

Standard Operational Procedures

Aerodrome **Brno Tuřany**

VERSION 2.7

CHANGES AND UPDATES

Effective	Version	Change
02 DEC 08	1.7	Info about SRA added (chapter 3.4.4), chapter 2.4 specified.
01 FEB 09	1.8	Information about SOPs SUP added (chapter 3.4.4).
01 AUG 09	1.9	Departing information changed (chapter 2.3.1).
	2.0	Intentionally left blank.
10 JAN 11	2.1	Change of ATIS FREQ and SRA terminal range. General text revision.
26 JAN 11	2.2	New design issued.
08 FEB 11	2.3	Info about SRA changed (chapter 3.4.4)
01 APR 11	2.4	Info about noise abatement added (chapter 2.7).
05 NOV 11	2.5	Change of MAG VAR, RWY MAG BRG, cancellation of NDB BNO and OM 28, change of SID, STAR, IAC, VFR routes.
-	2.6	Intentionally left blank.
15 SEP 13	2.7	General text revision; changes of SID, STAR routes; CTR/TMAs Přerov cancellation included.

NOTES

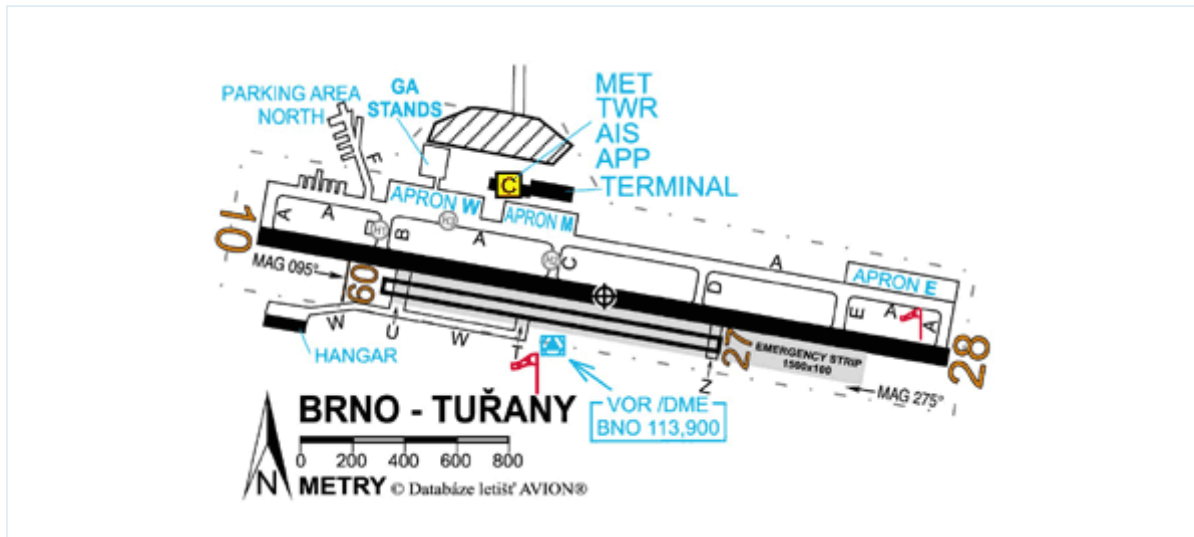
Official scenery and charts for use on VATSIM: <http://www.vacc-cz.org>

 All data are intended for SIMULATION purposes only. Do not use them in real aviation.

The purpose of these Standard Operating Procedures (SOPs) is to outline the procedures to be used by pilots operating at KTB - Airport Brno Tuřany. Following these procedures will help to prevent confusion and to promote efficiency between controllers and pilots on VATSIM.

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1 Basic information

1.1 ICAO CODE, NAME, AERODROME COORDINATES AND ELEVATION

- ICAO Code: I KTB
- Name: Brno - Tuřany
- ARP coordinates: 49 09 05 N 016 41 38 E
- Elevation: 778 ft / 237 m

1.2 TRANSITION ALTITUDE

5000 ft AMSl

1.3 RUNWAY CONFIGURATION

Designations RWY	Magnetic BRG	Dimensions of RWY (m)	Surface and Strength of RWY	LDA	Remarks
10/28	094° / 274°	2650 x 60	Concrete PCN 48/R/A/X/T	2650 m	Emergency strip 1500 x 100 m.
09/27	094° / 274°	1000 x 30	Grass 5700 kg / (1,50) MPa	1000 m	RWY 09/27 is located inside of the emergency strip; a centreline distance from RWY 10/28 is 80 m.

