

# Training Department

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# **S1 + S2 Training**

# Welcome to your S2 Training

Welcome to your training in Denmark. We are excited to have you here for your journey of becoming a VATSIM controller. It is an interesting, but lengthy and challenging process that requires a lot from you to reach our required standard.

Therefore take your time now to:

- Watch the Video below
- Read the text AFTER viewing the video

Make sure you understand it, and if you are not up for it to close your training again. This is because we have limited resources so we want to direct them on focused and serious candidates. If, however, you are ready and excited to get started then continue with the video

We try to employ a “*no-wait*” training structure, by employing lots of self study, and student initiative. Your training will therefore go through several phases until you are a fully checked out S2 controller. The whole process will take anywhere from 6-15 months depending on your skills, initiative and work ethics

[https://www.youtube.com/embed/Dk\\_3H527EOY](https://www.youtube.com/embed/Dk_3H527EOY)

## 1<sup>st</sup> Phase – Preparation

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## **Time to complete: 3-4 months depending on active queue**

This phase has started as soon as you requested your training. A vital part of being a controller is knowing the side of a pilot. You cannot become a VATSIM controller, if you have no understanding about the basic knowledge of flying.

To begin that, you need to log onto your plane and fly on the network. We fully expect you to be a proficient pilot by the time you move to the next phase. We don't care if you know how to fly. If you don't have a joystick you can study up offline, and by logging on as observer.

However you must know all the communication and technical skills of a proficient VATSIM pilot. This you can expect to dedicate the first 4 months of your training with.

We will upload pilot documentation and good links in the Training Library to help you on your way.

As you start your next phase of training you will have to pass a pilot test

Also, you can start reading the law documents concerned with training. Documents are will referece throughout the training here: [Law Documents and ATS Instructions](#)

You are also **highly** encouraged to join [Discord](#) and have a talk with the other controllers, to get into the social part of controlling. This gives you the best possible chance for a successful training!

## **2<sup>nd</sup> stage – S1+S2 Pre-Training**

### **Time to complete: 1-2 months**

After approximately 4-6 months we will start enrolling you in our self-study program for ATC. This is a sizable course which will explain you all the basic ATC skills, video training and observing hours on the network. It is divided into lots of chapters each dealing different aspects.

Your devotion and attention is important, and we have strict demands for this program. this means.

- Sign-up to the course within 72 hours of assignment
- Completion within 2 months
- Activity within running 21 days
- All tests passed satisfactory

This course starts with a pilot test to ensure you are up to the standard of a VATSIM pilot! If you fail you may be delayed another 3 months to properly learn your pilot skills, so make sure to spend your time wisely

Your S1+S2 Pre-Training will conclude with an exam to determine your eligibility for the next step.

## 3<sup>rd</sup> stage – S1 Training

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**Time to complete: 2-3 weeks**

You third stage will be S1 training which will allow you to sit on TWR in all Danish airports except EKCH, EKRK and EKRN. This will be a rating which will be on the simulator server (Sweatbox) and must be completed in only 3 sessions, so your preparedness is of the essence, and we reserve the right to re-evaluate your training eligibility if you are not up to a proper standard after the 3 sessions as pr. [VATEUD DTP](#). The training may be done as group sessions by an examiner

After you finish your S1 training, you will be required to be online for a minimum of **25 hours** to build up experience and ratify your commitment to the organization

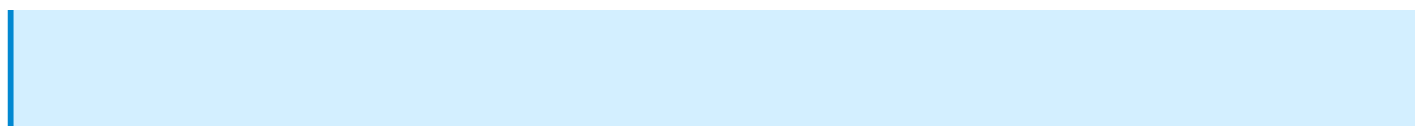
## 4<sup>th</sup> stage – Tier 1 Endorsement for EKCH Pre-Training

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**Time to complete: 1-4 weeks**

When you have your 25 hours, you can continue by entering the Pre-Training for your:

- Tier 1 endorsement
- S2 rating.



