

OPERATION ARCTIC CITADEL SPECIAL INSTRUCTIONS (SPINS)

# Summary of Changes:

Version 0.1: WIP (Updated 2024-12-30).

# Introduction

## Scope

These SPINS outline those procedures to be followed to permit to the safe and effective operation of aircraft participating in operation ARCTIC CITADEL.

These SPINS will not replace each participating squadrons SOP’s but will ensure that all participating pilots have a common understanding of how to operate during the campaign.

## Deviations

Deviations from these procedures require specific approval from participating squadrons/organizations and need to be briefed to all relevant actors.

## Precedence

These SPINS take precedence over unit SOP’s. This to ensure a safe environment for all aircrew participating in operation ARCTIC CITADEL..

## Recommended changes

Recommendations for changes to these SPINS should be addressed at the 132nd Virtual Wing forums.

## Changes

Minor changes (from version 1.0 to version 1.1) made in this document will be made visible in the following format:

Added text and ~~deleted text~~

Only changes from one version to the next will have these markings.

Major changes (from version 1.0 to version 2.0) will not have any markings, as the entire document need to be re-read.

# General Information

## Timezone

Timezone for all timings will be given in one of the following timings:

* ZULU time (Z): Real world Zulu time (UTC)
* Game time (G): In-game local time

## Standard Units

In order to minimize the workload of VIS and JFACC, it is the responsibility of pilots submitting intelligence to record units in the correct format. If conversion is required, it is the responsibility of the pilot to perform the conversion.

### Positions

Positions will be given in one of the following formats:

LAT/LONG: DD°MM.MMM' DDD°MM.MMM' (Standard)

MGRS: NNL LL NNNN NNNN Example: 12A BC 1234 6789 (For Attack Helicopters)

### Distance

Distance will be given in nautical miles,

When working with Attack Helicopters, meters or KM may be used as required

### Elevation

Elevation will be given in feet AMSL.

## Reference documents

### Close Air Support (CAS)

The following document outlines how CAS is conducted in OPAC:

[132-TTP-1 CAS Manual v1.2](https://www.dropbox.com/s/p9jirjxt00ri23k/132-TTP-1%20CAS%20Manual%20v1.2.pdf?dl=0?dl=0)

### Armed Reconnaissance (AR)

The following document outlines how AR is conducted in OPAC:

[132-TTP-12 Armed Reconnaissance v1.0](https://www.dropbox.com/s/0020j7nv0gaeav6/132-TTP-12%20Armed%20Reconnaissance%20v1.0.pdf?dl=0)

### Strike Coordination And Reconnaissance (SCAR)

The following document outlines how SCAR is conducted in OPAC:

[132-TTP-6 SCAR v2.0](https://www.dropbox.com/s/fgjn3wgn5aoit5w/132-TTP-6%20SCAR%20v2.0.pdf?dl=0)

### Air Interdiction (AI)

The following document outlines how AI operations are conducted in OPAC:

[132-TTP-13 Air Interdiction v1.0](https://www.dropbox.com/s/b7ppa1vzba778f0/132-TTP-13%20Air%20Interdiction%20v1.0.pdf?dl=0)

### AWACS

The following document outlines how integration and cooperation with AWACS is conducted in OPAC:

[132-TTP-10-AWACS Procedures v2.0](https://www.dropbox.com/s/udeqz9vxqawkiui/132-TTP-10-AWACS%20v2.0.pdf?dl=0)

### Brevities and Abbreviations

The following document includes brevities and abbreviations used in this document:

[132-TTP-4 Brevity and Abbreviations v2.0](https://cloud.132virtualwing.org/s/4TPtFDbmPbw9oWM)

## ATO publication

ATO will be published at each events event description and/or comms chatter.

Note that the ATO will be published 72 hours before event start.

# Command, Control and Communications (C3)

* Where AWACS is manned, they as a controlling agency have jurisdiction within the battlespace.
* When operating within a package, the Mission Commander leading the package is a controlling agency responsible for the flights within the package. The MC can be tasked by AWACS.
* Flight leads remain responsible for the safe, efficient, and proper conduct of their flights.
* Where AR missions involve multiple flights, the flights should be directed by a SCAR. If no SCAR flight is present, the best suited flight should assume the responsibility of SCAR to coordinate flights and ensure the safe of operations.
* All flights shall follow ATC and AWACS Controller instructions. All flights are to monitor ATC frequencies when within an airfield’s airspace control zone.
* All flights shall remain on an AWACS frequency, unless explicitly approved or directed by AWACS.

### Flight Plans

All flights are to file a flightplan prior to the conduct of their missions. Flightplans should define:

* The point of departure
* The route to be flown
* The point of arrival
* The mission/tasking being undertaken.

Optionally, a flight plan may include the loadout specification of the flight.

The submission of flight plans is critical to provide ATC and AWACS controllers with information to deconflict flights and assist in the conduct of missions at the direction of JFACC.

