

# **Briefing for Cloud-Breaking Procedures** IFR-Procedures (LOAV and LOAN)

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#### Preface



- → Please note that the PIC shall be well familiar with RNP approaches in general and is required to check this mandatory pre-flight-briefing, in addition to the legally binding documents found in the AIP/AIC.
- ➔ Pilots shall note, that both procedures in LOAV and LOAN are inter-dependent, and it is only possible to clear one aircraft at a time to use the SID or the RNP-A procedure of the respective aerodrome.
  - → This means that all other flights (e.g. other IFR traffic to/from LOAV/LOAN or paradropping operations) have to be delayed until the previously cleared aircraft has left the procedure Pilots are advised to expect delays.
- → It is understood, that it is solely the pilot in command's (PIC's) ultimate responsibility to comply with the rules and regulations established for the procedures. However, the actual duties and obligations of the PIC may be carried out by any qualified or supervised (by PIC) flight crew member of an aircraft.



# AGENDA

- → General Introduction
  - ✤ Procedures established in LOAV and LOAN
  - → Regulatory requirements
  - ✤ Equipment requirements / Pilot qualification
  - → Air Traffic Services
- ➔ Departure Procedure
  - → LOAV MOVOS1A SID
  - → LOAN GESGI1A SID
- → Arrival Procedure
  - → RNP A LOAV
  - → RNP A LOAN
- → Generic Summary of the procedures
- ✤ Documents to be carried in the aircraft



- → Before starting this briefing and commencing the flight the pilot shall have at least studied the following documents: (Link to AIP: Luftfahrthandbuch Österreich / AIP Austria (austrocontrol.at))
  - ✤ For departures from LOAV:
    - → LOAV AD 2 MAP 9-1 (Standard Departure Chart Instrument ICAO)
    - → AIC A 5/22
    - → AD2 LOAV
    - → LOAV AD 2 MAP 14-2 (Chart for VFR flights VÖSLAU)
  - → For arrivals to LOAV:
    - → LOAV AD 2 MAP 13-2-1 (Instrument Approach Chart (RNP A/B))
    - → AIC A 5/22
    - → AD2 LOAV
    - → LOAV AD 2 MAP 14-2 (Chart for VFR flights VÖSLAU)



- → Before starting this briefing and commencing the flight the pilot shall have at least studied the following documents: (Link to AIP: Luftfahrthandbuch Österreich / AIP Austria (austrocontrol.at))
  - ✤ For departures from LOAN:
    - → LOAN AD 2 MAP 9-1 (Standard Departure Chart Instrument ICAO)
    - → AIC A 4/22
    - ➔ AD2 LOAN
    - → LOAN AD 2 MAP 14-2 (Chart for VFR flights WR. NEUSTADT/OST WR. NEUSTADT/WEST)
  - ✤ For arrivals to LOAN:
    - → LOAN AD 2 MAP 13-2-1 (Instrument Approach Chart ICAO (RNP A CAT A / B))
    - → AIC A 4/22
    - ➔ AD2 LOAN
    - → LOAN AD 2 MAP 14-2 (Chart for VFR flights WR. NEUSTADT/OST WR. NEUSTADT/WEST)



✤ Procedures for cloud-breaking have been established at LOAV and LOAN

- ➔ It is important to note that neither the take-off nor the landing at LOAV or LOAN may be conducted under IFR – this means, that an IFR cancelation is mandatory prior landing according to the published procedures
- → The next two slides will describe a generic departure from LOAV or LOAN and a generic arrival to LOAV or LOAN using the published cloud-breaking procedures the slides aim to show when and how the change in flight rules is conducted (Further details regarding the procedure at LOAV and LOAN will be provided in this briefing)



#### → Example of a departure from LOAV / LOAN using the cloud-breaking procedures:

Note: The departure shall be conducted under VFR in VMC according to the published VFR procedures

Note: IFR starts automatically when passing the "IFR starting point" on the SID according to conditions on the chart and the respective AIC





Note: Landing at LOAV or LOAN is not permitted as an IFR flight – IFR cancelation is mandatory latest at the MAPt or prior deviation from the approach procedure in accordance with the cancellation procedures (see slide 25 of this briefing)

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Note: After the MAPt the pilot shall join the published VFR procedures







→ It is important to note that since the initial part of the departure and the last part of the arrival is conducted under VFR the <u>PIC shall be well familiar with the VFR procedures</u> (Chart for VFR flights and rules and regulations in the AIP) for the respective aerodrome

<u>See and avoid responsibilities:</u> It is the sole responsibility of the PIC to ensure a proper transition from the IFR procedure into the VFR traffic circuit and vice-versa. ATC will <u>NOT</u> separate VFR aircraft to IFR aircraft within airspace class E and G.

