# IVAC2 Handbook for BIRD FIR

Contents

Maps

Selection of maps is available via the MAPS button in the top menu. Clicking this button will open the maps menu:

The maps menu contains 9 groups, accessible via the 9 black buttons in the top. Each group contains a number of maps, which can be toggled on and off by using the buttons below. Note the T button next to each map button. For maps containing text labels, the text can be toggled on or off independently from the main map by using the T button.

Be aware that some maps, for example extended centrelines, are only visible when you zoom in far enough.

There are 1 NM between each marker dot on extended centrelines, for example:
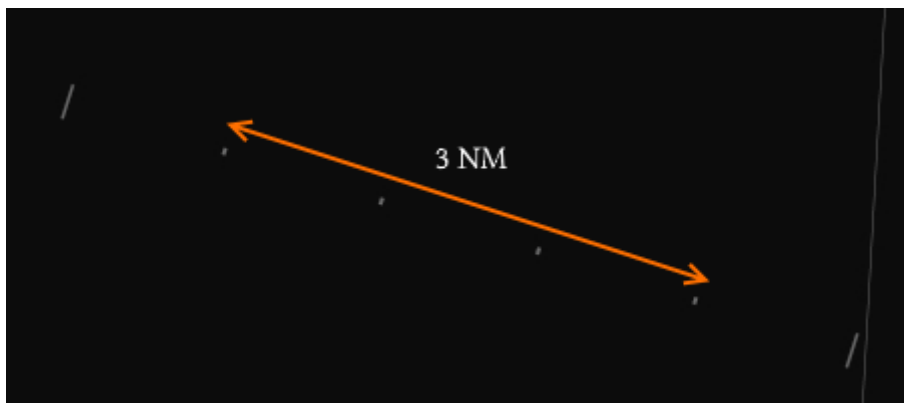
The only exemption is Vagar AFIS which utilizes the RADIS theme used within Copenhagen FIR (EKDK). Please refer to the **Handbook for COPENHAGEN FIR** when controlling as Vagar AFIS.

Map groups

The GEN group contains maps showing boundaries for external ACC sectors (EXT) and a geographical grid (GRID).

The ACC group contains range rings for Faxi TMA (FAXI RR) and Akureyri TMA (AKUREYRI RR) with intervals of 10 NM between each circle.

The ENR group contains the following maps:

- FIXES (PMY), FIXES (SEC) – significant points for en-route navigation

- NAVAIDS – radio navigation aids for en-route navigation

- RNAV RTE – aerial navigation (RNAV) routes

- ARP (PMY), ARP (SEC), ARP (GRL) – reference points for all aerodromes in Iceland, and for major aerodromes on the Faroe Islands and in Greenland

- OBST – air navigation obstacles in the FIR (Note: Only obstacles higher than 500 ft are included!)

All maps in the ENR group have text labels which can be turned on and off with the T button.

The PMY and SEC groups contain maps with significant points and radio navigation aids related to approach and departure procedures for all major and some minor aerodromes in Iceland and for EKVG airport on the Faroe Islands. In cases of BIKF and BIRK airports there are separate maps for each single runway. For example, clicking on BIRK [19] will open a map with significant points related to BIRK runway 19.

The GND group contains maps showing taxiway designators and taxiway restrictions.

The VFR group contains maps of visual reporting points.

The MIL and PRD groups contain maps of military exercise and training areas as well as prohibited, restricted and danger areas in the FIR. Note that prohibited areas are always shown, and their text labels can be activated by clicking on the map (and not on the T button).

Presets

Presets are a way to adjust the viewpoint and zoom level of the screen, and turn on or off multiple maps all in one go.

Whenever an ATC position is loaded, the correct preset is loaded automatically.

