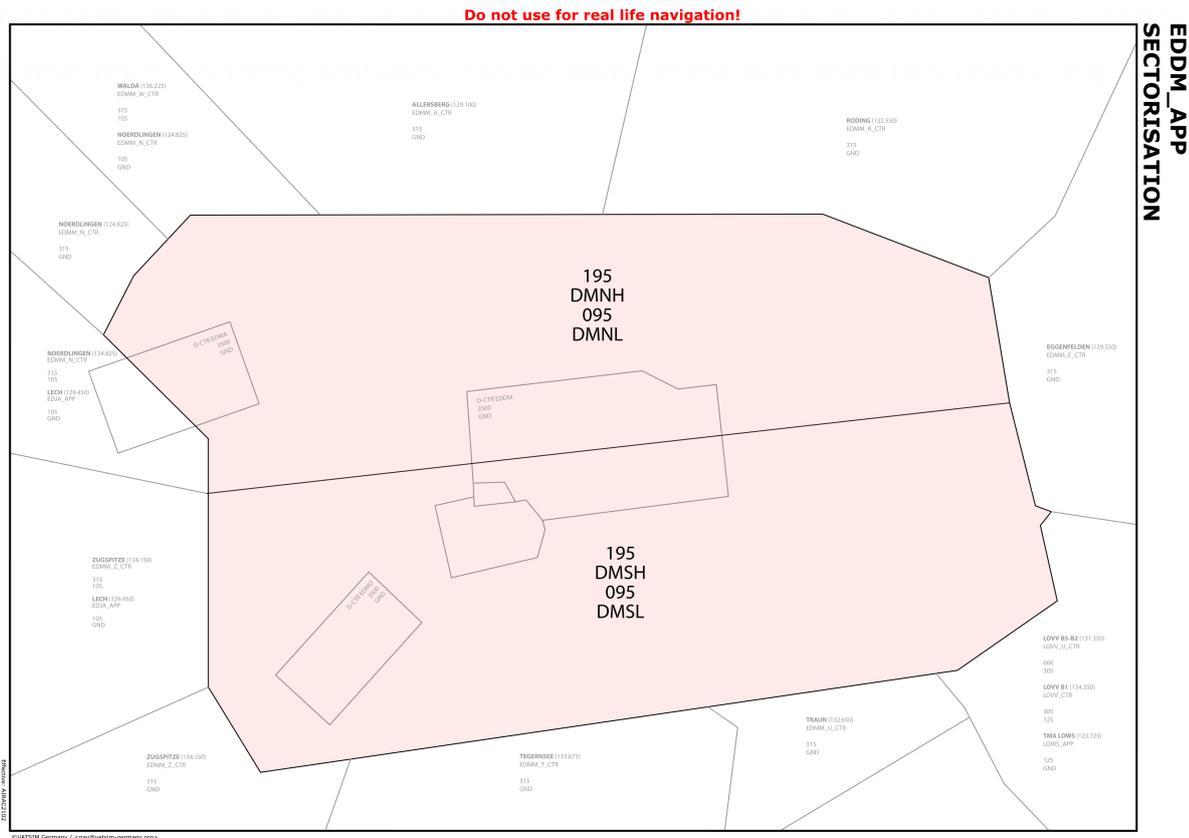


# Arrival

## Sectorization

As per the reference drawing below, the München TMA airspace can be divided into four sectors. The two feeder positions (Callsign "Director", DMNAT and DMSAT) do not have their own airspace assigned, but share airspace and implicitly receive a release when airplanes are sent to them. A

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Arrival Sectorization

The following station identifiers are used in the overview:

Station Identifier	Euroscope ID	Station	Frequency
DMNL	DMNL	München North Low	123.905
<b>DMNH</b>	<b>DMNH</b>	<b>München North High</b>	<b>128.030</b>
DMSH	DMSL	München South Low	127.955

DMSL	DMSH	München South High	120.780
<b>DMNAT</b>	<b>DMND</b>	<b>München Director North</b>	<b>118.830</b>
DMSAT	DMSD	München Director South	132.305

**DMNH is the primary station and to be staffed first. Without any further stations online, this station covers the complete TMA. The second station to be staffed is Director North (DMNAT).**

After DMNH and DMNAT are staffed, there are two strategies for further staffing:

- **North/South split:** The next station after DMNH and DMNAT is DMSH: The border is drawn as per the drawing above.
- **High/Low split:** The next station after DMNH and DMNAT is DMNL: DMNL and DMNH split the airspace vertically at FL95.