### Datalink

#### SADL information

Group ID’s are assigned per SQN. 617 Sqn uses 31-35. Other squadrons use 36-39. Flights will use their flight number for Own ID's. For example: TUSK 2-1 and 2-2 will use a OID of 21 and 22.

### Secure communication

Secure communication may be used with amending SECURE (GREEN) after the frequency. Secure frequencies will be noted in the ATO.

Revert to clear communication with PLAIN (RED).

Example: “*JEDI2, DARKSTAR, PUSH CHECK-IN GREEN”. “VIPER1, PUSH CHECK-IN IN RED”*.

#### Standard crypto fill in

The standard SRS crypto fill in will be “2”.

Being on a secure radio constitutes authentication, therefore AET100 challenge/response and other obfuscated communication such as codewords may be omitted.

### Authentication

Authentication will be conducted with [AET-100 OPAR v2.1](https://132nd-vwing.github.io/OPAR-Brief/MISSION%20INFORMATION/AET-100%20OPAR%20v2.2.pdf)

Backup for authentication is RAMROD.

#### RAMROD

Use real world date for figuring out if it is an even or odd day.

Real world even days (2,4,6,8): LUMBERJACK

Real world odd days (1,3,5,7): COMPLEXITY

#### Transmission authentication

Transmission authentication will be conducted with [TAT-101 OPAR v1.1](https://132nd-vwing.github.io/OPAR-Brief/MISSION%20INFORMATION/TAT-101%20OPAR%20v2.1.pdf). Times used for TAT must be use **real world Z time.**

### Frequencies

All flights will be assigned a primary and secondary frequency in the ATO. Frequency table is available on 132nd website: <http://132virtualwing.org/index.php/page/freqlist>

### IFF

Flights will be assigned IFF codes in the ATO, available on the 132nd website. Flights **must** squawk the assigned code and enable M4 before departure.

### Laser Codes

Flights will be assigned lasercodes in the ATO, available on the 132nd website.

### TACAN

Flights will be assigned TACAN codes in the ATO, available on the 132nd website.

## Command and Control Frequencies

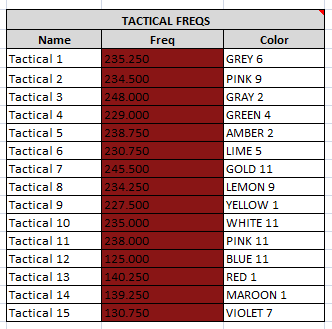
### AWACS frequencies

These frequencies are used by AWACS to control aircraft.

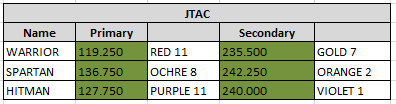
* Check-in: 231.500 (GREEN 7)
* In Flight Report frequency: 228.0 (ORANGE 10)
* Air Request frequency: 21.00 FM
* CSAR frequency: 233.0 (PINK 1)
* VHF Backup: 122.250 (GRAY 10)
* HF: 2971
* Ground Alert frequency (Scramble frequency): 248.75 (GREEN 6)

### Tactical frequencies

These frequencies are used by either AWACS or Mission Commanders / Flight Leads to use for the actual tactical execution of the mission (packages, SCAR, etc).



### JTAC frequencies and callsigns



### AWACS check-in

Check-ins with AWACS is to be conducted at designated Contact Points (CPs) or when leaving the airfield or FARPs. If AWACS is unmanned, all flights are to announce intentions (check-in and what frequency they are leaving for) before they leave check-in frequency for a tactical frequency.

## Codewords

|  |  |
| --- | --- |
| **Action/event** | **Codeword** |
| On station | ARMENIA |
| Off station | BRAZIL |
| RTB | CANADA |
| Abort mission | DENMARK |
| Mission successful | EGYPT |
| Mission unsuccessful | FRANCE |
| Attack successful | GERMANY |
| Attack unsuccessful | HUNGARY |
| Last off target | IRELAND |
| Re-attack | JAPAN |
| Push(ing) | KENYA |
| (Request) Rolex | LIBERIA |
| Wounded Bird | MALTA |

## Reporting

### In-Flight Report (INFLTREP)

During missions, in-flight reports can be used to pass information, situation updates or BDAs to AWACS. AWACS controllers will receive the INFLTREP over the in-flight report frequency, and the AWACS controller will submit the information via Campaign Manager. If a mission is underway, pilots can check Campaign Manager prior to stepping into DCS to get latest updates provided via in-flight reports from pilots already flying. In- Flight Report format:

|  |  |  |
| --- | --- | --- |
| **132nd INFLTREP** | **Remarks** | **Example** |
| 1. Callsign | Flight’s callsign | *BEAST11* |
| 1. Mission number | From the ATO | *AR3211* |
| 1. Target Location | Grid location or a geographical area commonly known | *N41 32.100 E044 23.200 or*  *Northwest in TSKHINVALI city* |
| 1. Time on Target | Time of the attack | *1255Z* |
| 1. Results (BDA) | Battle Damage Assessment (BDA) | *3x T-80 burning* |
| 1. Remarks | For example, area weather, enemy situation after attack, recommendations | *Overcast at FL120, 2 additional T-80s observed moving SOUTH along the road at 1330Z* |

