2015

VATSIM SCANDINAVIA

Air Traffic Control Guide to the Reykjavik CTA
1.0 Introduction to the Reykjavik CTA

On VATSIM controllers of VATSIM Scandinavia, in the European Division, provide air traffic control in Iceland, Greenland and the Faroe Islands, which comprise the Reykjavik CTA.

Charts, letters of agreement, downloads and other useful information can be found on the VATSIM Scandinavia website. If you need any help, ask one of our friendly controllers online, or post a question in our forums.

This guide is designed to be read in conjunction with the Sector Map, the Pilot Guide to the Reykjavik CTA and the Airport Guides to Iceland, Greenland and the Faroe Islands.

We look forward to seeing you controlling or information servicing online!

1.1 Where are we?

The Reykjavik CTA is a large control region that covers Iceland, Greenland, the Faroe Islands and a large portion of the North Sea and North Atlantic Ocean. There is full radar coverage within the confines of the west, south and east sectors, and procedural control within the confines of the north sector. Below FL195 in the north and west sectors you will find the Søndrestrøm FIR which covers all Greenlandic airports with information services.

The entire region is classified as oceanic airspace and all aircraft departing and arriving require an oceanic clearance. The only exception to this are domestic flights within a single country.

The CTA’s borders running clockwise from the North Pole are Murmansk OFIR (Russia), Bodø OFIR (Norway), Norway FIR – Stavanger AoR, Scottish FIR (UK), Shanwick OFIR (UK/Ireland), Gander OFIR (Canada) and Edmonton FIR (Canada).

Services are generally conducted in English, although Icelandic or other languages are permitted if there is prior agreement between the controller and pilot. It is quite common to hear Norwegian, Danish, Swedish and even French spoken on the radio!
2.0 Reykjavik Control (BIRD)
Reykjavik Control covers the west, south and east sectors of Icelandic airspace with full radar coverage. This position also covers all Icelandic and Faroese airports top down pursuant to the normal VATSIM regulations.

The sector splits for Reykjavik Control can be found in the sector map. The simplified explanation is that the south sector covers Iceland, the east sector covers the Faroe Islands and the west sector covers south-central Greenland.

As a general rule for day-to-day operations, the sectors are combined to form one giant sector.

If Iceland Radio is not online, Reykjavik Control will provide oceanic clearances for all aircraft entering its airspace. However, aircraft are not required to make position reports within Reykjavik Control’s airspace.

The minimum separation for aircraft within BIRD is 10nm above FL270 and 5nm below.

2.1 ATC Positions

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<tr>
<th>Name</th>
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<tr>
<td>Reykjavik Control</td>
<td>BIRD_CTR</td>
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<tr>
<td>Reykjavik Control (South)</td>
<td>BIRD_S_CTR</td>
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<tr>
<td>Reykjavik Control (East)</td>
<td>BIRD_E_CTR</td>
<td>126.750</td>
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<tr>
<td>Reykjavik Control (West)</td>
<td>BIRD_W_CTR</td>
<td>124.400</td>
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3.0 Iceland Radio (BICC)

Iceland Radio is primarily a procedural ATC position covering the north sector of Icelandic airspace, above FL195. It also provides a service in the west sector of the Reykjavik CTA when Reykjavik Control is not online.

Iceland Radio also provides oceanic clearances for aircraft entering the south, east and west sectors of BIRD_CTR, but DOES NOT provide ATC in those sectors as this is the responsibility of BIRD_CTR.

This position requires a separate oceanic endorsement from VATSIM Scandinavia.

3.1 ATC Positions

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<th>Name</th>
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<tr>
<td>Iceland Radio</td>
<td>BICC_FSS</td>
<td>127.850</td>
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3.2 Entry Procedures

Flights approaching Reykjavik airspace from:

- Scottish FIR or Norway FIR should contact Iceland Radio 20 minutes before entry of Reykjavik airspace to obtain their oceanic clearance.
- Edmonton FIR should contact Iceland Radio 45 minutes before entry of Reykjavik airspace to obtain their oceanic clearance.
- Murmansk OFIR should contact Iceland Radio 30 minutes before entry of Reykjavik airspace to obtain their oceanic clearance.
- Shanwick/Gander/Bodø FIRs OFIRs will receive their oceanic clearances from those controllers (not from Iceland Radio).

