AIRAC

# HUNGARY

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# 1. Amendment content:

- 1.1 GEN 1.5 Aircraft instrument, equipment and flight documents
- Extension of the 8.33 kHz channel spacing for VHF voice communication below FL 195
- 1.2 GEN 3.3 Air Traffic Services
- Minimum flight altitude changes
- 1.3 GEN 4.1 Aerodrome/Heliport charges
- Contact details of LHDC (Debrecen) International Airport
- Charges of LHUD (Szeged) Airport
- 1.4 ENR 1.3 Instrument flight rules
- Free route airspace general procedures
- 1.5 ENR 3.3 Area navigation (RNAV) routes
- All ATS routes in Budapest FIR have been withdrawn
- 1.6 ENR 4.4-1 Name-Code designators for FRA significant points
- Replacing ICAO Chapter 4.4
- 1.7 ENR 6 En-route Charts
- Introduction of free route airspace in Budapest FIR
- 1.8 AD 2 LHBP
- General aviation flight handling
- 1.9 AD 2 LHPR
- Charts: ILS/LOC-30, VOR-30, RNAV-12, RNAV-30
- 1.10 AD 2 LHSM
- Charts: SID-16, SID-34, ILS/LOC-16, NDB-16, NDB-34
- 1.11 AD 2 LHUD
- Changes in operational hours
- 2. Hand corrections to the following pages:
- Nil
- 3. Record entry of amendment in GEN 0.2.

# 4. This AIP amendment incorporates information contained in the following publications: NOTAM:

A1935/14, A2224/14, A2146/14, B0033/14, B0035/14 SUP: Nil AIC: A 003/2014, A 004/2014

## 5. Insert / remove the pages as shown in list on the next page:

AIP AMDT: AIRAC AMDT 001/2015

Effective Date: **05 Feb 2015** Publication Date: 25 DEC 2014

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003/2008	22-May-2008	03-Jul-2008	
004/2008	14-Aug-2008	25-Sep-2008	
001/2009	29-Jan-2009	12-Mar-2009	
002/2009	26-Mar-2009	07-May-2009	
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ENR 5.4 - 14	20 SEP 2012		10 0E1 2014	AD 2-LHDC - 1	06 FEB 2014
ENR 5.4 - 15	20 SEP 2012			AD 2-LHDC - 2	06 FEB 2014
ENR 5.4 - 16	20 SEP 2012			AD 2-LHDC - 3	03 JUL 2008
ENR 5.5 - 1	18 SEP 2014			AD 2-LHDC - 4	03 JUL 2008
ENR 5.5 - 2	18 SEP 2014	AD 2-1 HBP - 9	04 APR 2013	AD 2-LHDC - 5	08 APR 2010
ENR 5.5 - 3	18 SEP 2014			AD 2-LHDC - 6	08 APR 2010
ENR 5.5 - 4	18 SEP 2014		03 APP 2013	AD 2-LHDC - 7	18 NOV 2010
ENR 5.6 - 1	15 DEC 2011		03 AFR 2014	AD 2-LHDC - 8	18 NOV 2010
ENR 5.6 - 2	15 DEC 2011		00 AFIX 2014	AD 2-LHDC - 9	20 SEP 2012

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AD 2-LHDC - 10	20 SEP 2012	AD 2-LHPR-VOR-30 - 1	05 FEB 2015
AD 2-LHDC - 11	25 JUL 2013	AD 2-LHPR-VOR-30 - 2	05 FEB 2015
AD 2-LHDC - 12 AD 2-LHDC-ADC - 1	25 JUL 2013 14 NOV 2013	AD 2-LITPR-RNAV-12 - 1 AD 2-LITPR-RNAV-12 - 2	05 FEB 2015
AD 2-LHDC-ADC - 2	14 NOV 2013	AD 2-LHPR-RNAV-30 - 1	05 FEB 2015
AD 2-LHDC-AOCA - 1	26 AUG 2010	AD 2-LHPR-RNAV-30 - 2	05 FEB 2015
AD 2-LHDC-AOCA - 2	26 AUG 2010	AD 2-LHPR-VAC - 1	26 JUN 2014
AD 2-LHDC-SID-05R - 1 AD 2-LHDC-SID-05R - 2	26 AUG 2010 26 AUG 2010	AD 2-LHPR-VAC - 2 AD 2-LHSM - 1	30 MAY 2013
AD 2-LHDC-SID-23L - 1	26 AUG 2010	AD 2-LHSM - 2	30 MAY 2013
AD 2-LHDC-SID-23L - 2	26 AUG 2010	AD 2-LHSM - 3	25 JUL 2013
AD 2-LHDC-STAR - 1	26 AUG 2010	AD 2-LHSM - 4	25 JUL 2013
AD 2-LHDC-STAR - 2 AD 2-LHDC-II S-05R - 1	26 AUG 2010 26 AUG 2010	AD 2-LHSM - 5 AD 2-LHSM - 6	30 MAY 2013
AD 2-LHDC-ILS-05R - 2	26 AUG 2010	AD 2-LHSM - 7	20 SEP 2012
AD 2-LHDC-NDB-23L - 1	26 AUG 2010	AD 2-LHSM - 8	20 SEP 2012
	26 AUG 2010	AD 2-LHSM - 9	20 SEP 2012
AD 2-LHDC-RNAV-05R - 2	26 AUG 2010	AD 2-LHSM - 11	25 JUL 2013
AD 2-LHDC-RNAV-23L - 1	26 AUG 2010	AD 2-LHSM - 12	25 JUL 2013
AD 2-LHDC-RNAV-23L - 2	26 AUG 2010	AD 2-LHSM-ADC - 1	14 NOV 2013
AD 2-LHDC-VAC - 1 AD 2-LHDC-VAC - 2	26 AUG 2010 26 AUG 2010	AD 2-LHSM-ADC - 2 AD 2-LHSM-AOCA-1634 - 1	14 NOV 2013 20 SEP 2012
AD 2-LHFM - 1	26 AUG 2010	AD 2-LHSM-AOCA-1634 - 2	20 SEP 2012
AD 2-LHFM - 2	26 AUG 2010	AD 2-LHSM-SID-16 - 1	05 FEB 2015
AD 2-LHFM - 3	14 JAN 2010	AD 2-LHSM-SID-16 - 2	05 FEB 2015
AD 2-LHFM - 4 AD 2-LHFM - 5	14 JAN 2010 14 JAN 2010	AD 2-LHSM-SID-34 - 1 AD 2-I HSM-SID-34 - 2	05 FEB 2015 05 FEB 2015
AD 2-LHFM - 6	14 JAN 2010	AD 2-LHSM-ILS/LOC-16 - 1	05 FEB 2015
AD 2-LHFM - 7	14 JAN 2010	AD 2-LHSM-ILS/LOC-16 - 2	05 FEB 2015
AD 2-LHFM - 8	14 JAN 2010	AD 2-LHSM-NDB-16 - 1	05 FEB 2015
AD 2-LHFM-RNAV-10 - 1 AD 2-LHFM-RNAV-16 - 2	26 AUG 2010 26 AUG 2010	AD 2-LHSM-NDB-10 - 2 AD 2-LHSM-NDB-34 - 1	05 FEB 2015
AD 2-LHFM-RNAV-34 - 1	26 AUG 2010	AD 2-LHSM-NDB-34 - 2	05 FEB 2015
AD 2-LHFM-RNAV-34 - 2	26 AUG 2010	AD 2-LHSM-RNAV-16 - 1	20 SEP 2012
AD 2-LHFM-VAC - 1	26 AUG 2010 26 AUG 2010	AD 2-LHSM-RNAV-16 - 2	20 SEP 2012
AD 2-LHNY - 1	26 JUN 2014	AD 2-LHSM-RNAV-34 - 2	20 SEP 2012
AD 2-LHNY - 2	26 JUN 2014	AD 2-LHSM-VAC - 1	20 SEP 2012
AD 2-LHNY - 3	25 JUL 2013	AD 2-LHSM-VAC - 2	20 SEP 2012
AD 2-LHNY - 4 AD 2-LHNY - 5	25 JUL 2013 29 JUL 2010	AD 2-LHUD - 1 AD 2-LHUD - 2	05 FEB 2015 05 FEB 2015
AD 2-LHNY - 6	29 JUL 2010	AD 2-LHUD - 3	05 FEB 2015
AD 2-LHNY - 7	26 JUN 2014	AD 2-LHUD - 4	05 FEB 2015
	26 JUN 2014		26 AUG 2010
AD 2-LHNY-ADC - 2	25 JUL 2013	AD 2-LHUD - 7	26 AUG 2010
AD 2-LHPP - 1	26 JUN 2014	AD 2-LHUD - 8	26 AUG 2010
AD 2-LHPP - 2	26 JUN 2014	AD 2-LHUD-VAC - 1	26 JUN 2014
AD 2-LHPP - 3 AD 2-LHPP - 4	22 OCT 2009	AD 2-LHUD-VAC - 2	26 JUN 2014
AD 2-LHPP - 5	18 NOV 2010		
AD 2-LHPP - 6	18 NOV 2010		
	26 JUN 2014		
AD 2-LHPP-ADC - 1	26 JUN 2014		
AD 2-LHPP-ADC - 2	26 JUN 2014		
AD 2-LHPP-AOCA - 1	26 AUG 2010		
AD 2-LHPP-AUCA - 2 AD 2-LHPP-II S-34 - 1	26 AUG 2010 26 AUG 2010		
AD 2-LHPP-ILS-34 - 2	26 AUG 2010		
AD 2-LHPP-NDB-16 - 1	18 NOV 2010		
AD 2-LHPP-NDB-16 - 2	18 NOV 2010		
AD 2-LHPP-VAC - 1 AD 2-LHPP-VAC - 2	26 AUG 2010 26 AUG 2010		
AD 2-LHPR - 1	26 JUN 2014		
AD 2-LHPR - 2	26 JUN 2014		
	26 JUN 2014		
AD 2-LHPR - 5	26 JUN 2014		
AD 2-LHPR - 6	26 JUN 2014		
AD 2-LHPR - 7	26 JUN 2014		
Αυ 2-LΗΡΚ - δ ΑD 2-LΗΡΒ-ΔΟΩ - 1	26 JUN 2014 26 JUN 2014		
AD 2-LHPR-ADC - 2	26 JUN 2014		
AD 2-LHPR-SID-12 - 1	06 FEB 2014		
AD 2-LHPR-SID-12 - 2	06 FEB 2014		
AD 2-LITER-SID-30 - 1 AD 2-LHPR-SID-30 - 2	25 JUL 2013		
AD 2-LHPR-ILS/LOC-30 - 1	05 FEB 2015		
AD 2-LHPR-ILS/LOC-30 - 2	05 FEB 2015		
AD 2-LHPK-VOR-12 - 1 AD 2-I HPR-VOR-12 - 2	18 SEP 2014 18 SEP 2014		
	10 021 2014		

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## GEN 1.5 AIRCRAFT INSTRUMENT, EQUIPMENT AND FLIGHT DOCUMENTS

## 1. GENERAL

Commercial air transport aircraft operating in the airspace of Hungary have to adhere to the provisions of ICAO Annex 6 - Operation of Aircraft - Part 1, Chapter 6 - Aeroplane Instruments, Equipment and Flight Documents and Chapter 7 - Aeroplane Communication and Navigation Equipment.

Aircraft, other than State aircraft, operating according to Instrument Flight Rules (IFR) within Budapest FIR above 9500 FT ALT shall be equipped with, as a minimum, RNAV equipment meeting RNAV 5 in accordance with the requirements set out in ICAO Doc 7030/5 Regional Supplementary Procedures (5th edition, 2008, EUR). RNAV may only be performed by operators approved to do so and only with aircraft which are equipped with approved RNAV equipment.

## 2. SPECIAL EQUIPMENT TO BE CARRIED

Within Budapest FIR special equipment are not required.

#### 3. EQUIPMENT TO BE CARRIED ON ALL TYPES OF FLIGHT

All aircraft engaged in international flight operations shall carry and operate SSR transponder according to *ENR 1.6 para 2.* 

## 4. RADIO EQUIPMENT REQUIREMENTS

On the basis of the Commission Implementing Regulation (EU) No 1079/2012 for IFR GAT flights within class "C" airspaces of Budapest FIR above9500 FT ALT, the carriage and operation of 8.33 KHZ channel spacing-capable radio equipment is mandatory.

Non-equipped flights which are flight planned to enter Budapest FIR, except the UHF equipped State flights must flight plan to operate below 9500 FT ALT.

For exemptions from mandatory carriage of 8.33 KHZ equipment See ENR 1.8.

## 5. REQUIREMENTS FOR FM BROADCAST IMMUNITY OF AIRBORNE RECEIVERS

**5.1.** In Budapest FIR, aircraft with NAV equipment not complying with the applicable interference immunity performance requirements for ILS localiser and VOR receiving systems (ref. ICAO Annex 10, Vol. I., Chapter 3. para. 3.1.4. and 3.3.8.) may not continue to operate after 1st January 2001.

*Exceptions:* State aircraft with NAV equipment not complying with the above referred ICAO Standards may continue operations within Budapest FIR with the provision, that they are equipped with suitable other RNAV equipment (meeting RNAV 5 /B-RNAV/ in accordance with ICAO DOC 7030/5 European (EUR) Regional Supplementary Procedures Chapter 4.), for enroute part of the IFR flight.

For Budapest Liszt Ferenc International Airport alternative approach procedures (NDB) are published in *AD* 2-LHBP.

- **5.2.** All VHF communication receivers operating within Budapest FIR shall meet the ICAO FM Broadcast Immunity requirements (ref. ICAO Annex 10 Vol. III. Part II. para. 2.3.3).
- **5.3.** Any interference problems possibly experienced during their operations within Budapest FIR users are requested to report to:

National Transport Authority Aviation Authority (NTA AA)

Post:H-1675 Budapest P.O. Box 41.

The report should include the following information:

- a. frequency, on which interference was experienced;
- b. position and level/height of the aircraft;
- c. aircraft call sign and registration (number);
- d. date and time (UTC) of the experienced harmful interference

I

e. description of the interfering signal (e.g. music, speech, language, other noise, etc.)

## 6. **RVSM** OPERATION

Except for designated airspace where RVSM transition tasks are carried out, only RVSM approved aircraft and non-RVSM approved State aircraft shall be permitted to operate within the EUR RVSM airspace.

RVSM approved aircraft are those aircraft for which the Operator has obtained an RVSM approval, either from the State in which the operator is based, or from the State in which the aircraft is registered.

Guidance material on the airworthiness, continued airworthiness and the operational practices and procedures for the EUR RVSM airspace is provided in the Joint Aviation Authorities (JAA) Temporary Guidance Leaflet (TGL) No. 6, Revision 1 and the ICAO EUR Regional Supplementary Procedures (Doc 7030/5).

Except for State aircraft, RVSM approval is required for aircraft to operate in the RVSM airspace within Budapest FIR as described in *ENR 2.1*.

Note:

The provisions applicable to non-RVSM approved civil operations in EUR RVSM airspace where RVSM transition tasks are carried out are specified in the ICAO Regional Supplementary Procedures (Doc 7030/5 – EUR Chapter 1).

## 7. ACAS II REQUIREMENTS

All civil fixed-wing turbine-powered aircraft operating within airspace of Hungary shall be equipped with Airborne Collision Avoidance System (ACAS) II type:

- a. having a maximum take-off mass exceeding 15 000 kg or maximum approved passenger seating configuration of more than 30,
- b. having a maximum take-off mass exceeding 5 700 kg or maximum approved passenger seating configuration of more than 19.

The exemption from this requirement applies to aeroplanes which are subject to the provisions of Annex II to the EC Regulation (EC) No. 216/2008.

## 8. MODE S PROCEDURES – DISPLAY OF DOWNLINKED AIRCRAFT PARAMETERS (DAPS)

The following Mode S DAPs are used in Budapest FIR:

- DSFL- Downlinked Selected Flight Level
- DIAS- Downlinked Indicated Air Speed
- DMACH- Downlinked Mach Number
- DHDG- Downlinked Magnetic Heading.

These aircraft parameters are downlinked from aircraft by the Mode S EHS (Enhanced Surveillance) compliant transponder. Aircraft that are equipped with Mode S ELS (Elementary Surveillance) transponder only, cannot downlink these values.

Having seen the current Indicated Air Speed, Mach Number and Magnetic Heading in the label, the Air Traffic Controller generally will use these displayed values of a Mode SEHS equipped aircraft, without verbally asking.

Note 1: in certain circumstances, it may be necessary to verbally verify any of these DAPs against reading from the flight deck.

Note 2: the DRC (Downlinked Rate of Climb/Descend value is also provided by EHS compliant aircraft, but the Air Traffic Controller will not use it, due to the fluctuation of the DRC value. However the DRC value is also displayed on the screen, to give information about the tendency, and the order of magnitude of the vertical speed.

The carriage of a Mode S transponder capable of downlinking EHS aircraft parameters will not be compulsory in the Budapest FIR. However, where aircraft is so equipped, the installation and wiring of the instruments and transponder shall guarantee the downlinking of correct values in accordance with certification guidance contained in EASA Document AMC 20-13, or other equivalent airworthiness specifications.

F	
F	Fixed
FAC	Facilities
FAF	Final approach fix
FAI	Facilitation of international air transport
FAP	Final approach point
FATO	Final approach and take-off area
FAY	Facsimile transmission
FAWP	+Final approach way point
FRI	Light (used to indicate the intensity of weather phenomenal interference or static reports
I DL	$\alpha$ EBL RA=light rain)
FC	Eunnel cloud (tornado or water spout)
FCST	Forecast
FCT	Friction coefficient
FDPS	Flight data processing system
FER	Fabruary
	Few
FG	Fog
FIC	Flight information centre
FIR	+Flight information region
FIS	Flight information region
FISA	Automated flight information service
FI	Flight level
	Field
FLC	Flashing
FLR	Flares
	Flight
FLICK	Flight check
	Follow(s) or following
	Follow(s) of following
	From
	From (followed by time weather charge is forecast to begin)
	+Elight management system
EMU	Flow management unit
	Final approach
	Flight pass alignment point
FPI	Filed flight plan (message type designator)
	Fact per minute
	Flight plan route
ED	Fuel remaining
	+Eree Poute Airspace
	Frequency
	Friday
FRNG	Firing
	+Front (relating to weather)
FRO	Frequent
FSI	Full stop landing
FSS	Flight service station
FST	Firet
FT	Fist Feet (dimensional unit)
FTP	Fictitious threshold point
FII	Smoke
FUA	+Flexible use of airspace
F7	Freezing
	Freezing
FZFG	Freezing for
. 2. 0	

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FZRA	Freezing rain
G	
G G	Green Variations from the mean wind speed (gust) (followed by figures in the METAR/SPECI and TAF
GA G/A/G GAGAN GAIN GARP GAMET GAT GBAS GCA	Go ahead, resume sending (to be used in AFS as a procedure signal) Ground to air Ground to air and air to ground †GPS and geostationary earth orbit augmented navigation Airspeed or head wing gain GBAS azimuth referential point Area forecast for low-level flights +General air traffic †Ground-based augmentation system (to be pronounced "GEE-BAS") ‡Ground control approach system or ground control approach +General Directorate of Civil Aviation
GEN GEO GES GLD GLONASS GLS GMC GND	General Geographic or true Ground earth station Glider †(to be pronounced "GLO-NAS") Global orbiting navigation satellite system ‡GBAS landing system Ground movement chart (followed by name/title) Ground
GNDCK GNSS GP GPS GR GRAS GRASS GRIB	Ground check ‡Global navigation satellite system Glide path ‡Global positioning system Hail †Ground-based regional augmentation system (to be pronounced "GRASS") Grass landing area Processed meteorological data in the form of grid point values (in aeronautical meteorolog- ical code)
GRVL GS GS GUND	Gravel Ground speed Small hail and/or snow pellets Geoid undulation
н	
H H24 HAPI HBN HDF HDG HEL HF HGT HIAL HIRL HJ HLDG HN HNG HO HOL	High pressure area or the centre of high pressure Continuous day and night service Helicopter approach path indicator Hazard beacon High frequency direction finding station Heading Helicopter ‡High frequency (3000 to 30000 kHz) Height or height above +High intensity approach lights +High intensity runway lights Sunrise to sunset Holding Sunset to sunrise +Hungarian or Hungary Service available to meet operational requirements Holiday

I	HOSP HPA HR HS HUD HUF HUFRA HURCN HVDF HVY HVY HVY HVY HVS HX HX HZ HZ	Hospital aircraft Hectopascal Hours Service available during hours of scheduled operations Head-up display +Hungarian forints +Hungarian Free Route Airspace Hurricane High and very high frequency direction finding stations (at the same position) Heavy Heavy (used to indicate the intensity of weather phenomena (e.g. HVY RA = heavy rain) +Horizontal wind shear No specific working hours Higher Haze Hertz (cycle per second)
	I	
	IAC	Instrument approach chart (followed by name/title)
	IAF	Initial approach fix
	IAP	Instrument approach procedure
	IAR	Intersection of air routes
	IAS IBN	Indicated air speed
	IC	Ice crystals (very small ice crystals in suspension also known as diamond dust)
	ICAO	+International Civil Aviation Organization
	ICE	Icing
	ID	Identifier or identify
	IDENT	†Identification
	IF	Intermediate approach fix
		Identification friend/foe
	IFPS IFP	+Integrated Initial hight plan processing system
	IGA	International general aviation
	ILS	±Instrument landing system
	IM	Inner marker
	IMC	Instrument meteorological conditions
	IMG	Immigration
	IMI	*Interrogation sign (question mark) (to be used in AFS as a procedure signal)
		Improve or improving
	ΙΝΔ	Initial approach
	INBD	Inbound
	INC	In cloud
	INCERFA	†Uncertainty phase
	INFO	†Information
	INOP	Inoperative
		In not possible
	INS	Inertial navigation system
	INS	+Inches
	INSTL	Install or installed or installation
	INSTR	Instrument
	INT	Intersection
	INTL	International
		Interrogator
		Interrupt or Interruption or Interrupted
		intensity of intensitying
	e v 1	

