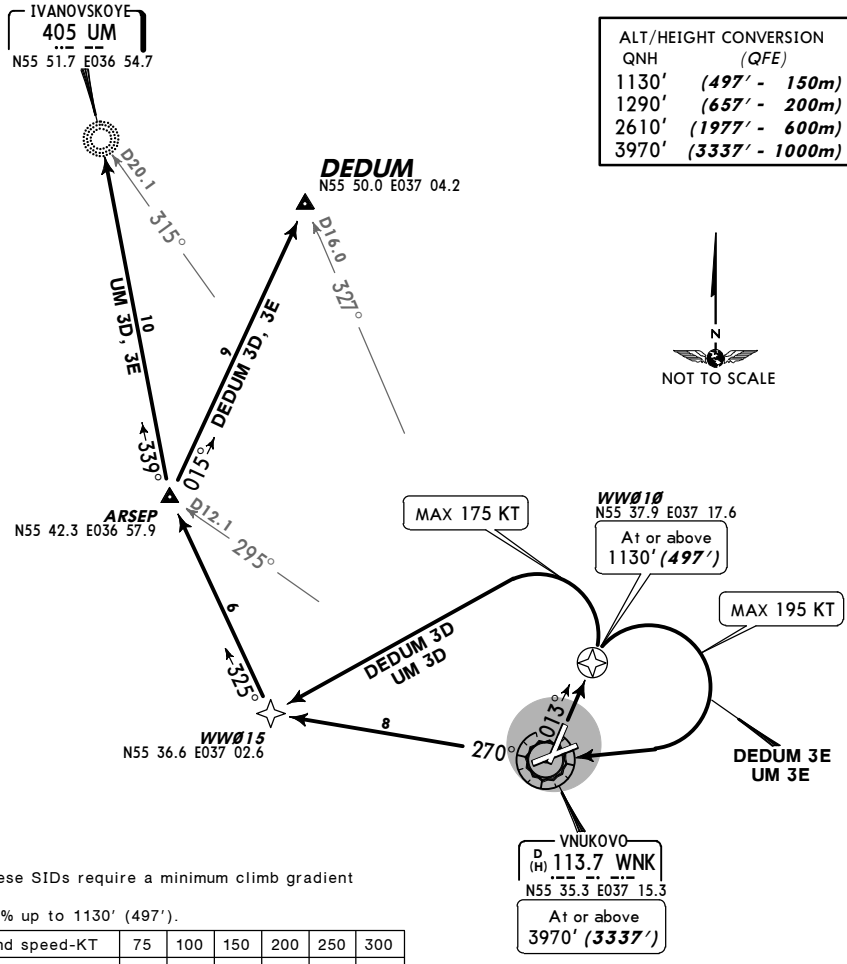
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3337′)*** 1.Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2.Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 3D *[DEDU3D]* , DEDUM 3E *[DEDU3E]*
IVANOVSKOYE 3D (UM 3D)
IVANOVSKOYE 3E (UM 3E)
RWY 01 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1130′	***(497′ - 150m)***
1290′	***(657′ - 200m)***
2610′	***(1977′ - 600m)***
3970′	***(3337′ - 1000m)***

These SIDs require a minimum climb gradient of
5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2610′ ***(1977′)***

SID	ROUTING
DEDUM 3D	DER01 - WW010 (1130′+; K175-) - WW015 - ARSEP - DEDUM.
DEDUM 3E	DER01 - WW010 (1130′+; K195-) - WNK (3970′+) - WW015 - ARSEP - DEDUM.
UM 3D	DER01 - WW010 (1130′+; K175-) - WW015 - ARSEP - UM.
UM 3E	DER01 - WW010 (1130′+; K195-) - WNK (3970′+) - WW015 - ARSEP - UM.

CHANGES: RNAV SIDs established & transferred.

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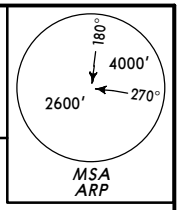
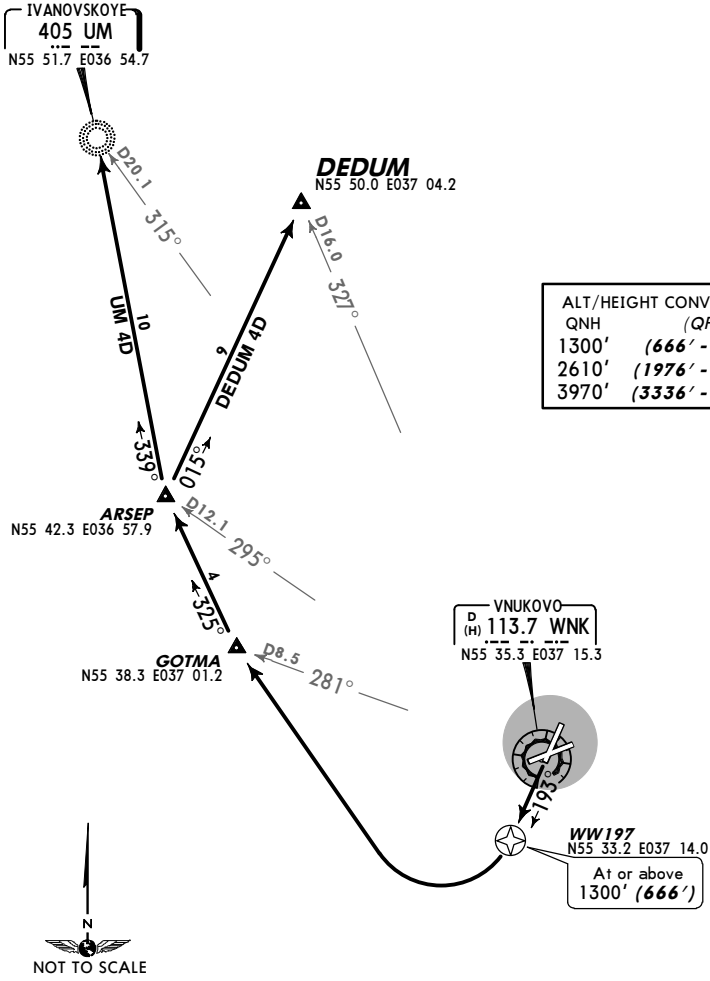
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3336′)*** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 4D *[DEDU4D]*
IVANOVSKOYE 4D (UM 4D)
RWY 19 RNAV DEPARTURES
SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1300′	***(666′ - 200m)***
2610′	***(1976′ - 600m)***
3970′	***(3336′ - 1000m)***

Initial climb clearance 2610′ ***(1976′)***

SID	ROUTING
DEDUM 4D	DER19 - WW197 (1300′+) - GOTMA - ARSEP - DEDUM.
UM 4D	DER19 - WW197 (1300′+) - GOTMA - ARSEP - UM.

CHANGES: RNAV SIDs established & transferred.

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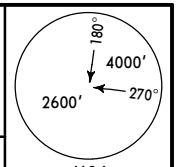
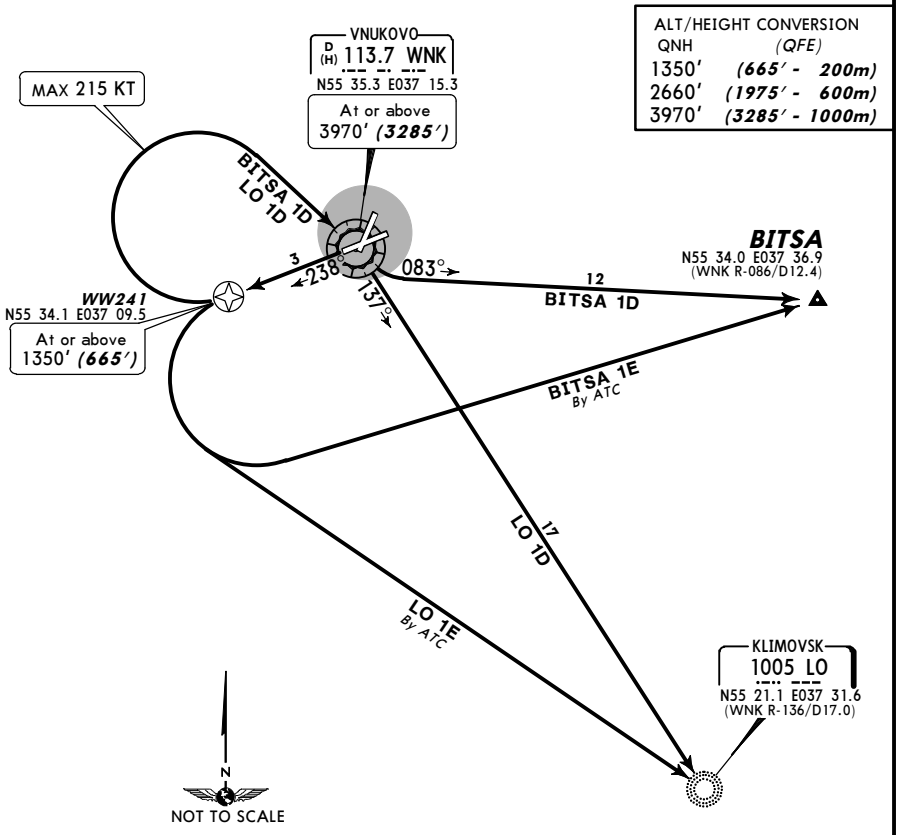
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3285′)*** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 1D *[BITS1D]* , BITSA 1E *[BITS1E]*
KLIMOVSK 1D (LO 1D), KLIMOVSK 1E (LO 1E)
RWY 24 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



Initial climb clearance 2660′ ***(1975′)***

SID	ROUTING
BITSA 1D	DER24 - WW241 (1350′+; K215-) - WNK (3970′+) - BISTA.
BITSA 1E By ATC	DER24 - WW241 (1350′+) - BISTA.
LO 1D	DER24 - WW241 (1350′+; K215-) - WNK (3970′+) - LO.
LO 1E By ATC	DER24 - WW241 (1350′+) - LO.

CHANGES: RNAV SIDs established & transferred.

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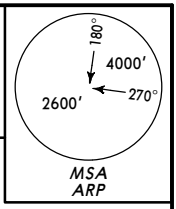
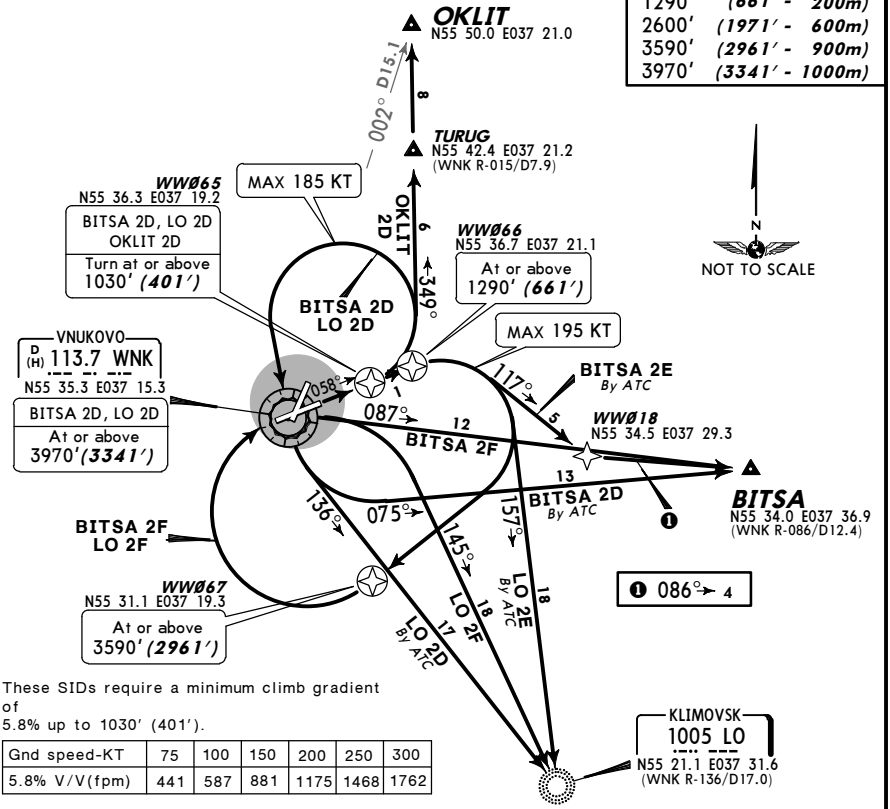
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3341′)*** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 2D *[BITS2D]*, BITSA 2E *[BITS2E]*
BITSA 2F *[BITS2F]*
KLIMOVSK 2D (LO 2D), KLIMOVSK 2E (LO 2E)
KLIMOVSK 2F (LO 2F)
OKLIT 2D *[OKLI2D]*
RWY 06 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1030′	***(401′ - 120m)***
1290′	***(661′ - 200m)***
2600′	***(1971′ - 600m)***
3590′	***(2961′ - 900m)***
3970′	***(3341′ - 1000m)***



These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ ***(1971′)***

SID	ROUTING
BITSA 2D By ATC	DER06 - WW065 (1030′+; K185-) - WNK (3970′+) - BITSA.
BITSA 2E By ATC	DER06 - WW066 (1290′+; K195-) - WW018 - BITSA.
BITSA 2F	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - WNK - BITSA.
LO 2D By ATC	DER06 - WW065 (1030′+; K185-) - WNK (3970′+) - LO.
LO 2E By ATC	DER06 - WW066 (1290′+; K195-) - LO.
LO 2F	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - WNK - LO.
OKLIT 2D	DER06 - WW065 (1030′+; K185-) - TURUG - OKLIT.

CHANGES: RNAV SIDs established & transferred.

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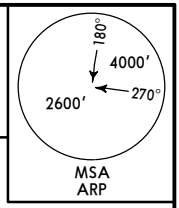
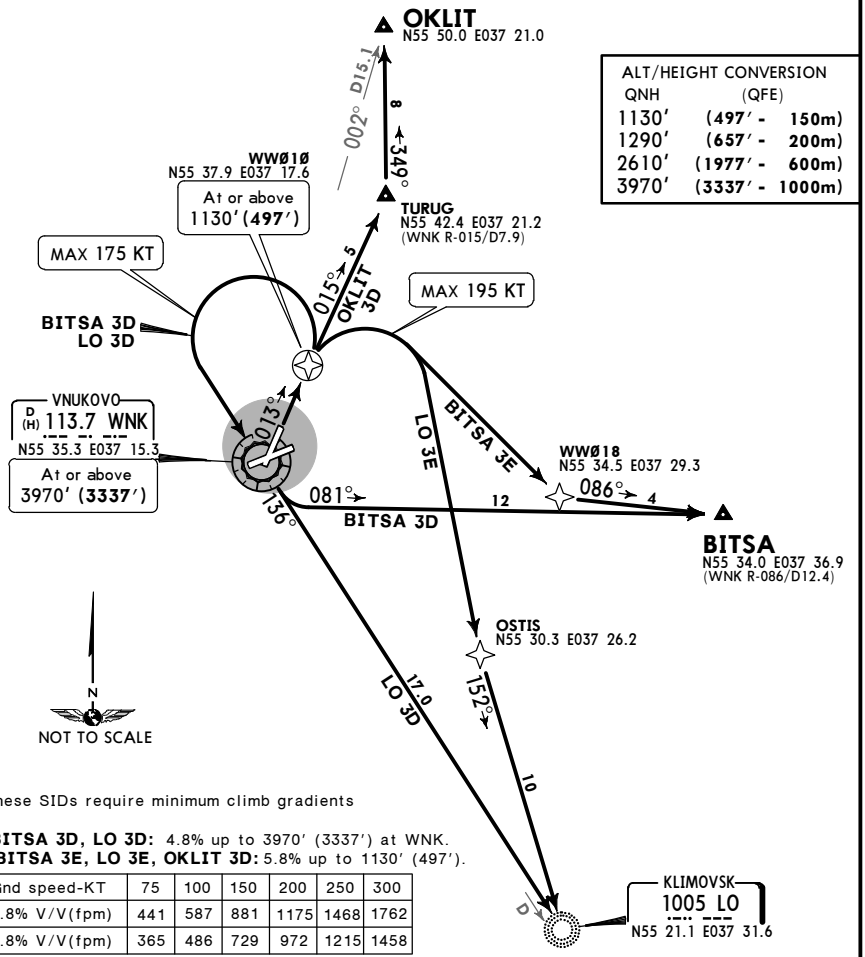
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3337′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 3D[BITS3D] , BITSA 3E[BITS3E]
KLIMOVSK 3D (LO 3D), KLIMOVSK 3E (LO 3E)
OKLIT 3D [OKLI3D]
RWY 01 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1130′	(497′ - 150m)
1290′	(657′ - 200m)
2610′	(1977′ - 600m)
3970′	(3337′ - 1000m)

These SIDs require minimum climb gradients of

BITSA 3D, LO 3D: 4.8% up to 3970′ (3337′) at WNK.
BITSA 3E, LO 3E, OKLIT 3D: 5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762
4.8% V/V(fpm)	365	486	729	972	1215	1458

Initial climb clearance 2610′ **(1977′)**

SID	ROUTING
BITSA 3D	DER01 - WW010 (1130′+; K175-) - WNK (3970′+) - BITSA.
BITSA 3E By ATC	DER01 - WW010 (1130′+; K195-) - WW018 - BITSA.
LO 3D	DER01 - WW010 (1130′+; K175-) - WNK (3970′+) - LO.
LO 3E	DER01 - WW010 (1130′+; K195-) - OSTIS - LO.
OKLIT 3D	DER01 - WW010 (1130′+) - TURUG - OKLIT.

CHANGES: None.

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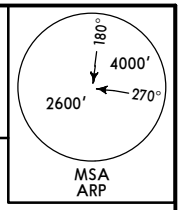
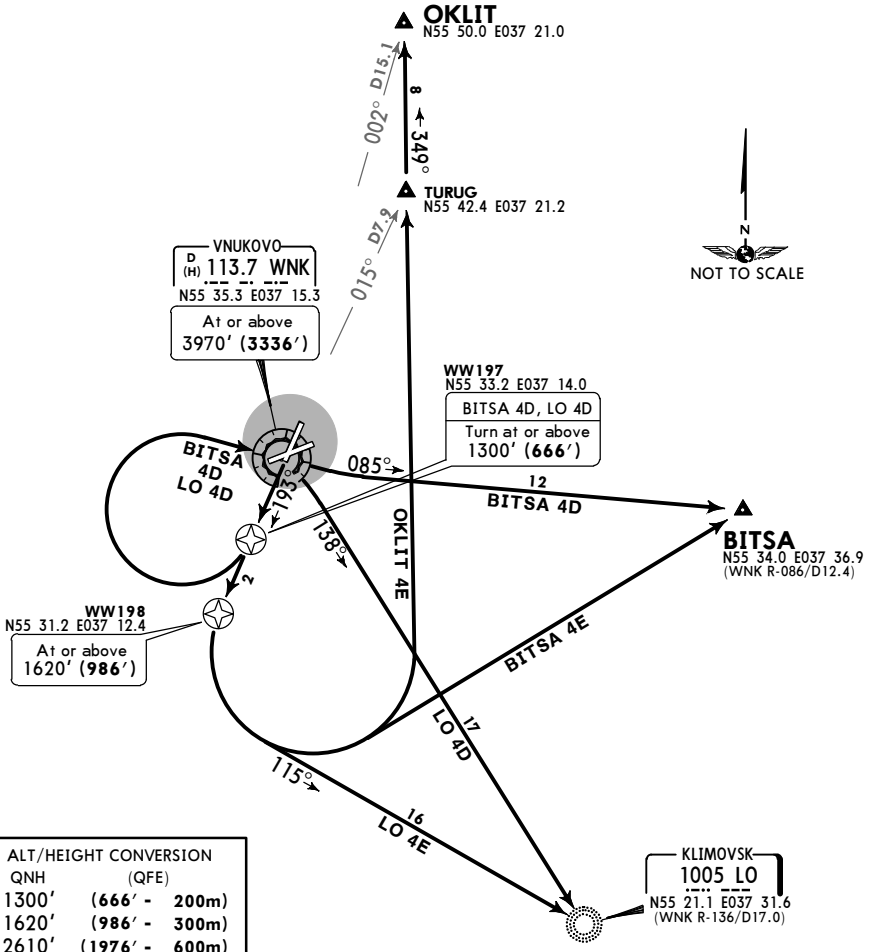
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3336′)** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 4D [BITS4D] , BITSA 4E [BITS4E]
KLIMOVSK 4D (LO 4D), KLIMOVSK 4E (LO 4E)
OKLIT 4E [OKLI4E]
RWY 19 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300′	**(666′ - 200m)**
1620′	**(986′ - 300m)**
2610′	**(1976′ - 600m)**
3970′	**(3336′ - 1000m)**

Initial climb clearance 2610′ **(1977′)**

SID	ROUTING
BITSA 4D	DER19 - WW197 (1300′+) - WNK (3970′+) - BITSA.
BITSA 4E	DER19 - WW198 (1620′+) - BITSA.
LO 4D	DER19 - WW197 (1300′+) - WNK (3970′+) - LO.
LO 4E	DER19 - WW198 (1620′+) - LO.
OKLIT 4E By ATC	DER19 - WW198 (1620′+) - TURUG - OKLIT.

CHANGES: Reissue.

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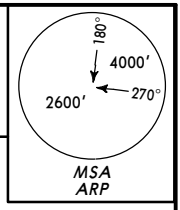
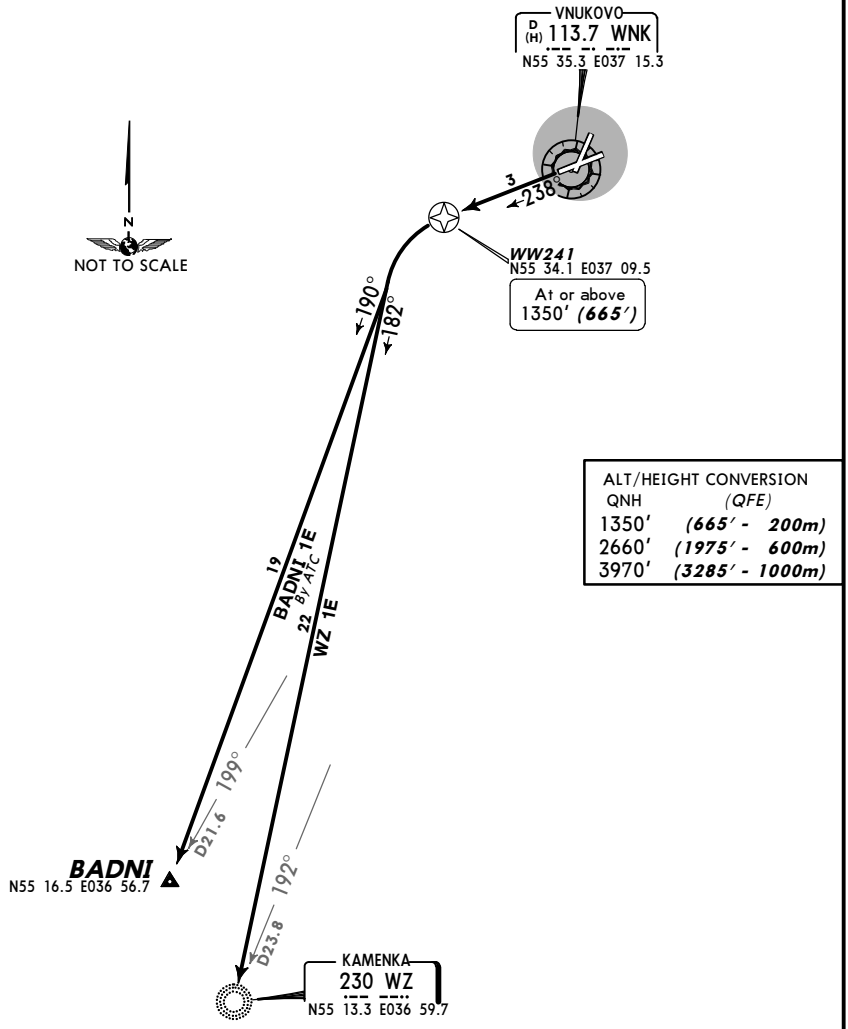
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3285′)*** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 1E *[BADN1E]*
KAMENKA 1E (WZ 1E)
RWY 24 RNAV DEPARTURES
SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	*(QFE)*
1350′	***(665′ - 200m)***
2660′	***(1975′ - 600m)***
3970′	***(3285′ - 1000m)***

Initial climb clearance 2660′ ***(1975′)***

SID	ROUTING
BADNI 1E By ATC	DER24 - WW241 (1350′+) - BADNI.
WZ 1E	DER24 - WW241 (1350′+) - WZ.

CHANGES: RNAV SIDs established; SIDs transferred.

