



354TH FIGHTER WING EIELSON AFB, ALASKA



MID-AIR COLLISION AVOIDANCE PAMPHLET

12 MARCH 2007

MEMORANDUM FOR ALASKA AVIATORS

12 MARCH 2007

FROM: 354th Fighter Wing Flight Safety Office

SUBJECT: Military Flying in Interior Alaska

1. This pamphlet is offered to give you a working knowledge of the military airspace used in interior Alaska. This airspace is shared with the military, flying businesses and civilians who fly for pleasure. The information in this pamphlet is focused toward reducing the risk of a mid-air collision between civil and military aviators.
2. Some pilots refer to the “Big Sky” theory of air traffic control. This method of air traffic “control” is based upon two conditions: 1) lots of airspace, and 2) very few airplanes. Although the Alaskan skies are spacious, the “Big Sky” method of mid-air collision avoidance is risky at best, and in the Fairbanks flying area is unreasonable.
3. There are six active airfields within five miles of the International Airport, serving helicopters, light planes, jumbo jets, and everything in between. Also, Eielson Air Force Base is home to fighters, tankers, helicopters, light aircraft, Red Flag Alaska and many other transient aircraft. Add to this the pipeline patrol aircraft and the numerous small airports and backyard runways scattered throughout the Interior and the potential for a traffic conflict becomes high.
4. In this environment a pilot using knowledge, good visual and radio lookout, and help from ground-based radar is much better off than the pilot using the “Big Sky” method. Good pilots know the location of all high density traffic areas, and the general flight characteristics of the primary types of aircraft operating in these areas. Knowing the location and restrictions (if any) is beneficial to all pilots. The smart pilot is not averse to requesting radar advisories whenever possible. Special Use Airspace Information Service (SUAIS) is available 24 hours a day and can be a great aid to pilots flying in Alaska. This pamphlet will discuss SUAIS and its use along with other information you can use to avoid a near miss or a mid-air collision. Remember... flying safety is no accident.
5. If you have any questions about military flying at Eielson Air Force Base, or any of our military operating areas, please call the Eielson Safety Office at 377-1155.