INTST	Intensity
IR	Ice on runway
ISA	International standard atmosphere
ISB	Independent sideband
ISOL	Isolated
J	
JAA	+Joint Aviation Authorities
JAN	January
JTST	Jet stream
JUL	July
JUN	June
К	
KG	Kilogrammes
KHZ	Kilohertz
KIAS	+Knots indicated airspeed
KM	Kilometres
KMH	Kilometres/hour
KPA	Kilo pascal
KT	Knots
KW	Kilowatts
L	
L	Locator (see LM, LO)
LAM	Logical acknowledgement (message type designator)
LAN	Inland
LAT	Latitude
LDA	Landing distance available
LDAH	Landing distance available, helicopter
LDG	Landing
LDI	Landing direction indicator
LEN	Length
LF	Low frequency (30 to 300 kHz)
LGT	Light or lighting
LGTD	Lighted
LI	+Locator inner
LIH	Light intensity high
LIL	Light intensity low
LIM	Light intensity medium
LLZ	Localizer
LM	Locator, middle
LMT	Local Mean Time
LNG LO LOC LONG LORAN	Long (used to indicate the type of approach desired or required) Locator outer Locally or location or located Longitude †LORAN (long range air navigation system) Airspeed or headwind loss
LR	The last message received by me was(to be used in AFS as a procedure signal)
LRG	Long range
LS	The last message sent by me was(to be used in AFS as a procedure signal)
LT	+Local Time
LTD	Limited
LTF	+Land line telephone
LTP	Landing threshold point

LTT	Land line teletypewriter
LV	Light and variable (relating to wind)
LVE	Leave or leaving
LVL	Level
LYR	Layer or layered
м	
М	Mach number (followed by figures)
M	Metres (preceded by figures)
M	Minimum values of runway visual range (followed by figures in the METAR/SPEC) and
IVI	TAF)
ΜΔΔ	Maximum authorized altitude
MAG	Magnetic
	Magnetic
	Acronautical maps and charts
	Aeronautical maps and charts
	Misseu approach point
MAR	At sea
MAS	
MAX	Maximum
MAY	May
MBST	Microburst
MCA	Minimum crossing altitude
MCTR	+Military CTR
MCW	Modulated continuous wave
MDA	Minimum descent altitude
MDF	Medium frequency direction-finding station
MDH	Minimum descent height
MEA	Minimum en-route altitude
MEHT	Minimum eye-height over threshold (for visual approach slope indicator systems)
MET	†Meteorological or meteorology
METAR	†Aviation routine weather report (in aeronautical meteorological code)
METREPORT	Local routine meteorological report (in abbreviated plain language)
MF	Medium frequency (300 to 3000 kHz)
MHDF	Medium and high frequency direction- finding stations (at the same position)
MHVDF	Medium, high and very high frequency direction-finding stations (at the same position)
MHZ	Megahertz
MID	Mid-point (related to RVR)
MIFG	Shallow fog
MIL	Military
MIN	*Minutes
MIS	Missing (transmission identification) (to be used in AFS as a procedure signal)
MKR	Marker radio beacon
MLS	tMicrowave landing system
MM	Middle marker
MMO	+Main Meteorological Office
MNM	Minimum
MNPS	Minimum navigation performance specifications
MNT	Monitor or monitoring or monitored
MNTN	Maintain Maintain
MOΔ	Military operating area
MOC	Miniary operating area Minimum obstacle clearance (required)
MOD	Moderate (used to indicate the intensity of weather phenomenal interference or static re-
	nousrale (used to mutuale the intensity of weather phenomena, intenentee of StallCTe-
MON	Above mountaine
	Above mountains Mondow
	Winimum anarational parformance standards
	Infinition operational performance standards
<u></u>	

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MPS	Metres per second
MRA	Minimum reception altitude
MPG	Medium range
	ATC per MET reporting point
MS	Minus
MSA	Minimum sector altitude
MSAS	†Multifunctional transport satellite (MTSAT) satellite-based augmentation system (to be
	pronounced "EM-SAS")
MSAW	Minimum safe altitude warning
MSG	Message
MSI	Mean sea level
MSR	#Message (transmission identification) has been misrouted (to be used in AFS as a pro-
WOR	
MOOD	Mene syllar economic surveillence reder
MSSR	Mono pulse secondary surveillance radar
MI	Mountain
MTOW	+Maximum take-off weight
MTU	Metric units
MTW	Mountain waves
MVDF	Medium and very high frequency direction-finding stations (at the same position)
MWO	Meteorological watch office
MX	Mixed type of ice formation (white and clear)
	wixed type of loc formation (white and olear)
Ν	
N	North or Northern latitude
	No divisit to Normen failude
	No distinct tendency (in RVR during previous To minutes)
NASC	TNational AIS system centre
NAI	North Atlantic
NAV	Navigation
NB	Northbound
NBFR	Not before
NC	No change
NCD	No cloud detected (used in automated METAR/SPECI)
NDB	±Non-directional radio beacon
NDV	No directional variations available (used in automated METAR/SPECI)
	North east
	North costbound
	Notifi-Edstround
NEG	No or negative or permission not granted or that is not correct
NGI	Night
NIL	*†None or I have nothing to send to you
NM	Nautical miles
NML	Normal
NN	No name, unnamed
NNE	North - north-east
NNW	North - north-west
NO	No (negative) (to be used in AES as a procedure signal)
NOF	International NOTAM office
NON	+Designation of non-modulated
NOSIC	+Ne significant change (used in trend type landing forecasts)
	Not sufficient to Florible use of circulate
NONFUA	+Not subject to Flexible use of all space
NOTAM	TA notice distributed by means of telecommunication containing information concerning the
	establishment, condition or change in any aeronautical facility, service, procedure or haz-
	ard, the timely knowledge of which is essential to personnel concerned with flight opera-
	tions.
NOV	November
NOZ	‡Normal operating zone
NR	Number
NRH	No reply heard
NS	Nimbostratus

Nil significant cloud Nil significant weather National ‡No transgression zone North-west North-westbound
Next
Oceanic area control centre Obstacle assessment surface Observe or observed or observation Obscure or obscured or obscuring Obstacle Obstacle clearance altitude Oceanic control area Occulting (light) Obstacle clearance height Occasional or occasionally Obstacle clearance surface October Obstacle free zone Originate (to be used in AFS as a procedure signal) Overhead *We agree or it is correct (to be used in AFS as a procedure signal) (Voerhead *We agree or it is correct (to be used in AFS as a procedure signal) (Overhead *We agree or it is correct (to be used in AFS as a procedure signal) (Outer marker Opaque, white type of ice formation Control indicated is operational control (Operational meteorological (information) Open or opening or opened Operator or operate or operative or operating or operational (Operations On request Indication of an order Ocean station vessel On top Organized track system Outbound Overcast
Maximum values of runway visual range (followed by figures in the METAR/SPECI and TAF) Prohibited area (followed by identifier) Precision approach Precision approach lighting system Procedures for air navigation services †Precision approach path indicator ‡Precision approach radar Parallel Precision approach terrain chart (followed by name/title) Passenger(s) Performance-based navigation Proceed or proceeding Pilot controlled lighting Pavement classification number

PDC	‡Pre – departure clearance
PDG	Procedure design gradient
PER	Performance
PERM	Permanent
PIB	Pre-flight information bulletin
PJE	Parachute jumping exercise
PI	Ice nellets
	Practice low approach
	Flight plan
	Propert level
	Priesent level
	Phot house required
PNR	
PO	Dust/sand whirls (dust devils)
P2	+Prognostic chart for 200 hPa
P3	+Prognostic chart for 300 hPa
P5	+Prognostic chart for 500 hPa
P7	+Prognostic chart for 700 hPa
P85	+Prognostic chart for 850 hPa
Psw	+Prognostic chart of significant weather
PTrVM	+Prognostic tropopause and maximum wind chart
POB	Persons on board
PON	+Pulse modulation, designation of emissions
POSS	Possible
PPI	Plan position indicator
PPR	Prior permission required
PPSN	Present position
PREG	Aerodrome partially covered by fog
PRI	Primary
DDKC	Darking
	+ Drobability
	Procedure
	Provedule
PRUV	Provisional
P3	Plus
PSG	Passing
PSN	Position
PSP	Pierced steel plank
PSR	‡Primary surveillance radar
PSYS	Pressure system(s)
PTN	Procedure turn
PTS	Polar track structure
PWR	Power
0	
Q	
QDL	Do you intend to to ask me for a series of bearings? or I intend to ask for a series of bearings
	(to be used in radiotelegraphy as a Q Code)
QDM	<pre>‡Magnetic heading (zero wind)</pre>
QDR	Magnetic bearing
QFE	‡Atmospheric pressure at aerodrome elevation (or at runway threshold)
QFU	Magnetic orientation of runway
QGE	What is my distance to your station or Your distance to my station is (distance figures and
	units) (to be used in radiotelegraphy as a Q Code)
O'IH	Shall I run my test tape/a test sentence or run your test tape/a test sentence (to be used in
QUIT	AFS as a O Code)
ONH	tAltimeter sub-scale setting to obtain elevation when on the ground
OSP	Will you relay to free of charge or I will relay to free of charge (to be used in AFS as
	a O Code)
ΟΤΑ	Shall I cancel telegram number 2 or cancel telegram number
OTE	True hearing
	nue beaning

AIP HUNGARY	05 FEB 2015
QTF	Will you give me the position of my station according to the bearings taken by the D/F sta- tions which you control or the position of your station according to the bearings taken by the D/F stations that I control was latitudelongitude (or other indication of position), class at hours (to be used in radiotelegraphy as a Q Code)
QUJ	Will you indicate the TRUE track to reach you or The TRUE track to reach me is degrees at hours (to be used in radiotelegraphy as a Q Code)
R	
R	Right (preceded by runway designator number to identify a parallel runway)
R	Red
R	Runway visual range (followed by figures in the METAR/SPECI)
R	*Received (acknowledgement of receipt) (to be used in AFS as a procedure signal)
R	Restricted area (followed by identification)
R	+Radial (VOR)
RAC	Rules of the air and air traffic services
RAG	Ragged
RAI	Runway alignment indicator
RAIM	†Receiver autonomous integrity monitoring
RASC	†Regional AIS system centre
RASS	Remote altimeter setting source
RB	Rescue boat
RCA	Reach cruising altitude
RCC	Rescue coordination centre
RCF	Radio communication failure message
RCL	Runway centre line
RCLL	Runway centre line light(s)
RCLR	Re cleared
RDH	Reference datum height
RDL	Radial
RDO	Radio
RE	Recent (used to qualify weather phenomena e.g. RE RA = recent rain)
REA	+Ready message
REC	Receive or receiver
REDL	Runway edge light(s)
REF	Reference to or refer to
REG	Registration
RENL	Runway end light(s)
REP	Report or reporting or reporting point
REQ	Request or requested
RERTE	Reroute
RESA	RWY end safety area
RFC	+Radio facility chart
RG	Range (lights)
RHC	Right-hand circuit
RIF	Re clearance on flight
RITE	Right (direction of turn)
RL	Report leaving
RI A	Relay to
RLCE	Request level change enroute
RLLS	Runway lead-in lighting system
RLNA	Request level not available
RMAC	Radar minimum altitude chart
RMK	Remark
RNAV	†(to be pronounced "AR-NAV") Area navigation
RNG	Radio range

RNP	Required navigation performance					
ROBEX	†Regional OPMET bulletin exchange (scheme)					
ROC	Rate of climb					
ROD	Rate of descent					
RON	Receiving only					
RPI	‡Radar position indicator					
RPL	Repetitive flight plan					
RPLC	Replace or replaced					
RPS	Radar position symbol					
RPT	*Repeat or I repeat (to be used in AFS as a procedure signal)					
RQ	*Request (to be used in AFS as a procedure signal)					
ROMNTS	Requirements					
ROP	Request flight plan (message type designator)					
ROS	Request supplementary flight plan (message type designator)					
PP	Report reaching					
	(or PPP, PPC, oto in conjugaço) Dolaved motocrological mossago (mossago typo dosig					
	(of RRB, RRC etc. in sequence) Delayed meleorological message (message type desig-					
DCC	Deceve cub contro					
RSC	Rescue sub-centre					
RSCD	Runway surface condition					
RSP	Responder beacon					
RSR	En-route surveillance radar					
RTD	Delayed (used to indicate delayed meteorological message; message type designator)					
RTE	Route					
RTF	Radio telephone					
RTG	Radio telegraph					
RTHL	Runway threshold light(s)					
RTN	Return or returned or returning					
RTODAH	Rejected take-off distance available helicopter					
RTS	Return to service					
RTT	Radio teletypewriter					
RTZL	Runway touchdown zone light(s)					
RUT	Standard regional route transmitting frequencies					
RV	Rescue vessel					
RVR	+Runway visual range					
RV/SM	TRaduced Vertical Separation Minima (300 m/1000 ft between EL 200 and EL 410)					
	Kuliway					
S						
S	State of the sea (followed by figures in METAR/SPECI)					
S	South or Southern latitude					
SA	Sand					
SALS	Simple approach lighting system					
SAN	Sanitary					
SAP	As soon as possible					
SAR	Search and rescue					
SARPS	Standards and recommended practices (ICAO)					
SAT	Saturday					
SATCOM	tSatellite communication					
SB	Southbound					
SBAS	+Satellite-based augmentation system (to be pronounced "SS-BASS")					
SC	Stratocumulus					
SCT	Scattered					
SDBY	Stand hv					
SE	South-past					
SEA	Sea (used in connection with sea surface temporature and state of the sea)					
SEA SED	Sea (used in connection with sea-surface temperature and state of the sea)					
SED	Sourceswould					
SECN	Section					
SECIN						

SECT	Sector
SELCAL	†Selective calling system
SEP	September
SER	Service or servicing or served
SEV	Severe (used e.g. to quality icing and turbulence reports)
SFC	Surface
SG	Snow grains
SGL	Signal Showere (followed by DA = rain SN = anow, DE = ico pollete, CD = beil, CS = amell beil
оп 9 це	and/or snow pellets or combinations, thereof, e.g SHRASN = showers of rain and snow)
SID	Super high frequency (3000 to 30000 Milz)
SIE	Selective identification feature
SIG	Significant
SIGMET	+Information concerning en-route weather phenomena which may effect the safety of air-
	craft operations
SIMUL	Simultaneous or simultaneously
SIWL	Single isolated wheel load
SKED	Schedule or scheduled
SLAP	+Slot allocation procedure
SLP	Speed limiting point
SLT	+Slot allocation message
SLW	Slow
SMC	Surface movement control
SMR	Surface movement radar
SN	Snow
SNOCLO	Aerodrome closed due to snow (used in METAR/SPECI)
SNOWTAM	†A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement
	area, by means of a specific pro format.
SOC	+Start of climb
SPECI	+Aviation selected special weather report (in aeronautical meteorological code)
SPECIAL	†Special meteorological report (in abbreviated plain language)
SPL	Supplementary flight plan message
SPOC	SAR point of contact
SPOT	†Spot wind
SQ	Squall
SQL	Squall line
SR	Sunrise
SRA	Surveillance radar approach
SRE	Surveillance radar element of precision approach radar system
SRG	Short range
SRR	Search and rescue region
SRQ	+Slot request message
SRY	Secondary
SS	Sandstorm
55	Sunset Single side band
33B 865	Single sideband
	Soulli-soulli-easi
SOR	Locolludiy Sulvellidice Idudi
SSW	South-south-west
ST	Stratus
STA	Straight in approach
STAR	+Standard (instrument) arrival
STD	Standard
STF	Strati form
STN	Station
K	

## GEN 2.2 - 18 05 FEB 2015

STNR STOL STS STWL SUBJ SUN SUP SUPPS SVC SVCBL SW SWB SWB SWY S6	Stationary Short take-off and landing Status Stopway light(s) Subject to Sunday Supplement (AIP supplement) Regional supplementary procedures Service message Service able South-west South-west South-west South-west South-west South-westpound Stopway +6-hourly surface synoptic chart
т	
T	Temperature
T	True (preceded by a bearing to indicate reference to True North)
TA	Transition altitude
TAA	Terminal arrival altitude
TACAN	UHF tactical air navigation aid
TAF	†Aerodrome forecast
TAIL	† Tall wind
TAR	Terminal area surveillance radar
TAS TAX TC TCA TCP	Taxiing or taxi Tropical cyclone +Area of responsibility of TMA sector +Transfer of control point
TCU	Towering cumulus
TDA	+Area or responsibility of BUDAPEST DIRECTOR
TDO	Tornado
TDZ	Touchdown zone
TECR	Technical reason
TEL TEMPO TEND	Temporary or temporarily Trend forecast
TGL	Touch-and-go landing
TGL	+Temporary Guidance Leaflet
TGS	Taxiing guidance system
THR	Threshold
THRU	Through
THU	Thursday
TIBA	†Traffic information broadcast by aircraft
TIL	†Until
TIP TIZ TKOE	Until past (place) +Traffic Information Zone
TL	Till (followed by time which weather change is forecast of end)
TLOF	Touchdown and lift-off area
TMA	Terminal control area
TN	Minimum temperature (followed by figures in TAF)
TNH	Turn Height
TO	To (place)
TOC	Top of climb
TODA	Take-off distance available

