NOTE: Aircraft experiencing lost comms with RAPCON south WITTMAN, ARIZONA THE VICINITY OF AUX

CAUTION: HANG GLIDER TRAFFIC IN 8 NM SSW OF AUX

CAUTION: TERRAIN RISES RAPIDLY 4NM SOUTH OF AUX

CAUTION: TERRAIN RISES RAPIDLY 4NM SOUTH OF AUX

NOTE: ALL DME FROM LUF TACAN (CH 77)

CAUTION: TERRAIN RISES RAPIDLY 4NM SOUTH OF AUX

NOTE: Aircraft experiencing lost comms with RAPCON south of the LUF R-300 should maintain VFR and proceed visually to the AUX-1 field. While enroute re-attempt radio contact.

USE LUKE AFB WEATHER AND ALTIMETER SETTING

CIRCLING NOT AUTHORIZED

NOTE: Aircraft experiencing lost comms with RAPCON south of the LUF R-300 should maintain VFR and proceed visually to the AUX-1 field. While enroute re-attempt radio contact.

VISUAL APPROACH

USE LUKE AFB WEATHER AND ALTIMETER SETTING
Summary of Changes for 56 FW AUX-1 Civil Aircraft Usage Policy

- Paragraph 1B: Practice approach authorized hours changed from “daylight hours” to “official sunrise to official sunset”.
- Paragraph 1C: Weather restrictions for practice approaches changed from “3000’ AGL and/or visibility is less than 3 miles” to “weather is less than 3,500’ ceiling and/or 3 SM visibility, or when PIREPs indicate that the pilots are unable to maintain VFR in the Aux-1 pattern”.
- Paragraph 1D: Aircraft will now be directed to contact 118.15 (north approach) rather than 120.5 (auxiliary arrival) on initial call up.
- Paragraph 1F: Added the requirement of a two way radio for all aircraft operating in the Aux-1 airspace (note: this should already occur because of the Luke SATR but it will now be formalized in this policy letter)
- Paragraph 1G: Now prohibits aircraft who have lost radar contact from continuing practice approaches
- Paragraph 1J: Added information about where the Rwy 11 ILS approach plate can be found
- Paragraph 1K: Adds guidance on pilot responsibility for terrain and obstruction clearance while operating in the Aux-1 pattern.
- Paragraph 1L: Changed from explaining IFR procedures in the Aux-1 pattern to mandating all aircraft to terminate the Aux-1 pattern with a missed approach and prohibiting them from descending below the decision height.
MEMORANDUM FOR Phoenix Airspace Users Working Group (PAUWG)

FROM: 56 FW/CC

SUBJECT: Policy for Civil Aircraft use of Luke Auxiliary Field #1 (Aux-1)

1. Luke AFB, 56th Fighter Wing, has approved the use of Aux-1 for restricted use by Civil Aircraft. Our primary concern is flight safety for all who fly in the Luke area. Also of concern is protecting Luke’s military training mission equities and being good neighbors and community partners to allow use of this field when weather and training conditions permit. We need a clear understanding of each party’s role in doing so. Civil Aircraft use of Luke Aux-1 is subject to the conditions listed here:

   A. During Luke RAPCON operational hours of operation, Civil Aircraft are authorized to request, and if ATC approved, execute Luke Aux-1 ILS RWY 11 approaches. Requests will be approved based on ATC workload and/or non-interference with military training flights.

   B. Luke RAPCON hours of operation are published in the VFR sectionals and/or via NOTAM. Aux-1 approaches are authorized only from official sunrise to official sunset.

   C. Practice approaches are terminated at Aux-1 when the reported weather is less than 3,500’ ceiling and/or 3 SM visibility, or when PIREPs indicate that pilots are unable to maintain VFR in the Aux-1 pattern. Weather minimums are based on Luke AFB weather and no weather equipment is located at Aux-1.

   D. Civil Aircraft requesting service to Aux-1 shall maintain VFR, contact Luke Approach on 118.15 and comply with Luke’s Special Air Traffic Rule (SATR) as defined in 14 CFR Part 93 (Subpart O: 93.175-177). For Aux-1 services, also see Phoenix TAC chart for geographic depiction.

   E. Luke RAPCON will provide basic VFR radar services on a workload permitting basis. A maximum of 6 Civil Aircraft can be on vectors for practice approaches at Aux-1 at any given time.