(!) Collision avoidance is always up to the PIC (!)

Traffic below 3000 FT AMSL might not be visible/known to ATC (radar coverage) and therefore traffic information might not be practicable.



# **Regulatory requirements**

- → Additional pre-flight action (SERA.2010 (b))
  - ➔ The PIC shall, before using the published (IFR) procedures from and to LOAV/LOAN, have completed this briefing
  - → The PIC shall have a (digital) copy of this briefing in the aircraft (see slide 43 of this briefing)
  - ✤ The pilot shall be familiar with the procedure

Note: Any other pre-flight action according to SERA.2010 (b) is not affected by this briefing and shall be complied with as appropriate



# Equipment requirements / Pilot qualification

- → Aircraft equipment according to SERA.5015 (a) and additionally to SERA.5015 (a) the aircraft shall be equipped with
  - → Two functional radio sets capable of 8.33KHz. (For the RNAV SID and the RNP-A approach)
- ➔ The RNAV SID and/or RNP-A approach procedure require the aircraft to be equipped in accordance with ICAO Doc 9613 (PERFORMANCE-BASED NAVIGATION MANUAL).
- ➔ Pilot qualification/training in accordance with ICAO Doc 9613 (PERFORMANCE-BASED NAVIGATION MANUAL) is required.



#### **Air Traffic Services**

- → The IFR flight on the RNAV SID or the RNP-A approach is provided with air traffic control (ATC) service by WIEN RADAR.
- ✤ For aircraft intending to use the RNAV SID, WIEN RADAR will issue the IFR clearance for the aircraft on ground.
- → At the aerodrome LOAV and LOAN no air traffic services unit is established and therefore no air traffic control service (ATC) or flight information service (AFIS) is provided.
- → The RMZ frequency shall be used by pilots for position reports.





- ✤ Receiving the IFR clearance
  - → The procedure thus starting in airspace class G (uncontrolled airspace) requires a clearance before departure since the aircraft will enter controlled airspace (airspace class E) under IFR shortly after departure
  - ✤ To receive the IFR clearance the PIC shall contact WIEN RADAR on FREQ 133.685 MHz and request the IFR clearance
  - ➔ In order to ensure that the PIC is able to receive ATC, ATC contact points have been established which are marked on the aerodrome (At this points the PIC will have a guaranteed reception of the FREQ 133,685 MHz)

Note: The PIC shall advise ATC prior clearance request if a Network Manager Operations Centre/NMOC restriction (SLOT) has been received



- → Clearance Expiry time
  - → ATC will issue a "Clearance Expiry time" together with the ATC clearance
    - → Example: "Clearance expires at 13:25"
  - → It is very important to note that the clearance becomes automatically void after the clearance expiry time, unless the flight has passed the "IFR starting point" at or before the clearance expiry time
  - → The clearance expiry time is therefore the <u>last possible time</u> the aircraft shall cross the "IFR starting point" (Be aware – Departing at the clearance expiry time and joining the VFR procedure to fly to the "IFR starting point" is <u>not</u> sufficient!)

→ Clearance Expiry time (PIC unable to meet the Clearance Expiry time)

- ➔ If the PIC can not depart in time to reach the IFR staring point at or before the clearance expiry time the PIC shall inform ATC immediately and remain VFR
- ✤ An amended clearance expiry time may be requested by the PIC
- → The reason for the issuance of a clearance expiry time is due to the fact that ATC is unable to block other operations within controlled airspace for an absolutely longer period of time than necessary since the airspace below the TMA LOWW is extremely busy (Traffic in and out of LOWW, LOAV, LOAN, overflights, etc.) the clearance expiry time greatly helps ATC to manage traffic efficiently and reduce delays for all aircraft