If departing from an airport within Reykjavik CTA and there is no local ATC online, pilots should contact Iceland Radio for your oceanic clearance before departure. Please note that it is the pilot’s responsibility to contact ATC for the oceanic clearance.

When there is local ATC online, departing pilots will receive oceanic clearance from local ATC.

If neighbouring oceanic sectors are not online, (e.g. Shanwick/Gander/Bodø), Iceland Radio should provide the oceanic clearances for aircraft inbound from those sectors.

3.3 Position Reports

Position reports are required at most points on a pilot’s route in BICC, which unlike BIRD is not radar assisted. The format for the report from the pilot is:

[CALLSIGN] at [WAYPOINT] at [TIME], [FLIGHT LEVEL] and [MACH], estimating [next WAYPOINT] at [TIME], thereafter [the WAYPOINT after that].

BICC_FSS will then read the position report back to the pilot, who will reply with “readback correct” or some other corrections. Controllers are also allowed to impose time restrictions on waypoints in order to help separate aircraft crossing the same waypoint.
4.0 Keflavik International Airport (BIKF)

The capital airport for Iceland is Keflavik International Airport, located in south-western Iceland near the capital city Reykjavik. Most flights to and from Iceland will pass through this airport, which has two perpendicular runways set up in the shape of a cross. The main terminal is the Leifur Eiriksson International Terminal on the north side of the field, whilst other aircraft can be found on the East Apron behind the control tower.

4.1 ATC Positions

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<th>Name</th>
<th>Callsign</th>
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<tr>
<td>Keflavik Approach</td>
<td>BIKF_APP</td>
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<tr>
<td>Keflavik Tower</td>
<td>BIKF_TWR</td>
<td>118.300</td>
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<tr>
<td>Keflavik Ground</td>
<td>BIKF_GND</td>
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<td>Keflavik Delivery</td>
<td>BIKF_DEL</td>
<td>121.000</td>
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<tr>
<td>Keflavik Information</td>
<td>BIKF_ATIS</td>
<td>128.300</td>
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</tbody>
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4.2 General Airport Procedures

The usual ATC procedures apply at Keflavik. The following are some special airport procedures drawn from the aerodrome charts. Please refer to the charts for full up-to-date information.

- **Transition altitude is 7000ft**
- **In general, only one runway should be in use at a time. Runway 02/20 is the preferred runway due to noise restrictions as far as conditions allow. The other runway 11/29, which is often preferred by pilots due to shorter taxi lengths.**
  - The noise restriction rule is not strictly enforced. BIKF_TWR has the discretion to accept specific runway requests from pilots.
- **Aircraft should be given the usual departure clearance via SID if flying a domestic route.**
  - Remember to state the runway in the clearance as SIDs at Keflavik overlap with multiple runways.
  - Please note that Greenland and the Faroe Islands are not domestic routes.
- **Aircraft should be given oceanic clearances for their international departures.** This may follow the SID assigned in Euroscope, but will usually be a routing through to their exit point out of the Reykjavik CTA. This can be determined by referring to the Reykjavik CTA diagram on our website and at the start of this document.
  - Example transmission:
    - Keeflavik Delivery, Scandinavian 123 is a B757 on stand 10 with information Alpha, requesting clearance to Stockholm Arlanda, mach .78, FL360.
    - Scandinavian 123, Keflavik Delivery, good evening sir. You are cleared to Arlanda Airport. After departure runway 11 direct OSKUM, 63N010W, ISVIG. Initial climb FL270, mach .78, squawk 4127.
    - Cleared to Stockholm, runway 11 direct OSKUM, 63N010W, ISVIG. Initial climb FL270, mach .78, squawk 4127, Scandinavian 123.
    - Scandinavian 123, readback correct.
  - As you can see the routing can be quite complex. The key is to make sure that the route terminates at a sector exit point, and that there is a waypoint for every 10 degrees of longitude (when flying west/east) and 5 degrees latitude (when flying north/south).
All departures will be given FL270 for their initial oceanic clearance, in keeping with real world procedure, unless their cruise altitude is below FL270.

If aircraft don’t specify a mach number in their flight plan, please request it from the pilot on first contact, or alternatively, via private chat.