but no precipitation at the aerodrome).     TS   Thunderstorm (followed by RA+rain, SN=snow, PE=ice pellets, GA=hali, GS=small hali and/or snow pellets or combinations thereof, e.g. TSRASN=thunderstorm with rain and snow)     TA   Temporary Segregated Area     TT   Teletypewriter     TUE   Tuesday     TURB   Turbulence     T-VASIS   f (to be pronounced "TEE –VASIS") T visual approach slope indicator system     TVOR   Terminal VOR     TWW   Aerodrome control tower or aerodrome control     TWY   Taxiway     TWY   Taxiway     TXT   Maximum temperature (followed by figures in TAF)     TXT   Maximum temperature (followed by figures in TAF)     TYP   Type of aircraft     TYPH   Typhoon     U   Upward (tendency in RVR during previous 10 minutes)     UA   Unmanned aircraft     UAC   Upper area control centre     UAR   Upper air route     UAS   Ummanned aircraft system     UDF   Ultra high frequency directon-finding station     UFH   ‡Upper Flight Information Region     UHF   ‡Ultra high frequency (3000 Mhz)     UIC   Upper Information Centre     UIR   ‡Upper Flight Information Region     UIR   Ultra light Frequency (autor) area  <	TODAH TOP TORA TOX TP TR TRA TRAS TREND TRCC TRL TROP TS	Take-off distance available, helicopter †Cloud top Take-off run available Toxic Turning point Track Temporary reserved airspace Transmits or transmitter Trend forecast +Terminal Radar Control Centre Transition level Tropopause Thunderstorm (in aerodrome reports and forecasts, TS used alone means thunder heard
TSA     + Temporary Segregated Area       TT     Teletypewriter       TUE     Tuesday       TURB     Turbulence       FVASIS     t(to be pronounced "TEE -VASIS") T visual approach slope indicator system       TVOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWYL     Taxiway.       TXT     "Text/when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Unli advised by       UAC     Upper aire acotrol centre       UAR     Upper air oute       UAR     Upper air oute       UAR     Upper (300 to 3000 Mhz)       UHDT     Unable higher due traffic       UHF     UItra high frequency (300 to 3000 Mhz)       UIR     #Upper Information Region       UIR     Upper Information Region       UIR     Upper Information Region       UIR     Upper	TS	but no precipitation at the aerodrome). Thunderstorm (followed by RA=rain, SN=snow, PE=ice pellets, GA=hail, GS=small hail and/or snow pellets or combinations thereof, e.g. TSRASN=thunderstorm with rain and snow)
TT     Teletypewriter       TUE     Tuesday       TURB     Turbulence       T-VASIS     f(to be pronounced "TEE -VASIS") T visual approach slope indicator system       TVOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWY     Taxiway-link       TX     Maximum temperature (followed by figures in TAF)       TX     Maximum temperature (followed by figures in TAF)       TXT     "Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Until advised by       UAC     Upper air coute       UAR     Upper air coute       UAS     Unmanned aircraft system       UDF     Ultra high frequency direction-finding station       UFN     Until further notice       UHF     Ultra high frequency (300 to 3000 Mhz)       UIC     Upper Information Centre       UIR     ‡Upper Flight Info	TSA	+Temporary Segregated Area
TUE     Tuesday       TURB     Turbulence       T-VASIS     t(to be pronounced "TEE -VASIS") T visual approach slope indicator system       TVOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWYL     Taxiway       TXT     Taxiway-link       TX     Maximum temperature (followed by figures in TAF)       TXT     "Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Type of aircraft       TYPH     Type of aircraft       U     Upward (tendency in RVR during previous 10 minutes)       UA     Ummanned aircraft       UAB     Until advised by       UAC     Upper air route       UAR     Upper air route       UAR     Upper air route       UAR     Upper air route       UHD     Unable higher due traffic       UHF     Ultra high frequency (300 to 3000 Mhz)       UF     Ultra long range       UNA	TT	Teletypewriter
TURB     Turbulence       T-VASIS     t(to be pronounced "TEE -VASIS") T visual approach slope indicator system       TVOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWY     Taxiway-link       TX     Maximum temperature (followed by figures in TAF)       TX     Maximum temperature (followed by figures in TAF)       TXT     "Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UA     Upmared aircraft       UA     Upper area control centre       UAR     Upper air route       UAS     Unmanned aircraft system       UDF     Ultra high frequency (300 to 3000 Mhz)       UHD     Unable higher due traffic       UHF     ‡ Ultra high frequency (300 to 3000 Mhz)       UIF     ţ Ultra log range       UNA     Unable       UNA     Unable       UNA     Unable <tr< td=""><td>TUE</td><td>Tuesday</td></tr<>	TUE	Tuesday
TVASIS     † (to be pronounced "TEE –VASIS") T visual approach slope indicator system       TVOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWYL     Taximay-link       X     Maximum temperature (followed by figures in TAF)       TX     Maximum temperature (followed by figures in TAF)       TX     *Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Until advised by       UAC     Upper air coute       UAR     Upper air route       UAS     Ummanned aircraft system       UDF     Ultra high frequency direction-finding station       UFN     Uniti further notice       UHPT     Upper Filopt Information Centre       UAB     Ultra high frequency (300 to 3000 Mhz)       UIC     Upper Filopt Information Centre       UIR     Ultra long range       UNA     Unable       UNAP <td>TURB</td> <td>Turbulence</td>	TURB	Turbulence
TWOR     Terminal VOR       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Until advised by       UAC     Upper air coulte       UAS     Unmanned aircraft system       UDF     Ultra high frequency direction-finding station       UFN     Unble fuger of aircoult fuger on torice       UHDT     Unable higher due traffic       UHF     ‡Ultra high frequency direction-finding station       UFF     ‡Ultra high frequency (300 to 3000 Mhz)       UIC     Upper Flight Information Region <td></td> <td><math>\pm</math> (to be pronounced "TEE -VASIS") T visual approach slope indicator system</td>		$\pm$ (to be pronounced "TEE -VASIS") T visual approach slope indicator system
TWR     Aerodrome control tower or aerodrome control       TWR     Aerodrome control tower or aerodrome control       TWY     Taxiway       TWYL     Taxiway-link       TX     Maximum temperature (followed by figures in TAF)       TXT     *Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Until advised by       UAC     Upper area control centre       UAR     Upper air route       UAR     Upper area control centre       UAR     Upper air oute       UAS     Unmanned aircraft system       UDF     Utra high frequency (300 to 3000 Mhz)       UIC     Upper Information Centre       UHF     ‡Upper Flight Information Region       ULR     Utra long range       UNAP     Unable to approve       UNA     Unable       UNAP     Unable to approve       UNA     Unserviceable       UP     Unid		
TWX     Taxiway       TWY     Taxiway-link       TX     Maximum temperature (followed by figures in TAF)       TXT     "Fext /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     U       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Unimanned aircraft       UAR     Upper are a control centre       UAR     Upper air route       UAS     Unmanned aircraft system       UDF     Ultra high frequency direction-finding station       UFN     Uhit arbigh requency (alto to 3000 Mhz)       UFN     tura high frequency (300 to 3000 Mhz)       UIR     tupper Flight Information Region       ULR     Ultra long range       UNA     Unable       UNAP     Unable to approve       UNL     Unilmited       UNREL     Uncilable       UP     Unidentified precipitation (used in automated METAR/SPECI)       U/S     Unserviceable       USD     +US dollar<		
TWYLTaxiway-InkTWYLTaxiway-InkTXMaximum temperature (followed by figures in TAF)TX"Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)TYPType of aircraftTYPHTyphoonUUpward (tendency in RVR during previous 10 minutes)UAUnmanned aircraftUABUntil advised byUACUpper area control centreUARUpper area control centreUARUpper area control centreUARUDFUITa high frequency direction-finding stationUFNUntil further noticeUHDTUnable higher due trafficUHF‡Ulpper Flight Information RegionULRUltra long rangeUNAPUnableUNAPUnableUNAPUnableUNAPUnableUNAPUndentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUZ+200 hPa chartU3+300 hPa chartU4+400 hPa chart		
TX     Maximum temperature (followed by figures in TAF)       TXT     *Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Type of aircraft       U     U       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UAB     Until advised by       UAC     Upper area control centre       UAR     Upper air route       UAS     Unmanned aircraft system       UDF     Ultra high frequency direction-finding station       UHF     ‡Ultra high frequency (300 to 3000 Mhz)       UIC     Upper Information Centre       UIR     ‡Upper Flight Information Region       ULR     Ultra long range       UNA     Unable       UNAP     Unable       UNA     Unable       UNA     Unreliable       UP     Unidentified precipitation (used in automated METAR/SPECI)       UVS     Unserviceable       USD     +US dollar       UTA     ‡Upper control area       UTC     Coordinated universa		Taxiway
TXT     Maximum temperature (rollowed by figures in TAF)       TXT     "Text /when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation (e.g. IMI TXT/ (to be used in AFS as a procedure signal)       TYP     Type of aircraft       TYPH     Typhoon       U     Upward (tendency in RVR during previous 10 minutes)       UA     Unmanned aircraft       UA     Unper area control centre       UAR     Upper air route       UAS     Unmanned aircraft system       UDF     Ultra high frequency direction-finding station       UFN     Uhtif luther notice       UHF     Ultra high frequency (300 to 3000 Mhz)       UIC     Upper Information Centre       UIR     ‡Upper Flight Information Region       ULR     Ultra long range       UNA     Unable       UNA     Unable       UNA     Unable       UNA     Undentified precipitation (used in automated METAR/SPECI)       U/S     Unserviceable       USD     +US dollar       UTA     ‡Upper control area       UTC     Coordinated universal time       U2     +200 hPa chart       U3     +3		Taxiway-IITK
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UDFUltra high frequency direction-finding stationUFNUntil further noticeUHDTUnable higher due trafficUHF‡Ultra high frequency (300 to 3000 Mhz)UICUpper Information CentreUIR‡Upper Flight Information RegionULRUltra long rangeUNAUnableUNAUnableUNLUnimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UAS	Unmanned aircraft system
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UHDTUnable higher due trafficUHF‡Ultra high frequency (300 to 3000 Mhz)UICUpper Information CentreUIR‡Upper Flight Information RegionULRUltra long rangeUNAUnableUNAUnableUNAUnableUNLUnlimitedUPPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UFN	Until further notice
UHF‡Ultra high frequency (300 to 3000 Mhz)UICUpper Information CentreUIR‡Upper Flight Information RegionULRUltra long rangeUNAUnableUNAUnableUNAUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UHDT	Unable higher due traffic
UICUpper Information CentreUIR‡Upper Flight Information RegionULRUltra long rangeUNAUnableUNAUnableUNAPUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UHF	‡Ultra high frequency (300 to 3000 Mhz)
UIR‡Upper Flight Information RegionULRUltra long rangeUNAUnableUNAUnableUNAPUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UIC	Upper Information Centre
ULRUltra long rangeUNAUnableUNAPUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UIR	Upper Flight Information Region
UNAUnableUNAPUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	ULR	Ultra long range
UNAPUnable to approveUNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UNA	Unable
UNLUnlimitedUNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UNAP	Unable to approve
UNRELUnreliableUPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UNL	Unlimited
UPUnidentified precipitation (used in automated METAR/SPECI)U/SUnserviceableUSD+US dollarUTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	UNRFI	Unreliable
U/S   Unserviceable     USD   +US dollar     UTA   ‡Upper control area     UTC   Coordinated universal time     U2   +200 hPa chart     U3   +300 hPa chart     U4   +400 hPa chart	UP	Unidentified precipitation (used in automated METAR/SPECI)
USD +US dollar UTA ‡Upper control area UTC Coordinated universal time U2 +200 hPa chart U3 +300 hPa chart U4 +400 hPa chart	U/S	Unserviceable
UTA‡Upper control areaUTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart	USD	+US dollar
UTCCoordinated universal timeU2+200 hPa chartU3+300 hPa chartU4+400 hPa chart		t Inner control area
U2+200 hPa chartU3+300 hPa chartU4+400 hPa chart		+opper control area
U2   +200 hPa chart     U3   +300 hPa chart     U4   +400 hPa chart		Coordinated universal lime
U3 +300 hPa chart U4 +400 hPa chart		
U4 +400 hPa chart	03	+300 hPa chart
	U4	+400 NPa Chart

U5 U7 U25 U85	+500 hPa chart +700 hPa chart +250 hPa chart +850 hPa chart
V	
V	Variations from the mean wind direction (preceded and followed by figures in the ME-
VA	Volcanic ash
VAC	Visual approach chart (followed by name/title)
VAL	In valleys
	Runway control van
VAR	Visual-aural radio range
VASIS	Visual approach slope indicator systems
VC	Vicinity of the aerodrome (followed by FG=fog, FC=funnel cloud, PO=dust/sand whirls, BLDU=blowing dust, BLSA=blowing sand or BLSN=blowing snow, e.g. VC FG=vicinity fog)
VCY	Vicinity
VDF	Very high frequency direction finding station
VER	venicai tVisual flight rules
VHF	‡Very high frequency (30 to 300 Mhz)
VIP	‡Very important person
VIS	Visibility
	Very low frequency 3 to 30 kHz)
VMC	‡Visual meteorological conditions
VOLMET	†Meteorological information for aircraft in flight
VOR	+VHF omnidirectional radio range
VORTAC	VOR airborne equipment test facility
VPA	Vertical pass angle
VPT	Visual manoeuvre with prescribed track
VRB	Variable
VSA VSP	Vertical speed
VTOL	Vertical take-off and landing
VV	Vertical visibility (followed by figures in METAR/SPECI and TAF)
VWS	+Vertical wind shear
W	
W	Sea-surface temperature (followed by figures in METAR/SPECI)
W	West or western longitude
WAAS	tWide area augmentation system
WAC	World Aeronautical Chart – ICAO 1 : 1 000 000 (followed by name/title)
WAFC	World Area Forecast Centre
WBAR	Westbound Wing bar lights
WDAIX	+Working day
WDI	Wind direction indicator
WDSPR	Widespread
	+weekend Wednesday
WEF	With effect from or effective from
WGS-84	World geodetic system- 1984
WI	Within

WID WIE WILCO WIND WIP WKN WMO WNW WO WPT WRNG WS WSPD WSW WSPD WSW WT WTSPT WWW	Width With immediate effect or effective immediately †Will comply Wind Work in progress Weaken or weakening +World Meteorological Organization West-north-west Without Way-point Way-point Warning Wind shear Wind shear Wind speed West-south-west Weight Waterspout World wide web Weather
X	
X XBAR XNG XS	Cross Crossbar (of approach lighting system) Crossing Atmospherics
Y	
Y YCZ YES YR	Yellow Yellow caution zone (runway lighting) *Yes (affirmative) (to be used in AFS as a procedure signal) Your
Z	
Z	Coordinated Universal Time (in meteorological messages)

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## GEN 2.3 CHART SYMBOLS

## 1. GENERAL SYMBOLS

## Figure 1. Aerodromes

	⇒ ()	Aerodrome, runway pattern
N		Paved runway (Aeronautical Chart - ICAO 1:500 000)
<b></b>	¢	Civil aerodrome
Ø	O	Military aerodrome
$\otimes$		Abandoned or closed aerodrome
6)	θ	Heliport, helicopter alighting area on an aerodrome

## Figure 2. Radio navigation aids



# Figure 3. Air traffic services

				<u> </u>	Flight Information Region (FIR)
					Terminal Control Area (TMA/MTMA); Control Area (CTA)
					Control Zone (CTR/MCTR)
					Free Route Airspace (FRA) (Enroute Chart - ICAO)
					Traffic Information Zone (TIZ)
C BUDAPEST TMA BUDAPEST FIR FL660 GND LHCC					Airspace type Airspace name Budarest ctr Budarest ctr Ctr Budarest ctr Ctr Budarest ctr Ctr Ctr Control limit (lower limit) C Ctr Ctr Ctr Ctr Ctr Ctr Ctr Ctr Ctr C
Aeronautica	l Chart -	ICAO 1	:500 000	: callsię	gn, frequency, airspace classification, vertical limits, airspace name and type $-\!\!/$
LHSG22 C GND-3000 (650	0 PCR)	/////	LH 	ISG22 500 ND	Aerial sporting and recreational activities with designator and vertical limits
LHP1 GND-FL195	-		LH	B32 0 AGL	Bird migration and areas with sensitive fauna with designator and vertical limits (upper limit)
		Δ		$\bigtriangleup$	Reporting point - compulsory; on request
	\$	\$			Final approach fix (FAF), Final approach point (FAP)
<u>3000</u>	3000	3000	4000 2000		Altitudes levels ("at or above", "at or below", "mandatory", "window")
	♦ <u>30</u>	00			Waypoint - fly-by; fly-over with crossing altitude
- 08	-084°-8.7 3000				Terminal route segment - instrument with designator, length (NM), minimum obstacle clearance altitude, course
					Terminal route segment - visual with designator, altitude, course
					Scale-break on route
<u>6000</u> 090°→					Holding pattern with altitude and course
•	→				Missed approach track

# Figure 4. Air restrictions

	LHP1 GND-FL195	LHP1 FL195	LHP1 FL195	Prohibited area with designator and vertical limits (upper limit)
		LHR1 3500	LHR1 3500	Restricted area with designator and vertical limits (upper limit)
		LHD1 3800	LHD1 3800	Danger area with designator and vertical limits (upper limit)
	LHTRA12 GND-FL115	LHTRA12 FL115 GND	LHTRA12 FL115 GND	Temporarily restricted area with designator and vertical limits

# Figure 5. Obstacles

		Obstacle; Group obstacles; Lighted obstacle; Lighted group obstacles		
L L L L		Exceptionally high obstacle; Exceptionally high obstacle lighted		
t t		Wind turbine; Wind turbines in minor group		
699 (203)		Elevation and (height) of top in ft		
1070 (622)		Spot elevation (height) in ft		
<b>— T — T  — T — T</b>		Prominent transmission line		

## 2. MISCELLANEOUS

# Figure 6. Symbols for En-route Charts

<b>5</b> <sup>2</sup>	Minimum off-route altitude (Grid MORA) - example: 5200 ft
3.5° E	Isogonic line

# Figure 7. Symbols for SID/STAR/Instrument Approach Charts

3600       23000         000       2200         3000       2100         1000       1000         1000       0 feet	Minimum sector altitude; Hypsometry
	City or large town; Hydrography

# Figure 8. Symbols for Aerodrome / Heliport Charts

	Area suitable for aircraft movement (asphalt, concrete, grass)		
<b>אק נו</b>	Runway designation; Stopway (SWY); Strip		
A	Taxiway sign and segment boundary		
+ ARP	Aerodrome boundary; Aerodrome reference point (ARP)		
<b>↔</b>	VOR check-point; Runway visual range (RVR) observation site		
==== IIIII	Runway-holding position (PatternA, B); Intermediate holding position		
•••• STOP ××× 🖸	Stop bar; Sign-board; No entry; Wind direction indicator		
• SMR • Ceilometer	Other aerodrome equipment; Meteorological equipment		
┃ ■ ▶ ○ ◎ ● ● ● ★ ┨ □	Point lights (see details on charts)		
	Taxiway centre line; Aircraft stand taxilane centre line		
•1	Number of aircraft stand		
APRON MANAGEMENT SERVICE	Boundary of the air traffic control service		
• TWR =	Aerodrome control tower; Building; Fence		
=+++	Service road, public road; Important dirt-road; Railway tracks		

## Figure 9. Symbols for Obstacle Charts - Type A

		Area suitable for aircraft movement (asphalt, concrete, grass)
9		Stopway (SWY); Strip
		Take-off flight path;Take-off flight path area
*	•	Tree or shrub; Pole, tower, spire, antenna, etc.; Identification number
	0	Built-up area; Forest area, etc.

## Figure 10. Symbols for Visual Approach Charts

Under development

# Figure 11. Symbols for Aeronautical Chart - ICAO 1:500 000

<b>1</b> <sup>3</sup>	Area minimum altitude - example: 1300 ft		
——————————————————————————————————————	Isogonic line		
Culture, hydrography and topography symbols see details on chart.			

## GEN 3.2 AERONAUTICAL CHARTS

## 1. **RESPONSIBLE SERVICES**

- **1.1.** The aeronautical charts for the territory of Hungary are published by the HungaroControl Pte. Ltd. Co.
- **1.2.** The aeronautical charts published in AIP HUNGARY are produced in accordance with the provisions contained in ICAO Annex 4 Aeronautical Charts 10. Edition with the differences listed in subsection *GEN 1.7* and conform with the provisions set forth in ICAO Aeronautical Charts Manual (DOC 8697).

## 2. MAINTENANCE OF CHARTS

- 2.1. The aeronautical charts included in the AIP are regularly kept up-to-date or are replaced by the amendments to the AIP. Significant amendments or revisions in aeronautical information to aeronautical chart 1:500000 are also included in the AIP and may be promulgated in NOTAM, if appropriate. Information concerning new maps and charts will be notified by Aeronautical Information Circular.
- **2.2.** Items of information found after publication having been incorrect at the aeronautical information date, are corrected immediately by NOTAM if they are of operational significance, attention being directed to the particular chart affected.
- **2.3.** Revision of the aeronautical information on all charts have constantly been in progress and amended reprints are published as regularly as production resources permit. Topographical and hydro graphical information portrayed are also revised when necessary.

#### 3. PURCHASE ARRANGEMENTS

- **3.1.** The charts as listed under may be obtained from:
  - HungaroControl

Aeronautical Information Service

Post:H-1675 Budapest P. O. Box 80.

## 4. AERONAUTICAL CHART SERIES AVAILABLE

- **4.1.** The following types of charts are published and available at present:
  - 1. Aeronautical Chart ICAO 1: 500 000
  - 2. Aerodrome Chart
  - 3. Aerodrome Ground Movement Chart
  - 4. Aircraft Parking/Docking Charts ICAO
  - 5. Aerodrome Obstacle Chart ICAO Type "A"
  - 6. Precision approach terrain chart ICAO
  - 7. Enroute Chart ICAO
  - 8. Prohibited, restricted and danger areas chart
  - 9. Temporarily Segregated Areas
  - 10. Instrument Approach Charts ICAO
  - 11. Visual Approach Chart ICAO
  - 12. Standard Instrument Departures Charts ICAO

A general description and explanation of the intended use of aeronautical charts listed above are given in para 4.2.

## 4.2 General description of each series

## 4.2.1 Aeronautical chart - ICAO 1:500000

This coloured chart is produced in conform conic projection and consists of one sheet.

The chart covers the area of 4540N to 4840N and from 1600E to 2300E. The topographic basis of the chart comprises built-up areas, railroads, roads, hydrography, topography, significant landmarks and political boundaries.

The aeronautical overprint includes the structure of airspaces, aerodromes, radio navigation facilities with names, frequencies and identification, known obstructions and isogonal information. This chart is designed to serve as a basic aeronautical chart for low speed visual air navigation and for preflight planning of operation.

#### 4.2.2 Aerodrome chart

These charts provide information on the movement area of public aerodromes published in Part AD (runways, taxiways and apron) and portrays the site of major flight operation facilities.

#### 4.2.3 Aerodrome ground movement chart

These charts at a scale of 1:10000 or 1:7 500 provides flight crews with detailed information to facilitate ground movement of aircraft to and from aircraft stands.

## 4.2.4 Aircraft parking/docking charts

These charts at a scale of 1:5000 or 1:2000 give more detailed information on the parking areas and procedures, being blown-up parts of the aerodrome ground movement chart above.

#### 4.2.5 Aerodrome obstacle charts

The Aerodrome Obstacle Charts, Type "A" are available for Budapest Liszt Ferenc International Airport. The horizontal scale of these charts are 1:20000 or 1:12 500 and they show the obstacles in the final approach/take-off flight path areas. The charts are included in part AD.

## 4.2.6 Precision approach terrain chart

These charts provide detailed terrain profile information of the final approach areas so as to enable aircraft operators to assess the effect of the terrain on decision height determination by the use of radio altimeters. These charts are included in part AD.

## 4.2.7 En-route chart

This chart is produced at a scale of 1:1000000.

The basic print is pale grey and the aeronautical information are of dark blue, magenta and green colour.

The function of these charts is to facilitate the task of flight crews in navigating by radio aids and significant points, in compliance with ATS procedures, during flights within Budapest FIR. The charts contain all the information relevant to the structure of controlled and uncontrolled airspaces, and the radio navigation facilities, type of service, identification, frequencies, and position coordinates.

The chart is included in part ENR 6.

## 4.2.8 Area chart

Not produced.

## 4.2.9 Prohibited, restricted and danger areas chart

The prohibited, restricted and danger areas relevant to the ATS airspaces shown on the enroute and area charts are depicted with their identification and vertical limit on a separate sheet at a scale of 1:1500000 to avoid congestion on these charts. This separate sheet is in Part ENR 6 in a consecutive order with the tabular presentation.

#### 4.2.10 Temporarily segregated areas

The temporarily segregated areas - as relevant to the ATS airspaces - shown on the en-route and area charts are depicted with their identification and vertical limit on a separate sheet at a scale of 1:1500000 to shown the graphic lateral portrayal of those listed on pages ENR 5.2-1, 5.2-2.

This chart is included in part ENR 6.

#### 4.2.11 Instrument approach charts

These charts are produced for each instrument approach procedure available at aerodromes. The basic print is pale grey and the aeronautical information are of dark blue colour.

Way points are shown in green overlay to facilitate BRNAV operations.

These charts are at a scale of 1:250000 and included in part AD 2.

#### 4.2.12 Visual approach charts

These charts are produced at different scales on coloured topographic base. The primary function is to provide information on the visual approach procedures applicable at aerodromes published in Part AD 2. The holding patterns and minimum holding altitudes associated with the approach procedures are shown.