It is possible to manually load a preset via the PRESETS button in the top menu.
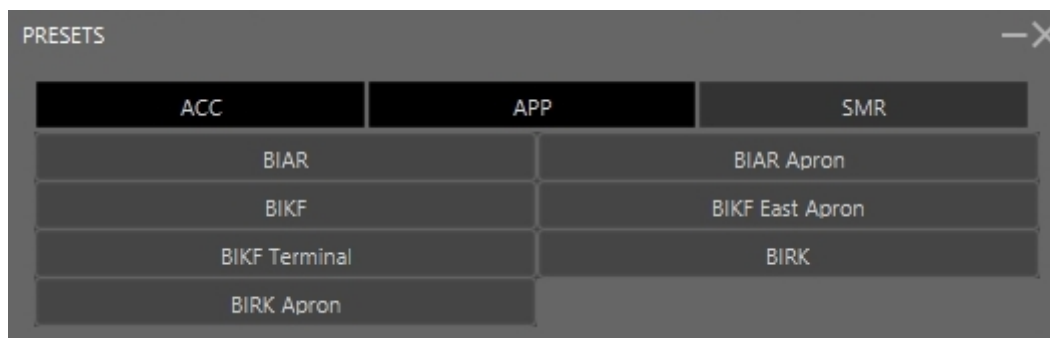
There are three preset groups which each contain a number of presets. The only preset group that is commonly used during normal controlling is the SMR group. Presets in the SMR group allow for a quick and easy way to open a ground view for a certain airport. For example, clicking the BIKF preset in the SMR group opens a ground view of BIKF airport.
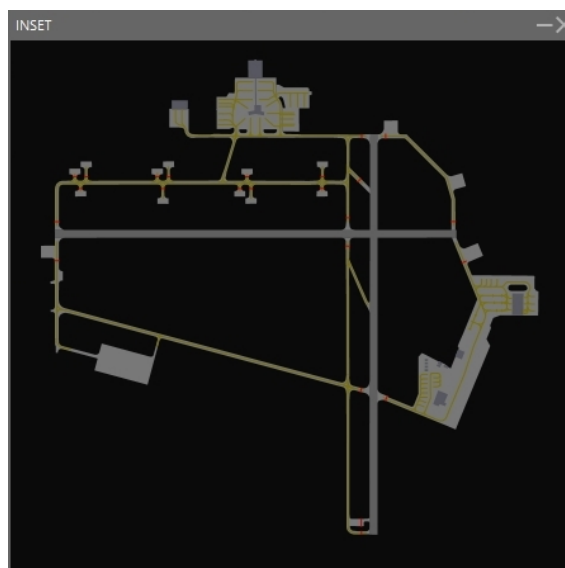
Labels

Within Reykjavik FIR, TERN labels are used at:

- ACC

- approach & departure (BIAR, BIKF, BIRK)

- aerodrome services (BIAR, BIKF, BIRK)

The following label types exist in the TERN system:

- Airborne labels

  - Unconcerned

  - Concerned

  - Assumed

  - Released

- Ground labels

  - Arrival

  - Departure

  - Unknown

Each label looks different depending on whether it is selected or unselected. To select a label, hover the mouse cursor over it.

(**Note:** *In the following chapters the labels used for* **ACC** *are described in detail. There are separate labels for approach and radar-supported tower units, however, these are based on the ACC labels and differ in the amount and arrangement of the label fields. Vagar AFIS utilizes RADIS labels – for more information please refer to the* **Handbook for COPENHAGEN FIR**.)

Label fields

The following label fields are used, and will be mentioned on the following pages. Refer back to this list when reading the next chapters.

ADES	Destination aerodrome
AFL	Actual flight level (mode C level)
AGATE	Arrival gate
* AHDG	Assigned heading or assigned route
* ASP	Assigned speed
ATYP	Aircraft type
CALLSIGN	Radio callsign
* CFL	Cleared flight level
DGATE	Departure gate
* DRWY	Departure runway
GS	Ground speed
OP_TXT	Operator text – a text field for remarks
* SI	Current ATC sector (if label is not assumed) Next ATC sector (if label is assumed)
TSSR	Transmitted SSR code (squawk code)
WTC	Weight turbulence category (L/M/H/S)

* = field will be blank on unselected labels if no value is set

Important label actions

Each field in a label can have a function. These functions can be accessed by either clicking, double clicking or right clicking a label field. Depending on the label state, different actions will be available.

To open the callsign menu: click the transmitted SSR code *(unconcerned label only)* or callsign.

To point out the track to all controllers: right click the aircraft type *(not available for unconcerned labels)*. This will draw an orange box around the track, which can be seen by all controllers.

To mark the track: right click the callsign *(not available for unconcerned labels)*. This will draw a blue box around the callsign, which can be only seen by you.

To open the flightplan: click the destination field.

To show the flightplan route: right click the destination field.

To send a text message to an aircraft: open the callsign menu and click TEXT *or* hover the label and press F7.

Aircrafts which are CPDLC only (no voice) will be shown with a box around the callsign:

For such flights, automatic CPDLC messages will be sent whenever a cleared level, assigned speed or assigned heading is set, or when a transfer to the next ATC sector is initiated.