A Tier 1 endorsement is a separate "sub-rating" for airports that are deemed too complex and challenging to sit on with a regular rating. In VATSIM-Scandinavia these are EKCH, ENGM, ESSA, EFHK.

This course will take you through the S1 and S2 specific procedures for the Tier 1 Endorsement for EKCH. The course has similarities with the S1+S2 Pre-training program, however notice following differences

- Course enrolled by your **OWN** initiative **ONLY** after completing 25 hours on other danish airports. Misuse leads to disciplinary actions!
- Completion within 1 month
- Activity within running 14 days
- All tests passed to satisfactory

## 5<sup>th</sup> Stage – Tier 1 EKCH\_GND training

**Time to complete: 1-2 weeks**

**Hour Requirement: 25 hours on EKBI, EKYT or EKAH**

When your Tier 1 EKCH - S1+S2 Pre-Training is completed, You must enter our Discord server and make use of our "Buddy System". For this you write in a dedicated channel, where one of our S2 controllers will take you through the training of your Tier 1 rating for EKCH, on S1 level

You will start by getting the Tier 1 endorsement for EKCH\_GND. This relies again heavily on self-study from the Pre-Training and should take no more than 2 sessions to complete. Once completed you are released to sit on EKCH\_A\_GND, EKCH\_D\_GND, EKCH\_S\_GND and EKCH\_DEL outside of events (*Meaning NOT at Vectors to Copenhagen*)

## 6<sup>th</sup> stage – Tier 1 EKCH\_TWR training + S2 Rating

**Time to Complete: As long as necessary**

**Hour Requirement: 25 hours on EKCH\_GND or EKCH\_DEL**

When your "Buddy" release you for your S1 Tier 1 endorsement for EKCH, he will advise the training department that you are ready to continue. You must control 25 hours on EKCH\_GND or EKCH\_DEL before your checkout, partly while we find a mentor for you for the last part of the program and partly supplementing the training on TWR positions.

## **7<sup>th</sup> stage – Examination**

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### **Time to complete: 2 hours**

When you and your mentor deem that you are ready for checkout you will take the VATEUD S2 theoretical test, and when completed, set up for a final practical examination by one of our examiners. Upon completion you are officially an S2 controller and your training is officially finished.

S1 + S2 Training

# S1 Syllabus

Here you can find the S1 Syllabus to learn

It consist of the general proficiencies you must gain, as well as a Three lesson wide lesson plan outlining exactly what we expect of you and what we will train from session to session so you can be as well prepared as possible

**[S1 Syllabus & Lesson Plan.pdf](#)**

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# Tier 2 Endorsements - EKRN/AFIS

By reading this training chapter, you will get an understanding of how to control an AFIS airport in the EKDK FIR.

After completion of this chapter, you will need to pass a small test, covering the subjects mentioned in this chapter.

After completion of the test, you will receive the T2 Endorsement for all AFIS stations within EKDK FIR.

You cannot get your S3 rating without completion of this course as some APP airspace provides top-down for AFIS airports.

# T2 - AFIS

## T2 Endorsement for AFIS operations in EKDK

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By reading this training document, you will gain an understanding of how to control an AFIS airport in the EKDK FIR.

After completing this page, you will need to pass a small test, covering the subjects mentioned in this document.

After completion of the test, you will receive the T2 Endorsement for all AFIS stations within EKDK FIR

You cannot get your S3 rating without completion of this course, as some APP airspace provides top-down for AFIS airports.

### Introduction

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In Denmark, we have 7 RMZ//TIA/TIZ(AFIS) AD:

- EKOD - Odense (TIZ/RMZ)
- EKEB - Esbjerg (TIZ/RMZ & TIA/RMZ)
- EKSB - Sønderborg (TIZ/RMZ)
- EKVD - Vamdrup (TIZ/RMZ)
- EKVJ - Stauning (TIZ/RMZ)

The 2 latter mentioned do not hold any commercial traffic.