→ Guidance for pilots departing from LOAV/LOAN with a "Z"-flight plan using the published departure procedure (PART 1)

- → The PIC shall ensure that a flight plan has been field and is available to ATC (If there are any problems kindly contact AIS/ARO Wien)
- → The PIC shall taxi to the ATC contact points and request the IFR clearance from WIEN RADAR (Note: It is possible that ATC requests the pilot to stand-by on the ATC FREQ if ATC is unable to issue a clearance due to traffic)
- ➔ PIC shall complete all checks for departure and after receiving the respective IFR clearance from WIEN RADAR as described then depart along the published VFR procedures announcing the intention and position as necessary on the RMZ FREQ



- → Guidance for pilots departing from LOAV/LOAN with a "Z"-flight plan using the published departure procedure (PART 2)
  - ➔ The PIC will automatically join IFR upon passing the IFR starting point on the SID at or before the clearance expiry time
  - → The PIC shall announce leaving the aerodrome FREQ and contact WIEN RADAR on FREQ 134.675 MHz (unless another FREQ has been advised in the received IFR clearance) as an "IFR initial contact"
    - → <u>Example:</u> WIEN RADAR (call sign) (passing altitude) climbing (cleared altitude) via SID (SID designator)
  - ✤ The flight will be identified and further clearance will be issued by WIEN RADAR



→ Common / Frequent Mistakes (PART 1)

- → Clearance expiry time: The flight reaches the IFR starting point after the clearance expiry time → In this case the flight never automatically becomes IFR (Note: This may lead to a VFR flight entering IMC)
- → Level Bust: The flight becomes IFR and does not comply with the cleared altitude/level → It is important to note that the flight as a VFR flight may operate in airspace class E at any altitude, however when the flight rule change to IFR becomes effective any IFR clearance limit (horizontally as well as vertically) is mandatory
  - → Example: If the IFR clearance contains an initial altitude of 3000 FT AMSL The airspace class E has an upper limit of 3500 FT AMSL → As long as the flight is VFR the maximum altitude is 3500 FT but once the flight rule change becomes effective the flight shall not be / shall not climb above 3000 FT AMSL



- → Common / Frequent Mistakes (PART 2)
  - → (Lateral) Deviation from the procedure: The PIC deviates laterally from the SID (Note: This could lead to a loss of separation or to an inadequate terrain clearance)
  - → Continue past the clearance limit: Usually the clearance limit for the departure from LOAV is the MOVOS HLDG and for departures from LOAN is the GESGI HLDG unless otherwise stated in the clearance (It is important to note that the flight shall not continue past the clearance limit if no further ATC clearance is received – If no clearance can be obtain the PIC shall enter a holding over the clearance limit → MOVOS HLDG/GESGI HLDG)



# Departure Procedure – MOVOS1A SID





# **Departure Procedure – GESGI1A SID**





- → Planning phase for the RNP-A procedure
  - → The PIC shall ensure that a "Y"-flight plan is filed to LOAV or LOAN
  - ➔ In the "Y"-flight plan the PIC shall file in <u>item 15</u> of the flight plan GESGI (for LOAN) or MOVOS (for LOAV) as the last (IFR) waypoint in the flight plan
  - → In item 18 of the "Y"-flight plan the PIC shall indicate the following:
    - ✤ For LOAN: RMK/GESGI DCT AN800 DCT AN802 VFR
    - ✤ For LOAV: RMK/MOVOS DCT AV806 DCT AV807 VFR



- ✤ Intention by the pilot and clearance by ATC to fly the RNP-A procedure
  - ➔ The PIC shall advise ATC (WIEN RADAR) as soon as possible that the RNP-A approach to LOAV or LOAN is requested
  - → This allows ATC to pre-plan and sequence traffic accordingly
  - → The procedure may only be flown (under IFR) subject to an ATC clearance (Note: A simulated approach under VFR in VMC is not subject to an ATC clearance as long as the flight remains in airspace class E and G)
    - → Note: The clearance limit is always the MOVOS HLDG (for flights to LOAV) and the GESGI HLDG (for flights to LOAN) If no further approach clearance is received prior to reaching the MOVOS or GESGI HLDG (as applicable) the flight shall enter the published HLDG



- ✤ Issuing the approach clearance
  - ✤ The clearance is issued by WIEN RADAR depending on the traffic situation
  - → PICs shall remain on the ATC FREQ until leaving controlled airspace (SERA.8035 (a)) and transmit the initial call on the RMZ FREQ (SERA.6005 (a) (2))

Note: The frequency handling is solely the responsibility of the PIC and ATC will not advise the PIC to initiate the frequency change.