Thereafter, the remaining stations can be staffed in any order. Note that in the combination (DMNH, DMNL, DMSH), DMSH staffs the southern half of the TMA, DMNL is restricted to the upper half.

Cross-couple (XC) all frequencies of the sectors your station covers (apart from the Feeder)! As stand-alone DMNH, for example, you should cross-couple DMNL, DMSL, DMSH; as DMNAT (without DMSAT), cross-couple DMSAT as well.

DMSAT is only to be staffed, after DMNL and DMSL are staffed. Two-feeder independent operations are in effect.

## Arrivals

### STARs

**The STARs in München** have their clearance limit at the first waypoint and **are usually not used**. The only exceptions are lost communication situations and non-RNAV flights. The procedures lead pilots from the clearance limits to the initial approach fixes of the approach procedures (MIQ in the north, OTT in the south).

### Transitions

To bring planes onto a controlled arrival procedure within the TMA, clear pilots to fly the RNAV transitions starting at the STAR clearance limits and bringing planes into an up- and/or downwind. High and Low can clear arrivals to any of the DMXXX waypoints on the transitions to generate or reduce track miles without prior coordination. Should the direct be situated beyond DM425/DM454

(26 ops) or DM425/DM455 (08 ops), coordination is highly suggested to avoid conflicting with crossing departures.

The München procedure package also includes CDO (continuous descent operations) transitions that can be cleared in coordination with center. The usage of the CDO transitions is only recommended during periods of low traffic.

## Approach procedures

München offers a CATIIIB certified ILS approach for either runway in either direction, as well as published RNP, and NDB approach procedures. ILS is the preferred approach type. Visual approaches for IFR traffic are generally not permitted, except for visual approaches on final.

## Two-feeder operations

Final approaches into München can be managed by one or two Feeder positions. Before opening the second feeder position, DMNL, DMSL, DMNH, and DMNAT need to be staffed. Staffing the second Feeder position is not(!) required to operate parallel independent approaches. If two feeders are staffed, DMNL and DMSL are responsible for assigning the runways. Planes on the northern downwind use the northern runway, planes on the southern downwind the southern runway. Exceptions are possible (cargo), but absolutely have to be coordinated in time.

To keep the amount of required coordination low, we employ **prescribed intercept areas** and intercept altitudes.

There is the **low final**, where planes intercept the localizer at **5000ft (or 4000ft)**, and the **high final** where planes are to intercept the localizer at **6000ft (or 5000ft)**. During **26 operations**, the **low final is north, during 08**, it is in the **south**. The low final is shown with the additional intercept "box" along the extended centerline:



## Noise abatement between 2200 and 0600 lcl

Between the time of 2200 and 2300 lcl, airplanes may not be cleared to descend below 6000ft, and between 2300 and 0600 lcl, not below FL70/7000ft until they:

- are in the downwind between DM420 and 429, or DM450 and DM459; or
- are in the airspace enclosed by DM420, DM429, DM459, and DM450.

Planes are to be guided to intercept the glide slope at 5000ft or above.

## Arrival Agreements

# Center to High

26 ops

Transferring Sector	COPX	Level	Optional Levels	Release	DCT
<b>NDG</b>	LURER / RIDAR	FL160	--	↔ ↓ FL110 at FL195 or below	ROKIL
<b>WLD</b>	BURAM / RENLO	FL170	FL150 / FL130 / FL110		
<b>RDG</b>	GOMAX / KUFAZ / OSTES	FL110	FL110 - FL130	↔ ↓ at FL195 or below	LANDU
<b>EGG</b>	ROSAB				
<b>FUE</b>	DISUN / MERSE	FL160	--	↔ ↓ north of L608	--
<b>STA</b>	ANDEC / KONIN	FL150	FL130		