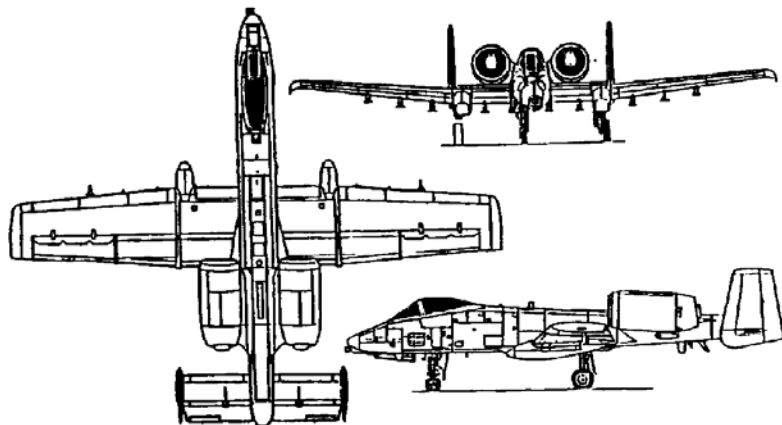
//Signed//

MATTHEW W. MITCHELL, Lt Col, USAF
Chief of Safety

AIRCRAFT BASED AT EIELSON

A-10A THUNDERBOLT II

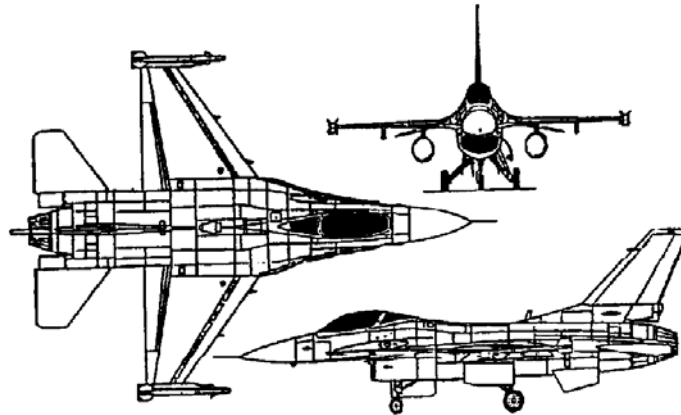
The Fairchild A-10A Thunderbolt II is dedicated to Close Air Support role, flying in support of army ground forces. The A-10A uses its 30-millimeter Gatling gun, air-to-ground missiles, rockets, and 16,000-pound payload to suppress enemy ground forces. They usually fly in formation, typically between 300 and 3,000 feet AGL. Formations are generally very loose with up to a mile or more between aircraft. Positioning of the #2 aircraft ranges from a line abreast to 45-60 degrees echelon or even directly in trail. So, if you visually acquire only one aircraft, watch the surrounding sky for its partner(s). Another aircraft could be out in front to the side, or behind. Remember, if you only see one, you don't know if it's the leader or a wingman. Their gray paint, low operating altitude and degree of maneuverability enhances the A-10's survivability in a hostile environment. Unfortunately, in peacetime these same characteristics make them hard for other pilots to see. In peacetime, they operate their red and green navigation lights full bright and leave their anti collision strobe lights (located on wing tips and tail) flashing at all times. The A-10A operates at speeds between 200 and 350 KIAS. A-10s are not limited to training within the Military Operations Area (MOA). They can fly enroute navigation sorties outside MOAs as long as they comply with FAA regulations. Their slow airspeed allows this. They normally fly between 300-2000 Ft AGL when flying outside of MOAs.



F-16C FIGHTING FALCON

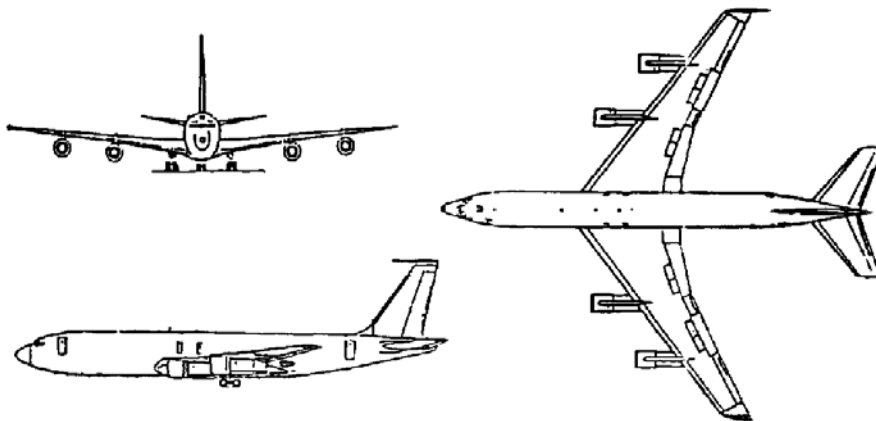
The General Dynamic F-16 Fighting Falcon is a multi-role tactical fighter with full air-to-air and air-to-ground combat capabilities. The F-16 has the capability to fight its way to a target, deliver air-to-ground ordnance, and then fight its way back to safety. This may be accomplished using a variety of tactics. The pilots train to become experts with these tactics in the Interior (MOA) airspace as well as Restricted Area R-2202, R-2205, and R-2211 and military training routes (MTR). The F-16 carries onboard radar that can detect other aircraft at great distances beyond visual range. This enhances the pilot's ability to see and avoid other aircraft. However, because of its small size (wing span=33 feet), high speed (normal operating speeds at low level = 400 to 550 KIS), and extremely effective gray camouflage paint scheme, it can be difficult to acquire.

F-16s also use widely spread formations and could be in formations consisting of four or more aircraft. The F-16 also has an anti collision strobe light mounted on top of the vertical stabilizer.



KC-135 STRATOTANKER

The Boeing KC-135 Stratotanker provides air refueling for fighter, bomber, and transport aircraft. The KC-135 aircrews train in the local area flying both VFR and IFR approach patterns. Although they are substantially larger than the fighter aircraft based at Eielson AFB, their paint scheme blends in well with the surrounding area. The KC-135 flies between 150 and 250 KIAS when below 10,000 feet.



