OPERATION LION'S MOAT
SPECIAL INSTRUCTIONS (SPINS)

Summary of Changes:

Version 1.0: Major version (Updated 15-11-2022).
- Initial publication

Version 1.1: Small Update (Updated 24-11-2022).
- External inputs added

Version 1.2: Small Update (Updated 15-01-23)
- Change to JTAC backup freqs
- Updated tanker text to match table (no freq or TACAN changes)

1 Introduction

1.1 Scope

These SPINS outline those procedures to be followed to permit the safe and effective operation of aircraft participating in Operation Lion's Moat (OPLM).

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.

1.2 Deviations

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

1.3 Precedence

These SPINS take precedence over unit SOPs. This is to ensure a safe environment for all aircrew participating in 132nd Virtual Wing-hosted events.

1.4 Recommended changes

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

1.5 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 shall be re-read.

2 General Information

2.1 Time Zone

The Time zone for all timings will be given in one of the following:

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

2.2 Standard Units

2.2.1 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 (alternate on request)

2.2.2 Distance

Distance will be given in nautical miles,
When working with Attack Helicopters, meters or KM may be used as required

2.2.3 Elevation

Elevation shall be in feet AMSL.

2.3 Reference documents

2.3.1 Close Air Support (CAS)

The following document outlines how CAS is conducted in OPLM:
132-TTP-1 CAS Manual v1.2

2.3.2 Armed Reconnaissance (AR)

The following document outlines how AR is conducted in OPLM:
132-TTP-12 Armed Reconnaissance v1.0

2.3.3 Strike Coordination And Reconnaissance (SCAR)

The following document outlines how SCAR is conducted in OPLM:
132-TTP-6 SCAR v2.0

2.3.4 Air Interdiction (AI)

The following document outlines how AI operations are conducted in OPLM:
132-TTP-13 Air Interdiction v1.0

2.3.5 AWACS

The following document outlines how integration and cooperation with AWACS is conducted in OPLM:
132-TTP-10-AWACS Procedures v2.0

2.3.6 Brevities and Abbreviations

The following document includes brevities and abbreviations used in this document:
132-TTP-4 Brevity and Abbreviations v2.0

2.4 ATO publication

ATO will be published with each event's description and/or comms chatter.
Note that the ATO will be published 72 hours before the event start.

3 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 their flights' safe, efficient, and proper conduct.
- When AR missions involve multiple flights, a SCAR shall direct the flights. If no SCAR flight is present, the best-suited flight should assume the responsibility of SCAR to coordinate flights and ensure safe operations.
- All flights shall follow ATC and AWACS Controller instructions. All flights shall 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.

3.1.1 Flight Plans

All flights are to file a flight plan before conducting their missions. Flight plans 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.

Submitting flight plans is critical to provide ATC and AWACS controllers with information to deconflict flights and assist in the conduct of missions.

3.1.2 Datalink

3.1.2.1 SADL information

Group IDs are assigned per SQN. 617 Sqn uses 31-35. Other squadrons use 36-39. Flights will use their flight number for their IDs. For example, TUSK 2-1 and 2-2 will use an OID of 21 and 22.

3.1.2.2 F/A-18C MIDS

The flight number will denote the MIDS frequencies the flight shall use. For example,
SQUID 1: MIDS 10-19

RAGIN 2: MIDS 20-29

3.1.3 Secure communication
Secure communication may be used by 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"*.

3.1.3.1 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.

3.1.4 Authentication
Authentication will be conducted with AET-100 v1.2
The backup for authentication is RAMROD.

3.1.4.1 RAMROD
Use real-world date to determine 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

3.1.4.2 Transmission authentication
Transmission authentication will be conducted with TAT-101 v1.3. Times used for TAT must use **real-world Z time.**

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

3.1.6 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.

3.1.7 IFF OFF LINE
Prior to crossing the IFF OFF LINE with the intent of entering into hostile territory, IFF modes 1, 2, and 3 must be switched **OFF**.

3.1.8 IFF ON LINE
Prior to crossing the IFF ON LINE with the intent of returning into friendly territory, IFF modes 1, 2, and 3 must be switched **ON**.

3.1.9 Laser Codes
Flights will be assigned laser codes in the ATO, available on the 132nd website.

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

3.2 Command and Control Frequencies

3.2.1 AWACS frequencies

AWACS uses these frequencies to control aircraft.