   F. An operational transponder and two-way radio communication is required for all aircraft operating in Aux-1 airspace under radar control.

   G. If radar contact is lost and cannot be reestablished, Luke RAPCON will instruct the Civil Aircraft to maintain VFR and discontinue practice approaches.
H. In the event of lost communication, aircraft must maintain VFR, proceed visually to Aux-1 and reattempt radio contact while climbing to 3,500’ MSL or above. Expect radar and radio contact within 3-5 miles from Aux-1.

I. All 56 FW military aircraft have priority at Aux-1 at all times. If traffic conditions dictate, Civil Aircraft will be instructed to maintain VFR and discontinue with radar services to avoid interfering with fighter pilot training.

J. Aux-1 ILS RWY 11 approaches will be IAW most recent approach plate publications. This policy letter, along with changes/updates to the published approach plate will be distributed through local user working groups and maintained on the Luke AFB Home page under Base Information/MACA information. (https://www.luke.af.mil/).

K. Pilots shall maintain their own terrain and obstruction clearance at all times while executing Aux-1 procedures. Terrain and obstruction alerts cannot be issued by ATC. Aircraft will be operating VFR below established Minimum Vectoring Altitudes (MVAs) while operating in the Aux-1 pattern. All radar patterns and vectors will be northwest of Aux-1 due to rising terrain to the south. All headings, altitudes and vectors are recommended and advisory in nature. Pilots must maintain vigilance to see and avoid other aircraft operating in the vicinity of Aux-1.

L. The runway at Aux-1 is unsuitable for landing. All approaches will terminate in a missed approach. Aircraft will not descend below Decision Height.

2. For questions or concerns for Civil Aircraft operation at Aux-1, contact Luke RAPCON at (623) 856-6448.
MidAir Collision Avoidance (MACA) Program

Luke Air Force Base, Arizona

WE BUILD THE FUTURE OF AIRPOWER

JANUARY 2018
Dear Fellow Aviators,

Midair collisions are an area of vital concern to everyone who flies an airplane. The actual number of midairs between Air Force aircraft and general aviation aircraft is relatively low; however, 80 percent of reported Air Force near misses occur with general aviation aircraft. Because of increasing general aviation traffic and heavy concentrations of military aircraft involved in training, we want to inform you about the flying activity at Luke Air Force Base.

The purpose of this pamphlet is to alert you to the many areas of high midair collision potential in the skies over Arizona and to discuss ways to make them safer. This pamphlet will describe available radar services, the types of military aircraft you may encounter, arrival and departure routes, military operating areas, and low level routes. It also provides information regarding midair collisions and ways we can all help avoid them.

The pilots and controllers assigned to Luke Air Force Base are committed to maintaining a valid and active midair collision avoidance program. We hope this pamphlet will serve to increase your understanding of Luke’s flying activities so we may continue to safely share the skies. If you desire any additional information or a briefing from the Luke Air Force Base MACA team members concerning our operations, please contact the Luke Flight Safety Office at (623) 856-6942, Airfield Operations Flight Commander at (623) 856-7341, or Airspace Management at (623) 856-5855.

Additional copies of this pamphlet can be obtained by calling the Luke Flight Safety Office.
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Luke AFB Location and Operation

Location: 19 miles West of Phoenix Sky Harbor
Airfield Identifier: KLUF
Coordinates: N 33 32.26  W 112 22.8
Elevation: 1085’
Frequencies: Approach - 125.45/118.15
Tower - 119.1

Luke AFB is closed to all civil traffic. Extensive, high speed student jet training in progress.