SPECIAL USE AIRSPACE INFORMATION SERVICE

What is it? SUAIS is a 24-hour service provided to civilian pilots flying in and around MOAs and Restricted Areas in Interior Alaska. Pilots can call SUAIS at **1-800-Restricted Joint Use-USAF** (1-800-758-8723), 372-6913 from the Fairbanks area, or VHF **125.3, call sign Eielson Range Control**. Primary coverage is along the AK Hwy. The further from the highway, typically the coverage quality is reduced. For more on SUAIS log on to: <http://www.elmendorf.af.mil/shared/media/document/AFD-061130-054.pdf> .

Who is Eielson Range Control (ERC)? ERC is an airspace manager at Eielson AFB, Alaska. It is normally staffed from 7 a.m. to 5 p.m., Monday through Friday (except federal holidays), and times when Air Force flying is in progress in Interior Alaskan MOAs and Restricted Areas. After hours, telephone and radio callers will hear the airspace status through a recorded message. ERC is equipped with UHF and VHF radios and radar displays.

Why use it?

First: safety. Eielson Range Control can advise civilian pilots of high-speed military aircraft operating in shared MOA airspace. Of particular concern are the Birch and Buffalo MOAs overlaying the Richardson and AK highways between Tok, Delta Junction, Glennallen, and Fairbanks--military aircraft occasionally use the corridor.

Second: efficiency. Military Restricted Areas are not always in use during the charted operating times. When not in use, ERC can clear civilian aircraft through these areas. ERC can also clear military aircraft out of any airspace if civilian aircraft emergency operations--for example, an air ambulance mission--requires it.

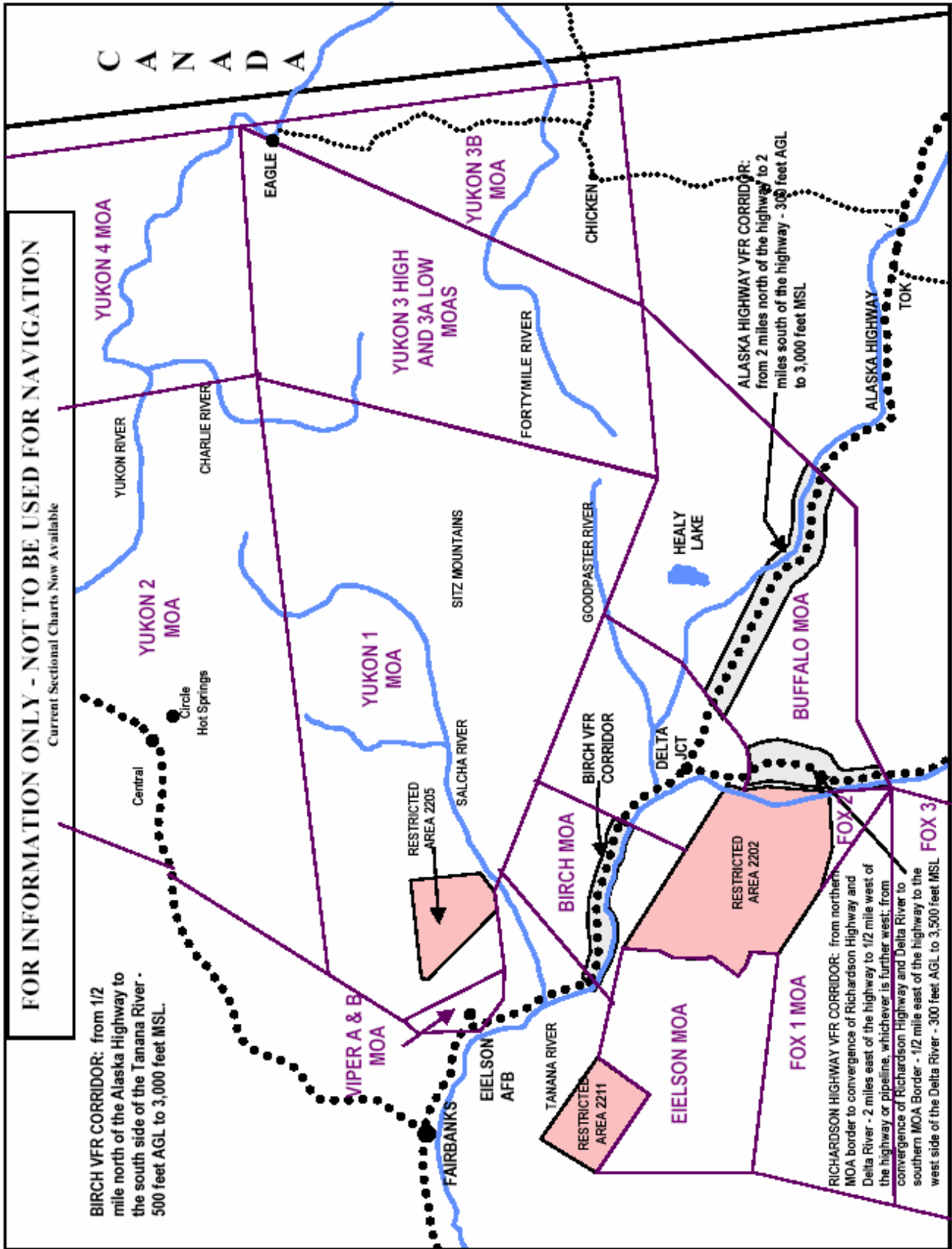
Where is SUAIS radio and radar coverage provided? Currently, through a series of radio relays, aircraft flying in the vicinity of R-2202, R-2205, R-2211 and the western Yukon MOAs talk to ERC. Coverage extends along the Alaska Highway toward the Canadian border and south of the Alaska Range to Glenallen. Aircraft flying in mountainous terrain to the east of the Tanana River will need to be at or above the tops of the highest terrain in their immediate vicinity. The ability to see non-transponder-equipped light aircraft is limited and unpredictable. Squawking is highly encouraged.