#### 4.2.13 Standard instrument departures charts

These charts at a scale of 1:500000 or 1:250 000 provide flight crew with information to enable them to comply with the designed standard instrument departure route from the take-off to the en-route phase of flight. Each chart includes relevant aeronautical information as well as the textual description of the designated standard instrument departure routes (SID).

Way points are shown in green overlay to facilitate BRNAV operations.

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## 5. LIST OF AERONAUTICAL CHARTS AVAILABLE

All series listed are part of the AIP

Title of series	Scale	Name and/or number	Price (HUF)	Date
Aeronautical Chart - ICAO		Hungary		
	1:500 000	2252-B 2251A	1600	25 JUL 2013
En-route Chart - ICAO		Hungary		
	1:1 000 000	ENR 6-LHCC-ERC	500	05 FEB 2015
Appendix to En-route Chart - ICAO	Nil	ENR 6-LHCC-ERC-MISC 1-3	500	05 FEB 2015
Military Exercise Areas		Hungary		
	1:1 500 000	ENR 6-LHCC-TRA	200	03 JUL 2008
P/R/D Areas		Hungary		
	1:1 500 000	ENR 6-LHCC-PRD	200	18 NOV 2010
Aerodrome Chart - ICAO		Békéscsaba		
	1:10 000	AD 2-LHBC-ADC	200	14 NOV 2013
		Budapest/Liszt Ferenc International Airport		
	1:25 000	AD 2-LHBP-ADC	200	18 SEP 2014
Appendix 1 to ADC	Nil	AD 2-LHBP-MISC-ARR	200	25 JUL 2013
Appendix 2 to ADC	Nil	AD 2-LHBP-MISC-DEP	200	25 JUL 2013
		Debrecen		
	1:10 000	AD 2-LHDC-ADC	150	14 NOV 2013
		Nyíregyháza		
	1:7 500	AD 2-LHNY-ADC	150	25 JUL 2013
		Győr/Pér		
	1: 10 000	AD 2-LHPR-ADC	200	26 JUN 2014
		Hévíz/Balaton		
	1:10 000	AD 2-LHSM-ADC	150	14 NOV 2013
		Pécs/Pogány		
	1:10 000	AD 2-LHPP-ADC	150	26 JUN 2014
Aerodrome Obstacle Chart - ICAO - Type A		Budapest/Liszt Ferenc International Airport		
	1:20 000	RWY 13R/31L AD 2-LHBP-AOC/A 13R/31L	150	25 AUG 2011
	1:20 000	RWY 13L/31R AD 2-LHBP-AOC/A 13L/31R	150	25 AUG 2011
		Debrecen		
	1:12 500	AD 2-LHDC-AOC/A	200	26 AUG 2010
		Pécs/Pogány		
	1:20 000	AD 2-LHPP-AOC/A	200	26 AUG 2010
		Hévíz/Balaton		
	1:20 000	AD 2-LHSM-AOC/A	200	20 SEP 2012
Aircraft Parking/Docking Chart - ICAO		Budapest/Liszt Ferenc International Airport		
	1:5 000	AD 2-LHBP-PDC/1	200	14 NOV 2013
	1:5 000	AD 2-LHBP-PDC/2	200	30 MAY 2013
	1:5 000	AD 2-LHBP-PDC/3	200	30 MAY 2013

Title of series	Scale	Name and/or number	Price (HUF)	Date
Instrument Approach Chart - ICAC	)	Békéscsaba		
	1:275 000	AD 2-LHBC-NDB 17L	200	14 NOV 2013
	1:275 000	AD 2-LHBC-NDB 35R	200	14 NOV 2013
	1:275 000	AD 2-LHBC-RNAV (GNSS) 17L	200	14 NOV 2013
	1:275 000	AD 2-LHBC-RNAV (GNSS) 35R	200	14 NOV 2013
		Budapest/Liszt Ferenc International Airport		
	1:300 000	AD 2-LHBP-ILS/LOC-13L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-VOR-13L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-NDB-13L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-ILS/LOC-13R	200	26 JUN 2014
	1:300 000	AD 2-LHBP-ILS/LOC-31L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-VOR-31L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-NDB-31L	200	26 JUN 2014
	1:300 000	AD 2-LHBP-ILS/LOC-31R	200	26 JUN 2014
	1:300 000	AD 2-LHBP-VOR-31R	200	26 JUN 2014
	1:300 000	AD 2-LHBP-NDB-31R	200	26 JUN 2014
		Debrecen		
	1:250 000	AD 2-LHDC-ILS 05R	200	26 AUG 2010
	1:250 000	AD 2-LHDC-NDB 23L	200	26 AUG 2010
	1:250 000	AD 2-LHDC-RNAV (GNSS) 05R	200	26 AUG 2010
	1:250 000	AD 2-LHDC-RNAV (GNSS) 23L	200	26 AUG 2010
		Fertőszentmiklós		
	1:175 000	AD 2-LHFM-RNAV (GNSS) 16(A,B)	200	26 AUG 2010
	1:175 000	AD 2-LHFM-RNAV (GNSS) 34(A,B)	200	26 AUG 2010
		Győr/Pér		
	1:250 000	AD 2-LHPR-VOR-12	200	18 SEP 2014
	1:250 000	AD 2-LHPR-ILS/LOC-30	200	05 FEB 2015
	1:250 000	AD 2-LHPR-VOR-30	200	05 FEB 2015
	1:250 000	AD 2-LHPR-RNAV-12	200	05 FEB 2015
	1:250 000	AD 2-LHPR-RNAV-30	200	05 FEB 2015
		Pécs/Pogány		
	1:250 000	AD 2-LHPP-NDB-16	200	18 NOV 2010
	1:250 000	AD 2-LHPP-ILS-34	200	26 AUG 2010
		Hévíz/Balaton		
	1:250 000	AD 2-LHSM-ILS/LOC-16	200	05 FEB 2015
	1:250 000	AD 2-LHSM-NDB-16	200	05 FEB 2015
	1:250 000	AD 2-LHSM-NDB-34	200	05 FEB 2015
	1:250 000	AD 2-LHSM-RNAV (GNSS) 16	200	20 SEP 2012
	1:250 000	AD 2-LHSM-RNAV (GNSS) 34	200	20 SEP 2012
Precision Approach Terrain Chart - ICAO		Budapest/Liszt Ferenc		
	1:2000	AD 2-LHBP-PATC 13R/31L	100	25 AUG 2011

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**AIP HUNGARY** 

Title of series	Scale	Name and/or number	Price (HUF)	Date
	1:2000	AD 2-LHBP-PATC 13L/31R	100	25 AUG 2011
Standard Arrival Chart - Instrument (STAR) - ICAO		Debrecen		
	1:250 000	AD 2-LHDC STAR	200	26 AUG 2010
Standard Departure Chart - Instrument (SID) - ICAO		Budapest/Liszt Ferenc International Airport		
	1:500 000	RWY 13L/13R AD 2-LHBP-SID 13	200	26 JUN 2014
	1:500 000	RWY 31L/31R AD 2-LHBP-SID 31	200	26 JUN 2014
		Debrecen		
	1:250 000	AD 2-LHDC SID05R	200	26 AUG 2010
	1:250 000	AD 2-LHDC SID23L	200	26 AUG 2010
		Győr/Pér		
	1:250 000	AD 2-LHPR-SID-12	200	06 FEB 2014
	1:250 000	AD 2-LHPR-SID-30	200	25 JUL 2013
		Hévíz/Balaton		
	1:250 000	AD 2-LHSM SID16	200	05 FEB 2015
	1:250 000	AD 2-LHSM SID34	200	05 FEB 2015
Visual Approach Chart - ICAO		Békéscsaba		
	1:75 000	AD 2-LHBC-VAC	400	14 NOV 2013
		Budapest/Liszt Ferenc International Airport		
	1:125 000	AD 2-LHBP-VAC	400	14 NOV 2013
		Debrecen		
	1:75 000	AD 2-LHDC-VAC	400	26 AUG 2010
		Fertőszentmiklós		
	1:75 000	AD 2-LHFM-VAC	400	26 AUG 2010
		Győr/Pér		
	1:75 000	AD 2-LHPR-VAC	400	26 JUN 2014
		Pécs/Pogány		
	1:75 000	AD 2-LHPP-VAC	400	26 AUG 2010
		Hévíz/Balaton		
	1:75 000	AD 2-LHSM-VAC	400	20 SEP 2012
		Szeged		
	1:75 000	AD2-LHUD-VAC	400	26 JUN 2014
GPS/FMS RNAV Arrival Chart Transition to Final Approach		Budapest/Liszt Ferenc International Airport		
	1:500 000	AD 2-LHBP-ARR 13L	200	26 JUN 2014
	1:500 000	AD 2-LHBP-ARR 13R	200	26 JUN 2014
	1:500 000	AD 2-LHBP-ARR-31L	200	26 JUN 2014
	1:500 000	AD 2-LHBP-ARR 31R	200	26 JUN 2014
## GEN 3.3 AIR TRAFFIC SERVICES

## 1. **RESPONSIBLE SERVICE**

The National Transport Authority Aviation Authority (NTA AA)

exercises the direct supervision upon the HungaroControl, Hungarian Air Navigation Services Pte. Ltd. Co. HungaroControl is the responsible organization for the provision of air traffic services for civil aviation.

HungaroControl

Post:H-1675 Budapest P. O. Box 80.

Phone:(361) 293-4000

Fax:(361) 293-4001

AFS:LHBPYFYX

Email:hc@hungarocontrol.hu

URL:http://www.hungarocontrol.hu

The services are provided in accordance with the provisions contained in the following ICAO documents:

- Doc 7300 Convention on International Civil Aviation
- Annex 2 Rules of the Air
- Annex 11 Air Traffic Services
- Doc 4444 Procedures for Air Navigation Services Rules of the Air and Air Traffic Services (PANS-ATM)
- Doc 8168 Procedures for Air Navigation Services Aircraft Operations (PANS-OPS)
- Doc 7030 Regional Supplementary Procedures (EUR Region)

Differences to these provisions are detailed in GEN 1.7

## 2. AREA OF RESPONSIBILITY

The area of responsibility of the Hungarian air traffic service is the entire territory of Hungary.

The area of responsibility covers additionally the parts of adjacent foreign airspace, within which the provision of the air traffic services has been delegated to HungaroControl on the basis of agreement with the appropriate foreign units. On the other hand, the provision of the ATS was delegated for specific parts of the FIR Budapest like manner to foreign air traffic service units.

The areas of responsibility are indicated by their co-ordinates in *ENR 2.2*. and depicted on aeronautical charts.

#### 3. TYPES OF SERVICES

#### 3.1 Air Traffic Services (ATS)

The following types of services are provided:

- Air Traffic Control service(ATC),
- Flight Information Service (FIS),
- Alerting Service (ALRS).

#### 3.1.1 Air Traffic Control service

The air traffic control service is subdivided in:

- area control service (ACC),
- approach control service (APP),

U HungaroControl

aerodrome control service (TWR).

ATC is provided to all flights (IFR and VFR) in class C airspace.

## 3.1.2 Flight Information Service

The Flight Information Service is subdivided in:

- Flight Information Centre (FIC),
- Aerodrome Flight Information Service (AFIS)

FIS is provided to all aircraft which are likely to be affected by the information and which are:

- a. provided with ATC service; or
- b. known to the relevant ATS unit and in two-way radio contact with it.

#### 3.1.2.1 FIC provides information and services:

- SIGMET, aerodrome met. reports, forecasts and weather conditions that likely make operation under VFR impracticable, as appropriate;
- · changes in the serviceability of navigation aids;
- other known air traffic to assist pilot to avoid collision;
- unnamed free balloons;
- activity of danger and temporary restricted areas;
- operational hours of aerodromes; and
- any other circumstances likely affect safety;
- altimeter setting (QNH);
- assistance for Search- and Rescue (SAR) operations;
- activation and closure of Flight Plans.

## 3.1.2.2 AFIS provides information:

The purpose of AFIS is to provide information necessary for the safe and efficient conduct of flight operations in the vicinity of the aerodrome and on the manoeuvring area. It shall be noted, that the pilot-in-command is - on the basis of the Rules of the Air, the information received and the use of his or her own judgment - responsible to maintain safe distance to other traffic as well as to report own intentions.

## 3.2 Alerting Service

ALRS is provided:

- a. to all aircraft provided with ATC service;
- b. in so far as practicable, to all other aircraft having filed a flight plan or otherwise known to the air traffic service units.

## 4. COORDINATION BETWEEN THE OPERATORS AND ATS

Coordination between the operators and air traffic services is effected in accordance with the relevant provisions of Annex 11, and the PANS-RAC (Doc 4444 - ATM/501).

## 5. MINIMUM FLIGHT ALTITUDES

The minimum flight altitudes have been determined for 1° geographical areas and provided a minimum terrain clearance of 1000 FT over lowlands and 2000 FT over mountainous areas. The area minimum altitudes are depicted on chart ENR 6-LHCC-ERC -1. The minimum flight altitudes for a given flight shall be determined based on the area minimum altitudes depicted on chart ENR 6-LHCC-ERC -1.

## GEN 4 CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

## GEN 4.1 AERODROME/HELIPORT CHARGES

A landing charge shall be paid for the use of the runways and/or taxiways of an airport (including the lighting charges) for each 1000 kgs of the aircraft's take-off mass. Each fraction of 1 metric ton shall be counted as a whole metric ton.

## 1. BUDAPEST LISZT FERENC INTERNATIONAL AIRPORT

For aerodrome charges visit the home page of National Transport Authority:

URL:http://www.nkh.hu/Repules/kozerdinfo/Lapok/default.aspx

then navigate to "Tariff Manual".

## 2. DEBRECEN

## 2.1

For aerodrome charges visit the home page of Debrecen International Airport:

URL:http://www.debrecenairport.com/airportcharges/

For Ground Handling fees contact the Operations Department:

Phone:+36 52 500 548

Email:opsatdebrecenairport.com.

- 2.2
- 2.3
- 2.4
- 2.5

## 3. FERTŐSZENTMIKLÓS

## 3.1 Landing of aircraft

• 6,00 USD/1000 kgs

Note:

Outside the hours of operation availability fee has to be paid. The fee is 10,00 USD/hour.

Discounts

	till 1000 kgs	from 1000 kgs
Training flight	40%	50%
Test flight	40%	50%
Authority check flight	40%	50%

## 3.2 Parking, hangarage and long-term storage of aircraft

- 2,00 USD/24 hours/1000 kgs (open air)
- 6,00 USD/24 hours/1000kgs (in hangar)

Note:

The first 3 hours of parking is free of charge, later every opened day is considered to be a full day.

## 3.3 Passenger service

• 3 USD/ departing passenger

Note:

Passenger service charge in case of parachute jumping may be subject to special arrangements.

## 4. NYIREGYHÁZA

## 4.1 Landing of aircraft

Aircraft mass in kgs	EUR/1000 kgs
up to 3.000	7.00
3.001 - 6.000	8.00
from 6.001	9.00

Note:

For use of RWY lighting an extra fee 30 EUR/occasion shall be paid.

RWY lighting fee for training flights is detailed in a special list available at the aerodrome operator.

For flight operation outside the normal operational hours, disposal charge shall be paid, which is 20 EUR/hour.

For customs and immigration an extra fee shall be paid, for detailed information contact aerodrome operator.

## 4.2 Parking, hangarage and long-term storage of aircraft

- 3 EUR/24 hours/1000 kgs (open air)
- 6,00 EUR/24 hours/1000kgs (in hangar)

Note:

Parking not exceeding 3 hours will not be charged, parking over 3 hours will be considered as 24 hours.

## **AIP HUNGARY**

## 8. SZEGED

## 8.1 Landing of aircraft

Aircraft mass in kgs	Landing/Take-off (HUF)	Training flights (touch and go) (HUF)
0 - 800	600	300
801 - 2.000	1.200	600
2001 -	900 / t	450 / t

Note:

With the exception of the airport contractual partners. In the above prices the VAT to be paid is not included.

## 8.2 Parking, hangarage and storage of aircraft

Aircraft mass in kgs	Open air (HUF)	In hangar (HUF)
0 - 800	600	2.100
801 - 2.000	1.200	2.700
2001-	1.000 / t	2.400 / t

#### Note:

With the exception of the airport contractual partners. In the above prices the Value Added Tax to be paid is not included.

The first 2 hours of open air parking is free of charge, parking over 2 hours will be considered as 24 hours.

## 8.3 Other

- Border crossing fee (for flights outside Schengen area):
  - weekdays BTN 0700-1500: 17.000 HUF+VAT/Hour/ACFT and every additional hour 8.000 HUF+VAT;
  - weekdays BTN 1500-2100: 21.000 HUF+VAT/Hour/ACFT and every additional hour 11.000 HUF+VAT;
  - weekends and holidays 27.000 HUF+VAT/Hour/ACFT and every additional hour 14.000 HUF+VAT.
  - Outside the operational hours (including aeronautical fee, RWY lighting fee): 1.750 HUF / 15 minutes.

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## ENR 1.2 VISUAL FLIGHT RULES

## 1. GENERAL RULES

**1.1.** Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in , equal to or greater than those specified in the table below:

Altitude band	Airspace class:	Flight visibility:	Distance from cloud:
At and above FL100 (3050 m STD)	C, D	8 km	
Between FL100 (3050 m STD) and 3000 feet (900 m) AMSL, or 1000 feet (300 m) above terrain, whichever is the higher	C, D, F, G	5 km	– 1500 m horizontally 1000 feet (300 m) vertically
At and below 3000 feet (900 m) AMSL, or 1000 feet (300 m) above terrain, whichever is the higher	C, D	5 km	1500 m horizontally 1000 feet (300 m) vertically and with the surface in sight
	F, G	5 km*	Clear of cloud and with the surface in sight

Table 1: Conditions of visibility and distance from clouds

- a. \*flight visibilities reduced to not less than 1500 m are permitted for flights operating
  - at speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
  - at or below 50 m above terrain for aerial work;
- b. flight visibilities reduced to not less than 750 m are permitted for flights operating:
  - helicopters, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; and
  - balloons.
- **1.2.** Except when a clearance is obtained from an air traffic control unit, VFR flights shall not take-off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or traffic pattern:
  - a. when the ceiling is less than 1500 ft (450 m); or
  - b. when the ground visibility is less than 5 km
- **1.3.** VFR flights between sunset and sunrise:
  - a. aircraft shall be equipped according to ICAO Annex 6, Part II., Chapter 6 para 6.7.
  - b. the operator shall establish operating weather minima with due regard to the conditions set for airspace type C, D in the *Table 1*. For airspace type F and G the flight visibility 5 km for fixed wing aircraft and 3 km for helicopters and with the surface in sight continously.

## 2. **RESTRICTIONS FOR VFR FLIGHTS**

- **2.1.** VFR flights shall not be conducted above FL285 (8700 m STD).
- 2.2. Enroute VFR flights shall not be conducted above FL195 (5950 m STD).
- 2.3. VFR flights between FL195 (5950 m STD) and FL285 (8700 m STD) may be conducted only:
  - in ad-hoc segregated airspace, or
  - according to the prior permission given by Budapest ATS Centre.

Note1: Application of ad-hoc segregated airspace shall be submitted to the Military Aviation Authority, not later than 10 working days prior to the date of operation (see page GEN 1.1-1, para 1.3)

Note2: In case of VFR flight planned above FL195 (5950 m STD), not in an ad-hoc segregated airspace, prior to submission of the flight plan, but in any case not later than 30 minutes prior to EOBT, the pilot shall

obtain prior permission from the duty supervisor of Budapest ATCC by phone on 291 6252.

Except in emergency or when cleared by the appropriate ACC sector controller otherwise, VFR flights above FL195 shall be conducted within the geographical area and up to the flight altitude defined by Budapest ATCC.

In case a VFR flight operating above FL195 (5950 m STD) if the radio contact with the appropriate ATC unit is lost, and to re-establish the two way radio communication with the appropriate or adjacent ATC unit is unsuccessful, the aircraft experiencing communication failure, shall descend immediately and leave the controlled airspace, within the area defined in the ATC clearance. Then land at the first suitable aerodrome and report the landing as soon as possible to the appropriate ATC unit.

In case when a VFR flight operating above FL 195 (5950 m STD) within controlled airspace and because of deterioration of meteorological conditions unable to operate in VMC:

- a. request an amended clearance, which permits to continue the operation in VMC to the destination or to an alternate aerodrome, or to leave the controlled airspace, or
- b. when the clearance in a) above may not be obtained, operate in VMC and report to the appropriate ATC unit the action for leaving the area concerned or for landing at the first suitable aerodrome.

The State boundaries of Hungary may be crossed over any significant points designated as Budapest FIR entry/exit points. The designed points are listed in part *ENR 4.4*.

- 2.4. VFR operation below FL100 (3050 m STD) with speed more than 250 kt (460 km/h) IAS is prohibited.
- **2.5.** Except take-off and landing, aerial work and state aircraft special task operations, VFR flights shall not be flown:
  - a. over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1000 ft (300 m) above the highest obstacle within a radius of 600 m from the aircraft;
  - b. elsewhere than as specified in 5 a), at a height less than 500 ft (150 m) above the ground or water; except flights with special clearances, balloon and hang glider flights
- **2.6.** VFR flights in level cruising flight when operated above 3500 ft (1050 m) MSL shall be conducted at a level appropriate to the track specified in the table of cruising levels (*ENR 1.7 para 3.*).
- **2.7.** In the controlled airspace of Budapest FIR operation on non powered aircraft shall be subject to prior permission issued by the appropriate ATC unit concerned.
- **2.8.** All VFR flights with FPL and radio equipped, shall maintain continuous listening watch on the appropriate radio frequency of, and report their position as necessary to the air traffic services unit providing flight information service.
- **2.9.** VFR flights entering Budapest FIR shall establish radio contact at least 10 minutes prior to the actual crossing of the FIR boundary with the appropriate Sector of Budapest ACC/FIC and shall report the following flight plan data:
  - a. aircraft identification;
  - b. type;
  - c. VFR;
  - d. destination;
  - e. ETO FIR boundary
  - f. cruising level/altitude.

