

# 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

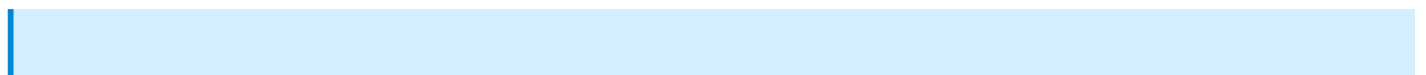
## 4<sup>th</sup> stage - Tier 1 Endorsement for EKCH Pre-Training

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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)
- EKSN - Sindal (TIZ/RMZ)
- EKVD - Vamdrup (TIZ/RMZ)
- EKST - Stauning (TIZ/RMZ)

The 3 later 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

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, minimize 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 in the bottom, showcases how a session in 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 departing aircraft and must contain:</b>		
Runway in use Transition Level Weather QNH		

## Example on AFIS Phraseology

### Arrival into Sønderborg/EKSB

- Sønderborg information, MMD122 inbound LIBRI planning on ILS RWY32
- MMD122, Sønderborg information. RWY32 in use, TL 030 QNH 1019. No reported traffic in the TIZ, report final. Do you require the latest MET-Report?
- Roger RWY32 TL030 QNH1010, Negative, we have the latest METAR onboard, and will report final. MMD122
- On Final RWY32 MMD122
- MMD122, Roger, No reported traffic on the runway, report vacated.
- Wilco, MMD122
- Runway vacated via B, MMD122
- MMD122, Roger I suggest you taxi to apron, no traffic reported on the apron.
- Taxiing to the Apron via B, MMD122

### Departure out of Sønderborg/EKSB

- Sønderborg information, MMD121 request IFR to EKCH
- MMD121, Sønderborg information. Copenhagen Control clears you to EKCH via KOR, climb FL040, level change enroute, squawk 1234. RWY 32 in use. Do you require the MET-Report?
- RWY 32 in use, cleared to EKCH via KOR, FL040, level change en-route, squawk 1234. And affirm we require the met-report. MMD121

- MMD121, roger, readback correct. Automatic report from 1450Z Winds 220 at 8 kt. variable 190 to 250. Visibility 10km. or greater Few clouds at FL120 Temperature -2 dewpoint -5, QNH1019. Report ready for taxi.
- Roger QNH1019, and WILCO, MMD121
- Ready for taxi MMD121
- MMD121, roger no reported traffic on the apron and runway. I suggest you taxi via B, backtrack and lineup RWY32, and report ready for departure.
- Roger, we will taxi via B, backtrack and line up RWY32 and report ready MMD121
- Ready for Departure MMD121
- MMD121, Roger winds 220/08, no reported traffic in the TIZ, report passing 3000 ft.
- 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

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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, leaving controlled airspace, radar service terminated. Report..."

When giving an 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, leaving controlled airspace, radar service terminated. QNH in Sønderborg 0988. No reported traffic in the zone, report final RWY32. Do you require the latest MET report?
- Roger, radar service terminated, 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

