

LOWW Approach Procedures



During periods of high traffic.



1. General

This document sets up general guidelines for working with large amounts of traffic at virtual LOWW Airport. They can always be modified by the controllers involved if deemed necessary.

LOWW_APP can be divided into up to five Sectors:

LOWW_APP	LOWW_N_APP	LOWW_S_APP	LOWW_F_APP	LOWW_D_APP
128.200	124.550	129.550	119.800	132.470
GND-FL105	FL105-FL245	FL105-FL245	1 st Director	2 nd Director

The decision which sectors are used shall be based on traffic Situation.

2. Handoffs

In preparation to high traffic events every controller should have a close look onto the handoff procedures which are described in the [SAG Approach study guide](#) (page 13).

Never hand off an aircraft that is in or can become into a conflicting situation while it is still in your own airspace.

You are responsible for everything that happens in your sector.

3. Sector Procedures

3.1. LOVV_CTR:

LOWW Arrivals are handed of to LOWW_N/S_APP from LOVV_CTR according to these guidelines:

Arr Rwys in use / Fix	TEMTA	BARUG	NIGSI
11 / 16	FL 130	< FL 150	< FL150
29 / 34	< FL 170	< FL 150	< FL130

- They should be placed at least ten miles in trail.
- Handoffs should be completed by the time the aircraft reaches the sector border (This includes Transfer of Communication!)
- Speed assignments are entered into the scratch pad or the Euroscope tag.
- Non-standard routes and directs are subject to prior coordination.
- Controller has to be aware that directs to SID end points are possible without coordination if they do not interfere with STARS.

3.2. LOWW_N/S_APP (Upper):

The border between these two sectors is depicted in the Sectorfile.

Departures: Departing Aircraft are handed off to N/S_APP by LOWW_APP. They should be cleared to FL240 or their respective cruise level if lower. Care should be taken not to climb aircraft through other sectors airspace.

Directs to SID endpoints are allowed without prior coordination, *if the aircraft is always separated to all STARs outside LOWW_N/S_APP airspace*. Departures to the south and to the west are handed off according to their Requested Cruise Level (RCL) if they can reach the associated sector within a reasonable distance (In some cases they might pass through LOVV_CTR or an APP airspace).

-> LOVV_CTR 134.350	-> LOVV_U_CTR 131.350	-> LOVV_L_CTR or APP
FL125 < RCL < FL245	RCL > FL245	RCL < 125

For Handoffs to Budapest, Bratislava or Praha Control check the respective LoA.

Arrivals:

Aircraft are already cleared for a STAR inbound to one of these clearance limits:

NERDU	MABOD	PESAT	BALAD
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Each of these points has got an associated holding pattern.

Upon initial contact with an aircraft *N/S_APP points out the expected Approach for each aircraft*.

From their clearance limit Aircraft are vectored or cleared onto a transition. This should be pointed out to the next controller by *putting a remark into the aircrafts scratchpad*.

A possible convention is:

- If cleared onto a transition the transition identifier (1m, 1n,) is inserted.
- On vectors the abbreviations vc11, vc16, ... are used.

This also indicates that the expected runway has been communicated to the pilot.

N/S_APP should *descend aircraft to FL110 and start to build up a sequence*. At some configurations (e.g. rwy 11 in use, aircraft via TEMTA NERDU) aircraft are not very long under N/S_APP control *so appropriate altitudes are especially important*. Aircraft should be handed off to LOWW_APP in a way that further descend and speed do not pose a problem. High speed below FL100 is subject to prior coordination with LOWW_APP.

3.3. LOWW APP (Lower):

Departures: Departures should be identified and climbed to FL100 or RCL if lower. Directs to SID endpoints are possible without prior coordination if the aircraft does not climb above FL100 and *if the aircraft is always separated to all STARs outside LOWW_APP airspace*. Flights are handed off to the next appropriate station according to their flight path.

Arrivals: LOWW_APP has to form a sequence, descend, and hand the aircraft off to Director. At runways 11, 29 and 34 two downwinds can be established. At runway 16 this is only possible to limited extend due to LO(R)-15.

Although forming downwind patterns is the best way to cope with big amounts of traffic, LOWW_APP has every liberty to modify the stream of traffic in order to build up a good sequence.

Speed for Handoff to Director is 220 kn and altitude according to this table:

11 / 16	29 / 34
Transition Level	5000 ft

LOWW_APP and LOWW_F/D_APP are working closely together, so communication between them is very important.

3.4. LOWW F/D APP (Director):

The Director forms the final sequence. He has to work closely together with LOWW_APP and in case of departure operations on the same runway, also with LOWW_X_TWR.

LOWW_F/D_APP establishes the aircraft on final. Recommended speed up to 4 nm final is 160 kn, whereas 180 kn should not be exceeded. When the aircraft is established on Localizer and no more instructions have to be issued they should be handed off to TWR.

4. Holding

4.1. Setting up holdings:

If necessary LOWW_X_APP should set up holding stacks at these holds:

NERDU	MABOD	PESAT	BALAD
104° / R	169° / R	270° / L	035° / R

Aircraft above FL 105 are cleared in to the hold by LOWW_N/S_APP. *If the stack exceeds FL110 LOVV_CTR has to be informed immediately.* From this point on aircraft should be *handed off to LOWW_N/S_APP at FL240 or RCL* if lower and be informed of the holding taking place. Also LOWW_N/S_APP should be informed about aircraft with an RCL below FL240. This is to prevent aircraft from flying through the stack if APP can not contact them in time. If remote holdings in LOVV_CTR airspace have to be used, LOWW_N/S_APP should inform LOVV_CTR. LOWW_N/S_APP should take care that he is still able to pass departures and overflights through the arriving traffic. According to traffic situation leaving open some holding levels should be considered.

4.2. Cancelling Holdings

In order to break up the holding patterns LOWW_APP starts to clear aircraft from the lowest levels out of the hold. Aircraft above have to be descended accordingly. LOWW_N/S_APP should handoff the lowest aircraft in his stack to LOWW_APP. LOWW_APP accepts this handoff as soon as he *can take the aircraft* and cancels the hold as necessary.

Transfer of communication should be carried out when LOWW_APP has accepted the handoff!

As soon as the level is vacated LOWW_N/S_APP can clear the next one to FL110 and initiate the handoff.

In a similar manner LOVV_CTR offers aircraft to LOWW_N/S_APP.

_CTR	->	N/S_APP	->	_APP	->	F/D_APP
<ul style="list-style-type: none"> Aircraft should be placed at least ten miles in trail. Handoffs have to be completed by the time the aircraft reaches the sector border. Speed assignments are entered into the scratchpad (or ES Tag). Non-standard routes and directs are subject to prior coordination. Altitudes according to table: 				<ul style="list-style-type: none"> Inform Aircraft about expected Approach Clear for transition or vectors (Scratchpad) Start setting up Sequence Descend to FL110 High speed below FL100 has to be coordinated with LOWW_APP. 	<ul style="list-style-type: none"> Set up sequence Descend to: 	
					11 / 16	29 / 34
					Transition Level	5000 ft
					<ul style="list-style-type: none"> Speed 220 kn Close Coordination with Director 	
Rwy/Fix	TEMTA	BARUV	NIGSI			
11 / 16	130	150	150			
29 / 34	170	150	130			

_APP	->	N/S_APP	->	_CTR
Climb FL 100 or RCL Directs to SID End points allowed if RCL below FL100 and flight path does not interfere with STAR outside LOWW_APP airspace.		Climb FL 240 or RCL Directs to SID End points allowed if flight path does not interfere with STAR outside LOWW_N/S_APP airspace.		