If radio contact as required above cannot be established, the ATS unit in charge of the area from which the aircraft is to enter Budapest FIR shall be requested to relay the prescribed data to Budapest ACC/FIC and obtain entry clearance.

Without previous entry clearance a VFR flight shall not enter Budapest FIR.

An exception to this the aircraft which has experienced communication failure, but had already reported the required FPL data to the ATS unit providing FIS in the area from which the aircraft is to enter Budapest FIR.

All international VFR flight shall operate SSR transponder according to ENR 1.6 para 2.

The State boundaries of Hungary may be crossed over any significant points designated as the ATS route

network entry/exit points. The designed points are listed in part ENR 3. ATS routes and are shown on Aeronautical Chart Hungary - ICAO 1:500000.

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## ENR 1.3 INSTRUMENT FLIGHT RULES

## 1. RULES APPLICABLE TO ALL IFR FLIGHTS

#### 1.1 Aircraft equipment

Commercial air transport aircraft operating in the airspace of Hungary have to adhere to the provisions of ICAO Annex 6 - Operation of Aircraft - Part 1, Chapter 6 - Aeroplane Instruments, Equipment and Flight Documents - and Chapter 7 - aeroplane Communication and Navigation Equipment.

Aircraft, other than state aircraft, operating within Budapest FIR under instrument flight rules (IFR) above 9500 FT ALT shall be equipped with, as a minimum, RNAV equipment meeting RNAV 5 in accordance with the requirements set out in of ICAO Doc 7030/5 Regional Supplementary Procedures (EUR).

Acceptable means of compliance are set out in the JAA Technical Guidance Leaflet No. 2 rev. 1.

#### 1.2 B-RNAV Contingency Procedures

For B-RNAV equipped aircraft experiencing temporary failure or degradation of the RNAV system below RNP 5, the following procedures apply:

- a. Correct operation of the aircraft RNAV system below RNP 5, the following procedures apply:
  - the routing is in accordance with the clearance; and
  - the aircraft navigation accuracy meets RNP 5
- b. If as a result of a failure or degradation of the RNAV system below RNAV5 an aircraft is unable either to enter the airspace designated in ICAO DOC 7030/5, EUR Regional Supplementary Procedures, or continue operations in accordance with the current air traffic control clearance, a revised clearance shall, whenever possible, be obtained by the pilot.
- c. Subsequent air traffic control action in respect of that aircraft will be dependent upon the nature of the reported failure and the overall traffic situation. Continued operation in accordance with the current ATC clearance may be possible in many situations. When this cannot be achieved, a revised clearance may be required to revert to VOR/DME navigation. ATC may also provide the aircraft with radar vectors until the aircraft is capable of resuming its own navigation.
- d. In case of a failure or degradation of the RNAV system below RNAV 5, which is detected before departure from an aerodrome where it is not practicable to effect a repair, the aircraft concerned should be permitted to proceed, as directly as possible, to the nearest suitable aerodrome where repair can be made. When granting clearance to such aircraft, ATC should take into consideration, the existing or anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight. Subsequent adjustments may become necessary during the course of flight. Operators of such aircraft, where a failure or degradation is detected before departure, shall not insert designators "S" ore" in Item 10 of the flight plan. Since such flights require special handling by air traffic control, Item 18 of the flight plan shall contain STS/RNAV INOP.
- e. For such aircraft experiencing a failure or degradation of RNAV system below RNAV 5, the following ATC procedures are applicable:
  - In case of automated messages not containing the information provided in Item 18 of the flight plan, the sending air traffic control unit shall inform the receiving air traffic control unit supplementing the ATC message verbally with the phrase "RNAV UNSERVICABLE" after the call sign of the aircraft concerned.
  - When a verbal co-ordination process is being used, the sending air traffic control unit shall include the phrase "RNAV UNSERVICABLE" at the end of the message.
  - The phrase "UNABLE RNAV DUE EQUIPMENT" shall be included by the pilot immediately following the aircraft call sign, whenever initial contact on air traffic control frequency is established.

#### 1.3 Minimum flight altitudes

The minimum flight altitudes are depicted on chart ENR 6-LHCC-ERC have been determined so as to ensure

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at least 1000 feet vertical clearance above the highest obstacle.

Except when necessary for take-off or landing an IFR flight shall not be flown lower than:

- over high terrain or in mountainous areas at a level which is at least 2000 FT (600 m) above
- elsewhere (over a flat terrain) at a level which is at least 1000 FT (300 m)

above the highest obstacle located within 8 km of the estimated position of the aircraft or at the minimum safe sector altitude (MSA) established for the area concerned.

When determining the flight altitude the navigational accuracy which can be achieved on the relevant route segment shall be taken into account, having due regard to the navigational facilities available on the ground and on board of the aircraft.

## 1.4 Change from IFR flight to VFR flight

An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall notify the appropriate ATS unit that the IFR flight plan is cancelled.

#### 1.5 **RVSM** operation

As specified in the ICAO EUR Regional Supplementary Procedures (Doc 7030/4 - EUR), Chapter 1, paragraph 1.1.1.2, flights shall be conducted in accordance with Instrument Flight Rules when operated within or above the EUR RVSM airspace.

Therefore, flights operating as General Air Traffic (GAT) within Budapest FIR at or above FL 290, as described in *ENR 2.1*, shall be conducted in accordance with the Instrument Flight Rules.

## 2. RULES APPLICABLE TO IFR FLIGHT WITHIN CONTROLLED AIRSPACE

- IFR flights shall comply with the provisions of para 3.6 of ICAO Annex 2, when operated in controlled airspace.
- An IFR flight operating in a controlled airspace shall be flown at a cruising level selected from the tables of cruising levels shown in *ENR 1.7 para 3.* according to its planned track, except as otherwise instructed by ATC.

#### 3. RULES APPLICABLE TO IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

#### 3.1 Cruising levels

Flight departing from non-controlled aerodromes for en-route flights may start operation only on possession of a filed flight plan, except when a special airspace portion has been approved for the individual flight.

During the en-route portion of the flight the cruising levels selected as prescribed in para 2 above shall be maintained.

Outside controlled airspace and TRA IFR flights shall not be conducted at an indicated airspeed (IAS) exceeding 250 KTS (460 km/h).

#### 3.2 Communications

All IFR flights leaving the CTR or TIZ shall maintain a continuous listening watch and establish two-way radio communications on the appropriate radio frequency of the Flight Information Centre (FIC).

Identically also the VFR flights operating enroute above 4000 FT shall maintain continuous listening watch on the appropriate radio frequency of the FIC.

#### 3.3 **Position reports**

Aircraft shall make position reports at designated reporting point (if any) and at other occasions as instructed by FIC, but at least every 15 minutes.

Irrespective of the applicable rules the FIC shall be notified:

- if an aircraft is compelled to divert from its flight plan route more than 5 km;
- if an estimated time over the FIR boundary is different with + 5 minutes from the one communicated to FIC earlier;
- if intends to change from IFR to VFR or vice versa;

- if departing from a non AFIS aerodrome;
- of an approach to land outside an aerodrome.

## 4. FREE ROUTE AIRSPACE GENERAL PROCEDURES

#### 4.1 Area of application

**4.1.1** HUFRA is available H24 from the ground level to FL 660 in the airspace encompassed by the lateral limits of Budapest FIR (LHCC FIR) including the areas where responsibility for provision of ATS have been delegated for Budapest ACC.

#### 4.2 Flight Procedures

#### 4.2.1 General

- **4.2.1.1** Within HUFRA, aircraft other than State aircraft, shall comply with the aircraft equipment requirements published in *GEN 1.5*
- **4.2.1.2** Within HUFRA airspace, users will be able to plan user-preferred trajectories using significant points five-letter name-codes and/or en-route radio navigation aids published in *ENR 4.4* and *ENR 4.1*, respectively. Segments between the significant points shall be defined by means of DCT (Direct) instructions.
- **4.2.1.3** Within HUFRA, significant points are considered as FRA entry, FRA exit, FRA intermediate, FRA arrival and FRA departure points, as described in *ENR 4.4*. All en-route radio navigation aids published in *ENR 4.1* are considered as FRA intermediate points.
- **4.2.1.4** Within HUFRA, there is no restriction on the maximum DCT distance.

#### 4.2.2 Overflying traffic

- **4.2.2.1** Overflight traffic shall be planned directly between FRA entry, FRA exit and FRA intermediate points.
- **4.2.2.2** An exception to the rule is made during the initial HUFRA implementation phase when the DCT segments which are not available are announced in accordance with paragraph *4.5* below.
- **4.2.2.3** Traffic proceeding inbound or outbound airports located in close vicinity of LHCC FIR shall be planned in accordance with *4.2.2.1* above and paragraph *4.4* below also using the relevant FRA arrival and FRA departure points. Airports in close vicinity of LHCC FIR are considered to be: LOWW and LZIB.

#### 4.2.3 Access to/from airports and terminal airspace

- **4.2.3.1** Flights arriving at or departing from airports located within LHCC FIR are eligible for free route operations and shall be planned in accordance with the paragraphs below.
- **4.2.3.2** In case of departing flight from an airport where standard instrument departures procedures (SIDs) are published, RNAV-capable departing flights shall be planned directly from the SID final waypoint to the HUFRA exit point.
- **4.2.3.3** In case of arriving flight to an airport where standard instrument arrival procedures (STARs), or transition procedures are published, RNAV-capable arriving flights shall be planned directly from the HUFRA entry point to the STAR initial waypoint or transition procedure.
- **4.2.3.4** The SID/STAR or transition procedures shall not be indicated in the filed route of the FPLs.
- **4.2.3.5** Where SIDs are not published, the flights shall be planned DCT to the HUFRA exit point.
- **4.2.3.6** Where STARs are not published, the flights shall be planned DCT from the HUFRA entry point to the airport.

#### 4.2.4 Cross-Border Applications

- **4.2.4.1** The planning of DCT segments across the HUFRA borders (cross border DCT) is not allowed. Entry and exit from HUFRA shall be planned using the published FRA entry and FRA exit points only.
- **4.2.4.2** The planning of DCT segments that are partially outside the lateral limits of HUFRA (multiple re-entry segments) is not allowed.
- **4.2.4.3** The planning of DCT segments closer than 3 NM to the HUFRA border is not allowed.

## 4.3 Airspace Reservation - Special Areas

## 4.3.1 Re-routing Special Areas

**4.3.1.1** Flights may be planned through active TRAs or danger areas.

## 4.3.2 Promulgation of route extension

- **4.3.2.1** In the case where there is no availability to cross the active reserved area, occasionally:
  - a. a flight may be instructed to proceed to one of the five significant points which are published in *ENR 4.4* as an intermediate point, with the remark "in case TRA 32/33 active";
  - b. tactical radar vectoring may be applied in order to ensure an additional safety margin between active TRA boundaries and flight trajectories. It is expected that the average extension to be considered by aircraft operators will be approximately 5 NM and in exceptional circumstances, not more than 10 NM.
- **4.3.2.2** Restrictions on the maximum DCT distance inserted in the flight plan will not be enforced.

## 4.4 Flight Planning (Item 15)

## 4.4.1 General

**4.4.1.1** In case of more than 30 minutes of flying time or 200 NM (370 KM), an intermediate point may be inserted at which a change of speed, flight level, track, or flight rules are planned. There is no restriction on the number of intermediate points that may be used.

**4.4.1.2** The use of a point entered in latitude and longitude for a change of speed or flight level shall be avoided.

## 4.4.2 ATS Route Network

- **4.4.2.1** The ATS route network within LHCC FIR will be withdrawn.
- **4.4.2.2** Within HUFRA no reference shall be made in the flight plan to ATS routes.

## 4.4.3 Flight Level Orientation Scheme

**4.4.3.1** Cruising levels must be planned in accordance with the information provided in the column "Remarks/Usage" in *ENR 4.4.* The direction of cruising levels (EVEN or ODD) must be chosen depending on the direction of the flight level required over the FRA entry and FRA exit points as described in the following table:

Direction of Cruising levels within HUFRA		
FLs over FRA entry point FLs over FRA exit point FLs inside HUFRA		FLs inside HUFRA
EVEN	EVEN	FLs for all DCT segments
ODD	ODD	FLs for all DCT segments
EVEN	ODD	A change from EVEN to ODD FLs must be planned inside HUFRA
ODD	EVEN	A change from ODD to EVEN FLs must be planned inside HUFRA

Note: ODD is the direction of IFR cruising levels with a magnetic track between 000° and 179° while EVEN is the direction of IFR cruising levels with a magnetic track between 180° and 359°, as described in the table of cruising levels in ENR 1.7.

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**4.4.3.2** Cruising levels must also be planned in accordance with the adjacent ATS route network Flight Level Orientation Scheme.

## 4.4.4 Flight Planning procedures for departing and arriving flights from/to significant airports

**4.4.4.1** Flight Planning of any departing flights from LHBP shall comply with the following procedures:

Airport	SID End Point	HUFRA Mandatory Intermediate Point	HUFRA (X) Exit Point	Flight Plan (Item 15)	Remark
	NALAG	RIGSA	KEKED, LONLA, GEMTO, KARIL, BADOR	NALAG DCT RIGSA DCT (X)	
	NORAH		NARKA, BUDOP	NORAH DCT (X)	
		MAV/IP	TEGRI, MOPUG, INVED	ERLOS DCT MAVIR DCT (X)	
	ERLOS		KEROP	ERLOS DCT MAVIR DCT KEROP	Below FL135
LHBP	PUSTA		KEROP, VEBAL, KOPRY, DIMLO, GOTAR	PUSTA DCT (X)	
	GILEP		SUNIS, ARSIN, ABETI, BEGLA	GILEP DCT (X)	
	TORNO		NATEX	TORNO DCT NATEX	Only for city pair LHBP - LOWW
	TORNO		XOMBA	TORNO DCT XOMBA	Only for city pair LHBP - LZIB

**4.4.4.2** Flight Planning of any arriving flights to LHBP shall comply with the following procedures:

HUFRA (E) Entry Point	HUFRA Mandatory Intermediate Point	Transition Initial Point	Airport	Flight Plan (Item 15)	Remark
KEKED, LONLA, GEMTO, KARIL	RIGSA - GELKA	JBR		(E) DCT RIGSA DCT GELKA DCT JBR	
DEMOP		JBR		DEMOP DCT JBR	
NARKA, MEGIK, BUDOP, DEGET, MOPUG, PARAK		ABONY	LHBP	(E) DCT ABONY	
VEBAL, KOPRY, DIMLO, GOTAR		VEBOS	-	(E) DCT VEBOS	
STEIN					STEIN not available for ARR LHBP

## 4.4.5 Flights arriving at or departing from airports located in close vicinity of LHCC FIR

**4.4.5.1** Flight Planning of any departing flight shall comply with the following procedures:

Airport	HUFRA (E) Entry Point	HUFRA Mandatory Intermediate Point	HUFRA (X) Exit Point	Flight Plan (Item 15)	Remark
	ALAMU	EPARI	KEKED, LONLA, GEMTO, KARIL, BADOR, NARKA, BUDOP, TEGRI	ALAMU DCT EPARI DCT (X)	
LOWW	STEIN	SIRDU	KEKED, LONLA, GEMTO, KARIL, BADOR, NARKA, BUDOP, TEGRI	STEIN DCT SIRDU DCT (X)	
	SASAL		INVED, BABIT, VEBAL, KOPRY	SASAL DCT (X)	
	VAMOG	SIRDU	VEBAL, KOPRY, DIMLO, GOTAR	VAMOG DCT SIRDU DCT (X)	
LZIB	VAMOG	GITAS	KEKED, LONLA, GEMTO, KARIL, BADOR, NARKA, BUDOP, TEGRI, MOPUG, INVED, KEROP, BABIT	VAMOG DCT GITAS DCT (X)	
	ERGOM		LONLA, GEMTO, KARIL, BADOR, NARKA, BUDOP, TEGRI	ERGOM DCT (X)	

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**4.4.5.2** Flight Planning of any arriving flight shall comply with the following procedures:

HUFRA (E) Entry Point	HUFRA Mandatory Intermediate Point	Transition Initial Point	Airport	Flight Plan (Item 15)	Remark
KEKED (and for DEP LHBP via TORNO SID)	TORNO	NATEX		(E) DCT TORNO DCT NATEX	
LONLA, GEMTO, KARIL, NARKA, MEGIK, BUDOP, DEGET, MOPUG, PARAK	BALUX	NATEX	LOWW	(E) DCT BALUX DCT NATEX	
KEKED, LONLA, GEMTO, KARIL, NARKA, MEGIK, BUDOP, DEGET, MOPUG, PARAK	BALUX	ХОМВА	LZIB	(E) DCT BALUX DCT XOMBA	
TONDO, VEBAL, KOPRY, DIMLO		XOMBA		(E) DCT XOMBA	

**<sup>4.4.5.3</sup>** The other flights arriving at or departing from other airports located in close vicinity of LHCC FIR are considered as overflying traffic (see para *4.2.2.3* above).

## 4.5 Route Availability Document

**4.5.1** All HUFRA constrains, exceptions and restrictions, if any will be published via the RAD and promulgated in accordance with *ENR 1.10*.

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## ENR 1.6 RADAR SERVICES AND PROCEDURES

## 1. OPERATION (PSR/SSR)

#### 1.1 Supplementary services

#### 1.1.1 Radar service is an integral part of the ATC system within Budapest FIR.

Budapest ACC and Budapest TRCC will normally use radar derived information in the provision of air traffic control services.

#### 1.1.2 Within Budapest FIR radar service is provided by:

- a. BUDAPEST CONTROL for aircraft operating under Area Control;
- b. BUDAPEST APPROACH for aircraft operating within Budapest TMA;
- c. BUDAPEST DIRECTOR for arriving aircraft in Budapest TMA below 7500 feet altitude (as traffic conditions require).
- d. BUDAPEST FLIGHT INFORMATION may use radar derived information in the provision for flight information service between 4000 feet and 9500 feet altitude. Radar serves only as an aid to provide aircraft with more accurate flight information. It does not relieve the pilot-in-command of an aircraft of any of his responsibilities and he has to make the final decision regarding any suggested alternation of flight plan.

For more details See ENR 2.1

#### 1.1.3 Communication

The following R/T procedures shall be applied by aircraft operating under radar control within Budapest FIR

- a. The initial call after a change of radio frequency shall contain only:
  - aircraft call sign;
  - actual level (with the addition of cleared level for climbing or descending aircraft).
- b. Any position report (if required) subsequently shall contain only:
  - aircraft call sign;
  - position;
  - time over (fix)
- c. Aircraft being identified after entering controlled airspace are exempted the requirement of subsequent position reporting. Pilots of aircraft shall resume position reporting when:
  - it is instructed by ATC; or
  - crossing the FIR boundary; or
  - are advised that radar service terminated or radar contact lost.

Note: The requirement to report receipt of *ATIS* broadcast at first contact on 129,700 MHz (*APP*) when entering Budapest *TMA* and on 134,550 MHz (Budapest Delivery) before starting up engines by reading back the relevant designator of information and actual *QNH* is not affected by the above procedure.

#### **1.2** Application of radar control service

- **1.2.1** Radar control service is applied in accordance with the provisions of ICAO Doc 4444 ATM/501 Chapter 8. ATS Surveillance Services.
- **1.2.2** Radar control service is provided in controlled airspace to aircraft operating within Budapest TMA and Budapest CTA.
- **1.2.3** Radar identification is achieved according to the provisions specified by ICAO, using the phrase: "IDENTIFIED" or "RADAR CONTACT" which may be followed by any instruction as necessary.
- **1.2.4** The applicable horizontal radar separation minima:

- Budapest CTA (Budapest ACC): 5NM
- Budapest TMA (Budapest TRCC): 3NM
- **1.2.5** Dependent parallel approach procedures are applied at Budapest Liszt Ferenc International Airport.
- **1.2.6** Levels assigned by radar controller to pilots will provide a minimum terrain clearance according to the phase of flight.

## 1.3 Radar and radio failure procedures

## 1.3.1 Radar failure

In the event of radar failure or loss of radar identity of an aircraft under radar control will be advised immediately of the interruption or termination of radar control and as an emergency measure reduced vertical separation (500 feet at/or below FL410 and 1000 feet above FL410) may be resorted to as necessary until standard non-radar separation can be provided or radar control is resumed.

#### 1.3.2 Radio communication failure

In the case of complete aircraft communication failure the pilot shall carry out the procedures detailed in PANS ATM (ICAO Doc 4444) Chapter 15, paragraph 15.3.

#### 1.4 Radar coverage

#### a. Budapest ACC

Radar data from 2 radar stations which are equipped with both primary and secondary radars will be used.

Position in WGS-84		Püspökladány (Budapest - East Radar) 472122.90N 0210239.06E	Kőrishegy (Budapest - West Radar) 471738.96N 0174512.89E
Pango	RSR	160NM	160NM
range	SSR	200NM	200NM

#### b. Budapest TRCC

A TAR station of Budapest Liszt Ferenc International Airport is equipped with both primary and secondary radars.