Can Eielson Range provide air traffic control? No. Service is limited to advisory information on the active/inactive status of airspace and the approximate locations of Air Force aircraft. IFR vectoring, processing of flight plans, etc., cannot be provided. However, ERC is an excellent source of information and should be used to develop your situational awareness on the airspace. Conveying your intentions to ERC is critical to helping the system enhance flight safety.

Does SUAIS include current Army operations? SUAIS includes Army artillery firing at all hours, and known helicopter operations. It also provides Army Unmanned Aerial Vehicle operations information in their area of coverage between Donnelly Dome and Fairbanks.

History. The Air Force created SUAIS in 1994 to enhance both safety and efficient airspace use in Interior Alaska. Since then, it has become a regular feature of general and commercial aviation in the area. For more information log on to the following Web site: <http://www.elmendorf.af.mil/11AF/611AOG/611AOS/webdocs/suais/suais.htm>

SPECIAL USE AIRSPACE



FLYING IN THE EIELSON AFB AREA

Awareness of MOAs, MTRs, and Restricted Areas is essential to safe flying. Red Flag Alaska exercises bring large numbers of military aircraft to operate in these areas.

Eielson AFB aircraft use three bombing (and artillery) ranges (R-2202, R-2205, and R-2211). These ranges are clearly depicted on sectional charts. It is essential that civilian aircraft avoid flying in these ranges when they are in use. Fairbanks Approach Control can be contacted to determine whether the ranges are in use. In addition, civilian aircraft can contact Eielson Range Control on 125.3 (SUAIS) to obtain clearance to fly through these areas when conditions permit.

Eielson AFB also uses several permanent MOAs. There are no FAA controlling agencies that civilian aircraft can contact for traffic advisories when the MOAs are active. Limited traffic information within approximately 25 nm of the bombing ranges can be obtained from Eielson Range Control on 125.3 (see SUAIS). While range control may help, diligent visual lookout must be practiced when flying through active MOAs in the interior.

Fighter aircraft from Eielson AFB also use many MTRs in the area. These routes, both VR and IR, are depicted on sectional charts; however, only the route centerline is shown (almost all interior routes are 10nm wide). Generally these routes extend from the surface to 3000 feet AGL; but some go as high as 17,000' MSL. The routes are active by NOTAM Advisory. Flight Service Stations can tell you which routes are active within 100NM. Generally, fighter aircraft flying in MTRs are low altitude and high speed. It is best to avoid active MTRs if at all possible.