Contact Luke Approach for traffic
The F-16 and F-35 are multi-role fighters. Luke is the largest single F-16 base worldwide. It is one of 2 USAF F-35 training bases. There are over one hundred F-16s assigned to Luke and more F-35s are showing up monthly. All phases of F-16/F-35 training for USAF pilots and some foreign countries are conducted here. Most F-16s/F-35s travel in even numbers, either 2 or 4 together, except in the local pattern where they'll fly as singles. F-16s/F-35s routinely fly 350 kts on departure and 300 kts on recovery and in the traffic pattern. In the Military Operations Areas (MOAs), airspeeds range from 150 kts to supersonic. On Military Training Routes (MTRs), F-16s/F-35s fly 500 kts at 500’-1000’ AGL. While in the MOAs or on MTRs, F-16s/F-35s generally fly 1-2 nm line abreast with another pair line abreast 2-3 nm in trail. So, if you see one F-16/F-35, look for others... chances are good there will be another one close by.
In addition to restricted airspace, the Gladden/Bagdad and Sells MOAs are the most highly used areas for Luke F-16s/F-35s. Operations are typically conducted sunrise to 2300(L), Mon-Fri and sometimes Sat/Sun. Operations in the Sunny MOA & ATCAA are conducted from 12,000 MSL—FL290. Numerous MTRs transit in and around Luke and the Phoenix area. For additional information on special use airspace please refer to sectional charts, local NOTAMs, etc.
MILITARY TRAINING ROUTES:
LOW ALTITUDE NAVIGATION AND TACTICAL TRAINING AT AIRSPEEDS IN EXCESS OF 400 KNOTS (NORMAL 450-550), BELOW 10,000 FT MSL
LUKE AIRCRAFT NORMALLY FLY THEM AT 500-1000’ AGL
ACTIVE: 0600-2400 (L) / MON - FRI (OTHER TIMES BY NOTAM)
ROUTE CHARACTERISTICS:
WIDTHS: VARIES BETWEEN 5-20NM WIDE
FLOORS: 100-300’ AGL
CONTACT FLIGHT SERVICE STATION (FSS) FOR MTR STATUS
SPECIAL AIR TRAFFIC RULE

APPLICABLE TO VFR AIRCRAFT IN VICINITY OF LUKE AFB

ACTIVE: DAYLIGHT HOURS / MON - FRI (OTHER TIMES BY NOTAM)

ALTITUDES: AS DEPICTED

CONTACT LUKE APPROACH:

118.15 NORTH OF BXK / 125.45 SOUTH OF BXK / 120.5 VICINITY OF E25
SPECIAL AIR TRAFFIC RULE

2-WAY COMMUNICATION REQUIRED PRIOR TO ENTERING AND WHILE WITHIN VERTICAL AND LATERAL BOUNDARIES
SELLS MOA & ATCAA
ACTIVE: SUNRISE - 2300(L) MON - FRI (OTHER TIMES BY NOTAM)
ALTITUDES: 3000’ AGL - FL510
(This airspace is also used by military aircraft from Tucson and Davis-Monthan AFB.)

USE CAUTION WHEN TRANSITING SELLS MOA - NUMEROUS MILITARY TRAINING ROUTES (MTRs) TRANSIT THE AIRSPACE
MILITARY AIRCRAFT ON MTRs ROUTINELY OPERATE AT SPEEDS IN EXCESS OF 500KTS DOWN TO 500’ AGL

DAVIS-MONTHAN LATN AREA HAS AIRCRAFT 100’ AGL TO 3000’ AGL

CONTACT ABQ CTR AT 126.45 FOR STATUS AND ADVISORIES
Military Ranges/Restricted Areas

NOTE: RESTRICTED AIRSPACE / RANGES MAY STILL BE ACTIVE IF GILA BEND TOWER AND / OR SNAKEYE IS CLOSED

CONTACT ABQ CTR AT 126.45 FOR STATUS AND ADVISORIES
**MILITARY RANGES & RESTRICTED AREAS**

R-2301E: SURFACE—FL800

R-2304-5: SURFACE TO FL240

ACTIVE: MON-SAT, 0600-2300L (OTHER TIMES BY NOTAM)

**TO CHECK RANGE / RESTRICTED AREA STATUS:**

ZAB: 126.45

LUKE APPROACH: 125.45

GXF TOWER: 127.75
GLADDEN MOA & ATCAA
ACTIVE: SUNRISE - 2300(L) MON - FRI (OTHER TIMES BY NOTAM)
ALTITUDES: 7000’ MSL (5000’ AGL) - FL330

BAGDAD MOA & ATCAA
ACTIVE: SUNRISE - 2300(L) MON - FRI (OTHER TIMES BY NOTAM)
ALTITUDES: 7000’ MSL (5000’ AGL) - FL280

THESE ARE LUKE’S MOST HIGHLY USED MOAs. OPERATIONS ARE GENERALLY CONDUCTED ABOVE 10,000’ MSL, BUT CERTAIN MISSION REQUIRE TRANSITIONS TO THE 7,000’ AGL FLOOR. ALSO, WHEN ABQ CENTER “CAPS” THE TOP OF THE AIRSPACE OR WHEN WEATHER IS A FACTOR, MISSIONS WILL BE CONDUCTED LOWER.