Position in WGS-84		Budapest Liszt Ferenc International Airport (Budapest - Terminal Area Surveillance Radar) TAR1 - 472650.8091N 0191546.6990E TAR2 - 472517.4060N 0191812.3400E	
Panga	TAR	60NM	
Range	SSR	150NM	

## ENR 1.7 ALTIMETER SETTING PROCEDURES

#### 1. INTRODUCTION

The altimeter Setting procedures in use generally conform to those contained in ICAO Doc 8168 OPS/611 Aircraft Operation Vol. I. Part 6 and are given in full below. Differences are shown *in italics*.

These procedures are applied to all IFR and VFR flights operating within Budapest FIR.

The atmospheric pressure is measured in accordance with ICAO Annex 3 Chapter 4, paragraph 4.11.

QNH and QFE values are computed in tenth of hectopascal. On pilots' request it may be given in millimetres and tenths.

In routine reports disseminated at the aerodrome QNH is included regularly while QFE is available on request from air traffic service units.

The values are rounded to the nearest lower whole hectoPascal. For example QNH 995,6 hPa is given as: "QNH 995".

In plain language reports (ATIS and VOLMET) broadcast) the unit of measurement (hPa) is omitted.

## 2. BASIC ALTIMETER SETTING PROCEDURES

### 2.1 General

#### 2.1.1 System of flight levels

- a. Flight level zero is located at the atmospheric pressure level of 1013.2 hPa. Consecutive flight levels are separated by a pressure interval corresponding to at least 1000 feet (3050 m) in the Standard Atmosphere.
- b. Flight levels are numbered according to the following table, which indicates the corresponding height in the Standard Atmosphere in feet and the approximate equivalent height in meters.

Elight Lovel Number	Height in the Standard Atmosphere		
Flight Level Number	Feet	Meters	
100	10000	3050	
150	15000	4550	
200	20000	6100	
660	66000	20100	

#### 2.1.2 Transition altitude

The transition altitude specified for Budapest FIR is 9000 feet.

#### 2.1.3 Transition level

The transition level will be determined by the appropriate ATC unit so as to give a transition layer of at least 1000 feet (305 m) vertical separation above the transition altitude.

For determination of current transition level the following table is used.

Transitio	n altitude		Transition level
Feet	Meters	QNHIFa	
9000	2750	1013,3 and above	FL100
		1013,2 - 977,2	FL110
		977,1 and below	FL120

The transition level at Budapest Liszt Ferenc International Airport is transmitted normally in ATIS broadcast,

or is involved in the clearances as appropriate.

#### 2.1.4 Transition from flights to altitudes and vice versa

The vertical position of aircraft when at or below the transition altitude shall be expressed in terms of altitude, whereas such position at or above the transition level shall be expressed in terms of flight levels. While passing through the transition layer, vertical position shall be expressed in terms of flight levels in climb and in terms of altitude when descending.

## 2.2 Take-off and climb

The QNH value for altimeter setting is transmitted normally in the ATIS broadcast, or is involved in start up clearance as appropriate.

#### 2.3 Vertical separation - enroute

#### 2.3.1 Vertical position

- a. Vertical positioning of aircraft during the enroute phase of flight at and below the transition altitude shall be assessed in terms of altitudes.
- b. Vertical position of aircraft during the enroute phase of flight at or above the transition level shall be assessed in terms of flight levels.
- c. In air-ground communication the vertical position of an aircraft during enroute flight shall be expressed according to the altimeter setting applied to conform the provisions of paragraphs above, as appropriate.

#### 2.3.2 Terrain clearance

- a. QNH altimeter setting and temperature in-formation are included in routine reports for use in determining adequate terrain clearance. These data are transmitted normally in ATIS and VOLMET broadcasts and are also available on request from ATIS units.
- b. Normally the QNH value determined for Budapest Liszt Ferenc International Airport is used as "regional QNH" within Budapest FIR.
- c. ATC units determine the lowest usable flight levels for the whole part of the control area for which they are responsible, and use it when assigning flight levels and pass it to pilots on request.

Note: The objectives of the air traffic control services as prescribed in Annex 11 do not include prevention of collision with terrain. The procedures prescribed above do not therefore relive the pilots' responsibility of ensuring that any clearances issued by ATC units are safe in this respect, except when an IFR flight is vectored by radar.

d. When vectoring an IFR flight, the radar controller shall ensure the adequate terrain clearance at all times until the aircraft reaches the point where the pilot will resume own navigation.

#### 2.4 Approach and landing

- **2.4.1** A QNH value is transmitted normally in the ATIS broadcast and/or is involved in approach clearances and/or in clearances to enter the traffic circuit, as appropriate.
- 2.4.2 A QFE value clearly identified as such is available on pilots' request in approach and landing clearances.

The QFE value given in clearances of ATC units shall be related to the threshold elevation of the runway in use.

E.g.: QUEBEC - FOXTROT - ECHO FOR RUNWAY THREE - ONE - RIGHT IS NINER - NINER - TWO

**2.4.3** Vertical positioning of aircraft during descent is controlled by reference to FLIGHT LEVELS until reaching the Transition Level, below which vertical positioning is controlled by reference to Altitudes.

Note: This does not preclude the use of QFE altimeter setting by a pilot for terrain clearance purposes during the final approach.

#### 2.5 Missed approach

**2.5.1** During the missed approach phase of the instrument approach procedure the vertical position of the aircraft is controlled by reference to Altitudes, unless otherwise instructed by the ATC unit.

## ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES (DOC7030)

EUR Regional Supplementary Procedures are applied. Differences are shown below:

#### 1. Chapter 2. Reduced Vertical Separation Minimum (RVSM) of 300 m (1000 FT)

The airspace within Budapest FIR between FL 290 and FL 410 inclusive, as described in ENR 2.1, is EUR RVSM airspace.

#### 2. Chapter 3. paragraph 3.1 Air-Ground Communications and In-Flight Reporting

All aircraft operating above 9500 FT AMSL in Budapest FIR shall be equipped with 8.33 KHZ channel spacing capable radio equipment.

Temporary exemption is granted for State aircraft to operate 8.33 kHz channel spacing radio equipment in Budapest FIR on condition that such flight establish and maintain two way radio communication contact with the appropriate ATS Unit (Sector) on UHF frequency - in the band 225,000 - 400,000 MHZ –as instructed by ATC.

The UHF coverage extends to the airspace above FL 100 within Budapest FIR.

More exemptions (ref. item 18 of the flight plan):

- STS/SAR
- STS/HOSP
- STS/FFR
- STS/MEDEVAC.

#### 3. Chapter 11.

#### Flight Information Service

#### 11.2. Transmission of SIGMETinformation

11.2.1. SIGMET information passed to aircraft cover Budapest FIR only.

#### 11.4. Transmission of amended aerodrome forecast

11.4.1. Amended aerodrome forecasts will be passed to aircraft only on pilots' request.

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aerodrome to other addressees, it is the flight plan originator's responsibility to add the special addresses.

#### 1.4.2 AFTN addressing of Flight Plans and associated messages

See ENR 1.11

## 1.4.3 Adherence to Airspace Utilization Rules and Availability

No flight plans shall be filed via the airspace of Budapest FIR deviating from the State restrictions defined within the Route Availability Document (RAD). This common European reference document contains all airspace utilisation rules and availability for Budapest FIR and any reference to them shall be made via

URL:https://www.nm.eurocontrol.int/RAD/index.html.

## 1.5 Submission of a Flight Plan

## **1.5.1** Direct filing of Flight Plans to the IFPS

All foreign aircraft operators (AOs), and those national air carriers who meet the technical and FPL filing and addressing requirements are permitted to submit their IFR/GAT or mixed flight plans directly to the IFPS via AFTN, SITA or via other communication means.

#### 1.5.2 Flight Plan filing at Budapest Liszt Ferenc International Airport

Pilots of aircraft departing from Budapest Liszt Ferenc International Airport have the possibility to send flight plans to the ATS reporting office via e-mail, fax and by phone.

## 1.5.3 Flight Plan filing at AFIS aerodrome.

Pilots of aircraft departing from an AFIS aerodrome shall file a flight plan form personally or via telephone to the aerodrome flight information service.

If a flight intends to operate wholly in an aerodrome traffic zone, limited information required by ATS unit can be submitted.

#### 1.5.4 Flight Plan filing at non-AFIS aerodrome.

In case of departure planned from a non-AFIS aerodrome the pilot shall submit a flight plan via telephone or fax to the Area Flight Information Centre (FIC):

Phone:+36 1 296-9102

Phone:+36 1 296-9103

Fax:+ 36 1 296-9151

#### 1.6 Acceptance of a Flight Plan

#### **1.6.1** Flight plans submitted directly to IFPS.

FPLs will be checked by IFPS for syntax, format and content. The flight plan originator will be informed on the acceptance by an ACK message, on the necessary manual correction by a MAN message and on the rejection by a REJ message.

Note: After accepting a flight plan IFPS will determine the ATS units responsible for IFR/GAT flights within IFPS Zone for which and for other addressees indicated in the message the flight plan will be forwarded. Unless a filed flight plan has been acknowledged by IFPS via an ACK message ATS units concerned will not have the flight plan and the aircraft may not begin operation.

#### 1.6.2 When a flight plan is not sent directly to IFPS the receiving unit of FPLs is responsible for:

- checking for format and content to the extent possible,
- calling originator's attention to the errors and giving assistance for correct filing of FPLs,
- indicating acceptance of a flight plan to the originator and
- correct transmission and distribution of flight plans for the parties concerned.

If FPLs are forwarded to FIC or to IFPS via ATS reporting office, originators should inquire about the acceptance of FPLs.

Verbal information, if necessary, will be forwarded by the receiving unit.about the acceptance of filed FPLs by IFPS or FIC.

Note: The acceptance of FPL does not relieve the pilot of his/her responsibility for obtaining Air Traffic Control (ATC) clearance for the operation in controlled airspace or in controlled aerodromes as well as for correct preflight preparation.

#### 1.7 Time for Filing a Flight Plan

Unless special circumstances require a flight plan shall be submitted prior to taxi for taking off not earlier than 24 hours and not later than 60 minutes before Estimated off Block Time (EOBT). For flights subject to ATFM measures FPLs shall be submitted at least 3 hours prior to EOBT.

Note: ATFM measures may be applied for IFR/GAT (or mixed) flights operating in Budapest FIR. In this case pilots are responsible to inquire if their flights are subject to ATFM measures. Relevant information can be obtained from ARO at departure aerodrome or from other relevant ATS unit as well as from Flow Management Position at Budapest Area Control Centre (ACC):

#### Phone:+36 1 293-4183

If FPLs are filed more than 24 hours in advance of EOBT insert the date of flight (DOF) in FPLs.

FPLs may not be filed earlier than 5 days before operation.

AFIL can be filed in the following cases:

- at least 10 minutes before the aircraft is estimated to reach the boundary of controlled airspace if FPLs are submitted for the purpose of obtaining air traffic control clearance for operation in controlled airspace,
- after departure
  - i. in case of search and rescue flights for the purpose of averting the consequences of damage caused by forces of nature, serious disaster and air accident, of police mission as well as of flights for urgent ambulance and medical assistance,
  - ii. in case of departure from field other than aerodrome

as early as possible.

#### 1.8 Cancellation and change of FPL

FPL shall be cancelled by operator to the ATS unit for which FPL has originally been submitted if:

- flight will not operate,
- aircraft wishes to depart before the time indicated in the filed FPL, or
- any changes are required in respect of aerodrome of departure or destination or aircraft identification,

In the latter cases a new FPL, including the modified data, shall be submitted.

For flights subject to ATFM measures the following procedures shall be applied:

- when an FPL or an RPL has been filed by an AO but it is decided, within 4 hours of EOBT, to use an
  alternative routing between the same aerodromes of departure and destination, a cancellation
  message with priority "DD" shall be transmitted to all addressees of the previous flight plan, and
- a replacement flight plan (RFP) in the form of the FPL with identical call sign shall be transmitted after the CNL message and with a delay of not less than 5 minutes.
- The replacement flight plan shall contain as the first element of item 18. the indication "RFP/An", where RFP signifies "Replacement Flight Plan" and "n" is the sequence number of RFP.

Operator shall inform the unit for which FPL has previously been submitted if:

• a flight is expected to delay for more than 30 minutes (for flight subject to ATFM measure it is 15 minutes), or

FPL will be cancelled by the competent ATS unit, unless information is received for taxiing, departure or revision for EOBT within 60 minutes after the EOBT.

• any necessary changes in the other items of the previously filed FPL (e.g. cruising speed, cruising level etc.).

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Notes:

- i. Should the cruising level be changed only, it can be done when radio contact is established with ATS units.
- ii. Information for cancellation or change must be initiated not more than 12 hours in advance of EOBT.
- iii. Receiving units will notify other units to whom the origin FPLs have been forwarded about cancellation and changes.

#### 1.9 Special handling requirement

In certain cases an aircraft may request special handling from ATS units e.g. ensuring priority, exemption from ATFM measures, etc. Request for such handling shall be indicated in the item 18. (STS/...) of the FPLs using the proper keyword (abbreviation).

Flights for special handling requirement are entitled as follows:

- flights in a state of emergency, including flights subject to unlawful interference,
- flights operating for humanitarian reasons,
- ambulance/medical flights when the safety of life is involved, including flights carrying sick and injured persons on board and flights which operate to the aerodrome of destination with the aim of transporting the above mentioned persons. In addition flights which transporting organs for transplantation, blood plasma and medicines as flights with the aim of transporting them.
- flights operating for search and rescue,
- flights with "Head of State" and" Head of Government" status
- other flights as specifically required by State Authorities.

Unjustified use of keywords (abbreviations) for special handling requirement is disciplinable.

Country	FIR/UIR	ICAO	Country code
Albania	Tirana	LAAA	LA
Armenia	Yerevan	UDDD	UD
Austria	Wien	LOVV	LO
Belgium	Brussels	EBBU/EBUR	EB
Bosnia and Hercegovina	Sarajevo	LQSB	LQ
Bulgaria	Sofia	LBSR	LB
Croatia	Zagreb	LDZO	LD
Cyprus	Nicosia	LCCC	LC
Czech Republic	Prague	LKAA	LK
Denmark	Copenhagen	EKDK	EK
Finland	Finland	EFIN	EF
France	Paris	LFFF	LF
	Reims	LFEF	LF
	Brest	LFRR	LF
	Bordeaux	LFBB	LF
	Marseille	LFMM	LF
Germany	Bremen	EDWW	ED
	Langen	EDGG	ED
	Frankfurt	EDFF	ED
	Munchen	EDMM	ED
	Rhein	EDDU	ED
	Hanover	EDVV	ED
Greece	Athens	LGGG	LG

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Country	FIR/UIR	ICAO	Country code
Hungary	Budapest	LHCC	LH
Ireland	Shannon	EISN	EI
	Sota	EISN	EI
Italy	Roma	LIRRR	LI
	Brindisi	LIBB	LI
	Milano	LIMM	LI
Latvia	Riga	EVRR	EV
Former Yugoslav Republic of Macedonia	Skopje	LWSS	LW
Malta	Malta	LMMM	LM
Moldova	Chisinau	LUUU	LU
Monaco	Marseille	LFMM	LN
Marocco	Casablanca	GMMM	GM
The Netherlands	Amsterdam	EHAA	EH
Norway	Norway	ENOR	EN
	Bodo - Oceanic	ENOB	EN
	Trondheim	ENTR	EN
Poland	Warsaw	EPWW	EP
Portugal	Lisbon	LPPC	LP
	Santa Maria	LPPO	LP
Romania	Bucharest	LRBB	LR
Slovak Republic	Bratislava	LZBB	LZ
Slovenia	Ljubljana	LJLA	LJ
Spain	Barcelona	LECB	LE
	Madrid	LECM	LE
	Canarias	GCCC	LE
Sweden	Sweeden	ESSA	ES
Switzerland	Switzerland	LSAS	LS
Turkey	Ankara	LTAA	LT
	Istanbul	LTBB	LT
Ukraine	L'Viv	UKLV	UK
	Kyiv	UKBV	UK
	Dnipropetrosk	UKDV	UK
	Odessa	UKOV	UK
	Sinferopol	UKFV	UK
United Kingdom	London	EGTT	EG
	Scottish	EGPX	EG
Serbia and Montenegro	Belgrade	LYBA	LY

## 2. REPETITIVE FLIGHT PLAN

## 2.1 General

- **2.1.1** Repetitive flight plans shall be submitted for regular operations as far as possible.
- **2.1.2** When using repetitive flight plans for flights affecting Budapest FIR, the procedures of ICAO Doc 4444 ATM/501Chapter 16, para 16.4. and Doc 7030 and the following regulations shall be applied.
- **2.1.3** RPLs, for flights affecting Budapest FIR shall be filed solely with EUROCONTROL at the CFMU, Brussels, in accordance with the requirements and procedures detailed herein. Distribution of RPL data to ATS Units in

Budapest FIR is provided by the EUROCONTROL.

**2.1.4** RPLs for flights having a route portion outside the Zone shall continue to be submitted in parallel to EUROCONTROL and to the National Authorities of those external States in accordance with existing procedures (see paragraph 2.5.2.). It should be noted in particular that ALL affected National Administrations outside the zone which are on the route of the flights MUST have agreed to the use of RPLs.

Note: List of FIRs participating in IFPS zone: See ENR 1.10 para 1.9

**2.1.5** Attention is drawn to the fact that the Shanwick (EGGX) and Santa Maria (LPPO) OACCs are NOT within the IFPS Zone.

#### 2.2 Types of submission

- **2.2.1** RPL data submission may be in the form of a New List or a Revised List.
- **2.2.2** A New List (NLST) is a submission that contains ONLY new information (typically the start of a new Winter or Summer period).
- **2.2.3** A Revised List (RLST) is a submission that contains revised information to a previously submitted list. This revised or amended information could be a combination of any of the following: changes, cancellations or additional new flights.

#### 2.3 RPL submission criteria

- 2.3.1 An NLST must be received by EUROCONTROL with a minimum of 14 days before the intended first flight.
- **2.3.2** An RLST must be received by EUROCONTROL such that:
  - a. there is a minimum of 7 working days (see 2.6.2 below) between reception of the file by EUROCONTROL and the activation of the first flight affected by the amendment, and
  - b. there must be two Mondays between reception of the file and the activation of the first flight affected by the amendment.

#### 2.4 RPL submission procedure

- **2.4.1** RPLs may be submitted in any of the following formats:
  - IFPS RPL format (former DBO/DBE format) via diskette, SITATEX or electronic file transfer
  - ICAO format (hard copy) on paper (ICAO Doc 4444)
- **2.4.2** Details of IFPS RPL format may be found in the IFPS User Manual section of the CFMU Handbook. Copies can be obtained from the EUROCONTROL Library at the address. See: *2.6.3*
- **2.4.3** On receipt of an RPL file, EUROCONTROL will send the following acknowledgement of receipt by SITA or Fax as appropriate.

#### Example of ACKNOWLEDGEMENT of reception sent to RPL Originators(SITA or FAX)

ZCZC 001 251220	
QN	MADWEZZ
BRUER7X	ddhhmm
FROM:	EUROCONTROL/CFMU
TO:	777
ATTN:	Mrs. Brown
SUBJ:	ACK OF YR RPL SUBMISSION 96-01
Nr.RPL:	12

- INITIAL CHECK OF FORMAT OK.

- FURTHER PROCESSING IN PROGRESS. WE WILL CONTACT YOU IF NECESSARY

# Example of ACKNOWLEDGEMENT of reception sent to RPL Originators(SITA or FAX)

BRGDS

D.TAYLOR/RPL TEAM

- **2.4.4** If NO acknowledgement is received from EUROCONTROL within 2 working days of dispatch, the originator MUST contact the RPL Team to confirm that the file has been received.
- **2.4.5** Following the acknowledgement the RPL Team will process the file and will contact the originator again ONLY if there are any problems, such as the route or validity periods. It follows, therefore, that if no subsequent query is initiated by EUROCONTROL, the originator can assume that the file has been successfully processed into the RPL database.
- **2.4.6** Any change to the address or contact number of the Aircraft Operator (for example, a change of contact number/address for obtaining supplementary information) must be advised to the RPL Team immediately.
- **2.4.7** EUROCONTROL is able to accept RPL data which covers more than one Winter/Summer period but Originators must ensure that any such data is amended to reflect any changes of the clock (i.e. to reflect Summer/Winter time).

