EDDF - Frankfurt/Main

General

> **Please use all available parking positions** to improve the trafic flow and to reduce delay, not only A and B stands! Check free parking positions here: https://vatsim-radar.com/airport/EDDF

Before you fly...

Welcome to Frankfurt/Main! This is one of the busiest airports in the world and ***the* busiest airport on VATSIM**. Due to the amount of traffic and the airport's complexity, it is very important that you **prepare yourself thoroughly** to **keep it fun for everyone** and avoid mistakes which might lead to delays for yourself and other users.

As Frankfurt/Main sees very regular staffing, it attracts a lot of pilots. **If you are new to VATSIM**, however, you might want to avoid the airport until you have gotten more comfortable with flying on the network. Controllers at Frankfurt/Main are **usually too busy to provide much assistance to new users**. There are many other, less busy and less complicated airports throughout Germany which see regular staffing as well and where controllers have more time for you.

Parking position

Please make sure you choose an appropriate stand for your aircraft type.

> **Do not use stands V151, V152, and V153**. These stands are located in the same position as the old N8 taxiway, which many sceneries still use. Parking at one of these stands would block the taxiway for other users and you can expect controllers to ask you to **reposition yourself**.

A380 parking positions

> With the FBW A380 release for MSFS, we suggest using the following parking positions for the best experience. **Only the positions below are suitable for the A388**.

- **A54, A58, A62** (DLH)
- **C14S, C15S, C16S** (DLH, QTR)
- **B26, B28, B46** (SIA, AAR, THA)

- **D4, E2, E5, E9** (UAE, KAL, ANA, JAL, ETD, AFR, BAW, CSN)
- V135, V161, F231, F232, F233, F234, F237, F238 (remote, secondary)
- G7, G9, G11, G13, K8, K10 (ferry)

Communication

Complex instructions

As there are various complex procedures at Frankfurt/Main, you may well encounter **instructions that you are unable to comply with**. This doesn't even have to be a lack of skill on your part: **sometimes your simulator simply doesn't have the functionality required**.

> If you are unsure what the controller wants you to do or receive an instruction that you are unable to comply with for any reason, **hold position and inform ATC immediately**. Not doing so will most likely result in you doing something else than ATC expects, thus causing major problems and delays; on the other hand, **controllers have no problem with you asking for an explanation or a different instruction**.

Handoffs

When instructed to contact another controller, do so as soon as possible. This will avoid you having to stop moving or level off. Additionally, do not change your frequency without a handoff as **all frequency changes at Frankfurt require an explicit handoff by ATC**. Please do not hold your position to switch the frequency, keep moving on the ground!

> Be aware that **some frequencies in use might not be shown in the controller list of your pilot client**, so it is important that you listen carefully to what ATC says.

Special taxi procedures

As Frankfurt/Main has a big and complex apron, there are various **special taxi procedures** which you might not be used to. Please familiarize yourself with them.

You must also be prepared to receive various **hold short and give way instructions**. Additionally, you should be prepared for **revisions to your taxi clearance on short notice** as the situation on the apron usually evolves very dynamically.

Colored lines

Some areas of the apron have **colored taxiway lines** which allow for more efficient taxi operations with **aircraft up to a wingspan of 36 meters**.