PLEASE CONTACT ABQ CTR FOR ADVISORIES IF TRANSITIONING MOA AT (128.45)
OUTLAW MOA & ATCAA
ACTIVE: SUNRISE - 2300(L) MON - FRI (OTHER TIMES BY NOTAM)
ALTITUDES: 8000’ MSL (3000’ AGL) - FL510 (NORMALLY CAPPED AT FL290)

JACKAL MOA & ATCAA
ACTIVE: SUNRISE - 2300(L) MON - FRI (OTHER TIMES BY NOTAM)
ALTITUDES: 11000’ MSL (3000’ AGL) - FL510 (NORMALLY CAPPED AT FL300)
Alert Area A-231

Active: Continuous

Exercise extreme caution for high speed jet traffic in A-231

Contact Luke Approach on 118.15 or 125.45 for advisories
BLACK - VFR SOUTH & BUSCO DEPARTURES GROUND TRACKS
BLUE - TIRON-GLADDEN DEPARTURE
RED - VFR NORTH & LAKE DEPARTURES
GREEN - NORDY departure to NOLLS and ARSON

CONTACT LUKE APPROACH ON 118.15 OR 125.45 FOR ADVISORIES
THE HIGHEST POTENTIAL CONFLICT AREAS CONTINUE TO BE ON LUKE'S SOUTHERN DEPARTURES (SOUTH OF GOODYEAR AIRPORT) AND NORTHERN DEPARTURE IN THE VICINITY OF LAKE PLEASANT. PRACTICE DISCIPLINED SEARCH PATTERNS AND IT IS RECOMMENDED YOU CONTACT LUKE APPROACH FOR TRAFFIC ADVISORIES.

CONTACT LUKE APPROACH ON 118.15 OR 125.45 FOR ADVISORIES
BLACK - GROUNDTRACK OF THE VALLEY RECOVERY
BLUE - GROUNDTRACK OF THE TANKZ RECOVERY

ARRIVALS FROM THE SOUTH FUNNEL TO GBN VORTAC ENROUTE TO LUKE

ARRIVALS FROM THE NORTH ENTER THE LUKE TRAFFIC PATTERN FROM NORTHWEST OF THE WHITE TANKS
BLACK - PATTERN ENTRY FROM SOUTH (i.e. VALLEY RECOVERY)
BLUE - PATTERN ENTRY FROM TANKZ RECOVERY
RED - PATTERN ENTRY FROM AUX 1 (INSTM PRACTICE AIRFIELD)

USE CAUTION IN THE VICINITY OF BUCKEYE AND THE WHITE TANKS
EXERCISE EXTREME CAUTION WHEN FLYING IN THE VICINITY OF THE SUBSTATION (NW OF SUN CITY) CHURCH (SW OF LUKE), AND THE ABANDONED AIRFIELDS (NORTH & SOUTH OF LUKE). THESE AREAS ARE USED AS REPORTING AND ENTRY POINTS INTO LUKE’S TRAFFIC PATTERN FOR BASE ASSIGNED F-16’s.

CONTACT LUKE APPROACH ON 118.15 OR 125.45 FOR ADVISORIES
WHILE ON RADAR VECTORS FOR INSTRUMENT TRAINING, THE GREATEST POTENTIAL CONFLICT WITH CIVIL TRAFFIC IS IN THE VICINITY OF ARROWHEAD HOUSING AREA AND INSIDE 10NM FINAL. PLEASE SQUAWK, TALK, AND LOOK FOR OTHER AIRCRAFT IN THIS BUSY AIRSPACE.

IF TRANSITING THE AIRSPACE DEPICTED ABOVE, IT IS RECOMMENDED YOU CONTACT LUKE APPROACH 118.15 OR 125.45 FOR TRAFFIC ADVISORIES.
THE PROCEDURES ABOVE ARE USED BY LUKE ASSIGNED F-16s AND F-35s. GILA BEND AFAF IS UTILIZED FOR PRACTICE TOUCH-AND-GO LANDINGS, SIMULATED FLAMEOUT PATTERNS (SFO), PRECAUTIONARY FLAMEOUT PATTERNS (PFO FOR F-35s) AND AS AN EMERGENCY DIVERT FIELD. OF NOTE, F-16/F-35 TRAFFIC SHOULD REMAIN SOUTH OF INTERSTATE 8. UPON RECOVERY, F-16s/F-35s SHOULD CLIMB ABOVE 4000' MSL BEFORE TURNING NORTH TOWARD LUKE AFB. BE ADVISED THAT DAVIS MONTANAN AND YUMA MILITARY AIRCRAFT ALSO UTILIZE THESE PROCEDURES.
Critical Seconds

Move away from the F-16 illustration about 3 feet. The F-16 silhouette represents the aircraft as it would appear from the distance indicated on that page. The time required to cover these distances is given in seconds for the combined speeds of 360 and 600 mph.