RMZ - Radio Mandatory Zone / TIA - Traffic Information Area / TIZ - Traffic Information Zone  
AFIS - Aerodrome Flight Information Service

All airspaces are class G, meaning:

- IFR & VFR receive Flight information
- Maximum speed 250 knots IAS
- IFR - Two-way radio communication
- IFR have SSR mode A+C
- No clearance to enter/exit

However, when controlling an RMZ//TIA/TIZ, some extra rules apply; these are:

SSR mode A+C for VFR (If fitted) & Two-way radio communication for VFR

The AFIS Station itself does not have radar, hence you will rely only on the information given by the pilots.

To simulate this in Euroscope, you can:

If on an I\_TWR, minimise ES, use a static chart for reference, launch a sim for tower view

If providing top-down, XCorelate the tag. You will still see their position, but not any information.

The video at the bottom showcases what a session on I\_TWR could look like for both IFR and VFR

## Phraseology

Since all AFIS is class G, you cannot control the planes; therefore, a lot of the normal instructions & clearances have to be modified.

Situation	Normal Instruction	AFIS instruction
Landing	"Cleared to land"	"No reported traffic on the runway. (Report vacated)"
ATC clearance	"Cleared to..."	"Copenhagen control clears you to..."
Startup	"Startup approved"	"Startup on own discretion \[Give Departure information\]" <sup>1</sup>
Takeoff	"Cleared for Takeoff"	"No reported traffic in the zone (Report airborne/passing...)"

Taxi	"Taxi Via A & B to holding point runway 24"	"Runway 24 in use, no traffic on the apron. I suggest you to taxi via A & B"
<b>Departure and arrival information</b>		
<b>Departure information should be given to the departing aircraft and must contain:</b>		
Runway in use Weather (On request) QNH		

## Example on AFIS Phrasology when on designated AFIS station

### Arrival into Sønderborg/EKSB

- “☐✈ Sønderborg information, MMD122 inbound LIBRI planning on ILS RWY32
- ☐ MMD122, Sønderborg information. RWY32 in use, QNH 1019. No reported traffic in the TIZ, report final. Do you require the latest MET-Report?
- ☐✈ Roger RWY32 QNH1010, Negative, we have the latest METAR onboard, and will report final. MMD122
- ☐ ICE123, roger.
- ☐✈ On Final RWY32 MMD122
- ☐ MMD122, Roger, No reported traffic on the runway, report vacated.
- 
- ☐✈ Wilco, MMD122
- 
- ☐✈ Runway vacated via B, MMD122

☐➔Taxiing to the Apron via B, MMD122

📄✈️ Sønderborg information, MMD121 request IFR to EKCH

✈ Roger QNH1019, and WILCO, MMD121

Ready for Departure MMD121

✈ Roger, will report passing 3000 ft. MMD121

☐✈️ Passing 3000 for FL040 MMD121

☐☐MMD121, roger contact Copenhagen on 136.485 - Moin

☐☐→Copenhagen on 136.485 MMD121, Moin!

## Top-Down coverage

When providing top-down service, it is important to distinguish between when the plane is in controlled airspace and when in Class-G.

As Class G airspace goes up to 3500ft an upper sector may only clear an aircraft to 4000ft.

As the aircraft approaches 4000ft the following must be said:

☐☐C/S, cleared to descend below controlled airspace. Report...

When providing inbound aircraft information about an aerodrome, the only thing you dictate is the runway that is in use, all other decisions i.e. approach type, are solely at the discretion of the PIC of the aircraft.

☐☐C/S, Runway 14 in use in Sønderborg. TL030, report expected approach.

### Phraseology example:

☐☐☐MMD122 RWY32 in use in Sønderborg, report expected approach

☐☐→RWY32 in use, we are expecting the ILS RWY32, MMD122

☐☐MMD122, Roger, proceed DCT LIBRI, when ready descend FL040. TL in Sønderborg is TL035

☐☐→Roger, When ready Descend FL040 DCT LIBRI, TL035, MMD122

☐☐MMD122, cleared to descend below controlled airspace. QNH in Sønderborg 0988. No reported traffic in the zone, report final RWY32. Do you require the latest MET report?

☐☐➔Roger, descending below controlled airspace, QNH 0988, will report final RWY32, and negative we have the weather onboard, MMD122

☐☐➔On final RWY32 MMD122

☐☐MMD122, roger, no reported traffic on the runway, winds 300/14, report vacated.