## 2.5 Specific EUROCONTROL requirements for RPL operation

- 2.5.1 The basic principles for the submission of Repetitive Flight Plans are contained in ICAO Docs 4444/501 and 7030. The following paragraphs detail the differences between the ICAO Standard and the EUROCONTROL requirement, which permits a more flexible approach within the basic rules. Full details are contained in the IFPS User Manual section of the CFMU Handbook.
- 2.5.2 RPLs shall cover the entire flight from the departure aerodrome to the destination aerodrome. Therefore, an RPL shall be submitted by the flight plan originator for the entire route. A mixture of both RPL and FPL message shall not be permitted. RPL procedures shall be applied ONLY when ALL ATS authorities concerned with the flights have agreed to accept RPLs. In this respect, all States of the IFPS zone accept RPLs. It is the responsibility of the AO to ensure that RPLs for flights which are partly outside the zone are properly coordinated and addressed to the relevant external ATS authorities.
- **2.5.3** For EUROCONTROL purposes an RLST may be submitted which contains only changes, cancellations and additions (i.e. "-" and "+"). Details of unchanged flights (i.e. "blanks") are not required.
- 2.5.4 The "-" must come before the "+".
- **2.5.5** For a cancellation or change, the "-" must be an exact duplicate of the original "+" that it is to cancel, in order for it to be accepted by the RPL processing system.
- **2.5.6** The NLSTs and RLSTs are to be numbered in sequence as this enables EUROCONTROL to ensure that the lists are entered into the RPL database in the correct order. It also provides a double check for possible missing submissions. The first NLST of the season should be numbered 001 and each following list, regardless of whether it is a NLST or RLST, is to be numbered in sequence.
- **2.5.7** The numbering of the RPL submissions is done on line "0" (sender record) starting at character 37 of the diskette file and in field "E" of a ICAO hard copy file (on paper).
- **2.5.8** To suspend an RPL the originator should send the information in the format See ENR 1.10 para 2.7 However, originators should note that flights cannot be suspended for less than 3 days. If the suspension is for less than 3 days, individual daily cancellation messages must be sent by the originator to the IFPS in order not to waste ATC capacity by leaving "ghost" flights in the CFMU and ATC data bases.
- **2.5.9** To cancel a RPL for a specific day, the originator need only send a normal ICAO CNL message to BOTH of the IFPS units (EUCHZMFP and EUCBZMFP or BRUEP7X and PAREP7X) and other external ATS Units as necessary. In respect of such flights, cancellation messages to the IFPS Units shall be submitted not earlier than 20 hours before the EOBT of the flight. The same rule applies for a change (CHG) or delay (DLA) message since at 20 hours before EOBT the RPL is transferred to the IFPS and the RPL effectively becomes an FPL.
- **2.5.10** To recover any RPL which has been suspended for an undefined period, the originator must send the instruction in the format See ENR 1.10 para 2.8
- **2.5.11** It is emphasized that the requirements specified in paragraphs 2.5.3, 2.5.5, 2.5.6, 2.5.7, 2.5.8, 2.5.9, 2.5.10 are not applicable to route portions outside the IFPS Zone.

#### **AIP HUNGARY**

#### 2.6 General information

- **2.6.1** RPL data at EUROCONTROL is handled by a dedicated section known as the RPL Team.
- **2.6.2** The RPL Team working day is from 0800 to 1715 (European time) Monday to Friday, including Public Holidays but excluding 25 December. Originators of RPL data should take these operating hours into account when submitting RPL data to EUROCONTROL.
- **2.6.3** RPL data files may be sent to EUROCONTROL by any of the following means of communication:

EUROCONTROL CFMU FDO/RPL Team

Post:Rue de la Fusee, 96 B -1130 Brussels, Belgium

SITA:BRUER7X

Fax:32.2.729.9042

Phone:32.2.729.9847

Phone:32.2.729.9861

Phone:32.2.729.9866

**2.6.4** The use of hard copy via post is discouraged. Submission via diskette, SITATEX or electronic file transfer removes the chance of an RPL operator making any typographical errors when copying the data from the hard copy into the IFPS RPL system.

#### 2.7 Suspension of RPLs

**2.7.1** To suspend an RPL/s, the RPL originator must send by SITA, FAX a letter to the EUROCONTROL RPL Office with an instruction with contains the following information:

Please suspend the following flights with effect from ddmm until ddmm.

AIRCRAFT-ID VAL-FROM VAL-UNTIL DAYS-OF-OPERATION ADEP EOBT ADES

Note:

- i. Flights can not be suspended for periods of less than 3 days
- ii. A suspension message shall be received by not less than 48 hours before the EOBT of the earliest affected flight/s. When sufficient notice cannot be given, individual CNL messages must be filed.
- iii. If the UNTIL is not filled in, then a Recovery message will have to be send.
- **2.7.2** A RSUS message is an ADEXP message which has not been implemented in the RPL system. This message shall not be used. Originators should use the media and layout described above.

#### 2.8 Recovery of RPLs

**2.8.1** To recover an RPL/s, the RPL originator must send by SITA, FAX a letter to the EUROCONTROL RPL Office with an instruction with contains the following information:

Please recover the following flights with effect from ddmm.

AIRCRAFT-ID VAL-FROM VAL-UNTIL DAYS-OF-OPERATION ADEP EOBT ADES

Note: A recovery message shall be received by not less than 48 hours before the EOBT of the earliest affected flight/s. When sufficient notice cannot be given, individual FPL messages must be filed.

**2.8.2** The RREC message is an ADEXP message which has not been implemented in the RPL system. This message shall not be used. Originators should use the media and layout described above.

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## 2. SIGNALS FOR USE IN THE EVENT OF INTERCEPTION

# 2.1 Signals initiated by intercepting aircraft and responses by intercepted aircraft

Series	INTERCEPTING aircraft signals	Meaning	INTERCEPTED aircraft responds	Meaning
1.	INTERCEPTING aircraft signals DAY or NIGHT - Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgment, a slow level turn, normally to the left (or to the right in the case of a helicopter) on the desired heading. Note 1 Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. Note 2 If the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it	You have been intercepted. Follow me.	DAY or NIGHT - Rocking aircraft, flashing navigational lights at irregular intervals and following. Note: Additional action required to be taken by intercepted aircraft is prescribed in Annex 2, Chapter 3, item 3.8.	Understood, will comply.
	passes the intercepted aircraft.			
2	DAY or NIGHT - An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT - Rocking the aircraft.	Understood, will comply.

Series	INTERCEPTING aircraft signals	Meaning	INTERCEPTED aircraft responds	Meaning
3	DAY or NIGHT - Lowering landing gear (if fitted) showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome	DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

# 2.2 Signals initiated by intercepted aircraft and responses by intercepting aircraft

Series	INTERCEPTED aircraft responds	Meaning	INTERCEPTING aircraft signals	Meaning
4	DAY or NIGHT - Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 1000 ft (300 m) but not exceeding 2000 ft (600 m) (in the case of a helicopter, at a height exceeding 170 ft (50 m) bud not exceeding 330 ft (100 m)) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is in- adequate.	DAY or NIGHT - If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. You may proceed.
5	DAY or NIGHT - Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT - Irregular flashing of all available lights.	In distress.	DAY or NIGHT - Use Series 2 signals prescribed for intercepting aircraft.	Understood.

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# **ENR 2 AIR TRAFFIC SERVICES AIRSPACE**

# ENR 2.1 FIR, CTA, TMA, MTMA, MCTR

# 1. FIR, CTA, TMA

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
BUDAPEST FIR The borders of Hungary FL 660 GND	BUDAPEST ACC	BUDAPEST CONTROL/RADAR EN, HU H24		The airspace layer between FL290- FL410 (both inclusive) of Budapest FIR is part of the EUR RVSM airspace.
	BUDAPEST FIC	BUDAPEST INFORMATION EAST EN, HU H24	133.000MHZ	East from river Danube Offset carrier mode operation
		BUDAPEST INFORMATION WEST EN, HU H24	125.500MHZ	West from river Danube Offset carrier mode operation
		BUDAPEST INFORMATION NORTH EN, HU H24	119.350MHZ	Uncontrolled airspace under Budapest TMA

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
BUDAPEST CTA	BUDAPEST	BUDAPEST	123.635 CH	
Lateral limits as for Budapest	ACC	CONTROL/RADAR	120.375 MHz	
FIR		EN, HU	128.105 CH	Standby
FL 660		H24	128.955 CH	
9500 FT AMSL			130.575 MHz	
С			132.055CH	
			132.790CH	
			133.200MHz	
			133.535CH	Standby
			135.205CH	
			135.555CH	
			136.380CH	

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Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency/ Purpose	Remarks
1	2	3	4	5
			234.250MHz UHF	UHF frequencies
			264.650MHz UHF	available for use by
			290.650MHz UHF	aircraft and in case of VHF COM failure

Name Lateral limits Vertical limits Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of service	Frequency /Purpose	Remarks	
1	2	3	4	5	
BUDAPEST TMA C	BUDAPEST TRCC	BUDAPEST APPROACH EN, HU	129.7MHZ 122.975MHZ 119.5MHZ		
BUDAPEST TMA PARTS	•		·	·	
BUDAPEST TMA1 474419N 0181530E along borde 470908N 0184432E - 471331N FL 195 7500 FT ALT C BUDAPEST TMA2	r HUNGARY_SL 0181507E - 473	OVAKREPUBLIC - 474551 521N 0181527E - 474419I	N 0182754E - 47350 N 0181530E	03N 0182754E -	
474551N 0182754E along borde 472516N 0185346E - 470806N FL 195 6500 FT ALT C	474551N 0182754E along border HUNGARY_SLOVAKREPUBLIC - 474527N 0183705E - 473233N 0184156E - 472516N 0185346E - 470806N 0185112E - 470908N 0184432E - 473503N 0182754E - 474551N 0182754E FL 195 6500 FT ALT C				
BUDAPEST TMA3 474527N 0183705E - 473233N 0184156E - 472516N 0185346E - 470806N 0185112E - 470403N 0191630E - 470606N 0192729E - 472525N 0185940E - 473055N 0190118E - 473220N 0185858E - 473500N 0185300E - 473720N 0185425E - 474643N 0190652E - 474750N 0184351E along border HUNGARY_SLOVAKREPUBLIC - 474527N 0183705E FL 195 3500 FT ALT					
BUDAPEST TMA4 474643N 0190652E - 473720N 0185425E - 473500N 0185300E - 473220N 0185858E - 473055N 0190118E - 473054N 0190159E - 473612N 0190412E - 474615N 0191631E - 474643N 0190652E FL 195 2500 FT ALT C					
BUDAPEST TMA5 474750N 0184351E - 474643N 0190652E - 474615N 0191631E - 474503N 0194053E - 475224N 0193441E - 480513N 0192330E along border HUNGARY_SLOVAKREPUBLIC - 474750N 0184351E FL 195 6500 FT ALT C					

# ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Nil

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# ENR 4.4 NAME-CODE DESIGNATORS FOR SIGNIFICANT POINTS

Nil

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# ENR 4.4-1 NAME-CODE DESIGNATORS FOR FRA SIGNIFICANT POINTS

Name-code designator	code Coordinates FRA relevance nator		Remarks/Usage
1	2	3	4
ABETI	474040N 0170046E	(X) Exit Point	EVEN FLs for all exiting aircraft
ABONY	471615N 0195845E	(A) Arrival Point (First way point of the STAR/transition procedure for LHBP)	
ABULI	482903N 0202912E	(X) Exit Point	EVEN FLs for all exiting aircraft
AGMAS	472903N 0194130E	(H) Holding Point (Terminal holding point)	ARR LHBP
ALAMU	474413N 0181948E	(E) Entry Point	ODD FLs for all entering aircraft
AMRAX	480529N 0192158E	(X) Exit Point	EVEN FLs for all exiting aircraft
ARSIN	473402N 0164513E	(X) Exit Point	EVEN FLs for all exiting aircraft
BABIT	455554N 0185544E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
BABOX	465345N 0194059E	(D) Final point of the SID procedure for LHKE	DEP LHKE
BADOR	473425N 0220629E	(X) Exit Point	ODD FLs for all exiting aircraft
BADOV	480116N 0184857E	(D) Final point of the SID procedure for LHBP	DEP LHBP
BALAP	480405N 0191500E	(E) Entry Point	ODD FLs for all entering aircraft
BALUX	472027N 0190746E	(I) Intermediate point	Mandatory waypoint for LOWW ARR except from KEKED. See also ENR 6 LHCC ERC MISC chart
BAREB	454446N 0182448E	(E / X) Entry / Exit Point	Only below 9500 feet AMSL EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
BEGLA	474951N 0170652E	(X) Exit Point	EVEN FLs for all exiting aircraft
BINKU	465534N 0202733E	(D) Final point of the SID procedure for LHKE	DEP LHKE
BOKSI	463807N 0194951E	(A) Arrival point (First way point of the STAR for LHKE)	
BUDOP	464115N 0212948E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft

# ENR 4.4-1 - 2 05 FEB 2015

Name-code designator	Coordinates	FRA relevance	Remarks/Usage
1	2	3	4
DEGET	462937N 0211602E	(E) Entry Point	EVEN FLs for all entering aircraft
DEMOP	481029N 0200325E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
DIMLO	464101N 0162522E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
DODAR	471252N 0193139E	(I) Intermediate Point	
EBORO	462121N 0195915E	(I) Intermediate Point	
EPARI	474111N 0185841E	(I) Intermediate Point	Mandatory waypoint for LOWW DEP entering to HUFRA via ALAMU. See also ENR 6 LHCC ERC MISC chart
ERGOM	474830N 0184359E	(E) Entry Point	ODD FLs for all entering aircraft
ERLOS	470403N 0191630E	(D) Final point of the SID procedure for LHBP	DEP LHBP
ETARO	473000N 0190000E	(I) Intermediate Point	
ETNOG	473938N 0215812E	(I) Intermediate Point	
GELKA	480605N 0201359E	(I) Intermediate Point	Mandatory waypoint for ARR LHBP entering to HUFRA via LONLA, KEKED, PITOK. See also ENR 6 LHCC ERC MISC chart
GEMTO	480800N 0223540E	(X) Exit Point	ODD FLs for all exiting aircraft
GILEP	472900N 0181532E	(D) Final point of the SID procedure for LHBP	DEP LHBP
GITAS	470317N 0181027E	(I) Intermediate Point	Mandatory waypoint for LZIB DEP entering to HUFRA via VAMOG, See also ENR 6 LHCC ERC MISC chart
GOTAR	465952N 0161329E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
INVED	460928N 0202405E	(X) Exit Point	ODD FLs for all exiting aircraft
KARIL	474738N 0222632E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
KEKED	483123N 0211729E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
KENIN	482142N 0215538E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
KEROP	461104N 0194148E	(X) Exit Point	ODD FLs for all exiting aircraft

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Name-code designator	Coordinates	FRA relevance	Remarks/Usage
1	2	3	4
KOLUM	482616N 0210429E	(A) Arrival Point (First way point of the STAR/transition procedure for LZKZ)	ARR LZKZ see AIP Slovakia
KOPRY	461425N 0165746E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
KOVEK	475050N 0203010E	(I) Intermediate Point	
KUSIS	475218N 0222302E	(I) Intermediate Point	For tactical re-routing in case TRA 32/33 active
KUVEX	475430N 0172615E	(X) Exit Point	ARR LZIB
LITKU	481350N 0193555E	(X / D) Exit / Final point of the SID procedure for LHBP	EVEN FLs for all exiting aircraft
LONLA	482024N 0221911E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
LUVEL	464600N 0212010E	(I) Intermediate Point	For tactical re-routing in case TRA 32/33 active
MAVIR	462354N 0194931E	(I / D) Intermediate / Final point of the SID procedure for LHKE	DEP LHKE
MEGIK	471230N 0215140E	(E) Entry Point	EVEN FLs for all entering aircraft
MOGMA	475220N 0165602E	(E) Entry Point	ODD FLs for all entering aircraft ARR LZIB
MOPUG	460949N 0204229E	(E) Entry Point	EVEN FLs for all entering aircraft
NALAG	480233N 0194557E	(D) Final point of the SID procedure for LHBP	DEP LHBP
NALOX	465211N 0164912E	(D / A) Final point of the SID procedure for LHSM airport / First way point of the STAR for LHSM	DEP/ARR LHSM
NARKA	471454N 0215136E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
NATEX	474449N 0173000E	(A) Arrival Point (First way point of the STAR for LOWW airport)	
NIKAB	463709N 0173244E	(I) Intermediate Point	
NIPUR	474302N 0200047E	(I) Intermediate Point For tactical re-routing in 32/33 active	
NORAH	473658N 0194829E	(I / D) Intermediate / Final point of the SID DEP LHBP procedure for LHBP	
OGVUN	472306N 0175120E	(D / A) Final point of the SID procedure for LHPA airport / First way point of the STAR for LHPA	DEP/ARR LHPA

Name-code designator	Coordinates	FRA relevance	Remarks/Usage
1	2	3	4
OKORA	464559N 0182217E	(I) Intermediate Point	
OLATI	465914N 0172845E	(I) Intermediate Point	
OSLEN	464336N 0202145E	(A) Arrival Point (First way point of the STAR for LHKE)	
PARAK	460950N 0200539E	(E / X) Entry / Exit Point	EVEN FLs for all entering aircraft ODD FLs for all exiting aircraft
РАТАК	480423N 0190738E	(X) Exit Point	EVEN FLs for all exiting aircraft
PERIT	474718N 0213722E	(I / A/ D) Intermediate / First way point of the STAR for LHDC Final point of the SID procedure for LHDC	ARR/DEP LHDC
PESAT	474254N 0170311E	(X) Exit Point	ARR LOWW airport see AIP Austria
PIDON	460720N 0180410E	(I / A/ D) Intermediate / First way point of the STAR for LHPP Final point of the SID procedure for LHPP	ARR/DEP LHPP
PITOK	481929N 0202218E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
PUSTA	470908N 0184432E	(D) Final point of the SID procedure for LHBP	DEP LHBP
RIGSA	480952N 0204506E	(I) Intermediate Point	Mandatory waypoint for DEP/ARR LHBP. See also ENR 6 LHCC ERC MISC chart
ROMKA	481319N 0215025E	(I) Intermediate Point	Mandatory in case of LHTRA32B and LHTRA33B active
SASAL	471705N 0162828E	(E) Entry Point	ODD FLs for all entering aircraft
SIRDU	471517N 0171955E	(I) Intermediate Point	Mandatory waypoint for LOWW DEP entering to HUFRA via STEIN
SOGMO	463637N 0174103E	(I) Intermediate Point	
SOPRO	473516N 0164809E	(E / X) Entry / Exit Point	Only below 9500 feet AMSL ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
STEIN	472539N 0163559E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft Exit only for DEP LHPA
SUBES	472516N 0172536E	(I) Intermediate Point	
SUNIS	470831N 0162059E	(X) Exit Point	EVEN FLs for all exiting aircraft

# AIP HUNGARY

Name-code designator	Coordinates	FRA relevance	Remarks/Usage
1	2	3	4
SUNOR	462847N 0171750E	(D / A) Final point of the SID procedure for LHSM First way point of the STAR for LHSM	DEP/ARR LHSM
TEGRI	461546N 0210616E	(X) Exit Point	ODD FLs for all exiting aircraft
TEKNO	473726N 0172432E	(I) Intermediate Point	
TONDO	460250N 0192121E	(E) Entry Point	EVEN FLs for all entering aircraft
TORNO	473223N 0182924E	(I / D) Intermediate / Final point of the SID procedure for LHBP	1.) Mandatory waypoint for ARR LOWW and entering to HUFRA via KEKED. See also ERC MISC-4 2.) DEP LHBP
UVERA	471200N 0202547E	(I) Intermediate Point	For tactical re-routing in case TRA 32/33 active
VAMOG	474714N 0173945E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
VEBAL	455929N 0171748E	(E / X) Entry / Exit Point	ODD FLs for all entering aircraft EVEN FLs for all exiting aircraft
VEBOS	471823N 0183814E	(A) Arrival Point (First way point of the STAR/transition procedure for LHBP)	
VERIG	471020N 0214329E	(I / A/ D) Intermediate / First way point of the STAR for LHDC Final point of the SID procedure for LHDC	ARR/DEP LHDC
ХОМВА	474524N 0180343E	(X) Exit Point	ARR LZIB

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# ENR 6

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# **EN-ROUTE CHARTS**

Title	Page
LHCC ERC - En-route Chart - ICAO	ENR 6-LHCC-ERC - 1
LHCC ERC MISC 1-3 - Appendix to En-route Chart - ICAO	ENR 6-LHCC-MISC-1-6
LHCC PRD - Prohibited, Restricted and Danger Areas	ENR 6-LHCC-PRD - 1
LHCC TRA - Military Excercise Areas	ENR 6-LHCC-TRA - 1

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# APPENDIX 1 TO ENR 6-LHCC-ERC COMPULSORY AND PLANNABLE LINKS

# 1. LHBP DEP within Budapest FIR



# ENR 6-LHCC-MISC1 - 2 05 FEB 2015

# 2. LHBP ARR within Budapest FIR



# APPENDIX 2 TO ENR 6-LHCC-ERC COMPULSORY AND PLANNABLE LINKS

# 3. LOWW DEP within Budapest FIR



# ENR 6-LHCC-MISC2 - 2 05 FEB 2015

# 4. LOWW ARR within Budapest FIR



# APPENDIX 3 TO ENR 6-LHCC-ERC COMPULSORY AND PLANNABLE LINKS

## 5. LZIB DEP within Budapest FIR



# ENR 6-LHCC-MISC3 - 2 05 FEB 2015

# 6. LZIB ARR within Budapest FIR



HungaroControl

# LHBP AD 2.1 AERODROME LOCATION INDICATOR - NAME

#### LHBP BUDAPEST LISZT FERENC INTERNATIONAL AIRPORT

## LHBP AD 2.2 AERODROME GEOGRAPHICAL DATA AND ADMINISTRATION

1	ARP coordinates and site at AD	472621.58N 0191542.51E at intersection of TWYs "A", "N" and "K
2	Direction and distance from (city)	16 km, ESE (115°) from down-town Budapest
3	Elevation/Reference temperature	151.3 M/22°C
4	Geoid undulation	44 M
5	MAG VAR/ annual change	4° E/0.1 (2009)
6	AD Administration, address, telephone, telefax, AFS	Post:Budapest Airport Zrt. H-1185 Budapest, BUD International Airport Phone:(+361) 296-7421 Fax:(+361) 296-6890 AFS:LHBPYDYG Email:airport.ops@bud.hu
7	Types of traffic permitted (IFR/VFR)	IFR-VFR
8	Remarks	Nil

# LHBP AD 2.3 OPERATIONAL HOURS

1	AD Administration	H24
2	Customs and immigration	H24
3	Health and sanitation	H24
4	AIS Briefing Office	H24
5	ATS Reporting Office (ARO)	H24
6	MET Briefing Office	H24 See AD 2-LHBP AD-2.11 and See GEN 3.5
7	ATS	H24 Night restrictions See AD 2-LHBP AD-2.21
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-icing	H24
12	Remarks	Nil

# LHBP AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Trucks (1,5-3,5 tonnes), fork lifts (up to 5 tonnes), conveyor belts, high loader (up to 20 tonnes).
2	Fuel/oil types	Jet A-1 kerosene, (NATO code F-35), MK8P and MOBIL Jet engine oil., FH15 and CHEVRON HYJET IV.
3	Fuelling facilities/capacity	Air BP senior representative Castrol Hungary KFT.: Phone:(+361) 296-6017 Phone:(+3630) 9335-319 Fax:(+361) 296-6017 Sales Manager Airport Fuel Supply LLC Phone:(+361) 296-6008 Phone:(+3620) 4931-039 Fax:(+361) 294-4215
4	De-icing facilities	AVBL on parking stands on request
5	Hangar space for visiting aircraft	Limited by prior arrangement only
6	Repair facilities for visiting aircraft	Aeroplex: Email:marketingkozpont@aeroplex.com Lufthansa Technik Budapest Phone:(+361) 296-3004 Fax:(+361) 296-3001
7	Remarks	Nil

# LHBP AD 2.5 PASSENGER FACILITIES

1	Hotels	In the city
2	Restaurants	at AD and in the city
3	Transportation	Buses, taxies, car hire (Hertz, Avis, Budget) and airport minibus services (Phone: 296-8555)
4	Medical facilities	First aid at AD, hospitals in the city
5	Bank and Post Office	OTP T2B open: 07:45-17:00 LT Post: T2A: open 08:00-15:30 LT
6	Tourist Office	T2B: OTP Travel open: 06:00-2200 LT T2A: Neckermann, Uhuvilla
7	Remarks	Money exchange: 05:30-22:00 LT Cash maschines: H24

# LHBP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	A9
2	Rescue equipment	Available
3	Capability for removal of disabled aircraft	Lifting bags and hydraulic jacks available

#### **AIP HUNGARY**

# 3. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS) BROADCASTS

Station	Call sign/Identification	Frequency (MHz)	Operational Hours	Remark
Rudapost	BUDAPEST TERMINAL	132.375	H24	
Dudapesi	INFORMATION	117.3	H24	BUD TVOR

#### 3.1 The content of ATIS broadcasts:

- 1. Name of aerodrome
- 2. Designator
- 3. Time of observation
- 4. Type of approach to be expected and runway(s) in use
- 5. Significant runway surface conditions and if appropriate braking action; conditions of other movement areas
- 6. Expected delay, if appropriate
- 7. Transition level
- 8. Other essential operational information
- 9. Meteorological report
- 10. ATFM information

Pilots of arriving and departing aircraft are requested to report receipt of ATIS broadcast by reading back relevant designator of information and QNH on initial contact with Budapest Approach or Budapest Ground respectively.