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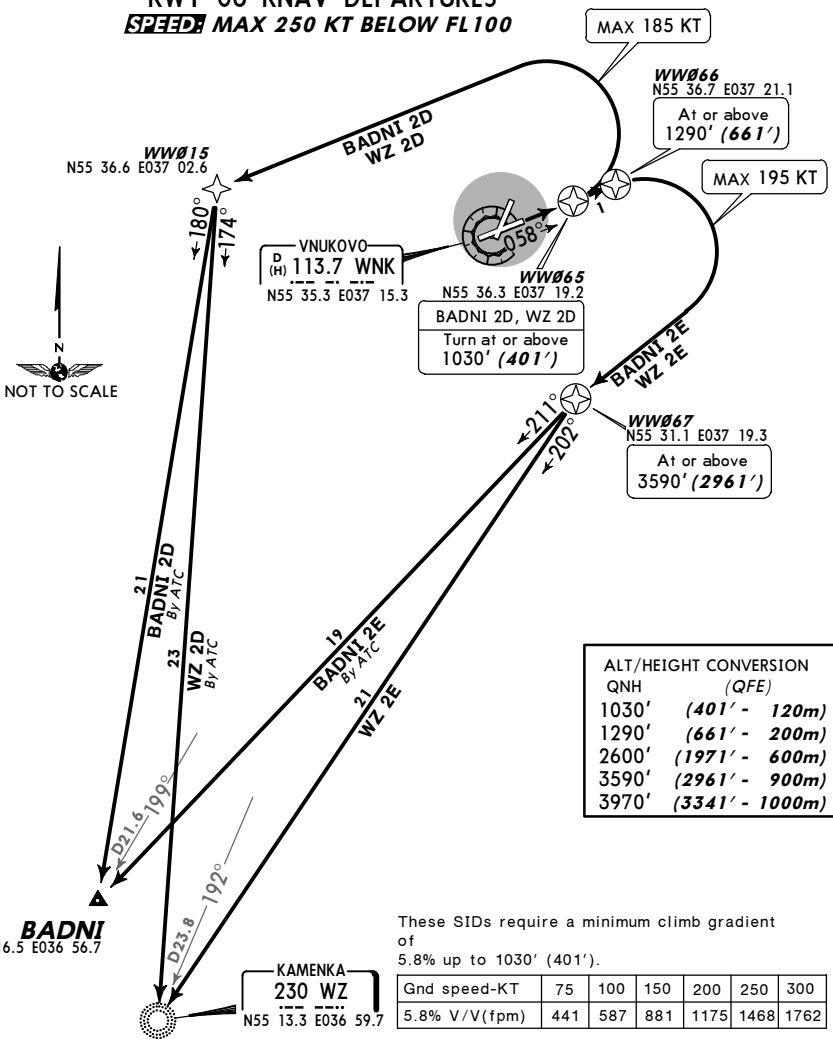
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3341′)*** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

MSA ARP: 180° 4000′ 270° 2600′

BADNI 2D *[BADN2D]*, BADNI 2E *[BADN2E]*
KAMENKA 2D (WZ 2D), KAMENKA 2E (WZ 2E)
RWY 06 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1030′	(401′ - 120m)
1290′	(661′ - 200m)
2600′	(1971′ - 600m)
3590′	(2961′ - 900m)
3970′	(3341′ - 1000m)

These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ ***(1971′)***

SID	ROUTING
BADNI 2D By ATC	DER06 - WW065 (1030′+; K185-) - WW015 - BADNI.
BADNI 2E By ATC	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - BADNI.
WZ 2D By ATC	DER06 - WW065 (1030′+; K185-) - WW015 - WZ.
WZ 2E	DER06 - WW066 (1290′+; K195-) - WW067 (3590′+) - WZ.

CHANGES: RNAV SIDs established; SIDs transferred.

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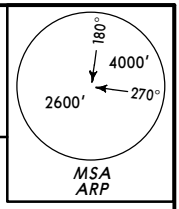
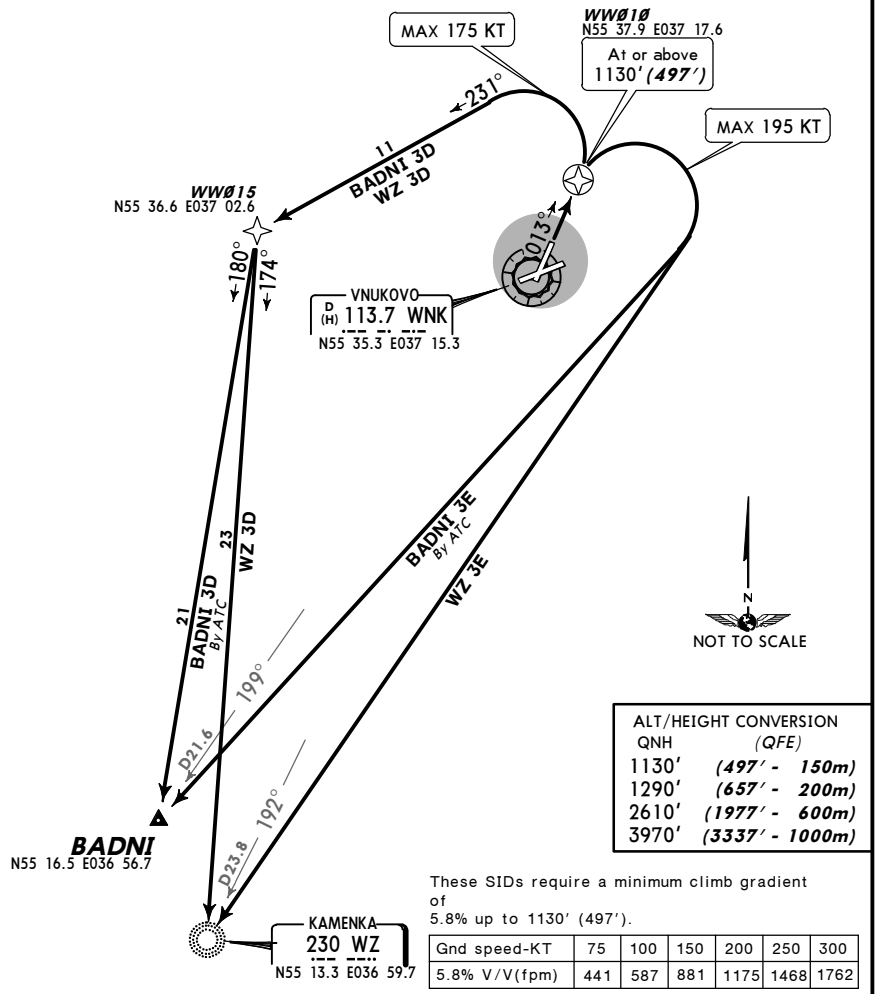
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3337′)*** 1.Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2.Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 3D *[BADN3D]*, BADNI 3E *[BADN3E]*
KAMENKA 3D (WZ 3D), KAMENKA 3E (WZ 3E)
RWY 01 RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1130′	***(497′ - 150m)***
1290′	***(657′ - 200m)***
2610′	***(1977′ - 600m)***
3970′	***(3337′ - 1000m)***

These SIDs require a minimum climb gradient of 5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2610′ ***(1977′)***

SID	ROUTING
BADNI 3D By ATC	DER01 - WW010 (1130′+; K175-) - WW015 - BADNI.
BADNI 3E By ATC	DER01 - WW010 (1130′+; K195-) - BADNI.
WZ 3D	DER01 - WW010 (1130′+; K175-) - WW015 - WZ.
WZ 3E	DER01 - WW010 (1130′+; K195-) - WZ.

CHANGES: None.

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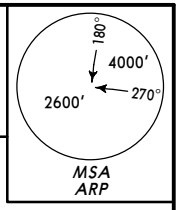
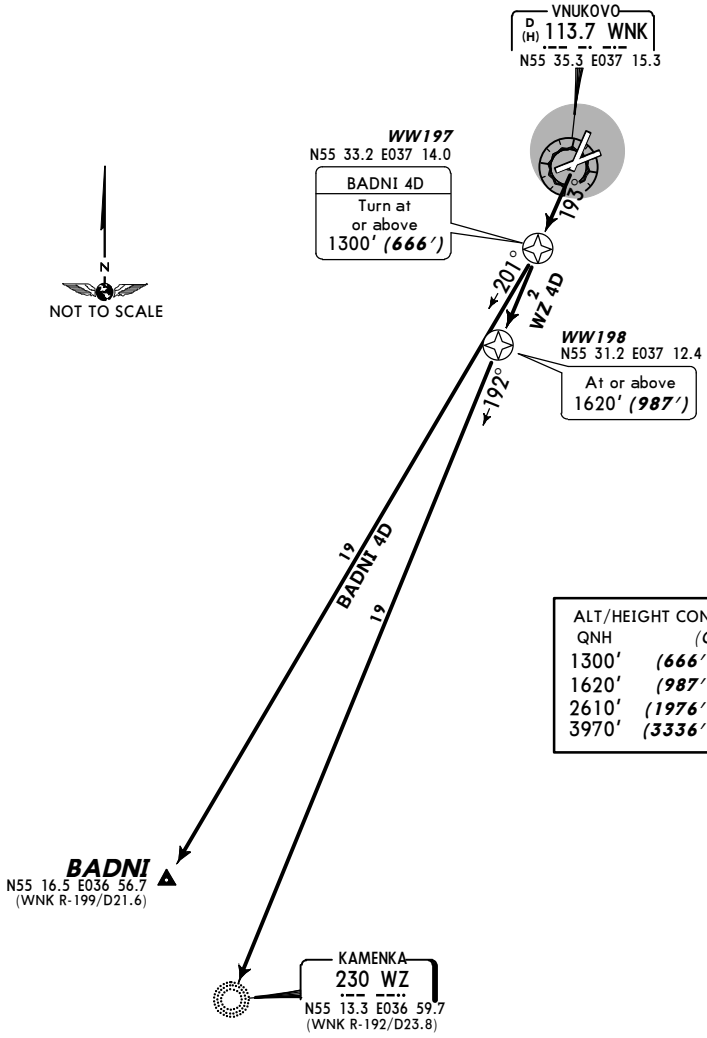
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3336′)*** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 4D *[BADN4D]*
KAMENKA 4D (WZ 4D)
RWY 19 RNAV DEPARTURES
SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1300′	***(666′ - 200m)***
1620′	***(987′ - 300m)***
2610′	***(1976′ - 600m)***
3970′	***(3336′ - 1000m)***

Initial climb clearance 2610′ ***(1976′)***

SID	ROUTING
BADNI 4D By ATC	DER19 - WW197 (1300′+) - BADNI.
WZ 4D	DER18 - WW198 (1620′+) - WZ.

CHANGES: RNAV SID WZ 4D revised.

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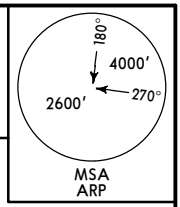
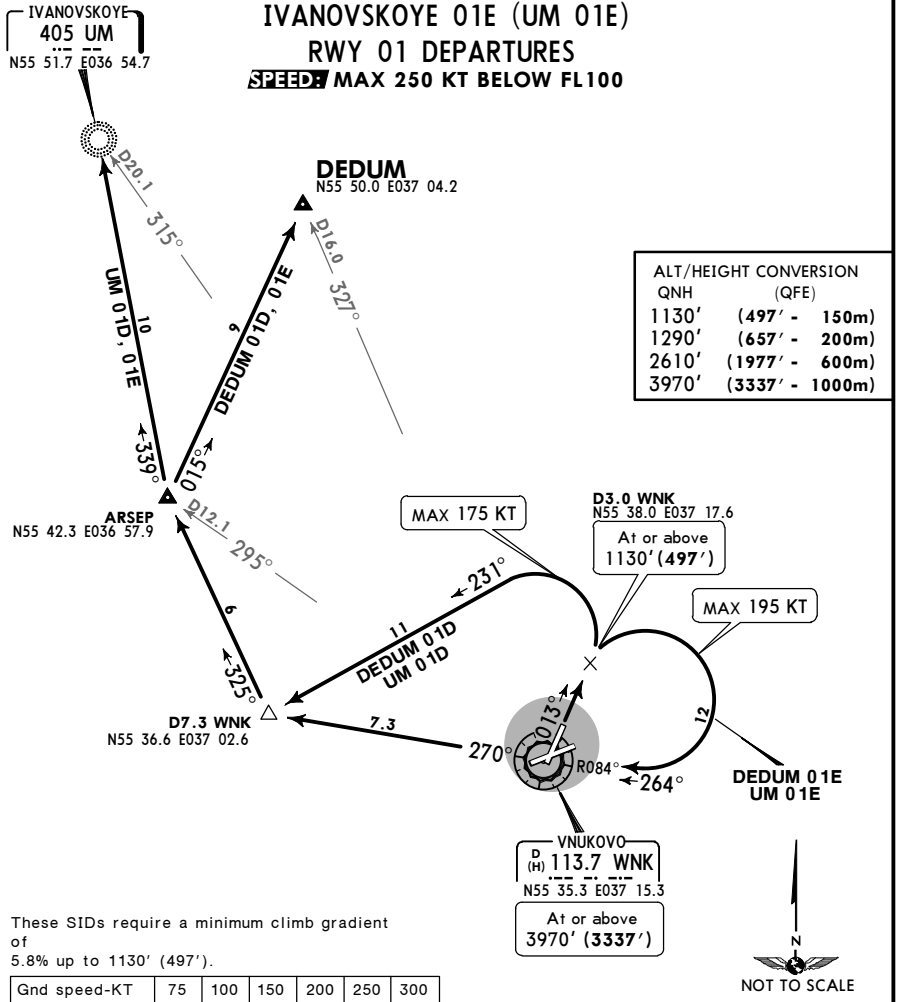
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3337′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 01D[DED0̸1D], DEDUM 01E[DED0̸1E]
IVANOVSKOYE 01D (UM 01D)
IVANOVSKOYE 01E (UM 01E)
RWY 01 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1130′	(497′ - 150m)
1290′	(657′ - 200m)
2610′	(1977′ - 600m)
3970′	(3337′ - 1000m)

These SIDs require a minimum climb gradient of
5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2610′ **(1977′)**

SID	ROUTING
DEDUM 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 231° track to D7.3 WNK, 325° track to ARSEP, then to DEDUM.
DEDUM 01E	Climb straight ahead to D3.0 WNK, turn RIGHT, 264° track to WNK, 270° track to D7.3 WNK, 325° track to ARSEP, then to DEDUM.
UM 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 231° track to D7.3 WNK, 325° track to ARSEP, then to UM.
UM 01E	Climb straight ahead to D3.0 WNK, turn RIGHT, 264 track to WNK, 270° track to D7.3 WNK, 325° track to ARSEP, then to UM.

CHANGES: None.

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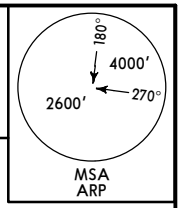
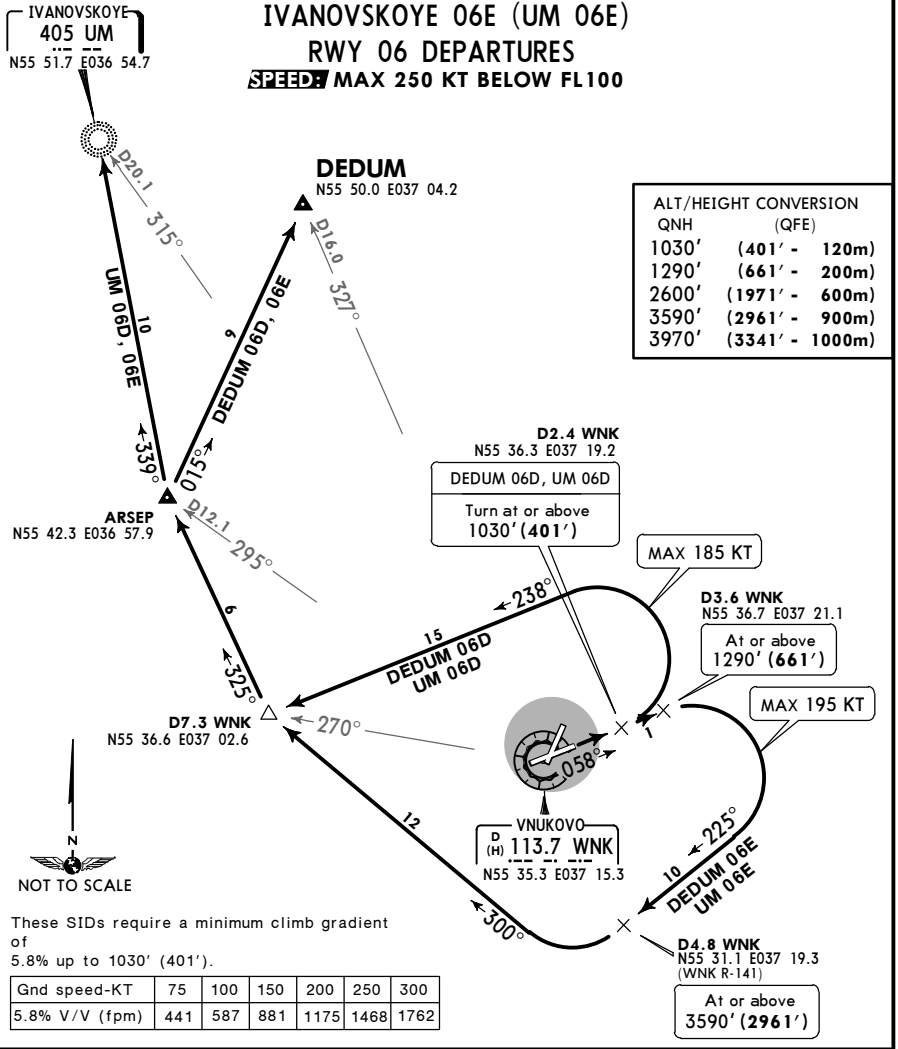
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3341′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 06D[DED06D], DEDUM 06E[DED06E]
IVANOVSKOYE 06D (UM 06D)
IVANOVSKOYE 06E (UM 06E)
RWY 06 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1030′	**(401′ - 120m)**
1290′	**(661′ - 200m)**
2600′	**(1971′ - 600m)**
3590′	**(2961′ - 900m)**
3970′	**(3341′ - 1000m)**

These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′**(1971′)**

SID	ROUTING
DEDUM 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 325° track to ARSEP, then to DEDUM.
DEDUM 06E	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT, 300° track to D7.3 WNK, then to ARSEP, then to DEDUM.
UM 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 325° track to ARSEP, then to UM.
UM 06E	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT, 300° track to D7.3 WNK, then to ARSEP, then to UM.

CHANGES: Availability DEDUM 06D & UM 06D.

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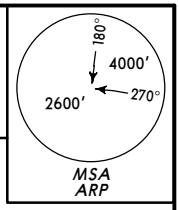
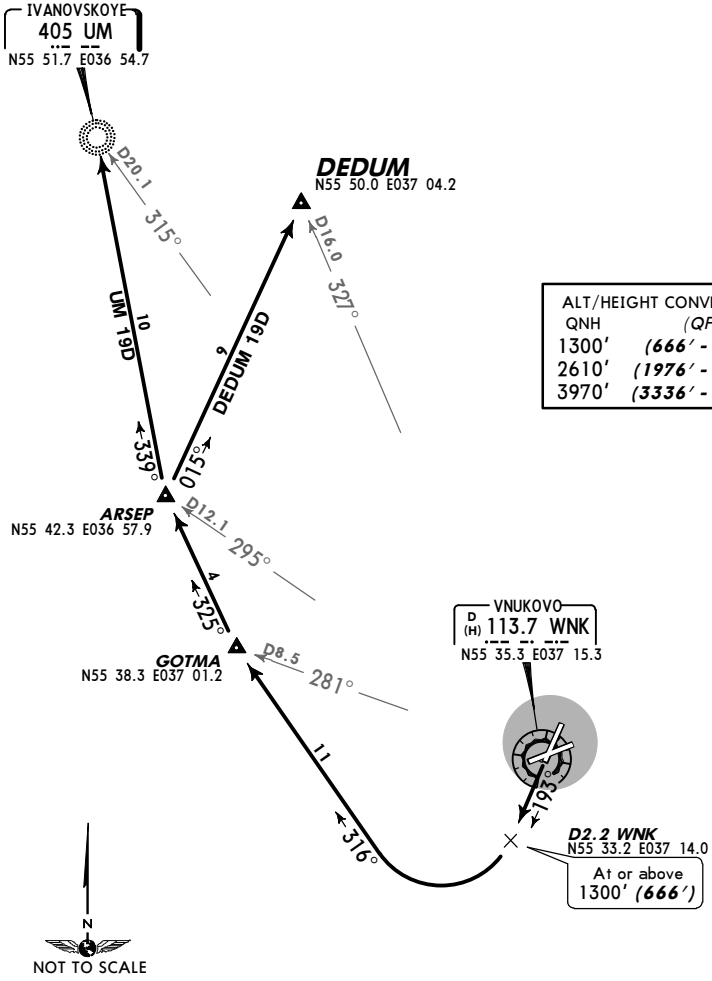
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3336′)*** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 19D *[DED19D]*
IVANOVSKOYE 19D (UM 19D)
RWY 19 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1300′	***(666′ - 200m)***
2610′	***(1976′ - 600m)***
3970′	***(3336′ - 1000m)***

Initial climb clearance 2610′ ***(1976′)***

SID	ROUTING
DEDUM 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 316° track to GOTMA, 325° track to ARSEP, then to DEDUM.
UM 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 316° track to GOTMA, 325° track to ARSEP, then to UM.

CHANGES: Transitions transferred & SIDs revised.

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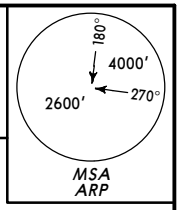
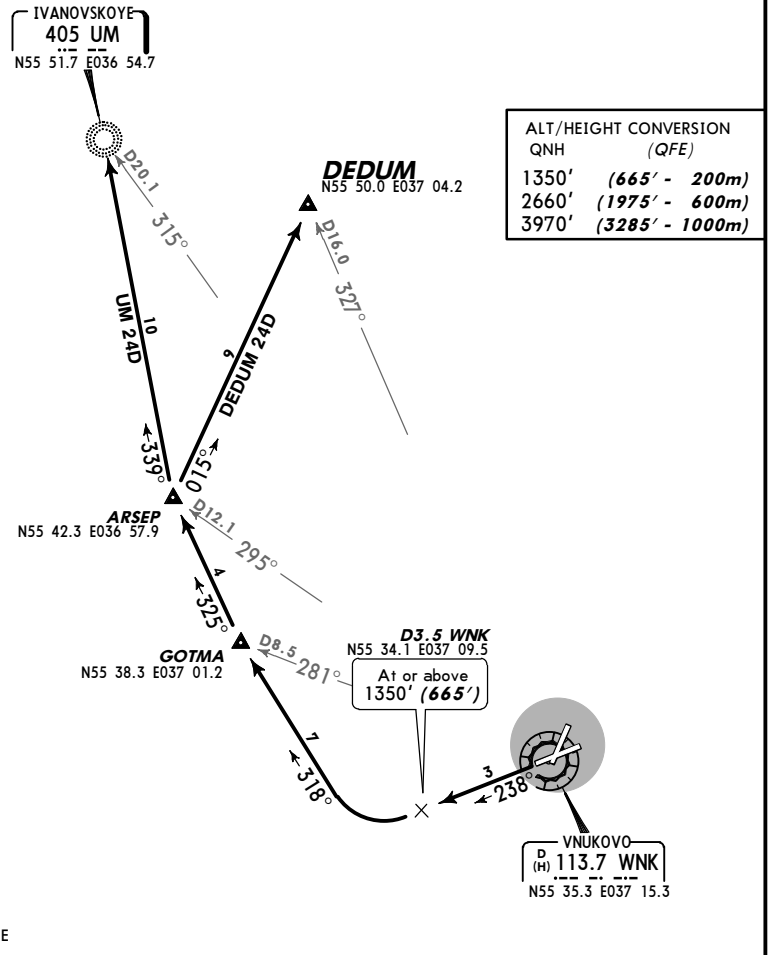
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3285′)*** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 24D *[DED24D]*
IVANOVSKOYE 24D (UM 24D)
RWY 24 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
1350′	***(665′ - 200m)***
2660′	***(1975′ - 600m)***
3970′	***(3285′ - 1000m)***

Initial climb clearance 2660′ ***(1975′)***

SID	ROUTING
DEDUM 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 318° track to GOTMA, then to ARSEP, then to DEDUM.
UM 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 318° track to GOTMA, then to ARSEP, then to UM.

CHANGES: SIDs established; transitions transferred.

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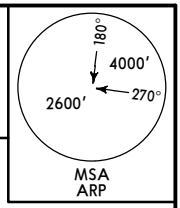
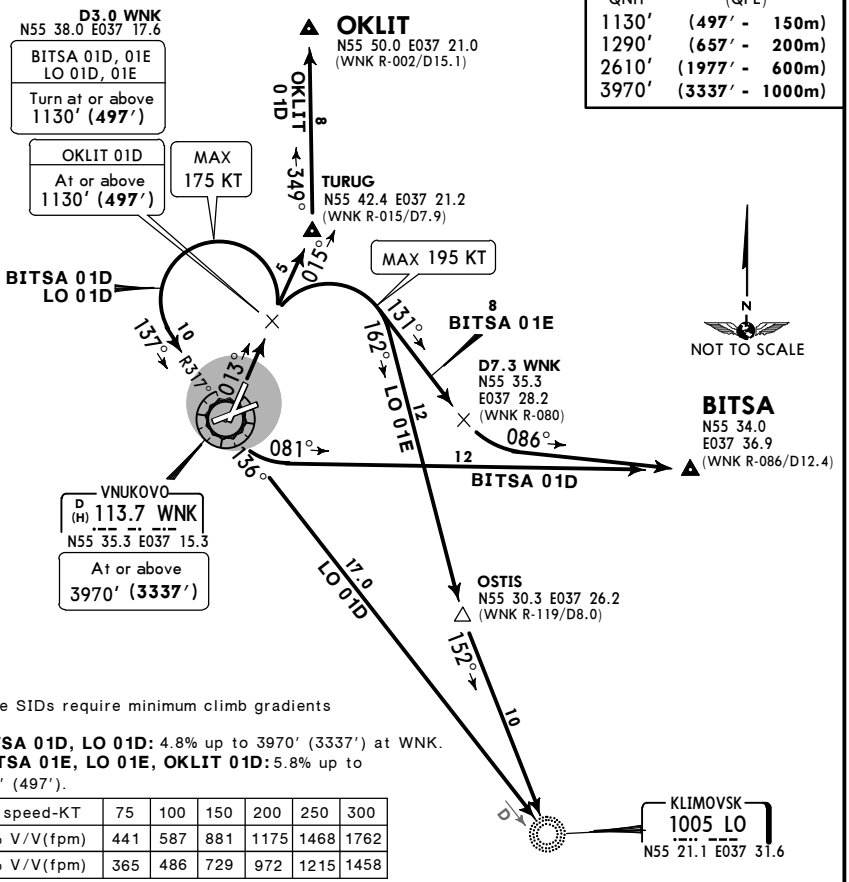
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3337′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 01D [BITØ1D], BITSA 01E [BITØ1E]
KLIMOVSK 01D (LO 01D), KLIMOVSK 01E (LO 01E)
OKLIT 01D [OKLØ1D]
RWY 01 DEPARTURES

SPEED: MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1130′	**(497′ - 150m)**
1290′	**(657′ - 200m)**
2610′	**(1977′ - 600m)**
3970′	**(3337′ - 1000m)**



These SIDs require minimum climb gradients of
BITSA 01D, LO 01D: 4.8% up to 3970′ (3337′) at WNK.
BITSA 01E, LO 01E, OKLIT 01D: 5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762
4.8% V/V(fpm)	365	486	729	972	1215	1458

Initial climb clearance 2610′ **(1977′)**

SID	ROUTING
BITSA 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 137° track to WNK, 081° track to BITSA.
BITSA 01E By ATC	Climb straight ahead to D3.0 WNK, turn RIGHT, 131° track to D7.3 WNK, 086° track to BITSA.
LO 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 137° track to WNK, 136° track to LO.
LO 01E	Climb straight ahead to D3.0 WNK, turn RIGHT, 162° track to OSTIS, 152° track to LO.
OKLIT 01D	Climb straight ahead to D3.0 WNK, then to TURUG, then to OKLIT.