two aircraft passing each other on N orange and blue

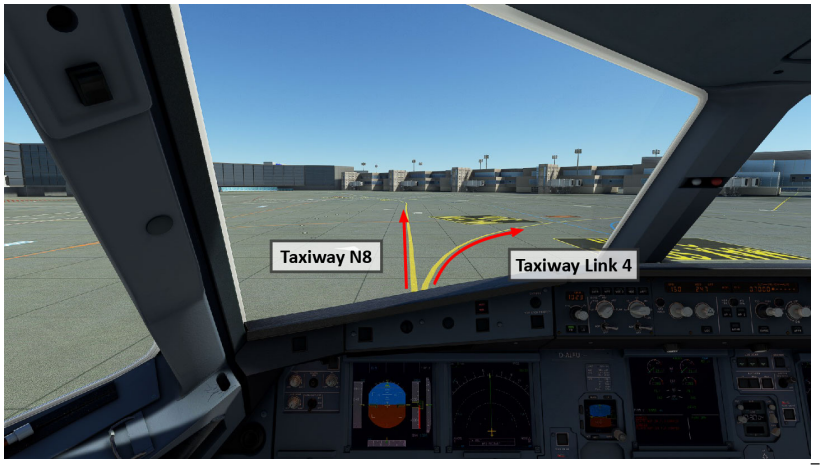
Links

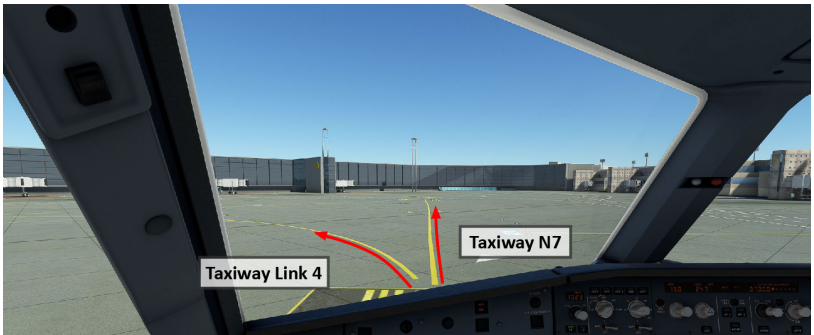
The apron at N7 and N8 utilizes so called Links to **connect both taxiways at different points** to allow for more efficient operations during periods of high traffic. Please refer to the images below if you are unsure which of the taxiway lines is the Link (you can click on the images to open a high resolution version).

Link 3

looking at Link 3 from the East (left) and the South (right)

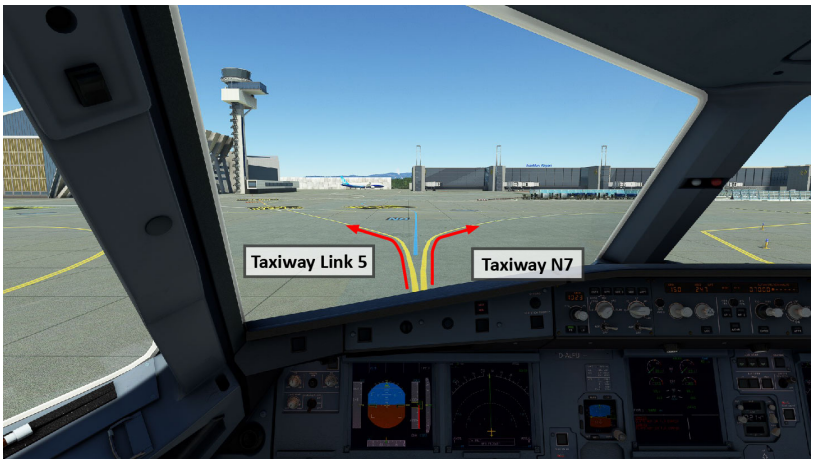
Link 4





looking at Link 4 from the West (left) and the South (right)

Link 5



looking at Link 5 from the North (left) and the South (right)

Stopbars

There are multiple stopbars on taxiways U, T, and Y, which **protect the extended centerlines** of runways 25C/07C and 25L/07R. Do not cross these stopbars without explicit clearance as this would be considered a **runway incursion**. When cleared to cross a stopbar, do not stop moving until the **entirety of your aircraft is past the following stopbar**.

holding short of stopbar T4

Charts & Scenery

Charts

You can find **current IFR charts** for Frankfurt/Main on chartfox (requires VATSIM login).

> There are **special ground movement charts** for the **A380** available due to restricted taxiways!

You can find **current VFR charts** for Frankfurt/Main in the AIP VFR.

For a better overview over the airspace structure around Frankfurt, we recommend openflightmaps .

Sceneries

We highly recommend using up to date scenery. There are **many layout changes that have recently taken place** - or are still taking place - at Frankfurt/Main. ATC is usually aware of these changes, but will work under the **assumption that everyone is using an up to date scenery**. Please inform ATC immediately if you are unable to comply with an instruction due to an outdated scenery.

Sim	Freeware	Payware
MSFS	flightsim.to | GSX profile	Aerosoft
X-Plane	X-Plane Default Scenery	Aerosoft
Prepare3D V4/V5	--	Aerosoft

> If you are using MSFS, **we recommend using the virtualFRA freeware scenery** or the **Aerosoft payware scenery** as it uses the most current airport layout. The **MSFS Deluxe** edition versions of the airport use an **outdated layout**.

Departing Traffic

> We ask all pilots to also read the General section with **information relevant to all pilots**.