DO:

- Become familiar with the Interior military airspace.
- Avoid flying through active MOAs and MTRs, whenever possible.
- Contact nearest FSS or Fairbanks Approach to determine if ranges, MOAs, or MTRs are active.
- Contact Eielson Range Control for SUAIS in the vicinity of Eielson AFB, interior ranges or MOAs.
- When flying through active MOAs or MTRs maintain a constant visual lookout (ahead and behind) for military traffic.

DON'T:

- NEVER fly through an active restricted area without contacting Eielson Range Control on 125.3 for permission. Live bombing, artillery or surface to air missile firings may be in progress.
- Fly through active Military Airspace unless it is impractical to go around it.

VISUAL APPROACHES/DEPARTURES

Military aircraft flying visual approaches to Eielson usually fly across the Tanana River at 2,000 feet MSL, often in close formation, to line up with the runway. They will then operate in a rectangular or overhead pattern. Visual departures will make climbing turns out of traffic, usually toward one of the restricted areas.

INSTRUMENT APPROACHES/DEPARTURES

Both military and civilian aircraft practice instrument procedures at Eielson. The TACAN and ILS approaches basically extend along the runway centerline out to about twelve miles (approximately over Harding Lake for Runway 31).

SPECIAL CONSIDERATIONS FOR RED FLAG ALASKA EXERCISES

Red Flag Alaska is a series of large scale flying exercises, which occur in the Eielson AFB area several times a year. These exercises may have up to 100 military aircraft flying in the Eielson AFB area at one time (in the span of two hours). It is very hazardous to fly VFR within the Interior Military Operations Areas during Red Flag Alaska exercise periods. These periods are usually two hours long; normally one period is in the morning and one in the afternoon. Fairbanks FSS, Fairbanks Approach, or Eielson Range Control (VHF 125.3) can confirm these exercise periods. Civilian aircraft flying from Northway or Glenallen to Fairbanks can avoid Red Flag Alaska airspace by flying at altitudes between 7,500 MSL up to Class A Airspace. You are encouraged to participate in the Special Use Airspace Information Service (SUAIS) provided by Eielson Range Control when airborne. This service is described above and also in pamphlets obtained at any Flight Service Station in the interior or on the web page. The web page also contains the Cope Thunder annual schedule. There you will get all the military airspace information you desire.

LIGHTS OUT OPERATIONS AT NIGHT

Military operations now require pilots to train with Night Vision Goggles (NVGs). This training involves flying with reduced aircraft lighting and in some cases no exterior lights at all. At times pilots practice NVG takeoffs and landings which require Eielson AFB airfield lighting to be turned down or even off. A NOTAM will be posted listing times, Restricted Airspace and/or MOAs being used. Pilots relying only on See and Avoid will not be able to see these aircraft, nor in some cases the airfield and should avoid the area or coordinate with the controlling agency in order to ensure positive separation. Safety procedures are in place using radar to ensure that military aircrews know when VFR aircraft enter the airspace. If necessary, they will turn their lights on and stop training if an unsafe situation develops.

WAKE TURBULENCE

Dangerous? **YES!** Unexpected, invisible, and unpredictable? **NO!** The one positive aspect of wake turbulence is its predictable occurrence. Wake turbulence is a vortex created by any wing producing lift. The vortex trails the wing tips and spreads outwards and downwards at 500 feet per minute. All aircraft produce some degree of wake turbulence, however, the greater the generating aircraft weight and the slower it flies, the more powerful the vortices. Cargo aircraft and passenger airliners produce powerful wake turbulence that could have a dramatic effect on the unsuspecting general aviation pilot. Here are some good rules of thumb for avoiding wake turbulence. During cruise, avoid flying directly behind and below other aircraft. During landing, fly your approach above the heavy aircraft and land beyond the point where the aircraft lowers its nose to the runway; during takeoff, liftoff before the rotation point of the heavy aircraft and climb above its flight path. Allow adequate time separation between yourself and the aircraft in

front of you, even if traveling perpendicular to its flight path. Don't get caught in these horizontal tornadoes.....Think Ahead!