CHANGES: Availability BITSA 01E.

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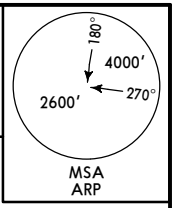
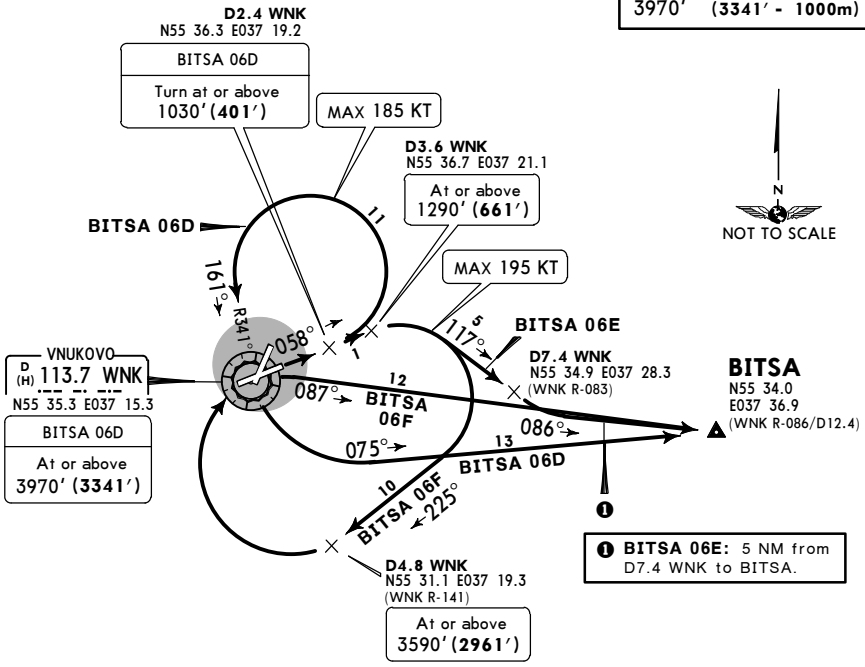
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3341′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 06D [BITØ6D], BITSA 06E [BITØ6E]
BITSA 06F [BITØ6F]
RWY 06 DEPARTURES

SPEED: MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1030′	**(401′ - 120m)**
1290′	**(661′ - 200m)**
2600′	**(1971′ - 600m)**
3590′	**(2961′ - 900m)**
3970′	**(3341′ - 1000m)**



These SIDs require a minimum climb gradient of
5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ **(1971′)**

SID	ROUTING
BITSA 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 161° track to WNK, turn LEFT, 075° track to BITSA.
BITSA 06E By ATC	Climb straight ahead to D3.6 WNK, turn RIGHT, 117° track to D7.4 WNK, turn LEFT, 086° track to BITSA.
BITSA 06F	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT to WNK, 087° track to BITSA.

CHANGES: Availability BITSA 06D & 06E.

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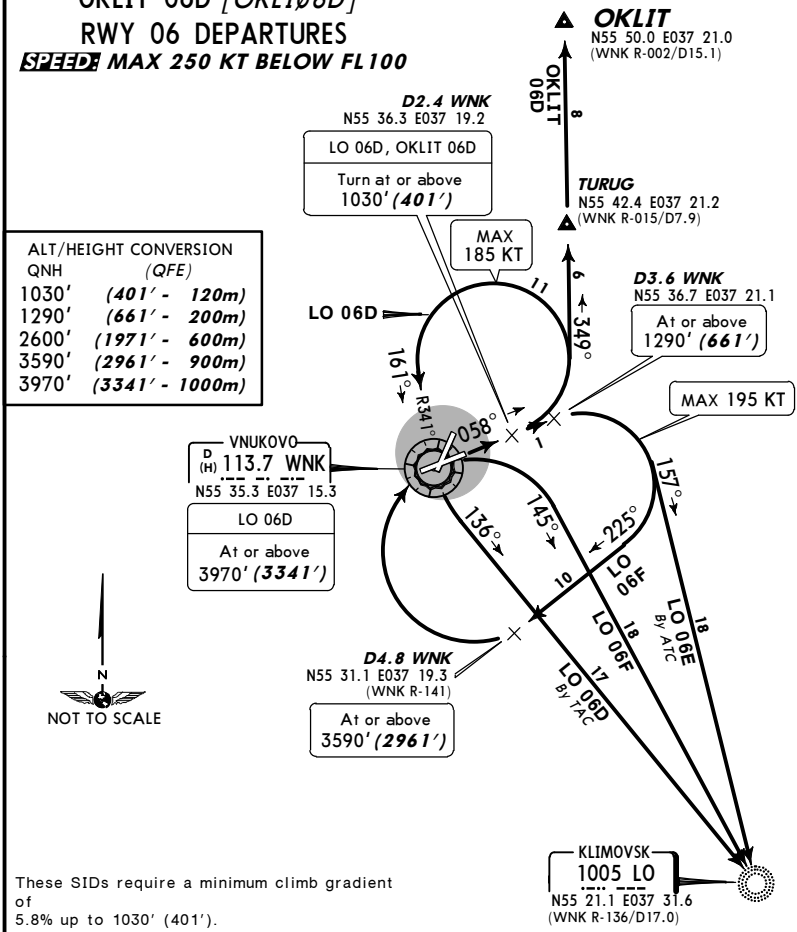
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3341′)*** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

MSA ARP
180°
4000′
270°
2600′

KLIMOVSK 06D (LO 06D)
KLIMOVSK 06E (LO 06E)
KLIMOVSK 06F (LO 06F)
OKLIT 06D *[OKLIØ6D]*
RWY 06 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1030′	***(401′ - 120m)***
1290′	***(661′ - 200m)***
2600′	***(1971′ - 600m)***
3590′	***(2961′ - 900m)***
3970′	***(3341′ - 1000m)***

These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ ***(1971′)***

SID	ROUTING
LO 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 161° track to WNK, turn LEFT, 136° track to LO.
LO 06E By ATC	Climb straight ahead to D3.6 WNK, turn RIGHT, 157° track to LO.
LO 06F	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT to WNK, 145° track to LO.
OKLIT 06D	Climb straight ahead to D2.4 WNK, turn LEFT, 349° track to TURUG, then to OKLIT.

CHANGES: New chart (SIDs established).

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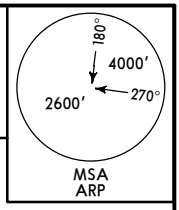
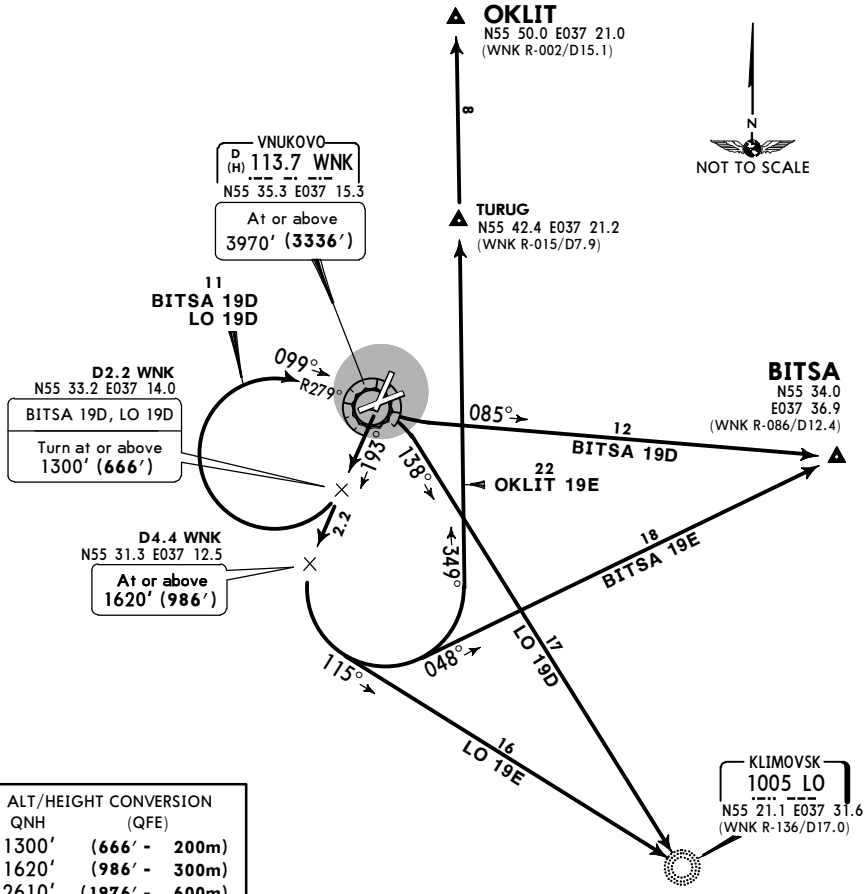
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3336′)** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 19D[BIT19D], BITSA 19E[BIT19E]
KLIMOVSK 19D (LO 19D), KLIMOVSK 19E (LO 19E)
OKLIT 19E[OKL19E]
RWY 19 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300′	(666′ - 200m)
1620′	(986′ - 300m)
2610′	(1976′ - 600m)
3970′	(3336′ - 1000m)

Initial climb clearance 2610′ **(1976′)**

SID	ROUTING
BITSA 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 099° track to WNK, then to BITSA.
BITSA 19E	Climb straight ahead to D4.4 WNK, turn LEFT to BITSA.
LO 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 099° track to WNK, then to LO.
LO 19E	Climb straight ahead to D4.4 WNK, turn LEFT to LO.
OKLIT 19E By ATC	Climb straight ahead to D4.4 WNK, turn LEFT, 349° track to TURUG, then to OKLIT.

CHANGES: Availability OKLIT 19E.

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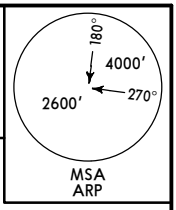
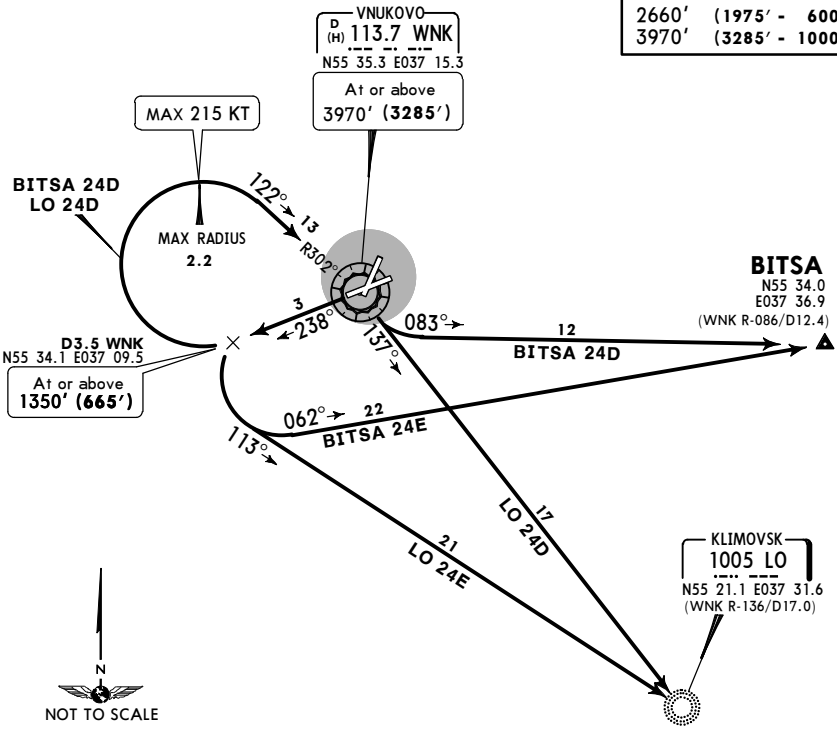
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3285′)** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 24D [BIT24D], BITSA 24E [BIT24E]
KLIMOVSK 24D (LO 24D), KLIMOVSK 24E (LO 24E)
RWY 24 DEPARTURES

SPEED: MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1350′	**(665′ - 200m)**
2660′	**(1975′ - 600m)**
3970′	**(3285′ - 1000m)**



Initial climb clearance 2660′ **(1975′)**

SID	ROUTING
BITSA 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 122° track to WNK, turn LEFT, 083° track to BITSA.
BITSA 24E By ATC	Climb straight ahead to D3.5 WNK, turn LEFT, 062° track to BITSA.
LO 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 122° track to WNK, turn RIGHT, 137° track to LO.
LO 24E By ATC	Climb straight ahead to D3.5 WNK, turn LEFT, 113° track to LO.

CHANGES: None.

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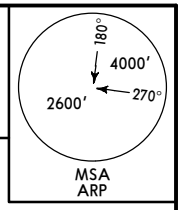
UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 (10-3X1)

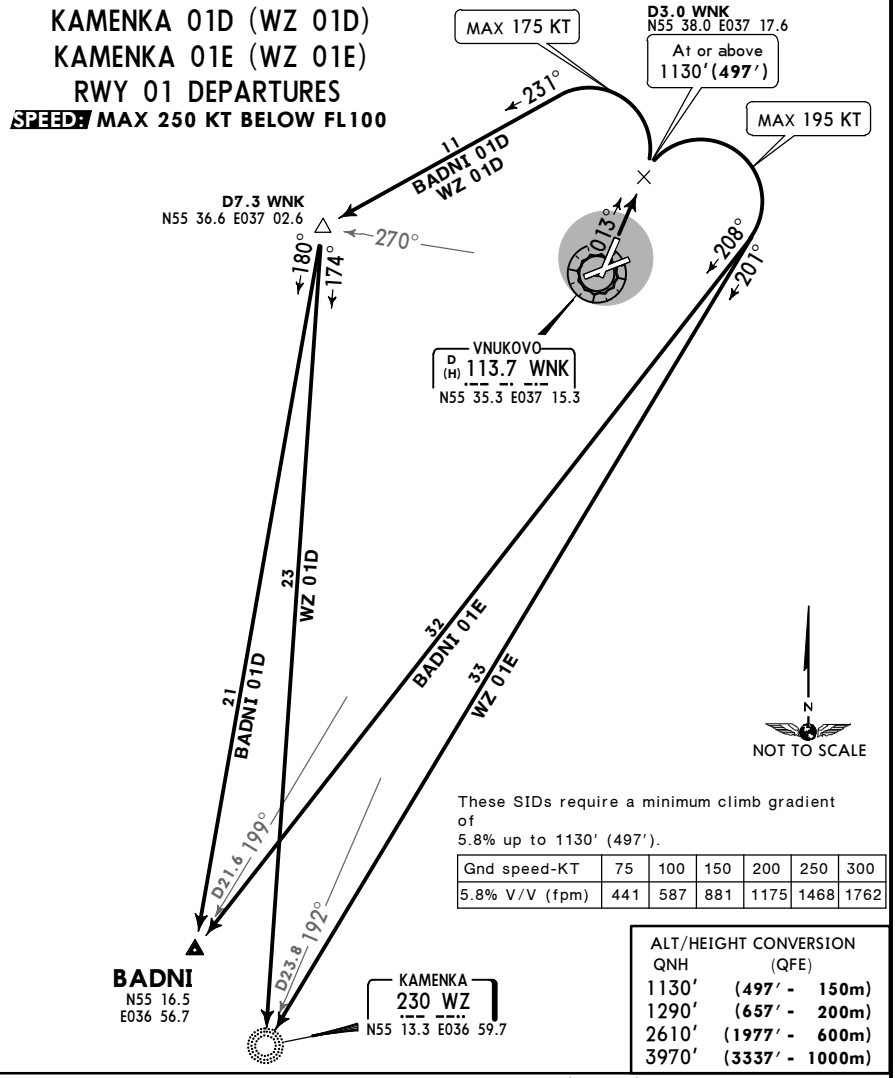
MOSCOW, RUSSIA
SID

VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3337′)** 1. Contact VNUKOVO Radar immediately after crossing 1290′ (657′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 01D [BADØ1D]
BADNI 01E [BADØ1E]
KAMENKA 01D (WZ 01D)
KAMENKA 01E (WZ 01E)
RWY 01 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



These SIDs require a minimum climb gradient of
5.8% up to 1130′ (497′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

ALT/HEIGHT CONVERSION

QNH	(QFE)
1130′	**(497′ - 150m)**
1290′	**(657′ - 200m)**
2610′	**(1977′ - 600m)**
3970′	**(3337′ - 1000m)**

Initial climb clearance 2610′ **(1977′)**

SID	ROUTING
BADNI 01D By ATC	Climb straight ahead to D3.0 WNK, turn LEFT, 231° track to D7.3 WNK, 180° track to BADNI.
BADNI 01E By ATC	Climb straight ahead to D3.0 WNK, turn RIGHT, 208° track to BADNI.
WZ 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 231° track to D7.3 WNK, 174° track to WZ.
WZ 01E	Climb straight ahead to D3.0 WNK, turn RIGHT, 201° track to WZ.

CHANGES: Availability BADNI 01D & 01E.

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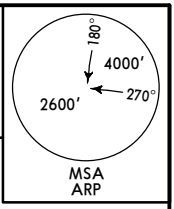
UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 (10-3X2)

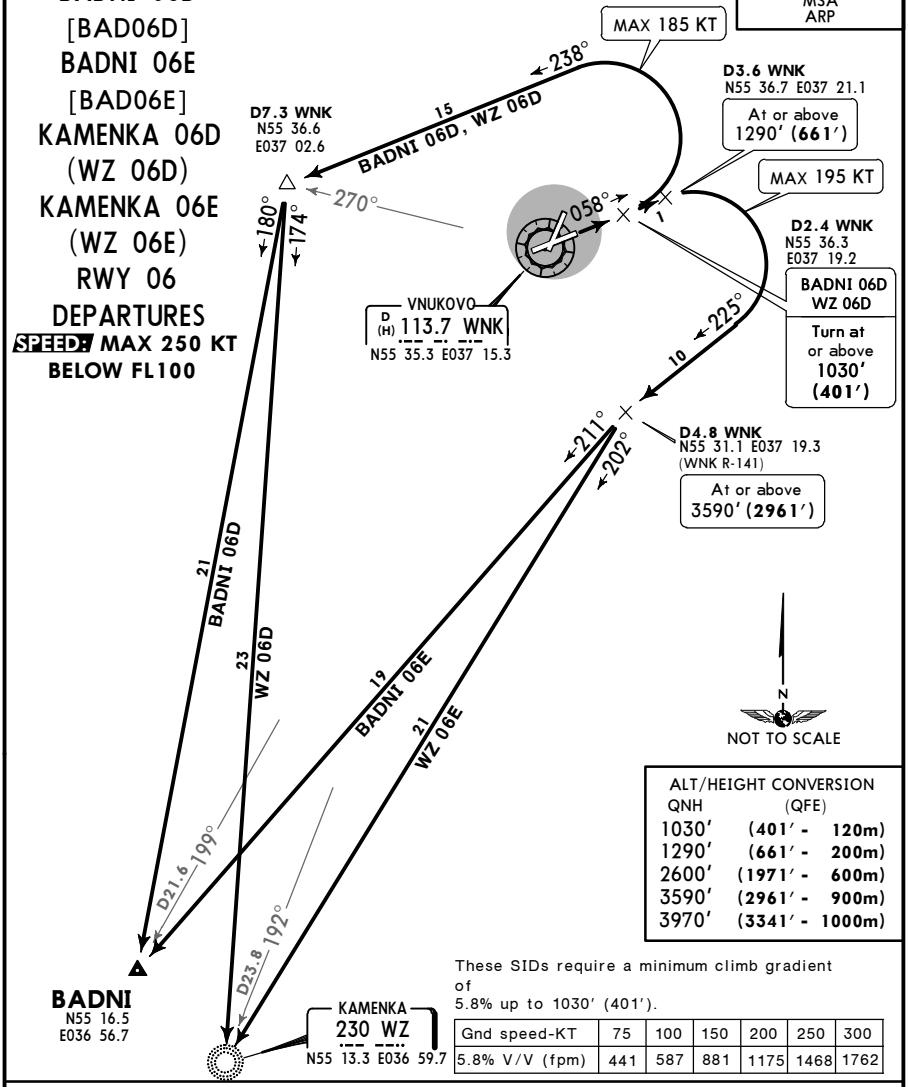
MOSCOW, RUSSIA
SID

VNUKOVO Radar 126.0	Apt Elev 686′

QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970′ **(3341′)**
1. Contact VNUKOVO Radar immediately after crossing 1290′ (661′).
2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 06D
[BAD06D]
BADNI 06E
[BAD06E]
KAMENKA 06D
(WZ 06D)
KAMENKA 06E
(WZ 06E)
RWY 06
DEPARTURES
SPEED: MAX 250 KT
BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1030′	(401′ - 120m)
1290′	(661′ - 200m)
2600′	(1971′ - 600m)
3590′	(2961′ - 900m)
3970′	(3341′ - 1000m)

These SIDs require a minimum climb gradient of 5.8% up to 1030′ (401′).

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2600′ **(1971′)**

SID	ROUTING
BADNI 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 180° track to BADNI.
BADNI 06E By ATC	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn LEFT, 211° track to BADNI.
WZ 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 174° track to WZ.
WZ 06E	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn LEFT, 202° track to WZ.

CHANGES: None.

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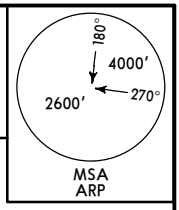
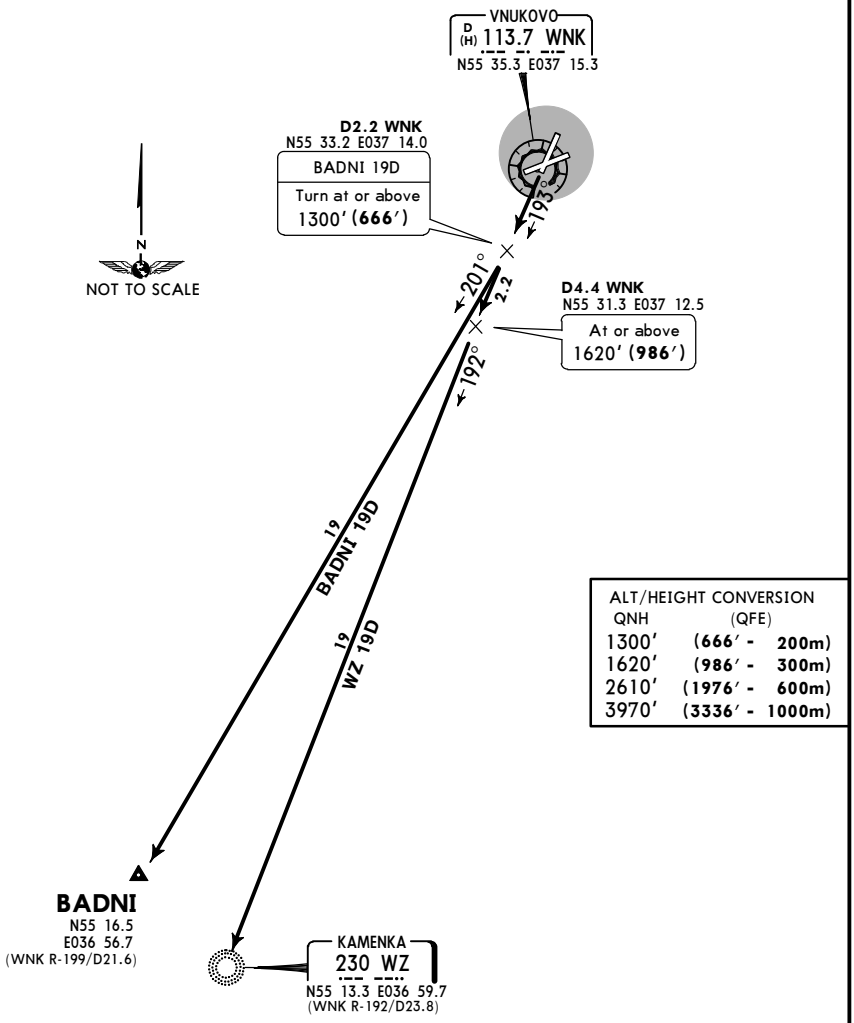
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3336′)** 1. Contact VNUKOVO Radar immediately after crossing 1300′ (666′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 19D [BAD19D]
KAMENKA 19D (WZ 19D)
RWY 19 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1300′	(666′ - 200m)
1620′	(986′ - 300m)
2610′	(1976′ - 600m)
3970′	(3336′ - 1000m)

Initial climb clearance 2610′ **(1976′)**

SID	ROUTING
BADNI 19D By ATC	Climb straight ahead to D2.2 WNK, turn RIGHT to BADNI.
WZ 19D	Climb straight ahead to D4.4 WNK, turn LEFT to WZ.