The blocks on the lower left corner of the previous page mark the danger area, based on the reaction times on the lower right of this page.

<table>
<thead>
<tr>
<th>Step</th>
<th>Time (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>See object</td>
<td>0.1</td>
</tr>
<tr>
<td>Recognize aircraft</td>
<td>1.0</td>
</tr>
<tr>
<td>Become aware of a collision course</td>
<td>5.0</td>
</tr>
<tr>
<td>Decision to turn left or right</td>
<td>4.0</td>
</tr>
<tr>
<td>Muscular reaction</td>
<td>0.4</td>
</tr>
<tr>
<td>Aircraft lag time</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**TOTAL** 12.5
### Distance - Speed - Time

<table>
<thead>
<tr>
<th>Distance</th>
<th>600 MPH</th>
<th>360 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Miles</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>6 Miles</td>
<td>36</td>
<td>60</td>
</tr>
<tr>
<td>5 Miles</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>4 Miles</td>
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<td>40</td>
</tr>
<tr>
<td>3 Miles</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>2 Miles</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>1 Mile</td>
<td>06</td>
<td>10</td>
</tr>
<tr>
<td>1/2 Mile</td>
<td>03</td>
<td>05</td>
</tr>
<tr>
<td>0 Mile</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In this area: Relax!

Why did all tensed up!!??
CIRCLE REPRESENTS 360 DEGREES OF POSSIBLE COLLISION COURSE BETWEEN A PIPER FLYING AT 80 KNOTS AND A F16 FLYING AT 320 KNOTS

- Pilot will see F16 in winds field
- Pilot can only see F16 inside window
- F16 will only be visible out the side window of the Piper
- F16 will not be seen by the Piper because he is being overtaken by the F16
- F16 flying at a relatively slow 320 knots
Ever landed and gotten out of your plane with your hands sweaty and body shaking because someone nearly took your wing off? If so, you’re not alone. As aviation activity increases throughout the US, the possibility of having a near midair or actual collision increases. The FAA has instituted policies to alleviate the midair collision potential, but the ultimate responsibility lies with YOU! Below are several rules to live by… in order to make flying safer for all.

1. **PLAN AHEAD** - Thoroughly plan and review your intended route of flight before walking to your aircraft. If possible, plan to avoid alert areas, MTRs, and MOAs. Check NOTAMs and identify potential conflict areas. The following website depicts military airspace near you: [www.SeeAndAvoid.org](http://www.SeeAndAvoid.org)

2. **SEE AND AVOID** - Scan the airspace ahead of your flight path and to the side using a disciplined scan pattern. Also, periodically check behind you since the majority of midairs occur when one aircraft overtakes another.

3. **CLEAR** - Before executing a climb, turn, descent, or any other maneuver, ensure the area is clear!

4. **COMMUNICATE** - When flying into or out of uncontrolled airports, broadcast your position and intentions. Request and use all available RADAR services whenever possible. Finally, don’t relax your visual scan even in a RADAR environment.

5. **SQUAWK** - If your aircraft is transponder equipped, turn it on and reply on both Mode 3/A and C.

6. **BE SEEN** - In order to enhance the see and avoid concept, you are encouraged to turn on your anti-collision lights and/or other appropriate lights whenever the engine is running. You’re further encouraged to turn on your landing light (within POH recommendations) when operating below 10,000’ MSL, day or night, but especially within 10 miles of an airport or in areas of reduced visibility.

**PROFILE OF A MIDAIR**

A three year study of midair collisions involving civilian aircraft by the NTSB determined the following:

1. The occupants of most midairs were on a pleasure flight with no filed flight plan.

2. Nearly all midair collisions occurred in VFR conditions during weekend daylight hours.

3. The majority of midairs were the result of a faster aircraft overtaking a slower aircraft.

4. NO ONE is immune. Experience levels ranged from initial solo to the 15,000 hour veteran.