→ Reaching the MAPt and cancelling the IFR flight

- ➔ Since landing at LOAV or LOAN is not permitted as an IFR flight the PIC shall cancel the IFR flight latest at the MAPt in order to continue as a VFR flight
- ➔ IFR cancellation is mandatory by using one of these two cancellation procedures:
  - (1) IFR Cancelation Procedure according to flight plan ("Y"-flight plan)
  - (2) IFR Cancellation according to SERA.5015 (c) (3)

Note: Both procedures are described in detail in the following slides



(1) IFR Cancelation Procedure according to "Y"-flight plan (PART 1)

- → The flight will automatically become VFR if the aircraft passes over the last point (for LOAN: MAPt AN802 and for LOAV: MAPt AV807) in the "Y"-flight plan (as indicated in item 18)
- → An additional verbal IFR cancellation according to SERA.5015 (c) (3) is not required in this case and the flight shall continue according to the VFR procedures (see slide 30 of this briefing)

Note: It is important to note that the IFR cancelation according to flight plan is only possible if the flight physically passes over the last point in the flight plan as indicated in item 18 – Deviation from the procedure is therefore not possible without canceling the IFR flight with ATC on the frequency.



(1) IFR Cancelation Procedure according to "Y"-flight plan (PART 2)

- ➔ If it is not possible, to file the routing remark in item 18 of the flight plan (see slide 22 of this briefing) prior departure, the PIC may request to change the flight plan in flight with ATC (SERA.8020 (c)).
- → If the flight plan change is acknowledged and accepted by ATC the procedure of an automatic IFR cancellation as described on the slide before according to "Y"-flight plan is possible.

Note: Due to traffic and ATC workload a request for a flight plan change might be declined.



- (2) IFR Cancellation according to SERA.5015 (c) (3)
  - → If a "Y"-flight plan incl. the remarks in item 18 has not been filed (see slide 22 of this briefing) and/or ATC is unable to accept the requested flight plan change (see slide 27 of this briefing) the IFR flight shall be cancelled at or before the MAPt by stating: "CANCELLING MY IFR FLIGHT" on the last assigned ATC frequency. (SERA.5015 (c) (3))
  - ➔ ATC will in this case acknowledge the IFR cancellation and provide the PIC with the time of the IFR cancellation.

Note: Due to frequency load and or insufficient radio coverage PIC might not be able to transmit the required IFR cancellation at or before the MAPt  $\rightarrow$  In this case the flight shall perform the published missed approach procedure, inform ATC immediately and shall not continue VFR even if VIMC is reached.

Note: The PIC may cancel IFR according to SERA.5015 (c) (3) at any time even if an IFR cancelation procedure according to flight plan was originally intended.



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- ✤ Entering the traffic circuit
  - → After the IFR flight is cancelled the flight shall proceed VFR and enter the traffic circuit \*

Note: A straight in landing (unless safety dedicates otherwise) is not allowed and the published VFR procedures shall be observed

- ➔ Due to the dependency of the procedures, as described in the preface of this briefing, it is very important to indicate to ATC that the flight rule change according to flight plan has been effected.
- → <u>Therefore, following procedures shall be observed by the PIC:</u>
  - → For LOAN:

A continuous flight and further descent below the MDA to RWY27 or the joining of the left-hand pattern for RWY09 with a maximum altitude of 1500ft AMSL.

→ For LOAV:

A continuous flight and further descent below the MDA to RWY31L or the joining of the left-hand pattern for RWY13R with a maximum altitude of 1700ft AMSL.



→ Common / Frequent Mistakes (PART 1)

→ Deviation from the procedure or clearance without IFR cancelation: The procedure begins at the IAF MOVOS (for LOAV) or GESGI (for LOAN) – It is important (unless otherwise instructed by ATC) that the flight proceeds via the respective IAF and joins the procedure – Proceeding direct to the FAF AN800 (for LOAN) or AV806 (for LOAV) is only permitted with explicit ATC clearance, unless the flight has cancelled IFR.