CHANGES: Availability BADNI 19D.

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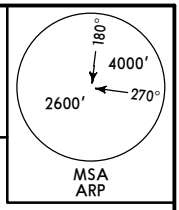
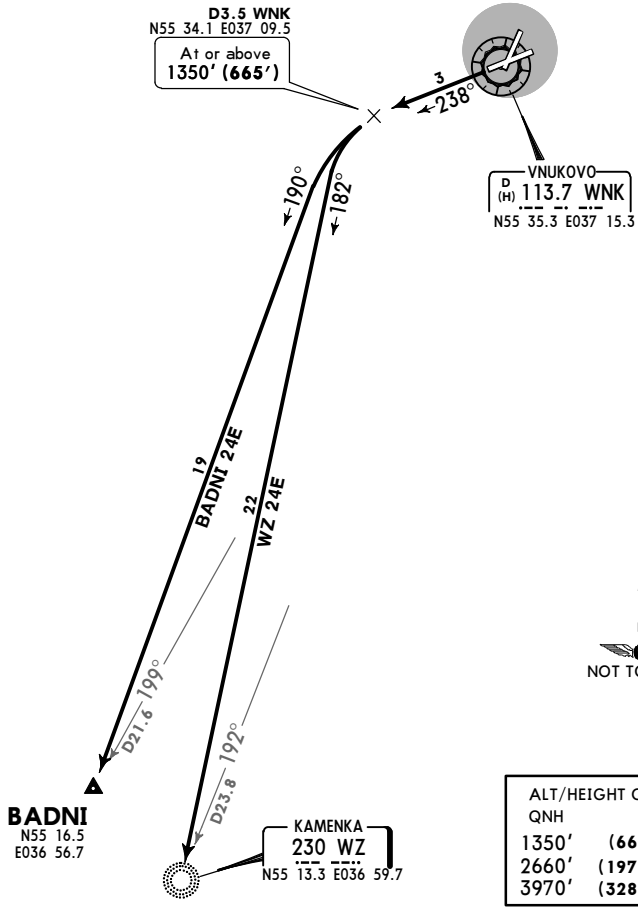
VNUKOVO Radar 126.0	Apt Elev 686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ **(3285′)** 1. Contact VNUKOVO Radar immediately after crossing 1350′ (665′). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 24E [BAD24E]
KAMENKA 24E (WZ 24E)
RWY 24 DEPARTURES

SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION

QNH	(QFE)
1350′	**(665′ - 200m)**
2660′	**(1975′ - 600m)**
3970′	**(3285′ - 1000m)**

Initial climb clearance 2660′ **(1975′)**

SID	ROUTING
BADNI 24E By ATC	Climb straight ahead to D3.5 WNK, turn LEFT, 190° track to BADNI.
WZ 24E	Climb straight ahead to D3.5 WNK, turn LEFT, 182° track to WZ.

CHANGES: None.

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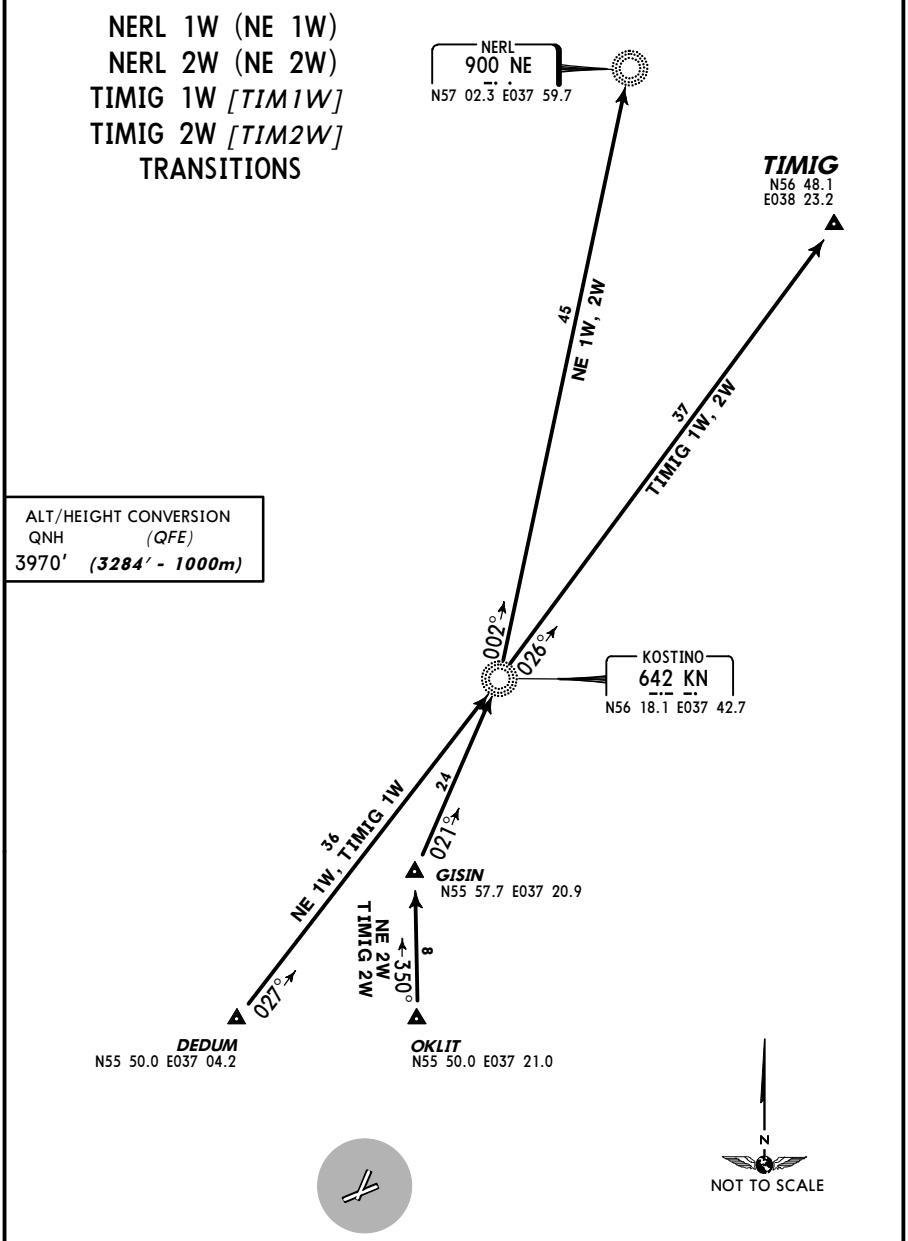
Apt Elev	
686′	QNH on request **(QFE)** Trans level: By ATC Trans alt: 3970′ ***(3284′)***

NERL 1W (NE 1W)
NERL 2W (NE 2W)
TIMIG 1W *[TIM1W]*
TIMIG 2W *[TIM2W]*
TRANSITIONS



TRANSITION	ROUTING
NE 1W	From DEDUM to KN, then to NE.
NE 2W	From OKLIT to GISIN, then to KN, then to NE.
TIMIG 1W By ATC	From DEDUM to KN, then to TIMIG.
TIMIG 2W By ATC	From OKLIT to GISIN, then to KN, then to TIMIG.

CHANGES: None.

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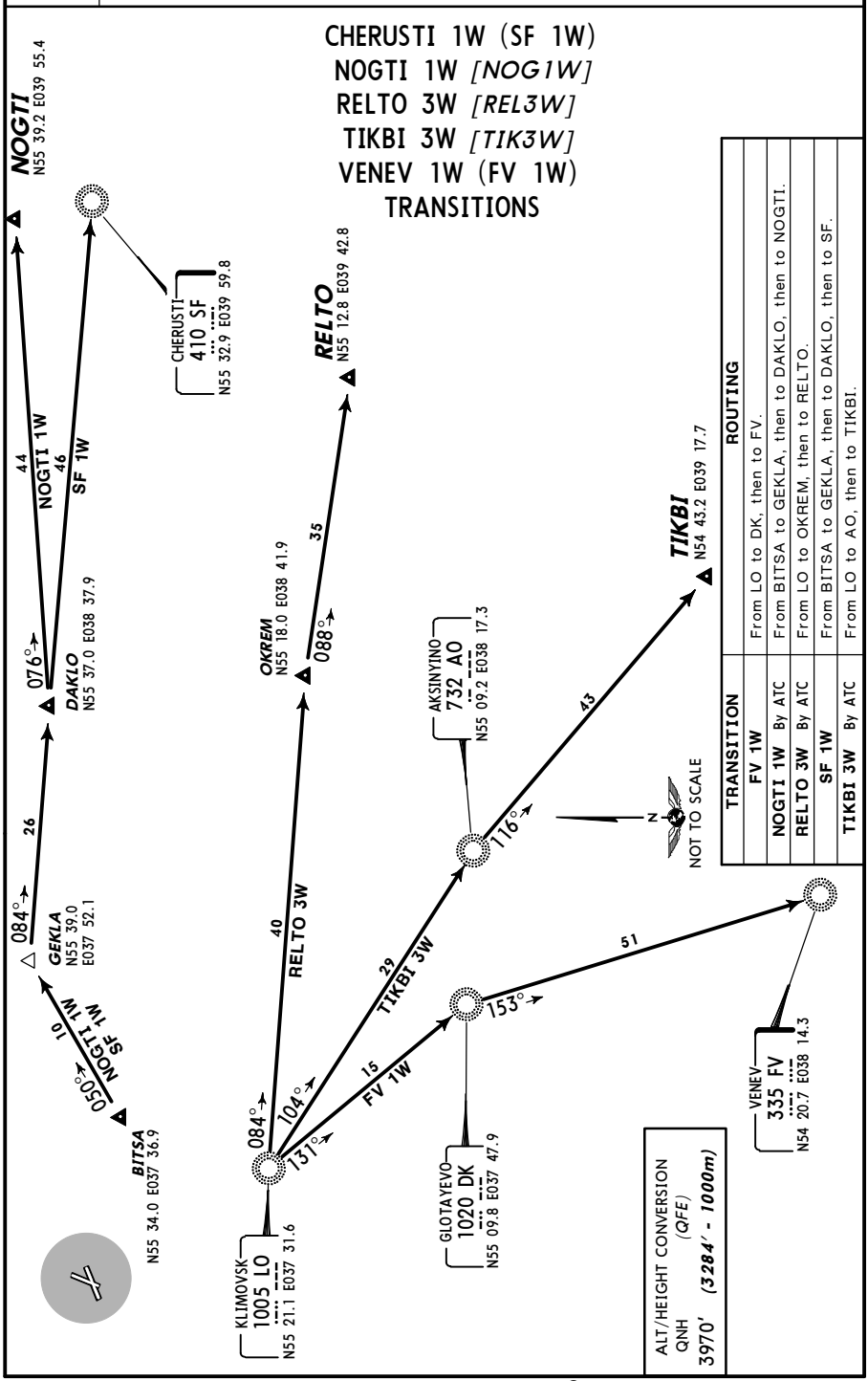
Apt Elev 686′

QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970′ ***(3284′)***

CHERUSTI 1W (SF 1W)
NOGTI 1W *[NOG1W]*
RELTO 3W *[REL3W]*
TIKBI 3W *[TIK3W]*
VENEV 1W (FV 1W)
TRANSITIONS



TRANSITION	ROUTING
FV 1W	From LO to DK, then to FV.
NOGTI 1W By ATC	From BITSA to GEKLA, then to DAKLO, then to NOGTI.
RELTO 3W By ATC	From LO to OKREM, then to RELTO.
SF 1W	From BITSA to GEKLA, then to DAKLO, then to SF.
TIKBI 3W By ATC	From LO to AO, then to TIKBI.

ALT/HEIGHT CONVERSION
(QFE)
QNH
3970′ ***(3284′ - 1000m)***

CHANGES: Transition NOGTI 1W established.

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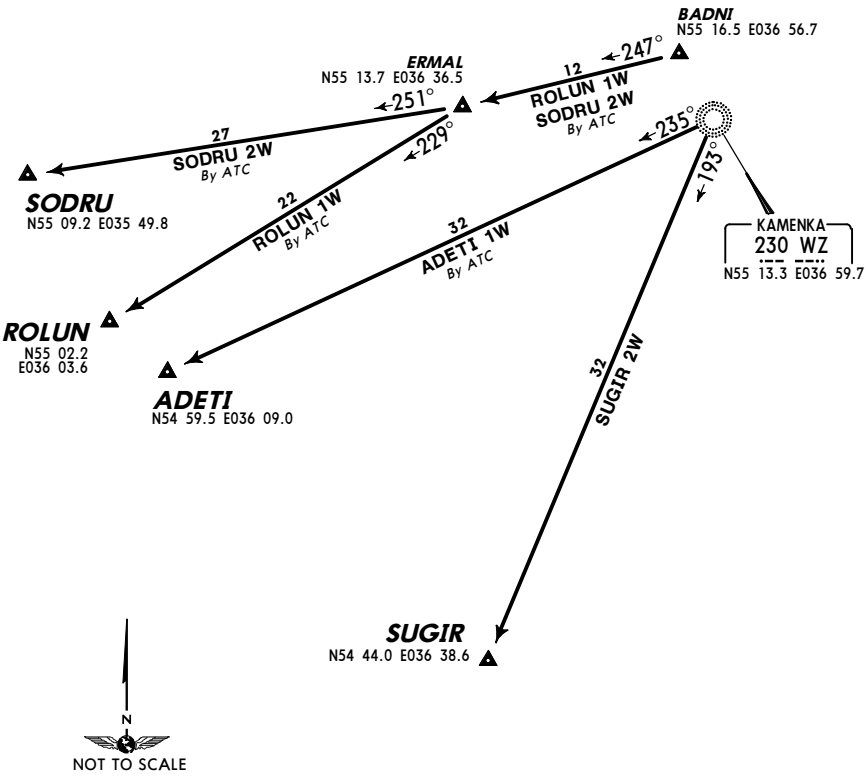
Apt Elev	QNH on request **(QFE)**
686′	Trans level: By ATC Trans alt: 3970′ ***(3284′)***

ADETI 1W *[ADE1W]*
ROLUN 1W *[ROL1W]*
SODRU 2W *[SOD2W]*
BY ATC

SUGIR 2W*[SUG2W]*

TRANSITIONS

ALT/HEIGHT CONVERSION	
QNH	*(QFE)*
3970′	***(3284′ - 1000m)***



TRANSITION	ROUTING
ADETI 1W	From WZ to ADETI.
ROLUN 1W	From BADNI to ERMAL, then to ROLUN.
SODRU 2W	From BADNI to ERMAL, then to SODRU.
SUGIR 2W	From WZ to SUGIR.

CHANGES: New chart (Transition transferred).

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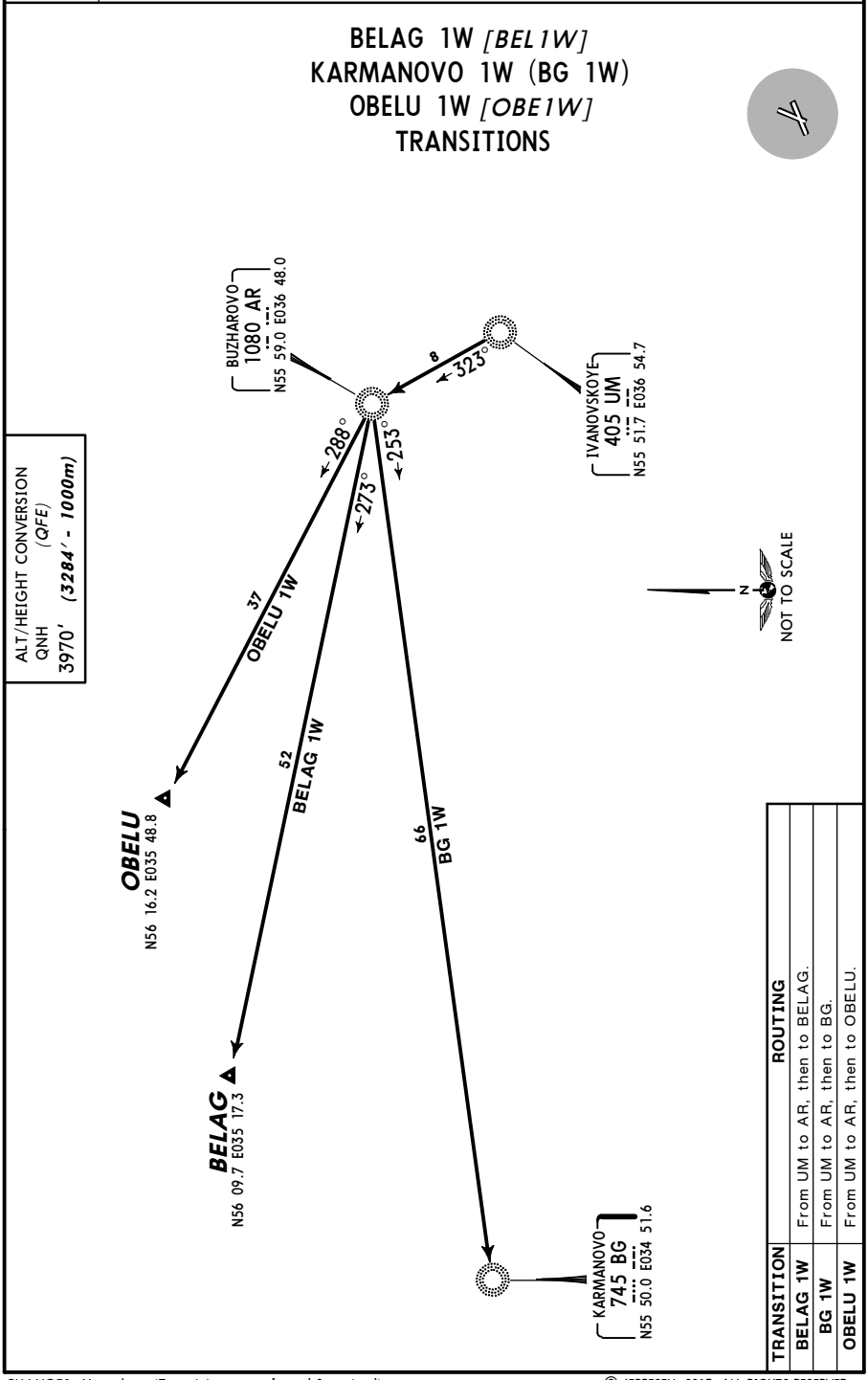
Apt Elev 686′

QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970′ ***(3284′)***

BELAG 1W *[BEL1W]*
KARMANOVO 1W (BG 1W)
OBELU 1W *[OBE1W]*
TRANSITIONS



TRANSITION	ROUTING
BELAG 1W	From UM to AR, then to BELAG.
BG 1W	From UM to AR, then to BG.
OBELU 1W	From UM to AR, then to OBELU.

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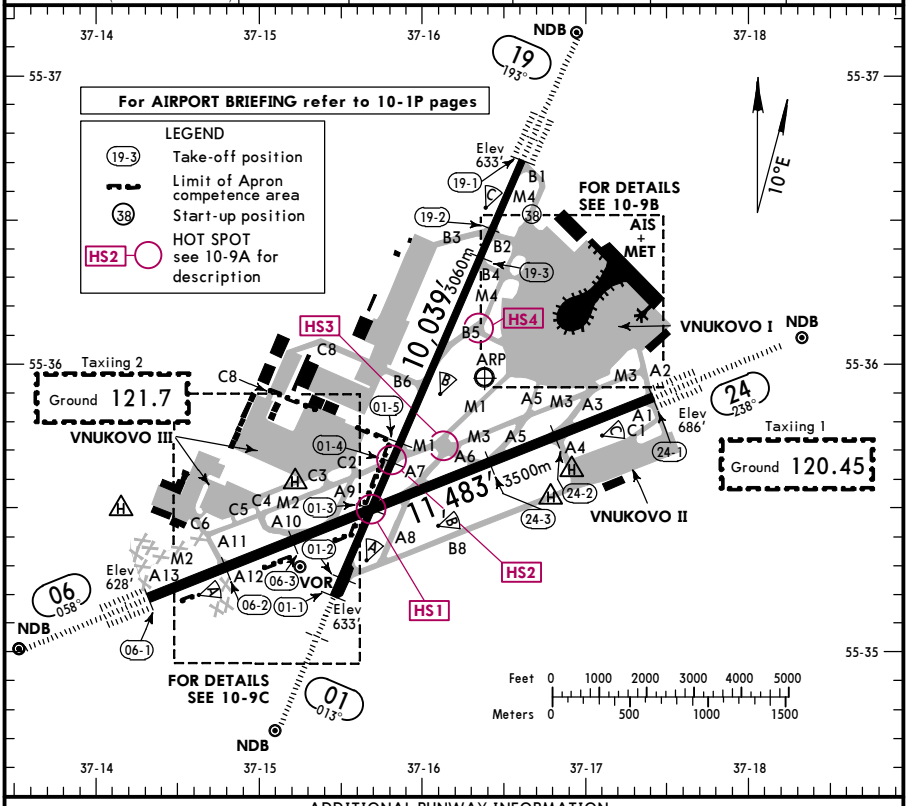
UUWW/VKO

Apt Elev 686′
N55 36.0 E037 16.4

JEPPESEN
13 MAY 16 (10-9) Eff 26 May

MOSCOW, RUSSIA
VNUKOVO

ATIS Departure	VNUKOVO Delivery	VNUKOVO Operation (Delivery)	VNUKOVO Taxiing 1 (GND)	VNUKOVO Taxiing 2 (GND)	Tower
124.45 (Russian 127.8)	131.8	131.125	120.45	121.7	118.3



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
01	HIRL (60m) CL(15m) HIALS PAPI-L(3.0°) RVR		9128′2782m	❶	148′ 45m
19	HIRL (60m) CL(15m) HIALS-II TDZ PAPI-L(3.0°) RVR				

❶ TAKE-OFF RUN AVAILABLE

RWY 01: From point 01-1 10,039′(3060m)
from point 01-2 9429′(2874m)
from point 01-3 8091′(2466m)
from point 01-4 7119′(2170m)
from point 01-5 6850′(2088m)

RWY 19: From point 19-1 10,039′(3060m)
from point 19-2 8409′(2563m)
from point 19-3 7713′(2351m)

RWY					
06	HIRL (60m) CL(15m) HIALS-II TDZ PAPI-L(3.0°) RVR		10,511′3204m	❷	197′ 60m
24			10,389′3167m		

❷ TAKE-OFF RUN AVAILABLE

RWY 06: From point 06-1 11,483′(3500m)
from point 06-2 9843′(3000m)
from point 06-3 8327′(2538m)

RWY 24: From point 24-1 11,483′(3500m)
from point 24-2 9708′(2959m)
from point 24-3 8209′(2502m)

TAKE-OFF

	AIR CARRIER (JAA) All Rwys LVP must be in force RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	AIR CARRIER (FAR 121) All Rwys	CL & RCLM any RVR out, other two req.	Adequate Vis Ref
A				2 Eng	TDZ RVR 200m Mid RVR 200m Roll out RVR 150m	RVR 500m VIS 400m
B	200m (150m)	250m	400m			
C				3 & 4 Eng		
D	250m (200m)	300m				

CHANGES: Aprons. Twy C8.

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HOT SPOTS

For information only, not to be construed as ATC instructions.

HS1 Intersection of Rwy 06/24 and Rwy 01/19

When both rwys are used for flights simultaneously or acft taxi along runway flight crew shall exercise CAUTION, strictly follow ATS unit instructions.

HS2 Intersection of Twy M1, M2 and Rwy 01/19

This is the hot spot of intensive crossing of Rwy 01/19. Flight crew of acft taxiing from Vnukovo III apron must not cross Rwy 01/19 holding position without ATS unit instruction. Crossing runway holding positions at Rwy 01/19 and taxiing to Twy M2 shall be carried out strictly by ATS unit instruction.

HS3 Intersection of Twys M1, M3, A6 and A7

Acft shall taxi with increased CAUTION according to the established marking and instructions of the ATS unit. During vacation of Rwy 06 along Twy A7 after landing flight crew shall regulate acft speed not to miss Twy A7.

HS4 Intersection of Twys M4 and B5

During vacation of Rwy 01 along Twy B5 after landing, flight crew shall regulate the speed not to miss the RIGHT turn to Vnukovo I apron. While taxiing along Twy M4 to Vnukovo I apron flight crew shall increase CAUTION not to miss the LEFT turn.

