BIAR AKUREYRI AIRPORT QUICK REFERENCE SHEET

T2 BIAR P TWR Endorsement Required

General Information

- Akureyri has **one apron**, **one taxiway**, and **one runway entry/exit point**. Be mindful that arriving and departing aircraft need more time to backtrack the runway.
- There is only one position available at Akureyri: TWR.
- TWR provides a **procedural approach service** which requires differences training.

Akureyri Tower (BIAR_TWR | ART | 118.200)

Area of responsibility: The BIAR CTR and TMA.

IFR Clearance Delivery:

- **Oceanic clearance (OCL) is no longer required.**
- Check aircrafts' **SID**, **flight plan route** and **requested flight level** (RFL). Re-route if necessary. **Assign squawk code** and **set cleared flight level** (CFL) to the initial climb (FL290 or the RFL, whichever is lower).
    - **Most SIDs require high performance climbs due to terrain.** Ensure that the SID being used is appropriate for the aircraft's performance category.
- Note that only aircraft with limited RNAV equipment may follow the **G3 airway**. Re-route all 'modern' aircraft via **ING**, **ROSTI**, **LARUX** or **MY**.
- ***Clearance:*** *Cleared to [DEST], [SID] departure, climb via SID [CFL], squawk XXXX.*
- Note that 'climb via SID FL290' and 'climb FL290' are two very different instructions with two different meanings. **You cannot abbreviate the departure clearance.**

Movements:

- Aircraft **must be squawking correctly** and have **mode C set** before push or taxi.
- VFR aircraft are to be given a squawk code with startup or taxi clearance.
- Local QNH should be provided **no later than startup clearance**.
- VFR single engine piston aircraft do not require start clearance; all other aircraft do.
- **Push and start:** *Stand XX, [push/startup/push and start] approved, release point X, [face N/E/S/W].*
- **Taxi:** *Taxi holding point runway XX via X, [cross/hold short runway XX].*
    - At Akureyri, it is common to provide a backtrack instruction with taxi clearance: *Via A, backtrack and line-up runway XX, report ready.*
- All aircraft must backtrack before departing.

IFR Runway Operations:

- **Takeoff:** *Report passing 7,000ft. Winds XXX degrees XX knots, runway XX, cleared for takeoff.*
    - At 7,000ft, transfer the aircraft to the lowest BIRD_S sector or UNICOM.
- **Landing:** *Winds XXX degrees XX knots, runway XX, cleared to land.*
- **Go-arounds:** *Follow standard missed approach.*
    - Then, after the aircraft is stable: *Report 6,000ft.*
    - At 6,000ft, DCT to the IAF: *Route direct [WAYPOINT].*

IFR Arrivals (Procedural Approach Service):

Runway 01 Final Approach Altitudes				
IAF	**ILS**	**LOC**	**LOC A**	**ASR**
NB	6,100ft	6,500ft		
GILTU		6,800ft		
PEXIL	6,000ft			

- **Do not provide radar vectors.** On initial contact, provide aircraft with the local QNH.
- **Runway 01 Operations:**
    - There are no STARs for runway 01 – aircraft directly join via the IAF.
    - BIRD will descend aircraft to 7,000ft and route them to the IAF. On contact, descend the aircraft to their final approach altitude: *Route direct [IAF], descend altitude XXXX ft, QNH XXXX.*
    - If BIRD is offline, TWR may pick up aircraft early (when they come into EuroScope's range) and descend them to the final approach altitude.
- **Runway 19 Operations:**
    - BIRD will clear aircraft onto the STAR and descend them via the STAR to 7,000ft. Handoffs usually occur at the beginning of the STAR.
    - If BIRD is offline, TWR may pick up aircraft early (when they come into EuroScope's range) and clear them: *Cleared [STAR] arrival, descend via STAR to altitude 7,000ft, QNH XXXX, squawk XXXX.*
    - Once the aircraft is on the STAR, descend them further to 6,000ft (the final approach altitude for runway 19): *Descend via the STAR to 6,000 ft.*
- **When nearing the IAF:**
    - Clear the aircraft onto the approach: *Via [IAF], cleared XXX approach runway XX. [Report established.]*
    - **Only one aircraft may be cleared for the approach at once.** Once that aircraft is established, another aircraft may be cleared for the approach.
    - **Hold an aircraft:** *Hold at XXX as published, XXXX ft.*

VFR:

- **Left** circuits runway **01**. **Right** circuits runway **19**.
- **TMA Entry:** *Cleared into the TMA, XXXX ft, QNH XXXX, report entering the TMA.*
    - VFR aircraft in the TMA must fly at even/odd levels +500ft.

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Providing a Procedural Approach Service

- In real life, TWR normally does not have access to radar surveillance. **Do not give aircraft radar vectors or apply radar separation** – instead utilise published procedures and DCT aircraft to waypoints.
    - The only exception to this rule is when TWR provides a LOC/ASR approach using **primary surveillance radar** (PSR). PSR transmits a signal and, based on the returns it receives from the signal bouncing off aircraft, determines their position. It does not provide altitude information.
- TWR is responsible for **both the CTR and TMA** which are class D. Aircraft require clearance before entering the CTR or TMA.
- Note that **only one aircraft can be cleared onto initial approach at once**. If approach clearance cannot be issued before the IAF, that aircraft **must be put into a hold**.