> **Please use all available parking positions** to improve the trafic flow and to reduce delay, not only A and B stands! Check free parking positions here: https://vatsim-radar.com/airport/EDDF

Preparation

A thorough preparation is important for any flight, but even more so when flying at a busy and complex airport like Frankfurt/Main. We ask you to **conduct a thorough briefing to avoid delays and keep it fun for everyone**.

Route planning

You can find valid routes for many destinations in the AeroNav Global Route Database.

When planning a route via SimBrief, please use routes with the Eurocontrol icon, as those will usually be valid.

> When filing an invalid flight plan, you will usually have to **file a completely new flight plan** before ATC can issue your enroute clearance. While ATC might occasionally be able to provide you with a valid route to your destination, this is not guaranteed. It is ultimately **your responsibility as the pilot to plan and file a valid route**.

SID assignment

ATC will usually assign SIDs according to the table below, but deviations are possible. If the first waypoint of your flight plan is not listed here, **please check which AIRAC you are using** - if your AIRAC cycle is too outdated, it might take some time until the controllers can coordinate a solution for you. Please also make sure you are **complying with the restrictions** for each of the available initial waypoints.

Default SID assignment

Waypoint	25C	07C	18	Restrictions
ANEKI	-	-	L	not to FIR München (EDMM)
CINDY	-	-	S	via **T104** only to destination within FIR München (EDMM) via **T604** only for propeller aircraft with maximum requested FL230
KOMIB	-	D	-	only to EDDN area
OBOKA	M / G	E / D	-	
MARUN	M / F	E / D	-	
SOBRA	-	-	L	
SULUS	-	D	S	
TOBAK	M / F	D	-	**not** via Z10
ULKIG	-	-	L	
MTR	-	C	-	only for non-RNAV capable aircraft with maximum requested FL90
FKS	Q	C	B	
TAU	Q	-	-	

Enroute clearance

Clearance requests in Germany are very short. Please **avoid unnecessarily long clearance requests** to reduce frequency congestion.

> **Pilot**: Frankfurt Delivery, Lufthansa 2FT, stand B27, request enroute clearance, information F.

Be aware that **SIDs in Germany are usually runway dependent**, so ATC will only inform you of your departure runway if it is not obvious from your SID assignment. As there are multiple different SIDs per waypoint and runway in Frankfurt/Main, it is very important that you **brief and program the correct SID** to avoid separation issues.

Datalink clearance (DCL)

Frankfurt/Main also offers electronic datalink clearances (DCL) - similar to pre-departure clearances (PDC) - using the Hoppie ACARS system. The station code can always be found in the controller info for the controller currently issuing the enroute clearances; usually it is **EDDF**. If your aircraft does not have a direct integration of the Hoppie system, you can also use the standalone easyCPDLC client.

> Requesting clearance electronically is **preferred over voice clearances** as it reduces frequency congestion thus avoiding delays. Because of this, we ask all pilots able to use the Hoppie ACARS system to do so.

Startup

Startup approval is the controller's **assurance that you will be cleared to start moving within the next few minutes**. If Delivery and Apron are separately staffed, it is requested and approved separately from pushback.
Do not start your engines at the gate, unless you have a taxi-out position. Even with startup approval, the engines are started during pushback.

> Pushback will not be issued by Delivery. **Startup approval is not a clearance for pushback!**

ACDM procedures

Frankfurt/Main employs ACDM procedures for more efficient operations. This requires pilots to **comply with assigned ACDM times**. Please **set your TOBT** and **update it whenever your estimate changes by more than 5 minutes** using the vACDM pilot interface to help controllers with preplanning and reducing delays.

> If you are unfamiliar with ACDM procedures, **please read the vACDM pilot guide**.

Startup request

If you are unable to comply with any restriction on your assigned SID or cannot accept a wind component on your assigned departure runway, you need to **inform ATC prior to your startup request** so that they can coordinate another solution.