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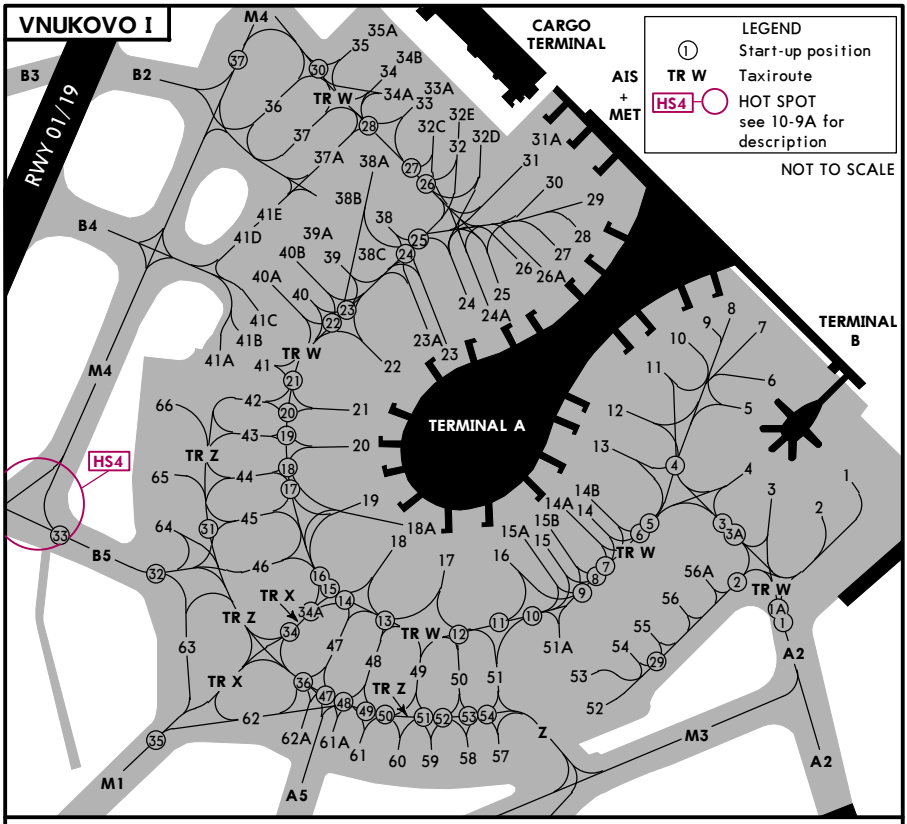

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1	N55 36.2 E037 17.4	34B thru 35A	N55 36.5 E037 16.8
2	N55 36.1 E037 17.4	36, 37	N55 36.4 E037 16.7
3	N55 36.1 E037 17.3	37A	N55 36.4 E037 16.8
4 thru 7	N55 36.2 E037 17.3	38	N55 36.3 E037 16.8
8	N55 36.3 E037 17.3	38A, 38B	N55 36.4 E037 16.8
9	N55 36.3 E037 17.2	38C, 39	N55 36.3 E037 16.8
10	N55 36.2 E037 17.2	39A thru 40B	N55 36.3 E037 16.7
11 thru 13	N55 36.2 E037 17.1	42, 43	N55 36.2 E037 16.7
14	N55 36.1 E037 17.0	44	N55 36.1 E037 16.6
14A, 14B	N55 36.1 E037 17.1	45, 46	N55 36.1 E037 16.7
15 thru 15B	N55 36.1 E037 17.0	47, 48	N55 36.0 E037 16.8
16, 17	N55 36.1 E037 16.9	49, 50	N55 36.0 E037 16.9
18 thru 19	N55 36.1 E037 16.8	51	N55 36.0 E037 16.0
20 thru 22	N55 36.2 E037 16.8	52 thru 55	N55 36.0 E037 17.1
23 thru 24	N55 36.2 E037 16.9	56, 56A	N55 36.1 E037 17.2
24A	N55 36.2 E037 17.0	57	N55 35.9 E037 17.0
25 thru 27	N55 36.3 E037 17.0	58, 59	N55 35.9 E037 16.9
28, 29	N55 36.3 E037 17.1	60, 61	N55 35.9 E037 16.8
30 thru 31A	N55 36.4 E037 17.0	61A thru 62A	N55 36.0 E037 16.7
32 thru 32E	N55 36.4 E037 16.9	63	N55 36.0 E037 16.6
33	N55 36.4 E037 16.8	64, 65	N55 36.1 E037 16.5
33A	N55 36.4 E037 16.9	66	N55 36.2 E037 16.5
34, 34A	N55 36.4 E037 16.8		

CHANGES: Reindexed. Stands withdrawn. Hot spot.

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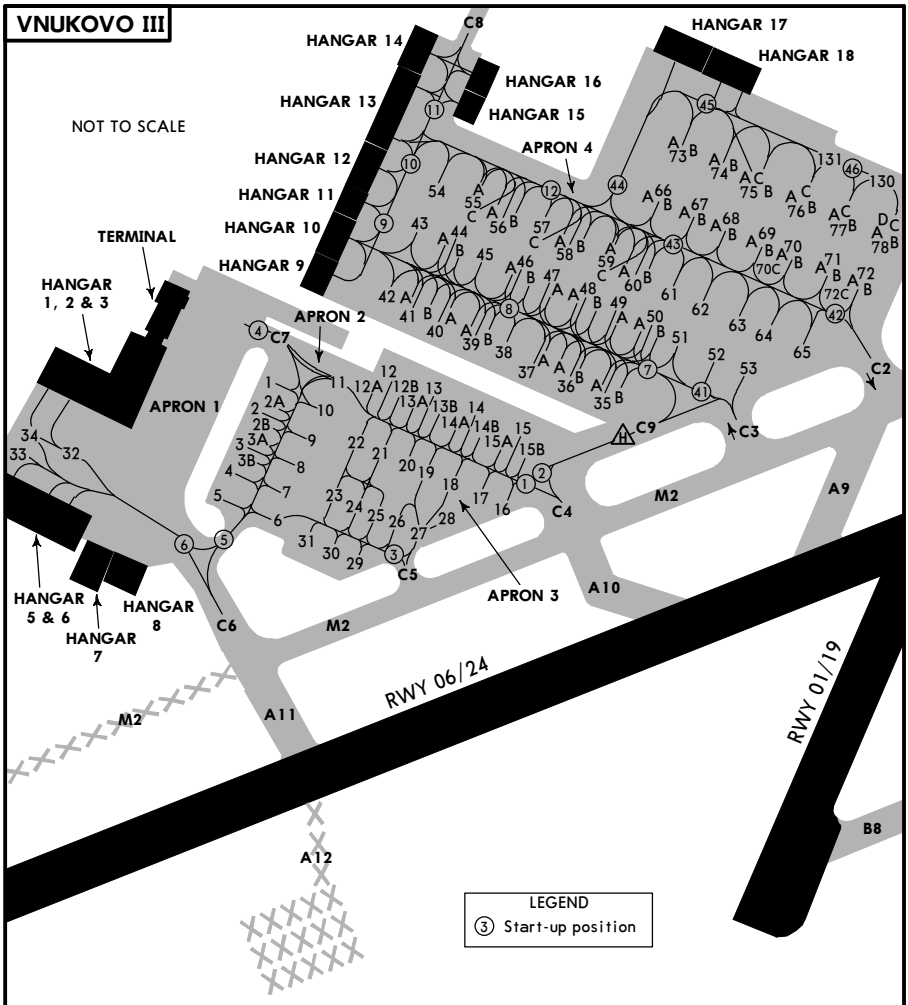
VNUKOVO III



INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1 thru 9	N55 35.5 E037 14.7	67 thru 68	N55 35.8 E037 15.4
10, 11	N55 35.6 E037 14.7	68A thru 69	N55 35.7 E037 15.4
12	N55 35.6 E037 14.8	69A	N55 35.7 E037 15.5
13 thru 15	N55 35.5 E037 14.9	69B	N55 35.7 E037 15.4
16 thru 31	N55 35.5 E037 14.8	70 thru 71B	N55 35.7 E037 15.5
40 thru 44A	N55 35.7 E037 15.0	72 thru 72B	N55 35.7 E037 15.6
44B thru 46B	N55 35.7 E037 15.1	73 thru 73B	N55 35.8 E037 15.3
52	N55 35.7 E037 15.4	74 thru 75C	N55 35.8 E037 15.4
53	N55 35.6 E037 15.4	76, 76A	N55 35.7 E037 15.5
54	N55 35.8 E037 15.0	76B	N55 35.8 E037 15.5
55 thru 56B	N55 35.8 E037 15.1	77 thru 77B	N55 35.7 E037 15.5
57 thru 58B	N55 35.7 E037 15.2	78 thru 78B	N55 35.7 E037 15.6
62 thru 64	N55 35.7 E037 15.4		
65	N55 35.6 E037 15.5		
66 thru 66B	N55 35.8 E037 15.3		

CHANGES: Reindexed.

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STRAIGHT-IN RWY		A	B	C	D
01	ILS	**833**′(200′)	**833**′(200′)	**833**′(200′)	**833**′(200′)
	FULL	**R550m**	**R550m**	**R550m**	**R550m**
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ❶	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**
	ALS out	R1500m	R1500m	C2100m	C2100m
	NDB ❶❷	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**	**1080**′(447′) **R1400m**
	ALS out	R1500m	R1500m	C2100m	C2100m
	NDB ❸	**1180**′(547′) **R2000m**	**1180**′(547′) **R2000m**	**1180**′(547′) **C2200m**	**1180**′(547′) **C2200m**
	ALS out	C2700m	C2700m	C2900m	C2900m
06	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**730**′(100′) **RA104′ R300m**	**730**′(100′) **RA104′ R300m**	**730**′(100′) **RA104′ R300m**	**730**′(100′) ❹ **RA104′ R300m**
	ILS	**830**′(200′)	**830**′(200′)	**830**′(200′)	**830**′(200′)
	FULL	**R550m**	**R550m**	**R550m**	**R550m**
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ❶	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**
	ALS out	R1500m	R1500m	C2200m	C2200m
	NDB ❶❷	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**	**1100**′(470′) **R1500m**
	ALS out	R1500m	R1500m	C2200m	C2200m
	NDB ❸	**1220**′(590′) **C2200m**	**1220**′(590′) **C2200m**	**1220**′(590′) **C2400m**	**1220**′(590′) **C2400m**
	ALS out	C2900m	C2900m	C3100m	C3100m
19	CAT 2 ILS	**733**′(100′) **RA105′ R300m**	**733**′(100′) **RA105′ R300m**	**733**′(100′) **RA105′ R300m**	**738**′(105′) **RA111′ R300m**
	ILS	**833**′(200′)	**833**′(200′)	**833**′(200′)	**833**′(200′)
	FULL	**R550m**	**R550m**	**R550m**	**R550m**
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH

❶ Continuous Descent Final Approach.
❷ with FAF.
❸ w/o FAF.
❹ Widebodied acft: DA(H) 732′(102′) RA106′.

CHANGES: Minimums.

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STRAIGHT-IN RWY		A	B	C	D
19 (contd)	RNAV ❶	**1150′**(517′) **R1500m**	**1150′**(517′) **R1500m**	**1150′**(517′) **R1600m**	**1150′**(517′) **R1600m**
	ALS out	R1500m	R1500m	C2400m	C2400m
	NDB ❶❷	**1150′**(517′) **R1500m**	**1150′**(517′) **R1500m**	**1150′**(517′) **R1600m**	**1150′**(517′) **R1600m**
	ALS out	R1500m	R1500m	C2400m	C2400m
	NDB ❸	**1250′**(617′) **C2300m**	**1250′**(617′) **C2300m**	**1250′**(617′) **C2500m**	**1250′**(617′) **C2500m**
	ALS out	C3000m	C3000m	C3200m	C3200m
24	CAT 3A ILS	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**	**RA50′ R200m**
	CAT 2 ILS	**786′**(100′) **RA102′ R300m**	**786′**(100′) **RA102′ R300m**	**786′**(100′) **RA102′ R300m**	**786′**(100′) **RA102′ R300m**
	ILS	**886′**(200′)	**886′**(200′)	**886′**(200′)	**886′**(200′)
	FULL	**R550m**	**R550m**	**R550m**	**R550m**
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ❶	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**
	ALS out	R1500m	R1500m	R1700m	R1700m
	NDB ❶❷	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**	**1060′**(374′) **R1000m**
	ALS out	R1500m	R1500m	R1700m	R1700m
	NDB ❸	**1480′**(794′) **C3100m**	**1480′**(794′) **C3100m**	**1480′**(794′) **C3300m**	**1480′**(794′) **C3300m**
	ALS out	C3800m	C3800m	C4000m	C4000m

❶ Continuous Descent Final Approach.
❷ with FAF.
❸ w/o FAF.

TAKE-OFF RWY 01, 06, 19, 24

	Approved Operators HIRL, CL & mult. RVR req	LVP must be in Force: RL, CL & mult. RVR req	LVP must be in Force: RL & CL	LVP must be in Force: RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A B C	125m	150m	200m	250m	400m	500m
D	150m	200m	250m	300m		

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-1) Eff 15 Oct

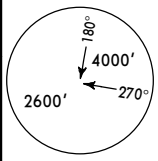
MOSCOW, RUSSIA
ILS DME Rwy 01

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

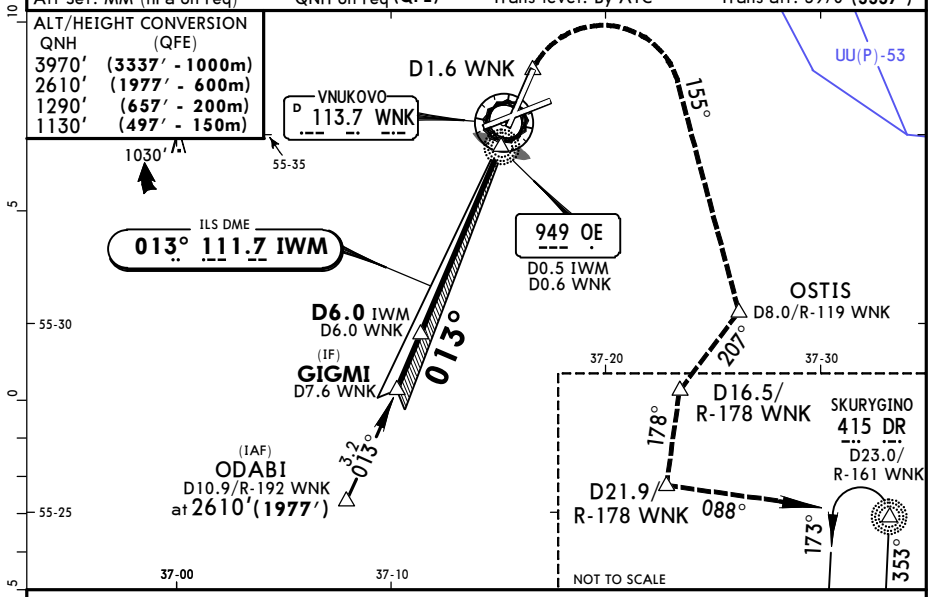
LOC IWM	Final Apch Crs	GS OE NDB	ILS DA(H)	Apt Elev 686'
111.7	013°	846'(213')	833'(200')	Rwy 633'

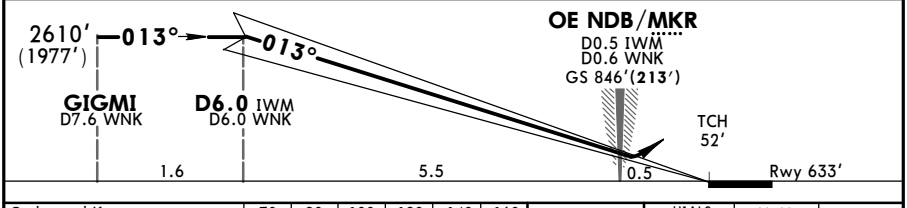


MISSED APCH: Climb STRAIGHT AHEAD to 1130'(497') or above to D1.6 WNK, then turn RIGHT onto 155° to OSTIS climbing to 2610'(1977'), then on 207° to D16.5 WNK, then on 178° to D21.9 WNK, then on 088° to DR NDB, or as directed.
At 1290'(657') immediately contact Radar.

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970'(3337')

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3337' - 1000m)
2610' (1977' - 600m)
1290' (657' - 200m)
1130' (497' - 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS
PAPI
MIM 1130' (497')
D1.6 WNK

STRAIGHT-IN LANDING RWY 01

	ILS DA(H) 833'(200') FULL	ILS DA(H) 833'(200') ALS out	LOC (GS out)
A	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B			
C			
D			

PANS OPS

CHANGES: None.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-2) Eff 15 Oct

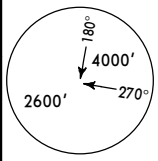
MOSCOW, RUSSIA
ILS (GNSS) Rwy 01

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

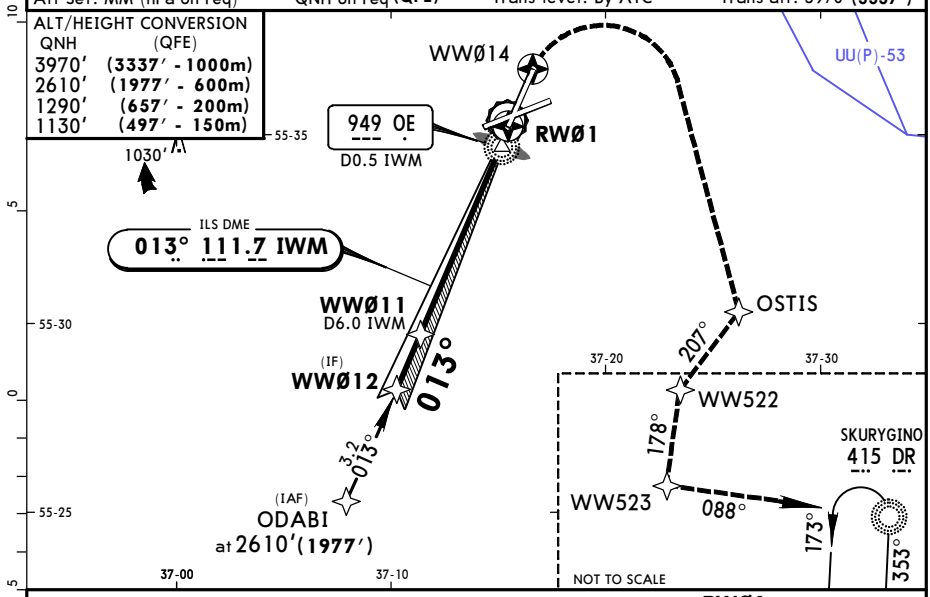
LOC IWM	Final Apch Crs	GS OE NDB	ILS DA(H)	Apt Elev 686′
111.7	013°	846′(213′)	833′(200′)	Rwy 633′

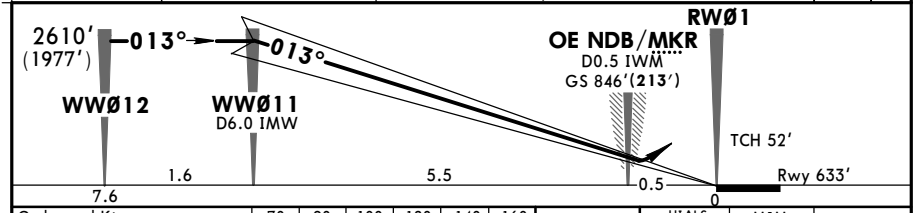


MISSED APCH: Climb STRAIGHT AHEAD to 1130′(497′) or above to WWØ14, then turn RIGHT direct to OSTIS climbing to 2610′(1977′), then proceed on 207° to WW522, then on 178° to WW523, then on 088° to DR NDB, or as directed.
At 1290′(657′) immediately contact Radar.

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3337′ - 1000m)
2610′ (1977′ - 600m)
1290′ (657′ - 200m)
1130′ (497′ - 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS
PAPI
MIM 1130′ (497′)
WWØ14

STRAIGHT-IN LANDING RWY 01

	ILS DA(H) 833′(200′) FULL	ILS DA(H) 833′(200′) ALS out	LOC (GS out)
A	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B			
C			
D			

PANS OPS

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-3) Eff 15 Oct

MOSCOW, RUSSIA
ILS DME Rwy 06

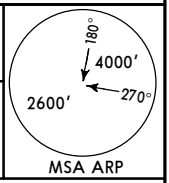
ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

BRIEFING STRIP

LOC IGT	Final Apch Crs	GS GT NDB	ILS DA(H)	Apt Elev 686′
108.9	058°	843′(213′)	830′(200′)	Rwy 630′

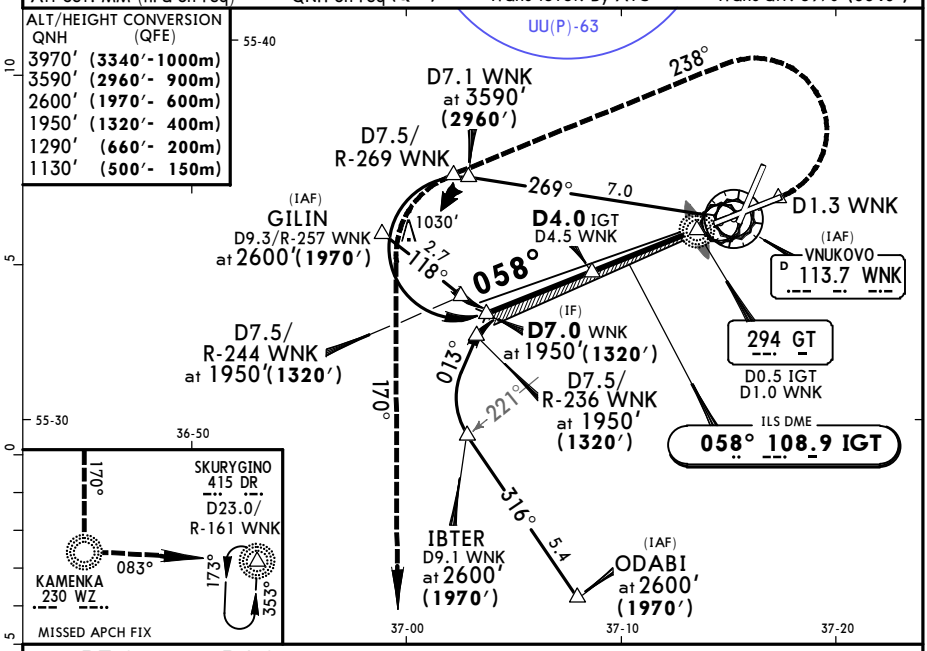
MISSED APCH: Climb STRAIGHT AHEAD to 1130′(500′) or above to D1.3 WNK, then turn LEFT onto 238° to D7.5 WNK climbing to 2600′(1970′), then turn LEFT onto 170° to WZ NDB, then on 083° to DR NDB, or as directed. At 1290′(660′) immediately contact Radar.

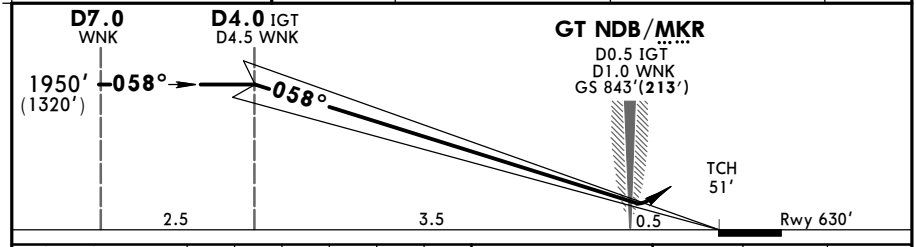


Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3340′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3340′-1000m)
3590′	(2960′- 900m)
2600′	(1970′- 600m)
1950′	(1320′- 400m)
1290′	(660′- 200m)
1130′	(500′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130′ (500′)
D1.3 WNK

STRAIGHT-IN LANDING RWY 06

	ILS		LOC (GS out)
DA(H)	830′(200′)		
	FULL	TDZ or CL out	ALS out
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B			
C			
D			

PANS OPS

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-3A

MOSCOW, RUSSIA
CAT II ILS DME Rwy 06

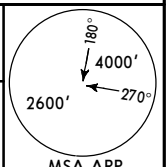
BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IGT	Final Apch Crs	GS	CAT II ILS	Apt Elev 686′
108.9	058°	GT NDB 843′(213′)	RA 104′ DA(H) 730′(100′)	Rwy 630′

MISSED APCH: Climb STRAIGHT AHEAD to 1130′(500′) or above to D1.3 WNK, then turn LEFT onto 238° to D7.5 WNK climbing to 2600′(1970′), then turn LEFT onto 170° to WZ NDB, then on 083° to DR NDB, or as directed. At 1290′(660′) immediately contact Radar.