Surveillance Radar Approach (LOC/ASR)

- **The LOC/ASR approach is only available for runway 01.**
- During the initial approach, a localiser is used by the aircraft for lateral guidance. TWR provides lateral guidance onto final approach, usually beginning with a vector of 007°.
- During the descent, TWR periodically provides altitude advisories.
- LOC/ASR approaches may only be utilised by TWR **when it is handling one aircraft**. All **other aircraft must hold** during a LOC/ASR approach.
- **Before Establishing on the LOC:**
    - All 3 of these calls must be made separately by TWR. Each must be separately acknowledged and/or read back by the aircraft.
    - **Approach Clearance:** *Descend XXXX ft. Via [GILTU/NB], cleared localiser surveillance radar approach runway 01. Report established on the localiser.*
    - **Then:** *This will be a surveillance radar approach for runway 01, terminating at 2 miles from touchdown. Obstacle clearance altitude is 640ft. Check your minima and missed approach point.*
    - **Then:** *Commence descent at 17 DME to maintain a 3 and a half degree glidepath.* (Must be fully read back by the pilot.)
- **At 12 DME:**
    - Radar monitoring begins. TWR may begin to use PSR.
    - **Radar Identification:** *Radar contact, 12 miles from touchdown, altitude should be 4,550ft.*
    - Note that during the approach a lot of radio calls are made by TWR. Clear the aircraft to land as early as possible.
    - **Landing:** *Winds XXX degrees XX knots, runway XX, cleared to land.*

Surveillance Radar Approach (LOC/ASR) (contd.)

- **At 9 DME:** *9 miles from touchdown. Altitude should be 3,420ft. Check gear down and locked.*
- **At 7 DME:** *7 miles from touchdown. Altitude should be 2,660ft.*
- **At 4.7 DME:**
    - Radar control begins. TWR may begin to issue radar vectors.
    - **Vector the aircraft onto final approach:** *Turn left heading 007 degrees, closing final approach. Report visual.*
    - **Once the aircraft has responded:** *Do not acknowledge further transmissions.*
- **Using radar vectors, keep the aircraft on the final approach path.**
    - **Too far left:** *[Slightly/Very] left of track, turn right by X degrees.*
    - **Joining from the left:** *Closing [slowly/quickly/rapidly] from the left, turn right by X degrees.*
    - **Too far right:** *[Slightly/Very] right of track, turn left by X degrees.*
    - **Joining from the right:** *Closing [slowly/quickly/rapidly] from the right, turn left by X degrees.*
    - **On track:** *On track, X miles from touchdown. Altitude should be XXXX ft.*
- **From 4.7 DME, every mile the aircraft must be told their expected altitude:**
    - **Advisory:** *X miles from touchdown. Altitude should be XXXX ft.*
    - **4 DME:** 1,490ft
    - **3 DME:** 1,120ft
    - **2 DME:** 750ft
- **When the pilot reports visual:**
    - Radar surveillance by TWR ends.
    - *Roger, radar service terminated. Winds XXX degrees XX knots.*
- **At 2 DME, if the pilot has not reported visual:**
    - The aircraft MUST go around if they are not visual by 2 DME.
    - *2 miles from touchdown. Altitude should be 750ft. Continue visually or go around. Acknowledge.*
- **At 2 DME, if the pilot reports NOT VISUAL:** *GO AROUND IMMEDIATELY. Radar service terminated. Follow standard missed.*
- **Pilot reports going around:** *Radar service terminated. Follow standard missed.*

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Standard Instrument Departures (SIDs)

End Fix	Runway	
	01	19
AR	1A	
AKI	2A 2B	
ASKUR	1A * 1B *	1C ** 1D 1E
MAMEP	1A *	
JARRI		1C ** 1D 1E
PERUR	1A * 1B *	1D
RETUR		1D **
UTISU	2A *	
Initial climb: FL290 or RFL, whichever is lower		

Warning: Many SIDs require a high minimum climb gradient due to terrain.

* Performance category A / B only.

** Performance category A / B / C only.

Published RNAV Holding Patterns

Waypoint	Inbound Course	Turns (Leg Time)	Permitted Levels
PEXIL	010°	RIGHT (1 min)	6,000ft+
NORFI	159°	RIGHT (1 min)	6,000ft+
AKI	332°	RIGHT (1 min)	5,000ft+
ARLAX	295°	RIGHT (1 min)	6,000ft+

Standard Instrument Arrival Procedures (STARs)

Initial Fix	STAR	IAF
RUNWAY 01		
Runway 01 does not have any STARs. Route arriving aircraft DCT to the IAF.		
RUNWAY 19		
AFPAC	1M	NORFI
BEZIM	1M	
CUBAS	1M	
DORFA	1M	
UTISU	1M	ARLAX
	1N	GITTA
MAMEP	1M	ARLAX
	1N	GITTA
PEXIL	1M	ARLAX
	1N	AKI
PERUR	1N	

Airspace

Name (Class)	Boundaries	Owner	Remarks
AEY CTR (D)	SFC – A030	ART	
AEY TMA (D)	A030 – A070	ART	Procedural approach service from TWR.

Navaids

Ident.	Freq.	Name	Type
AR	334	Akureyri	NDB
AKI	113.6	Akureyri	VOR/DME

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