

# Quick Reference Sheet - LHCC / Budapest FIR

## Standard Instrument Departures

### LHBP – Budapest (init. climb: 7000ft)

SID	RWY31	RWY13	Cld. FL	Handoff
BADOV	1L/1R		FL240	LZBB_CTR
GILEP	1L/1R		FL180	LHCC_CTR
DUZLA	1L/1R		FL180	LHCC_CTR
LITKU	1L/1R 1X <sup>2</sup> /1A <sup>2</sup>		FL240	LZBB_CTR
FAHAZ	1L/1R	1B/1J	FL180	LHCC_CTR
GAZDA	1L/1R		FL190	LHCC_CTR
VETIK	1L/1R		FL190	LHCC_CTR
WITRI	1L/1R 1X <sup>2</sup> /1A <sup>2</sup>		FL190	LHCC_CTR

### LHDC – Debrecen

SID	RWY04R	RWY22L	Init. climb
PERIT			
VERIG	6D	3D	10000 ft or coordinated
NARKA			

### LHSM - Sármellék

SID	RWY16	RWY34	Init. climb
SUNOR			
NALOX	1D	3D	10000 ft or coordinated

Separation between departing aircraft		
First A/C	Second A/C	Distance
Heavy	Heavy	4 nm
Heavy	Medium	5 nm
Heavy	Light	6 nm
Medium	Light	5 nm
Separation = 3nm if none of the above conditions apply		

- <sup>2</sup> Csak „könnyű” turbulencia kategóriájú vagy légcsavaros gázturbinás légi járművek számára

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## Arrival Procedures

### LHBP – Budapest

STAR	RWY 31	RWY 13	H/O FL	
			RWY 31	RWY 13
ARFOX			FL150	same
ANEXA			FL130	same
VAJDI			FL150	same
ULZAK			FL130	same
EBAMO	1H	1T	FL180	same
KEZAL			FL140	same
BETED			FL180	same
EDEMU			FL190	same

### LHDC - Debrecen

STAR	RWY04R	RWY22L	Approach (IAF: DC001)
PERIT			<u>04R</u> : ILS,NDB,RNAV
VERIG	5A	2A	<u>22L</u> :NDB,RNAV
NARKA			

### LHSM - Sármellék

IAF	RWY16	RWY34
SME	ILS NDB, RNAV	NDB, RNAV

### T-bar procedures<sup>2</sup>

Point	RWY	Altitude	Description
NICRA	31L / R	4000 ft	Right base point
ATICO	31L / R	4000 ft	Left base point
FUTNA	31L	5000 ft	Straight-in point
OFENA	31R	5000 ft	Straight-in point
ECMAN	13L / R	5000 ft	Right base point
CATUZ	13L / R	5000 ft	Left base point
GIFRA	13L	6000 ft	Straight-in point
TORAZ	13R	6000 ft	Straight-in point

### Separation between arrival aircrafts

Minimal separation on runway threshold		
Runway	VMC or IMC and PREP phase	LVP phase
31R	4 NM	8 NM
31L	4 NM	
13R	5 NM	10 NM
13L	5 NM	

Phase	Condition
VMC	VIS > 5000 m or CBH > 1500'
IMC	VIS < 5000 m or CBH < 1500'
PREP	any RVR < 800 m or CBH < 400'
LVP I.	any RVR < 600 m and/or CBH < 200'
LVP II.	any RVR < 400 m

<sup>2</sup>: After these points, pilots need to follow the published procedure to the ILS.

**Phraseology: Via ATICO cleared ILS approach runway 31R.**

- In PREP conditions the APP controller has to make at least 7 nm miles final
- In LVP conditions the APP controller has to make at least 10 nm miles final

At LHDC and LHSM only one aircraft is permitted to commence approach – other arrivals at the same time shall enter a holding over the IAF until the approaching aircraft has landed

At LHDC and LHSM only procedural control is available – radar vectors must not be issued