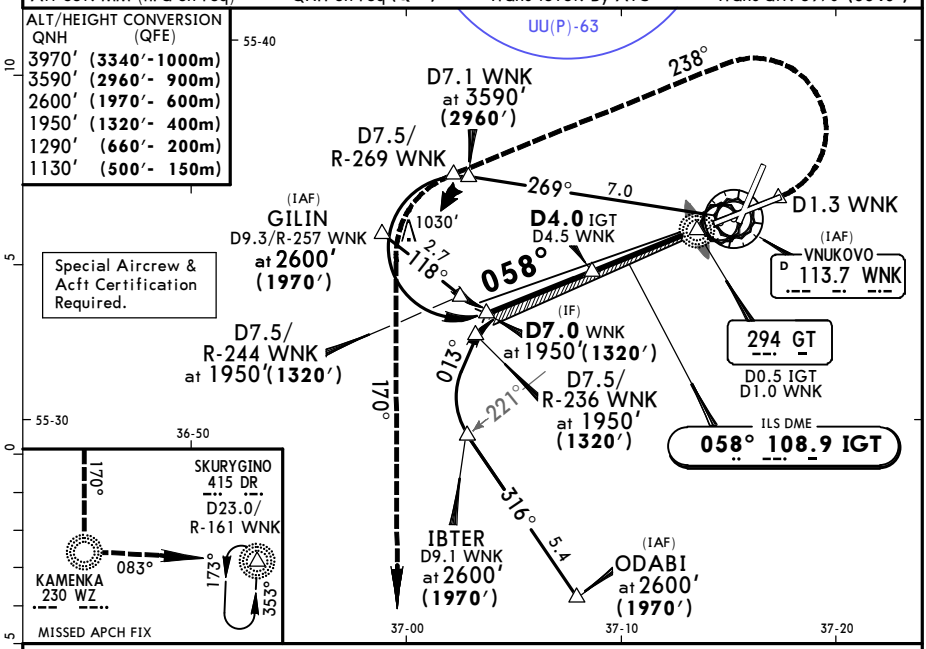


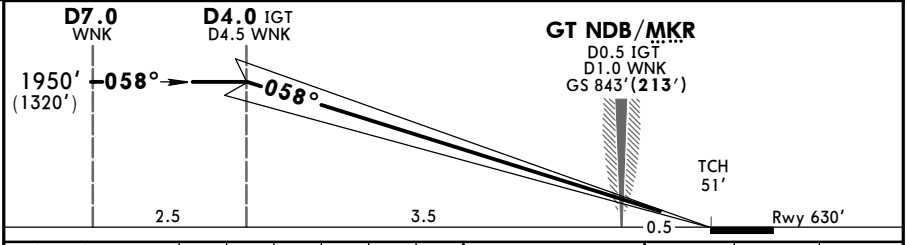
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3340′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3340′-1000m)
3590′	(2960′- 900m)
2600′	(1970′- 600m)
1950′	(1320′- 400m)
1290′	(660′- 200m)
1130′	(500′- 150m)

Special Aircrew & Acft Certification Required.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130′ (500′)
D1.3 WNK

STRAIGHT-IN LANDING RWY 06
CAT II ILS

RA 104′
DA(H) 730′(100′) 1

RVR 300m

PANS OPS

1 Widebodied acft: RA 106′ DA(H) 732′(102′)

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-4) Eff 15 Oct

MOSCOW, RUSSIA
ILS (GNSS) Rwy 06

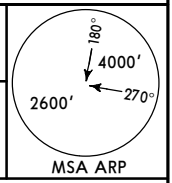
BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IGT	Final Apch Crs	GS GT NDB	ILS DA(H)	Apt Elev 686' Rwy 630'
108.9	058°	843'(213')	830'(200')	

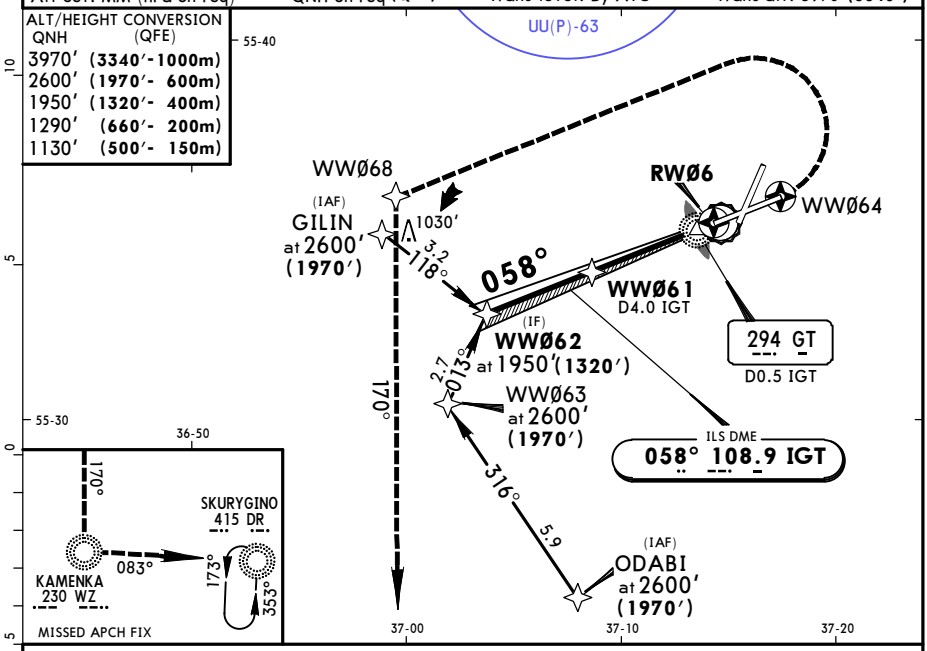
MISSED APCH: Climb STRAIGHT AHEAD to 1130'(500') or above to WWØ64, then turn LEFT direct to WWØ68 climbing to 2600'(1970'), then proceed on 170° to WZ NDB, then on 083° to DR NDB, or as directed. At 1290'(660') immediately contact Radar.

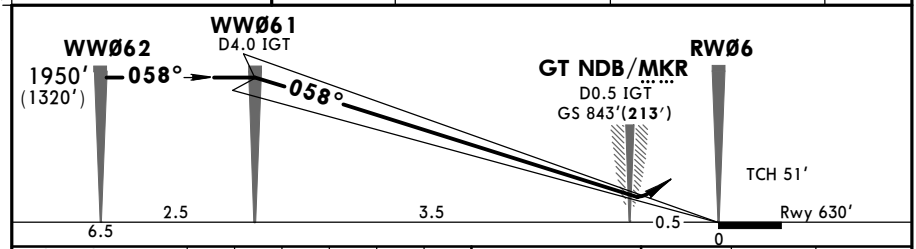


Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970'(3340')

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970'	(3340'-1000m)
2600'	(1970'- 600m)
1950'	(1320'- 400m)
1290'	(660'- 200m)
1130'	(500'- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130' (500')
WWØ64

STRAIGHT-IN LANDING RWY 06

	ILS	LOC (GS out)
DA(H)	830'(200')	

PANS OPS

	FULL	TDZ or CL out	ALS out	
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-4A

MOSCOW, RUSSIA
CAT II ILS (GNSS) Rwy 06

BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IGT	Final Apch Crs	GS	CAT II ILS	Apt Elev 686′
108.9	**058°**	GT NDB 843′(213′)	RA 104′ DA(H) 730′(100′)	Rwy 630′

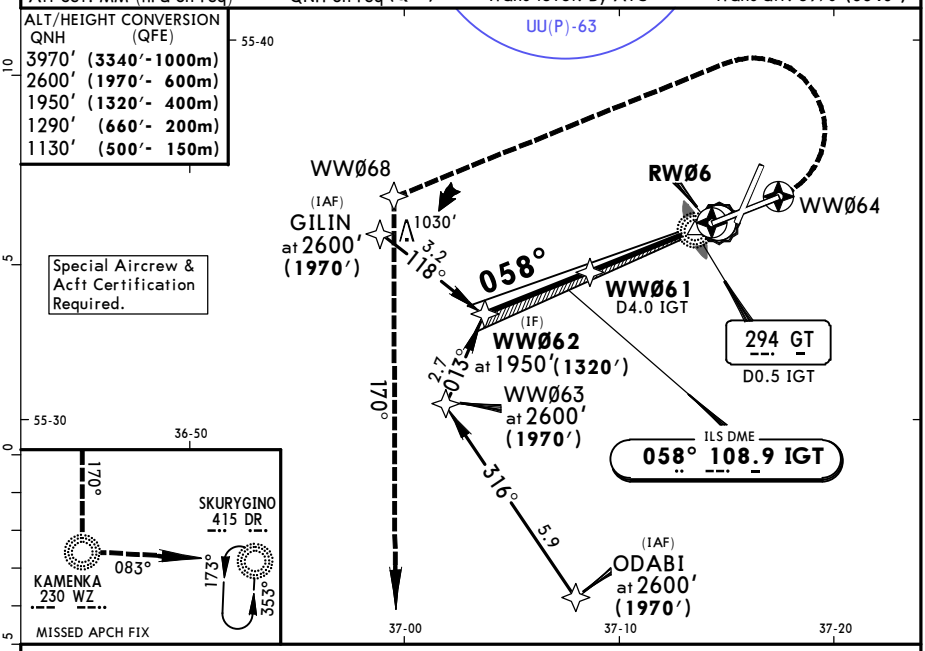
MISSED APCH: Climb STRAIGHT AHEAD to 1130′(500′) or above to WWØ64, then turn LEFT direct to WWØ68 climbing to 2600′(1970′), then proceed on 170° to WZ NDB, then on 083° to DR NDB, or as directed. At 1290′(660′) immediately contact Radar.

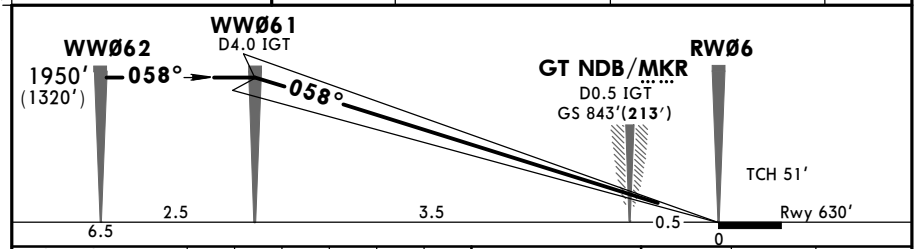
MSA ARP: 180° 4000′ 270° 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3340′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3340′-1000m)
2600′	(1970′- 600m)
1950′	(1320′- 400m)
1290′	(660′- 200m)
1130′	(500′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130′ (500′)
WWØ64

STRAIGHT-IN LANDING RWY 06
CAT II ILS

RA 104′
DA(H) 730′(100′) 1

RVR 300m

PANS OPS

1 Widebodied acft: RA 106′ DA(H) 732′(102′)

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-5) Eff 15 Oct

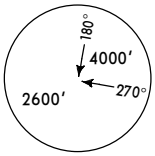
MOSCOW, RUSSIA
ILS DME Rwy 19

BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground	
126.0	118.3	120.45	121.7

LOC ITA	Final Apch Crs	GS SX NDB	ILS DA(H)	Apt Elev 686′ Rwy 633′
111.5	193°	846′(213′)	833′(200′)	

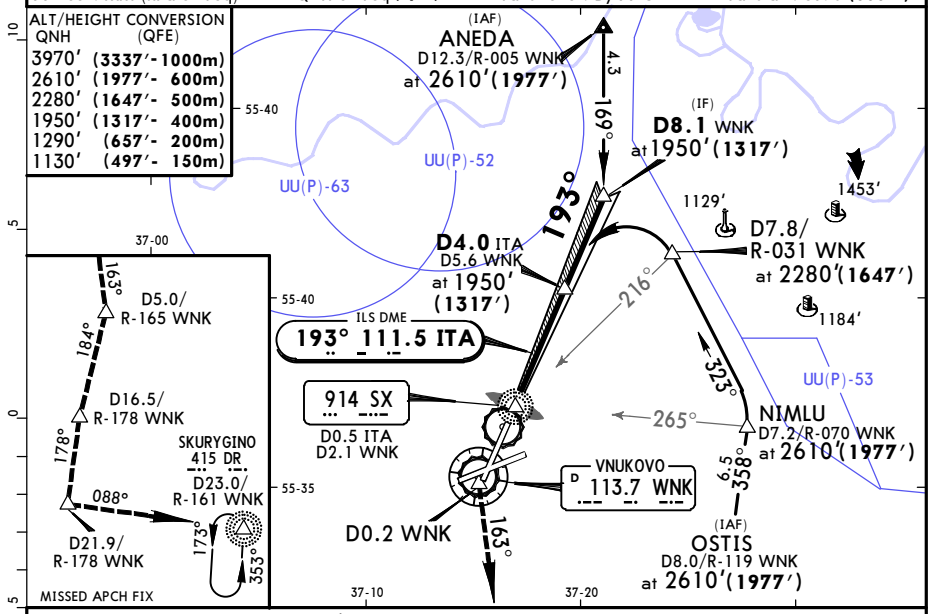


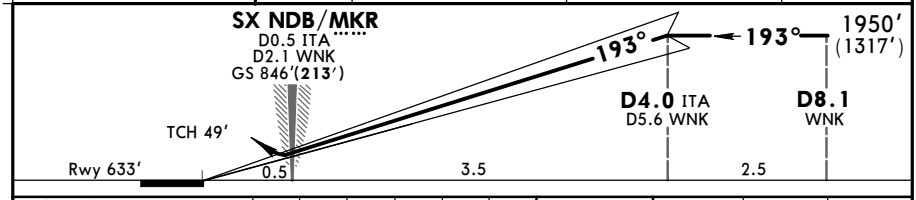
MSA
ARP

MISSED APCH: Climb STRAIGHT AHEAD to 1130′(497′) or above to D0.2 WNK, then turn LEFT onto 163° to D5.0 WNK climbing to 2610′(1977′). Turn RIGHT onto 184° to D16.5 WNK, then on 178° to D21.9 WNK, then on 088° to DR NDB, or as directed.
At 1290′(657′) immediately contact Radar.

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3337′-1000m)
2610′ (1977′- 600m)
2280′ (1647′- 500m)
1950′ (1317′- 400m)
1290′ (657′- 200m)
1130′ (497′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130′ (497′)
D0.2 WNK

STRAIGHT-IN LANDING RWY 19

	ILS DA(H) 833′(200′) FULL	ILS TDZ or CL out	ILS ALS out	LOC (GS out)
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

PANS OPS

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
(11-5A)

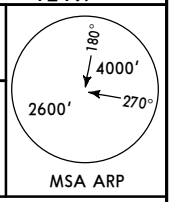
MOSCOW, RUSSIA
CAT II ILS DME Rwy 19

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC ITA	Final Apch Crs	GS	CAT II ILS	Apt Elev 686′
111.5	193°	SX NDB 846′(213′)	Refer to Minimums	Rwy 633′

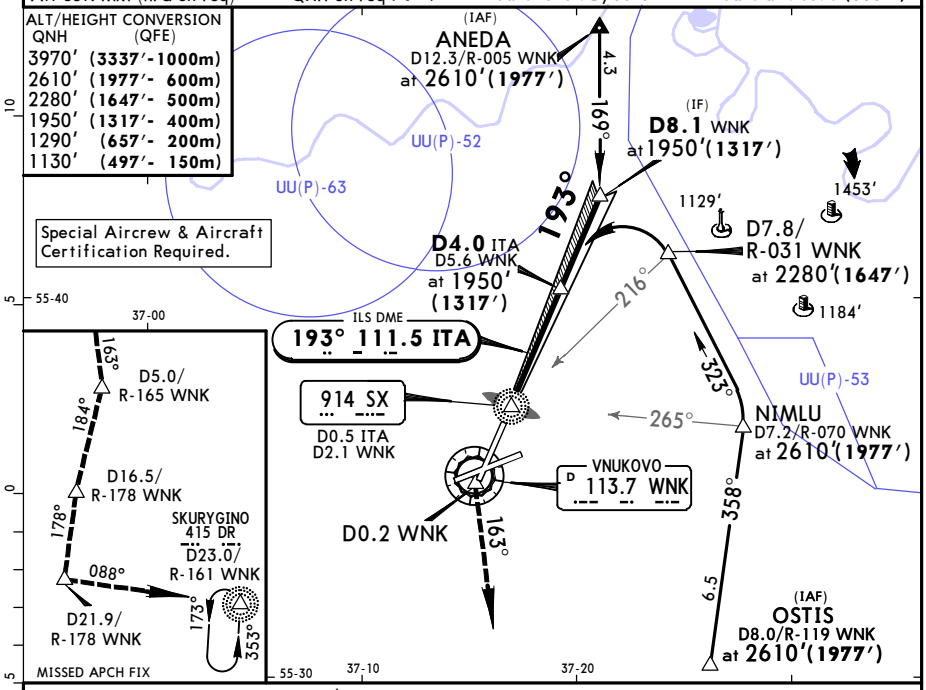


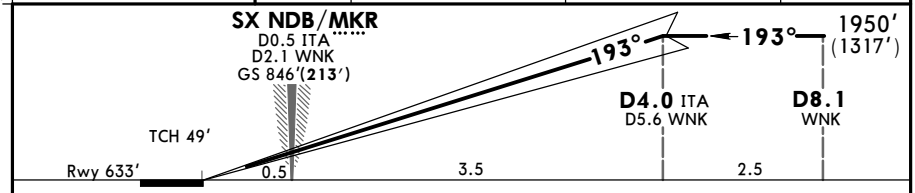
MISSED APCH: Climb STRAIGHT AHEAD to 1130′(497′) or above to D0.2 WNK, then turn LEFT onto 163° to D5.0 WNK climbing to 2610′(1977′). Turn RIGHT onto 184° to D16.5 WNK, then on 178° to D21.9 WNK, then on 088° to DR NDB, or as directed.
At 1290′(657′) immediately contact Radar.

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION QNH	(QFE)
3970′	(3337′-1000m)
2610′	(1977′- 600m)
2280′	(1647′- 500m)
1950′	(1317′- 400m)
1290′	(657′- 200m)
1130′	(497′- 150m)

Special Aircrew & Aircraft Certification Required.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1130′ (497′)
D0.2 WNK

PANS OPS

STRAIGHT-IN LANDING RWY 19
CAT II ILS

ABC	D
RA 105′	RA 111′
DA(H) 733′(100′)	DA(H) 738′(105′)

RVR 300m

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-6) Eff 15 Oct

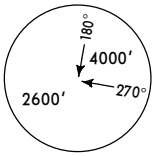
MOSCOW, RUSSIA
ILS (GNSS) Rwy 19

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground	
126.0	118.3	120.45	121.7

LOC ITA	Final Apch Crs	GS SX NDB	ILS DA(H)	Apt Elev 686′ Rwy 633′
111.5	193°	846′(213′)	833′(200′)	

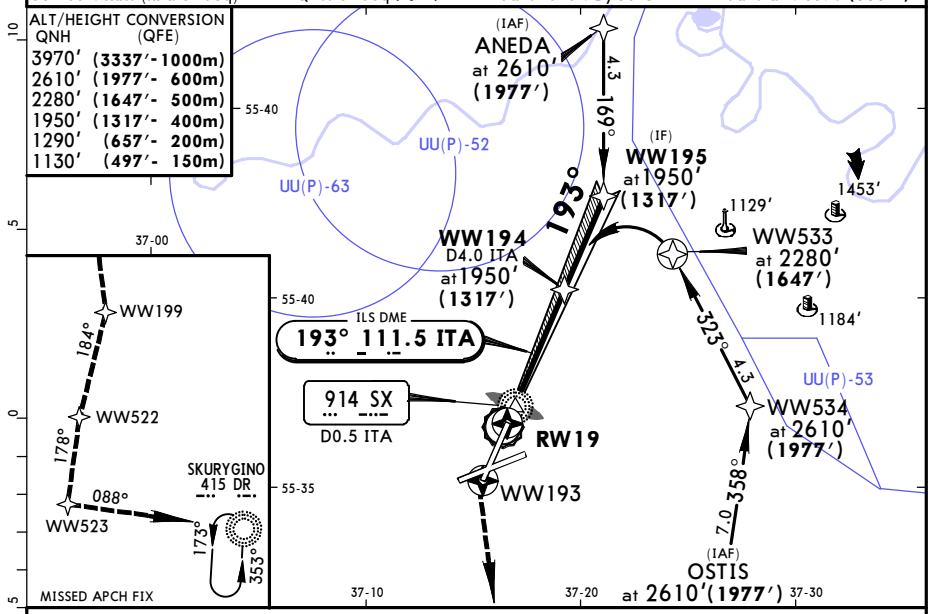


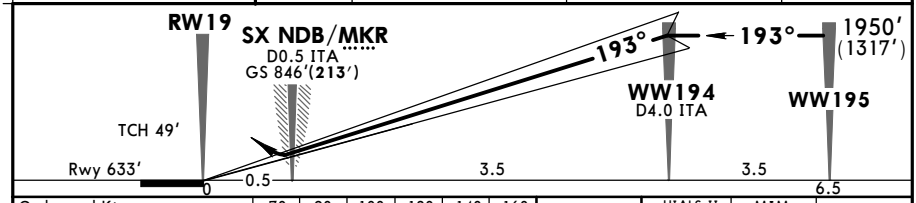
MISSED APCH: Climb STRAIGHT AHEAD to 1130′(497′) or above to WW193, then turn LEFT direct to WW199 climbing to 2610′(1977′), then proceed on 184° to WW522, then on 178° to WW523, then on 088° to DR NDB, or as directed.
At 1290′(657′) immediately contact Radar.

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3337′- 1000m)
2610′	(1977′- 600m)
2280′	(1647′- 500m)
1950′	(1317′- 400m)
1290′	(657′- 200m)
1130′	(497′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI | MIM 1130′ (497′) | WW193

STRAIGHT-IN LANDING RWY 19

	ILS DA(H) 833′(200′) FULL	ILS TDZ or CL out	ILS ALS out	LOC (GS out)
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

PANS OPS

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-6A

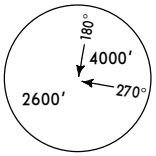
MOSCOW, RUSSIA
CAT II ILS (GNSS) Rwy 19

BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground	
126.0	118.3	120.45	121.7

LOC ITA	Final Apch Crs	GS	CAT II ILS	Apt Elev 686′
111.5	193°	SX NDB 846′(213′)	Refer to Minimums	Rwy 633′



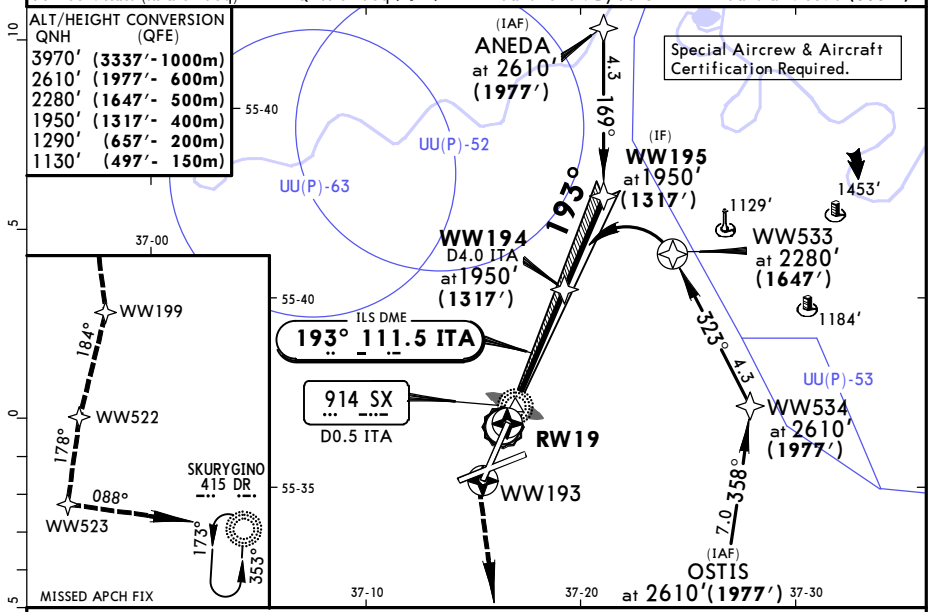
MISSED APCH: Climb STRAIGHT AHEAD to 1130′(497′) or above to WW193, then turn LEFT direct to WW199 climbing to 2610′(1977′), then proceed on 184° to WW522, then on 178° to WW523, then on 088° to DR NDB, or as directed.
At 1290′(657′) immediately contact Radar.

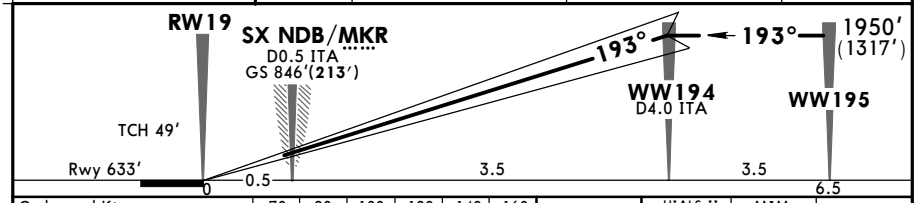
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3337′- 1000m)
2610′	(1977′- 600m)
2280′	(1647′- 500m)
1950′	(1317′- 400m)
1290′	(657′- 200m)
1130′	(497′- 150m)

Special Aircrew & Aircraft Certification Required.





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM
1130′
(497′)
WW193

PANS OPS

STRAIGHT-IN LANDING RWY 19
CAT II ILS

ABC	D
RA 105′	RA 111′
DA(H) 733′(100′)	DA(H) 738′(105′)

RVR 300m

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 (11-7) Eff 15 Oct

MOSCOW, RUSSIA
ILS DME Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	ILS DA(H)	Apt Elev 686′
111.1	238°	915′(229′)	886′(200′)	Rwy 686′

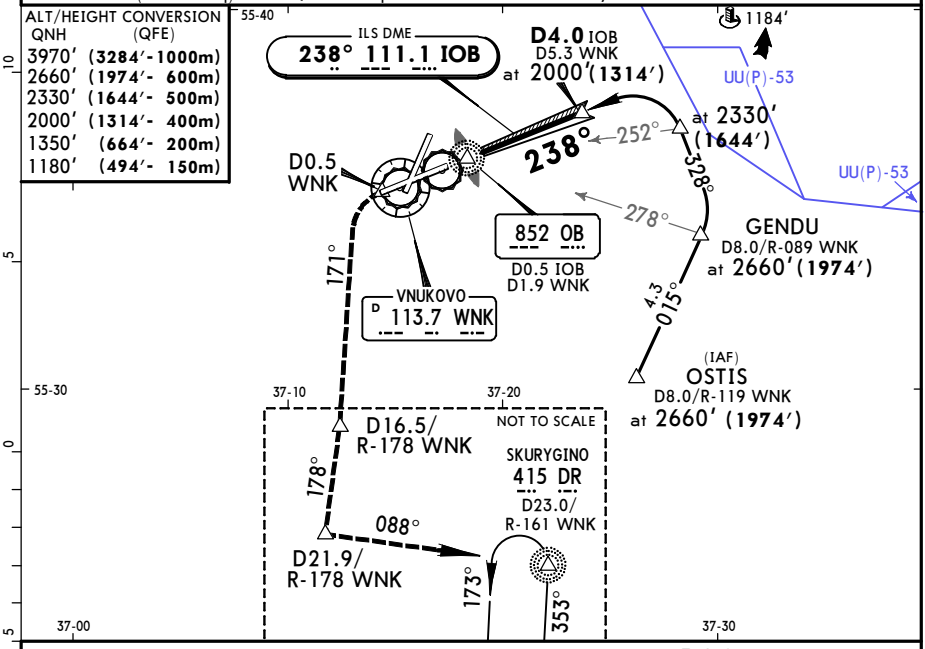
MISSED APCH: Climb STRAIGHT AHEAD to 1180′(494′) or above to D0.5 WNK, then turn LEFT onto 171° to D16.5 WNK climbing to 2660′(1974′). Turn RIGHT onto 178° to D21.9 WNK, then onto 088° to DR NDB, or as directed. At 1350′(664′) immediately contact Radar.