08 ops

Transferring Sector	COPX	Level	Optional Levels	Release	DCT
<b>NDG</b>	LURER / RIDAR	FL140	--	↔ ↓ FL110 at FL195 or below	ROKIL
<b>WLD</b>	BURAM / RENLO	FL130	FL110		
<b>RDG</b>	GOMAX / KUFAZ / OSTES	FL110	FL110 - FL170	↔ ↓ at FL195 or below	LANDU
<b>EGG</b>	ROSAB				
<b>FUE</b>	DISUN / MERSE	FL120	FL140	↔ ↓ north of L608	--
<b>TEG</b>	ANDEC / KONIN	FL130	FL150		

## Releases

Routing	Release	Released by
ANORA / AKANU	↓ to FL110   ↔ below FL195	CTR

LURER	↓ to FL110   ↔ after LURER	CTR
LANDU	↓ ↔ below FL195	CTR
BETOS	↓ ↔ after passing airway L608	CTR
ANORA / AKANU / LURER	DCT ROKIL	APP
LANDU	DCT LANDU	APP

## High to Low

Arriving traffic is handed over established on the upwind or downwind at the following altitudes with an assigned speed of 220–240 kt IAS (exceptions depending on the traffic situation are possible):

- Aircraft on the upwind are to be cleared to descend to FL100,
- Aircraft on the downwind are to be cleared to descend to FL110.

With transfer of communication, all aircraft are fully released.

## Low to Director

Arriving traffic is to be handed over to München Director at 220 kt IAS. Higher speeds are acceptable depending on the traffic situation.

Traffic is to be handed over with the following conditions:

Position	RWY 26	RWY 08	Release
Downwind N	↓ 5000 ft	↓ 6000 ft	fully released at transfer of communication
Downwind S	↓ 6000 ft	↓ 5000 ft	

After coordination with München Director, High and Low can hand over arriving traffic on the base leg or a dog leg under the following conditions:

Position	RWY 26	RWY 08	Release
Base/Dog-leg N Crossing of the downwind	5000 ft	6000 ft	fully released at transfer of communication
Base/Dog-leg S Crossing of the downwind	6000 ft	5000 ft	

**All aircraft transferred to Director shall be issued the current local QNH and cleared to an altitude on local QNH.**

## Director to Tower

Director generally is to only hand over arrivals that are established on a published arrival procedure to tower. Visual final approaches are to be coordinated with Tower.

Separation between two arrivals on the same arrival procedure or runway shall at all times equate to or surpass the applicable radar and wake turbulence separation. Director shall monitor the departing traffic situation at the runway holding points and increase separation on final to allow departures to use the resulting gaps. Notwithstanding, tower can always request specific and further increased separation on final.

## Separation recommendations during LVP

During Low Visibility Procedures, increased separation required for runway movements is to be established on the final as well. Experience has shown these separation minima work well between two arrivals:

WTC preceding aircraft	Separation
Light (L) / Medium (M)	3,5 NM
Heavy (H)	6 NM
Super (J)	10 NM

## Departure Agreements

### Low to High

Departures on the GIVMI, INPUD, EVIVA, MIQ, ANKER, AKINI, OBAXA, TURBU, and VAVOR departures are transferred from Low to Center climbing to FL 150/190. Low shall ensure separation to aircraft within the High sectors at all times.

All other departures are cleared by Low to climb to FL90 and are sent to High (climbing). After coordination with High, Low can also send these Departures directly to Center.

### High to Center

High can generally clear departures direct to the SID end fix. For same routes, if a minimum separation of 5 NM cannot be established at time of transfer, the departure aircraft are to be handed over on different flight levels. For differing routes, 3 NM separation are acceptable as well.

Exceptionally, High can transfer departures to Center on a heading. In this case, pilots shall be instructed to report their heading to the Center controller during their initial call.

These procedures can likewise be applied to departures handed over directly from Low to Center.