### After-Action Report (AAR)

After completion of a mission, all pilots and controllers are to file an after-action report. The after-action report contains the following important information, and is filled out on the 132nd website:

* Event sequence: What was done in the mission. Where was it flown.
* Lessons Learned: What experiences was done in the mission. What worked, what did not work. Suggestions of tactics that may work, or other ideas on how to solve the mission or handling situations. Suggestions can be to squadrons (airframe specific), or for JFACC and VIS. Suggestions can also be directed at event host/mission designer

The rationale for the AAR is to build a common understanding of what happened during a mission (Tacview will not be fully available) and will make sure everyone participating in the event gets a picture of what happened across the AO. JFACC and VIS can also use this information to build a better understanding and assessment after BDA and intelligence reporting. Supplements to the AAR include, but are not limited to:

* Battle Damage Assessment (BDA): If any ordnance (both A-A and A-G) is delivered, BDA should be provided. If battle damage is suspected but not confirmed either visually or by sensors, the report should be marked as unconfirmed. BDA reports should be made via Campaign Manager:<https://cm.132virtualwing.org/>.
* Intel: Any information or observation that can be of intelligence value for the campaign should be reported via Campaign Manager.
* Attachments: Any pictures (TGP / HUD / out of cockpit / LotATC radar tracks) are to be posted in the #bda-reports channel in the 132nd Discord, and linked in the report content to ease the workload for VIS.

For reporting of enemy units, avoid to the maximum extent possible reporting single units (single main battle tank in a location). Maneuver forces (MBT, IFV, APCs) rarely operate alone and so reporting should be done at platoon, company or battalion level for all maneuver forces. For reporting SAMs, rocket artillery, MLRS or other more special equipment reporting of single vehicles can be conducted.

### Intelligence Reporting Instructions

Timely and relevant reporting is crucial in Operation Arctic Citadel. This is the foundation for VIS and JFACC to understanding the situation and inform decisions about re-attacks and prioritization of effort.

When reporting intelligence try to get an understanding of the situation and provide your understanding as amplifying information. For example: Company of Main Battle Tanks in camp area, likely resting in the nearby tents. Or Mechanized brigade in combat formation preparing to start an offensive along the road going SOUTH. This added information is very valuable for VIS to get a better understanding of what is *actually* happening. Try to justify your belief wherever possible.

Pictures or additional graphics are often good supplements to the written report, and it is encouraged that pilots who encounter situations also provide documentation in the form of pictures or a map with additional text/graphics with amplifying information when needed.

**Note:** Do not attach a picture if you are reporting something you clearly recognize and where the picture is not needed. This will only increase the workload for VIS, without adding value. If you see a platoon of MBT in a T-junction, then you simply report that in the intelligence reporting without needing to attach a picture. However, if you see a vehicle that you do not recognise or see some activity you think is noteworthy then you should include it.

* When attaching a picture, make sure to activity is clearly visible and not hidden by the marker.
* The VIS analysts do not have details of individual pilots/flights plans, or their planned navpoints, so it is important that all locations are in a format that can be used directly in CombatFlite for processing. All necessary details/information need to be within the AAR, so the VIS analysts can understand the full picture if needed.

#### Reporting accuracy

It is important after the mission to report locations in the format specified in SPINS. This make it possible for VIS to copy/paste the coordinate directly into CombatFlite  
  
The correct format is like this:  
N DD MM.MMM E DDD MM.MMM or NDD MM.MMM EDDD MM.MMM

or

NNL LL NNNN NNNN (MGRS) Example: 12A BC 12345 67890  
  
**NOT** like these:  
N DD MM MMM E DDD MM MMM  
N DD MM M E DD MM M

NNLLLNNNNNNNN

NNL LL NNN NNN

## Retasking

Any flight flying in OPAC may be re-tasked to higher priority tasks. AWACS have re-tasking authority during execution of air operation. Re-tasking will be conducted using the re-tasking brief:

