

STANDARD

Multi-Service Tactics, Techniques, and Procedures for Kill Box Employment KILL BOX SIGNATURE DRAFT

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KILL BOX

***MULTI-SERVICE TACTICS,
TECHNIQUES, AND
PROCEDURES FOR
KILL BOX EMPLOYMENT***

FM 3-09.34

MCRP 3-25H

NTTP 3-09.2.1

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MULTI-SERVICE TACTICS, TECHNIQUES, AND PROCEDURES

FOREWORD

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PREFACE

1. Purpose

This publication presents a doctrinal framework for kill box employment procedures across Service and/or functional components within a joint environment. A kill box is defined in Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, as: “A three-dimensional area reference that enables timely, effective coordination and control and facilitates rapid attacks.” Although a definition exists, there is no formal kill box doctrine or tactics, techniques, and procedures. Therefore, this publication updates the definition and establishes the kill box as a fire support coordinating measure (FSCM). The multi-Service tactics, techniques, and procedures described assist in developing, establishing, and executing kill box procedures to allow rapid target engagement.

2. Scope

This publication highlights kill box terminology and commonalities, presents known practices, and includes key lessons learned. It discusses multi-Service kill box planning, responsibilities, coordination, and support. Specifically, this publication provides an overview of kill box procedures, methods of employment, and coordination and synchronization.

This publication is not authoritative in nature, however, it is consistent with joint doctrine and provides principles that can help planners coordinate, deconflict, synchronize, and implement kill box procedures among the components assigned to a joint force. It covers planning and execution at the tactical and operational level. This publication will not be used by one or more Services, joint commands, other joint agencies, or other entities to obligate another Service in regards to doctrine, organization, training, materiel, leadership, personnel, and facilities.

3. Applicability

This publication provides the joint force commander (JFC) and Service components unclassified kill box multi-Service tactics, techniques, and procedures (MTTP) to implement within any area of operations (AO). The target audience includes commanders as well as the operations section (current operations, fires, and future plans) and intelligence section of Service components and their main subordinate elements (i.e., Army corps, Marine expeditionary force, Navy numbered fleet, and Air Force wing) and their counterparts on the JFC’s staff. This publication should be used by the Services as a multi-Service training publication. It should also be used by Services conducting joint operations as part of a joint force, but each Service and JFC will ultimately decide the range of applicability.

4. Implementation Plan

Army. Upon approval and authentication, this publication incorporates the procedures contained herein into the United States (US) Army Doctrine and Training Literature Program as directed by the Commander, US Army Training and Doctrine Command (TRADOC). Distribution is in accordance with applicable directives and the Initial Distribution Number (IDN) listed on the authentication page.

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18 and the Air Land Sea Application (ALSA) Center developed this publication with the joint
19 participation of the approving Service commands. ALSA will review and update this
20 publication as necessary.

21 b. This publication reflects current joint and Service doctrine, command and control
22 organizations, facilities, personnel, responsibilities, and procedures. Changes in Service
23 protocol, appropriately reflected in joint and Service publications, will likewise be
24 incorporated in revisions to this document.

25 c. We encourage recommended changes for improving this publication. Key your
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13 **May 2005**

14 **KILL BOX**
15 **MULTI-SERVICE TACTICS, TECHNIQUES AND PROCEDURES**
16 **FOR KILL BOX EMPLOYMENT**

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EXECUTIVE SUMMARY

KILL BOX

Multi-Service Tactics, Techniques, and Procedures for Kill Box Employment

Overview

This publication updates the definition of the kill box and establishes it as a fire support coordinating measure (FSCM). Commanders and staffs must understand the elements and use of kill boxes in order to plan, develop, and employ them effectively in support of the joint force commander's (JFC) requirements. This publication offers a detailed explanation of kill box employment and provides information to effectively organize, plan, and execute kill box procedures in a multinational and joint environment. This document:

- Incorporates lessons learned and best practices from Operations ENDURING FREEDOM (OEF) and IRAQI FREEDOM (OIF) and recent exercises.
- Provides basic background information on kill boxes.
- Outlines factors impacting the planning of kill boxes.
- Describes procedures and factors impacting the execution of kill boxes.
- Provides examples and scenarios involving kill box establishment and operations to better illustrate the concepts and employment of kill boxes.

Kill Box Overview

Chapter I defines the term kill box and briefly describes the purpose, employment of, and overarching concepts concerning kill boxes. It provides a graphic portrayal of these concepts and defines unique kill box terms used in the document.

Kill Box Planning and Development Considerations

Chapter II provides an overview of the various planning and coordinating considerations. It also describes the process of establishing kill boxes and describes the characteristics of the two types of kill boxes: the blue kill box which permits air-to-surface fires, and the purple kill box which permits integration of surface-to-surface indirect fires with air-to-surface fires.

Note: Some terms used in this publication are not in accordance with published joint doctrine. However, the described terms are consistent with the intent of existing joint doctrine.

Kill Box Execution Procedures

1 Chapter III describes factors and procedures (such as coordination) involved in
2 conducting kill box operations.

3 **Appendices**

4 The appendices provide additional detailed information relevant to kill box procedures.
5 These include:

- 6 • Kill box request matrix.
- 7 • Component commanders kill box coordination examples.
- 8 • Example procedures for establishing kill boxes.
- 9 • Theater-specific kill box procedures.
- 10 • Common geographic reference system (CGRS).

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Chapter I

KILL BOX OVERVIEW

1. Definition and Purpose

a. Definition: A kill box is a three-dimensional fire support coordinating measure (FSCM) used to facilitate the expeditious air-to-surface lethal attack of targets, which may be augmented by or integrated with surface-to-surface indirect fires. While kill boxes are permissive FSCMs with respect to the deliverance of air-to-surface weapons they are also restrictive in nature; trajectories and effects of surface-to-surface indirect fires are not normally allowed to pass through the kill box. A kill box is a unique FSCM that may contain other measures within its boundaries [e.g., no-fire areas (NFAs), restricted operations area (ROAs), airspace coordination areas (ACAs), etc.]. Restrictive FSCMs and airspace control measures (ACMs) will always have priority when established in a kill box.

b. Purpose: When established, the primary purpose of a kill box is to allow air assets to conduct interdiction against surface targets without further coordination with the establishing commander and without terminal attack control. A kill box will not be established specifically for close air support (CAS) missions. However, this does not restrict CAS missions inside of established kill boxes if all CAS requirements are met. When used to integrate air-to-surface and surface-to-surface indirect fires, the kill box will have appropriate restrictions. The goal is to reduce the coordination required to fulfill support requirements with maximum flexibility, while preventing fratricide.

2. Establishment

A kill box is established and adjusted by component commanders in consultation with superior, subordinate, supporting, and affected commanders, and is an extension of an existing support relationship established by the joint force commander (JFC). Kill box boundaries normally are defined using an area reference system (e.g., Appendix E, Common Geographic Reference System [CGRS]), but could follow well defined terrain features or may be located by grid coordinates or by a radius from a center point. Changes in the status of established kill boxes, as with other FSCMs and/or airspace control measures (ACMs), must be coordinated as far in advance as possible. All joint force coordinating agencies must inform their forces of the effective times and locations of new FSCMs and/or ACMs. Following the direction to execute the change, the component operations cells should confirm the changes to ensure that affected forces are aware of new FSCM and/or ACM locations and that associated positive control measures are being followed. The two types of kill boxes and the terminology used during the life cycle of a kill box are defined below:

a. **Blue Kill Box.** A blue kill box permits air-to-surface fires in the kill box without further coordination with the establishing headquarters.

1 b. **Purple Kill Box.** Same as above, plus a purple kill box permits the integration
2 of surface-to-surface indirect fires with air-to-surface fires into the purple kill box
3 without further coordination with the establishing headquarters.

4 c. **Life Cycle of a Kill Box Terminology.** (figure I-1)

5 (1) **Established.** Term used to describe a kill box that is in effect, either planned
6 via the joint targeting cycle or immediate during execution. Information about the time
7 it becomes established, the duration, and other attributes will be published and
8 disseminated using existing voice and digital command and control (C2) systems (e.g.,
9 Automated Deep Operations Coordination System [ADOCS], Advanced Field Artillery
10 Tactical Data System [AFATDS], theater battle management core system [TBMCS], or
11 fragmentary order [FRAG order] from the establishing headquarters [HQ]).

12 (a) **Open.** Term used to describe a portion or portions of a kill box that are
13 open to fires without further coordination or deconfliction. An established kill box is
14 inherently open, until closed or cancelled.

15 • **Active.** An established kill box that has aircraft flying in the
16 space defined by the box or effects of air or other joint fires within the boundaries of the
17 kill box.

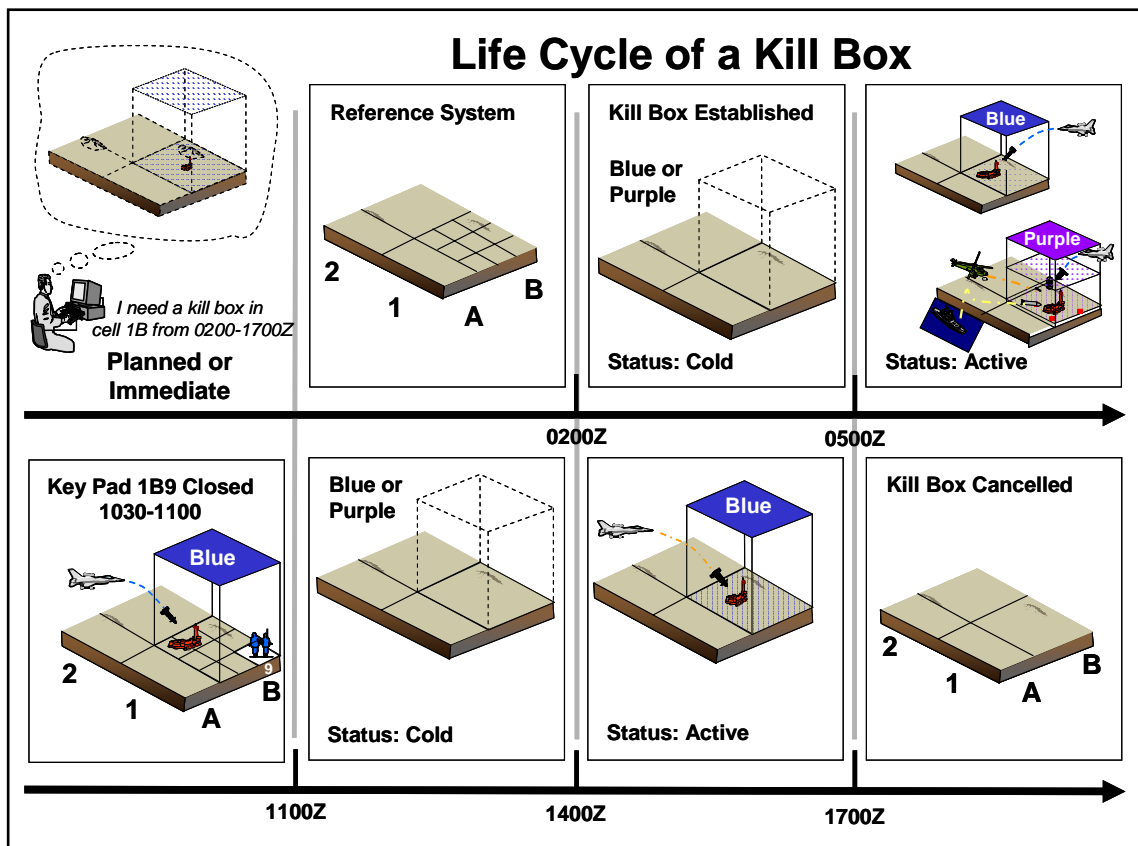
18 • **Cold.** An established kill box that is not active. All portions of the
19 kill box are open to fires unless identified as closed.

20 (b) **Closed.** Term used to describe a portion or portions of an established
21 kill box in which fires or effects of fires are not allowed without further coordination.

22 (2) **Cancelled.** The kill box is no longer in effect.

23 d. **Area Reference System.** Primarily an operational-level administrative
24 measure used to coordinate geographic areas rapidly for battlespace deconfliction and
25 synchronization. This reference system provides a common language between the
26 components and simplifies communications. (e.g., Appendix E, Common Geographic
27 Reference System, and JP 3-60, Joint Doctrine for Targeting, Appendix D, Common
28 Reference Systems: Area and Point).

29 Note: Combatant commanders will define the naming convention for the
30 employment of kill boxes within their area of responsibility (AOR).



1 **Figure I-1. Life Cycle of a Kill Box**

2 **3. Employment**

3 Kill boxes are normally used when a support relationship already exists between
 4 two or more functional or Service components. The goal is to reduce the coordination
 5 required to fulfill support requirements with maximum flexibility, while preventing
 6 fratricide. (figure I-2)

7 a. Kill boxes support the commander's objectives and concept of operations
 8 (CONOPS). As such, all target engagements within a kill box must adhere to the
 9 establishing commander's designated target priorities, effects, and timing of fires.

10 b. Use of kill boxes is not mandatory.

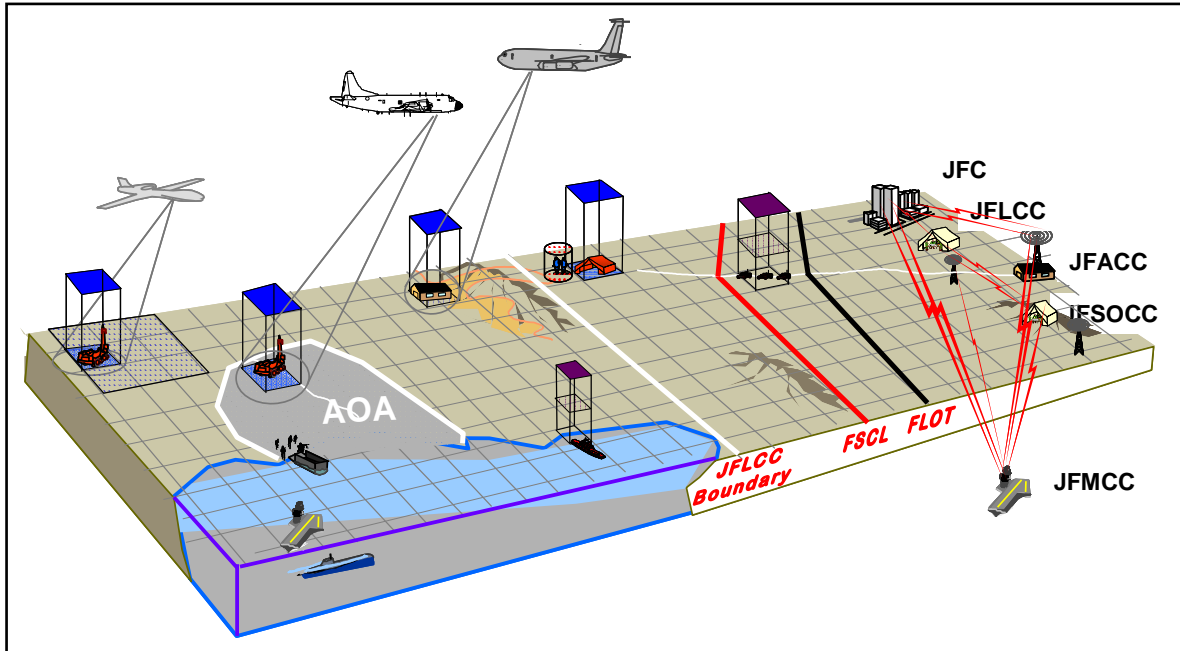
11 c. C2 updates on kill boxes will be accomplished (e.g., altitude restrictions,
 12 frequency use, established control measures within the kill box) via appropriate C2
 13 systems.

14 d. It is important to note that establishing a kill box is similar to establishing a
 15 target. This step only identifies an area where effects are desired. Additional action is
 16 required to identify and task assets to conduct attacks in this kill box. Those actions
 17 will be conducted within the standard joint and Service targeting cycles and in
 18 conjunction with the air tasking cycle.

1 e. **Linear Battlespace.** Kill boxes can augment use of traditional FSCMs, such as
2 fire support coordination line (FSCL), coordinated fire line, and battlefield coordination
3 line (BCL). They can help the commander focus the effort of air and indirect fire assets.

4 f. **Non-linear Battlespace.** When traditional FSCMs are not useful or are less
5 applicable, the kill box can be another method for identifying areas to focus air and
6 indirect fire assets.

7 g. **Altitudes.** The minimum and maximum altitudes may be disseminated in the
8 special instructions (SPINS) or in the establishment order of the coordinating measure.



9 **Figure I-2. Representative Kill Box Locations**

10 **4. Considerations**

11 a. It is important to note that a kill box is an FSCM and is **not** a reference system.
12 Kill box boundaries are normally defined using an area reference system which provides
13 the construct (a two-dimensional system) while a kill box (a three-dimensional system)
14 is the application.

15 b. Applicable rules of engagement (ROE), collateral damage (CD) guidance and
16 restrictions, positive identification (PID), and the SPINS must still be followed in a kill
17 box.

18 c. The decision to use a kill box requires careful consideration by the JFC or the
19 establishing commander. If used, its size, location, and timing are based on estimates of
20 the situation and CONOPS. Disposition of enemy forces, friendly forces, anticipated
21 rates of movement, concept and tempo of the operation, surface-to-surface indirect
22 weapon capabilities, and other factors must be considered by the commander.

23 d. There should be no friendly ground forces within or maneuvering into
24 established kill boxes. If circumstances require otherwise (e.g., long-range
25 reconnaissance patrols, special operations forces (SOF) teams, etc.), then NFAs must be

1 established to cover those forces, or the kill box must be closed. The joint force
2 commands must maintain awareness of locations of friendly ground forces and the
3 status of kill boxes within the AOR and maintain timely management of kill boxes to
4 prevent fratricide.

5 e. A kill box may contain other measures within its boundaries [e.g., NFAs, ROAs,
6 ACAs, etc.]. Restrictive FSCMs and ACMs will always have priority when established
7 in a kill box.

8 f. Integration of air-to-surface fires and surface-to-surface indirect fires requires
9 application of appropriate restrictions: altitude, time separation, or lateral separation.
10 The establishing commander will determine which of these is appropriate for the
11 mission and ensure dissemination through the appropriate C2 nodes.

12 g. Surface-to-surface direct fires, however, are not restricted by the establishment
13 of a kill box.

14 h. All available aircraft will be tasked on the daily air tasking order (ATO) with
15 either scheduled or on-call missions. Aircraft to be used to conduct interdiction missions
16 in kill boxes should normally come from the same mission set, most likely the on-call
17 interdiction missions without specific targets. Alternately, kill boxes may be used as
18 target locations for preplanned requests for scheduled and on-call missions.

19 i. The first forward air controller (airborne) [FAC(A)], strike coordination and
20 reconnaissance (SCAR), mission commander, or flight lead on station is responsible for
21 deconfliction and coordination, if required.

22 23 **5. Graphic Portrayal**

24 The kill box is graphically portrayed by a solid black line defining the area with
25 diagonal black lines within (figure I-3). The letters “BKB” (blue kill box) or “PKB”
26 (purple kill box), followed by the establishing HQ, the effective date time group (DTG),
27 and the effected altitudes (if different from the SPINS) are also within the defined area
28 as required. Units and/or automation systems may add color to the boxes for visual
29 recognition; however, the basic graphic should meet the standards of an FSCM. On-
30 order kill boxes (not currently in effect) do not have to be displayed or may be
31 represented by a box without diagonal lines.

Chapter II

KILL BOX PLANNING AND DEVELOPMENT CONSIDERATIONS

1. General

a. The JFC establishes detailed procedures and CONOPS for successful kill box employment within the joint operations area (JOA) by promulgating guidance and priorities. Additionally, the JFC normally delegates to component commanders the authority to establish and adjust kill boxes in consultation with superior, subordinate, supporting, and affected commanders.. Component commanders may further delegate that authority. The establishing commander is responsible for coordinating with and notifying all affected forces.

Note: For the purposes of this publication and the procedures described, the establishing commander is a component commander (e.g., JFACC, JFLCC, JFMCC, or JFSOCC).

b. An area reference system facilitates the structural and procedural requirements for using kill boxes, but it is not an absolute requirement.

c. Kill box procedures will not be ideal for every situation. Considerations of mission, enemy, terrain and weather, troops and support available–time available (METT-T) (Army adds civil considerations) and requirements for terminal attack control may determine that other procedures would be more effective.

2. Planning Considerations

a. Kill boxes can be applied to different portions of the battlespace, including rear areas, to facilitate expeditious target engagement. Also, the kill box may be an applicable tool where traditional coordination measures (e.g., FSCL) do not exist or have not been established. Kill boxes can be used in conjunction with existing FSCMs.

b. The component commanders must be able to communicate kill box status in a timely manner. This will ensure systems and organization databases are updated. The architecture and means by which this information is disseminated should be identified early in the planning process. It must accommodate both planned and immediate kill boxes. Communications methods may include joint and multinational digital and voice systems. Units responsible for input of kill box status, as well as the primary and secondary systems which the information will be passed, must be identified to ensure timely dissemination of kill box status.

c. Establishing a kill box requires careful planning and coordination. Some of the considerations for successful planning are:

- (1) Commander's guidance and intent.
- (2) Targeting priorities.
- (3) Intelligence preparation of the battlespace.

1 (4) Location of other FSCMs and ACMs.

2 (5) CONOPS and scheme of maneuver (kill boxes should not impede or adversely
3 impact the scheme of maneuver). Kill boxes are intended to facilitate rapid
4 engagement of targets in conjunction with the commander's concept of operation.

5 (6) Friendly locations and capabilities including SOF and other government
6 agencies (OGAs).

7 (a) Restrictive fire support coordination measures (e.g., restricted fire area
8 (RFA), NFA, or closed portion of kill box) take precedence over kill boxes, in order to
9 protect friendly forces on the ground.

10 (b) The burden of friendly deconfliction is the responsibility of the
11 establishing headquarters. The establishing headquarters is also responsible for
12 clearance of fires within the kill box.

13 (c) Consider the impact on the range and trajectory of surface-to-surface
14 indirect fires.

15 (d) Surface-to-air fires responsiveness could be reduced due to additional
16 coordination requirements.