Incoming CPDLC messages are visible in the TEXT IN window, which you can open by clicking TEXT IN in the top menu. Note that incoming messages can be clicked once to turn them grey, as a reminder for yourself that the message has been dealt with.
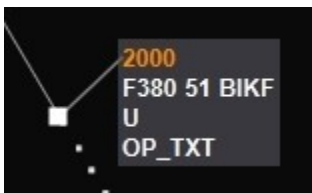
Unconcerned labels

An unconcerned label is a label of an aircraft that is not going to enter your airspace, or when it is not yet known to the system that the aircraft will enter your airspace. Unconcerned labels contain a minimal amount of information.

An unselected, unconcerned label consists of:
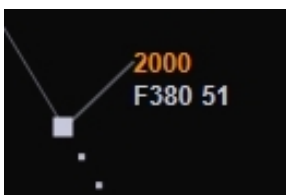
TSSR
AFL, GS

A selected, unconcerned label consists of:
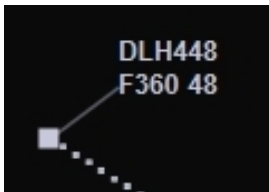

TSSR
AFL, GS, ADES
SI
OP_TXT

If an aircraft with an unconcerned label is going to enter your airspace at some point, you must set yourself as the next ATC sector. Do so by right clicking the SI field. This will move the label to the concerned state.

Concerned labels

A concerned label is a label of an aircraft that is going to enter your airspace in the future.

An unselected, concerned label consists of:

| CALLSIGN |
| AFL, GS |
| SI, ASP, AHDG, CFL |

A selected, concerned label consists of:

| CALLSIGN, TSSR, ATYP |
| AFL, GS, ADES |
| SI, ASP, AHDG, CFL |
| OP_TXT |

The concerned label gives you information you need to start planning the flight's section through your airspace. More detailed information like COPN (coordinated entry point) or PEL (planned entry level) is available via the flight lists (see respective section below).

If an aircraft is entering your sector from uncontrolled airspace, you must send a CPDLC CONTACT message to let the pilot know they need to contact you. To do so, click the SI field and click the CONTACT > (FREQ) button.

If an aircraft is assumed by another ATC sector, you must wait for this sector to transfer the aircraft to you. If you would like the previous ATC sector to transfer the aircraft right away, double click the SI field. This will make ROF (request on frequency) appear in the label for the previous controller, reminding them to transfer the flight to you.

When the flight calls you (and not before!), accept the transfer by double clicking the callsign field. This will move the label to the assumed state.

Assumed labels
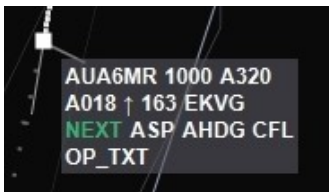
An assumed label is a label of a flight currently assumed by you – basically, all flights on your frequency.

An unselected, assumed label consists of:

CALLSIGN
AFL, GS
SI, ASP, AHDG, CFL

A selected, assumed label consists of:

CALLSIGN, TSSR, ATYP
AFL, GS, ADES
SI, ASP, AHDG, CFL
OP_TXT

The first thing you need to do when a label has been assumed is to set the next ATC sector. This is done by clicking the SI field and selecting the correct sector from the menu. If an aircraft will be leaving your sector into uncontrolled airspace, no next sector should be set.

The cleared level, assigned heading/waypoint and assigned speed can be changed by clicking those respective fields. Note: in the cleared flight level menu, CA means *cleared approach* and VA means *cleared visual approach*. LND can be set to indicate a flight has been cleared to land.

To assign a mode A (squawk) code to a flight, click the TSSR field (which will be shown in an orange warning colour if the flight is transmitting a wrong code, or 2000/7000 etc.)

For a flight arriving in or near your sector, you can set the arrival runway by right clicking the assigned heading/waypoint. To set a STAR (standard arrival route), double click the AHDG field.

You can add a note to the label by clicking the OP_TXT field. This note is visible to all controllers.

To transfer the label to the next ATC sector, right click the SI field. Once the next sector accepts the transfer, the label will be moved to the released state. If no next ATC sector is available, release the label by opening the callsign menu and clicking RELEASE.

ATC inputted data can be cleared prior releasing a target to uncontrolled airspace. To do so, either click on DISPLAY and then on WIPE ON REL in the top menu (automatic method) or press ALT + W (manual method).

Released labels

A released label is a label of a flight that was previously assumed by you, and that has now been transferred to the next sector or released to uncontrolled airspace.