|  |  |  |
| --- | --- | --- |
| **132nd Retasking brief** | **Remarks** | **Example** |
| 1. Task / Mission | What is the task or mission the flight is being re-tasked to do | *CAS*  *or*  *SCAR*  *or*  *Armed Reconnaissance* |
| 1. Location / Killbox name and status | What location or Killbox are designated as the target area  Killbox that are active are currently occupied by other flights-  Killbox that are cold are not in use by other flights. | *Killbox P1 Active*  *or*  *Killbox P1 cold*  *or*  *2nm SOUTHEAST of GUDUATA airfield* |
| 1. Enemy situation / target | What is the general situation in the target area / What is the target | *Enemy fuel convoy is moving NORTH on the MSR leading into GUDUATA. Target is enemy fuel convoy.* |
| 1. Threat | Any known threats in the target area | *2x SHILKA at GUDUATA airfield. 1xSA-8 2 nm NORTHWEST of GUDUATA* |
| 1. Friendlies | Any information about friendly forces in the target area | *Closest friendlies are 15 nm to the NORTHWEST in static defensive positions.* |
| 1. SCAR | SCAR flight and contact frequency.  SCAR field is optional, and only included if a SCAR flight is supporting the mission. If no SCAR flight is supporting the mission, this line will be omitted. | *AXE 2-1 on 258.250* |
| 1. Ordnance restrictions or request | If certain ordnance is not authorized, or of certain ordnance is requested to meet the objective | *No CBU’s allowed* |
| 1. Remarks | Any additional information not included in the lines above. | *Routing via SENAKI at Angels 15 and CP C03 at Angels 10. Contact AXE 2-1 at over SENAKI.* |

## Joint Tactical Air Support Request

The Joint Tactical Air Support Request is used for requesting air support from AWACS during missions. The Joint Tactical Air Support Request format is shown below:

1.\_\_\_AWACS\_\_\_ This is: \_\_Callsign\_\_\_

2.Request number \_\_\_\_\_\_\_\_\_ Date-time \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.Preplanned/Immediate, priority (1 = emergency, 2 = priority, 3 = routine)

4.Target is/are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.Target location is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (MGRS, /LAT/LONG, KILLBOX)

6.Target Time/Date: ASAP / Not later than / At

7.Desired ordnance:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.A. Final control: JTAC / FAC(A) /SCAR

8.B. Callsign:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.C. Frequency:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.D. Contact Point:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9.Remarks:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Air to Air Instructions

## Identification terms

### HOSTILE

A contact identified as enemy upon which clearance to fire is authorized in accordance with (IAW) current rules of engagement (ROE) and Identification Criteria.

### BANDIT

A contact positively identified as an enemy authorized in accordance with (IAW) current rules of engagement (ROE) and Identification Criteria.

### BOGEY

Unknown contact. Need more investigation.

### FRIENDLY

A positively identified friendly contact.

### NEUTRAL

Aircraft identified as civilian with current ROE and Identification criteria.

### RIDER

An unknown contact (BOGEY) that is complying with airspace control order/airspace control plan or following a published Minimum Risk Route (MRR). Require additional identification.

### OUTLAW

Unknown contact (BOGEY) taking off from enemy territory / enemy airbase.

### SPADES

An interrogated GROUP or radar contact that lacks all the air tasking order (or   
equivalent) IFF or selective ID feature modes and codes required for the ID criteria.

## Identification criteria

In operation ARCTIC CITADEL the following Identification criteria are to be used.

### NEUTRAL indicators

* Valid IFF squawk code of 60XX and adhering to published air routes in Airspace Control Plan (ACP) or Airspace Control Order (ACO).

**OR**

* Visually/electro optically identified as civilian aircraft (airliner).

**OR**

* Visually/electro optically identified as from a country not part in the conflict (military aircraft)

### FRIENDLY (Positive Friendly Indicators)

Any **one** of the following:

* Datalink Precise Position Location&Identification **(PPLI)** indicates friend.  
  *Tracks that auto-correlate as friendly in LotATC count as having a PPLI from AWACS perspective.*
* IFF interrogation reply indicates friend.
* Communications with unit is established and the unit is authenticated as friendly.
* Visually (VID) or electro optically (EO) ID to friendly unit.

### BANDIT Criteria

* Visual Identification (VID) or Electro Optical (EO) to known enemy unit. *Visual ID (VID) or Electro Optical ID to known enemy unit overrides any need for additional positive enemy indicators (PEI). No additional PEIs are required to upgrade to BANDIT.*

Or any **two** of the following positive enemy indicators (PEI):

* Lack of IFF and/or Lack of PPLI **(SPADES)**
* PPLI indicates enemy (red) – *note – this does NOT automatically denote hostile.*
* Point of origin at enemy airfield or enemy territory **(OUTLAW).**
* RWR correlation to known enemy unit.
* Pattern racetrack in known enemy territory.
* High Fast Flier profile **(HFF)** – (40.000ft or higher and 800 KGS or higher.)

### HOSTILE Criteria

Any **three** of the following:

* Lack of IFF and/or Lack of PPLI **(SPADES)**
* PPLI indicates enemy (red) – *note: this does NOT automatically denote hostile.*
* Point of origin at enemy airfield or enemy territory **(OUTLAW).**
* RWR correlation to known enemy unit.
* Pattern racetrack in known enemy territory.
* High Fast Flier profile (HFF) – (40.000ft or higher and 800 KGS or higher.)