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

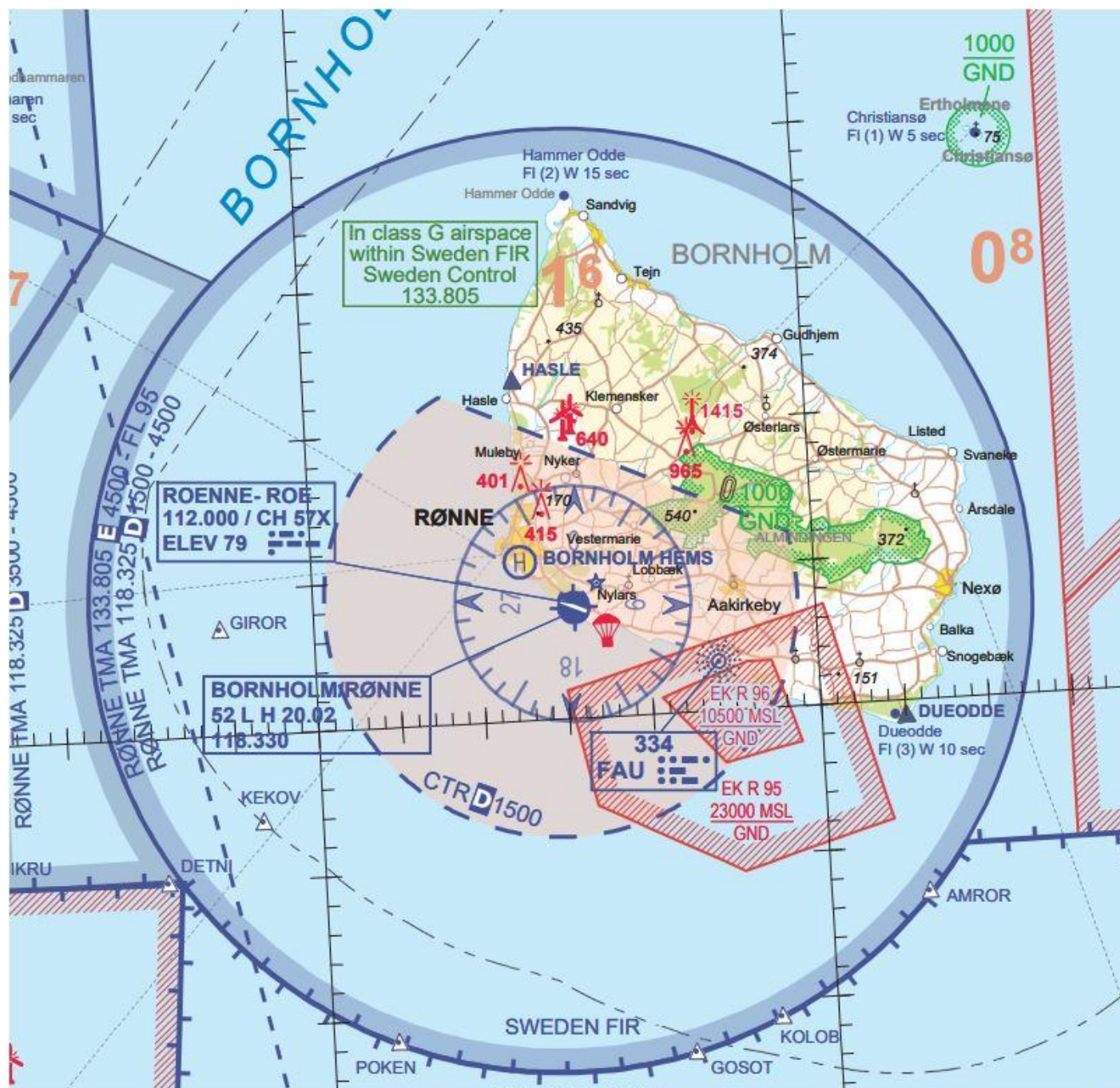
## Operation

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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.

## Procedural Tower

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As Rønne is a Procedural tower, means that they serve as an "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

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The entire airspace is Class D. First sector from GND-1500' and second from 1500 - 3500 ft.

## Procedures

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

## Inbounds

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All inbounds are handed over from Sweden at 5000 ft. (On ESMM QNH) DCT ROE VOR (Or otherwise coordinated)

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





Initial climb is always Maximum 3000 ft. and handed directly over to ESMM\_APP

**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

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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, 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:**

- Rønne TWR hello, DNU46R passing FL060 for 5000 ft. inbound FAU NDB
- DNU46R, Rønne TWR hello. RWY 29 in use. TL040, 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
- Establish on final RWY29, DNU46R
- DNU46R, roger, winds 300/14 RWY29 cleared to land
- Cleared to land RWY29, DNU46R

**A flight out of EARN 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

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All departures must be coordinated and approved, however Flights to EKCH may be cleared via TIDVU without coordination

See LOA with Sweden for more info

# 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](#)