This example (LOAV) shows how the approach should be flown (starting at MOVOS) in green and how it should not be flown (deviating from the procedure – direct to the FAF AV806) in red

For LOAN the same applies respectively





- ✤ Common / Frequent Mistakes (PART 2)
  - → Not cancelling the IFR flight latest at the MAPt: The flight does not cancel the IFR flight at all or after the MAPt – The cancelation is mandatory, and the PIC shall observe the cancelation procedures described in this briefing.
  - → Requesting to cancel IFR: The PIC shall not request the IFR cancelation since ATC can neither approve nor deny such a request – The pilot only <u>reports</u> that the IFR flight is canceled, and ATC will acknowledge the cancelation. (Not applicable for the IFR Cancelation Procedure according to "Y"-flight plan where no verbal cancelation is required)
    - ✤ Phraseology: "(call sign) CANCELLING MY IFR FLIGHT"
    - ✤ <u>Not</u> "(call sign) <del>Request</del> CANCELLING MY IFR FLIGHT"



→ Common / Frequent Mistakes (PART 3)

- → Not monitoring ATC FREQ while operating IFR in controlled airspace: Although it is very unlikely that ATC needs to talk to the pilot after the approach clearance, in some rare cases ATC may need to contact the PIC immediately (for example to issue a go around instruction) It is therefore important that the pilot operating under IFR remains on the ATC FREQ until leaving controlled airspace even if an approval to leave the frequency is received by ATC.
- ✤ Continue past the clearance limit without ATC clearance: If no clearance for the RNP-A approach procedure is received the PIC shall enter the published holding procedure Therefore the pilot shall be familiar with the holding pattern and be prepared to use an appropriate entry procedure to fly the holding correctly. (see next slide)





These are the standard holding entry sectors – The relevant track to determine the relevant sectors 1, 2 and 3 is the holding inbound track (<u>NOT</u> the final approach track)

HLDG Fix	Sector 1	Sector 2	Sector 3
MOVOS HLDG	250° - 360°	360° - 070°	070° - 250°
GESGI HLDG	210° - 320°	320° - 030°	030° - 210°

Note: The tolerance between the sectors is 5 degrees to either side of the sector boundary.

Note: This is a generic depiction of a standard holding pattern (right turn) – MOVOS/GESGI are both non-standard HLDG patterns (left turn) therefore the actual sectors are defined in the table above.



## Arrival Procedure – RNP-A LOAV

Latest point to cancel IFR (complying with one of the two possible procedures for IFR CNL)

After the MAPt and the IFR CNL the PIC shall proceed VFR according to the published VFR procedures



Approach shall be flown via IAF MOVOS unless differently cleared by WIEN RADAR

MOVOS is also the clearance limit and the flight shall not continue the approach unless clearance has been received



#### Arrival Procedure – RNP-A LOAV





#### Arrival Procedure – RNP-A LOAV

 (!) CAUTION – New QNH reference (!) The minima are based on the QNH LOWW – PIC shall <u>only</u> use the QNH
 LOWW provided by Wien Radar

MDA (MDH) IN FT	A	В	QNH LOWW required	(!) CAUTION – New Minima (!) Pilots shall observe the minima – descending below the minimum
LNAV	1640	(880) ———		is only permitted after

If required the flight shall proceed and follow the missed approach and contact WIEN RADAR immediately

MISSED APPROACH: AT AV807 TURN RIGHT DIRECT TO MOVOS; CLIMB TO 3000 FT AMSL AND HOLD.

NOTE: MISSED APPROACH SPEED IS LIMITED TO MAX IAS 120 KT !



#### Arrival Procedure – RNP-A LOAN

procedures



Approach shall be flown via IAF GESGI unless differently cleared by WIEN RADAR

GESGI is also the clearance limit and the flight shall not continue the approach unless clearance has been received



#### Arrival Procedure – RNP-A LOAN





#### Arrival Procedure – RNP-A LOAN

#### (!) CAUTION - New QNH reference (!)

The minima are based on the QNH LOWW – PIC shall <u>only</u> use the QNH LOWW provided by Wien Radar

MDA (MDH) IN FT	A	В	QNH LOWW required	
LNAV	1/80	(580)		
LINAV	1480 (580) ——			

MISSED APPROACH: AT AN802 TURN RIGHT DIRECT TO GESGI; CLIMB 3000 FT AMSL AND HOLD.