An unselected, released label consists of:
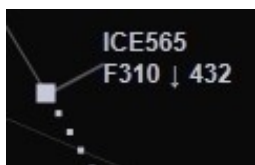
| CALLSIGN |
| AFL, GS |
| SI |

A selected, released label consists of:

| CALLSIGN, TSSR, ATYP |
| AFL, GS, ADES |
| SI |
| OP_TXT |

A released label only contains information that allows you to be aware of the flight. Since the flight will not enter your airspace again, you cannot change any of the values in the label.
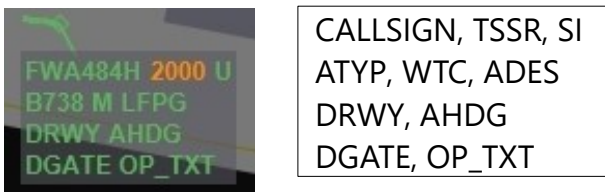
Ground labels

There are two general types of ground labels: labels for departing traffic and labels for arriving traffic.

An unselected departure label consists of:

| CALLSIGN |
| DRWY |

A selected departure label consists of:

| CALLSIGN, TSSR, SI |
| ATYP, WTC, ADES |
| DRWY, AHDG |
| DGATE, OP_TXT |

To issue an IFR clearance, double click the AHDG field. This will open the DCL (datalink clearance) window:

Fill in all required fields and click VOICE if the clearance will be transmitted to the pilot by voice, or SEND DCL to send the clearance via datalink. After transmitting the clearance (by voice or datalink) you need to enter the clearance limit (e. g. end point of a SID) in the label by clicking the AHDG field.

If you need to set a departure runway without issuing an IFR clearance (for example for VFR traffic), simply click the departure runway field.

An unselected arrival label consists of:

CALLSIGN

A selected arrival label consists of:

CALLSIGN, SI
ATYP, WTC
AGATE
OP_TXT

To set the arrival gate for an arriving aircraft, click the gate field.

By default, ground labels are only shown if you zoomed in far enough to see the ground map of an airport. However, it is possible to see all ground labels by clicking the GND button in the top menu. This can be useful if you quickly need to scan for traffic on the ground at multiple airports.

Note that departure runway and arrival/departure gate can be set even if the label is not assumed. However, you must assume the label if you want to enter anything in the AHDG or OP_TXT field.

ATC information system

The ATC information system is a window containing different information useful when controlling. It can be accessed by clicking the ATC INFO button in the top menu.

The buttons on the right side of the window give access to different pages.

(**General note:** *most recent and detailed weather information can be retrieved via the following URL:* http://en.vedur.is/weather/aviation/)

EMERG

The EMERG page contains checklists to be used in different emergency situations. The general ASSIST checklist is presented at the top, and specific checklists can be accessed via the buttons.

CLS

The CLS page allows you to look up the callsign and other useful information for different airlines. Simply type in the ICAO designator of an airline in the text field and click Search callsign.

LOC

The LOC page allows you to look up location information for different aerodromes. Simply type in the ICAO designator of an aerodrome in the text field and click Search location.

ATYP

The ATYP page makes it possible to look up performance information for different aircraft types. Simply type in the ICAO designator of an aircraft in the text field and click Get Performance Data. If you do not know the ICAO designator of a certain aircraft type, click Search for ICAO Designator to look it up.

NOTAM

The NOTAM window allows you to look up NOTAMs for BIRD FIR. Type in an airport ICAO designator and click Search NOTAMs or click Get all BIRD NOTAMs to get all NOTAMs in the FIR.

(**Note:** *further Series B & C NOTAMs can be retrieved via the following URL:* https://www.isavia.is/c/notam/)

RUNWAY

The runway page shows the recommended runways in use for airports in BIRD FIR. Please remember that these are only recommendations. NOTAMs are not considered. Be aware that this page might take a few seconds to load when you open it, during which time IVAC2 will appear to be "frozen".

LABELS

The labels window contains an overview of the different aircraft labels. You can hover your mouse cursor over each label field to see different label actions (click, double click, right click).

ATC sectors

Every ATC sector has an unique sector code and a short sector ID.

Sector codes and IDs are visible in the ATC list, which can be opened by clicking the ATC button in the top menu. In the example below, ENOR is the unique sector code and NO is the sector ID.

The sector ID is shown in the SI field in the label when an ATC sector has been set as the next sector. For example, if ENOR was set as the next ATC sector for a flight, the SI field in the label would contain the letters NO. The following sector IDs are used in BIRD FIR:

- Local ACC sectors (Reykjavik Control) have "ACC" plus their sector name as ID. For example, Reykjavik ACC Sector E has the sector ID ACC E.