☐☐➔No reported traffic, will report vacated, MMD122

☐☐➔Vacated RWY32 via B, MMD122

☐☐MMD122, roger. No reported traffic on the apron. I suggest you taxi to parking via B. Moine

☐☐➔Roger, we will be using B to parking, MMD122, Moin!

## How to handle the traffic

**As an AFIS airport doesn't have any radar, the operator must rely solely on the reports from the pilots.**

If you feel like you have too many A/C within the Zone, maintain them in Controlled airspace, and put them in Hold at a convenient fix/VOR.

☐☐MMD122, due occupancy of airspace descend FL040 and enter hold at ALS VOR. Right hand turns inbound course 270, 1 min. leg

☐☐MMD122, Exit holding, continue inbound Sønderborg. You are cleared to descend below controlled airspace. QNH in Sønderborg 0988. Traffic information: one ATR72 on final for rwy 32. Report final RWY32. Do you require the latest MET report?

# Operation

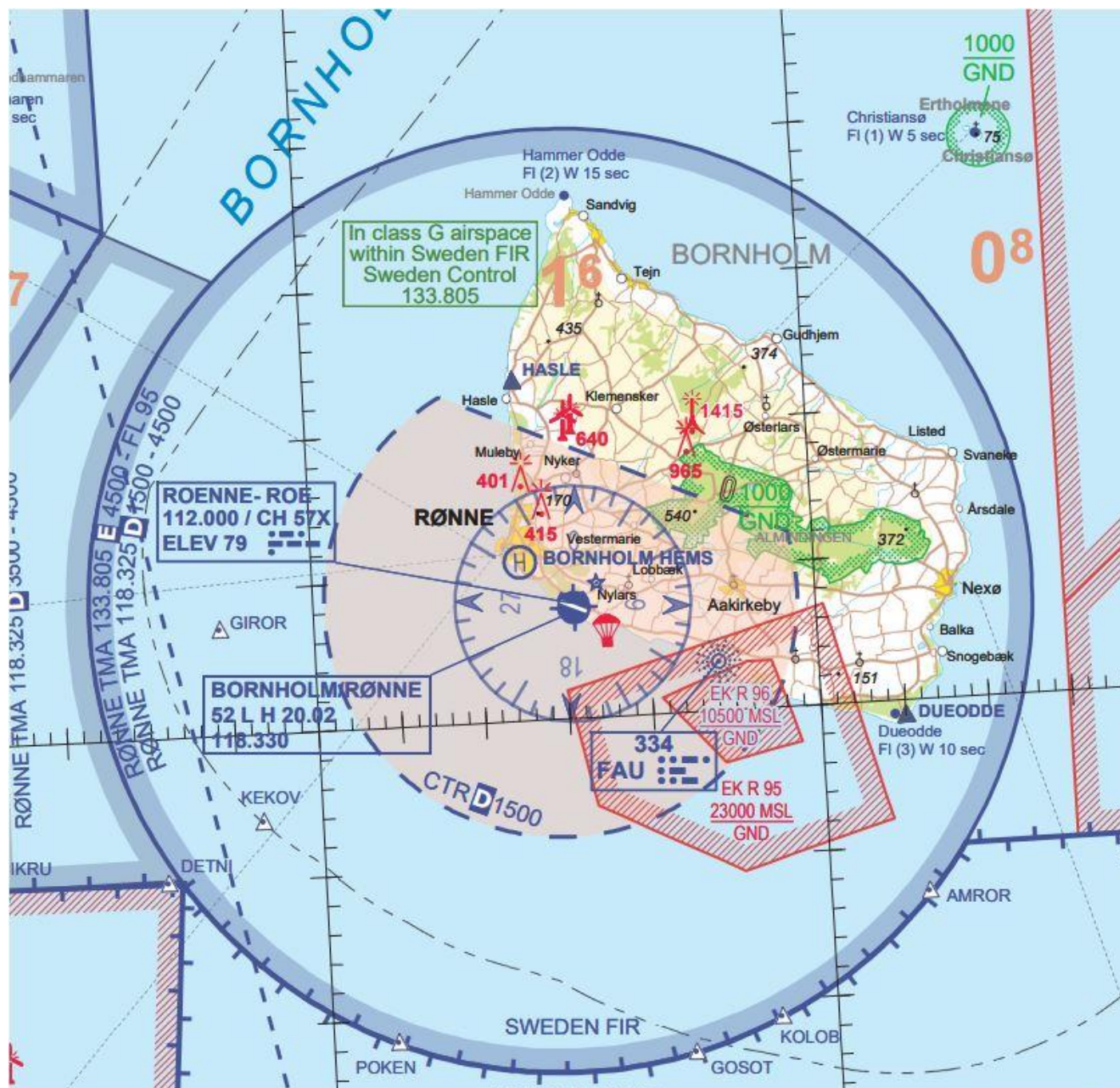
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This video demonstrates both operations and phraseology to use