17 (e) Weapons release may occur outside the confines of the kill box where
18 effects are intended. Special considerations may be required for certain stand-off
19 weapons, such as Tomahawk land attack missiles (TLAMs) or conventional air-
20 launched cruise missiles (CALCMs), with respect to flight path deconfliction.

21 (7) Communication. Kill box frequencies must be considered in the development
22 of the communications plan, and communication nets between C2 and fire assets must
23 be clearly established. Ideally there will be a frequency associated with a specific kill
24 box. This will enable the assets entering the kill box to have a common frequency for
25 coordination. As the number of kill boxes established increases, the available number of
26 frequencies decreases and reduces flexibility.

27 (8) ROE. Target engagement within an established kill box must still adhere to
28 applicable elements of theater ROE (e.g., ROE for air integration). Planners at the joint
29 and component level should determine if the current ROE are appropriate or unduly
30 restricts target engagement within kill boxes and should request appropriate ROE
31 adjustments, as required.

32 (9) Restrictions. Planners developing kill boxes must be aware that there are
33 many constraints and restrictions that may impact how operations are executed within
34 the kill box. Such restrictions could include requirements regarding CD, PID, restricted
35 target list (RTL) or no-strike list (NSL). These restrictions will be published in the
36 appropriate CONOPs and/or SPINS.

37 **3. Kill Box Development**

38
39 a. Kill boxes are tools for coordinating fires, but they are not the only tools.
40 Commanders retain at their disposal their full range of FSCMs and ACMs to manage
41 the battlespace.

1 (1) **Planned.** A planned kill box is developed during the planning process (i.e.,
2 joint targeting cycle, air tasking cycle, military decision making process, deliberate
3 planning process). Planners must ensure dissemination of all planned FSCMs, ensuring
4 kill boxes are in the airspace control order (ACO) or SPINS. Widest dissemination of
5 the plan will enable greater understanding of the CONOPS. A kill box can be planned
6 in a target area of interest (TAI) where a commander might expect the requirement for
7 a specified time period. TBMCS applications require that air assets be directed to a
8 specific reference point or airspace. Kill boxes that are built in the modernized
9 integrated database (MIDB) as facility targets can be processed by TBMCS as target
10 locations. Specific instructions for planned kill boxes will be disseminated via the
11 individual mission amplification (MSN AMPN) field in the ATO or in the SPINS.
12 Procedures for each theater may vary.

13 (2) **Immediate.** An immediate kill box is developed and established during the
14 execution phase of an operation. Immediate kill boxes are established by the current
15 operations sections within each command and disseminated via appropriate means
16 (voice and digital) to ensure visibility across the joint force. If the establishing
17 commander needs to establish a kill box that cannot be promulgated through planning
18 documents, he/she calls their liaison element such as a battlefield coordination
19 detachment (BCD) or goes through the direct air support center (DASC)/air support
20 operations center (ASOC) to inform the joint air operations center (JAOC) that a kill box
21 was established and the time it will be open. C2 systems must be updated to reflect the
22 new FSCM.

23 (3) **On-Order.** An on-order kill box is planned without a specific time for it to be
24 established. The establishment may be triggered by an event(s). This kill box may have
25 restrictions listed, but more likely, specific coordination for this kill box will occur with
26 the notification to change its status to current.

27 Note: For detailed procedures for establishing kill boxes, see Appendix C.

28 b. While kill boxes are permissive FSCMs, with respect to the delivery of air-to-
29 surface weapons, they are also restrictive in nature. Trajectories and effects of surface-
30 to-surface indirect fires are not allowed to pass through a blue kill box. Also air-to-
31 surface munitions (and their trajectories) delivered by aircraft not assigned to the kill
32 box are not permitted to pass through an active kill box unless coordinated with the
33 designated controlling authority. All aircraft not assigned to operate within a kill box
34 are restricted from flying through an active kill box without permission of the
35 designated controlling authority.

36 c. The primary purpose of permissive measures is to facilitate the attack of targets.
37 Permissive measures require no further detailed coordination for the engagement of
38 targets with conventional means. Restrictive measures (e.g., restrictive fire line, RFA,
39 and NFA) impose requirements for specific coordination before engagement of targets.
40 For example, aircraft cannot drop on an established NFA and must abide by the
41 confines of an ACA. However, a kill box may take priority over permissive FSCMs. For
42 example, a FSCL that crosses an established kill box does not automatically close that
43 kill box.

44 d. Engagement authority is automatically granted by the establishment of a kill
45 box but does not relieve the aircrew of the responsibility for complying with

1 requirements such as commander's designated target priority, PID, CD, ROE, and
2 SPINS.

3

4 **4. Blue Kill Box**

5 a. **Primary Purpose.** The primary purpose of a blue kill box is to permit air-to-
6 surface fires in the kill box without further coordination or deconfliction (figure II-1). If
7 the kill box is active, air-to-surface munitions (and their trajectories) delivered by
8 aircraft not assigned to the blue kill box need to be coordinated. All aircraft not
9 assigned to an active blue kill box are restricted from flying through it unless
10 coordinated with the kill box coordinator (KBC). The airspace included by a blue kill
11 box extends from the surface up to the limit established by the airspace control
12 authority.

13 Note: Ordnance may be delivered from outside the airspace defined by the kill box
14 to include stand-off surface-to-surface indirect and air-to-surface weapons
15 (figures II-1 and II-2).

16 b. **Permits Rapid Engagement.** A blue kill box minimizes the restrictions on air-
17 to-surface fires, while also protecting aircraft. Effects and trajectories of surface-to-
18 surface indirect fires are not allowed to pass through the blue kill box. Land and
19 maritime force commanders must coordinate with the air component to deliver surface-
20 to-surface indirect fires into or through an established blue kill box. The primary
21 purpose of permissive measures is to facilitate the attack of targets. Permissive
22 measures require no further detailed coordination for the engagement of targets with
23 conventional means. Restrictive measures impose requirements for specific coordination
24 before engagement of targets.

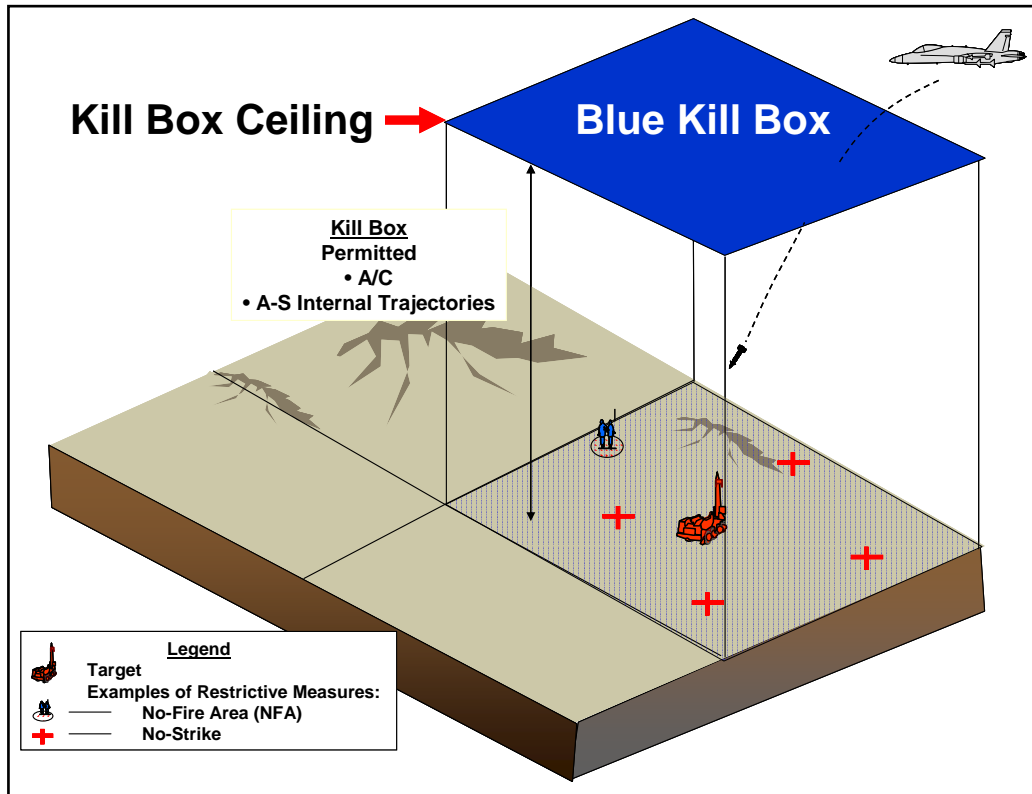


Figure II-1. Notional Blue Kill Box

1

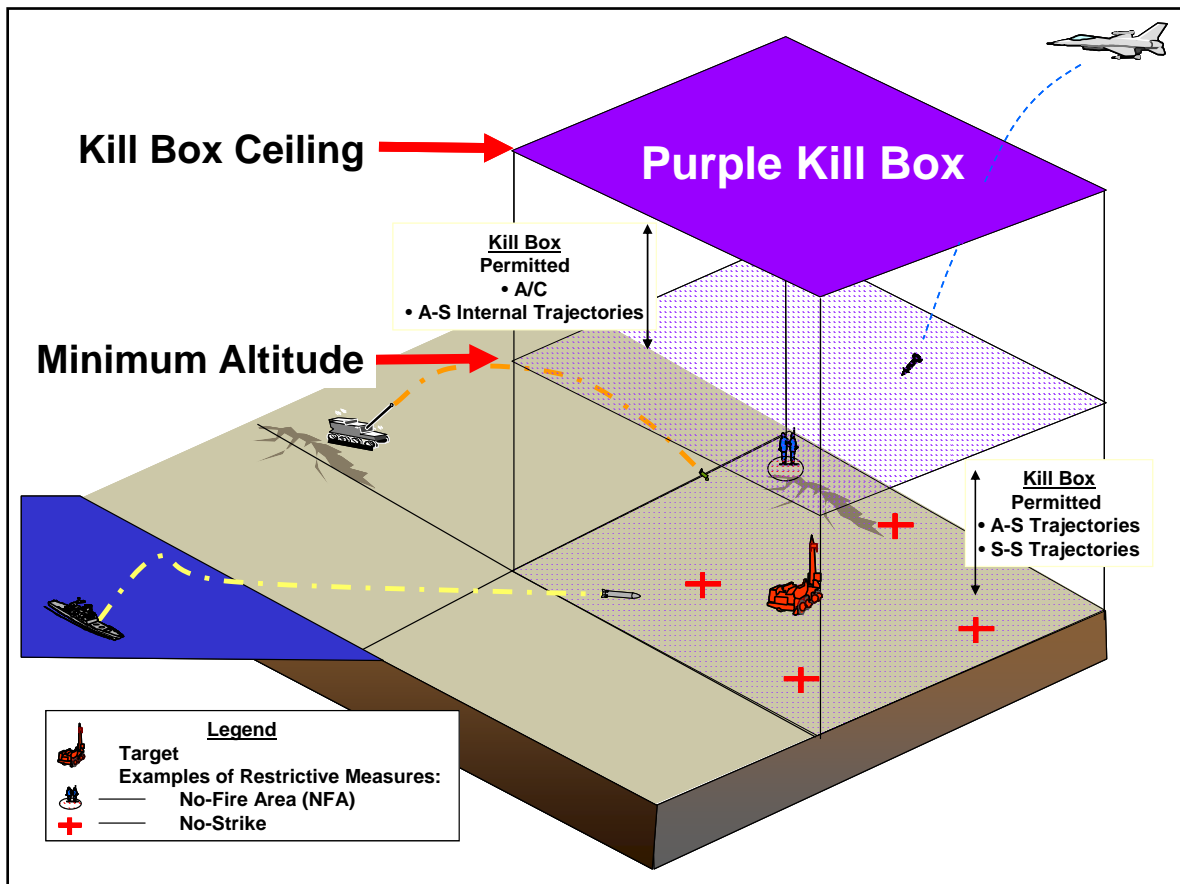
2 **5. Purple Kill Box**

3 a. **Primary Purpose.** The primary purpose of a purple kill box is to reduce the
 4 coordination requirements for air-to-surface fires, while still allowing surface
 5 component commanders to employ surface-to-surface indirect fires. The purple kill box
 6 allows the maximum use of joint fires in the kill box creating a synergistic effect and
 7 maximum potential for engaging targets.

8 b. **Permits Integration of Fires.** A purple kill box permits the integration of
 9 surface-to-surface indirect fires with air-to-surface fires into the purple kill box without
 10 further coordination (figure II-2). Air-to-surface and surface-to-surface indirect fires can
 11 be deconflicted by altitude, lateral, or time separation. The establishing headquarters
 12 will coordinate with the air component to define the appropriate deconfliction technique
 13 for operations within the purple kill box. All aircraft not assigned to an active purple
 14 kill box are restricted from flying through it unless coordinated. Also air-to-surface
 15 munitions (and their trajectories) delivered by aircraft not assigned to the kill box will
 16 not violate the purple kill box unless coordinated. Ground units subordinate to the
 17 establishing commander are required to obtain clearance from the air component for
 18 any surface-to-surface indirect fires when their trajectories will violate the altitude,
 19 lateral, or time restrictions. Ground units from other components must coordinate fires
 20 with the establishing commander as well.

21 c. **Deconfliction Techniques**

- 1 (1) **Lateral Separation.** Lateral separation is effective for coordinating fires
 2 against targets that are adequately separated from flight routes to ensure aircraft
 3 protection from the effects of friendly fires.
- 4 (2) **Altitude Separation.** Altitude separation is effective for coordinating fires
 5 when aircrews will remain above or below indirect fire trajectories and their effects.
- 6 (3) **Altitude and Lateral Separation.** Altitude and lateral separation is the
 7 most restrictive technique for aircrews and may be required when aircraft must cross
 8 the firing unit's gun-target line.
- 9 (4) **Time Separation.** Time separation requires the most detailed coordination
 10 and may be required when altitude restrictions from indirect fire trajectories (e.g., Army
 11 Tactical Missile System [ATACMS] trajectory) adversely impact aircraft ordnance
 12 delivery.



13

Figure II-2. Notional Purple Kill Box

1 **6. Kill Box Responsibilities Matrix**

2 The following matrix (table II-1) describes the responsibilities inherent in employment of the
 3 types of kill boxes.

4 **Table II-1. Kill Box Responsibilities**

Kill Box Responsibilities Matrix		
Types/Location	Establishing Commander ¹	Component Coordination Requirements
Blue or Purple Kill Box <ul style="list-style-type: none"> • Outside JFC-designated AOs 	JFC JFACC (when delegated) ²	JFACC: No additional coordination required once established.
		Other components: Must coordinate with JFACC.
		Purple Kill Box Restrictions: Altitude, lateral, or time separation as specified when established.
Blue or Purple Kill Box <ul style="list-style-type: none"> • Inside JFC-designated AOs 	Land, Maritime, or Service component commander ³	JFACC: No additional coordination required once established, except changes in establishing commander target priorities, effects, and timing.
		Establishing Headquarters: Must notify the JFACC when opening, closing, canceling, or changing the type of kill box or changes to establishing commander's target priorities, effects, and timing.
		Other components: Must coordinate with establishing headquarters.
		Purple Kill Box Restrictions: Altitude, lateral, or time separation as specified when established.

5 ¹ The JFC may be the establishing commander for any FSCM within the AOR.

6 ² The JFC will normally delegate to the JFACC the authority for establishing kill boxes in unassigned areas of the JOA.

7 ³ The JFSOCC is the establishing commander for kill boxes inside a joint special operations area (JSOA).

1 Chapter III

2 **KILL BOX EXECUTION PROCEDURES**

3 **1. Execution of Operations Within Kill Boxes**

4 Kill box execution begins with the establishment of a kill box by a component
5 commander and is dependant on two factors: the method by which a kill box is
6 established (either planned or immediate) and types of fires to be delivered (either
7 integrated surface-to-surface indirect and air-to-surface fires [purple kill boxes] or pure
8 air-to-surface fires [blue kill boxes]).
9

10 **2. Establishment and Cancellation of a Kill Box**

11 a. Kill box establishment and adjustment requires the establishing commander to
12 conduct detailed coordination and dissemination of information with superior,
13 subordinate, supporting, and affected commanders within the JOA. The establishment
14 of planned or immediate kill boxes will use existing theater command, control,
15 communications, and computer systems. During execution, communications nets
16 between C2 and air assets providing air-to-surface fires will be clearly established and
17 used to terminate operations in a timely manner if necessary.

18 b. Component commanders initiate the establishment of a kill box through their
19 operational C2 organization (the recommended request format is provided in figure III-
20 1). They will coordinate their action with the airspace control authority, who is
21 typically, but not always, the joint force air component commander (JFACC).
22 Coordination will include consultation with the JFACC's representatives on the impacts
23 and details of the kill box. Example: The joint force land component commander
24 (JFLCC) wants to establish a kill box in his/her operational area. Prior to establishing
25 the kill box, the JFLCC will coordinate the impacts and details of the kill box with
26 ASOC/JAOC via the fire support element (FSE).

27 Note: For detailed procedures for establishing kill boxes, see Appendix C.

1

KILL BOX REQUEST FORMAT	
Purpose:	_____
Geographic limits/kill box location:	_____
Effective times of establishment:	_____
	<ul style="list-style-type: none"> • Identify the date-time group (DTG) the kill box is established • Identify the DTG or the event that will cancel the kill box
Kill Box Type:	_____
	<i>(Identify whether it is blue or purple)</i>
Establishing Commander:	_____
	<i>(Identify the establishing commander)</i>
Establishing Commander's Targeting Guidance:	_____
	<ul style="list-style-type: none"> • Priorities: List the targets • Effects: Identify the desired effects • Identify restrictions
Remarks:	_____
	<i>(Give any additional information [e.g. NFA, no strike, etc.] needed.)</i>

2

Figure III-1. Kill Box Request Format

3

3. Contingencies and Considerations

4

a. The kill box is designed to rapidly provide a solution to the requirement for coordination of lethal fires. However, nonlethal fires such as electronic attack may be employed to facilitate fires and provide synergy of prosecution of a given target across the entire operational spectrum. Every attempt should be made to bring to bear all capabilities against a given target set to ensure its efficient destruction.

8

9

b. Additionally, established kill boxes in the vicinity of joint air defense assets can adversely affect the capabilities of the air defense system to operate as intended by the area air defense commander (AADC). Advise the AADC when a kill box is established in the vicinity of a joint air defense area.

10

11

12

1 4. Coordinating Operations Within Active Kill Boxes

2 Kill box coordination is required when multiple flights or formations are operating
3 within or providing air-to-surface fires within the same kill box. This coordination may
4 be as simple as deconflicting two flights or as complex as performing SCAR. At a
5 minimum, this coordination must deconflict flight paths and weapons deliveries.

6 a. The functions associated with kill box coordination should not be confused with
7 those of the FAC(A). FAC(A)s are a direct extension of a tactical air control party
8 (TACP) or joint terminal attack controllers (JTAC) and specifically facilitate the conduct
9 of CAS. Flights providing kill box coordination will not normally provide terminal
10 attack control within a kill box. However, rapidly changing circumstances could require
11 FAC(A)s to provide terminal attack control for CAS missions. In this case, the kill box
12 or portions thereof will be closed and CAS procedures will be used.

13 b. Unless previously coordinated, the first flight to enter a given kill box will be
14 responsible for providing the required kill box coordination. As the complexity of the
15 kill box environment begins to exceed airframe capability or the flight's training or
16 comfort level, that flight should seek to pass the responsibility for providing kill box
17 coordination to a more qualified flight. FAC(A)s or SCAR-trained flights are ideally
18 suited and prepared to provide all of the capabilities described above. If no FAC(A),
19 SCAR, or mission commander is available, the most qualified flight lead will conduct
20 kill box coordination and will only be responsible for kill box deconfliction.

21 c. Once positive deconfliction has been established, kill box coordination may
22 include any or all of the following:

- 23 (1) Expeditiously flowing interdiction aircraft into and out of the target area.
- 24 (2) Attempting to match weapons with targets and targeting priorities.
- 25 (3) Preventing redundant strikes against targets previously destroyed.
- 26 (4) Providing targeting information, to include accurate coordinates and PID.
- 27 (5) Providing target marks.
- 28 (6) Supporting laser-guided weapons.
- 29 (7) Confirming or locating surface-to-air threats.
- 30 (8) Providing battle damage assessment/bomb hit assessment (BHA).

31 32 5. Command, Control, and Communications

33 **Radio Procedures.** Flights will check in with C2 agencies in accordance with
34 (IAW) theater SPINS. Once authorized to proceed to a kill box, flights must check in
35 with the agency or flight providing kill box coordination prior to entering that kill box.
36 Recommended check-in and briefing formats are provided below. The applicable
37 information from each format should be passed. At a minimum, the C2 agency will pass
38 kill box location, status, coordinator, frequency, friendlies, and threats.

1 a. C2 Agency Check-In Standard IAW Theater SPINS. As time and conditions
2 permit, amplifying information may be passed including some or all of the following
3 (figure III-2).

COMMAND AND CONTROL AGENCY BRIEFING Information passed from C2 Agency to Aircraft
Aircraft Check-In: " <u><i>C2 agency call sign, this is aircraft call sign</i></u> "
C2 Response: " <u><i>aircraft call sign, this is C2 agency call sign</i></u> "
Targets: " _____ " (priorities, targets being worked, etc.)
Threats: " _____ "
Friendlys: " _____ " (all applicable air and ground assets in vicinity of kill box)
Fires Integration: " _____ "
Coordinator: " _____ " (call sign and net)
Ordnance Restrictions or Requests: " _____ "
Remarks: " _____ " (restricted targets or munitions, etc.)
Example: "Kmart 00, this is Razor 22 checking in as fragged." "Razor 22, this is Kmart 00, proceed to 7F, target priorities are tanks and artillery, possible SA-8 in keypad 5, multiple aircraft on station, contact Badger 11 on TAD-2, no scatterable munitions."