- Check-in: 237.000 (BLUE 3)
- In-Flight Report frequency: 234.000 (OCHRE 9)
- Air Request frequency: 21.00 FM
- CSAR frequency: 228.500 (BROWN 10)
- VHF Backup: 136.250 (INDIGO 6)
- Ground Alert frequency (Scramble frequency): 228.250 (VIOLET 10)

3.2.2 Tactical frequencies

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

TACTICAL FREQUENCIES				
Frequency	Primary	Name	Secondary	Name
Tactical 1	242.500	OCHRE 4	131.250	AQUA 4
Tactical 2	239.750	INDIGO 4	138.250	CORAL 3
Tactical 3	243.750	CHERRY 8	132.750	LEMON 3
Tactical 4	225.750	INDIGO 10	120.250	OCHRE 5
Tactical 5	235.750	AMBER 4	136.750	OCHRE 8
Tactical 6	233.250	BROWN 7	139.750	AQUA 10

3.2.3 JTAC frequencies and callsigns

JTAC				
Name	Primary		BACKUP	
PREDATOR	240.750	MAROON 7	121.250	YELLOW 5
BATONET	235.500	GOLD 7	119.500	ORANGE 9
GATOR	238.000	PINK 11	133.000	YELLOW 10

3.2.4 AWACS check-in

Check-ins with AWACS are 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 go check-in frequency for a tactical frequency.

3.3 Codewords

Action/event	Codeword
On station	Hoth
Off station	Bespin
RTB	Death Star
Abort mission	Yavin
Mission successful	Tatooine
Mission unsuccessful	Cloud City
Attack successful	Dagobah
Attack unsuccessful	Endor
Last off target	Coruscant
Re-attack	Mustafar
Push(ing)	Kessel
(Request) Rolex	Kashyyyk
Wounded Bird	Kamino

3.4 Reporting

3.4.1 In-Flight Report (INFLTREP)

During missions, in-flight reports can 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. Pilots can check with the Campaign Manager before stepping into DCS to get the latest updates via in-flight reports from pilots already flying if a mission is underway. In-Flight Report format:

132nd INFLTREP	Remarks	Example
(1) Callsign	Flight's callsign	*BEAST11*
(2) Mission number	From the ATO	*AR3211*
(3) Target Location	Grid location or a geographical area commonly known	*N41 32.100 E044 23.200 or Northwest in TSKHINVALI city*
(4) Time on Target	Time of the attack	*1255Z*
(5) Results (BDA)	Battle Damage Assessment (BDA)	*3x T-80 burning*
(6) 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*

3.5 Retasking

Any flight flying in OPLM may be re-tasked to higher priority tasks. AWACS have re-tasking authority during the execution of air operations. 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*
(2) Location / Killbox name and status	What location or killbox is designated as the target area Killbox that are active are currently occupied by other flights- Killbox that are active are not in use by other flights.	*Killbox P1 Active* *or* *Killbox P1 cold* *or* *2nm SOUTHEAST of GUDUATA airfield*
(3) 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.*
(4) Threat	Any known threats in the target area	*2x SHILKA at GUDUATA airfield.* *1xSA-8 2 nm NORTHWEST of GUDUATA*
(5) Friendlies	Any information about friendly forces in the target area	*Closest friendlies are 15 nm to the NORTHWEST in static defensive positions.*
(6) SCAR	SCAR flight and contact frequency. The SCAR field is optional and only included if a SCAR flight supports the mission. This line will be omitted if no SCAR flight supports the mission.	*AXE 2-1 on 258.250*
(7) Ordnance restrictions or request	If certain ordnance is not authorized or if certain ordnance is requested to meet the objective	*No CBUs allowed*
(8) 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.*

3.6 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:_____

4 Air-to-Air Instructions

4.1 Identification terms

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

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

4.1.3 BOGEY
Unknown contact. Need more investigation.

4.1.4 FRIENDLY
A positively identified friendly contact.

4.1.5 NEUTRAL
Aircraft identified as civilian with current ROE and Identification criteria.

4.1.6 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.

4.1.7 GOPHER
A tracked CONTACT that has not conformed to safe passage routing, airspeed or altitude procedures. Will only be used when safe passage or minimum risk routing procedures are part of an ID matrix.