[https://www.youtube.com/embed/kKIPOi\\_6CrM](https://www.youtube.com/embed/kKIPOi_6CrM)



# Overview



Rønne/Bornholms Lufthavn is the only procedural tower in Denmark. The airport is serving around 200.000 passengers yearly on its routes. The primary operator DAT, serves the weekly/daily routes to EKCH, EKYT & EKBI. During the annual "Folkemøde", there is an extreme increase in traffic from both DAT, SAS and Norwegian.

## Procedural Tower

As Rønne is a Procedural tower, meaning that they serve as a "normal" controlled airport, however without their own radar. They therefore rely solely on aircraft information and data from the Swedish radars.

As they do not have their own radar, there is not any APP. The entire airspace is covered by the TWR. All arrivals and departures, therefore, have to either follow standard arrival or visual. No radar vector can be provided.

## Airspace

The entire airspace is Class D. First sector from GND-1500' and second from 1500 - 4500 ft.

CLASS	IFR / VFR	SEPERATION	SERVICE PROVIDE D	SPEED LIMITATI ON	RADIO COMM.	TRANS PONDER	CLR
D	IFR	IFR from IFR	Air traffic control service. Traffic informatio n about VFR flights, and traffic avoidance advice on request	250 KT IAS below FL 100	Continuou s two-way	A + C	Yes

VFR	None	Air traffic control service. Traffic information about VFR and IFR flights, and traffic avoidance advice on request	250 KT IAS below FL 100	Continuous two-way	Above FL 95 TMZ	Yes
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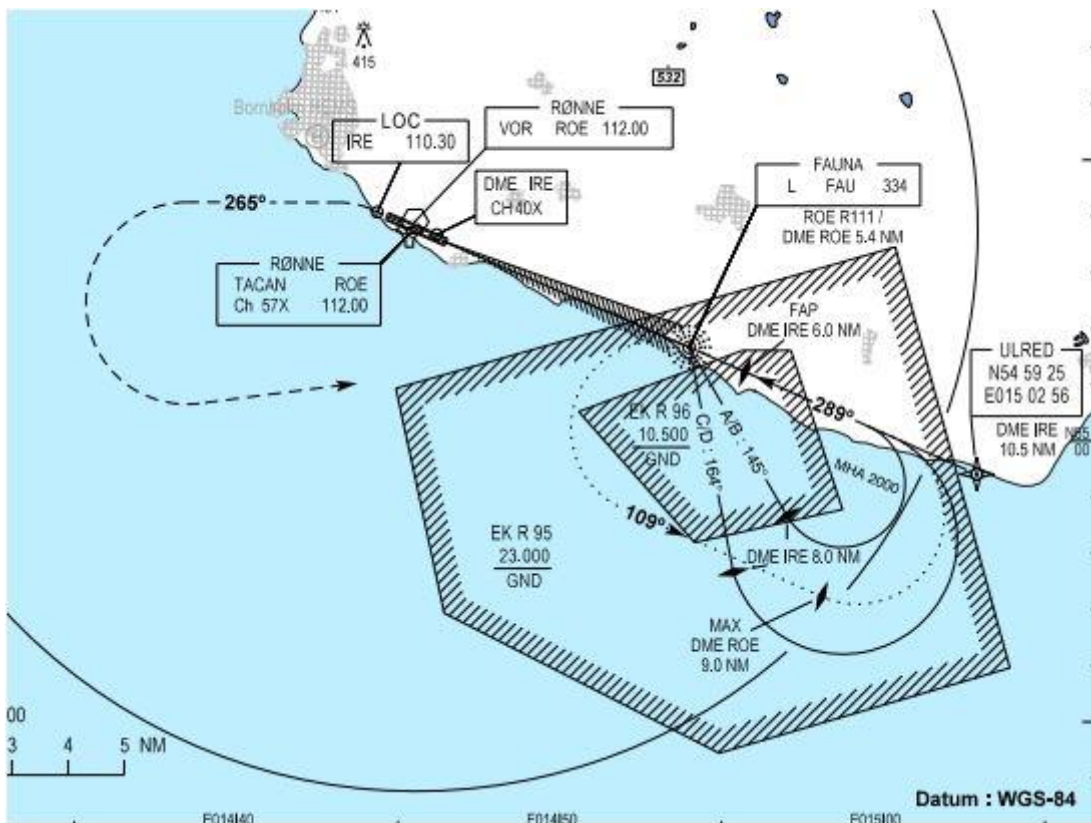
## Procedures