- Oceanic ACC sectors (Reykjavik Control) have the sector ID OACC.

- Radio units (Iceland Radio) have "RADIO" plus their sector name as ID. For example, Iceland Radio Sector NW has the sector ID RADIO NW.

- Foreign ACC sectors mostly have two letter IDs:
  - ◦ Sondrestrom Information: GL IF
  - ◦ Edmonton Centre: EG
  - ◦ Gander Centre and Gander Radio: QX
 - ◦ Shanwick Radio: GX
  - ◦ Scottish Control: PX

- ○ Bodo Oceanic Radio: OB

- ○ Norway Control (Stavanger sectors): SV

- ○ Norway Control (combined): NO

- Regional approach and tower units (except BIRK) use the last two letters of the ICAO designator followed by APP for approach, RAD for radar, G for ground or D for clearance delivery. Tower units have no suffix. For example: KF APP is Keflavik Approach, AR is Akureyri Tower.

- Reykjavik (BIRK) has the letter "V" followed by APP for approach or G for ground.

- Keflavik Approach (Final) has the sector ID KF FIN.

- AFIS units use the last two letters of the ICAO designator. For example: VM is Vestmannaeyjar Information, VG is Vagar AFIS.

ATIS and voice communications

When signing in with IVAC2, you must always, as a minimum, open the ATIS window (click ATIS in the top menu) and click save, regardless of whether you want to set up an actual ATIS or not. This will enable voice communications and allow pilots to contact you.

You can set up an ATIS by filling out the ATIS window. Note that a detailed ATIS is only available for units where pilots would be expected to report an ATIS letter on first contact, i. e. only tower and approach units, and only at airports that have an ATIS in the real world.

After saving your ATIS, check that voice is enabled by clicking VOICE in the top menu. The opened window should have a green background (like shown below).
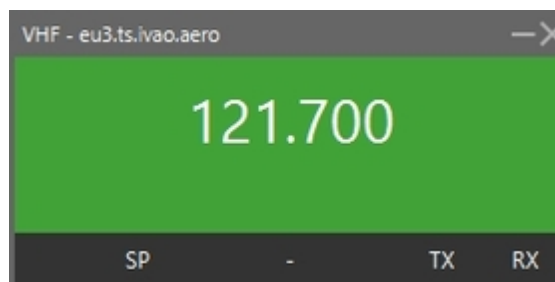
If voice has been disabled, double click the frequency to retry a connection:
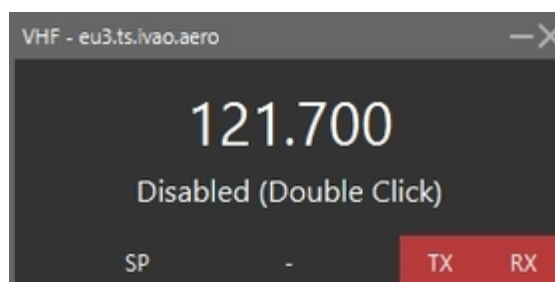
Flight lists

Flight lists are used to get an overview of flights for planning purposes. All flight lists are accessed by clicking FLTLIST in the top menu. The following lists are available:

Sector list

The sector list shows all flights currently assumed by you. It is opened by clicking the SL button.

Sector inbound list

The sector inbound list shows all flights where you are set as the next ATC sector. It is opened by clicking the SIL button.

Departure list

The departure list shows departing flights from one or several aerodromes, or from a specific runway. By clicking the DEP button, a filter window will open. Type in a departure aerodrome and/or runway to select which flights should be shown in the list. It is possible to show many aerodromes at once, for example, by typing "BI" in the ADEP field, all flights departing from aerodromes whose location indicator start with "BI" will be shown.

Approach and tower controllers are encouraged to have a departure list with their aerodrome open at all times.

Arrival list

The arrival list works like the departure list, but for arriving traffic. It is opened via the ARR button.

Holding list

The holding list shows all aircraft assigned to airborne holdings.

When instructing an aircraft to hold, first set the holding fix as the cleared waypoint in the AHDG field in the label. Then, click the callsign of the flight and select HOLD. You can now open the holding list. A dropdown menu will appear, containing all the points where aircraft are presently instructed to hold. Select a point and click ok to open the holding list.

When an aircraft is instructed to leave a holding, click the callsign and click XHOLD.