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 - EKRN / Rønne

T2 - AFIS

T2 Endorsement for AFIS operations in EKDK

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Introduction

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 \[Give Departure information\]"[1]
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"

Departure and arrival information
Departure information should be given to the departing aircraft and must contain:
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, Sønderborgborg information. RWY32 in use, wind 310/19kt , QNH 1019. Transition level FL45. No reported trafic in the TIZ, report final. Do you require the latest MET-Report?
>
> □□✈ Roger RWY32 QNH1019, Negative, we have the latest METAR onboard, and will report final. MMD122
>
> □□ ICE123, roger.
>
> □□✈On Final RWY32 MMD122
>
> □□MMD122, Roger, Wind 310/19 kt. No reported traffic on the runway, report vacated.
>
> □□✈Wilco, MMD122
>
> □□✈Runway vacated via B, MMD122
>
> □□MMD122, Roger I sugest 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 cleares 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

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?

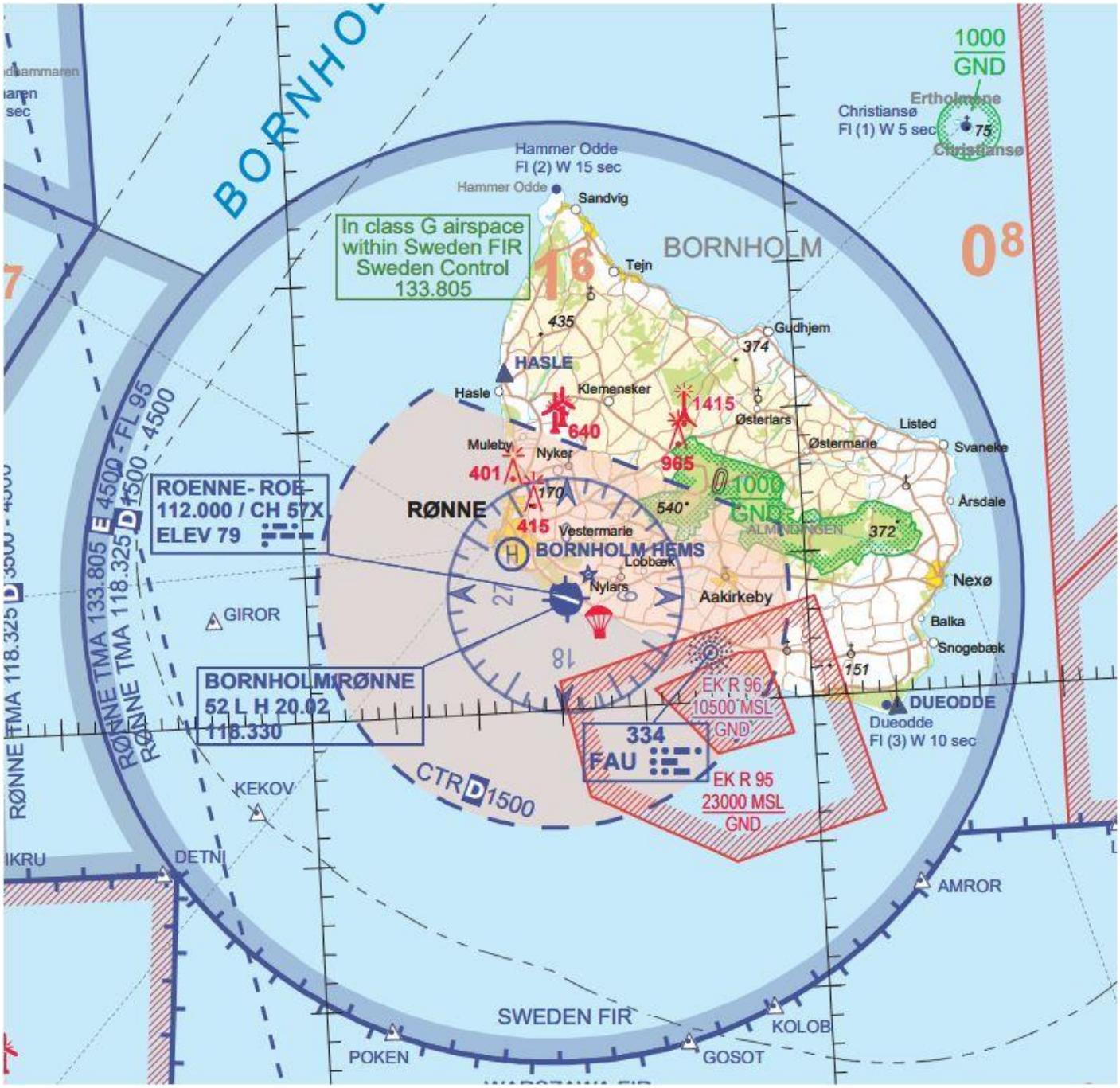
Operation

This video demonstrates both operations and phraseology to use

https://www.youtube.com/embed/kKIPOi_6CrM

T2 - EKRN / Rønne

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 PROVIDED	SPEED LIMITATION	RADIO COMM.	TRANS PONDER	CLR
D	IFR	IFR from IFR	Air traffic control service. Traffic information about VFR flights, and traffic avoidance advice on request	250 KT IAS below FL 100	Continuous 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

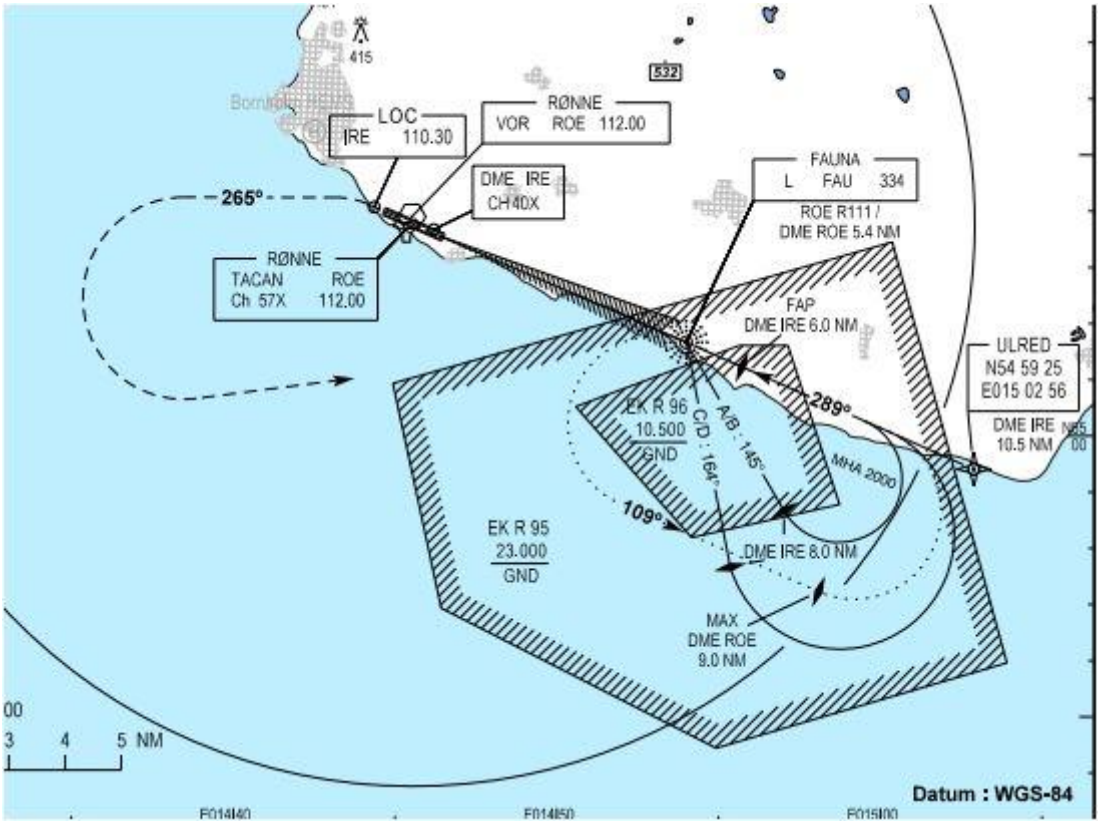
Procedures

> 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 indbound 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 ESMS_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 EKRN might sound like this:

> □□✈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 enviorment 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 seperated to Ronne
TWR.

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