### Level Agreements

SID	Runway	Level
<b>North</b>		
AKINI / ANKER / EVIVA / GIVMI / INPUD / MIQ	ALL	FL190
RIDAR	08	FL180
	26	FL140
<b>South</b>		
ALG / BIBAG / KIRDI / MERSI / OLASO	ALL	FL190
OBAXA / ROTAX / TULSI / TURBU / VAVOR	ALL	FL150

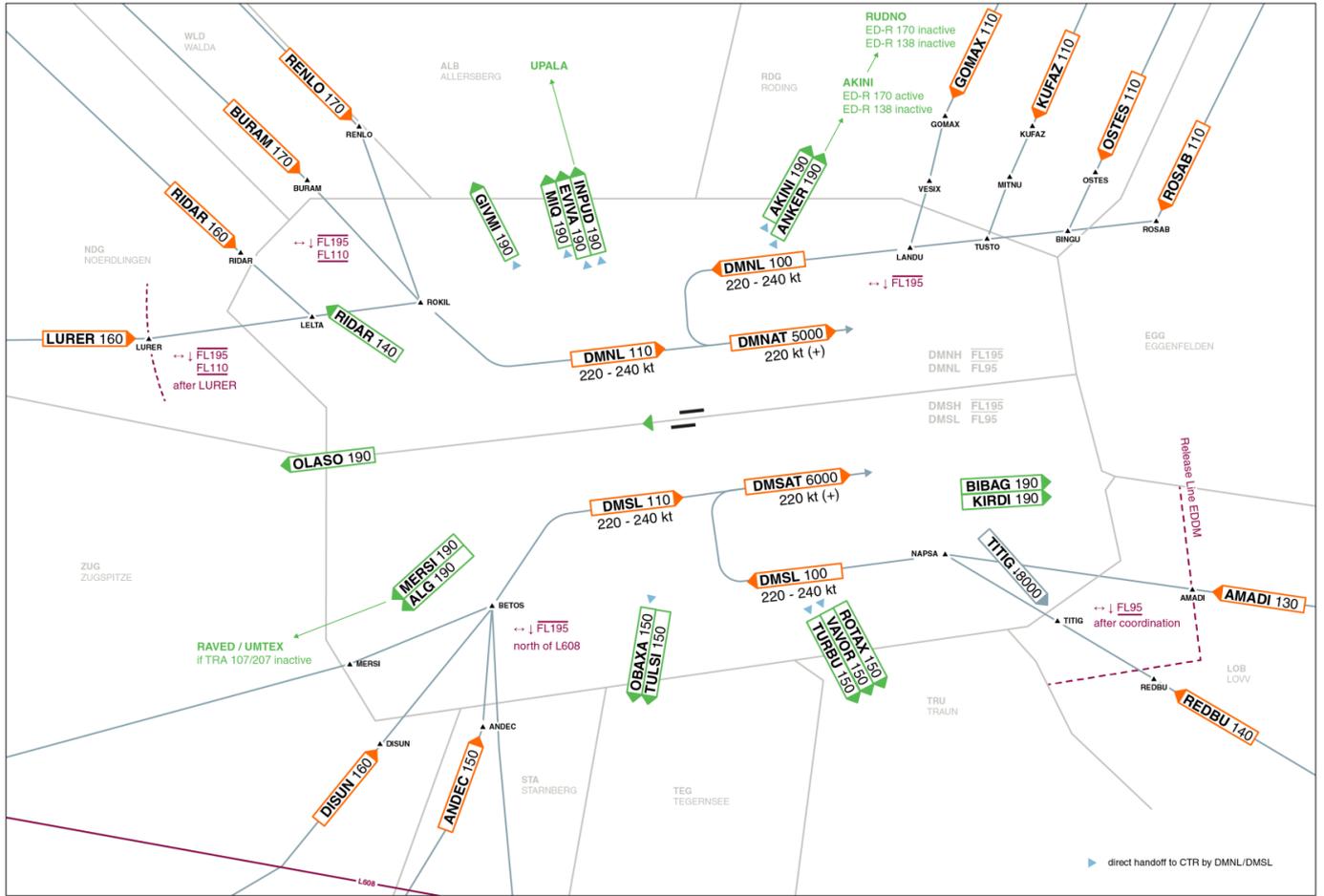
## Released Directs by Center

Routing	Restricted Airspace	Directs released
MOMUK / UMTEX	<b>inactive:</b> TRA Allgäu (107/207)	RAVED / UMTEX
ANKER / AKINI	<b>active:</b> ED-R 170 ; <b>inactive:</b> ED-R 138	AKINI
ANKER / AKINI	<b>RWY26 only, inactive:</b> ED-R 170 <b>und</b> ED-R 138	RUDNO
INPUD	/	UPALA