EIELSON'S CLASS "D" AIRSPACE

Defined as that airspace within a 4.7nm radius of Eielson extending from the surface up to, but not including 3,000 feet AGL. The control tower is operational daily from 0700-2300 local time and other times by NOTAM. Eielson tower must be contacted if operating in the Class D Airspace. Frequencies are 127.2 and 352.05. **NOTE:** There is a long stretch of the Tanana River that lies well within the 4.7nm radius of the Class D Airspace. Also take note that Eielson TACAN lies at the south end of the 14,500-foot runway (That's almost three miles!). As such, when traversing the Eielson Class D Air space, it is advisable not to use just the river or TACAN (DME) as a guide to "five miles", instead remain well clear to the west of the river and always contact the tower if able.

REPORTING CONFLICTS WITH MILITARY AIRCRAFT

If you are unfortunate enough to have a close encounter with a military aircraft in the Eielson AFB area then please report it to the FAA and to the Eielson AFB Safety Office. Reporting the incident to the Eielson Safety Office is the best way to ensure that action is taken to prevent further incidents. To report incidents call (907) 377-1155 or (907) 377-1025. You can also reach the Safety Office by mail at:

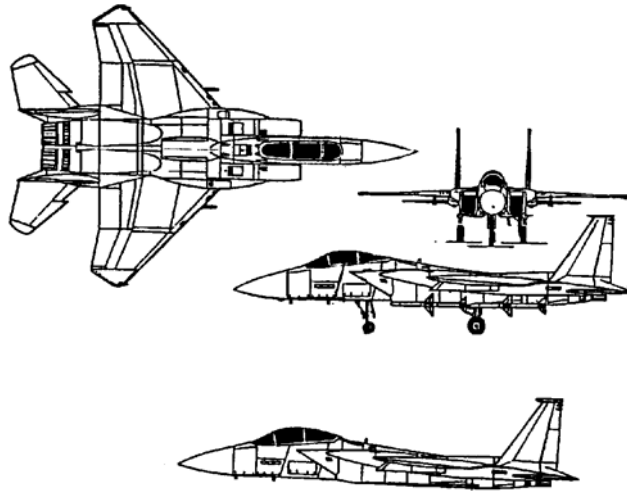
**354 FW/SE
354 Broadway St., Unit 13A
Eielson AFB AK 99702-1894**

or email at:
354fw.se@ielson.af.mil

FREQUENT VISITING AIRCRAFT

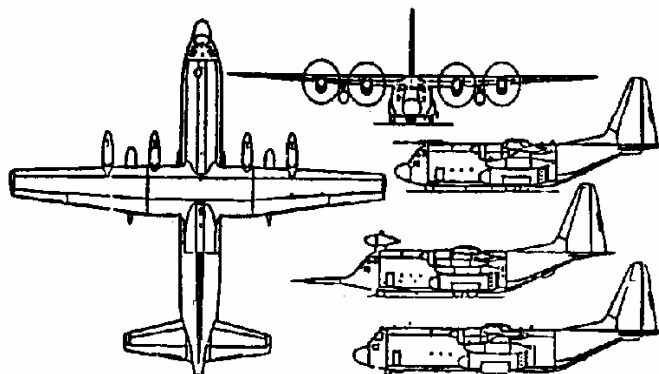
F-15 EAGLE

The F-15C is the Air Force's all-weather air superiority fighter. The F-15E is an air-to-ground version of the F-15C. Based at Elmendorf AFB, these aircraft utilize the Interior airspace frequently. They also use Eielson AFB for instrument approach training. F-15's operate at all altitudes and all airspeeds. Both models of the F-15 carry an onboard radar that can detect other aircraft at great distances. They are painted gray camouflage and are very hard to see.