Figure III-2. Command and Control Agency Briefing

1

2 b. Kill Box Check-In Briefing (figure III-3)

KILL BOX CHECK-IN BRIEFING Passed to Kill Box Coordinator Before Entering	
Aircraft: <i><u>"KBC call sign, this is aircraft call sign"</u></i>	
Mission Number:	" _____ "
Number and Type of Aircraft:	" _____ "
Position and Altitude:	" _____ "
Ordnance:	" _____ "
<i>(laser codes as applicable)</i>	
Time on Station:	" _____ "
Additional Aircraft/Aircrew Capabilities:	" _____ "
Remarks:	" _____ "
<i>Example:</i>	
"Badger 11, this is Razor 22, mission #3601, flight of 2 x AV-8s, 50 nm south angels 26, 3 GBU-12s and Litening, 20 minutes playtime."	

3

Figure III-3. Kill Box Check-In Briefing

1

2 c. KBC to Fighter Brief/Check-In (figure III-4)

KBC TO FIGHTER BRIEF/CHECK-IN Passed from KBC	
Aircraft: <i>“aircraft call sign, this is KBC call sign”</i>	
Deconfliction Plan:	“ _____ ”
Friendlies:	“ _____ ” <i>(all applicable air and ground assets in kill box)</i>
Targets:	“ _____ ” <i>(priorities, targets being worked, etc)</i>
Threats:	“ _____ ”
Kill Box Status and Restrictions:	“ _____ ”
Remarks:	“ _____ ” <i>(restricted targets or munitions, etc)</i>
<i>Example:</i>	
“Razor 22, this is Badger 11, descend to angels 20, proceed to 7F keypad 9, target priorities are tanks and artillery, possible SA-8 in 7F5, 7F is active blue kill box, be advised Ripper 33, established angels 18, 7F keypads 1, 2, and 3, Badger 11 angels 25, advise when ready to copy attack brief.”	

3

Figure III-4. Kill Box Coordinator to Fighter Brief/Check-In

1

2 d. Kill Box Attack Brief (figure III-5)

KILL BOX ATTACK BRIEF KBC to Striker Aircraft
Aircraft: <u>"KBC call sign, this is strike aircraft call sign"</u>
Target Description: " _____ "
Target Location: " _____ " <i>(coordinates, geographic references, etc.)</i>
Target Elevation: " _____ "
Remarks: " _____ " <i>(buddy-lase plan, mark, time on target (TOT), deconfliction, etc.)</i>
<p>NOTE: Once established in the open kill box with flight and weapon deconfliction assured, authorization to engage targets is assumed once the following measures have been satisfied by the flight:</p> <ul style="list-style-type: none"> • PID • FSCMs Restrictions • Collateral Damage Estimations (CDEs) • No-strike Lists/Restricted Target List • ROE/SPINS
<p>Example:</p> <p>"Razor 22 Ready to copy."</p> <p>"Column of 4 APCs oriented north to south with dismounted infantry, location N3701.034 / W07601.089, elevation 69', remain in 7F keypad 9, contact Badger 11 once complete."</p>

3

Figure III-5. Kill Box Attack Brief

4

e. Departing KBCs will execute a positive handoff to the appropriate flight, if applicable, and notify C2. If no flights are available, the KBC will execute a positive handoff with C2.

6

1

Appendix A

2

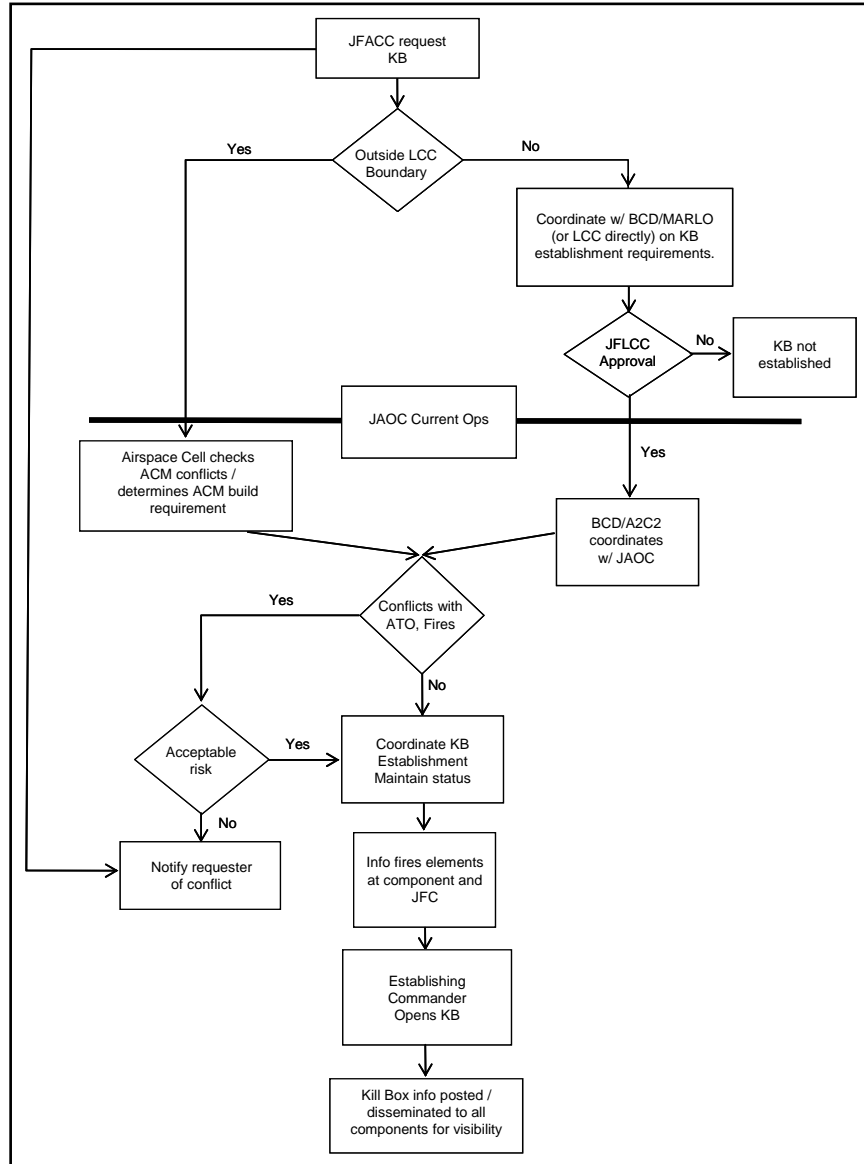
KILL BOX REQUEST MATRIX

3

1. Joint Force Air Component Commander (JFACC) Requesting Immediate

4

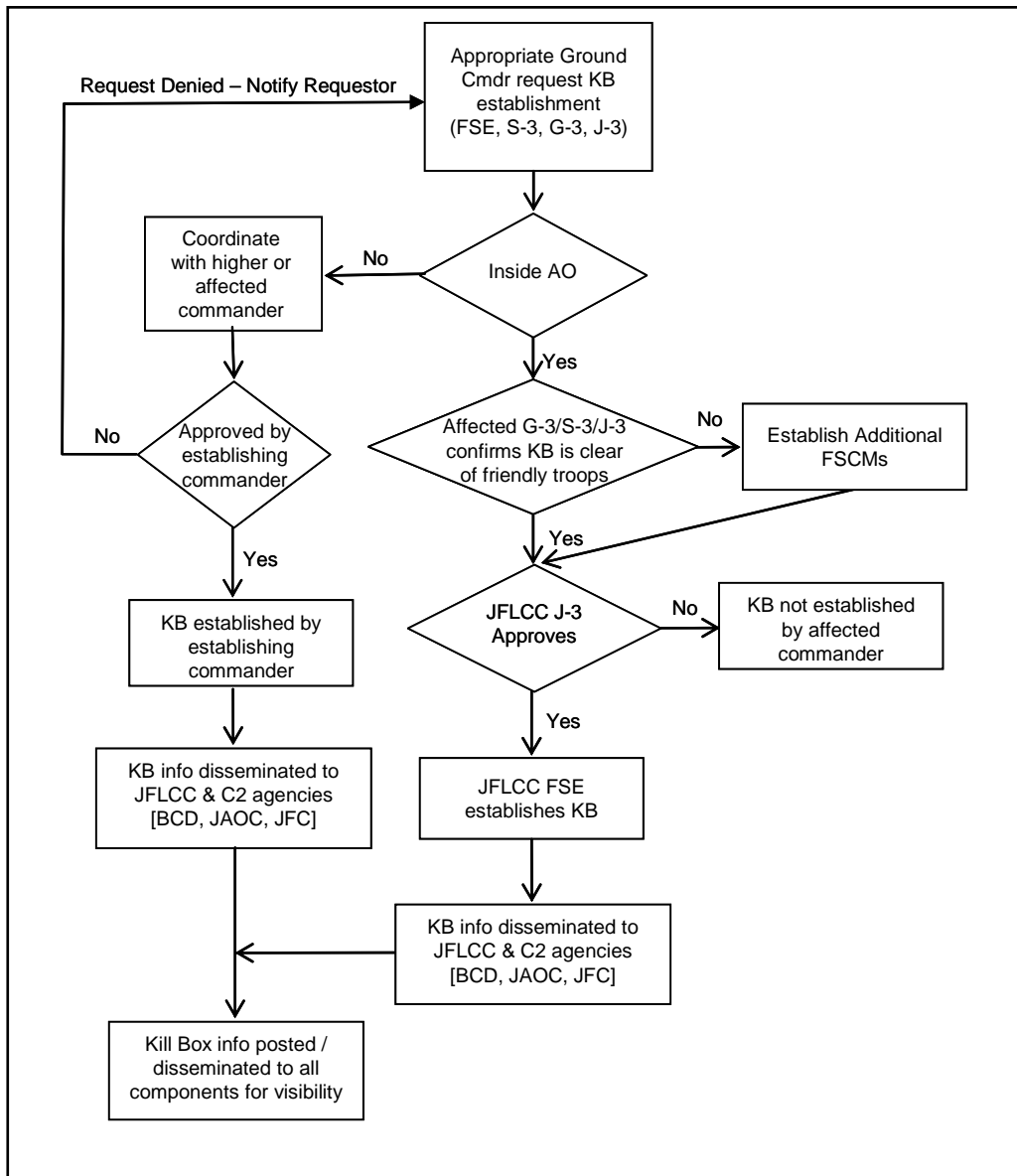
Kill Box



5

Figure A-1. JFACC Requesting Immediate Kill Box Decision Flow Chart

1 **2. Army Maneuver Unit Requesting Immediate Kill Box**



2 **Figure A-2. Army Maneuver Unit Requesting Immediate Kill Box Decision Flow Chart**

3 The Army maneuver unit requesting an immediate kill box decision flow chart is a
 4 tool to be used by the staff to expedite the establishment of an immediate kill box. Prior
 5 to being used, the flow chart should be adjusted to reflect the current situation. If used
 6 correctly, the flow chart will provide the staff an overview of the decisions to be made
 7 and the coordination required to open an immediate kill box.

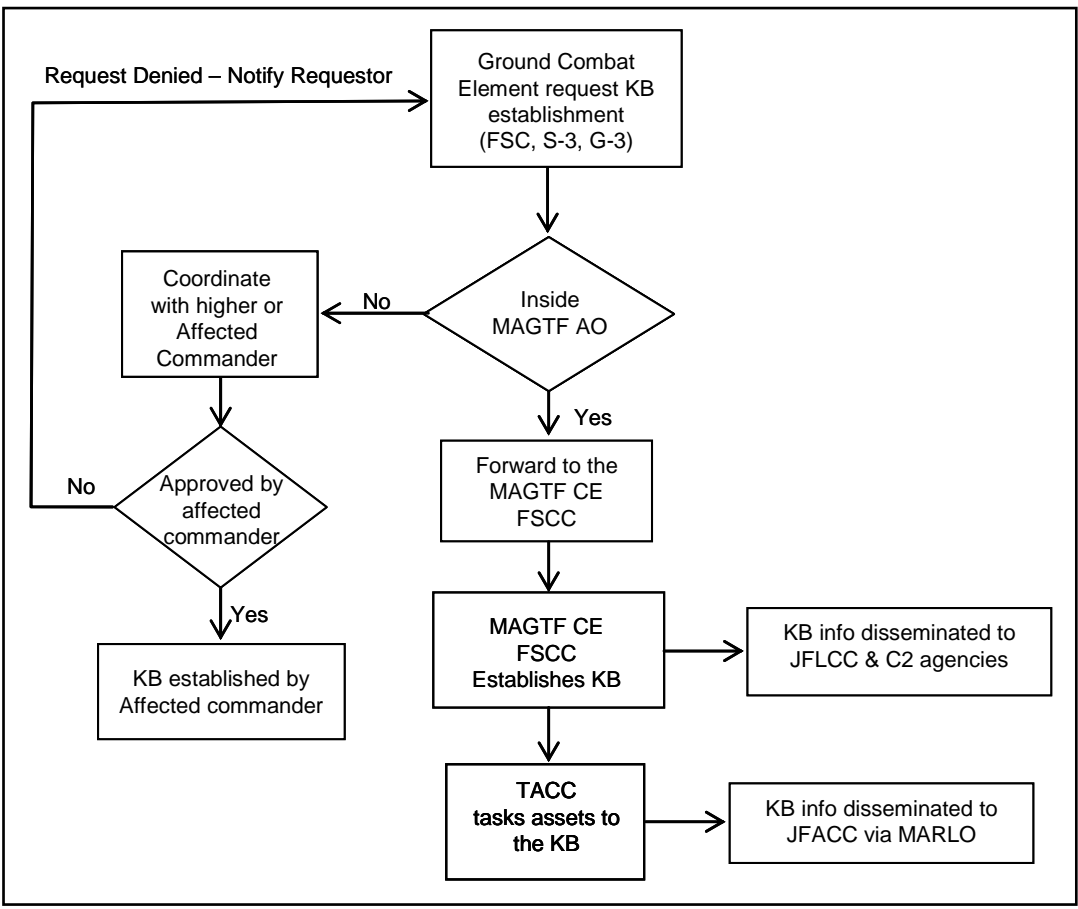
8 a. The fire support coordinator (FSCOORD) in consultation with the G-3/S-3/J-3
 9 and air liaison officer (ALO) recommend that a kill box be established.

10 b. Is the kill box in the unit's area of operation (AO) – Yes?

- 1 (1) Can G-3/S-3/J-3 confirm that there are no friendlies within the area of the kill
2 box?
- 3 (a) If yes, the kill box recommendation goes forward.
- 4 (b) If no, the G-3/S-3/J-3 and the FSCOORD must make recommendations
5 for additional FSCMs to protect those troops.
- 6 (2) Notify the air defense artillery (ADA) liaison officer (LNO) to establish a kill
7 box. Coordinate on the LNO's risk assessment, if submitted.
- 8 (3) Can the ALO/TACP ensure that the kill box establishment will not adversely
9 affect air operations in support of the maneuver force or JFLCC operations?
- 10 (a) If yes, the kill box recommendation goes forward.
- 11 (b) If no, the ALO LNO must provide a risk assessment to the commander
12 along with his/her recommendations.
- 13 (4) Weighing all the information and recommendations, the maneuver
14 commander makes his/her decision on establishing the kill box.
- 15 (a) If yes, the kill box is established.
- 16 (b) If no, the kill box is not established.
- 17 c. Is the kill box in the unit's AO – No?
- 18 (1) The FSE coordinates with the commander of the AO where the kill box is to be
19 located and recommends that a kill box be established and provides all the information
20 concerning the establishment of the kill box.
- 21 (2) The staff of the affected commander performs steps in b(1), (2) and (3).
- 22 d. Does the affected component commander approve the establishment of a kill box
23 in his/her AO?
- 24 (1) If yes, the kill box information is established.
- 25 (2) If no, the kill box is not established.
- 26 e. Can the JFLCC clear the kill box for all friendly forces, e.g., special operations
27 forces (SOF), other government agency (OGA), etc?
- 28 (1) If yes, the kill box information is disseminated to all component commanders
29 prior to establishment.
- 30 (2) If no, the JFLCC deep operations coordination cell (DOCC)/FSE must
31 establish additional FSCMs to protect those forces.

1 **3. Marine Air-Ground Task Force (MAGTF) Ground Combat Element (GCE)**

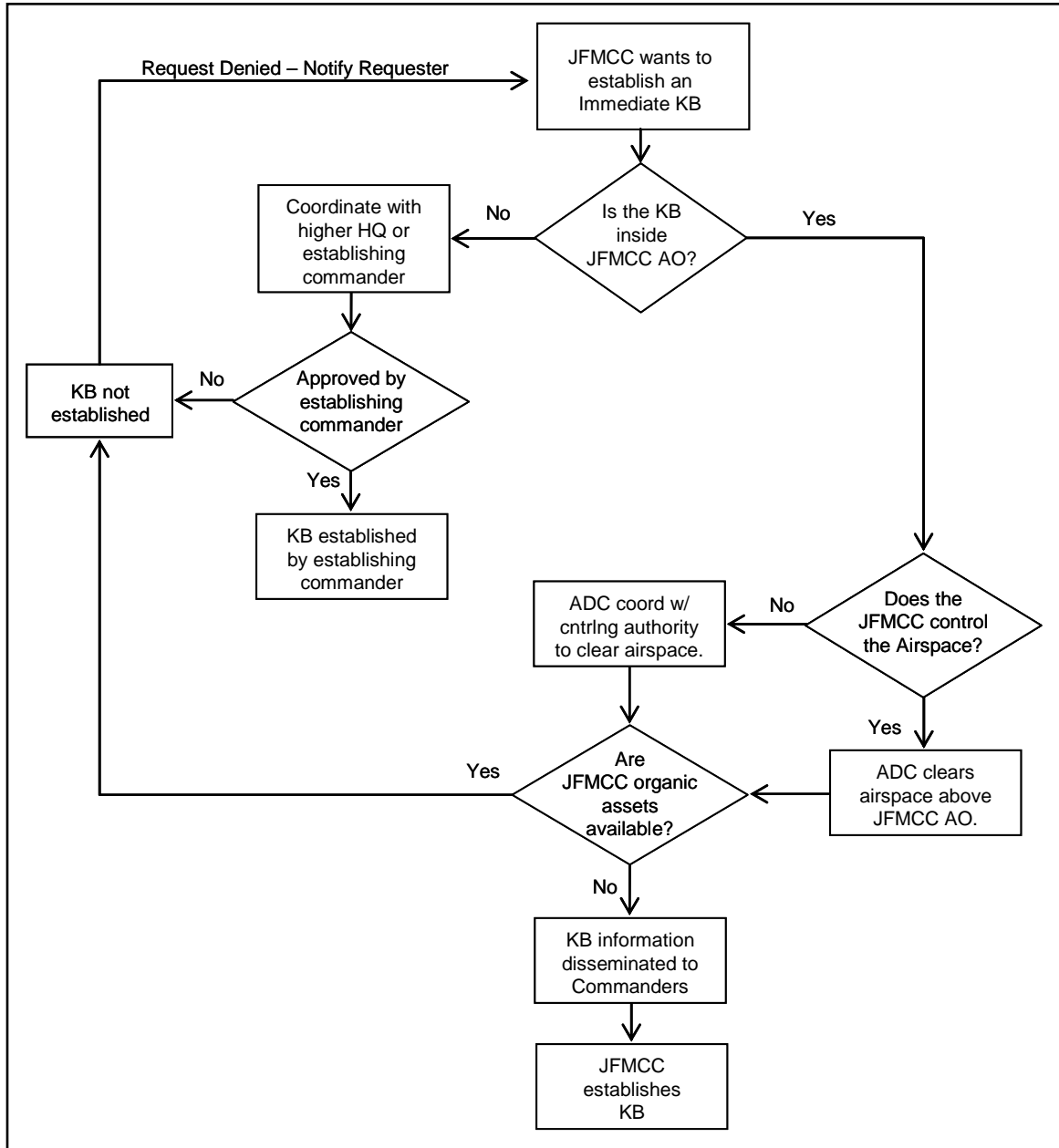
2 **Requesting Immediate Kill Box**



3 **Figure A-3. MAGTF GCE Requesting Immediate Kill Box Decision Flow Chart**

4

1 **4. Joint Force Maritime Component Commander (JFMCC) Requesting an**
 2 **Immediate Kill Box**



3 **Figure A-4. JFMCC Requesting Immediate Kill Box Decision Flow Chart**

4 The JFMCC immediate kill box decision flow chart is a tool to be used by the
 5 JFMCC staff to expedite establishing an immediate kill box. Prior to each use, the flow
 6 chart should be modified to reflect the current situation. If used correctly, the flow

1 chart will provide the JFMCC staff an overview of the decisions to be made and the
2 coordination required to open an immediate kill box.

3 a. Is the kill box in the JFMCC AO? – Yes

4 (1) Does the JFMCC control the airspace defined by the kill box?

5 (a) If yes, the air defense commander (ADC) clears the airspace defined by
6 the kill box.

7 (b) If no, the ADC coordinates with the airspace control authority (normally
8 delegated to the Chief of Combat Operations [CCO] working for the JFACC in the
9 JAOC) to clear the airspace defined by the kill box.

10 (c) Are JFMCC organic assets available?

11 • If yes, a kill box is not established.

12 • If no, the kill box information (KB type, location, establishing
13 headquarters, and time established, etc.) is disseminated to all component commanders
14 prior to establishment.

15 b. Is the kill box in the JFMCC AO? – No

16 (1) JFMCC current operations coordinates with the establishing headquarters to
17 establish a kill box.

18 (2) Does the establishing headquarters approve the establishment of a kill box in
19 his/her AO?

20 (a) If yes, the kill box information (KB type, location, establishing
21 headquarters, and time established, etc.) is disseminated to all component
22 commanders prior to establishment.

23 (b) If no, a kill box is not established.

24

1 **Appendix B**

2
3 **COMPONENT COMMANDERS KILL BOX**
4 **COORDINATION EXAMPLES**

5 **1. Kill Box Execution: Examples of Cross-Component Coordination**

6 The following mission examples demonstrate how the kill box process can be
7 implemented across components. The examples explore different possibilities and
8 illustrate key concepts in coordination of kill boxes, but are not intended to be all-
9 inclusive.

10 **2. JFLCC Planned Kill Box Example**

11 a. The JFLCC staff during the military decision-making process has identified an
12 area of expected enemy concentrations of armored forces in areas well beyond the
13 forward line of own troops (FLOT) and beyond the expected movement of friendly forces
14 for the next 48 hours. Intending to shape the battlespace, the FSCoord and ALO
15 recommend that the JFLCC establish a kill box over the area. This will allow air assets
16 to attack enemy targets without further coordination. The kill box will not adversely
17 affect ADA coverage for the land component. (figure B-1, blue kill box) They submit the
18 following kill box request:

19 (1) Purpose: To destroy enemy armor assets in the area and degrade enemy
20 forces for the friendly forces.