- Circuits/traffic patterns are right-hand, unless otherwise coordinated.
- Caution should be exercised instructing pushbacks off the south end of the terminal (facing N4) as larger aircraft may obstruct the taxiway during pushback.
- Taxi routes at Keflavik are at the controller’s discretion.
  - Remember that Keflavik does not use named holding points. Instead, taxiways have different names for different sections (e.g. N4, N5, K3, K4 etc...).
    - However, it is permissible to shorten the instruction if no other possibilities are available e.g. “Taxi to holding point runway 11 via N4, C3 and K3” (K4 is obvious)
  - A380s can’t use the main terminal due to shortage of wingtip clearance and should be advised to park on the East Apron.
- Low visibility procedures come into force when RVR for runways 11/20 is less than 800 metres or when ceiling is less than 200ft. Takeoff is available on all runways during LVPS.
- Stands 1-15 are used mainly for all aircraft requiring access to the main terminal.
- Stands 66-70 are for cargo aircraft.
- General aviation aircraft should use the parking stands available on the East Apron. There are also general aviation stands available on taxiways K2 and K3.
- All other stands are available at ATC discretion. In the case of a major event, aircraft should be sent to the East Apron.
- The helipad is just south-east of the threshold for runway 29.

4.3 Aerodrome Airspace

Keflavik Approach’s airspace consists principally of a semi-circle around the airport to the west. To the east it borders the airspace of Reykjavik Approach. In usual operations when Reykjavik Approach is not online, Keflavik Approach assumes this airspace.

When both BIKF_APP and BIRK_APP are online, aircraft inbound to Keflavik will be covered exclusively by BIKF_APP and aircraft inbound to Reykjavik will be covered exclusively by BIRK_APP, unless otherwise coordinated.

The airspace is classified Class C between 3000ft and FL195, then Class A between FL200 and FL245, above which is Reykjavik Control (South). The control zone for tower extends upwards to 3000ft. Around the Keflavik Airport control zone there is also a 5nm buffer zone. Within the buffer zone, the lower limit for approach radar services is 1000ft.

Minimum separation for aircraft is 5nm between 30+ nm from the airport radar and 3nm when closer than 30nm.
5.0 Reykjavik Airport (BIRK)

Reykjavik Airport is primarily a domestic airport located in the heart of the city of Reykjavik. On VATSIM, many pilots confuse this airport with Keflavik, which is, in the real world, the larger and busier airport. The airport has 3 sets of runways available, however, only 1 set should be used under normal conditions (this is at the controller’s discretion).

- Please note that runways 06/24 should not be used in regular operations as they are too short. In fact, takeoffs from runway 06 are forbidden, as are ‘touch and go’s from both runways.
- Only runways 13 and 19 have a localiser for instrument approach.
- Runways 13, 19 and 24 use a right-hand traffic circuit.
- Runways 01 and 31 use a left-hand traffic circuit.
- Circling on final is not authorised except in case of emergency.

5.1 ATC Positions

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<tr>
<td>Reykjavik Information</td>
<td>BIRK_ATIS</td>
<td>128.100</td>
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Please note that in the real world there is no Clearance Delivery position at Reykjavik airport; this is the responsibility of Ground.

5.2 Aerodrome Airspace

Reykjavik Approach’s airspace is situated to the north-east of Keflavik Approach’s airspace. If Reykjavik Approach is not online, this sector is assumed by Keflavik Approach.

When both BIKF_APP and BIRK_APP are online, aircraft inbound to Keflavik will be covered exclusively by BIKF_APP and aircraft inbound to Reykjavik will be covered exclusively by BIRK_APP, unless otherwise coordinated.

The airspace is classified Class D between 3000ft and FL195, then Class A between FL200 and FL245, above which is Reykjavik Control (South). The control zone for tower extends upwards to 3000ft. Around the Reykjavik Airport control zone there is also a 5nm buffer zone. Within the buffer zone, the lower limit for approach radar services is 1000ft.

Minimum separation for aircraft is 5nm between 30+ nm from the airport radar and 3nm when closer than 30nm.
6.0 Akureyri Airport (BIAR)

Akureyri is often called the ‘capital of Northern Iceland’. Its airport is also an international airport, handling flights mainly from within Iceland and Greenland as well as from Europe. It has a single runway and terminal.

In keeping with real world practice, Akureyri Airport is only staffed by a tower controller on VATSIM. The tower controller provides approach services for inbound aircraft, after they have been handed off by Reykjavik Control. This is due to the lack of low level radar coverage in the Akureyri region.