**OR** any Hostile Act **(HA)** or Hostile Intent **(HI)** criteria

#### Hostile Act (HA)

Any **one** of the following:

* Enemy forces that employ ordnance of any kind against any friendly forces as indicated by EO, Visual or RWR.
* Radar lock against any friendly forces.

#### Hostile Intent (HI)

Any **one** of the following:

* Maneuvering to obtain tactical advantage. Aspect less than 120°.
* High Fast Flier profile (HFF) originating from enemy airspace. (40k ft + 800knots or higher).

## Rules of Engagement (ROE)

The following Rules of Engagement apply in operation ARCTIC CITADEL.

### Weapon status terms

The following weapon release status is used to determine what classification is required to employ ordinance.

### WEAPON FREE

Weapons may be employed at any target not positively identified as FRIENDLY and NEUTRAL

### WEAPON TIGHT

Weapons may be employed at any targets positively identified as HOSTILE and BANDIT.

### WEAPON HOLD

Weapons may be employed in response to a formal order only.

#### Formal order

Formal order is given as *“Commit group XXX, Time now XX:XX, I authenticate XC”* (IAW TAT-101).

### Default status

Unless briefed otherwise, the default status is:

* WEAPONS FREE in the area of operations (Notian territory). + ADDITIONAL AREA?
* WEAPONS TIGHT in International waters and friendly territory.

This default status may be overridden by:

* JFACC in the AOD for an ATO day.
* AWACS.
* A Mission Commander **only in the absence of AWACS.**
* A Flight lead **only in the absence of AWACS and Mission Commander**

### Self Defense

* Nothing in these ROE negates the right of individual self-defense.
* Nothing in these ROE negates a pilot’s right to take all necessary and appropriate action in unit self-defense.

### Border Crossing Authority

Something to consider before the conflict goes kinetic?

# Offensive operations

## Acceptable Level of Risk (ALR)

### Application of ALR

Mission commanders can use ALR definitions and associated tactics to determine the feasibility of mission accomplishment. If mission planning reveals that the mission is unlikely to succeed using the assigned risk level, the mission commander or flight lead should inform JFACC prior to mission execution.

JFACC then has the following options:

* Scrub the mission in favour of an alternative mission that meets the assigned ALR.
* Allocate more assets to accomplish the mission or make other changes to the plan that will enhance the chance of that mission’s success while adhering to the assigned ALR.
* Assign the mission a higher risk ALR using existing assets and the existing plan.

In-flight, mission commanders and flight leads can use the tactical boundaries associated with an ALR to make the following tactical decisions:

* Accept or decline a merge based on AMR or targeting ratio.
* Make attack/reattack decisions based on real-time evaluation of SEAD effectiveness.
* Abort a mission or package when it looks like ALR will be, or has been, exceeded.

### A-G tactics based on Acceptable Level of Risk (ALR)

|  |  |  |
| --- | --- | --- |
| **Air-to-Ground Tactics restrictions based on ALR** | | |
| **Acceptable**  **Level of Risk** | **Definition** | **A/G Tactics** |
| **LOW** | Withdraw to preserve forces. Accept only favorableengagements.  Losses only at expected training or peacetime attrition rates. | * Single-ship FLOT crossings not authorized * EnterWEZ of SAM/AAA only with fully effective SEAD. * Fixed Wing - low-level tactics and reattacks not authorized |
| **MEDIUM** | Losses expected at historical combat rates(~25%). Accept neutral or disadvantageous engagements. Can withdraw to prevent heavy losses. | * Single-ship FLOT crossings not authorized * Operations in AAA and Manpad WEZ as required. * Operations in SAM envelopes are acceptable with partially effective SEAD. * One reattack authorized to meet mission objectives. |
| **HIGH** | Accept major losses (~50%)to achieve objective; Preserve some future capability, if able. | * Single-ship FLOT crossings authorized * Operations in AAA and Manpad WEZ as required. * Operations in SAM envelopes are acceptable with marginally effective SEAD. * Reattacks as required to meet mission objectives, withdraw if threat overwhelming. |
| **EXTREME** | Accept any losses necessary to accomplish mission.  Defense against WMD (weapons of mass destruction), where consequences of failure is unacceptable. | * Single-ship FLOT crossings authorized * Mission may only be cancelled by higher authority (AWACS/AOC). * Aircraft recovery is not a factor in selection of tactics. |