21 (2) Geographic limits/kill box location: Using the area reference system, the
22 entire cell 24K is identified as a kill box.

23 (3) Effective times of establishment:

24 (a) Established at 240600ZAug04

25 (b) Cancelled 260600ZAug04 or on-order

26 (4) Kill Box Type: BLUE

27 (5) Establishing Commander: JFLCC

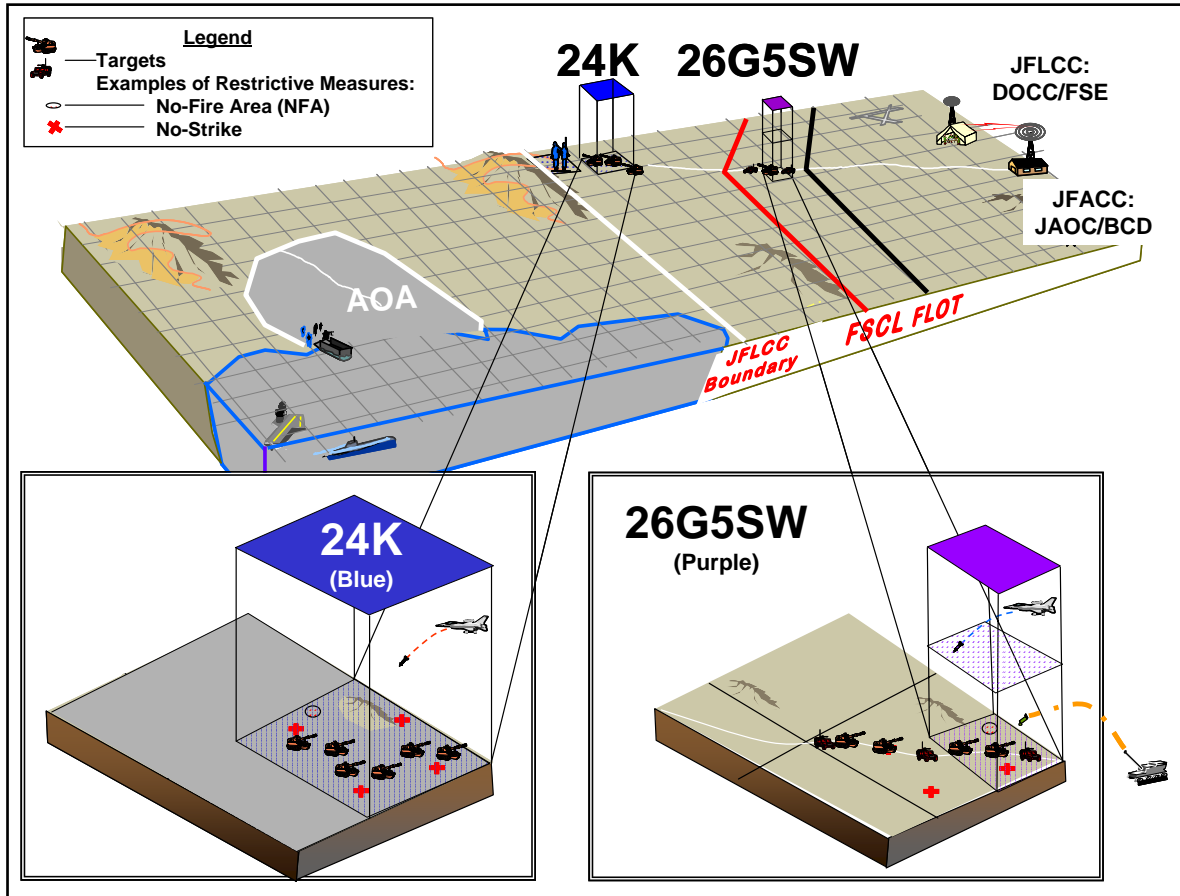
28 (6) Establishing Commander's Targeting Guidance:

29 (a) Priorities: Tanks, ADA, and armored vehicles.

30 (b) Effects: Destroy/neutralize when found.

31 (c) Restrictions: Do not destroy bridges or road networks. No scatterable
32 munitions near bridges, roads, or road intersections.

1 (7) Remarks: No friendlies are within the proposed kill box. NFAs have been
2 established around restricted and no-strike targets.



3 **Figure B-1. JFLCC Establishes Planned and Immediate Kill Boxes**

4 **3. JFLCC Immediate Kill Box Example**

5 a. During shore operations, the HQ of the Marine air-ground task force (MAGTF)
6 receives intelligence reports concerning stationary and advancing enemy forces within
7 their AO. The enemy armored and mechanized units are short of the FSCL but beyond
8 the BCL and the range of Marine organic indirect fires. The FSCOORD and air officer
9 recommend that a purple kill box be established immediately to bring maximum joint
10 fires to bear on the target. The JFLCC (Marine expeditionary force [MEF] commander)
11 agrees and establishes the kill box. (figure B-1, purple kill box)

12 b. A message is prepared with the following information:

13 (1) Purpose: To destroy enemy armor and mechanized forces before they reach
14 Marine Corps units.

15 (2) Geographic limits/kill box location: Using the area reference system, the
16 quadrant 26G5SE is identified as a kill box.

17 (3) Effective Times:

- 1 (a) Established: Immediately
2 (b) Cancelled: On-order
3 (4) Kill Box Type: PURPLE, minimum altitude 12,000 ft mean sea level (MSL)
4 maximum altitude 25,000 ft MSL.
5 (5) Establishing Commander: JFLCC
6 (6) Establishing Commander's Targeting Guidance:
7 (a) Priorities: Tanks, armored vehicles, artillery.
8 (b) Effects: Destroy. Do not destroy bridges or road networks.
9 (7) Remarks: No friendlies are within the proposed kill box. There are no
10 restricted or no strike targets within the kill box.

11 **4. JFMCC Planned Kill Box Example**

12 a. A Marine expeditionary brigade (MEB) level amphibious assault is scheduled to
13 take place in 5 days within an amphibious objective area (AOA) designated by the JFC.
14 The intelligence section of the command element briefs the ground combat element
15 (GCE) commander (regimental combat team [RCT] commanding officer [CO]) on an
16 enemy high speed armor avenue of approach into the AOA. The RCT CO determines
17 the need to shape the amphibious landing area in preparation for the amphibious
18 assault. His/her FSCOORD and air officer recommend establishing a purple kill box
19 over the area. This will allow for air assets and naval surface fire support (NSFS) to
20 engage targets in the area without further coordination. (figure B-2, purple kill box)

21 b. The RCT CO purple kill box request is based on the following information:

22 (1) Purpose: To destroy enemy armor assets in the area and prohibit enemy
23 forces from approaching the beachhead area.

24 (2) Geographic limits/kill box location: Using the area reference system, the
25 entire keypad 29W is identified as a kill box.

26 (3) Effective Times:

27 (a) Established at 0600Z D-3

28 (b) Cancelled at 0600Z D-day

29 (4) Kill Box Type: PURPLE

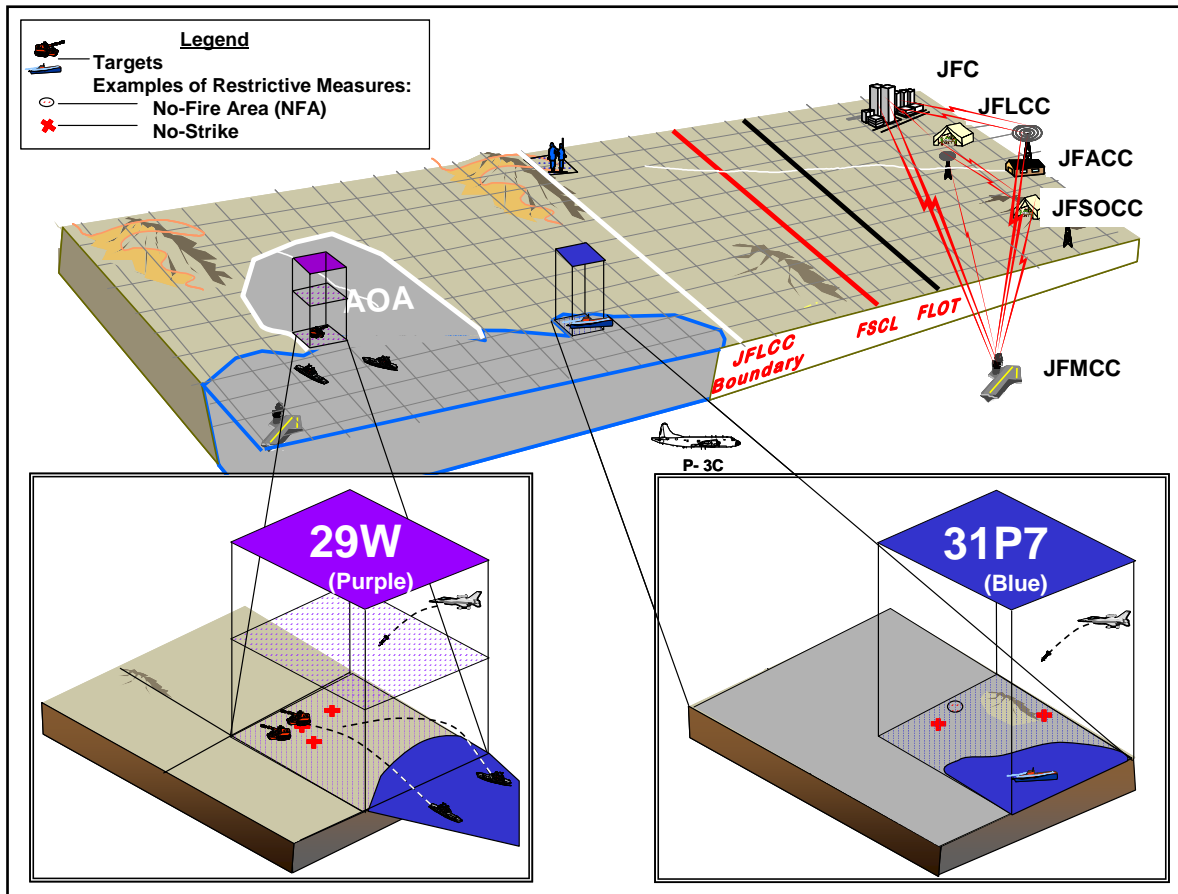
30 (5) Establishing Commander: JFMCC

31 (6) Establishing Commander's Targeting Guidance:

32 (a) Priorities: Tanks, armored vehicles, artillery.

33 (b) Effects: Destroy. Do not destroy bridges or road networks. No
34 scatterable munitions near bridges, roads, or road intersections.

35 (7) Remarks: No friendlies are within the proposed kill box. NFAs have been
36 established around restricted and no-strike targets.



1 **Figure B-2. JFMCC Activates Planned and Immediate Kill Boxes**

2 **5. JFMCC Immediate Kill Box Example**

3 a. A P-3 on a maritime patrol mission identifies an enemy ship (a submarine) being
 4 loaded with mines in a port facility. The P-3 reports its findings to the strike warfare
 5 commander (SWC) watch, in the Combat Division Center. The SWC watch
 6 simultaneously relays the information to JFMCC current operations in the Maritime
 7 Operating Center (MOC) and looks for a surface asset to intercept the submarine prior
 8 to getting underway. JFMCC Current Operations tasks the SWC watch (Bravo Papa) to
 9 locate a direct-use aircraft for tasking. JFMCC Current Operations receives the
 10 following information from Bravo Papa and the SWC watch: No aircraft are available
 11 for a potential strike and the closest naval combatant ship has a 5-hour transit time to
 12 intercept the submarine. (figure B-2)

13 b. In addition to no-strike aircraft or surface combatants to engage the submarine,
 14 there are no preplanned Tomahawk missions for the port facility. JFMCC Current
 15 Operations determines that the most expeditious method of destroying the enemy
 16 submarine prior to getting underway is to establish and activate a blue kill box over the
 17 submarine for JFACC air assets to engage. JFMCC Current Operations coordinates

1 with the JFACC JAOC through the Navy liaisons and passes the following information
2 to establish the blue kill box and request air assets for engagement:

3 (1) Purpose: To destroy enemy submarine being loaded with mines in a port
4 facility.

5 (2) Geographic limits/kill box location: Using the area reference system, the
6 submarine and the channel out of the port facility are identified as the kill box due to
7 the unknown underway time of the submarine: 31P7.

8 (3) Effective Times:

9 (a) Established at 261000ZAug04

10 (b) Cancelled at 261500ZAug04 or on-order

11 (4) Kill Box Type: BLUE

12 (5) Establishing Commander: JFMCC

13 (6) Establishing Commander's Targeting Guidance:

14 (a) Priorities: Kilo submarine alongside pier in port facility, or underway;
15 mines on pier in port facility; convoy vehicles carrying mine shapes in port facility.

16 (b) Effects: Destroy. Do not destroy avenues of approach or port facilities.

17 No cluster munitions.

18 (7) Remarks: No friendlies are within the proposed kill box. NFAs have been
19 established around restricted and no strike targets.

20 **6. JFACC Planned Kill Box Example**

21 a. Recent JFACC intelligence, surveillance, and reconnaissance (ISR) trending data
22 has determined that several potential enemy assembly areas are operating in a
23 geographic region outside JFC-designated AOs. The JFC has delegated authority to the
24 JFACC to establish and cancel kill boxes outside of JFCs AOs. The JAOC ISR Division
25 forwards this information through appropriate intelligence representatives in the
26 Combat Plans Division teams for kill box consideration in the planning of the ATO.

27 b. Within the Combat Plans Division, the target effects team (or guidance,
28 apportionment, and targeting team) and master air attack plan (MAAP) team
29 determine that a planned kill box is necessary to posture air power in the vicinity to
30 exploit the intelligence data. This will allow a permissive environment for air-to-surface
31 fires over a specified area of the battlespace.

32 c. In this example (figure B-3), the Combat Plans Division (MAAP team)
33 determines that a kill box should be established over the area suspected of containing
34 enemy assembly areas and processes the request with the following information:

35 (1) Purpose: To destroy enemy assets in the area and degrade enemy forces for
36 the friendly forces.

1 (2) Geographic limits/kill box location: Using area reference system, cell 26P is
2 identified as a kill box.

3 (3) Effective Times:

4 (a) Established at 240600ZAug04

5 (b) Cancelled at 250600ZAug04

6 (4) Kill Box Type: BLUE

7 (5) Establishing Commander: JFACC

8 (6) Establishing Commander's Targeting Guidance:

9 (a) Priorities: Tanks, armored vehicles, military-type vehicles, troop
10 concentrations, and ADA.

11 (b) Effects: Destroy. Do not destroy bridges or road networks. No
12 scatterable munitions near bridges, roads, or road intersections.

13 (7) Remarks: No friendlies are within the proposed kill box. NFAs have been
14 established around restricted and no-strike targets.

15 d. The first set of assets in the kill box, serving as the KBC, is a 2-ship of F-15Es
16 (call sign Rocket 01) equipped with low-altitude navigation and targeting infrared for
17 night (LANTIRN) pods. The Predator (call sign Toy 51) enters the kill box and Rocket
18 01 establishes a kill box floor of 14,000 feet MSL to allow the Predator to operate
19 unrestricted at 13,000 feet MSL. Further, Rocket 01 has Toy 51 concentrate its search
20 efforts on keypads 7-9 of the kill box.

21 e. Toy 51 locates enemy troops in the open and several stopped tanks and armored
22 vehicles in an adjacent tree line. Rocket 01 query Airborne Warning and Control
23 System (AWACS) if there are any additional assets available to work with Predator
24 while it continues to search the other keypads within the kill box. AWACS notifies
25 Rocket 01 that currently there is a 2-ship of F-14s (call sign Voodoo 33) available and en
26 route. Rocket 01 advises AWACS to bring the F-14s into keypads 7-9 at 15,000 feet
27 MSL to work with the Predator (Toy 51) who is at 13,000 feet MSL.

28 f. Voodoo 33 arrives in the kill box and begins working with the Predator, receiving
29 talk-ons to the target. The PID is established by Voodoo 33 and the collateral damage
30 estimate (CDE) for the troops in the open is low. However, there is a collateral damage
31 concern for two of the armored vehicles adjacent to a building that appears to be used
32 for unknown storage.

33 g. Voodoo 33 engages any positively identified enemy targets meeting the low CDE
34 criteria while they confer with the JAOC regarding the medium CDE targets.

35 h. The CD issue is worked by the JAOC combat operations team, which provides
36 approval to engage the remaining armored vehicles while minimizing damage to the
37 nearby building.

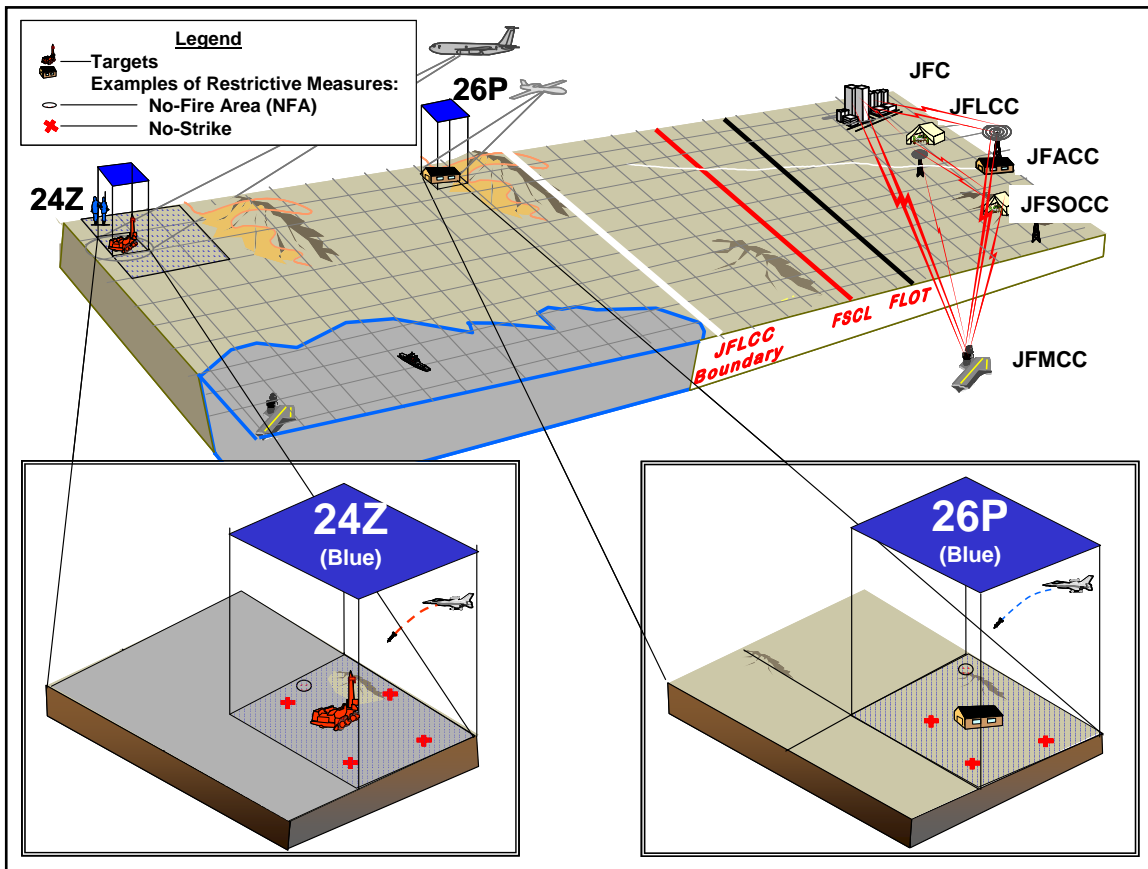
38 i. The DDO notifies AWACS of the approval to engage the remaining armored
39 vehicles with associated caveats. The AWACS, in turn, relays this information to the F-
40 14s, who comply.

1 j. Rocket 01 has now located what they believe are tanks on the move in keypad 3
2 of the kill box. However, they are unable to PID via their LANTIRN pods and
3 intermittent cloud cover below them is obscuring their view. They notify AWACS of
4 their findings.

5 k. AWACS coordinates tactically to bring in a 2-ship of F-16s (call sign Snake 21)
6 with Sniper Pods to assist the F-15Es. As Snake 21 flight checks-in, Rocket 01 advises
7 AWACS and the F-16s that Rocket 01 is joker and en route to air refuel. Rocket 01
8 provides a location of tank activity and a kill box update to Snake 21, to include the
9 activity of the Predator and F-14s in keypads 7-9. Rocket 01 further deconflicts its
10 outbound altitude with that of the inbound Snake flight.

11 l. Snake 21 PIDs the tank column in keypad 3 via their Sniper Pods as enemy T-72
12 tanks. The CDE is low so they begin their engagements.

13 m. Once the engagements are over, in-flight reports will be provided to AWACS
14 prior to striker check-out. AWACS will in-turn relay the in-flight reports to the JAOC.



15 **Figure B-3. Planned and Immediate Kill Boxes Outside JFC-designated AOs in Support of**
16 **JFACC Operations**

1 7. JFACC Immediate Kill Box Example

2 a. An E-8C Joint Surveillance Target Attack Radar System (JSTARS) has detected
3 several movements out of a suspected surface-to-surface missile system (SCUD) hide
4 site that meets reporting criteria within a known joint special operations area (JSOA).
5 The JFACC determines that the JSTARS tracks are potentially valid. The JFACC has
6 appropriate weapon-target paired assets available to engage the target tracks if they
7 prove to be valid targets after PID. The JFACC has determined that a kill box is
8 necessary to rapidly open up the battlespace to allow a permissive environment for air-
9 to-surface fires over an expanding area. Due to the JSOA, the joint force special
10 operations component commander (JFSOCC) is the establishing commander. (figure B-
11 3)

12 b. The JFACC has an imagery sensor focused in the JSOA seeking to locate
13 potential SCUD activity suspected to be operating in the area. A JSTARS is currently
14 tracking several “movers” away from a suspected SCUD hide site within the JSOA and
15 requires assistance to determine identification and potential courses of action.