1.4 HELICOPTER LANDING AREAS

TLOF Dimensions	TLOF Surface, Strength and Marking
Ti OF H1	On TWY B, concrete, PCN 27 R/B/X/T, a white circle of radius 11 m, marked by white letter H, with the centre 116 m N from RWY 10 axis.
Ti OF H2	On TWY C, concrete, PCN 27 R/B/X/T, a white circle of radius 11 m, marked by white letter H, with the centre 116 m N from RWY 10 axis.
Ti OF H3	On TWY A, concrete, PCN 27 R/B/X/T, a white circle of radius 14 m, marked by white letter H.

1.5 LINKS

Name	URL
VACC Czech Republic	http://www.vacc-cz.org
Charts	http://www.vacc-cz.org/airports/lktb
Scenery	http://www.vacc-cz.org/airports/lktb
Other info	http://www.vacc-cz.org/wiki/index.php/Hlavn%C3%AD_strana mostly in Czech language
Real LKTb	http://www.airport-brno.cz

2 Departures

2.1 PARKING POSITIONS

2.1.1 Apron East

There are no stands signed. The apron is used rarely.

2.1.2 Apron Middle

Parking stands and taxiing instructions are shown on Parking Chart; included into All Charts for I KTB (<http://www.vacc-cz.org/airports/lktb>). The apron is usually used by passenger traffic.

2.1.3 Apron West

There are no stands signed. The apron is usually used by cargo traffic.

Pushback is not provided at I KTB. Pilots must be able to start/continue taxi without any pushback.

2.2 FIRST CONTACT AND CLEARANCE INITIAL

Pilots contact Tuřany Ground/Tower (or Brno Radar) and report:

- the used apron;
- ATIS information, if any;
- QNH.

ACFT not approved for RNAV operations shall inform ATCo when establishing the first radio contact, vectoring will be provided

Short form	Call Sign	FREQ
I KTB_ATIS	Tuřany ATIS	131,10 MHz
I KTB_GND	Tuřany Ground	125,42 MHz
I KTB_TWR	Tuřany Věž / Tuřany Tower	119,60 MHz
I KTB_APP	Brno Approach / Brno Radar	120,55 MHz

2.3 DEPARTURES

Both **Radar Departures** and **SIDs** are used at Airport Brno Tuřany.

- The SIDs may be used by R-NAV equipped ACFT, only (ACFT not approved for RNAV operations shall inform ATCo when establishing the first radio contact, vectoring will be provided).
- Initial climb is usually Fi 120. However, it's always given as a part of ATC clearance; thus, a different initial climb can be given. Pilots shall follow the instructions given in ATCo clearance at all time.

While flying:

- **MIKOV 3D** (RWY 10), turn speed at TB103 is limited to MAX 210 kt IAS,
- **TUMKA 1D** (RWY 10), pass TB101 at or above 1300 ft, turn speed at TB101 is limited to MAX 210 kt IAS,
- **MIKOV 1A** (RWY 28), pass TB201 at or above 1300 ft, turn speed at TB201 is limited to MAX 210 kt IAS,

- **ODNEM 2A** (RWY 28), pass TB201 at or above 1300 ft, turn speed at TB201 is limited to MAX 210 kt IAS,
- **HLV 1B** (RWY 28), pass TB201 at or above 1300 ft, turn speed at TB201 is limited to MAX 210 kt IAS,
- **HLV 3A** (RWY 28), turn speed at TB202 is limited to MAX 230 kt IAS.

2.3.1 Departing Frequency

Until instructed for change to relevant frequency, pilots of departing ACFT shall remain on frequency of Tuřany Tower (FREQ 119.60 MHz) after departure.

2.4 TAXI

The requested use of RWY 09/27 (grass) has to be reported during start-up or taxi clearance. When taxiing from/to RWY 09/27 (grass), pilots have to request clearance to cross RWY 10/28 (concrete).