Remember, EKRN does NOT have an ATIS, hence all A/C must be offered the latest MET-Report, including RWY in use!

## Inbounds

All inbounds are handed over from Sweden at 5000 ft. (On ESMM QNH) DCT ROE VOR, or in case of RWY 11 in use, DCT ODMEI (Or otherwise coordinated)

TWR may request any aircraft DCT to any WP on the arrival. FAU & ULRED is some of the best/most used.



When an aircraft is inbound FAU, they will after the WP turn for final. Be noted the turning curve is different based of aircraft type. After the "Teardrop turn", they will establish on ILS.

To avoid the teardrop from an annoying angle, they may be cleared DCT ULRED for a straight-in ILS

Type Z is always the preferred approach.

RWY	Proc.	West	North	East	South
11	ILS/LOC/VOR Runway 11	Intercept ROE Radial 289 inbound to intercept [ILS] (Or Direct ODMEI)	Direct ROE for base turn procedure.		
	RNP Z Runway 11	Direct UMVAP	Direct OGTET		Direct LUKAG

29	ILS/LOC/VOR Runway 29	Direct FAU for base turn procedure		Direct ULRED for final runway 29	
	RNP Z Runway 29	Direct GOTOG	Direct ASBAX	Direct INVIR	Direct GOTOG

## Departures

All IFR departures must be coordinated with Sweden, and they must be the ones approving and issuing the Clearance.

Initial climb is always 4000 ft. and handed directly over to ESMM\_APP, or overlaying MM sector.

A good practice is to request coordination from Sweden when the A/C calls for clearance. You then tell the A/C to expect clearance during Taxi, which gives Sweden time to respond.

Remember to inform Sweden upon taxiing, with the estimated time of takeoff.

### All departures are Omnidirectional.

RWY 11 - Climb straight to 700 ft. then turn

RWY 29 - Climb on track 274 to 700/1000 ft. then turn

## Phraseology

Exactly the same as a normal TWR.

Only to remember an aircraft can NOT be identified.

For clearance, remember to include: "*Sweden clears you...*"

For a teardrop approach, the following is used: "**C/S, via FAU cleared full ILS-Z approach RWY29. Report FAU outbound**"

For a straight-in approach: "**C/S, via ULRED cleared straight in approach ILS-Z. Report final**"

**A flight into EARN might sound like this:**

I

☐☐➔Rønne TWR hello, DNU46R passing FL060 for 5000 ft. inbound FAU NDB

☐☐DNU46R, Rønne TWR hello. RWY 29 in use. Rønne QNH 1013. Expect ILS-Z approach RWY29 via FAU. Do you require the latest METAR?

☐☐➔TL040, QNH 1013, expecting ILS-Z RWY29 via FAU. Negative we have the latest weather onboard. DNU46R

☐☐DNU46R, roger. Descend 2000 ft. via FAU cleared full ILS-Z approach RWY29. Report Final

☐☐➔Descend 2000 ft. via FAU cleared full ILS-Z approach RWY29. We will report Final. DNU46R

☐☐Established on final RWY29, DNU46R

☐☐➔DNU46R, roger, winds 300/14 RWY29 cleared to land

☐☐Cleared to land RWY29, DNU46R

### A flight out of EKRN might sound like this:

☐☐☐☐➔Rønne TWR hello, DNU49K, stand 1 request IFR clearance to EKYT

☐☐DNU49K Rønne TWR hello. Request on standby, expect clearance during Taxi. RWY11 in use. Do you require the latest MET-Report?