Pushback

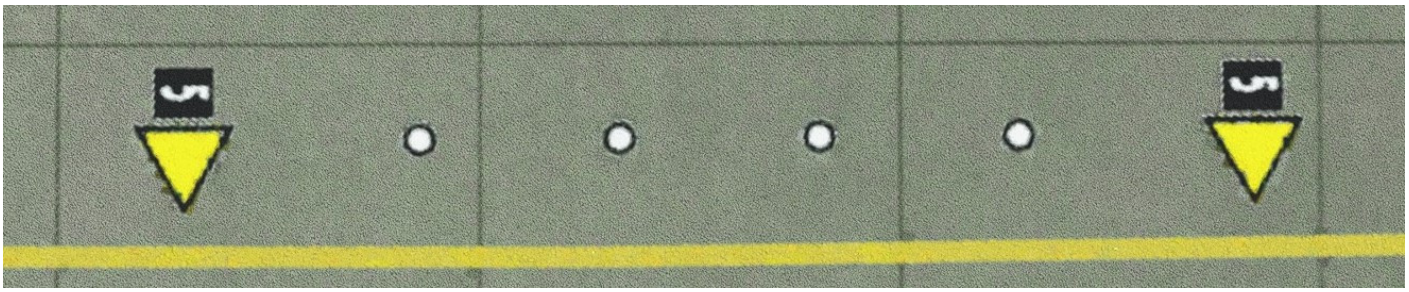
Pushback instructions at a busy and complex airport like Frankfurt/Main can be **longer and more precise than what you might be used to**. It is very important that you follow these instructions promptly and accurately.

Only request pushback if you are actually ready to start pushing back. If you take longer than **1-2 minutes to start moving**, ATC might have to cancel your pushback clearance to avoid delays for other pilots.
Keep in mind that some positions on Frankfurt/Main's apron are **taxi-out stands**. If you are parked on one of these taxi out stands, you won't need a pushback.

> ATC might issue a pushback instruction that requires a **push and pull procedure**. Do not accept these clearances unless you are able to comply with them.

Pushback areas

Busy areas of Frankfurt/Main's apron utilize **pushback areas for more efficient operations**. The position of these areas can be found on the ground charts. With a properly realistic scenery, you will also see **ground markings** for each area, indicating where your nose gear has to be located after the pushback.



ground markings for area 5 on taxiway N8

> **ATC**: Lufthansa 123, pushback approved, area 5.

For more information on the facing and position of each pushback area, have a look at the table below. Be aware that **some of these areas require a push and pull procedure** depending on where you were parked.

Pushback areas

Taxiway	Area	Nose gear abeam stand	Facing
N	2	E5 / V111	*West/East*
N-East	1	*nose gear abeam service road between V106 and V107*	North
N3	1	C6 / B44	South
	2	C11 / B45	South
N5	1	A15 / B22	South
	2	B25 / A21	South
	3	B26 / A25	South
N7	2	A24	South-West
	4	A30	West
	6	A40	West
N8	1	A16	West
	3	A58A	West
	5	A58B	**East**
	7	A66B	West
	9	*short of N*	South
P1	1	F238	*West/East*
	2	V267	West
S4	1	G6	North
	2	G12	North
S5	1	H4	North
	3	G13	North

S7	2	H12	North
S11	6	V326	North
	7	*short of S*	North
S13	1	K4	West
S15	2	K10	West
	4	*short of S11*	West

> If you are parked at taxiway N7, ATC might instruct you to use one of the pushback areas on N8, and vice versa.

> The latest version of the GSX profile for the MSFS virtualFRA scenery now includes all pushback areas, including those requiring push and pull. If you use MSFS and own GSX, **we highly recommend using the virtualFRA scenery and the accompanying GSX profile** to make it easy for you to comply with the pushback area assignments promptly and accurately.

Taxi-out stands

A1, B10, C2, S401-S420, V134-V136, and V151-V178 are taxi-out positions, so no pushback is required if you are parked there. However, you should be prepared to receive an **initial taxi instruction away from your assigned departure runway**. This will allow the Apron controller to **smoothly integrate you into the traffic stream** without undue delay.