2.5 TAKE OFF

2.5.1 Intersection Take off Table

RWY Designator	From	TORA (m)	TODA (m)	ASDA (m)
10	TWY A	2650	2950	2650
10	TWY B	1990	2290	1990
10	TWY C	1460	1760	1460
28	TWY A	2650	2950	2650
28	TWY E	2120	2420	2120
28	TWY D	1650	1950	1650
28	TWY C	1190	1490	1190
28	TWY B	660	960	660

2.6 HAND OFF

2.6.1 IFR Flights

If there is any other ATC position present (I KTB_APP, I KAA_CTR), Tuřany Tower instruct pilots to contact the appropriate frequency after departure.

2.6.2 VFR Flights

After departure, VFR flights shall remain on frequency of Tuřany Tower (FREQ 119.60 MHz) unless instructed otherwise. ATCo informs pilots when and which frequency they have to contact.

2.7 NOISE ABATEMENT

2.7.1 Departures

Due to noise abatement the minimum ascending from RWY 10/28 is 5 % up to 3000 ft.

2.7.2 Training Flights

For reason of noise abatement flights, including flights along traffic circuit, should not be carried out over built-up areas of villages Tuřany, Holásky, Dvorska, Kobylnice, řlapanice, Slatina, unless otherwise stated by ATC service (for example for provision of separation, avoiding the clouds etc.).

The traffic circuit altitude is 1800 ft AMSl for all ACFT including sporting flying equipments and powered gliders.

Acrobatic flights may be carried out outside built-up areas only and according to ATC instructions.

3 Arrivals

3.1 FIRST CONTACT AND COMMUNICATION

Check the ATIS at first. If ATIS is online (FREQ 131,10 MHz), both voice and text ATIS is available there.

During the first contact with I KTB_APP pilots report:

- ATIS information, if any;
- QNH;

ACFT not approved for RNAV operations shall inform ATC when establishing the first radio contact, radar vectoring will be provided.

Intention to land on RWY 09/27 (grass) shall be reported on initial contact with I KTB_APP.

3.2 STANDARD TERMINAL ARRIVALS ROUTES (STARS)

Published STARS are authorized for RNAV equipped ACFT, only.

ACFT not approved for RNAV operations shall inform ATC when establishing the first radio contact, radar vectoring will be provided.

3.3 SPEED AND DESCEND PLANNING

3.3.1 Descending

All descent clearances are given by ATCo only. Pilots are not authorized to descend without clearance.

- STARS: pilots shall respect the MFA (Minimum Flight Altitudes) published in the appropriate STAR chart even if ATCo descent clearance is lower.
- Vectoring: descent instructions are given by ATCo.

3.3.2 Speed Restriction

Below Fl 100 maximum indicated air speed is 250 kt unless higher speed is authorized by ATCo.

3.3.3 Landing Distance Available (LDA)

- RWY 10/28 - 2650 m;
- RWY 09/27 - 1000 m.

3.3.4 RWY 10

For RWY 10, I S apch is NOT available.

After passing TUMKA, pilots have to follow the tracks given by approach chart. **The descend gradient is greater** than usual in the RWY 10 heading! Additionally, pilots have to strictly respect minimum flight altitudes during all approach phases (chart: AD 2-I KTB-RNAV STAR RWY 10). It's recommended to avoid entering class E airspace (maintain above Fl 70 for TMA VI Brno, 5500 ft AMSl for TMA V Brno). In order to adhere to these rules, it is advisable to reduce speed as much as possible from the very beginning of the approach.

For detailed tips and tricks see: http://www.vacc-cz.org/wiki/index.php/I_KTB_-_přilet_na_rwy_10 (in Czech language only).

3.3.5 Surveillance Radar Approach (SRA)

SRA is provided by TWR/APP in case of special event, only. ATCo instructs pilot which frequency to contact.

In case of radiocommunication failure, climb to 3000 ft AMSl to BNO VOR and follow radiocommunication failure procedures.