16 c. Within the JAOC, the JFACC’s senior intelligence duty officer (SIDO) confers
17 with the senior operations duty officer (SODO) to determine that assets are available to
18 send for investigation of the JSTARS tracks. The CCO then requests through the JAOC
19 special operations liaison element (SOLE) to the JFSOCC/JSOTF that a blue kill box be
20 established over the area of the JSTARS reported tracks. Once approved the joint
21 special operations task force (JSOTF) (or SOLE) will enter the blue kill box information
22 into display systems (automated deep operations coordination system [ADOCS],
23 command and control personal computer [C2PC], etc.) that can be viewed by all
24 component HQ nodes. For purposes of this example, the request for kill box activation
25 is based upon the established area reference system and will be prepared with the
26 following information as an example:

27 (1) Purpose: To destroy enemy SCUD assets in the area.

28 (2) Geographic limits/kill box location: Using area reference system, the cell 24Z
29 is identified as a kill box.

30 (3) Effective Times:

31 (a) Established immediately

32 (b) Cancelled on-order

33 (4) Kill Box Type: BLUE

34 (5) Establishing Commander: JFSOCC (JSOTF)

35 (6) Establishing Commander’s Targeting Guidance:

36 (a) Priorities: SCUD missiles, SCUD transporter-erector-launchers (TELS),
37 missile transporters, SCUD-related support equipment, and ADA.

38 (b) Effects: Destroy. Do not destroy bridges or road networks. No
39 scatterable munitions near bridges, roads, or road intersections.

40 (7) Remarks: Keypad 24Z1 is closed due to friendlies in the area. There are no
41 other restricted or no-strike targets within the remaining kill box keypads.

1 d. The SOLE will subsequently coordinate with the affected JSOTF FSE in the
2 JSOA to gain approval for the establishment of a blue kill box within the JSOA. The
3 JSOTF will either approve or disapprove the JFACC's request.

4 e. After approval, the JSOTF will relay to the SOLE their concurrence for the blue
5 kill box establishment along with any restrictions. The SOLE then relays the approval
6 to the JAOC combat operations team. The restrictions for this example include a single
7 closed keypad within the kill box grid, 24Z1. There is a SOF unit operating within that
8 keypad, call sign Torpedo 24 on TAD 159 frequency.

9 f. The SODO will relay the kill box establishment to appropriate tactical C2 nodes
10 to include the JSTARS with instructions to assign available assets to investigate the
11 reported tracks.

12 g. JSTARS tasks both a 2-ship of F-16s, call sign Python 01, and a 2-ship of F-15Es,
13 call sign Hoss 11, to investigate two of the tracks within the now established blue kill
14 box 24Z. Since Hoss 11 flight is closer and will arrive first, they will assume control of
15 kill box coordination with all other air assets.

16 h. Upon arrival, Hoss 11 notifies the JSTARS that they will be operating at 17,000
17 feet MSL and to have Python 01 flight enter and maintain 19,000 feet MSL. Hoss 11
18 locates and identifies one of the JSTARS tracks as an enemy SA-6 on the move. PID
19 requirements are met and the CDE is low. Since there will be additional air assets
20 arriving in the area shortly (the F-16s), Hoss 11 elects to engage the SA-6 even though
21 it is not a SCUD entity.

22 i. JSTARS notifies Python 01 of Hoss 11's kill box coordination plan. Upon kill box
23 entry, Python 01 locates their JSTARS-provided track and identifies it as an enemy
24 SCUD-TEL with a missile that has just turned off-road. The flight lead determines the
25 CDE to be low but the location is adjacent to the closed keypad within the kill box, 24Z1.
26 Python 01 elects to coordinate tactically with Torpedo 24 to ensure deconfliction prior to
27 engagement of the SCUD-TEL.

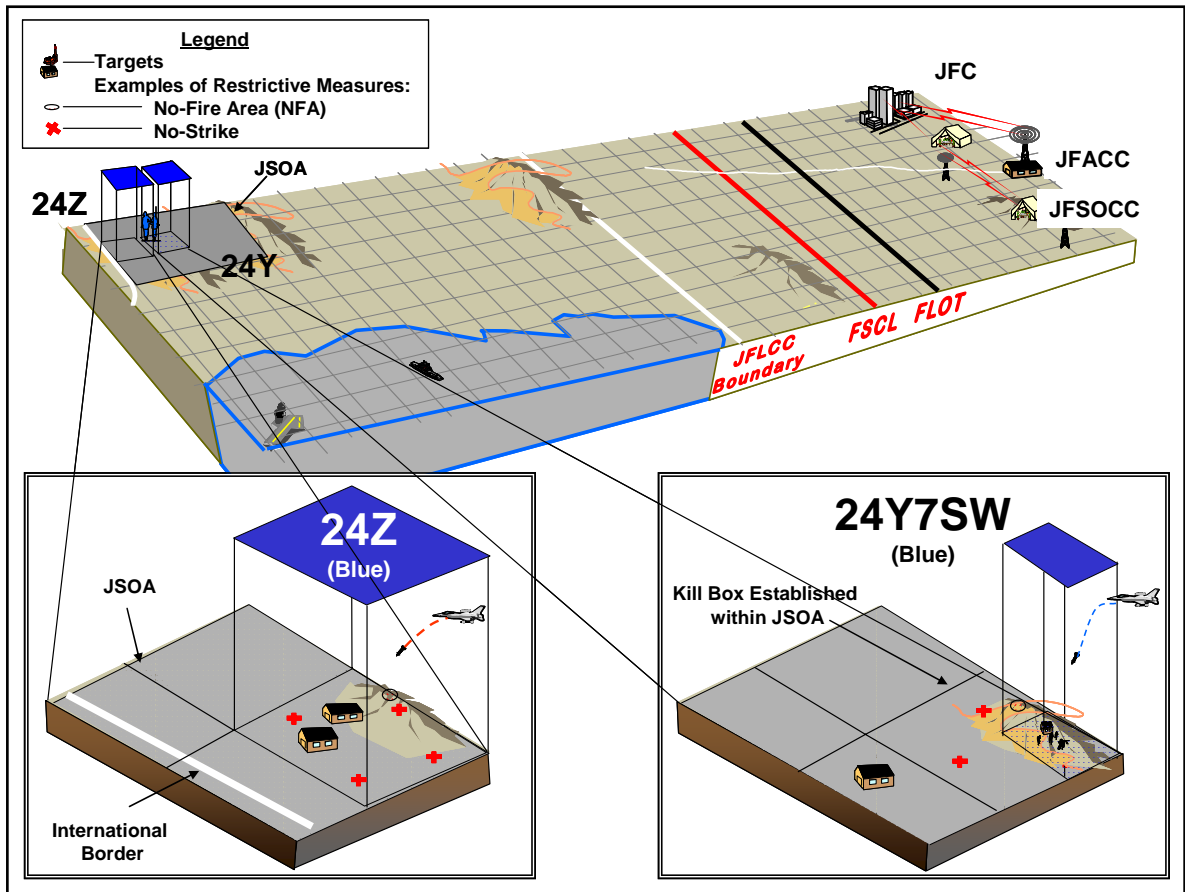
28 j. Upon successful engagements of the SA-6 and SCUD-TEL, the flight leads of
29 both the F-15Es and F-16s notify the JSTARS via an in-flight report. JSTARS
30 continues working with the F-15Es and F-16s to investigate additional tracks of interest
31 within the kill box.

32 k. Upon receipt of the F-15Es and F-16s in-flight report from the JSTARS to the
33 JAOC validating SCUD activity within kill box 24Z, the JFACC continues to coordinate
34 with the SOLE to maintain 24Z keypads 2-9 as an established, open blue kill box for the
35 near term in order to continue to investigate for engagement activity within the kill box.

36 **8. JFSOCC Planned Kill Box Example**

37 a. Foot and vehicle traffic have been reported by a reliable source along the border
38 of friendly and hostile nation states. It is believed that this area is being used by hostile
39 forces as an infiltration and ex-filtration point for the delivery of supplies and personnel
40 to the combat area. It is recommended by the Army special operations task force
41 (ARSOTF) to the JFSOCC that a Special Forces operational detachment A (SFODA) be
42 inserted to observe the area and report observations and findings to the JFSOCC.

- 1 b. A JSOA has been designated in support of the SFODA with established kill
2 boxes encompassing the reported movement of enemy forces. (figure B-4)
- 3 (1) Purpose: To destroy personnel and equipment infiltrating the combat area
4 from a hostile state's recognized international border.
- 5 (2) Geographic limits/kill box location: Using the area reference system, the
6 entire cell of 24Z is identified as a kill box.
- 7 (3) Effective Times
- 8 (a) Established at 240600ZAug04
- 9 (b) Cancelled at 261500ZAug04 or on-order
- 10 (4) Kill Box Type: BLUE
- 11 (5) Establishing Commander: JFSOCC
- 12 (6) Establishing Commander's Targeting Guidance:
- 13 (a) Priorities: Personnel, equipment, vehicles, and pack animals.
- 14 (b) Effects: Destroy.
- 15 (7) Remarks: No friendlies are within the proposed kill box. NFAs have been
16 established around restricted and no-strike targets, and around a SOF team in vicinity
17 of kill box. JFSOCC notifies all component commanders through their liaison elements:
- 18 (a) SOLE at the JFACC
- 19 (b) Special operations command and control element (SOCCE) at the
20 JFLCC
- 21 (c) Naval special warfare task unit (NSWTU) at the JFMCC
- 22 (d) LNO at the JFC



1 **Figure B-4. Planned and Immediate Kill Boxes in Support of JFSOCC Operations**

2 **9. JFSOCC Immediate Kill Box Example**

3 a. SFODA has been given the mission of strategic reconnaissance. While
 4 performing this mission the SFODA has come upon an insurgent force in the open that
 5 appears to be rehearsing actions on an objective. There appears to be an important two
 6 to five person observation team. The SFODA commander believes that at least two of
 7 these individuals have been designated as high-payoff targets (HPTs). The SFODA
 8 commander has requested an immediate kill box be established. The SFODA
 9 commander has requested that the kill box not be opened until at least 30 minutes after
 10 approval to give the SFODA time to vacate the immediate area to avoid being
 11 compromised. JFSOCC staff receives and acknowledges the request and passes it on to
 12 the JFSOCC. JFSOCC approves and establishes an immediate purple kill box.
 13 JFSOCC directs the SFODA upon cancellation of the kill box to conduct a battle damage
 14 assessment (BDA) of the attack. The JFSOCC staff sends out the following information:
 15 (figure B-4)

16 (1) Purpose: To destroy HPTs and other combatant personnel and equipment.

1 (2) Geographic limits/kill box location: Using the area reference system, the
2 entire quadrant of 24Y7SW is identified as a kill box.

3 (3) Effective Times:

4 (a) Established at 240630ZAug04

5 (b) Cancelled on-order

6 (4) Kill Box Type: BLUE

7 (5) Establishing Commander: JFSOCC

8 (6) Establishing Commander's Targeting Guidance:

9 (a) Priorities: Personnel identified as HPTs; other combatant personnel and
10 equipment; training camp.

11 (b) Effects: Destroy.

12 (7) Remarks: No friendlies are within the kill box after 0630Z. There are no
13 restricted or no-strike targets within the kill box. An NFA has been established around
14 the SOF team in vicinity of kill box. JFSOCC notifies all component commanders
15 through their liaison elements:

16 (a) SOLE at the JAOC

17 (b) SOCCE at the JFLCC

18 (c) NSWTU at the JFMCC

19 (d) LNO at the JFC

20 **10. ASOC-Directed Employment of Scheduled or On-Call CAS Missions in an** 21 **Interdiction Role in a Kill Box**

22 a. The corps analysis and control element receives intelligence reports concerning
23 advancing enemy forces. The enemy armored and mechanized units are short of the
24 FSCL but beyond the range of corps organic indirect fires and deep employment of
25 rotary wing assets would take too long. The enemy forces are located in a blue kill box.
26 CAS missions have been allocated to the corps. The FSCoord and ALO determine
27 that the only assets capable of interdicting the enemy forces are a series of CAS
28 missions supporting the corps in the current ATO; no interdiction sorties can be
29 diverted and there are no other assets available. The FSCoord and the ALO
30 coordinate with the JAOC and recommends that the CAS missions be directed to
31 interdict the enemy forces in the kill box. The JAOC combat operations team agrees
32 and notifies the E-3 AWACS to coordinate tactical C2 in the kill box. (figure B-5) A
33 message is prepared with the following information:

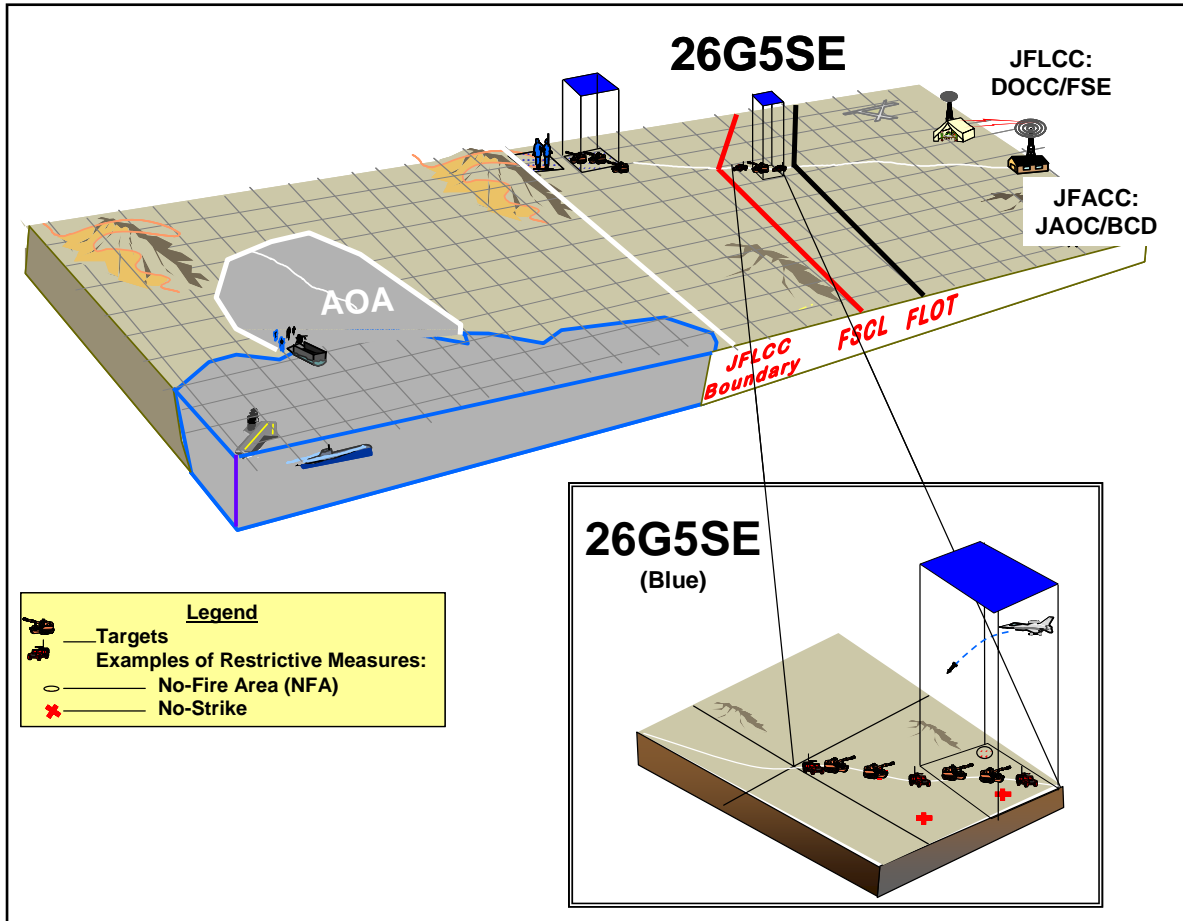
34 (1) Purpose: To destroy enemy armor and mechanized forces before they reach
35 corps units.

36 (2) Geographic limits/kill box location: Using the area reference system, the kill
37 box is identified as 26G5SE.

38 (3) Effective Times:

39 (a) Established at 240600ZAug04

- 1 (b) Cancelled at 260900ZAug04 or on-order
- 2 (4) Kill Box Type: BLUE
- 3 (5) Established Authority: JFLCC (Corps)
- 4 (6) Establishing Commander's Targeting Guidance:
- 5 (a) Priorities: Tanks and armored vehicles.
- 6 (b) Effects: Destroy. Do not damage bridges or road networks.
- 7 (7) Remarks: No friendlies are within the proposed kill box. There are no
- 8 restrictions or no-strike targets within the kill box.
- 9 b. Upon coordination with the JAOC, the information is also forwarded by the FSE
- 10 to the JFLCC DOCC/FSE and BCD, for situational awareness. The FSE verifies that
- 11 the kill box exists in AFATDS. The ASOC directs selected CAS assets into the kill box
- 12 to interdict enemy forces IAW corps priorities. The ASOC identifies an available flight
- 13 to conduct coordination within the kill box and directs other CAS assets to the kill box
- 14 for attack. Upon completion of the mission, the ASOC informs the JAOC of all CAS
- 15 assets that were diverted and relays any available in-flight reports for those missions.
- 16 FSE notifies the JFLCC DOCC/FSE and BCD of mission completion and passes on
- 17 results.



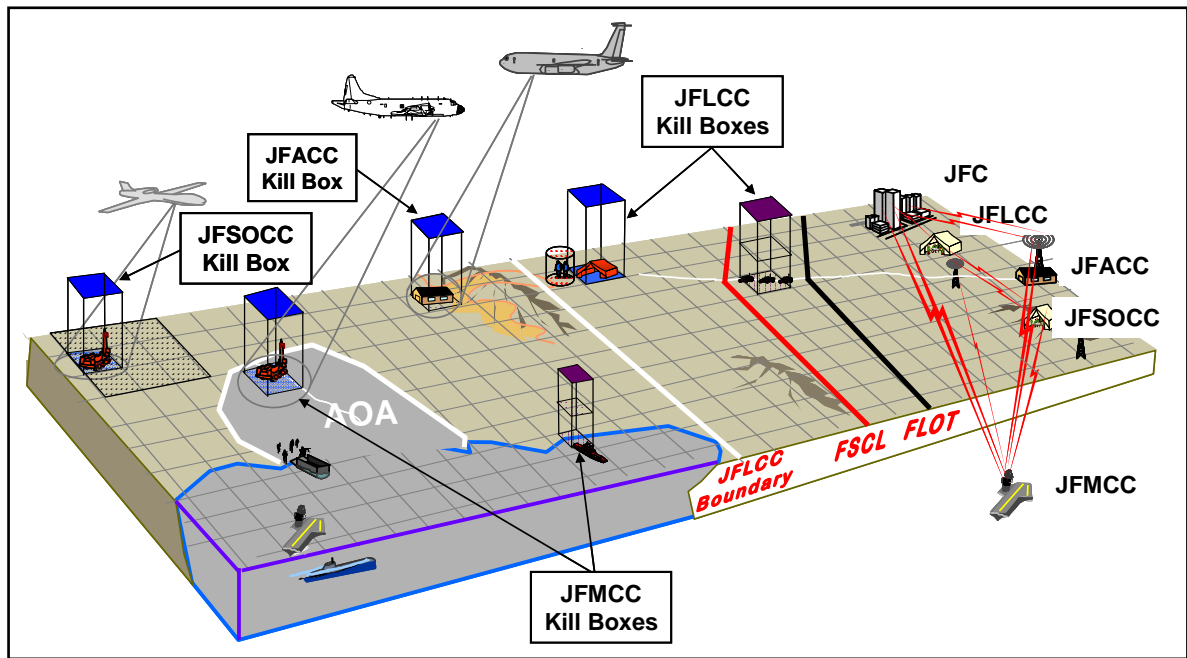
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Figure B-5. ASOC-Directed Employment of CAS Assets in an Interdiction Role in a Kill Box

1 Appendix C

2 **EXAMPLE PROCEDURES FOR ESTABLISHING KILL BOXES**

3 Figure C-1 is referenced throughout this appendix to portray possible kill boxes that
4 can be established throughout the AO for a joint task force's functional component
5 commanders.



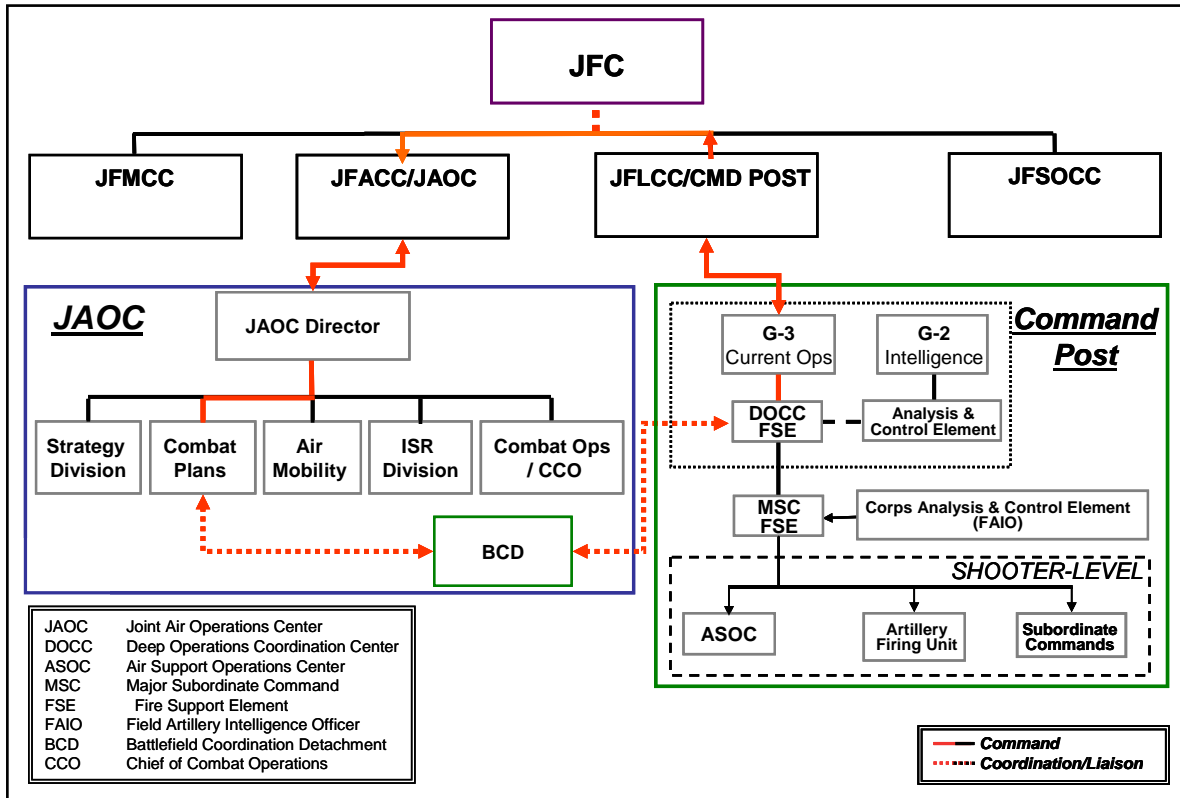
6 **Figure C-1. Example of Component Commander Kill Boxes in JFC AO**

7 **1. JFLCC Procedures for Planned Kill Boxes**

8 a. Figure C-1 depicts examples of blue and purple kill boxes within the JFLCC's
9 AO.