Akureyri Tower’s airspace is between 3000ft and 7000ft within the Class D TMA and 3000ft to ground level within the control zone. On approach, aircraft should position themselves for the runway, with information services from Akureyri Tower within its airspace.

Please refer to the charts for full up-to-date information on local procedures.

6.1 ATC Positions

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<th>Frequency</th>
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<tr>
<td>Akureyri Tower</td>
<td>BIAR_TWR</td>
<td>118.200</td>
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Please note that there is no BIAR_ATIS position in the real world. Basic ATIS information should be given in the controller information of BIAR_TWR, and further information provided on pilot request.

6.2 Aircraft Surveillance Radar Approach (ASR)

Akureyri is the only airport in the Reykjavik CTA with an ASR/SRA approach available. This is only for runway 19. This service is quite uncommon in Scandinavia, but the essence is as follows:

1) Pilot requests an ASR approach
2) Controller accepts, and begins vectoring aircraft once they reach the radar zone and report over a waypoint. This is viewable on the chart and covers mainly the fjord north of the airfield.
3) Controller will vector the aircraft precisely onto the glideslope. This includes vectors of “Turn left by 3 degrees” and so on.
4) Controller will issue descents by small amounts (such as 500ft)
5) Pilot must continue following instructions until visual with the runway.
6) If pilot does not report visual by decision height, controller should issue a go-around and re-attempt the ASR approach.

7.0 Other Icelandic airports

There are many other airports scattered throughout Iceland which mainly cater towards light aircraft. If you wish to provide ATC at these airports, you will only be providing Aerodrome Flight Information Services (AFIS). This should include weather information, traffic information and suggested runways. In higher traffic situations, AFIS should use suggestions to help coordinate the flow of traffic. However at no time should AFIS officers start ‘controlling’ the traffic.

Under normal conditions, Reykjavik Control will provide AFIS services top down in these areas, reverting to ATC services once aircraft enter controlled airspace, which usually begins at 3000ft (see charts for more accurate explanation).
8.0 Faroe Islands (EKVG)

The Faroe Islands are an autonomous territory within the Kingdom of Denmark lying in the North Sea and coincidentally within Icelandic airspace. As such, control in the capital airport of Vágar is provided by Reykjavik Control. Controllers are also free to log in as the local AFIS officer below:

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<th>Name</th>
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<tr>
<td>Vagar Information</td>
<td>EKVG_I_TWR</td>
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Vagar Information is an Aerodrome Flight Information Service (AFIS) position which only provides information services to traffic in the Faroe Islands. This should include weather information, traffic information and suggested runways. In higher traffic situations, AFIS should use suggestions to help coordinate the flow of traffic. However at no time should Vagar Information start ‘controlling’ the traffic.

Vagar Information should also relay IFR clearances down from Reykjavik Control. So when an aircraft requests an IFR clearance, Vagar should coordinate with BIRD_CTR and then relay it back to the aircraft. If BIRD_CTR is not online, BICC_FSS should be contacted for an oceanic clearance.

AFIS officers should log in with their scope centred on the NL NDB, extending information services to all traffic within a 60nm radius. This may involve providing services to aircraft beyond the scope of visibility as VATSIM unfortunately limits tower visibility to 50nm.

The vertical limit of the service is 7500ft. Controllers should also be aware of minimum altitudes around various parts of the Faroe Islands (available in charts or on EuroScope sector) and inform pilots if they are flying over these regions.
9.0 Greenland (BGGL)

Greenland is an autonomous territory within the Kingdom of Denmark. On VATSIM, Greenland currently belongs to VATSIM Canada, but is delegated to VATSIM Scandinavia under a Letter of Agreement. Due to its proximity to Iceland, training is provided by Icelandic mentors.

All of Greenland’s airspace lies below FL195, being bound east by Reykjavik Control and south by Gander Radio, as well as above FL195 by Iceland Radio (north), Gander Radio (south) and Reykjavik Control (south-central). The airspace is currently completely non-radar except at BGSF and BGTL and therefore requires careful reference to published charts. It is highly recommended that controllers have the Greenlandic charts at their side for reference (either on computer or in hard copy) when controlling.

All international departures from Greenland require an oceanic clearance. Pilots should request these from the local AFIS/ATC unit, who will in turn request clearance from either Iceland Radio or Gander/Shanwick Radio, depending on the direction of the flight and location of the airfield. If the oceanic unit is not online, no oceanic clearance will be provided.