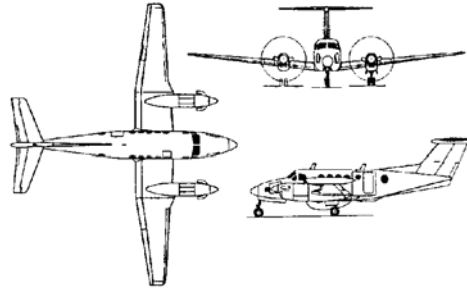
C-130 HERCULES

The C-130 Hercules is used for tactical transport and airdrop. Special versions of the C-130 include rescue, weather, special operations, and gunship variants. They all operate at airspeeds between 150 and 250 KIAS in the landing pattern. These aircraft sometimes participate in exercises in the Interior MOAs and fly at very low altitudes (300 to 500 feet above the ground). Watch for groups of 2-6 aircraft in 2,000' to 4,000' trail formation. Active duty aircraft are generally gray and ANG are typically green camouflage. Like the A-10, these aircraft are not limited to operations within MOAs. They can be found flying VFR practically anywhere.



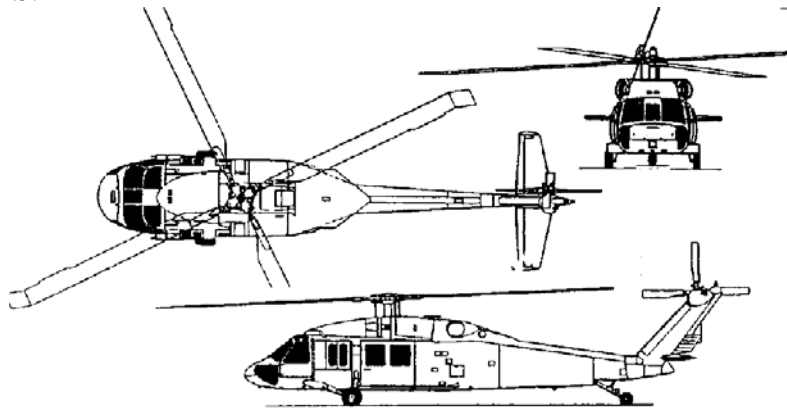
C-12 KING AIR

The Beech King Air is used for personnel transport throughout Alaska and frequents the Eielson area. It travels at 250 KIAS, and is capable of operating out of bare-base airfields.



HH-60 BLACK HAWK

The Sikorsky HH-60 Black Hawk helicopter performs a variety of roles around Eielson including support of range operations, search and rescue exercises, and re-supply of Eielson's outlying sites. They fly low altitude from the surface to 1,000 feet above the ground, between 120 and 150 KIAS.



OTHERS

C-5 and C-17 cargo aircraft are occasional visitors to Eielson and these are somewhat larger than the aging C-141. They typically fly similar profiles as the C-130. KC-10 refueling aircraft also visit from time to time. They are the military derivative of the DC-10 and typically operate above FL 180.

EIELSON AFB AIRFIELD INFORMATION

LOCATION 22 miles east of Fairbanks, Alaska
RUNWAY 31/13 14,500 feet, concrete, two north arresting cables, one south arresting cable
ELEVATION 547 feet MSL
LIGHTING Airfield Rotating Beacon (1 Green, 2 White)
RUNWAY High Intensity Runway Lighting (HIRL) with Sequenced Flashing,
Precision Approach Path Indicator (PAPI)
NAVAIDS **TACAN-CH 98**
Runway 31 ILS-109.90
Runway 13 ILS-110.50
RADAR No radar approaches at this time
CLASS "D" AIRSPACE 4.7 nm radius up to 3,000 feet MSL
FREQUENCIES TOWER-127.2 (VHF) OR 352.050 (UHF)
GROUND-121.8 (VHF) OR 275.8 (UHF)
SUAIS RANGE CONTROL-125.3 (VHF)
1-800-758-8723 or 372-6913 from Fairbanks area
<http://www.elmendorf.af.mil/11AF/611AOG/611AOS/webdocs/suais/suais.htm>
<http://www.eielson.af.mil>

EIELSON AFB AIR TRAFFIC CONTROL CONTACTS

Commander, Airfield Operations Flight	Capt James Hudnell	(907) 377-3116
Chief Controller	SMSGt John Turner	(907) 377-7050
Chief, ATC Training Standardization	MSgt Johnny Cofer	(907) 377-4362

A Superior Pilot Is One Who Stays Out Of Trouble By Using Superior Judgment To Avoid Situations, Which Might Require The Use Of Superior Skills!

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