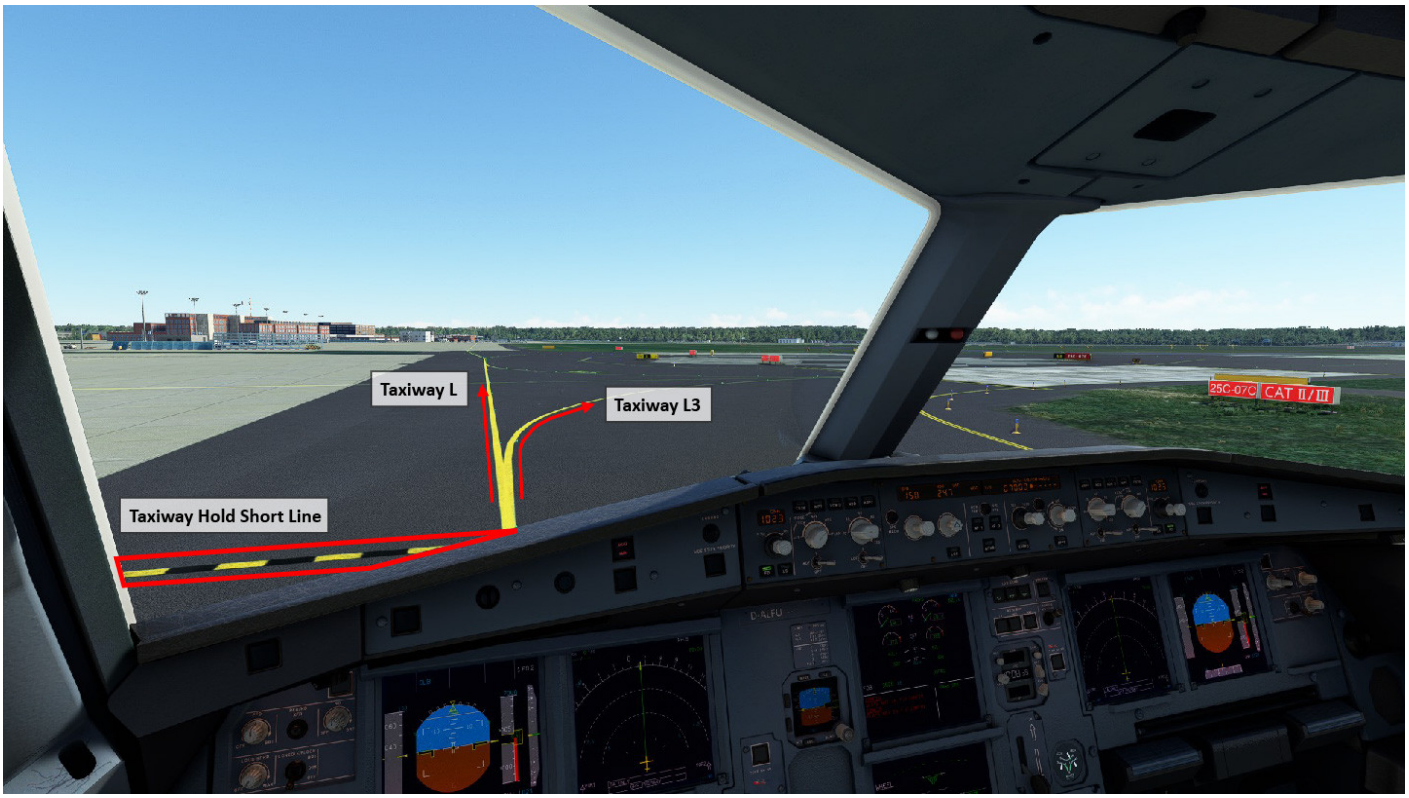
Taxi

Frankfurt/Main's complex layout demands a **thorough briefing of expected taxi routes** as well as **correct taxiing**. To avoid delays for yourself and other users, **start taxiing as soon as possible after receiving your taxi clearance** and **request taxi in a timely manner after your pushback**.

Intersection departures

Frankfurt Apron has no authority to assign intersections for runway 25C/07C. Because of this, you will always be instructed to **hold short of L3 or L20**. Frankfurt Tower will assign intersections to achieve an efficient departure sequence.

> **ATC**: Lufthansa 123, runway 25C, taxi via N7 L, hold short of L3.



holding short of L3

Do not turn into any runway intersection **without an explicit instruction to do so by Frankfurt Tower**.

Pilots should **report the earliest intersection they can depart from to Frankfurt Tower** on initial contact.

Transition 1 (Standard Taxi Route)

All aircraft parked east of N3 (or in the Southern part of the airport) and departing out of runway 18 must be prepared for a departure from **intersection S**. While controllers will usually ask pilots if they are able to depart from there, they are not required to do so. Keep in mind that you need explicit clearance to cross stopbars U2 and U6.

If you are unable to depart from intersection S, you have to **inform the Apron controller on initial contact**. The TORA from intersection S is 2755 m, which is **enough for most light and medium aircraft** (especially on short haul routes).

Handover point from Apron to Ground	Routing Transition 1
holding short of U2 (stopbar)	U - S - S11 - R - S28 - S

> **ATC**: Lufthansa 123, taxi to holding point runway 18, intersection S, via Transition 1, cross U2 and U6.