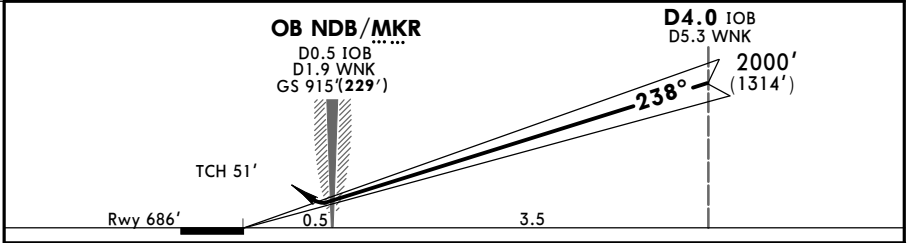
MSA ARP: 180°, 4000′, 270°, 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1180′ (494′)
D0.5 WNK

STRAIGHT-IN LANDING RWY 24

	ILS	LOC (GS out)
DA(H)	886′(200′)	

PANS OPS

	FULL	TDZ or CL out	ALS out	
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-7A

MOSCOW, RUSSIA
CAT II ILS DME Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	CAT II ILS RA 102′ DA(H)	Apt Elev 686′ Rwy 686′
111.1	238°	915′(229′)	786′(100′)	

MISSED APCH: Climb STRAIGHT AHEAD to 1180′(494′) or above to D0.5 WNK, then turn LEFT onto 171° to D16.5 WNK climbing to 2660′(1974′). Turn RIGHT onto 178° to D21.9 WNK, then onto 088° to DR NDB, or as directed. At 1350′(664′) immediately contact Radar.

MSA ARP: 180° 4000′ 270° 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)

Special Aircrew & Acft Certification Required.

ILS DME 238° 111.1 IOB

D4.0 IOB D5.3 WNK at 2000′(1314′)

1184′

UU(P)-53 at 2330′ (1644′)

UU(P)-53

252° 238° 328°

D0.5 WNK

278°

852 OB D0.5 IOB D1.9 WNK

GENDU D8.0/R-089 WNK at 2660′(1974′)

171°

VNUKOVO D 113.7 WNK

4.3 015°

(IAF) OSTIS D8.0/R-119 WNK at 2660′ (1974′)

55-40 55-30 37-10 37-20 37-00 37-30

D16.5/ R-178 WNK

NOT TO SCALE

SKURYGINO 415 DR D23.0/ R-161 WNK

178° 088°

D21.9/ R-178 WNK

173° 353°

OB NDB/MKR
D0.5 IOB
D1.9 WNK
GS 915′(229′)

D4.0 IOB D5.3 WNK 2000′ (1314′)

238°

TCH 51′

Rwy 686′ 0.5 3.5

Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI

MIM 1180′ (494′)

D0.5 WNK

STRAIGHT-IN LANDING RWY 24
CAT II ILS

RA 102′
DA(H) 786′(100′)

RVR 300m

PANS OPS

CHANGES: Chart reindexed.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-8

MOSCOW, RUSSIA
ILS (GNSS) A Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	ILS DA(H)	Apt Elev 686′ Rwy 686′
111.1	238°	915′(229′)	886′(200′)	

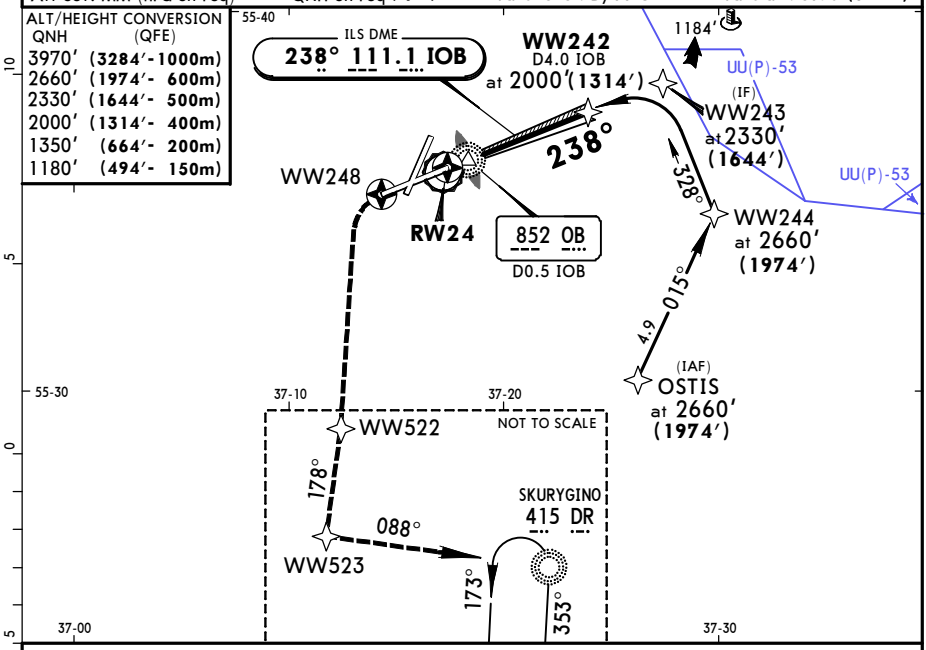
MISSED APCH: Climb STRAIGHT AHEAD to 1180′(494′) or above to WW248, then turn LEFT direct to WW522 climbing to 2660′(1974′), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350′(664′) immediately contact Radar.

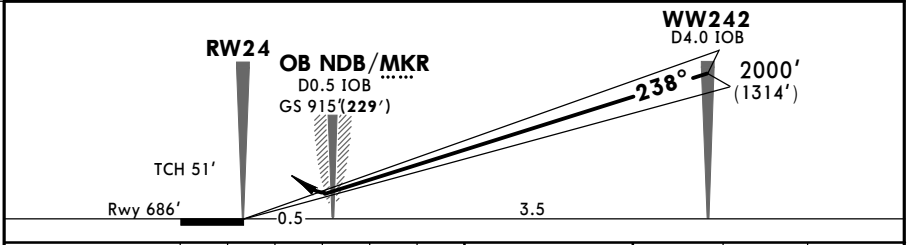
MSA ARP: 180° 4000′ 270° 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)





Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II
PAPI
MIM 1180′ (494′)
WW248

STRAIGHT-IN LANDING RWY 24

	ILS	LOC (GS out)
DA(H)	886′(200′)	

PANS OPS

	FULL	TDZ or CL out	ALS out	
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN

9 OCT 15
Eff 15 Oct

(11-8A)

MOSCOW, RUSSIA
CAT II ILS (GNSS) A Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	CAT II ILS RA 102′ DA(H)	Apt Elev 686′ Rwy 686′
111.1	238°	915′(229′)	786′(100′)	

MISSED APCH: Climb STRAIGHT AHEAD to 1180′(494′) or above to WW248, then turn LEFT direct to WW522 climbing to 2660′(1974′), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350′(664′) immediately contact Radar.

MSA ARP: 180° 4000′ 270° 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)

ILS DME 238° 111.1 IOB

WW242 D4.0 IOB at 2000′(1314′)

238°

WW248

RW24

852 OB D0.5 IOB

WW243 at 2330′ (1644′)

328°

WW244 at 2660′ (1974′)

015°

4.9

(IAF) OSTIS at 2660′ (1974′)

1184′

UU(P)-53 (IF)

UU(P)-53

Special Aircrew & Acft Certification Required.

55-40 55-30 37-00 37-10 37-20 37-30

NOT TO SCALE

WW522

178°

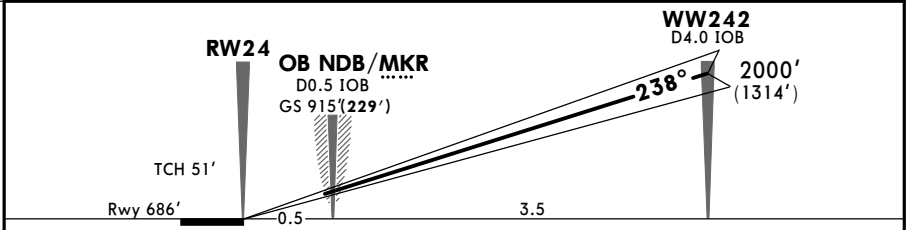
088°

WW523

SKURYGINO 415 DR

173°

353°



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI

MIM 1180′ (494′)

WW248

STRAIGHT-IN LANDING RWY 24
CAT II ILS

RA 102′
DA(H) 786′(100′)

RVR 300m

PANS OPS

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-9

MOSCOW, RUSSIA
ILS (GNSS) B Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	ILS DA(H)	Apt Elev 686' Rwy 686'
111.1	238°	915'(229')	886'(200')	

MISSED APCH: Climb STRAIGHT AHEAD to 1180'(494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660'(1974'), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350'(664') immediately contact Radar.

MSA ARP: 180°, 4000', 270°, 2600'

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970'(3284')

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970'	(3284'-1000m)
2660'	(1974'- 600m)
2330'	(1644'- 500m)
2000'	(1314'- 400m)
1350'	(664'- 200m)
1180'	(494'- 150m)

ILS DME 238° 111.1 IOB

WW242 D4.0 IOB at 2000' (1314')

1184'

(IF) WW246 at 2330' (1644')

3.2 238° 238°

328° 4.3

UU(P)-53

UU(P)-53

WW247 at 2660' (1974')

WW248

RW24

852 OB D0.5 IOB

By ATC

028° 5.4

(IAF) OSTIS at 2660' (1974')

55-40 55-30 37-00 37-10 37-20 37-30

NOT TO SCALE

WW522

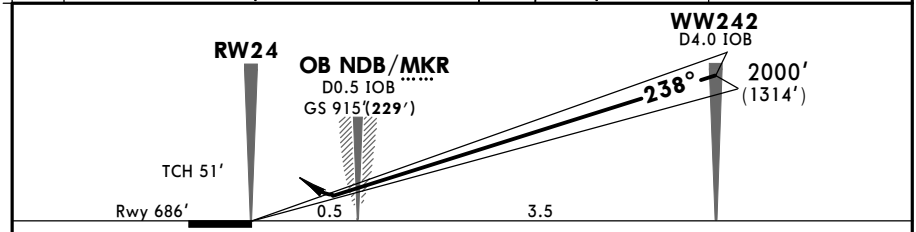
178°

088°

WW523

SKURYGINO 415 DR

173° 353°



Gnd speed-Kts		70	90	100	120	140	160
ILS GS	3.00°	372	478	531	637	743	849

HIALS-II PAPI | MIM 1180' (494') | WW248

STRAIGHT-IN LANDING RWY 24

	ILS			LOC (GS out)
DA(H)	886'(200')			
	FULL	TDZ or CL out	ALS out	
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED
B				
C				
D				

PANS OPS

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15
Eff 15 Oct
11-9A

MOSCOW, RUSSIA
CAT II ILS (GNSS) B Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

LOC IOB	Final Apch Crs	GS OB NDB	CAT II ILS RA 102′ DA(H)	Apt Elev 686′ Rwy 686′
111.1	238°	915′(229′)	786′(100′)	

MISSED APCH: Climb STRAIGHT AHEAD to 1180′(494′) or above to WW248, then turn LEFT direct to WW522 climbing to 2660′(1974′), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350′(664′) immediately contact Radar.

MSA ARP: 180° 4000′ 270° 2600′

Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)

ILS DME 238° 111.1 IOB

WW242 D4.0 IOB at 2000′ (1314′)

1184′

(IF) WW246 at 2330′ (1644′)

3.2 238°

238°

328°

4.3

UU(P)-53

UU(P)-53

WW248

RW24

852 OB D0.5 IOB

WW247 at 2660′ (1974′)

By ATC

Special Aircrew & Acft Certification Required.

028°

5.4

(IAF) OSTIS at 2660′ (1974′)

55-40 55-30 37-00 37-10 37-20 37-30

NOT TO SCALE

WW522

178°

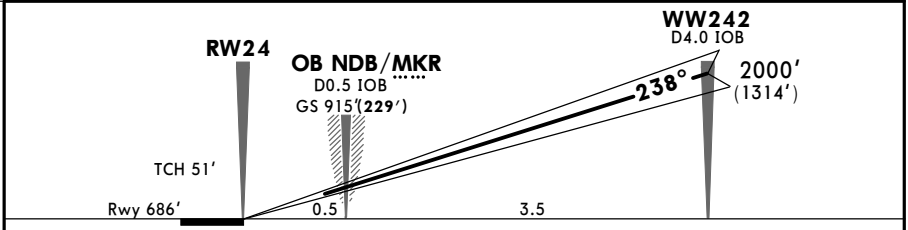
SKURYGINO 415 DR

088°

WW523

173°

353°



Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

HIALS-II PAPI

MIM 1180′ (494′)

WW248

STRAIGHT-IN LANDING RWY 24
CAT II ILS

RA 102′
DA(H) 786′(100′)

RVR 300m

BRIEFING STRIP™

PANS OPS

CHANGES: New procedure.

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UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14 (12-1) Eff 3 Apr

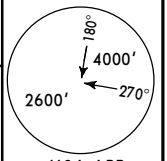
MOSCOW, RUSSIA
RNAV (GNSS) Rwy 01

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

RNAV	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 686′
	013°	WW011 2610′ (1977′)	1080′ (447′)	RWY 633′



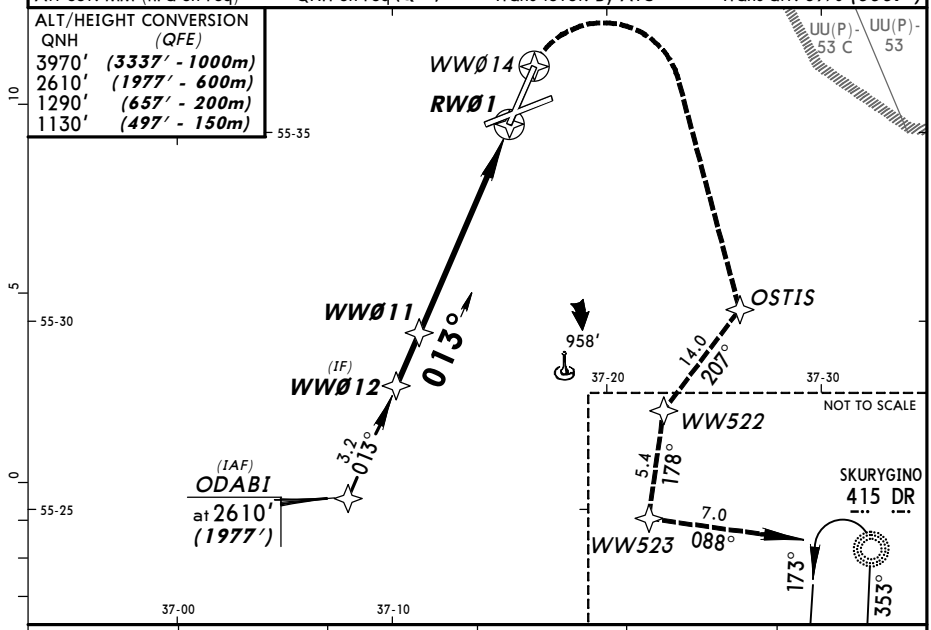
MSA ARP

MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (497′) or above to WW014, then turn RIGHT direct to OSTIS climbing to 2610′ (1977′), then on 207° to WW522, then on 178° to WW523, then on 088° DR NDB, or as directed. At 1290′(657′) immediately contact Radar.

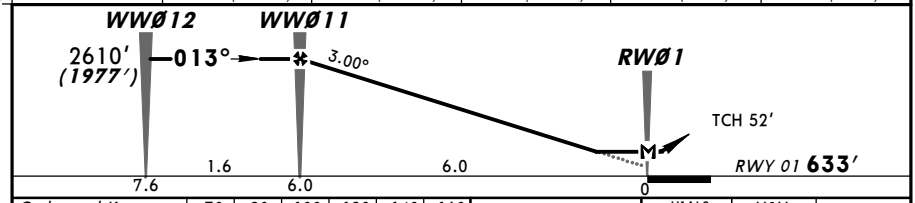
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3337′ - 1000m)
2610′	(1977′ - 600m)
1290′	(657′ - 200m)
1130′	(497′ - 150m)



DIST to RW01	5.9	4.9	3.8	2.7	1.6
ALTITUDE (HAT)	2570′(1937′)	2230′(1597′)	1880′(1247′)	1540′(907′)	1210′(577′)



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW01							

HIALS
PAPI
MIM 1130′ (497′)
WW014

STRAIGHT-IN LANDING RWY 01

MDA(H) 1080′(447′)

PANS OPS

		ALS out
A	RVR 720m VIS 800m	RVR 1500m VIS 1600m
B		
C	1200m	RVR 1800m VIS 2000m
D	RVR 1500m VIS 1600m	2400m

CHANGES: Step down fix withdrawn. TCH.

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UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14 (12-2) Eff 3 Apr

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 06

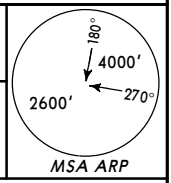
BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

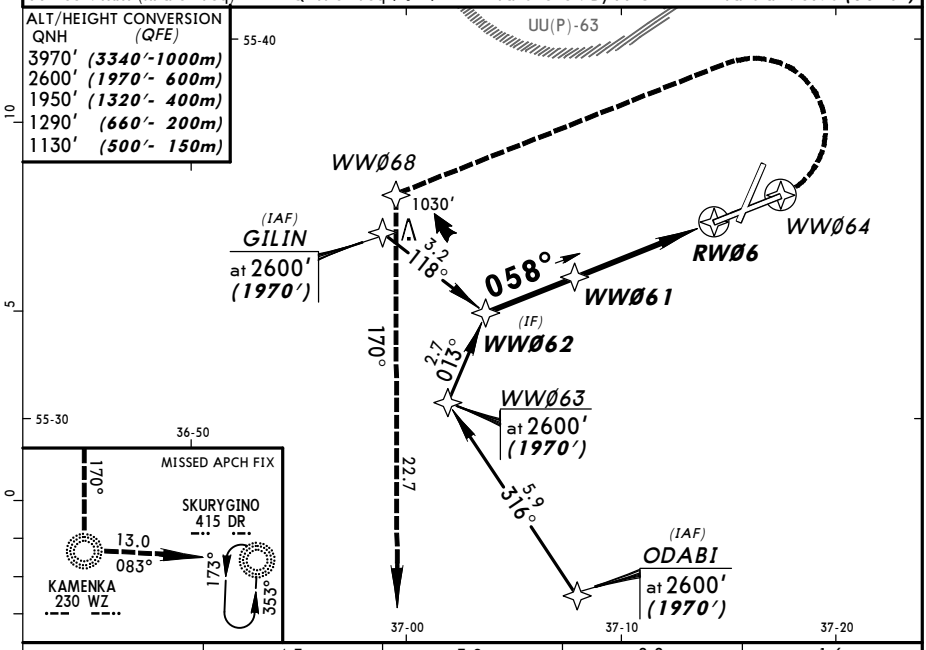
RNAV	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 686′
	058°	WW061 1950′ (1320′)	1100′ (470′)	RWY 630′

MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (500′) or above to WW064. Turn LEFT direct to WW068 climbing to 2600′ (1970′), then on 170° to WZ NDB, then on 083° to DR NDB, or as directed.
At 1290′(660′) immediately contact Radar.

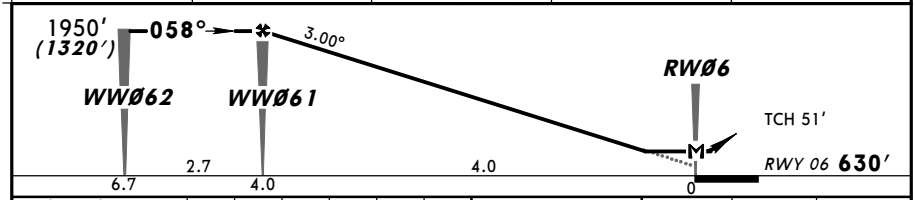


Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3340′)

ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3340′-1000m)
2600′ (1970′- 600m)
1950′ (1320′- 400m)
1290′ (660′- 200m)
1130′ (500′- 150m)



DIST to RW06	4.3	3.2	2.2	1.6
ALTITUDE (HAT)	1950′(1320′)	1640′(1010′)	1320′(690′)	1160′(530′)



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW06						

HIALS-II
PAPI
MIM 1130′ (500′)
WW064

STRAIGHT-IN LANDING RWY 06

MDA(H) 1100′(470′)

PANS OPS

		ALS out
A	RVR 720m VIS 800m	RVR 1500m VIS 1600m
B		
C	1200m	RVR 1800m VIS 2000m
D	RVR 1500m VIS 1600m	2400m

CHANGES: Rwy elev. TCH.

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UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14 (12-3) Eff 3 Apr

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 19

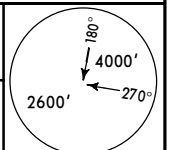
ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

BRIEFING STRIP

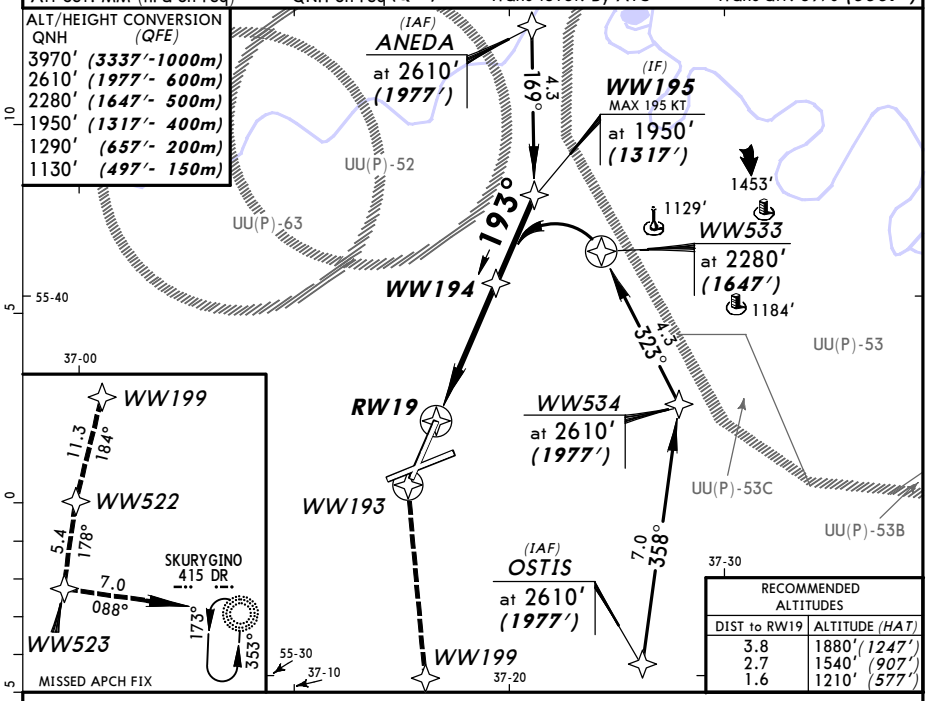
RNAV	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev / RWY
	193°	WW194 1950′ (1317′)	1150′ (517′)	686′ / RWY 633′

MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (497′) or above to WW193. Turn LEFT direct to WW199 climbing to 2610′ (1977′), then on 184° to WW522, then on 178° to WW523, then on 088° to DR NDB, or as directed. At 1290′(657′) immediately contact Radar.

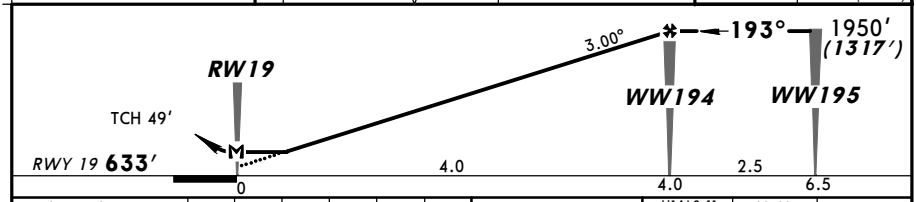


Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION
QNH (QFE)
3970′ (3337′-1000m)
2610′ (1977′- 600m)
2280′ (1647′- 500m)
1950′ (1317′- 400m)
1290′ (657′- 200m)
1130′ (497′- 150m)



RECOMMENDED ALTITUDES	
DIST to RW19	ALTITUDE (HAT)
3.8	1880′ (1247′)
2.7	1540′ (907′)
1.6	1210′ (577′)



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW19						

HIALS-II
PAPI
MIM 1130′ (497′) WW193

STRAIGHT-IN LANDING RWY 19

MDA(H) 1150′(517′)

PANS OPS

		ALS out
A	RVR 720m VIS 800m	RVR 1500m VIS 1600m
B		
C	RVR 1500m VIS 1600m	2400m
D	RVR 1800m VIS 2000m	2800m

CHANGES: Procedure. TCH.