NOTE: MISSED APPROACH TURN LIMITED TO MAX IAS 130 KT.

#### (!) CAUTION - New Minima (!)

Pilots shall observe the minima – descending below the minimum is only permitted after compliance with the applicable cancellation procedure

If required the flight shall proceed and follow the
 missed approach and contact WIEN RADAR immediately



# Generic Summary of the published SIDs from LOAV/LOAN

			and the second s
BEFORE TAXI CHECKLIST		AFTER TAKE OFF CHECKLIST	
PRE-FLIGHT PREPARATION	COMPLETED		OBSERVED AND CHECKED starting point thence continue on the IFR and routing as soon as the flight rule change
ATC Z F-PLAN <sup>1</sup> Acknowledged	SEND AND ACK <sup>1</sup>	becomes effective RMZ FREQ	LEAVING ANNOUNCED
ATC CLEARANCE FOR THE SID	RECEIVED	ATC FREQ	CONTACT ESTABLISHED
NORMAL PROCEDURE	RESUME	NORMAL PROCEDURE	RESUME
BEFORE TAKE OFF CHECKLIST			is slide aim to aid the PIC in orrectly – They shall under no upersede the checklists
CLEARANCE EXPIRY TIME <sup>1</sup> with sufficient margin to reach the IFR starting point	VALID <sup>1</sup>	required for the aircraft – PICs are reminded to follow all approved procedures and checklists for the aircraft	
NORMAL PROCEDURE	RESUME	at all times.	

# Generic Summary of the published RNP-A APCH to LOAV/LOAN



Y F-PLAN<sup>1</sup> including the remarks in item 18 <sup>2</sup>Acknowledged

BRIEFING<sup>3</sup> <sup>3</sup> IFR-APCH Charts and VFR Charts APPROACH CLEARANCE

ATC FREQ <sup>4</sup>until leaving controlled airspace

INITIAL CALL RMZ FREQ <sup>5</sup>Before entering the RMZ

ENTER VFR TRAFFIC CIRCUIT

<sup>6</sup> Use Caution for other VFR Traffic and maximum altitude

NORMAL PROCEDURE

SEND AND ACK<sup>2</sup>

COMPLETED

RECEIVED

MONITOR<sup>4</sup>

COMPLETED<sup>5</sup>

CHECKED<sup>6</sup>

RESUME

APPROACH CHECKLIST (CNL SERA.5015 (c) (3))

BRIEFING<sup>1</sup> <sup>1</sup>IFR-APCH Charts and VFR Charts **APPROACH CLEARANCE** 

COMPLETED RECEIVED

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CONTROL

ATC FREQ MONITOR<sup>2</sup> <sup>2</sup>until cancelling IFR (Phrase: CANCELLING MY IFR FLIGHT)

INITIAL CALL RMZ FREQ <sup>3</sup>Before entering the RMZ

COMPLETED<sup>3</sup>

SEND<sup>4</sup> AND ACK<sup>5</sup>

IFR CNL TO ATC

<sup>4</sup>At or before the MAPt

<sup>5</sup>Acknowledged

ENTER VFR TRAFFIC CIRCUIT CHECKED<sup>6</sup> <sup>6</sup> Use Caution for other VFR Traffic NORMAL PROCEDURE RESUME



#### Documents to be carried in the aircraft

- → PICs shall in addition to the other legally required documents carry a (digital) copy of this briefing in the aircraft at all times when conducting the IFR procedures described in this briefing.
- → This mandatory briefing is part of the pilot's responsibility for a flight preparation in accordance with the relevant operating procedures (e.g. NCO.OP.135, NCC.OP.145, ...) and part of the required documents for a safe flight (e.g. NCO.GEN.135, NCC.GEN.140, ...)
- ➔ The copy of this briefing carried in the aircraft shall be presented to officials of Austro Control GmbH on request.



# In case there are any question regarding the procedures or the briefing please contact:

ifr.ga@austrocontrol.at