10 b. Once approved by the JFLCC, the blue kill box is established by the JFLCC
11 DOCC/FSE. The information is passed to the BCD, which informs the JFACC's staff
12 and works the input into the JFACC's combat plans MAAP-ATO process. The
13 DOCC/FSE informs subordinate elements so that all field artillery, air defense, and
14 army aviation units know about the kill box. The field artillery units create an ACA in
15 AFATDS for cell 24K from surface to the standard kill box height as identified in the
16 SPINS (e.g., 25,000 ft MSL). This prevents surface-to-surface indirect fires from
17 entering or passing through the kill box without further coordination. Air defense

1 assets identify the kill box as a weapons hold area (high-density airspace control zone,
 2 weapons control status “Hold”) and the A2C2 cell identifies the kill box for restricted
 3 operations that will prevent Army aviation assets from entering the airspace. The corps
 4 operations officer (G-3) creates a phase line at some distance from the kill box that will
 5 alert G-3 to the unexpected arrival of friendly troops triggering cancellation of the kill
 6 box before the established time if required. Figure C-2 depicts the Army forces as the
 7 JFLCC and its information flow for a planned kill box.



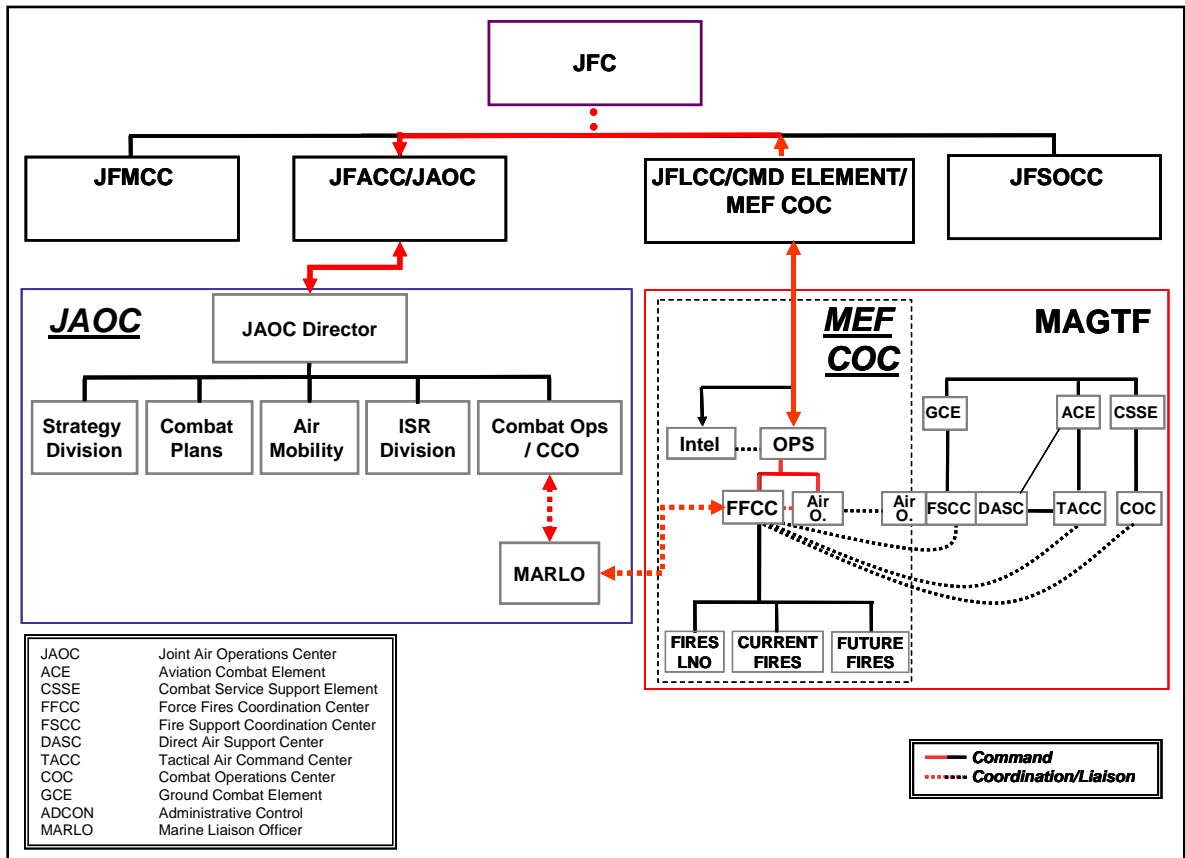
8 **Figure C-2. JFLCC Planned Kill Box Information Flow**

9 **2. JFLCC Procedures for Immediate Kill Boxes**

10 a. Figure C-1 depicts examples of blue and purple kill boxes within the JFLCC’s
 11 AO.

12 b. The MEF force fires coordination center (FFCC) immediately informs the JFLCC
 13 DOCC/FSE via AFATDS/ADOCS of the establishment of the purple kill box. The BCD is
 14 notified by the same message and passes the information to the JAOC. The FFCC
 15 inputs the kill box information into AFATDS. This ensures that all Marine and Army
 16 artillery FSE/FSCCs and fire direction centers are notified. The trajectories of surface-
 17 to-surface indirect fires will not enter the restricted airspace (12000 – 25000 ft MSL) of
 18 the kill box. Trajectories below the kill box minimum altitude are allowed and multiple
 19 indirect surface-to-surface assets are directed to engage the enemy forces. The Marine
 20 division air officer notifies the DASC (voice or chat) of the establishment of the kill box

1 and recommends maximum application of air power against the enemy forces in
 2 addition to surface-to-surface indirect fires preparing to engage. The tactical air
 3 command center (Marine TACC) also receives kill box information and relays it to the
 4 DASC and the JAOC (BCD Operations (OPS)). The TACC could delegate divert
 5 authority to the DASC to expedite attack of targets in the kill box. The DASC identifies
 6 an available flight to conduct coordination within the kill box and assigns another flight
 7 to the kill box for attack. Figure C-3 depicts the Marine Corps forces (MARFOR) as the
 8 JFLCC and its information flow for an immediate kill box.



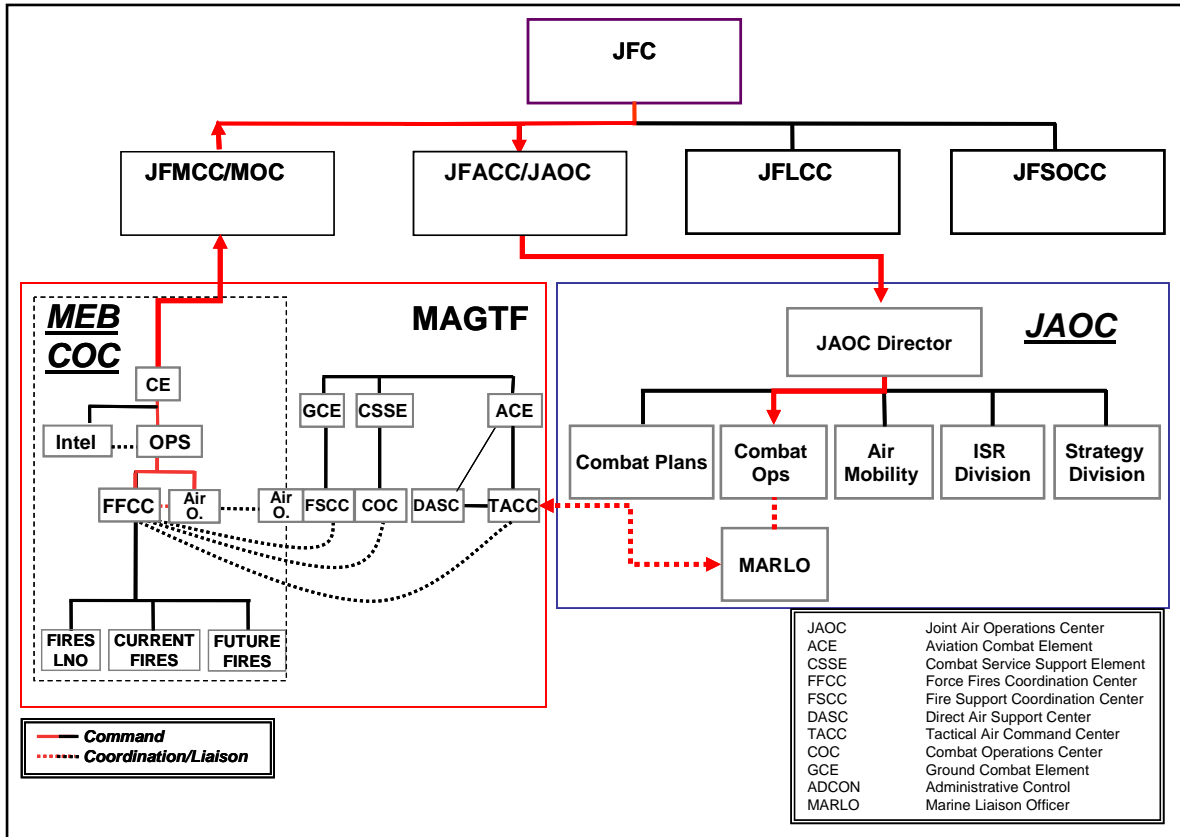
9 **Figure C-3. JFLCC Immediate Kill Box Information Flow**

10 **3. JFMCC Procedures for Planned Kill Boxes**

11 a. Figure C-1 depicts examples of blue and purple kill boxes within the JFMCC's
 12 AO.

13 b. The RCT FSCC passes this request to the MEB staff for approval. The MEB
 14 commander concurs with the kill box request. The FSCC passes this information to the
 15 supporting arms coordination center (SACC). The SACC briefs the kill box request to
 16 the JFMCC. The JFMCC concurs and establishes the purple kill box. The SACC
 17 further coordinates with the Navy tactical air control center and aviation combat

1 element (ACE). JFMCC future operations tasks the surface warfare commander to plan
 2 the NSFS and coordinate with the SACC. The TACC passes the kill box specifics to the
 3 MARLO in the JAOC. Combat Plans creates missions for the kill box in ATOs AJ
 4 through AL. ATOs AJ through AL include the following assets for the kill box: two
 5 strike aircraft 4 times per day with an E-2C for tactical command and control. Two
 6 Arleigh Burke Class Destroyers are scheduled to be on station to coincide with the air
 7 strikes 4 times per day. Figure C-4 depicts the MAGTF as part of the JFMCC and its
 8 information flow for a planned kill box.



9 **Figure C-4. JFMCC Planned Kill Box Information Flow**

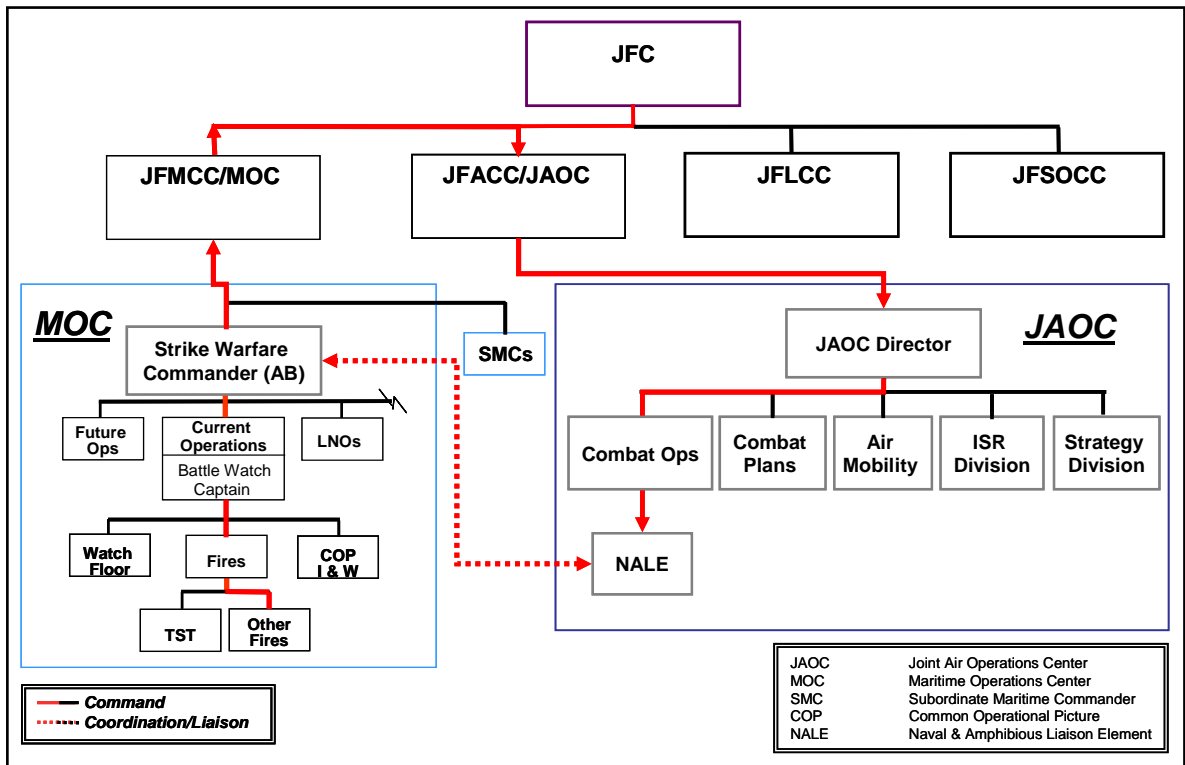
10 **4. JFMCC Operations for Immediate Kill Boxes**

11 a. Figure C-1 depicts examples of blue and purple kill boxes within the JFMCC's
 12 AO.

13 b. A P-3 on a maritime patrol mission identifies an enemy ship (a submarine) being
 14 loaded with mines in a port facility. The P-3 reports its findings to the Surface Warfare
 15 Commander (SWC) watch, in the Combat Division Center (CDC). The SWC watch
 16 simultaneously relays the information to JFMCC Current Operations in the Maritime
 17 Operating Center (MOC) and looks for a surface asset to intercept the submarine prior
 18 to getting underway. JFMCC Current Operations tasks the Strike Warfare Commander
 19 watch (Bravo Papa) to locate aircraft for tasking. JFMCC Current Operations receive

1 the following information from Bravo Papa and the SWC watch: no aircraft are
 2 available for a potential strike, and the closest naval combatant ship has a 5-hour
 3 transit time to intercept the submarine.

4 c. In addition to no-strike aircraft or surface combatants to engage the submarine,
 5 there are no preplanned Tomahawk missions for the port facility. JFMCC current
 6 operations determines that the most expeditious method of destroying the enemy
 7 submarine prior to getting underway is to establish a blue kill box over the submarine
 8 for JFACC air assets to engage. JFMCC current operations coordinates with the
 9 JFACC JAOC through its Navy liaisons to establish a blue kill box and request air
 10 assets for engagement. Diagram below (figure C-5) depicts the MARFOR as the JFMCC
 11 and its C2 flow for an immediate kill box.



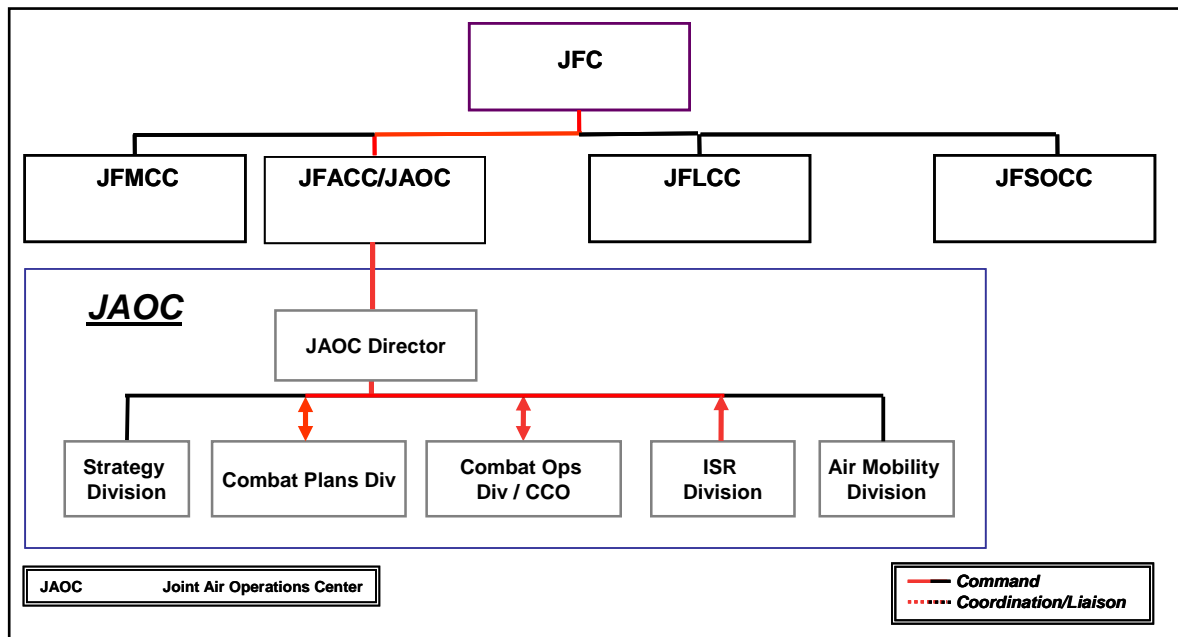
12 **Figure C-5. JFMCC Immediate Kill Box Information Flow**

13 **5. JFACC Operations for Planned Kill Boxes**

14 a. Figure C-1 depicts an example of a blue kill box employed outside JFC-
 15 designated AOs in support of JFACC operations.

16 b. The MAAP team plans missions to ACM airspaces, points, or targets associated
 17 with planned kill boxes. Kill box attributes, desired target sets, NSL/RTL restrictions,
 18 establishment, and cancellation will be specified in the SPINS or the ATO. Changes to
 19 the air battle plan after release of the ATO will be disseminated via ATO/ACO changes

1 (time permitting). Short notice changes during ATO execution are disseminated to air
 2 assets through the appropriate airspace control agency. The Combat Operations
 3 Division of the JAOC acting under the authority of the airspace control authority will
 4 coordinate changes and deconfliction with the other component airspace control
 5 agencies (JFLCC, JFMCC, and JFSOCC) via kill box coordination C2 systems (C2PC,
 6 ADOCS/WEEMC, etc.). Combat Operations Division will execute the prescribed ATO
 7 with the annotated established kill box. Assigned assets will execute the fragged ATO
 8 which includes an E-3 AWACS for tactical command and control, a RQ-1 Predator, and
 9 multiple flights of 2-ship strike assets with mixed munitions scheduled to operate SCAR
 10 missions in 2-hour vulnerability windows in the kill box during the ATO day. Figure C-
 11 6 depicts the the JFACC and its information flow for a planned kill box.

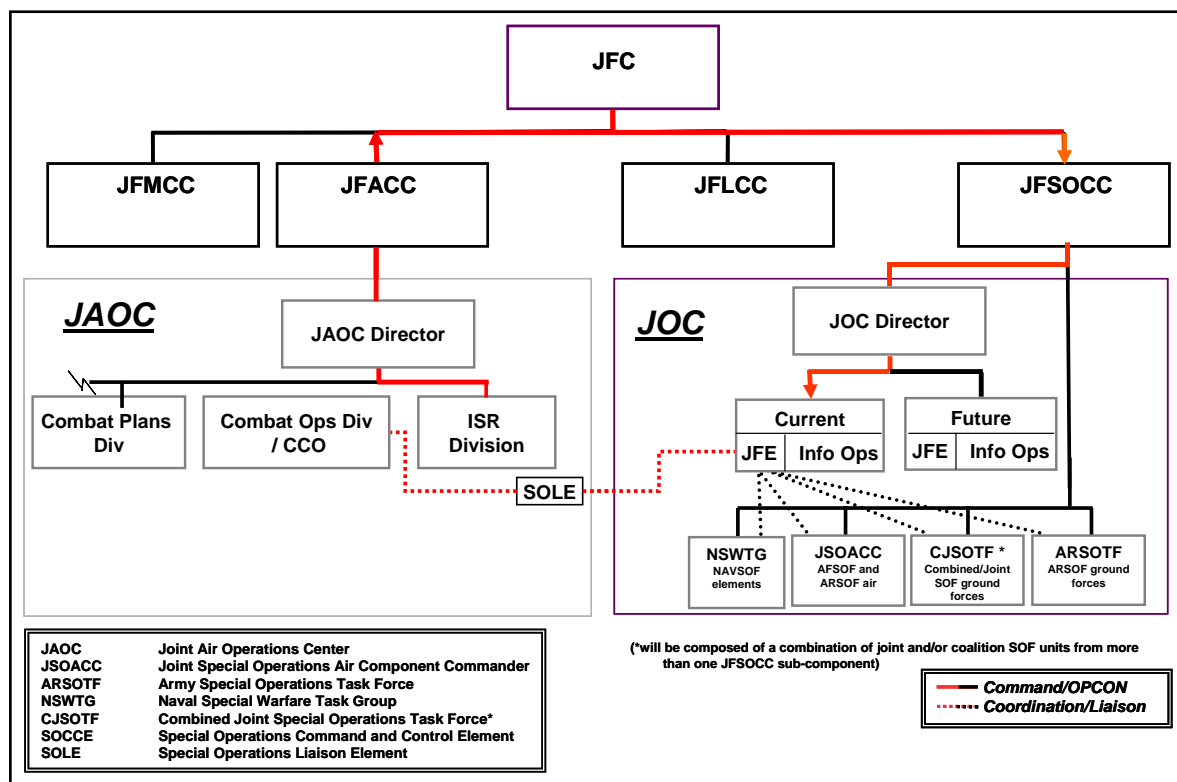


12 **Figure C-6. JFACC Planned Kill Box Information Flow**

13 **6. JFACC Operations for Immediate Kill Boxes**

14 a. Figure C-1 depicts an example of a blue kill box employed outside JFC-
 15 designated AOs in support of JFACC operations.