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

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

4.1.10 PRINT
Valid non co-operative target recognition (NCTR) reply.

4.2 Identification criteria
In OPERATION LION'S MOAT, the following Identification criteria are used.

4.2.1 NEUTRAL indicators
- Valid IFF squawk code of 60XX and adhering to published air routes in the 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 of the conflict (military aircraft)

4.2.2 FRIENDLY (Positive Friendly Indicators)

Any **TWO** of the following:

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

4.2.3 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.)

4.2.4 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

4.2.4.1 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.

4.2.4.2 Hostile Intent (HI)

Any **ONE** of the following:

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

4.3 Rules of Engagement (ROE)

The following Rules of Engagement apply in OPERATION LION'S MOAT.

4.3.1 Weapon status terms

The following weapon release status determines the classification required to employ ordinance.

4.3.2 WEAPON FREE

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

4.3.3 WEAPON TIGHT

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

4.3.4 WEAPON HOLD

Weapons may be employed in self-defence or in response to a formal order.

4.3.4.1 Formal order

The formal order is *"Commit group XXX, Time now XX:XX, I authenticate XC"* (IAW TAT-101).

4.3.5 Default status

Unless briefed otherwise, the default status is:

- WEAPONS FREE in the area of operations (Iranian airspace and Iranian occupied territories).
- WEAPONS TIGHT in International waters and Friendly territory.

This default status may be overridden by:

- The campaign creator 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 a Mission Commander.

4.3.6 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.

5 Offensive operations

5.1 Application of ALR

Mission commanders can use ALR definitions and associated tactics to determine the feasibility of mission accomplishment. Suppose mission planning reveals that the mission is unlikely to succeed using the assigned risk level. In that case, the mission commander or flight lead should inform the campaign creator before mission execution.

The campaign creator then has the following options:

- Scrub the mission in favor 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.

5.2 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 favorable engagements. Losses only at expected training or peacetime attrition rates.	• Single-ship FLOT crossings not authorized • Enter WEZ of SAM/AAA only with fully effective SEAD. • Fixed Wing - low-level tactics and reattacks not authorized
MEDIUM	Losses are 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 the mission. Defense against WMD (weapons of mass destruction), where consequences of failure are unacceptable.	• Single-ship FLOT crossings authorized • Higher authority may only cancel the mission (AWACS/AOC). • Aircraft recovery is not a factor in the selection of tactics.

5.2.1 SEAD Effectiveness Table for A/G ALR

SEAD Effectiveness	Defined as
FULLY EFFECTIVE	SEAD Can deny Air Defense engagements by continuous 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 Defense engagements but can distract SAM sites, delaying targeting or disrupting SAM guidance with **immediate reactive shots** forcing SAM sites to shut down during guidance or be destroyed. On-board countermeasures and maneuvers can effectively degrade the terminal guidance of SAM sites.
MARGINALLY EFFECTIVE	SEAD Cannot deny or delay Air Defense engagements. On-board countermeasures have limited capability to degrade SAM guidance. Tactics depend primarily on overwhelming numbers to saturate defenses and maneuvers to defeat shots.

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 merge ratios. • Use BANZAI as required. • Aircraft recovery is a higher priority than the mission goal.	1:1
HIGH	Accept major losses (~50%) to achieve the 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 the mission.	• Accept merge with inferior merge ratios. • Aircraft recovery is not an issue.	Any

Note the **Acceptable Merge Ratio (AMR)** is the ratio of friendlies to **peer** adversaries within Factor Range.[1] 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.

[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.

5.3 Target priority grade

5.3.1 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 operation's overall success.
- 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.

5.3.2 Target priority B

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

5.3.3 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.

5.3.4 Target priority D

- Target of opportunity if:
    - A: Other targets are 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 but are not considered time critical.
- Targets with priority D will not have a negative impact if not targeted.

5.4 Effects

The following effects may be tasked on the ATO:

5.4.1 Destroy

1)To damage the condition of the target so that it cannot function as intended nor 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.

5.4.2 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 function's operation is permanently impaired, but the damage does not extend to all facets of the function's operation.