### SEAD Effectiveness Table for A/G ALR

|  |  |
| --- | --- |
| **SEAD Effectiveness** | **Defined as** |
| **FULLYEFFECTIVE** | SEAD CandenyAir Defenseengagementsbycontinuous suppression throughout the vulnerability period (VUL) using pre-emptive shots or otherwise completely denying SAM sites ability to engage. |
| **PARTIALLY EFFECTIVE** | SEAD Cannot deny Air Defenseengagements but can distract SAM sites, delayingtargetingordisrupt SAMguidance with **immediate reactive shots** forcing SAM sites to shut down during guidance or be destroyed.  On-boardcountermeasures and maneuvers can effectively degrade terminal guidance of SAM sites. |
| **MARGINALLY EFFECTIVE** | SEAD Cannot deny or delay Air Defenseengagements. On-board countermeasures have limited capability to degrade SAM guidance.  Tactics dependprimarilyonoverwhelming numberstosaturatedefensesand maneuvers to defeat shots. |

### A-A tactics based on Acceptable Level of Risk (ALR)

|  |  |  |  |
| --- | --- | --- | --- |
| **Air to AIR Tactics based on ALR** | | | |
| **Acceptable level of Risk** | **Definition** | **A/A Tactics** | **AMR** |
| **LOW** | Accept only favorable engagements. | * Avoid merge when possible. * Accept merge only with superior merge ratios. * Use SKATE or SHORT SKATE. | 2:1 or greater. |
| **MEDIUM** | Accept favorable or neutral engagements. Can withdraw to prevent heavy losses. | * Accept merge with equal mergeratios. * Use BANZAI as required. * Aircraft recovery higher priority than mission goal. | 1:1 |
| **HIGH** | Accept major losses (~50%) to achieve objective. Preserve some future capability if able. | * Accept merge with inferior merge ratios. * Use BANZAI tactics as required. * Recover aircraft if able. | 1:2 |
| **EXTREME** | Accept any losses necessary to accomplish mission. | * Accept merge with inferior merge ratios. * Aircraft recovery not an issue. | Any |
| Note the **Acceptable Merge Ratio (AMR)**is the ratio of friendlies to **peer** adversaries within Factor Range.[[1]](#footnote-2) For general planning purposes – it is suggested to set FR to **25nm.**  Example 1:  4xF18Cs vs 2 groups of 2 MIG29´s that are within Factor Range of each other is 1:1 and thus requires ALR MEDIUM to MERGE.  Example 2:  4xF16s vs 4 groups of 2 MIG29´s that are outside of Factor Range of each other is 1:2 and thus requires ALR HIGH to MERGE. | | | |

## Target priority grade

### Target priority A

* The target is essential for mission success in support of current objectives (or the target is a designated High Value Target, High Payoff Target, or TST).
* A target with priority A is crucial to the overall success of the operation.
* A target with priority A will have immediate and compelling effects.
* Its’ timeliness as an urgent target for targets with priority A may not exist in the future.
* If not targeted, negative consequences may seriously jeopardize future CJTF operations.

### Target priority B

* Targets have substantial, but not immediate impact on the battle.
* The cascading effects this target provides may not be realized in the future.
* If not targeted on this ATO, a significant level of effort may be required later.
* If not targeted, negative consequence may significantly hamper CJTF operations.

### Target priority C

* Target with priority C will contribute to the battle, but it is not critical to mission success.
* Targeting a target with priority C will further the success of the operation.
* Targets with priority C will eventually require targeting due to Combined Joint Force Commanders’ (CJTF) future plans.
* If not targeted on this ATO, negative consequences will probably not impede ongoing operations.

### Target priority D

* Target of opportunity if:
  + A: Other targets not suitable for this ATO.
  + B: As a backup target
* Targets with priority D will have minor contributions to the operation.
* Targets with priority D may be required for targeting butare not considered time critical.
* Targets with priority D will not have a negative impact if not targeted.

## Effects

The following effects may be tasked on the ATO:

### Destroy

1)To damage the condition of the target so that it cannot function as intended nor to be restored to a usable condition.

2) Damage done to the function is permanent, and all aspects of the function have been affected.

3) A function's operation is permanently impaired, and the damage extends to all facets of the function's operation.

### Degrade

1) Damage done to the function is permanent, but only portions of the function were affected, that is, the function is still operational, but not fully

2) A functions operation is permanently impaired, but the damage does not extend to all facets of the functions operation.

### Neutralize

1) To render an enemy weapon system and maneuver unit ineffective or unusable for a specific period of time

2) To render ineffective, invalid or unable to perform a particular task or function

3) To counteract the activity or effect of

### Attrit

1) To destroy or kill by the use of firepower (troops for example)

### Disrupt

1) To break apart, disturb or interrupt a function

2) Damage done to the function is temporary, and only portions of the function have been affected

3) A functions operation is impaired over the short term and the damage does not extend to all facets of the function’s operations

### Deny

1) To hinder the enemy the use of space, personnel, or facilities. It may include destruction, removal

2) Damage done to the function is only temporary, but all aspects of the function were affected

3) A function's operations is impaired over the short term, but the damage extends to all facets of the functions operations

### Harass

1) To disturb the rest of the troops, curtail their movement and lower morale by threat of loss.