16 b. Within the JAOC, the JFACC's SIDO confers with the SODO to determine that
 17 assets are available to send for investigation of the JSTARS tracks. The CCO will
 18 request through the JAOC SOLE to the JFSOCC/JSOTF that a blue kill box be
 19 established over the area of the JSTARS reported track. Once approved, the JSOTF (or
 20 SOLE) will enter the blue kill box information into display systems (ADOCS, C2PC,
 21 etc.) that can be viewed by all component HQ nodes. The SODO will relay the kill box
 22 establishment to appropriate tactical C2 nodes to include the JSTARS with instructions
 23 to assign available assets to investigate the reported tracks. Figure C-7 depicts the
 24 JFACC and its information flow for an immediate kill box.

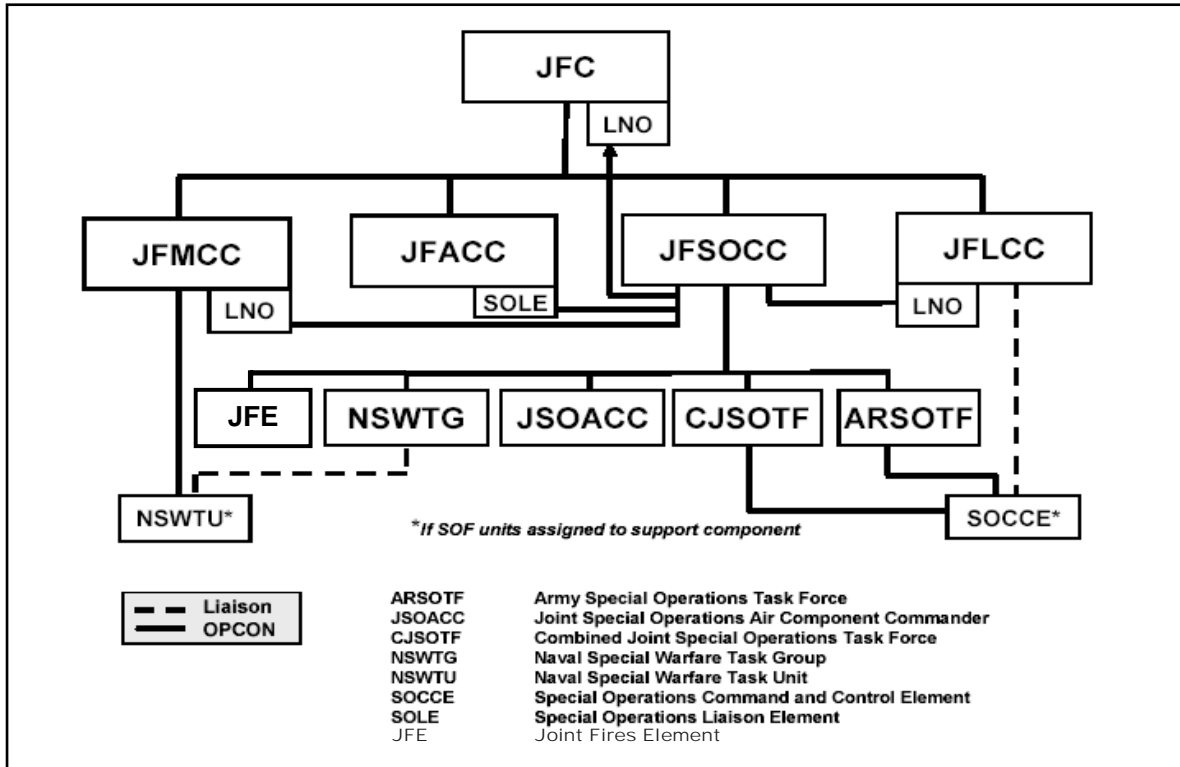


1 **Figure C-7. JFACC Immediate Kill Box Information Flow**

2 **7. JFSOCC Operations for Planned Kill Boxes**

3 a. The JFSOCC will have a joint fires element (JFE) embedded in the JFSOCC
 4 joint operations center (JOC), which serves as the focal point for all joint fires issues,
 5 including kill box targeting (figure C-8). The JFSOCC JFE is responsible for kill box
 6 coordination and prosecution within its operating areas and controls SOF inputs to the
 7 joint force kill box targeting coordination tools. The JFSOCC JFE will be the primary
 8 node for targeting and deconfliction, but not necessarily the only JFSOCC node. The
 9 JFSOCC can potentially employ its forces as one or more subordinate JSOTFs, each
 10 with its own JFE. These JSOTFs normally operate within a designated JSOA, possibly
 11 within other components' operating areas.

12 b. Subordinate JSOTF JFEs may prosecute identified kill boxes within their JSOAs
 13 using organic assets or, when the JSOA is located within another component's
 14 operational area, they may coordinate directly with that component for any fire support assets
 15 allocated or apportioned specifically for operations within kill boxes. Each JSOTF JFE will determine
 16 its own FSCM requirements and coordinate those requirements through the JFSOCC JFE. In certain
 17 directed situations, where a specific JSOTF may be in support of another component, the JSOTF JFE
 18 may coordinate directly with the supported component's HQ for FSCM requirements. The JFSOCC
 19 will be kept informed of all applicable coordination.



1 **Figure C-8. JFSOCC C2 Structure for Kill Box Operations**

2 **8. JFSOCC Operations for Immediate Kill Boxes**

3 For kill boxes prosecuted in support of the JFACC, the JSOTF JFE will coordinate
 4 with the SOLE representative in the JAOC. For kill boxes prosecuted in support of the
 5 JFLCC, the JSOTF JFE will coordinate with its deployed SOCCE collocated with the
 6 JFLCC JFE or its subordinate's JFE/fires cell. Coordination with the JFMCC will be
 7 through the deployed NSWTU. The JSOTF may permit subordinate units operating
 8 within another component's operating area, but not within a JSOA, to coordinate
 9 directly with the SOCCE or NSWTU for kill box reporting and fires support. The
 10 reporting process will follow the procedures established by that component's JFE/fires
 11 cell.

1 **Appendix D**

2 **THEATER-SPECIFIC KILL BOX PROCEDURES**

3

4 **1. Background**

5 Prior to the publication of this MTTP manual, there were (and still are) kill box
6 standard operating procedures (SOPs) in regional combatant commands. In some cases,
7 there are significant differences in theater SOPs. This MTTP describes common,
8 generic kill box procedures. The purpose of this appendix is to highlight theater-specific
9 SOPs or references and their differences.

10 **2. Geographic Combatant Command Kill Box Procedures**

11 The following regional combatant commands have kill box SOPs. When operating
12 in these theaters, consult these references or organizations for theater-specific kill box
13 procedures.

14 a. US Central Command (USCENTCOM) – US Central Command Air Forces
15 (USCENTAF) Kill Box Interdiction/Close Air Support CONOPS (KI/CAS CONOPS),
16 SECRET Rel GBR and AUS.

17 b. US Pacific Command (USPACOM) – Republic of Korea (ROK) – US Combined
18 Forces Command Publication 3-1, Joint Fires – Korea.

19 c. US Special Operations Command (USSOCOM) – USSOCOM does not have a
20 unique SOP for joint fires in each theater. USSOCOM will utilize the kill box
21 procedures developed and exercised by the theater combatant commander whether it is
22 the supporting or supported commander.

1 **Appendix E**

2
3 **COMMON GEOGRAPHIC REFERENCE SYSTEM (CGRS)**

4 **1. Overview**

5 a. JP 3-60, *Joint Doctrine for Targeting*, Appendix D, introduces an area reference
6 system. This appendix is a more detailed explanation of the process involved in creating
7 and using an area reference system based primarily on USCENTCOM's model during
8 Operation (OIF).

9 b. A CGRS is a reference system based on lines of latitude (LAT) and longitude
10 (LONG) , which is established by a JFC, to provide an integrated common frame of
11 reference for joint force situational awareness to facilitate attack coordination,
12 deconfliction, integration, and synchronization. This reference system provides a
13 common language between the components and simplifies communications. A CGRS
14 has proven highly useful in coordinating and facilitating rapid attacks on time-sensitive
15 targets (TSTs). The usefulness of a CGRS is that it enables establishment of
16 appropriate control and coordination measures that can be mutually coordinated,
17 deconflicted, and synchronized via a simple, common, mutually understood, and agreed
18 upon reference system.

19 **2. CGRS Labeling and Identification**

20 a. The grid should be labeled with a simple, common, universal identifier
21 recognizable by each component and its associated C2 and attack assets. LAT/LONG
22 references easily define cells since they are common and exist on most military
23 operational graphics and charts. LAT/LONG may allow for easy interpretation using
24 digital displays common in the tactical weapon systems of all components.

25 b. The steps in creating a CGRS are straight forward (figure E-1):

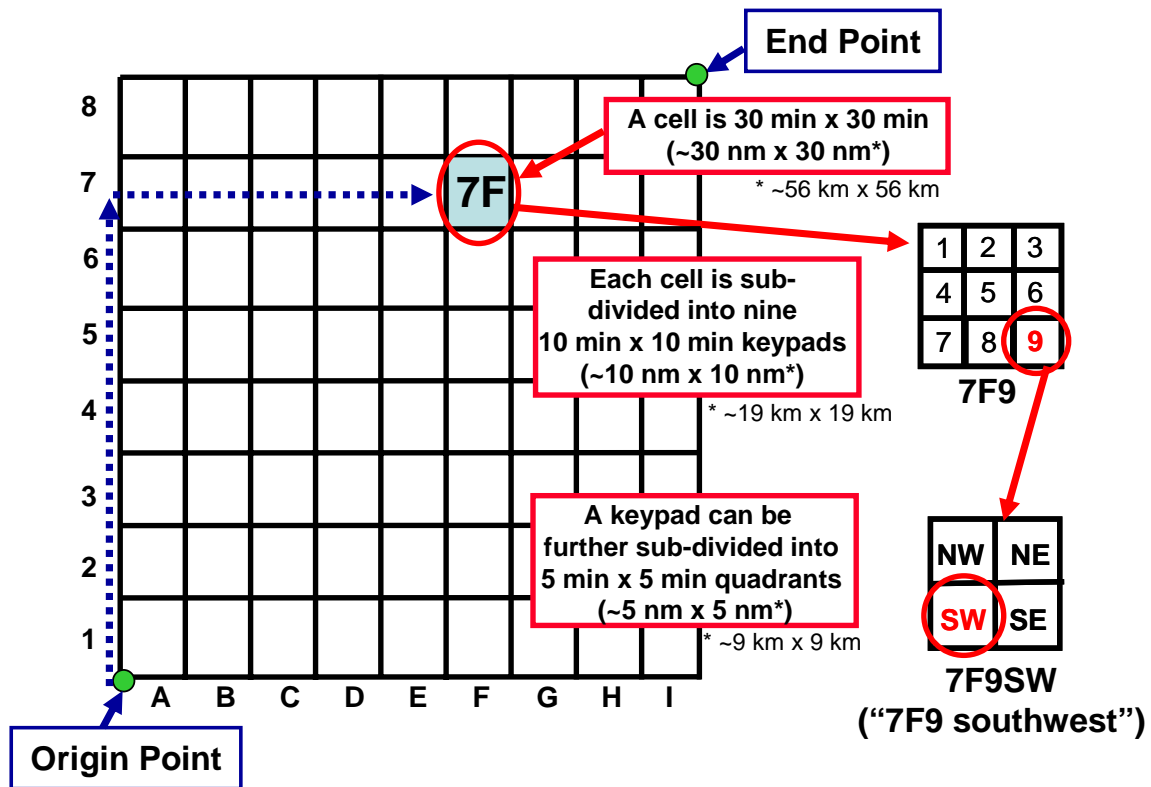
26 (1) Designate a grid origin/starting point (base LAT/LONG) for the operating
27 area. The origin point should be at the intersection of degree or 30-minute lines of
28 LAT/LONG.

29 (2) Designate a grid end point (upper right corner LAT/LONG) for the operating
30 area. The end point should also be at the intersection of degree or 30-minute lines of
31 LAT/LONG.

32 (3) Assign cell dimensions (and subset cell dimensions).

33 (4) Assign an alphanumeric labeling system to the grid.

1 Note: The CGRS cell labeling system is “read up, then read right” process rather
 2 than the military grid reference system’s “read right, and then read up.” Care
 3 must be taken to ensure a referenced cell is correctly identified.



4 **Figure E-1. Common Geographic Reference System Example**

5 (5) The system used with great success in OIF consists of an alphanumeric grid
 6 overlay which creates cells of 30 minutes of LAT by 30 minutes of LONG. In far
 7 northern or southern latitudes, consider using 30-minute LAT by 60-minute LONG cells
 8 to more closely approximate the dimensions of a square. Cell nomenclature consists of a
 9 number that defines the north-south axis and a letter that defines the east-west axis.
 10 (Example: “Cell 7F,” figure E-1.)

11 c. The approximately 30 x 30 nautical mile (nm) cells can be further subdivided
 12 into nine keypads identified by using the familiar telephone keypad numbering system
 13 (numbered from left to right, top to bottom, 1-9). (Example: “Keypad 7F9,” figure A-1.)
 14 The keypads are 10 minutes of LAT by 10 minutes of LONG that roughly equate to 10 x
 15 10 nm. In far northern or southern latitudes, consider using a 10-minute LAT by 20-
 16 minute LONG keypad to more closely approximate the dimensions of a square. The
 17 keypads can be further subdivided into approximately 5 x 5 nm quadrants for special
 18 applications and must be clearly labeled. (Example: 7F9SW, figure E-1.)

1 d. The CGRS should have an operational area-defined origin point. A global grid
2 origin point is impractical and undesirable.

3 **3. CGRS Development**

4 a. The JFC should develop the CGRS for the entire operational area including over
5 land and nearby maritime areas and should mandate use by all components. The CGRS
6 should be developed in consultation with all affected commanders and agencies.
7 Guidance from the JFC and inputs from other component commanders are critical to
8 ensuring the reference system fits the needs of the joint force and, more importantly, is
9 accepted as a mutual tool. Once developed, the JFC should evaluate the system for its
10 potential to expedite coordination, deconfliction, and synchronization within the
11 operational area. Once approved, the reference system is passed to each component and
12 their associated C2 and attack assets. Instructions for establishing, labeling, and using
13 it should be published in appropriate component orders.

14 b. All agencies must operate on a common map datum to prevent location errors
15 that could result in fratricide or missed targets. Although recent US-produced maps use
16 the World Geodetic System's 84-ellipsoid system, older or foreign maps may use a
17 different reference system that must have a correction factor applied. Most tactical fire
18 support computer systems can automatically apply the correction if the map datum
19 information is entered during computer set up.

20 c. Multiple reference systems within an operational area will cause confusion and
21 must be avoided. Care must be taken to ensure that proper deconfliction is conducted
22 on the fringes where two separate operational areas meet to ensure overlap does not
23 occur. A JFC may designate specific cells as inactive (non-applicable) for his/her
24 operational area grid to aid in deconfliction should an overlap of CGRSs occur.

25 d. A CGRS origin point or orientation should not be changed during combat
26 operations unless the adverse impact of a compromised grid system outweighs the risk
27 of fratricide caused by potential cell confusion. Keeping grid origin locations secret and
28 minimizing/eliminating unsecured transmissions of cell targeting locations will aid in
29 keeping a grid system secure. Even if a CGRS is suspected to be compromised,
30 disciplined use of secure communications can mitigate any potential advantage to an
31 enemy.

32 **4. CGRS Applications**

33 a. The CGRS cells themselves are not FSCMs, ACMs, or maneuver control
34 measures, but simply a common reference system that complements joint fire support
35 and/or airspace control systems and measures.

36 b. Control and coordination measure boundaries can be delineated by CGRS cells,
37 keypads, and quadrants. The CGRS is a two-dimensional construct, but FSCM and
38 ACM areas delineated by CGRS cells may have altitudes attached to them (such as in a
39 kill box).

1 c. The CGRS can be a tool for rapid deconfliction during non-contiguous battlefield
2 operations (such as SOF operating behind enemy lines) and may even be employed as a
3 primary method to describe a contiguous battlefield.

4 (1) The CGRS is flexible enough to be used for a variety of purposes, including
5 being used to identify littoral maritime warfare areas for antisubmarine warfare and
6 antisurface warfare forces.

7 d. The CGRS is not:

8 (1) A replacement for the world geographic reference system, or the military grid
9 reference system based upon the universal transverse mercator and universal polar
10 stereographic grids.

11 (2) Used to specify grid coordinates for target location or for platform/weapon
12 targeting.

13 e. If a target is acquired and areas of intended attack are designated, they can be
14 rapidly correlated to a specific cell location. The identifying component can then
15 establish appropriate control and coordinating measures, (such as FSCMs and/or ACMs)
16 , as authorized, to expedite and deconflict attacks with other components (such as
17 designating a cell as a kill box, etc.). Some situations warrant simultaneous joint
18 engagements within a single cell area. FSCMs and/or ACMs (such as ACAs with
19 altitude separation) are constructed appropriately to allow for rapid coordination and
20 deconfliction of combined arms attacks.

21 f. The CGRS is not optimized for defining:

22 (1) Air pictures (the “bullseye” system is tried and proven).

23 (2) Lines or boundaries that are not grid-friendly (i.e., 45 degree lines, etc.).

24 (3) Natural terrain features. CGRS may be combined with ground feature
25 references for easier use, as demonstrated in the following examples:

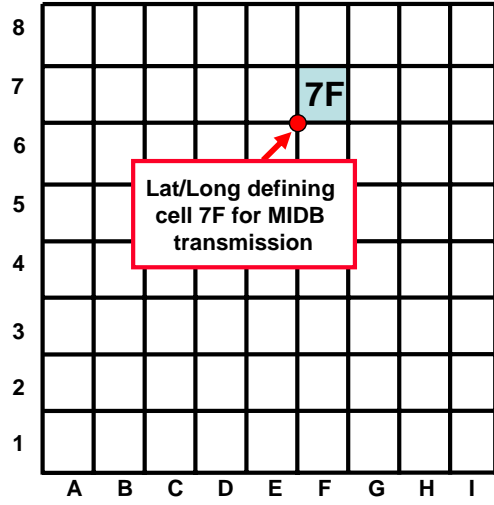
26 (a) “Cleared to engage targets east side of river in cell 2C.”

27 (b) “Remain west of north-south ridge in cells 1 and 2A.”

28 Note: Geographical references are an important method of rapidly communicating
29 location information and cannot be completely replaced by a CGRS.

30 5. Modernized Integrated Database (MIDB) Integration

31 The CGRS must be built in the “facilities” portion of the local MIDB as a point target
32 that represents a 30 x 30-minute area. As a technique, the lower left corner of a 30 x
33 30-minute cell could identify the cell (figure E-2). Multiple “O” suffixes could then be
34 built to identify subset cells (keypads or quadrants). Once the CGRS is built into the
35 local MIDB, it can be transmitted to other components to be used for target
36 development.



1

Figure E-2. MIDB LAT/LONG Example

1

REFERENCES

2 **Joint Publications**

3 JP 0-2, *Unified Action Armed Forces (UNAAF)*, 10 July 2001.

4 JP 1, *Joint Warfare of the Armed Forces of the United States*, 14 November 2000

5 JP 1-02, *DOD Dictionary of Military and Associated Terms*, 12 April 2001, as amended
6 through 7 October 2004

7 JP 2-01, *Joint and National Intelligence Support to Military Operations*, 7 October 2004

8 JP 2-03, *Joint Tactics, Techniques, and Procedures for Geospatial Information and Services*
9 *Support to Joint Operations*, 31 March 1999.