5.4.3 Neutralize

1) To render an enemy weapon system and maneuver unit ineffective or unusable for a specific period
2) To render ineffective, invalid, or unable to perform a particular task or function
3) To counteract the activity or effect of

5.4.4 Attrit

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

5.4.5 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

5.4.6 Deny

1) To hinder the enemy's 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 are impaired over the short term, but the damage extends to all facets of the functions operations

5.4.7 Harass

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

5.4.8 Prevent

1) To deprive of hope or power of acting or succeeding
2) To keep from happening to avert

5.5 Close Air Support (CAS)

The following formats are used for CAS operations in OP LION'S MOAT:

5.5.1 CAS check-in briefing

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

5.5.2 Area Operations update (AO update)

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

5.5.3 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

5.6 SCAR

See AR TTP and SCAR TTP

5.7 Time Sensitive Targeting (TST)

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

6 Tanker information

KC-135 is used for boom operations (F-16 / A-10)
KC-135 MPRS & S-3B are used for drogue operations (F/A-18 / F-14)

6.1 Tanker tracks.

Tanker tracks will be named ARXXX.
AR1XX (Callsign SHELL) for boom operations (speed Mach 0.6).
AR2XX (Callsign TEXACO) for drogue operations (speed Mach 0.6).
AR9XX (Callsign ARCO) for drogue operations at the carrier (speed 250 kts)
Altimeter setting. Unless otherwise directed, an altimeter setting of standard pressure setting (29.92) shall be used for AAR operations.

TANKER KC-135						
Name	C/S	Freq	Name	TACAN	IFF	BORT
AR101	SHELL 1-1	150.000	ORANGE 5	41X	5101	521
AR102	SHELL 2-1	151.000	YELLOW 10	42X	5102	522
AR103	SHELL 3-1	138.100	WHITE 8	43X	5103	523
AR104	SHELL 4-1	127.750	ORANGE 1	44X	5104	524
TANKER KC-135 MPRS						
Name	C/S	Freq	Name	TACAN	IFF	BORT
AR201	TEXACO 1-1	130.700	INDIGO 2	45X	5201	531
AR202	TEXACO 2-1	131.700	MAROON 11	46X	5202	532
AR203	TEXACO 3-1	132.700	INDIGO 6	48X	5203	533
AR204	TEXACO 4-1	133.700	LEMON 3	49X	5204	534
TANKER S-3V						
Name	C/S	Freq	Name	TACAN	IFF	BORT
AR901	ARCO 1-1	120.500	OLIVE 8	20X	5321	541

6.2 Vertical separation

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

6.3 Clearance

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

6.4 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/drogues when the receiver has visually confirmed that no refueling is in progress.

7 Airspace information

7.1 International airspace

12 nm outside UAE, Iran, Oman, and Bahrain is defined as international airspace.

7.2 Authorized airbases

7.2.1 United Arab Emirates

All fixed wing operations for CJTF-08 shall operate out of Al Dhafra airbase. Al Minhad, Al Ain Internatinal, and Fujairah International are available as divert airfields only. All other airports are prohibited for CJTF-08.

7.3 Airspace control measures

Control/Initial Points are to be used to command and control the airspace. These points can be used in flight plans. Minimum Risk Routes will be routes between Control/Initial Points. See the Airspace Control Plan (ACP) for a graphical representation of airspace control measures.

7.3.1 Contact Points (CP)

Contact Points are points to establish communications (check-in) with AWACS/FAC(A)/SCAR/JTACs.

7.3.2 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

7.3.3 Airspace Control Point (ACP)

Airspace Control Points are primarily designed to be routing points for air traffic.

7.3.4 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. An area reference system defines the space. A Killbox can be either active or closed. Killboxes are assigned in ATO and are pre-planned.

7.3.4.1 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.

7.3.4.2 Closed Killbox

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

7.3.4.3 Restricted Operating Zone (ROZ)

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

7.3.4.4 Minimum Risk Routes (MRR)

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

7.3.4.5 Standard Pressure Settings (SPS)

For OPLM, standard pressure setting at altitudes above 13,000ft AMSL. Switch to standard pressure setting when climbing above 13,000fg (29.92). When operating on SPS, altitudes will be given as flight levels (FL). When descending below FL150, switch back to local QNH.

7.3.4.6 Force QNH

AWACS, JTAC, FAC(A), and SCAR can establish a force QNH within his area of responsibility. This is to avoid unnecessary QNH changes. When operating on force QNH, the C2 agency must ensure all assets are briefed on the QNH in use before entering the area.

7.4 Routing of flights

All fixed-wing flights in/out of Al Dhafra and Al Minhad shall use procedures outlined in OPLM Air Control Plan (ACP) or 132nd FLIP v1.3. Flights scrambled by a C2 agency are exempt from these requirements.