Designator	Value	Remarks
RWY	10 / 28	NI
Altitude of Intermediate Approach	3000 ft / 914 m AMSl	Low temperature altitude used from 15 NOV to 15 MAR is 3160 ft / 960 m unless otherwise published by NOTAM.
Final Approach Fix	7 NM / 13,0 km from TDZ	NI
Angle of Descent	3°	NI
Terminal Range	2,1 NM / 3,9 km from TDZ	NI
Obstacle Clearance Altitude (OCA)	1430 ft / 437 m AMSl	Low temperature altitude used from 15 NOV to 15 MAR is 1480 ft / 450 m unless otherwise published by NOTAM.
Obstacle Clearance Height (OCH)	670 ft / 204 m AGl	Low temperature altitude used from 15 NOV to 15 MAR is 710 ft / 217 m unless otherwise published by NOTAM.

For further information about SRA see: http://www.vacc-cz.org/wiki/index.php/I_KTB_-_Surveillance_Radar_Approach

Note: Although this kind of approach has been already cancelled in the real world life at Airport Brno - Tuřany, it is still used for special events on VATSIM.

3.4 VACATING RUNWAYS

3.4.1 RWY 10/28

Vacate RWY via first possible TWY unless instructed otherwise by ATCo. Pilots should report "RWY vacated".

3.4.2 RWY 09/27

After land on RWY 09/27 unless already cleared to taxi, vacate RWY to the nearest marked holding bay, TWY U or TWY T. Holding bay, TWY U and TWY T are located south of RWY 09/27. Pilots should report "RWY vacated".

3.5 TAXI AND PARKING

For details about stands see chapter 2.1.

ATC service is not provided at the parking area North. TWY F is available for ACFT of a code letter A only.

We are pleased if you want to thank us (after shut down), but if there is a heavy traffic, don't do it, please.

3.5.1 RWY 09/27

During taxiing from/to RWY 09/27 to/from apron the pilots have to request clearance to cross RWY 10/28.

Holding point RWY 09/27 on TWY U is also dedicated as a holding point for RWY 10/28.

4 Low Visibility Procedures

Not available.

5 Procedures for VFR Flights

5.1 TMA/CTR AIRSPACE CLASSIFICATION

TMA/CTR of Brno airport is classified as airspace Class D:

- VFR from VFR separation is not provided, traffic information (and traffic avoidance advice on request) is provided;
- VFR from IFR separation is not provided, traffic information (and traffic avoidance advice on request) is provided.

5.2 GENERAL

VFR flights entering CTR Tuřany from Class G airspace shall establish radio contact with TWR at least 3 minutes before entering CTR and give following information:

- identification of ACFT;
- call sign, type of ACFT;
- entry point into CTR;
- estimated time of entry into CTR;
- exit point from CTR (for ACFT flying through CTR).

Pilots-in-command are requested to confirm ATIS information and read back its QNH when they establish radio contact. Pilots have to report exit of CTR.

5.3 VFR ENTRY/EXIT, HOLDING POINTS

Designation	Location	Coordinates	
November	Kuřim (railway crossing SE of town)	49 17 32 N 016 33 37 E	Entry/Exit
Echo	Rousínov (church)	49 12 13 N 016 53 10 E	Entry/Exit
Sierra	Klobouky u Brna	48 59 52 N 016 51 44 E	Entry/Exit
Whisky	Ořechov (church)	49 06 39 N 016 31 15 E	Entry/Exit
Zulu	Zidlochovice	49 02 09 N 016 37 17 E	Entry/Exit
Alfa	Sokolnice (railway crossing)	49 07 03 N 016 42 12 E	Holding
Bravo	Podolí (highway overbridge)	49 10 54 N 016 42 45 E	Holding

To see VFR entry/exit positions, download the VFR Arrival and Departures Chart; included into All Charts for LKTB (<http://www.vacc-cz.org/airports/lktb>).

5.4 VFR DEPARTURES/ARRIVALS WAYPOINTS SEQUENCE

Arrival Route	Waypoint Sequence
November 1	November - Bravo
Echo 1	Echo - Bravo
Sierra 1	Sierra - Alfa
Whisky 1	Whisky - Alfa
Zulu 1	Zulu - Alfa

Departure Route	Waypoint Sequence
November 1	Bravo - November
Echo 1	Bravo - Echo
Sierra 1	Alfa - Sierra
Whisky 1	Alfa - Sierra
Zulu 1	Zulu - Sierra