### Prevent

1) To deprive of hope or power of acting or succeeding

2) To keep from happening to avert

## TLE Categories

## Risk Estimate Distances

|  |  |  |
| --- | --- | --- |
| **Weapon** | **Description** | **0,1 % PI[[2]](#footnote-3)** |
| **MK-82** | 500Ibs | 200 |
| **MK-83** | 1000Ibs | 250 |
| **MK-84** | 2000Ibs | 300 |
| **GBU-12** | 500Ibs, laserguided | 150 |
| **GBU-16** | 1000Ibs laserguided | 200 |
| **GBU-10** | 2000Ibs, laserguided | 250 |
| **GBU-24** | 2000Ibs, laserguided, PAweway III, BLU-109 | 250 |
| **GBU-38** | 500Ibs INS/GPS | 150 |
| **GBU-32** | 1000IbsINS/GPS | 200 |
| **GBU-31(V) 1/B** | 2000Ibs, INS/GPS | 250 |
| **GBU-31 (V)3(B** | 2000Ibs, INS/GPS BLU-109 | 250 |
| **CBU-87** |  | 300 |
| **CBU-97** |  | 300 |
| **CBU-103** |  | 300 |
| **CBU-105** |  | 300 |
| **MK20 Rockeye** |  | 300 |
| **AGM-65** |  | 100 |
| **AGM-84** |  |  |
| **AGM-154A** | Cluster | 300 |
| **AGM154C** | 500Ibs, hardened targets | 200 |
| **2.75” Rockets** |  | 100 |
| **APKWS rockets** |  | 100 |
| **30mm gun** |  | 75 |
| **20mm gun** |  | 50 |

## CDE

## Targeting categories

## Military kill effects

|  |  |
| --- | --- |
| **Kill Effect** | **Definition** |
| **Blast** | The high-pressure shockwave created by an explosion, traveling outward from the detonation point. Blast effects cause destruction by overpressure (compression force) and dynamic pressure (wind generated by the expanding gases), which can demolish structures, damage equipment, and injure personnel. |
| **Fragmentation** | The dispersal of shrapnel or debris from an exploding munition. Fragments are propelled outward at high velocity, targeting personnel, equipment, and light structures in the area of effect. |
| **Penetration** | The effect of a munition or projectile piercing a target's surface without fully passing through it. Penetration is often used to defeat hardened targets, such as bunkers, by transferring energy into the target's structural layers. |
| **Incendiary** | The combustion of materials caused by incendiary munitions, secondary explosions, or the heat from a blast. Fire destroys flammable materials and can cause secondary damage to structures and equipment, as well as injuries to personnel. |
| **Cratering** | The formation of a crater in the ground caused by the impact or detonation of a munition. Cratering disrupts mobility and operations, damaging roads, runways, or creating obstacles in the battlefield. |
| **Perforation** | The complete passage of a munition or projectile through a target, creating both an entry and exit point. Perforation may reduce the energy transfer to the target, making it less effective for destroying heavily armored or reinforced structures. |
| **Earth Shock** | The seismic-like vibrations transmitted through the ground from an explosion. Earth shock can damage underground structures, destabilize foundations, or incapacitate personnel in subterranean environments. |

## Close Air Support (CAS)

The following formats are used for CAS operations in operation ARCTIC CITADEL:

### CAS check-in briefing

|  |
| --- |
| Mission number |
| Number and type of aircraft |
| Position and altitude |
| Ordnance |
| Time on station |
| Capabilities |
| Abort code |

### Area Operations update (AO update)

|  |
| --- |
| Threat |
| Target |
| Friendly situation |
| Artillery activity |
| Clearance authority |
| Ordnance |
| Restrictions |
| Hazards |
| Remarks |

### CAS brief

|  |  |
| --- | --- |
| **Gameplan** | |
| Type of control ( 1/2/3 ) | |
| Method of engagement (Bomb on target / Bomb on coordinate ) | |
| Ordnance | |
| **9-line** | |
| 1 | IP/BP |
| 2 | Heading |
| 3 | Distance |
| 4 | Target elevation |
| 5 | Target description |
| 6 | Target location |
| 7 | Type Mark Laser code: |
| 8 | Friendlies |
| 9 | Egress |
|  |  |
|  | Remarks |
|  | Restrictions |

## SCAR

See [AR TTP](#_Armed_Reconnaissance_(AR)) and [SCAR TTP](#_Strike_Coordination_And)

## Time Sensitive Targeting (TST)

TST are of critical importance for the overall execution of the campaign. If any TST target is located during execution of a mission, this will take precedence over any other tasking, and resources should be used to neutralize this target as soon as possible.

TST matrix with valid TST targets, desired effect and accepted risk level is published daily together with the Joint Prioritized Target List (JPTL) by JFACC.