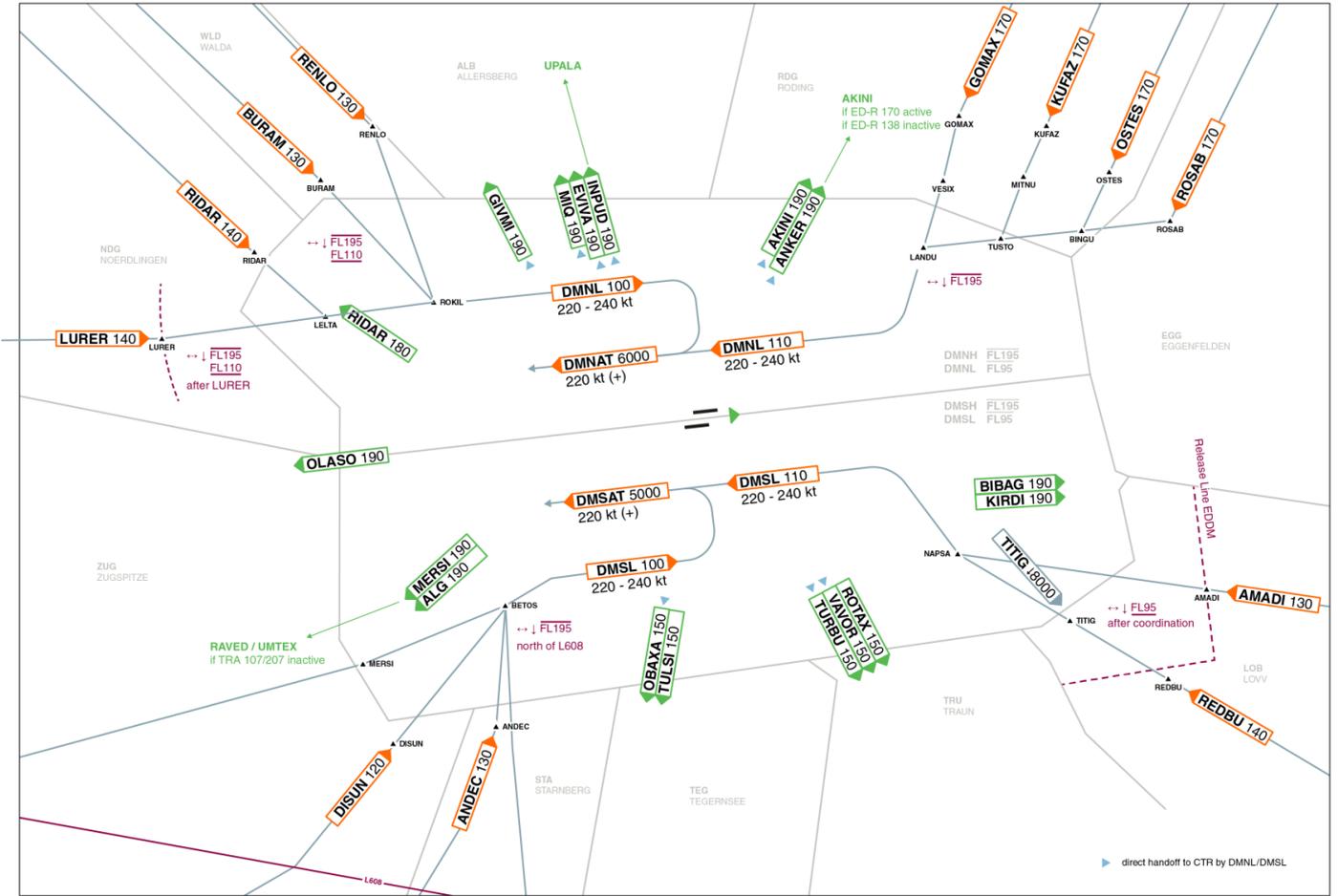
## Releases by Arrival

All aircraft sent by all München approach units are considered as fully released for climb, descend, turns, and speed control upon transfer of communication.

# Agreement and Procedure Quicksheets



EDDM 08



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