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## COM frequencies

Station	Frequency	Callsign
LHBP_DEL	134.550	Budapest Delivery
LHBP_GND	121.900	Budapest Ground
LHBP_TWR	118.100	Budapest Tower
LHBP_APP	122.975	Budapest Approach
LHBP_D_APP	119.500	Budapest Approach
LHBP_U_APP	123.850	Budapest Approach
LHCC_CTR	120.375	Budapest Radar
LHCC_W_CTR	133.200	Budapest Radar
LHCC_U_CTR	127.105	Budapest Radar
LHCC_K_CTR	128.955	Budapest Radar
LHCC_1_CTR	135.555	Budapest Radar
LHCC_2_CTR	135.205	Budapest Radar
LHCC_I_CTR	119.350	Budapest Info
LHDC_TWR	125.900	Debrecen Tower
LHSM_TWR	134.575	Sármellék Tower
LOVV_CTR	134.350	Vienna Center
LOWW_APP	134.675	Wien Radar
LZBB_CTR	134.475	Bratislava Center
LZIB_APP	134.925	Stefanik Approach
LZKZ_APP	119.850	Kosice Approach
UKLV_CTR	128.000	Lviv Center
LRBB_CTR	122.025	Bucharest Control
LRAR_APP	127.250	Arad Approach
LYBA_CTR	123.775	Beograd Center
LDZO_CTR	135.800	Zagreb Center
LJLJ_CTR	131.275	Ljubljana Radar
EURE_FSS	135.300	Eurocontrol East
EURM_CTR	135.450	Maastricht Radar

## Defining transition level

QNH	Transition altitude	Transition level
$\geq 1013$		FL110
1012-977	10000 ft	FL120
$\leq 976$		FL130

**Runway configurations** (Preferred up to 5kts tailwind component)

**Formula:**  $\cos(\text{rwy course-wind direction}) * \text{windspeed} < 5$

Airport	Departures	Arrivals
LHBP	31L	31R / 31L
	13L / 13R	13R
LHDC	04R	04R
	22L	22L
LHSM	16	16
	34	34

## ILS frequencies

RWY	Freq.	Other information
31R	109.500	BPR 308° CATII/III Elevation:416'
13R	110.500	FER 128° CATII Elevation:496'
31L	111.500	FHL 308° CATII Elevation:448'
13L	109.150	BPL 128° CATII Elevation:496'
04R	110.100	DCN 044° CATI Elevation:355'
16	108.750	SMK 162° CATI Elevation:408'

## Published holdings

FIX	Freq.	Instructions	Altitude (min./max.)
JOZEP		100°/R	10000' AMSL – FL340
LAHOR		230°/L	10000' AMSL – FL340
ZURFA		310°/L	6000' AMSL – FL340
HUZTA		310°/L	6000' AMSL – FL190
ALZUR		310°/R	6000' AMSL – FL190
WONTA		130°/R	3000' AMSL – FL190
UTCON		130°/L	3000' AMSL – FL190
TPS	115.900	246°/L	3000' AMSL – FL190
DC	295	034°/L	5000 ft (4000 ft - MA) / -
SME	428	357°/L(RWY16), 144°/R(RWY34)	4000 ft (3000 ft - MA) / -

- At TPS, UTCON and ZURFA only one of the holdings can be used at the same height at same time.
- JOZEP, LAHOR and ZURFA holding patterns up to FL190 can be used independently. Between FL200 and FL340, LAHOR and ZURFA cannot be used at the same height at the same time.

## VFR traffic

Airport	Rep. points	Procedure
LHBP	DUNAM0	<p>Aircraft may only enter the CTR zone via this point, with permission issued by Budapest Tower. Flight operations in Budapest CTR require at least a Mode-C transponder. LHBP-inbound traffic shall be cleared for a visual approach -if entry into the CTR may not be granted due to high traffic load.</p> <p>ADC has to coordinate with the Approach controller about traffic in the CTR above 2000' AMSL.</p> <p><b>Traffic pattern:</b> RWY31L/13L: left hand, RWY31R/13R: right hand, altitude: 1500ft (recommended)</p>
LHDC	JOZA, EBES, HOPI	<b>Traffic pattern:</b> RWY04R: right hand, RWY22L: left hand, altitude: 1500ft
LHSM	DIOSKAL, BALATON	<b>Traffic pattern:</b> RWY16: right hand, RWY34: left hand, altitude: 1500ft

## Aerodrome reference codes

Code letter	Wingspan	Typical airplanes
A	< 15 m	PIPER PA-31/CESSNA 404 Titan
B	15 m but < 24 m	BOMBARDIER Regional Jet CRJ-200/DE HAVILLAND CANADA DHC-6
C	24 m but < 36 m	BOEING 737-700/AIRBUS A-320/EMBRAER ERJ 190-100
D	36 m but < 52 m	B767 Series/AIRBUS A-310
E	52 m but < 65 m	B777 Series/B787 Series/A330 Family
F	65 m but < 80 m	BOEING 747-8/AIRBUS A-380-800

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