# Tanker information

KC-135 are used for boom operations (F-16 / A-10)

KC-135 MPRS are used for drogue operations (F/A-18 / F-14)

## Tanker tracks.

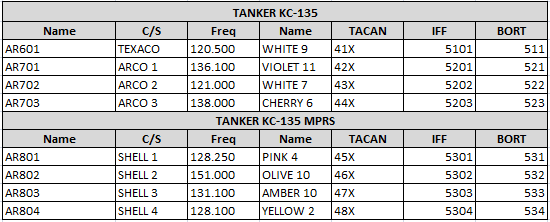
Tanker tracks will be named ARXXX.

AR6XX (Callsign TEXACO) for boom operations lower speed (speed 220kts FL115).

AR7XX (Callsign ARCO) for boom operations higher speed (speed Mach 0.6)

AR8XX (Callsign SHELL) for drogue operations (speed Mach 0.6)

Altimeter setting.Unless otherwise directed an altimeter setting of standard pressure setting (29.92) is to be used for AAR operations.



## Vertical separation

Receivers are to join from below and are to maintain a minimum of 1000ft vertical separation (unless otherwise directed by the controlling agency), until visual contact have been made.

## Clearance

Receivers must receive clearance from the controlling agency (AWACS) before contacting the tanker. Wherever possible, flights should remain on the AWACS frequency as well as monitoring the tanker frequency.

## Joining procedures

The left side of the tanker is to be used for joining aircraft. The first receiver of a formation may join directly astern the boom, when the receiver has visually confirmed that no refueling is in progress.

# Airspace information

## International airspace

12 nm outside Notia, Kambiland and Norway is defined as international airspace.

## Airspace Control Measures

Control/Initial Points are to be used for command and control of the airspace. These points can be used in flightplans. Minimum Risk Routes will be routes between Control/Initial Points.

See Airspace Control Plan (ACP) for graphical representation of airspace control measures.

### Contact Points (CP)

Contact Points are points to be used to establish communications (check-in) with AWACS/FAC(A)/SCAR/JTAC’s.

### Initial Points (IP)

Initial points are primarily designed to facilitate initial points for attack runs in CAS operations. A secondary use is that they can be used as control points

### Airspace Control Point (ACP)

Airspace Control Point is primarily designed to be routing points for air traffic.

### Killbox

Killbox is a three-dimensional target area. It is a coordination measure enabling air assets to engage surface targets without needing further coordination with commanders and without terminal attack control. A killbox can be under the control of any flight. The space is defined by an area reference system.. A killbox can be either active or closed. Killboxes are assigned in ATO and are pre-planned.

#### Active Killbox

This is a killbox currently allocated to a flight. Permission should be sought from the flight assigned to or controlling a killbox before entering, even if only to cross.

#### Closed Killbox

This is a killbox currently not in use by anyone and imposes no restrictions on air operations. This is the default value for killboxes.

#### Restricted Operating Zone (ROZ)

ROZ are a temporarily airspace zone established for a specific mission. ROZ can be used to facilitate SCAR, CAS or any other mission. As with killbox, a ROZ have an owner that control that ROZ, and to enter the ROZ one need to establish communications with the current controlling agency (FAC(A), SCAR, Flight, JTAC, AWACS). A ROZ can be established temporarily during mission execution through AWACS.

#### Minimum Risk Routes (MRR)

Minimum Risk Route is a route that will keep air traffic reasonably safe from threats and are used to route traffic within friendly airspace.

#### Standard Pressure Settings (SPS)

For OPAC, standard pressure setting at altitudes above 7,000ft AMSL. When climbing above 7,500ft, switch to standard pressure setting (29.92). Altitudes will be given as flight levels(FL)when operating on SPS. When descending below FL085, switch back to local QNH.

#### Force QNH

AWACS, JTAC, FAC(A) and SCAR can establish a force QNH within his area of responsibility. This in-order to avoid unnecessary QNH changes. When operating on force QNH, the C2 agency need to make sure all assets are briefed on the QNH in use prior to entering the area.

## Routing of flights

All fixed wing flights in/out of allied airbases are to use procedures outlined in OPAC Air Control Plan (ACP) or 132nd FLIP v1.3. Flights scrambled by a C2 agency are exempt from these requirements.

1. 132-TTP4 Defines Factor Range as “During merge tactics, the minimum acceptable distance between the group being merged with and the next nearest group. Groups outside of this range are unlikely to affect the merge with the targeted group. FR should allow engaging and killing the targeted group, egressing tail aspect to the second group, and remaining outside that group’s maximum stern WEZ. FR is driven by threat weapons capability, fighter weapons capability, closure, and proficiency. [↑](#footnote-ref-2)
2. PI: Probability of incapacitation.Incapacitation means that a soldier that stands within this distance is physically unable to function in an assault within a 5-minute period after an attack. Ordnance delivery inside 0.1% PI distances will be considered as “danger close.” [↑](#footnote-ref-3)