Takeoff

Only use the absolute minimum amount of time necessary on the runway before beginning your takeoff roll. Due to various dependencies to other runways, there might be **as little as 5 seconds for you to begin your takeoff roll** after receiving your clearance. If you take too long, **ATC will have to cancel your takeoff clearance**.

> At Frankfurt/Main, **all aircraft are considered ready for departure by Tower**. If you are not yet ready, **inform Tower on initial contact**.

Runway 18 - Intersection M

During 07 operations, ATC might instruct you to **taxi down the runway to intersection M** to reduce separation requirements with inbounds for 07R, thus improving efficiency. If you are unable to depart from this intersection, **inform Tower on initial contact**!

> **ATC**: Lufthansa 123, line up runway 18, on the runway taxi down intersection M.

Arriving Traffic

> We ask all pilots to also read the General section with **information relevant to all pilots**.

Arrival

STAR assignment

STARs are assigned based on the waypoint at which you exit your route and the operating direction of the airport. The following table shows the **standard STAR assignment**; however, controllers might assign a different STAR (e.g. during night operations).

Waypoint	25 operations	07 operations
SPESA	B	C
EMPAX	B	C
IMCOM	A	D
(RASVO)	A	D
ROLIS	A	D
KERAX	A	D
DIXAT	A	D
(PETIX)	B	C

> All STARs into Frankfurt/Main have **altitude and speed restrictions**. Make sure you comply with these unless they are explicitly cancelled by ATC.

> In Germany, you are supposed to **file your STAR**. If you did so and you have not been cleared for a STAR when reaching the STAR entry fix, follow the filed STAR until reaching the clearance limit.

Descent planning

To avoid having to fly unnecessarily long finals, pilots should **plan to cross the following waypoints at the following altitudes**. Remember that all altitude changes require an explicit clearance by ATC.

- **ADNIS**: FL100
- **KERAX**: FL110
- **OSPUL**: FL100
- **SPESA**: FL110
- **ROLIS**: FL150
- **RAMOB**: FL110

Runway assignment

Runways are assigned either by Frankfurt Director or Approach. During high traffic situations, you have to **expect the runway assignment on very short notice**, so you should always prepare for all the standard approaches stated in the Arrival ATIS.

> If your aircraft supports a **secondary flight plan function**, you should prepare the approach to one runway in your primary flight plan and to the other in the secondary flight plan to be able to quickly select the correct approach once assigned.

Runway 25R/07L is **not available for aircraft of the following types**:

- Boeing 747
- Airbus A380
- McDonnell Douglas MD-11
- Lockheed L-1011 TriStar
- Antonov An-124
- Antonov An-225

Additionally, aircraft of the types Antonov An-124 and An-225 can usually expect to be assigned runway 25C/07C.

Approach

Approach procedures

The approach into Frankfurt/Main will usually be an **ILS approach**; GLS approaches are available upon request.

Night operations

The real Frankfurt/Main airport has a night time flying restriction between 23 and 05 local time with **special noise abatement procedures in effect between 22 and 06 local time**. While you can of course still fly to the airport during these hours on VATSIM, controllers may decide to use the special noise abatement procedures.

During night operations, not all runways will be available, special noise abatement SIDs will be assigned to some aircraft, and all pilots will be **assigned an RNP X approach**. Aircraft unable to fly the RNP X approach should be prepared for some delay as pilots able to fly the RNP X approach will be treated with priority.

For runway 25R/07L, ILS Y with a 3.2° glideslope will normally be in use. ILS Z has a standard 3° glideslope and will be used during low visibility or if there is a tailwind component. Make sure you fly the procedure assigned by ATC.