Notes:

- One broadcast is serving both arriving and departing aircraft.
- Runway braking action is reported with friction coefficient, or estimated braking action if friction coefficient is not available. It is transmitted for each third of the runway in use commencing from the threshold. Sections of the runway are identified as first part, second part, and third part.
- RVR values are transmitted in the following order: touchdown zone, mid point and stop end. When RVRs for all the three positions are available, the positions are not identified.

#### 4. BIRD FLOCKS AND BIRD MIGRATIONS

The size of flocks of birds living at or near Budapest Liszt Ferenc International Airport varies with seasons.

Domestic pigeons bred at settlements in the vicinity of the airport represent a constant and growing threat. Appearance of a flock comprising 50 to 100 individuals can be expected from every direction between 30 and 100 feet.

About 40 to 60 birds of prey live within the area or in the immediate vicinity of the airport. Birds of prey are a hazard to aircraft in the initial climb or final approach phase of flight.

Danger of collision somewhat increases in June-August when the new generation leave their nests.

Bird migrations occur, depending on weather conditions, in February-March and in September-October. In these months flocks of several thousand, relatively small, birds will migrate through the airspace at varying altitudes.

Between November and February gulls also appear at the airport, usually preferring to settle on runways and taxiways.

Particular mention must be made of black and grey crows. Between October and March - also depending on weather conditions - they migrate through the airspace of the airport in flocks of several ten thousand, sometimes of several hundred thousand, and settle temporarily on the airfield.

Their migration shows a distinct daily pattern: after dawn they fly from NW to SE, at dusk from SE to NW, between 30 and 1000 feet.

### 4.1 Bird Watch and Scaring Service

The Budapest Airport Zrt. operates a continuous bird watch and scaring service, with adequate equipment.

Operators using Budapest Liszt Ferenc International Airport are requested to send their comments relating to the operation of this service to the following address:

Airside Management

BUD International Airport Zrt.

Post:H-1185 Budapest, BUD International Airport

Phone: (361) 296-5535

Fax:(361) 296-8981

Email:airside.bud@bud.hu

#### 4.2 Reporting a Bird Strike

Operators using Budapest Liszt Ferenc International Airport are requested to report events of bird strike by filling in the ICAO standard "BIRD STRIKE REPORTING FORM" (BSRF). The form can be obtained - and filed - at the Air Traffic Services Reporting Office.

If the event occurs after take-off and the crew do not consider it necessary to interrupt their flight, then they should notify the TWR via radio, then fill in the BSRF at their destination airport and send it to the following address:

Airside Management

BUD International Airport Zrt.

Post:H-1185 Budapest, BUD International Airport

Fax:(361) 296-8981

Email:airside.bud@bud.hu

#### 5. GENERAL AVIATION FLIGHT HANDLING

An operator or a handling agent authorized by the operator must advise its operation as a minimum three hours before the planned arrival or departure time. Requests shall be submitted to the Airport Operations Control Center by:

Email:airport.ops@bud.hu

Operation request shall comprise the following information:

- date of flight;
- aircraft identification and type of aircraft;
- type of flight;
- estimated time of arrival and/or departure;
- aerodrome of departure and destination;
- aircraft registration;
- name of the handling agent;
- MTOW and noise data of the aircraft;
- name of the operator.

The airport operator will confirm the times to the sender.

# AD 2-LHPR-ILS/LOC-30 - 1 05 FEB 2015



**AIP HUNGARY** 

# AD 2 LHPR INSTRUMENT APPROACH CHART ILS OR LOC RWY 30

FIX	LATITUDE	LONGITUDE	FIX FORMATION (True BRGs)
IAF	N47 39 32.8	E017 43 27.7	GYR VOR
IAF	N47 38 17.1	E018 04 32.0	R 95.00 GYR VOR / D 14.23 GYR DME
IF	N47 32 30.2	E018 01 51.4	R 299.46 GYR VOR / D 14.25 GYR DME
FAP	N47 34 57.3	E017 55 28.6	R 299.46 GPR LOC / D 9.40 GYR DME
FAF LOC only	N47 34 58.2	E017 55 26.1	R 299.46 GPR LOC / D 9.30 GYR DME
MAPt LOC only	N47 37 25.9	E017 49 00.0	R 299.46 GYR VOR / D 4.30 GYR DME
MA TP	N47 38 48.4	E017 45 23.7	R 299.46 GYR VOR / D 1.50 GYR DME

#### Final approach descent (LOC only): 3.06°

#### Approach holding procedure:

Holding fix: GYR VOR I	R 092 / D 14.3.
Maximum speed:	210 KIAS
Inbound track:	092°
Outbound track:	272°
Turns:	Right
Outbound timing:	1 min.
Minimum holding altitude:	4500 (3500 for Missed Approach)
MOCA:	2000
Entry:	Sector 1 (parallel) and Sector 2 (offset) entries prohibited

## AD 2-LHPR-VOR-30 - 1 05 FEB 2015



**AIP HUNGARY** 

# AD 2 LHPR INSTRUMENT APPROACH CHART VOR RWY 30

FIX	LATITUDE	LONGITUDE	FIX FORMATION (True BRGs)
IAF	N47 39 32.8	E017 43 27.7	GYR VOR
IAF	N47 38 17.1	E018 04 32.0	R 95.00 GYR VOR / D 14.23 GYR DME
IF	N47 32 30.2	E018 01 51.4	R 299.46 GYR VOR / D 14.25 GYR DME
FAF	N47 34 58.2	E017 55 26.1	R 299.46 GYR VOR / D 9.51 GYR DME
SDF	N47 36 41.9	E017 50 55.8	R 299.46 GYR VOR / D 5.80 GYR DME
MAPt	N47 37 25.9	E017 49 00.0	R 299.46 GYR VOR / D 4.30 GYR DME
MA TP	N47 38 48.4	E017 45 23.7	R 299.46 GYR VOR / D 1.5 GYR DME

#### Final approach descent: 3.06°

#### Approach holding procedure:

Holding fix: GYR VOR I	R 092 / D 14.3.
Maximum speed:	210 KIAS
Inbound track:	092°
Outbound track:	272°
Turns:	Right
Outbound timing:	1 min.
Minimum holding altitude:	4500 (3500 for Missed Approach)
MOCA:	2000
Entry:	Sector 1 (parallel) and Sector 2 (offset) entries prohibited

## AD 2-LHPR-RNAV-12 - 1 05 FEB 2015



**AIP HUNGARY** 

	AD 2 LHPR INSTRUMENT APPROACH CHART RNAV <sub>(GNSS)</sub> RWY 12										
Serial Number	Path Descriptor	Waypoint Identifier	Fly- over	Course °M (°T)	Magnetic Variation (2009)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA/TCH	Navigation Specification
001	IF	GYR			+3.4			+6000			RNP APCH
002	TF	PR014	-	092 (095.0)	+3.4	14.2	-	+6000			RNP APCH
003	TF	PR015	-	193 (196.6)	+3.4	6.0	-	+6000			RNP APCH
004	TF	PR016	-	266 (269.1)	+3.4	8.4	-	+6000			RNP APCH
005	TF	PR017	-	291 (294.5)	+3.4	7.9	-	+5500			RNP APCH
006	TF	PR018	-	316 (319.5)	+3.4	6.2	-	+3700	-210		RNP APCH
007	TF	PR019	-	026 (029.5)	+3.4	2.8	-	+3000	-180		RNP APCH
008	TF	PR020	-	116 (119.5)	+3.4	5.0	-	@2100			RNP APCH
009	TF	PR021	Y	116 (119.5)	+3.4	5.0	-	@770		-3.08/49	RNP APCH
010	TF	PR022	-	116 (119.5)	+3.4	4.8	-	-	-230		RNP APCH
011	НМ	PR014	-	066 (069.5)	+3.4	7.7	-	+3500			RNP APCH

# WAYPOINT COORDINATES AD 2-LHPR-RNAV<sub>(GNSS)</sub> 12

WAYPOINT	LATITUDE	LONGITUDE	REMARK	
PR014	N47 38 17.4	E018 04 25.7	IAF	
PR015	N47 32 30.2	E018 01 54.4	IAF	
PR016	N47 32 22.9	E017 49 24.5	IAF	
PR017	N47 35 39.3	E017 38 44.7	IAF	
PR018	N47 40 25.6	E017 32 40.2	IAF	
PR019	N47 42 52.1	E017 34 41.8	IF	
PR020	N47 40 25.3	E017 41 09.0	FAF	
PR021	N47 37 58.3	E017 47 35.6	MAPt	
PR022	N47 35 36.7	E017 53 45.6	MA TP	

## AD 2-LHPR-RNAV-30 - 1 05 FEB 2015



**AIP HUNGARY** 

	AD 2 LHPR INSTRUMENT APPROACH CHART RNAV <sub>(GNSS)</sub> RWY 30										
Serial Number	Path Descriptor	Waypoint Identifier	Fly- over	Course °M (°T)	Magnetic Variation (2009)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (KIAS)	VPA/TCH	Navigation Specification
001	IF	GYR			+3.4						RNP APCH
002	TF	PR014	-	092 (095.0)	+3.4	14.2	-	+4500	-230		RNP APCH
003	TF	PR015	-	193 (196.6)	+3.4	6.0	-	+3000	-210		RNP APCH
004	TF	PR023	-	296 (299.5)	+3.4	5.0	-	@2100			RNP APCH
005	TF	PR024	Y	296 (299.5)	+3.4	5.0	-	@770		-3.06/49	RNP APCH
006	DF	PR025	Y	296 (299.5)	+3.4	3	-	-	-185		RNP APCH
007	DF	PR026	-	-	+3.4	_	-	-			RNP APCH
008	HM	PR014	-	092 (095.0)	+3.4	6.0	-	+3500			RNP APCH

# WAYPOINT COORDINATES AD 2-LHPR-RNAV<sub>(GNSS)</sub> 30

WAYPOINT	LATITUDE	LONGITUDE	REMARK								
PR014	N47 38 17.4	E018 04 25.7	IAF								
PR015	N47 32 30.2	E018 01 54.4	IF								
PR023	N47 34 58.2	E017 55 26.1	FAF								
PR024	N47 37 26.0	E017 49 00.3	MAPt								
PR025	N47 38 54.3	E017 45 08.2	MA TP								
PR026	N47 38 49.6	E017 55 35.4	MA TP								

## **AIP HUNGARY**

## AD 2-LHSM-SID-16 - 1 05 FEB 2015



# AD 2 LHSM STANDARD DEPARTURE CHART INSTRUMENT RWY 16

NAME	PROCEDURE
NALOX1D (32.1)	After departure continue RWY HDG. Climb to FL100. Cross D 4.5 SME DME at 2000 or above then turn left and proceed direct to SME NDB (Turn limited to 210 KIAS max.) After crossing SME NDB fly on QDR 307 SME NDB proceeding to NALOX. Cross NALOX at FL100.
<b>SUNOR1D</b> (29.5)	After departure continue RWY HDG. Climb to FL100. Cross D 4.5 SME DME at 2000 or above then turn left and proceed direct to SME DME. (Turn limited to 210 KIAS MAX.) After crossing SME NDB turn left to track 135° proceeding to SUNOR. Cross SUNOR at FL100.
### **AIP HUNGARY**

#### AD 2-LHSM-SID-34 - 1 05 FEB 2015



# AD 2 LHSM STANDARD DEPARTURE CHART INSTRUMENT RWY 34

NAME	PROCEDURE
<b>NALOX3D</b> (39.9)	After departure continue RWY HDG. Climb to FL100. Cross D 5.5 SME DME at 2000 or above then turn left and proceed direct to SME NDB. (Turn limited to 210 KIAS max.) After crossing SME NDB turn left to track 311°. After crossing QDM 162 SME NDB turn left to track 293° proceeding to NALOX. Cross NALOX at FL100.
<b>SUNOR3D</b> (27.9)	After departure continue RWY HDG. Climb to FL100. Cross D 5.5 SME DME at 2000 or above then turn left and proceed direct to SME NDB. (Turn limited to 210 KIAS max.) After crossing SME NDB fly on QDR 151 SME NDB proceeding to SUNOR. Cross SUNOR at FL100.



AD 2-LHSM-ILS/LOC-16 - 1

# AD 2 LHSM INSTRUMENT APPROACH CHART ILS OR LOC RWY 16

Approach from SME DME: Initial altitude: 4000.

Fly outbound on 357° for 3 minutes or D 9.8 SME DME (whichever comes first) and descend to 2300. Turn left (185 KIAS max.) intercept the localizer inbound on 162°, then descend to 1800. Glide path interception at D 4.4 SMK DME, then follow ILS.

Holding procedure: Holding fix: SME DME. Left hand holding pattern. rack: 357° Inbound track:

Outbound track: Rate of turn:

Outbound timing: Minimum holding altitude:

177° 3°/sec. or 25° bank angle (whichever requires lesser bank) 1 min 4000 3000 for Missed Approach



AD 2-LHSM-NDB-16 - 1

# **AD 2 LHSM INSTRUMENT APPROACH CHART NDB RWY 16**

Approach from SME DME:

Initial altitude: 4000. Fly outbound on 357° for 3 minutes or D 9.8 SME DME (whichever comes first) and descend to 2300. Turn left (185 KIAS max.) to 162° inbound, then descend to 1800. At D 6.2 SME DME descend to 1150. At D 4.2 SME DME descend to 770.

Holding procedure: Holding fix: SME DME. Left hand holding pattern. Inbound track: 357° 177° Outbound track: 3°/sec. or 25° bank angle Rate of turn: (whichever requires lesser bank) Outbound timing: 1 min Minimum holding altitude: 4000 3000 for Missed Approach

Final approach descent: 3.00°



**AIP HUNGARY** 

AD 2-LHSM-NDB-34 - 1

05 FEB 2015

# AD 2 LHSM INSTRUMENT APPROACH CHART NDB 34

Approach from SME DME: Initial altitude: 4000. Fly outbound on 144° for 2.5 minutes or D 8.1 SME DME (whichever comes first) and descend to 2000. Turn right (185 KIAS max.) to 342° inbound SME DME. At D 4.1 SME DME descend to 690.

Holding procedure: Holding fix: SME DME. Left hand holding pattern. rack: 144° Inbound track: Outbound track: Rate of turn: 324° 3°/sec. or 25° bank angle (whichever requires lesser bank) Outbound timing: Minimum holding altitude: 1 min 4000 3000 for Missed Approach

Final approach descent: 3.10°

Note: The following sections in this chapter are intentionally left blank: AD-2.16, AD-2.20, AD-2.21, AD-2.22, AD-2.23

### LHUD AD 2.1 AERODROME LOCATION INDICATOR - NAME

#### LHUD SZEGED

#### LHUD AD 2.2 AERODROME GEOGRAPHICAL DATA AND ADMINISTRATION

1	ARP coordinates and site at AD	461503N 0200521E, at RWY 16 THR
2	Direction and distance from (city)	5 km West from centre of Szeged city
3	Elevation/Reference temperature	82 M / 27.7° C
4	Geoid undulation	44 M
5	MAG VAR/ annual change	4° E (2009) / 0.1° increasing
6	AD Administration, address, telephone, telefax, AFS	Post:Szegedi Kozlekedesi Kft. H-6720 Szeged, Zrinyi u. 4-8. H-6701 Szeged 1, POB: 78 Phone:+36 62-592-250 Aerodrome office Phone:+36 62-541-519 AFIS Phone:+36 62-541-825 Phone:(+36) 30 967 70 64 Phone: (+36) 62 553 614 Fax:+36 62 549 505 AFS:LHUDZTZX Email:info@airportszeged.hu RECEPTION Phone:+36 62 541 518
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	Nil

### LHUD AD 2.3 OPERATIONAL HOURS

AD Administration JAN 01-31 0700-1500 JUL 01-31 0700-1900 1 I FEB 01-28 0700-1530 AUG 01-31 0700-1830 I MAR 01-31 0700-1630 SEP 01-30 0700-1730 I APR 01-31 0700-1800 OCT 01-30 0700-1530 I MAY 01-31 0700-1900 0700-1500 NOV 01-30 I JUN 01-30 0700-1900 DEC 01-31 0700-1500 I PPR 72 hours 2 Customs and immigration 3 Nil Health and sanitation 4 AIS Briefing Office As AD Administration

# AD 2-LHUD - 2 05 FEB 2015

5	ATS Reporting Office (ARO)	As AD Administration
6	MET Briefing Office	Nil
7	ATS	As AD Administration
8	Fuelling	As AD Administration
9	Handling	As AD Administration
10	Security	H24
11	De-icing	Nil
12	Remarks	Beyond operational hours services are available on preliminary request.

# LHUD AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Nil
2	Fuel/oil types	AVGAS 100LL petrol, JET A1 kerosene
3	Fuelling facilities/capacity	Nil
4	De-icing facilities	Nil
5	Hangar space for visiting aircraft	limited by prior arrangement only
6	Repair facilities for visiting aircraft	Nil
7	Remarks	Nil

# LHUD AD 2.5 PASSENGER FACILITIES

1	Hotels	in the city
2	Restaurants	buffet at the AD, restaurants in the city
3	Transportation	taxi, bus and tram (bus- and tram-stop on road No. 55.)
4	Medical facilities	First aid at AD, hospital in the city
5	Bank and Post Office	in the city
6	Tourist Office	in the city, leaflets at the AD (AFIS)
7	Remarks	Nil

# LHUD AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	A5
2	Rescue equipment	1 fire fighting vehicle
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

# LHUD AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

# LHUD AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Surface:	GRASS
		Strength:	N/A
2	Taxiway width, surface and strength	Width:	15 M (TWY A)
		Surface:	ASPH
		Strength:	14/F/C/W/T
3	Altimeter checkpoint location and	Location:	Nil
	elevation	Elevation:	
4	VOR checkpoints	Nil	
5	INS checkpoints	Nil	
6	Remarks	Nil	

# LHUD AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil	
2	RWY and TWY markings and LGT	RWY:	Designator, threshold, centre line, aiming point
		TWY:	Centreline, holding positions, instruction sign
3	Stop bars	Nil	
4	Remarks	Nil	

# LHUD AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling a	rea and at AD	Remarks
1		2		3	
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
а	b	с	а	b	
16/APCH	Antenna tower 135 M LGTD	461622.33N 0200432.38E	temple 134 M	461628.87N 0200344.05E	Nil

# LHUD AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	National Meteorological Service, Aeronautical Meteorological Centre
2	Hours of service	H24
3	Office responsible for TAF preparation Periods of validity	Nil
4	Type of landing forecast Interval of issuance	Nil
5	Briefing/consultation provided	Consultation, flight documentation and other info via phone, fax or telex. See GEN 3.5
6	Flight documentation Language(s) used	Charts, abbreviated plain language text Hungarian, English
7	Charts and other information available for briefing or consultation	Aerodrome reports and forecasts for EUR, area forecasts, met. observations and warnings in Budapest FIR
8	Supplementary equipment available for providing information	Meteorological satellite display updated in every half an hour
9	ATS Units provided with information	Budapest FIC on request
10	Additional information	Nil