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UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14
Eff 3 Apr
(12-4)

MOSCOW, RUSSIA
RNAV (GNSS) A Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach 1
131.85 (Russian 125.87)	128.0	123.4	122.3

VNUKOVO Radar	VNUKOVO Tower/Precision (TWR)	Ground
126.0	118.3	120.45 121.7

RNAV	Final Apch Crs	Minimum Alt WW242	MDA(H)	Apt Elev 686′ RWY 686′
	238°	2000′ (1314′)	1060′ (374′)	

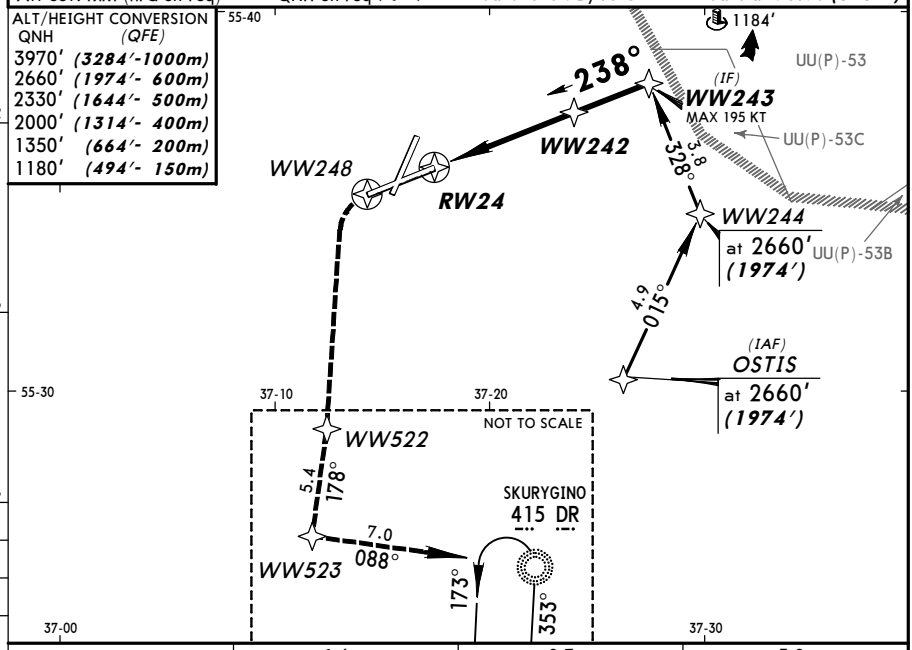
MISSED APCH: Climb STRAIGHT AHEAD to 1180′ (494′) or above to WW248, then turn LEFT direct to WW522 climbing to 2660′ (1974′), then on 178° to WW523, then on 088° to DR NDB, or as directed.
At 1350′(664′) immediately contact Radar.

MSA ARP: 180° 4000′ 270° 2600′

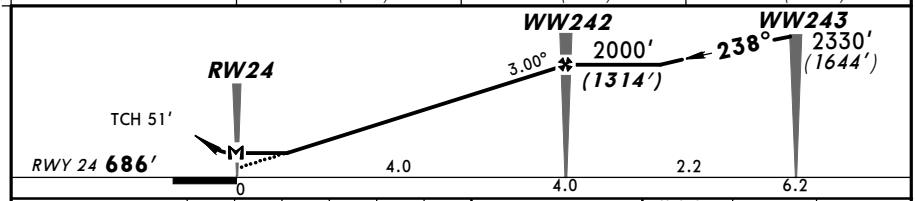
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)



DIST to RW24	1.6	2.7	3.8
ALTITUDE (HAT)	1260′(574′)	1590′(904′)	1940′(1254′)



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW24						

HIALS-II
PAPI
MIM 1180′ (494′)
WW248

STRAIGHT-IN LANDING RWY 24

MDA(H) 1060′(374′)

	ALS out
A	
B	RVR 720m VIS 800m / RVR 1500m VIS 1600m
C	
D	RVR 1500m VIS 1600m / RVR 1800m VIS 2000m

PANS OPS

CHANGES: TCH.

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UUWW/VKO
VNUKOVO

JEPPESEN
13 DEC 13 (12-5)

MOSCOW, RUSSIA
RNAV (GNSS) B Rwy 24

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
131.85 (Russian 125.87)	128.0	123.4	122.3
VNUKOVO Radar	**VNUKOVO Precision (PAR)**	**VNUKOVO Tower**	**Ground**
126.0	118.3	118.3	120.45 121.7

RNAV	Final Apch Crs	Minimum Alt WW242	MDA(H)	Apt Elev 686′
	238°	2000′ (1314′)	1060′ (374′)	RWY 686′

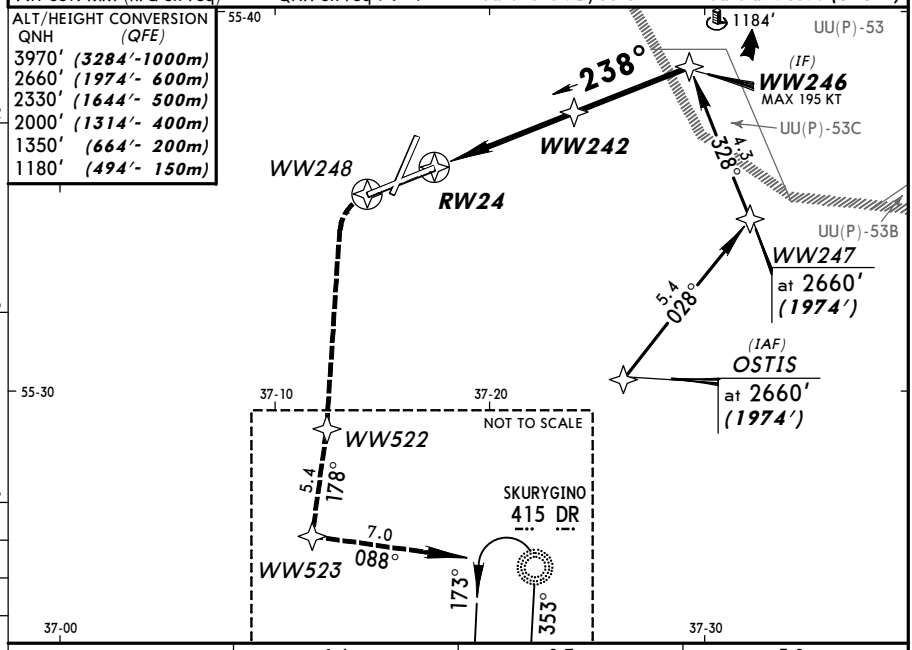
MISSED APCH: Climb STRAIGHT AHEAD to 1180′ (494′) or above to WW248, then turn LEFT direct to WW522 climbing to 2660′ (1974′). Then onto 178° to WW523, then onto 088° to DR NDB, or as directed.
At 1350′(664′) immediately contact Radar.

MSA ARP: 180° 4000′ 270° 2600′

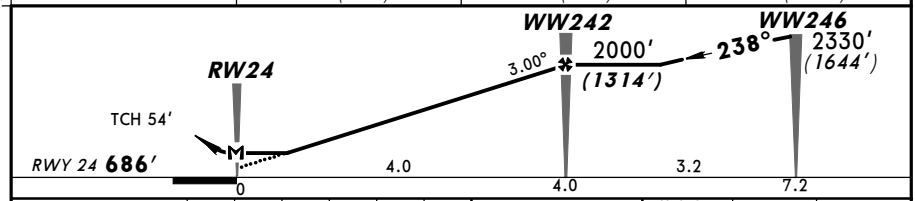
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH (QFE)
3970′ (3284′-1000m)
2660′ (1974′- 600m)
2330′ (1644′- 500m)
2000′ (1314′- 400m)
1350′ (664′- 200m)
1180′ (494′- 150m)



DIST to RW24	1.6	2.7	3.8
ALTITUDE (HAT)	1260′(574′)	1590′(904′)	1940′(1254′)



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW24						

HIALS-II
PAPI
1180′ (494′)
WW248

STRAIGHT-IN LANDING RWY 24

MDA(H) 1060′(374′)

PANS OPS

	ALS out
A	
B	RVR 720m VIS 800m / RVR 1500m VIS 1600m
C	
D	RVR 1500m VIS 1600m / RVR 1800m VIS 2000m

CHANGES: Minimums.

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UUWW/VKO
VNUKOVO

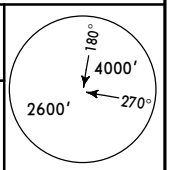
JEPPESEN
6 MAR 15 (16-1)

MOSCOW, RUSSIA
NDB/MKR Rwy 01

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
131.85 (Russian 125.87)	128.0	123.4	122.3
VNUKOVO Radar	**VNUKOVO Precision (PAR)**	**VNUKOVO Tower**	**Ground**
126.0	118.3	118.3	120.45 121.7

BRIEFING STRIP TM

NDB	Final	Minimum Alt	MDA(H)	Apt Elev 686′
OE	Apch Crs	D6.0	(CONDITIONAL)	RWY 633′
949	013°	2610′ (1977′)	1080′ (447′)	

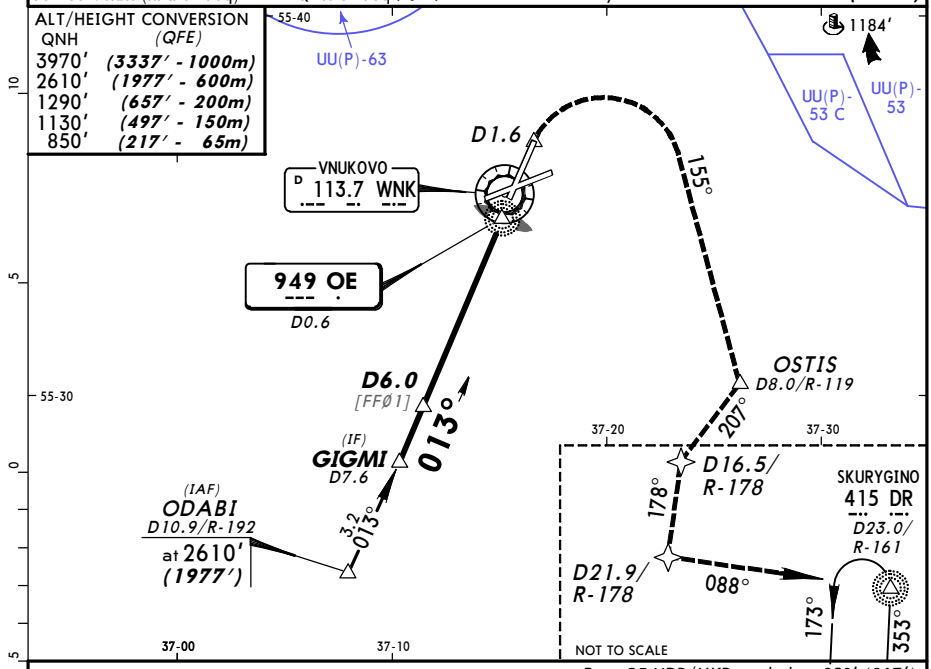


MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (497′) or above to D1.6, turn RIGHT onto 155° to OSTIS climbing to 2610′ (1977′), then onto 207° to D16.5. Then onto 178° to D21.9, then onto 088° to DR NDB, or as directed. At 1290′(657′)immediately contact Radar.

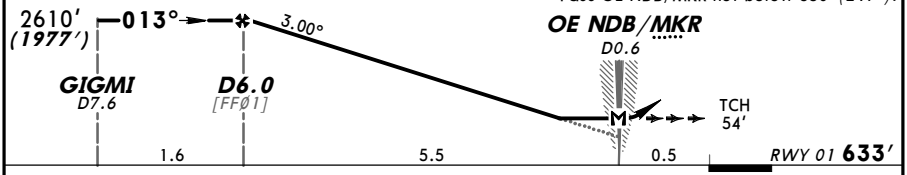
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3337′ - 1000m)
2610′	(1977′ - 600m)
1290′	(657′ - 200m)
1130′	(497′ - 150m)
850′	(217′ - 65m)



Pass OE NDB/MKR not below 850′ (217′).



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at OE NDB/MKR/D0.6							

HIALS
PAPI

1130′
(497′)

D1.6

STRAIGHT-IN LANDING RWY 01

	With FAF MDA(H) 1080′(447′)		W/o FAF MDA(H) 1180′(547′)	
		ALS out		ALS out
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m
B				
C		RVR 1800m VIS 2000m	RVR 1500m VIS 1600m	2400m
D	RVR 1800m VIS 2000m	2400m	2400m	2800m

PANS OPS

CHANGES: Additional fix added.

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UUWW/VKO
VNUKOVO

JEPPESEN
6 MAR 15 (16-2)

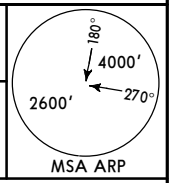
MOSCOW, RUSSIA
NDB/MKR Rwy 06

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
131.85 (Russian 125.87)	128.0	123.4	122.3
VNUKOVO Radar	**VNUKOVO Precision (PAR)**	**VNUKOVO Tower**	**Ground**
126.0	118.3	118.3	120.45 121.7

BRIEFING STRIP

NDB GT	Final Apch Crs	Minimum Alt D4.5	MDA(H) (CONDITIONAL)	Apt Elev 686′ RWY 630′
294	058°	1950′(1320′)	1100′(470′)	

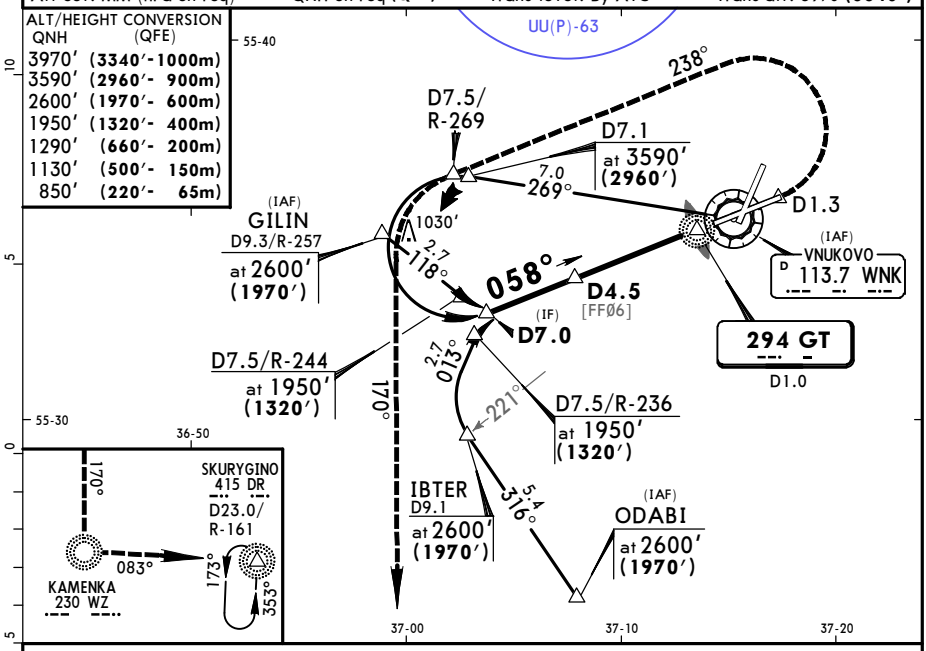
MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (500′) or above to D1.3, turn LEFT onto 238° to D7.5 climbing to 2600′ (1970′), then turn LEFT onto 170° to WZ NDB. Then onto 083° to DR NDB, or as directed.
At 1290′(660′) immediately contact Radar.



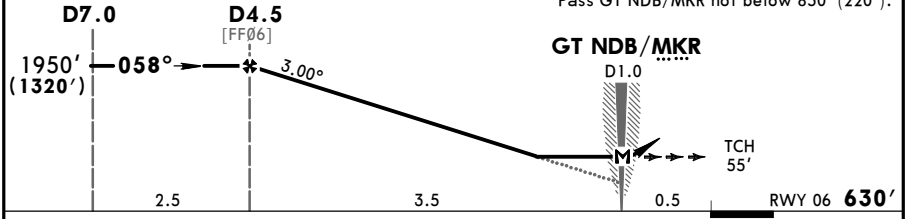
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3340′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3340′-1000m)
3590′	(2960′- 900m)
2600′	(1970′- 600m)
1950′	(1320′- 400m)
1290′	(660′- 200m)
1130′	(500′- 150m)
850′	(220′- 65m)



Pass GT NDB/MKR not below 850′ (220′).



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at GT NDB/MKR/D1.0							

HIALS-II
PAPI
1130′ (500′)
D1.3

STRAIGHT-IN LANDING RWY 06

PANS OPS

	With FAF MDA(H) 1100′(470′)		W/o FAF MDA(H) 1220′(590′)	
		ALS out		ALS out
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m
B				
C		RVR 1800m VIS 2000m	RVR 1500m VIS 1600m	2400m
D	RVR 1800m VIS 2000m	2400m	2400m	2800m

CHANGES: Additional fix added.

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UUWW/VKO
VNUKOVO

JEPPESEN
6 MAR 15 (16-3)

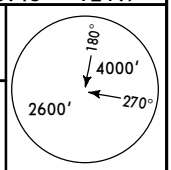
MOSCOW, RUSSIA
NDB/MKR Rwy 19

BRIEFING STRIP TM

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
131.85 (Russian 125.87)	128.0	123.4	122.3
VNUKOVO Radar	**VNUKOVO Precision (PAR)**	**VNUKOVO Tower**	**Ground**
126.0	118.3	118.3	120.45 121.7

NDB	Final	Minimum Alt	MDA(H)	Apt Elev 686′
SX	Apch Crs	D5.6	(CONDITIONAL)	RWY 633′
914	193°	1950′ (1317′)	1150′ (517′)	

MISSED APCH: Climb STRAIGHT AHEAD to 1130′ (497′) or above to D0.2, turn LEFT onto 163° to D5.0 climbing to 2610′ (1977′). Turn RIGHT onto 184° to D16.5, then onto 178° to D21.9, then onto 088° to DR NDB, or as directed. At 1290′(657′) immediately contact Radar.

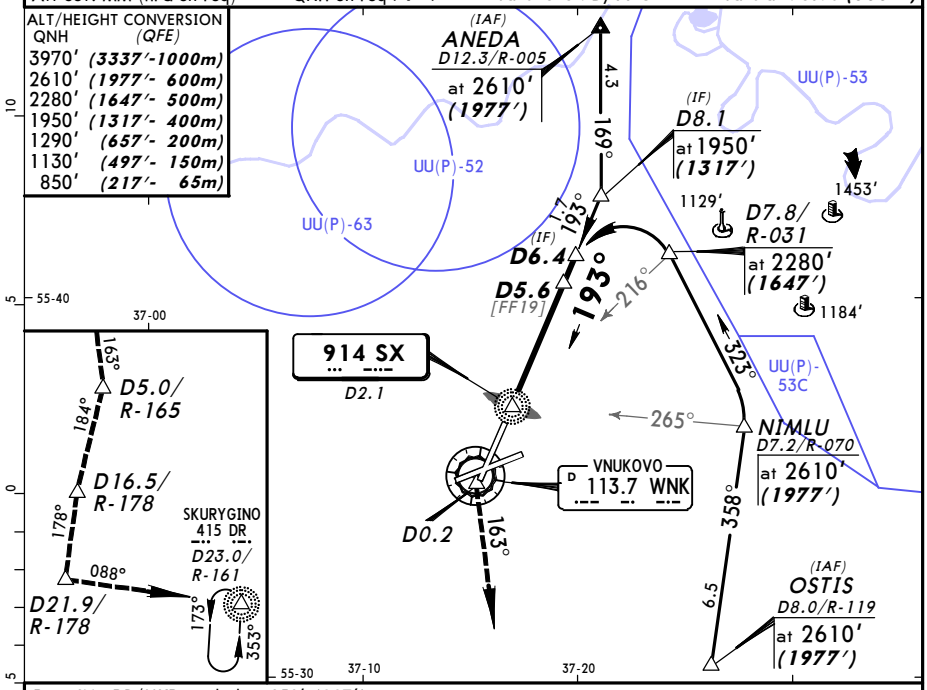


MSA ARP

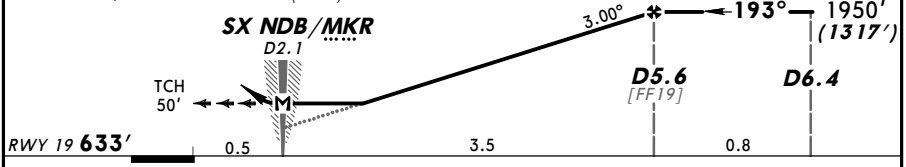
Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3337′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3337′-1000m)
2610′	(1977′- 600m)
2280′	(1647′- 500m)
1950′	(1317′- 400m)
1290′	(657′- 200m)
1130′	(497′- 150m)
850′	(217′- 65m)



Pass SX NDB/MKR not below 850′ (217′).



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at SX NDB/MKR/D2.1							

HIALS-II
PAPI
1130′ (497′)
D0.2

PANS OPS

STRAIGHT-IN LANDING RWY 19

	With FAF MDA(H) 1150′(517′)		W/o FAF MDA(H) 1250′(617′)	
		ALS out		ALS out
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m
B				
C	RVR 1500m VIS 1600m	2400m	RVR 1800m VIS 2000m	2800m
D	2400m	2800m	2800m	3200m

CHANGES: Additional fix added.

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UUWW/VKO
VNUKOVO

JEPPESEN
6 MAR 15 (16-4)

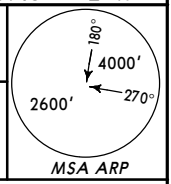
MOSCOW, RUSSIA
NDB/MKR Rwy 24

BRIEFING STRIP™

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
131.85 (Russian 125.87)	128.0	123.4	122.3
VNUKOVO Radar	**VNUKOVO Precision (PAR)**	**VNUKOVO Tower**	**Ground**
126.0	118.3	118.3	120.45 121.7

NDB OB	Final Apch Crs	Minimum Alt D5.3	MDA(H) (CONDITIONAL)	Apt Elev 686′
852	238°	2000′ (1314′)	1060′ (374′)	RWY 686′

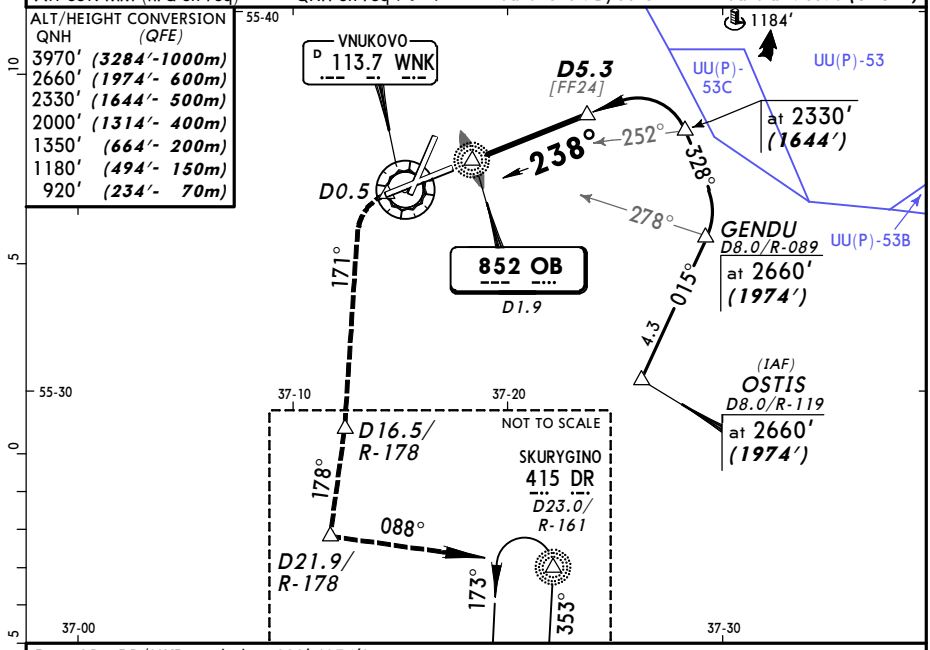
MISSED APCH: Climb STRAIGHT AHEAD to 1180′ (494′) or above to D0.5, then turn LEFT onto 171° to D16.5 climbing to 2660′ (1974′). Turn RIGHT onto 178° to D21.9, then onto 088° to DR NDB, or as directed.
At 1350′(664′) immediately contact Radar.

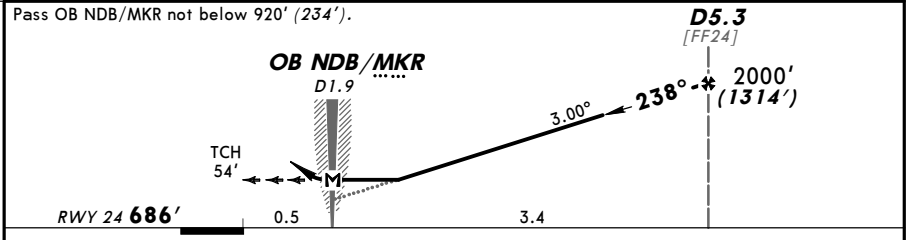


Alt Set: MM (hPa on req) | QNH on req (QFE) | Trans level: By ATC | Trans alt: 3970′(3284′)

ALT/HEIGHT CONVERSION

QNH	(QFE)
3970′	(3284′-1000m)
2660′	(1974′- 600m)
2330′	(1644′- 500m)
2000′	(1314′- 400m)
1350′	(664′- 200m)
1180′	(494′- 150m)
920′	(234′- 70m)





Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at OB NDB/MKR/D1.9							

HIALS-II
PAPI
1180′ (494′)
D0.5

STRAIGHT-IN LANDING RWY 24

	With FAF MDA(H) 1060′(374′)		W/o FAF MDA(H) 1480′(794′)	
		ALS out		ALS out
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m
B				RVR 1800m VIS 2000m
C			2800m	3600m
D	RVR 1500m VIS 1600m	RVR 1800m VIS 2000m	3600m	4000m

PANS OPS

CHANGES: Additional fix added.

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Chart changes since cycle 12-2016

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE

MOSCOW, (VNUKOVO - UUWW)

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TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport UUWW