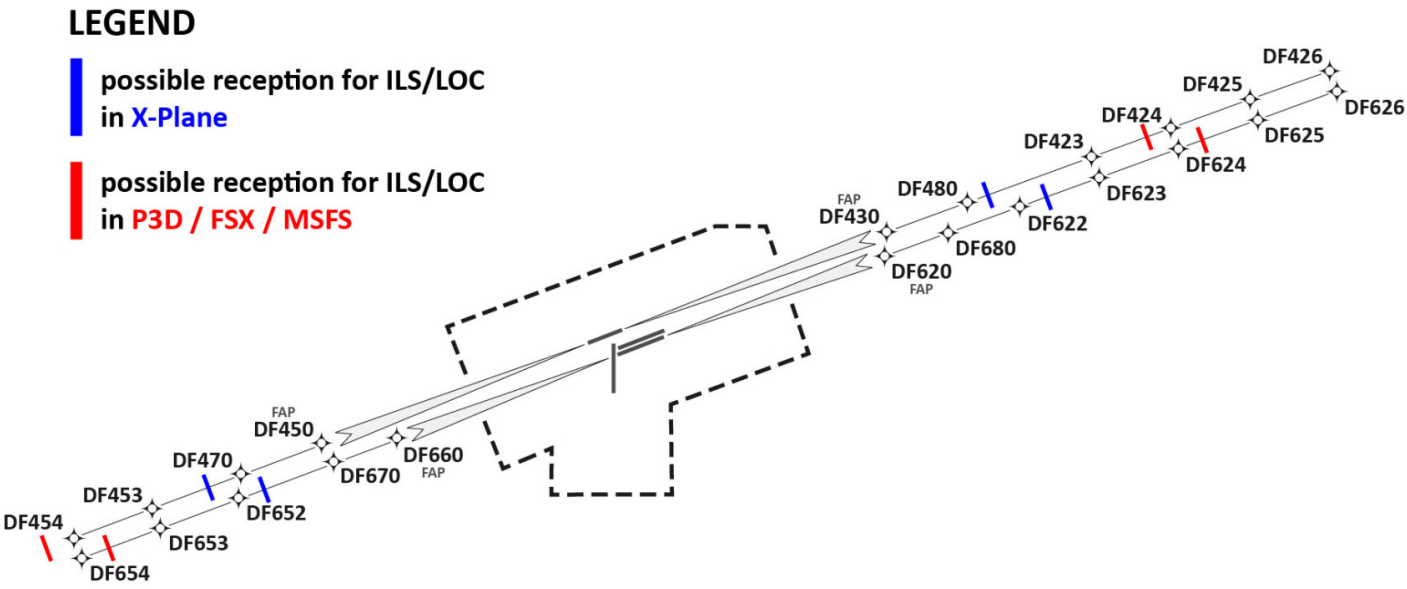
> Pilots unable to accept the 3.2° glideslope of ILS Y shall **inform Frankfurt Approach on initial contact**.

During periods of high traffic, ATC may employ independent parallel approaches. Otherwise, dependent parallel approaches will be in use with a **minimum head-to-head separation of 1.5 NM**.

ILS/LOC range issues

There is a **known issue with the ILS/LOC range in some simulators** being unrealistically short, so you might not be able to receive the ILS signal yet where ATC wants you to intercept the localizer. Please be aware of this and **avoid overshooting the extended centerline**. In these cases, we recommend you **use the following transition waypoints to stay on centerline** until capturing the ILS signal.

- **25R**: DF426 - DF430
- **25L**: DF626 - DF620
- **07R**: DF654 - DF660
- **07L**: DF454 - DF450



> The LOC-reception in x-plane**12** is reported to be the same as displayed for P3D/FSX/MSFS.

Speeds

Pilots should **plan the following speeds**. Keep in mind that ATC instructions always take precedent.

- **Descent phase**: 260 - 300 KIAS
- **Base**: 220 KIAS
- **Turn to final**: 180 - 200 KIAS

> There is **no restriction for maximum 250 KIAS below FL100** as the Frankfurt/Main TMA is class C.

> You need to follow all speed instructions precisely to ensure separation until they are cancelled by ATC (**the approach clearance does not cancel your speed instructions**). If you need to slow down earlier for any reason, **advise ATC immediately**, so they can find an appropriate solution.

Landing

HIRO (High Intensity Runway Operations)

Due to the high volume of traffic, it is very important that every aircraft **vacates the runway as quickly as possible** to avoid go-arounds of following traffic. Pilots should use the first available high speed exit. Keep in mind that your aircraft needs to be past the appropriate runway holding point in its entirety before you are considered clear of the runway, so **don't stop moving prematurely**.
You should plan to use the following or earlier runway exits whenever possible.

Runway	Light	Medium (Prop)	Medium (Jet)	Heavy
25L	M11	M11	M17	M21
25C	L8	L8	L10	L13
25R	P14	P14	P16	P20
07L	P10	P8	P8	P6
07C	L11	L11	L11	L9

07R	M15	M15	M15	M13

> If you need to vacate later than these exits, **inform the Tower controller on initial contact** which exit you are planning to use.

> Pilots landing on runway 25L/07R and 25C/07C shall **always vacate to the North** unless instructed otherwise.