☐☐➔Roger clearance during taxi, RWY11 in use, negative we have the latest weather onboard. DNU49K

☐☐DNU49K, roger. Rønne QNH 1013, startup approved, report ready for taxi.

☐☐➔Startup approved, QNH 1013 report ready for taxi. DNU49K

☐☐➔TWR, DNU49K ready for taxi.

☐☐DNU49K, Roger, taxi H/P RWY11 via A. Report ready to copy IFR clearance.

☐☐➔Roger taxi H/P RWY11 via A, we are ready to Copy, DNU49K



☐☐DNU49K, Sweden clears you to EKYT via Flight planned route. Initial climb 3000 ft. SQ1234. After departure RWY11, follow standard noise abatement procedure.

☐☐➔Cleared to EKYT via Flight planned route. Initial climb 3000 ft. SQ1234. After departure RWY11, follow standard noise abatement procedure, DNU49K

☐☐DNU49K read back correct, report ready for departure

☐☐➔Ready for departure, DNU49K

☐☐DNU49K roger, winds 150/21 RWY11 cleared for takeoff. Report turning

☐☐➔Cleared Takeoff RWY11, report turning DNU49K

☐☐➔TWR, DNU49K turning right.

☐☐DNU49K, Roger. Contact Sweden on 136.135, bye!

☐☐➔Sweden on 136.135 DNU49K, adios!

## Coordination

**As per Sweden LOA - Ver 1.13 - 28/November/2024**

*Always double-check check latest LOA*

### “**B3.3 Procedures between Roenne TWR and ATCC Malmö**”

Roenne TWR will inform ATCC Malmö of RWY in use.

Due to lack of surveillance environment at Roenne TWR, procedural separation applies in Roenne

TMA below 4500 FT MSL.

#### **B.3.3.1 Arriving aircraft to EKRN**

Arriving aircraft to EKRN shall be informed of RWY in use and cleared to ROE VOR at 5000 FT

MSL (ESMS QNH) or at cruising level, if lower.

ATCC Malmö shall transfer arriving aircraft either vertically or procedurally separated to Ronne TWR.

When RWY 11 is in use, aircraft flight planned via Copenhagen FIR can without coordination with

Ronne TWR be cleared direct to ODMEI.

Arriving aircraft to EKRN are after passing ROE DME 20, in respect of known traffic, released to

Ronne TWR for:

- turn,
- further descent and
- change of speed

#### **B.3.3.2 Departing aircraft from EKRN**

For departing aircraft from EKRN, Ronne TWR shall report Estimated Time of Departure to - and request departure clearance and transponder code from ATCC Malmö.

Departing aircraft with destination EKCH/RK or ESMS can without coordination be cleared to TIDVU at 4000 FT MSL. Information on ETD and request of transponder code is still needed.

ATCC Malmö will issue a clearance in accordance with:

- Initial cleared Altitude is normally 4000 FT MSL. (FL 90 towards EDWW)
- Headings are normally not accepted due to lack of surveillance environment and noise abatement procedure.

Departing aircraft from EKRN are after passing ROE DME 5, in respect of known traffic, released to



ATCC Malmö for:

- turn and
- change of speed.

# Sweatbox scenarios

All sweatbox scenarios for both Billund and Copenhagen.

Documentation regarding the use of sweatbox can be found here:

<https://wiki.vatsim-scandinavia.org/books/software-manuals/page/sweatbox>

Sweatbox scenarios

# S2 | Copenhagen

[Copenhagen.zip](#)

Sweatbox scenarios

# S1 - Billund

[S1 - Billund.zip](#)

Sweatbox scenarios

# S2 - Billund

[Billund.zip](#)

Sweatbox scenarios

# S3 - Copenhagen

[Copenhagen.zip](#)

Sweatbox scenarios

# S3 - Billund

[Billund.zip](#)

Sweatbox scenarios

# C1

[C1.rar](#)