9.1 Søndre Strømfjord (Kangerlussuaq) Airport (BGSF)

This is the principal airport for Greenland and most international flights should be arriving here. The airport has a single runway, 09/27, and three aprons for traffic. There are no numbered stands so aircraft should be assigned simply to one of the aprons.

Use of the runways at BGSF is highly regulated as the airport is surrounded by high terrain. The minimum safe altitude within 25nm is 5300ft. Most approaches and departures should be made over the port area over open water. This means that all approaches (except visual) are assigned to runway 09, irrespective of the wind direction. Conversely, runway 27 is the preferred runway for departures, although exceptions can be made for aircraft able to climb quickly from runway 09.

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<td>Sondrestrom Approach</td>
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<tr>
<td>Sondrestrom Tower</td>
<td>BGSF_TWR</td>
<td>118.300</td>
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9.2 Narsarsuaq Airport (BGBW)

Narsarsuaq is the second Greenlandic airport able to take larger jets. The airspace surrounding it is uncontrolled with an information officer providing services at the airfield. As with Kangerlussuaq, approaches and departures must be cautioned about the high terrain, with the minimum safe altitude in to the west of the airport set at 7100ft and to the east at 8900ft.

The single runway at BGBW is runway 07/25 and as with BGSF, the preference is for arrivals via 07 and departures via 25. If departures use runway 07, rapid climb is essential as terrain on departure rises up to 2000ft within 5nm.

The approach at BGBW is particularly steep (5.6 degree glideslope) and aircraft unable to make this must descend towards the runway threshold, then make a 360 degree left-hand descending turn to lose altitude and intercept the final. Please ask pilots before they commence approach if they are able to accept the steep approach, or if they will opt for the ‘double approach’ procedure and plan ahead.
accordingly. Also ensure the turn is to the left, as there is a 2000ft mountain on the right of the airport, and that it does not exceed 1nm in radius as there is a 3000ft mountain to the north.

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<tr>
<td>Narsarsuaq Information</td>
<td>BGBW_I_TWR</td>
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9.3 Nuuk Airport (BGGH)
Nuuk is the capital of Greenland. Its airport however is on the small side, taking mainly transfers to/from Kangerlussuaq in the north. All surrounding airspace is uncontrolled and information services are provided. As with the other main airports in Greenland, high minimum safe altitudes ranging from 4000ft to 6400ft are the norm here and approaches must be carried out very carefully.

Nuuk Airport has a single runway 23/05, which takes approaches and departures equally from both directions. The ILS however is only available for runway 23. Circuits are right hand for runway 23.

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<td>BGGH_I_TWR</td>
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9.4 Søndrestrøm Information (BGGL_FSS)
This is the flight information service station for Greenland, which covers all Greenlandic airspace up to FL195. Most of this airspace is uncontrolled except for the CTA around Kangerlussuaq (Sondre Stromfjord), and around Thule (US military airport). When local positions aren’t online, BGGL_FSS will cover all positions top down, including the controlled area around BGSF. However, BGGL_FSS will not provide an air traffic control service at BGSF, instead providing only information services, which matches the real world ‘after hours’ operations. BGSF traffic will only receive ATC services when BGSF_TWR and/or BGSF_APP are online.

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10.0 Eurocontrol Islands (EURI)
Eurocontrol Islands provides ATC services in the UIR regions of the British Isles and Iceland. Their lower limit is set at FL245. As such if BIRD_CTR is not online, EURI_FSS will fill that role. Thus

- EURI_FSS provides oceanic clearances to arrivals when BICC_FSS is not online, or otherwise sends them to BICC_FSS.
- EURI_FSS provides oceanic clearances to departures when APP/TWR/GND/DEL are not online, but only when the departure has reached FL245. If, by FL245, the departure is very close to the lateral limits of EURI_FSS, then no oceanic clearance is to be issued (common sense).
- EURI_FSS shall handoff and coordinate directly with BIKF/BIRK_APP when BIRD_CTR is not online, as the upper limit for the FAXI TMA is FL245, corresponding with the lower limit of EURI_FSS.
- EURI_FSS does not cover BICC_FSS or BGGL_FSS when they are offline.
- EURI_FSS does not cover BIRD_W_CTR.
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