> ATC might already give you your **initial taxi clearance during roll-out**, before you have actually vacated the runway.

Visual swingover

Pilots approaching runway 25L might be asked if they can accept a **visual approach to runway 25C**. This procedure allows for shorter taxi and can increase efficiency. Please only accept it if you have the **runway in sight** and are able to **comply with all accompanying instructions**. Visual swingovers are not possible during 07 operations unless deemed necessary by Frankfurt Tower for safety reasons.

Taxi

Frankfurt/Main's complex layout demands a **thorough briefing of expected taxi routes** as well as **correct taxiing**. To avoid delays for other users, **start taxiing as soon as possible after receiving your taxi clearance**.

Runway crossing

Traffic landing on runway 25L/07R and parking on the Northern part of the airport will have to cross runway 25C/07C or its extended centerline. Before the crossing aircraft will be instructed to **hold short of the CAT2/3 holding point or appropriate stopbar**. Make sure you hold before the correct hold short line. You can expect to cross the runway at one of the following points. Please **brief expected initial taxi routes during your approach briefing** to avoid having to stop taxiing after vacating and thus blocking the runway exit.

25 operations	07 operations
stopbar T4	stopbar T4
intersection M10	intersection M6
intersection M30	intersection M8
stopbar Y10	-

holding at the CAT2/3 holding point at M30

> The above crossing points are arranged such that the crossing has the least amount of impact on traffic taxiing on the Apron. **Turning into the wrong intersection will require additional coordination between Frankfurt Tower and Frankfurt Apron**, which might result in some delay for you, depending on how busy these controllers are.

VFR Traffic

> We ask all pilots to also read the General section with **information relevant to all pilots**.

Frankfurt/Main's airspace and amount of jetliner traffic make the airport **very unsuitable for VFR traffic** in the real world. As there is a high level of traffic on VATSIM as well, controllers will often be unable to accommodate many VFR requests. Especially during events you can expect to be denied traffic circuits and might face significant delays for takeoffs, landings, and CTR crossings.

You should be prepared for the controller to **instruct you to leave the control zone** if the traffic load rises or you fail to comply with instructions promptly and accurately.

> In the real world, **most non-airline traffic will fly to Frankfurt-Egelsbach** instead of Frankfurt/Main.

Airspace Structure

The Frankfurt/Main CTR has a **top altitude of 2500 ft MSL, about 2100 ft AGL**. Please pay close attention to setting the correct QNH and your altitude to avoid inadvertently entering **airspace D or C above**.

There are four mandatory reporting points around the CTR. Romeo 1 and Sierra are generally only available for departures. If Egelsbach Radio is staffed, **traffic via Lima is subject to approval by Egelsbach Radio**. Keep in mind that ATC might instruct you to use a different reporting point than the one you requested, if necessary.

Two VFR holdings are charted for Frankfurt, one in the North and one in the South of the field. If no further clearance has been given after entering the CTR, you are expected to hold using these VFR holdings.

Frankfurt/Main is bordered by the **Egelsbach ATZ in the Southeast** and the **Wiesbaden CTR(HX) in the Northwest**.

Departure

VFR departures have to **initially call Frankfurt Delivery**.

>

> When departing runways 25L or 25C, you can expect to be instructed to not overfly runway 18. If you are unable to comply with this instruction, **inform ATC on initial contact** that you need to overfly runway 18.

Arrival

Runway 25R/07L is **not available for VFR traffic**.

Traffic circuits

Due to the layout of Frankfurt/Main, the airspace around it, and the high amount of jetliner traffic, the airport is **not well suited for VFR traffic circuits**. This means that **pilots need to be very proficient** and can expect to spend a lot of time in one of the holdings.

During periods of high traffic, ATC might need to fit you into **very tight gaps**, resulting in very short to non-existent finals as well as early crosswind turns. Please follow all instructions accurately and immediately to avoid go arounds and ensure separation.

Who to contact?

When multiple Tower stations are staffed, it might not be immediately obvious who you should contact. Please **refer to the following table** in such cases:

Intention	Frequency (contact topmost station online)
Outbound	122.035 *(Frankfurt Delivery)*
Inbound from the North	136.500 *(Frankfurt Tower)*
	124.855 *(Frankfurt Tower)*
	118.780 *(Frankfurt Tower)*
Inbound from the South	119.905 *(Frankfurt Tower)*
	118.780 *(Frankfurt Tower)*