10 JP 3-0, *Doctrine for Joint Operations*, 10 September 2001

11 JP 3-02, *Joint Doctrine for Amphibious Operations*, 19 September 2001

12 JP 3-09, *Doctrine for Joint Fire Support*, 12 May 1998

13 JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)*, 3
14 September 2003

15 JP 3-60, *Joint Doctrine for Targeting*, 17 January 2002

16 **Multi-Service**

17 FM 3-60.1, MCRP 3-16D, NTTP 3-60.1, AFTTP(I) 3-2.3, ALSA, *MTTP for Targeting Time-*
18 *Sensitive Targets*, April 2004

19 FM 3-54.10, MCRP 3-25B, NTTP 6-02.1, AFTTP(I) 3-2.5, ALSA, *Multi-Service Brevity*
20 *Codes*, June 2003

21 **Army**

22 FM 1-02, *Operational Terms and Graphics*, 21 September 2004

23 FM 3-0, *Operations*, 14 June 2001

24 FM 3-90, *Tactics*, July 2001

25 **Marine Corps**

26 MCWP 3-16, *Fire Support Coordination in the Ground Combat Element* 28 November 2001

27 MAWTS-1, *Forward Air Controller (Airborne) [FAC(A)] Handbook*, 1 January 2004

28 **Navy**

29 NWP 3-56 (Rev. A), *Composite Warfare Commander's Manual*, August 2001

1 **Air Force**

2 AFOTTP 2-3.2, *Air and Space Operations Center*, 25 October 2002

1

GLOSSARY

2

PART I – ABBREVIATIONS AND ACRONYMS

3

A

4	A2C2	Army airspace command and control
5	A/C	aircraft
6	A-S	air-to-surface
7	AADC	area air defense commander
8	ACA	airspace coordination area
9	ACE	aviation combat element
10	ACM	airspace control measure
11	ACO	airspace control order
12	ADA	air defense artillery
13	ADC	air defense commander
14	ADCON	administrative control
15	ADOCS	Automated Deep Operations Coordination System
16	AFATDS	Advanced Field Artillery Tactical Data System
17	AFDC	Air Force Doctrine Center
18	AFI	Air Force Instruction
19	AFTTP(I)	Air Force Tactics, Techniques, and Procedures (Interservice)
20	ALO	air liaison officer
21	ALSA	Air Land Sea Application
22	AO	area of operations
23	AOA	amphibious objective area
24	AOR	area of responsibility
25	ARSOTF	Army special operations task force
26	ASOC	air support operations center
27	ATACMS	Army Tactical Missile System
28	ATO	air tasking order
29	AUS	Australia

1	AWACS	Airborne Warning and Control System
2		B
3	BCD	battlefield coordination detachment
4	BCL	battlefield coordination line
5	BDA	battle damage assessment
6	BHA	bomb hit assessment
7	BKB	blue kill box
8		C
9	C2	command and control
10	C2PC	command and control personal computer
11	CALCM	conventional air-launched cruise missile
12	CAS	close air support
13	CCO	Chief of Combat Operations
14	CD	collateral damage
15	CDC	Combat Division Center
16	CDE	collateral damage estimate
17	CE	combat element
18	CFL	coordinated fire line
19	CGRS	common geographic reference system
20	CJSOTF	combined joint special operations task force
21	CO	commanding officer
22	COC	combat operations center
23	CONOPS	concept of operations
24	COP	common operational picture
25	CSSE	combat service support element
26		D
27	DASC	direct air support center
28	DDO	Deputy Director of Operations
29	DOCC	deep operations coordination cell
30	DTG	date-time group
31		F
32	FAC(A)	forward air controller (airborne)

1	FAIO	field artillery intelligence officer
2	FB	forward boundary
3	FFCC	force fires coordination center
4	FLOT	forward line of own troops
5	FM	field manual
6	FRAG order	fragmentary order
7	FSCC	fire support coordination center
8	FSCL	fire support coordination line
9	FSCM	fire support coordinating measure
10	FSCOORD	fire support coordinator
11	FSE	fire support element
12		G
13	G-3	Army or Marine Corps component operations staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
14		
15	GBR	Great Britain
16	GCE	ground combat element
17		H
18	HPT	high-payoff target
19	HQ	headquarters
20		I
21	IAW	in accordance with
22	IDN	Initial Distribution Number
23	ISR	intelligence, surveillance, and reconnaissance
24		J
25	JAOC	joint air operations center
26	JFC	joint force commander
27	JFE	joint fires element
28	JFLCC	joint force land component commander
29	JFMCC	joint force maritime component commander
30	JFSOCC	joint force special operations component commander
31	JOA	joint operations area
32	JOC	joint operations center

1	JP	joint publication
2	JSOA	joint special operations area
3	JSOACC	joint special operations air component commander
4	JSOTF	joint special operations task force
5	JSTARS	Joint Surveillance Target Attack Radar System
6	JTAC	joint terminal attack controller
7		K
8	KB	kill box
9	KBC	kill box coordinator
10		L
11	LANTIRN	low-altitude navigation and targeting infrared for night
12	LAT	latitude
13	LNO	liaison officer
14	LONG	longitude
15		M
16	MAAP	master air attack plan
17	MAGTF	Marine air-ground task force
18	MARFOR	Marine Corps forces
19	Marine TACC	tactical air command center
20	MARLO	Marine liaison officer
21	MCCDC	Marine Corps Combat Development Command
22	MCPDS	Marine Corp Publication Distribution System
23	MCRP	Marine Corps reference publication
24	MEB	Marine expeditionary brigade
25	MEF	Marine expeditionary force
26	METT-T	mission, enemy, terrain and weather, troops and support
27		available–time available
28	MIDB	modernized integrated database
29	MOC	Maritime Operating Center
30	MSL	mean sea level
31	MSN AMPN	mission amplification
32	MTTP	multi-Service tactics, techniques, and procedures
33		N

1	NFA	no-fire area
2	nm	nautical mile
3	NSFS	naval surface fire support
4	NSL	no-strike list
5	NSWTG	naval special warfare task group
6	NSWTU	naval special warfare task unit
7	NTP	Navy tactics, techniques, and procedures
8	NWDC	Navy Warfare Development Command
9	NWP	Navy Warfare Publication
10		O
11	OEF	Operation ENDURING FREEDOM
12	OGA	other government agency
13	OIF	Operation IRAQI FREEDOM
14	OPS	operations
15		P
16	PID	positive identification
17	PKB	purple kill box
18		R
19	RCT	regimental combat team
20	REL	releasable
21	RFA	restricted fire area
22	ROA	restricted operations area
23	ROE	rules of engagement
24	ROK	Republic of Korea
25	RTL	restricted target list
26		S
27	S-3	battalion or brigade operations staff officer (Army; Marine Corps
28		battalion or regiment)
29	S-S	surface-to-surface
30	SACC	supporting arms coordination center
31	SCAR	strike coordination and reconnaissance
32	SCUD	surface-to-surface missile system

1	SFODA	Special Forces operational detachment A
2	SIDO	senior intelligence duty officer
3	SOCCE	special operations command and control element
4	SODO	senior operations duty officer
5	SOF	special operations forces
6	SOLE	special operations liaison element
7	SOP	standard operating procedure
8	SPINS	special instructions
9	SWC	strike warfare commander
10		T
11	TACP	tactical air control party
12	TAI	target area of interest
13	TBMCS	theater battle management core system
14	TEL	transporter-erector-launcher (missile platform)
15	TLAM	Tomahawk land attack missile
16	TOT	time on target
17	TRADOC	United States Army Training and Doctrine Command
18	TST	time-sensitive target
19		U-W
20	UAV	unmanned aerial vehicle
21	US	United States
22	USCENTAF	United States Central Command Air Forces
23	USCENTCOM	United States Central Command
24	USPACOM	United States Pacific Command
25	USSOCOM	United States Special Operations Command
26	WEEMC	web enabled execution management capability
27		

28 **PART II – TERMS AND DEFINITIONS**

29 **air defense artillery** – Weapons and equipment for actively combating air targets
30 from the ground. Also called ADA. (JP 1-02)

- 1 **air liaison officer** – The senior tactical air control party member attached to a ground
2 unit who functions as the primary advisor to the ground
3 commander on air power. An air liaison officer is usually an
4 aeronautically rated officer. Also called ALO. (JP 1-02)
- 5 **airspace control measures** – Rules, mechanisms, and directions governed by joint
6 doctrine and defined by the airspace control plan which control the
7 use of airspace of specified dimensions. Also called ACM. (FM 1-02)
- 8 **airspace control order** – An order implementing the airspace control plan that
9 provides the details of the approved requests for airspace
10 coordinating measures. It is published either as part of the air
11 tasking order or as a separate document. Also called ACO. (JP 1-
12 02)
- 13 **airspace coordination area** – A three-dimensional block of airspace in a target area,
14 established by the appropriate ground commander, in which
15 friendly aircraft are reasonably safe from friendly surface fires.
16 The airspace coordination area may be formal or informal. Also
17 called ACA. (JP 1-02)
- 18 **air support operations center** – The principal air control agency of the theater air
19 control system responsible for the direction and control of air
20 operations directly supporting the ground combat element. It
21 processes and coordinates requests for immediate air support and
22 coordinates air missions requiring integration with other
23 supporting arms and ground forces. It normally collocates with the
24 Army tactical headquarters senior fire support coordination center
25 within the ground combat element. Also called ASOC. (JP 1-02)
- 26 **air tasking order** – A method used to task and disseminate to components,
27 subordinate units, and command and control agencies projected
28 sorties, capabilities and/or forces to targets and specific missions.
29 Normally provides specific instructions to include call signs,
30 targets, controlling agencies, etc., as well as general instructions.
31 Also called ATO. (JP 1-02)
- 32 **amphibious objective area** – A geographical area (delineated for command and
33 control purposes in the order initiating the amphibious operation)
34 within which is located the objective(s) to be secured by the
35 amphibious force. This area must be of sufficient size to ensure
36 accomplishment of the amphibious force's mission and must
37 provide sufficient area for conducting necessary sea, air, and land
38 operations. Also called AOA. (JP 1-02)
- 39 **area air defense commander** – Within a unified command, subordinate unified
40 command, or joint task force, the commander will assign overall
41 responsibility for air defense to a single commander. Normally,
42 this will be the component commander with the preponderance of
43 air defense capability and the command, control, and
44 communications capability to plan and execute integrated air
45 defense operations. Representation from the other components

1 involved will be provided, as appropriate, to the area air defense
2 commander's headquarters. Also called AADC. (JP 1-02)

3 **area of operations** – An operational area defined by the joint force commander for
4 land and naval forces. Areas of operation do not typically
5 encompass the entire operational area of the joint force
6 commander, but should be large enough for component
7 commanders to accomplish their missions and protect their forces.
8 Also called AO. (JP 1-02)

9 **battle damage assessment** – The timely and accurate estimate of damage resulting
10 from the application of military force, either lethal or non-lethal,
11 against a predetermined objective. Battle damage assessment can
12 be applied to the employment of all types of weapon systems (air,
13 ground, naval, and special forces weapon systems) throughout the
14 range of military operations. Battle damage assessment is
15 primarily an intelligence responsibility with required inputs and
16 coordination from the operators. Battle damage assessment is
17 composed of physical damage assessment, functional damage
18 assessment, and target system assessment. Also called BDA. (JP
19 1-02)

20 **battlefield coordination detachment** – An Army liaison provided by the Army
21 component or force commander to the air operations center (AOC)
22 and/or to the component designated by the joint force commander
23 to plan, coordinate, and deconflict air operations. The battlefield
24 coordination detachment processes Army requests for air support,
25 monitors and interprets the land battle situation for the AOC, and
26 provides the necessary interface for exchange of current
27 intelligence and operational data. Also called BCD. (JP 1-02)

28 **battlefield coordination line** – A battlefield coordination line is a fire support
29 coordinating measure, established based on METT-T, which
30 facilitates the expeditious attack of surface targets of opportunity
31 between the measure and the FSCL. When established, the
32 primary purpose is to allow MAGTF aviation to attack surface
33 targets without approval of a GCE commander in whose area the
34 targets may be located. To facilitate air-delivered fires and
35 deconflict air and surface fires, an airspace coordination area
36 (ACA) will always overlie the area between the BCL and the
37 FSCL. Ground commanders may strike any targets beyond the
38 BCL and short of the FSCL with artillery and/or rockets without
39 coordination as long as those fires deconflict with the established
40 ACA overhead. This includes targets in an adjacent ground
41 commander's zone that falls within the BCL-FSCL area. The BCL
42 is an exclusive Marine Corps FSCM, similar to an FSCL, which
43 facilitates the expeditious attack of targets with surface indirect
44 fires and aviation fires between this measure and the FSCL. Also
45 called BCL. (MCWP 3-16)

- 1 **battlespace** – The environment, factors, and conditions that must be understood to
2 successfully apply combat power, protect the force, or complete the
3 mission. This includes the air, land, sea, space, and the included
4 enemy and friendly forces; facilities; weather; terrain; the
5 electromagnetic spectrum; and the information environment
6 within the operational areas and areas of interest. (JP 1-02)
- 7 **boundary** – A line that delineates surface areas for the purpose of facilitating
8 coordination and deconfliction of operations between adjacent
9 units, formations, or areas. (JP 1-02)
- 10 **close air support** – Air action by fixed- and rotary-wing aircraft against hostile targets
11 that are in close proximity to friendly forces and that require
12 detailed integration of each air mission with the fire and
13 movement of those forces. Also called CAS. (JP 1-02)
- 14 **collateral damage** – Unintentional or incidental injury or damage to persons or objects
15 that would not be lawful military targets in the circumstances
16 ruling at the time. Such damage is not unlawful so long as it is not
17 excessive in light of the overall military advantage anticipated
18 from the attack. (JP 1-02)
- 19 **command and control** – The exercise of authority and direction by a properly
20 designated commander over assigned and attached forces in the
21 accomplishment of the mission. Command and control functions
22 are performed through an arrangement of personnel, equipment,
23 communications, facilities, and procedures employed by a
24 commander in planning, directing, coordinating, and controlling
25 forces and operations in the accomplishment of the mission. Also
26 called C2. (JP 1-02)
- 27 **coordinated fire line** – The coordinated fire line (CFL) is a line beyond which
28 conventional, direct, and indirect surface fire support means may
29 fire at any time within the boundaries of the establishing
30 headquarters without additional coordination. The purpose of the
31 CFL is to expedite the surface-to-surface attack of targets beyond
32 the CFL without coordination with the ground commander in
33 whose area the targets are located. Also called CFL. (JP 1-02)
- 34 **data** – Representation of facts, concepts, or instructions in a formalized manner
35 suitable for communication, interpretation, or processing by
36 humans or by automatic means. Any representations, such as
37 characters or analog quantities to which meaning is or might be
38 assigned. (JP 1-02)
- 39 **date-time group** – The date and time, expressed in digits and time zone suffix, at
40 which the message was prepared for transmission. (Expressed as
41 six digits followed by the time zone suffix; first pair of digits
42 denotes the date, second pair the hours, third pair the minutes,
43 followed by a three-letter month abbreviation and two-digit year
44 abbreviation.) Also called DTG. (JP 1-02)

- 1 **direct air support center** – The principal air control agency of the US Marine air
2 command and control system responsible for the direction and
3 control of air operations directly supporting the ground combat
4 element. It processes and coordinates requests for immediate air
5 support and coordinates air missions requiring integration with
6 ground forces and other supporting arms. It normally collocates
7 with the senior fire support coordination center within the ground
8 combat element and is subordinate to the tactical air command
9 center. Also called DASC. (JP 1-02)
- 10 **fire support coordinating measure** – A measure employed by land or amphibious
11 commanders to facilitate the rapid engagement of targets and
12 simultaneously provide safeguards for friendly forces. Also called
13 FSCM. (JP 1-02)
- 14 **fire support coordination line** – A fire support coordinating measure that is
15 established and adjusted by appropriate land or amphibious force
16 commanders within their boundaries in consultation with superior,
17 subordinate, supporting, and affected commanders. Fire support
18 coordination lines (FSCLs) facilitate the expeditious attack of
19 surface targets of opportunity beyond the coordinating measure.
20 An FSCL does not divide an area of operations by defining a
21 boundary between close and deep operations or a zone for close air
22 support. The FSCL applies to all fires of air, land, and sea-based
23 weapons systems using any type of ammunition. Forces attacking
24 targets beyond an FSCL must inform all affected commanders in
25 sufficient time to allow necessary reaction to avoid fratricide.
26 Supporting elements attacking targets beyond the FSCL must
27 ensure that the attack will not produce adverse attacks on, or to
28 the rear of, the line. Short of an FSCL, all air-to-ground and
29 surface-to-surface attack operations are controlled by the
30 appropriate land or amphibious force commander. The FSCL
31 should follow well-defined terrain features. Coordination of attacks
32 beyond the FSCL is especially critical to commanders of air, land,
33 and special operations forces. In exceptional circumstances, the
34 inability to conduct this coordination will not preclude the attack
35 of targets beyond the FSCL. However, failure to do so may
36 increase the risk of fratricide and could waste limited resources.
37 Also called FSCL. (JP 1-02)
- 38 **fire support element** – That portion of the force tactical operations center at every
39 echelon above company or troop (to corps) that is responsible for
40 targeting coordination and for integrating fires delivered on
41 surface targets by fire-support means under the control, or in
42 support, of the force. Also called FSE. (JP 1-02)
- 43 **forward air controller (airborne)** – A specifically trained and qualified aviation
44 officer who exercises control from the air of aircraft engaged in
45 close air support of ground troops. The forward air controller
46 (airborne) is normally an airborne extension of the tactical air
47 control party. Also called FAC(A). (JP 1-02)

1 **forward edge of the battle area** – The foremost limits of a series of areas in which
2 ground combat units are deployed, excluding the areas in which
3 the covering or screening forces are operating, designated to
4 coordinate fire support, the positioning of forces, or the maneuver
5 of units. Also called FEBA. (JP 1-02)

6 **forward line of own troops** – A line that indicates the most forward positions of
7 friendly forces in any kind of military operation at a specific time.
8 The forward line of own troops (FLOT) normally identifies the
9 forward location of covering and screening forces. The FLOT may
10 be at, beyond, or short of the forward edge of the battle area. An
11 enemy FLOT indicates the forward-most position of hostile forces.
12 Also called FLOT. (JP 1-02)

13 **fragmentary order** – An abbreviated form of an operation order (verbal, written or
14 digital) usually issued on a day-to-day basis that eliminates the
15 need for restating information contained in a basic operation order.
16 It may be issued in sections. It is issued after an operation order to
17 change or modify that order or to execute a branch or sequel to
18 that order. Also called FRAG order. (JP 1-02)

19 **ground combat element** – The core element of a Marine air-ground task force
20 (MAGTF) that is task-organized to conduct ground operations. It is
21 usually constructed around an infantry organization but can vary
22 in size from a small ground unit of any type, to one or more Marine
23 divisions that can be independently maneuvered under the
24 direction of the MAGTF commander. The ground combat element
25 itself is not a formal command. Also called GCE. (JP 1-02)

26 **identification** – 1. The process of determining the friendly or hostile character of an
27 unknown detected contact. 2. In arms control, the process of
28 determining which nation is responsible for the detected violations
29 of any arms control measure. 3. In ground combat operations,
30 discrimination between recognizable objects as being friendly or
31 enemy, or the name that belongs to the object as a member of a
32 class. Also called ID. (JP-1-02)

33 **integration** – 2. The arrangement of military forces and their actions to create a force
34 that operates by engaging as a whole. (JP 1-02)

35 **intelligence preparation of the battlespace** – An analytical methodology employed
36 to reduce uncertainties concerning the enemy, environment, and
37 terrain for all types of operations. Intelligence preparation of the
38 battlespace builds an extensive database for each potential area in
39 which a unit may be required to operate. The database is then
40 analyzed in detail to determine the impact of the enemy,
41 environment, and terrain on operations and presents it in graphic
42 form. Intelligence preparation of the battlespace is a continuing
43 process. Also called IPB. (JP 1-02)

44 **joint air operations center** – A jointly staffed facility established for planning,
45 directing, and executing joint air operations in support of the joint

1 force commander's operation or campaign objectives. Also called
2 JAOC. (JP 1-02)

3 **joint fires** – Fires produced during the employment of forces from two or more
4 components in coordinated action toward a common objective. (JP
5 1-02)

6 **joint fire support** – Joint fires that assist air, land, maritime, amphibious, and special
7 operations forces to move, maneuver, and control territory,
8 populations, airspace, and key waters. (JP 1-02)

9 **joint force air component commander** – The commander within a unified
10 command, subordinate unified command, or joint task force
11 responsible to the establishing commander for making
12 recommendations on the proper employment of assigned, attached,
13 and/or made available for tasking air forces; planning and
14 coordinating air operations; or accomplishing such operational
15 missions as may be assigned. The joint force air component
16 commander is given the authority necessary to accomplish
17 missions and tasks assigned by the establishing commander. Also
18 called JFACC. (JP 1-02)

19 **joint force commander** – A general term applied to a combatant commander,
20 subunified commander, or joint task force commander authorized
21 to exercise combatant command (command authority) or
22 operational control over a joint force. Also called JFC. (JP 1-02)

23 **joint force land component commander** – The commander within a unified
24 command, subordinate unified command, or joint task force
25 responsible to the establishing commander for making
26 recommendations on the proper employment of assigned, attached,
27 and/or made available for tasking land forces; planning and
28 coordinating land operations; or accomplishing such operational
29 missions as may be assigned. The joint force land component
30 commander is given the authority necessary to accomplish
31 missions and tasks assigned by the establishing commander. Also
32 called JFLCC. (JP 1-02)

33 **joint force maritime component commander** – The commander within a unified
34 command, subordinate unified command, or joint task force
35 responsible to the establishing commander for making
36 recommendations on the proper employment of assigned, attached,
37 and/or made available for tasking maritime forces and assets;
38 planning and coordinating maritime operations; or accomplishing
39 such operational missions as may be assigned. The joint force
40 maritime component commander is given the authority necessary
41 to accomplish missions and tasks assigned by the establishing
42 commander. Also called JFMCC. (JP 1-02)

43 **joint force special operations component commander** – The commander within a
44 unified command, subordinate unified command, or joint task force
45 responsible to the establishing commander for making

1 recommendations on the proper employment of assigned, attached,
2 and/or made available for tasking special operations forces and
3 assets; planning and coordinating special operations; or
4 accomplishing such operational missions as may be assigned. The
5 joint force special operations component commander is given the
6 authority necessary to accomplish missions and tasks assigned by
7 the establishing commander. Also called JFSOCC. (JP 1-02)

8 **joint operations area** – An area of land, sea, and airspace, defined by a geographic
9 combatant commander or subordinate unified commander, in
10 which a joint force commander (normally a joint task force
11 commander) conducts military operations to accomplish a specific
12 mission. Joint operations areas are particularly useful when
13 operations are limited in scope and geographic area or when
14 operations are to be conducted on the boundaries between
15 theaters. Also called JOA. (JP 1-02)

16 **joint special operations area** – A restricted area of land, sea, and airspace assigned
17 by a joint force commander to the commander of a joint special
18 operations force to conduct special operations activities. The
19 commander of joint special operations forces may further assign a
20 specific area or sector within the joint special operations area to a
21 subordinate commander for mission execution. The scope and
22 duration of the special operations forces' mission, friendly and
23 hostile situation, and politico-military considerations all influence
24 the number, composition, and sequencing of special operations
25 forces deployed into a joint special operations area. It may be
26 limited in size to accommodate a discrete direct action mission or
27 may be extensive enough to allow a continuing broad range of
28 unconventional warfare operations. Also called JSOA. (JP 1-02)

29 **joint special operations task force** – A joint task force composed of special
30 operations units from more than one Service, formed to carry out a
31 specific special operation or prosecute special operations in support
32 of a theater campaign or other operations. The joint special
33 operations task force may have conventional non-special
34 operations units assigned or attached to support the conduct of
35 specific missions. Also called JSOTF. (JP 1-02)

36 **joint terminal attack controller** – A qualified (certified) Service member who, from a
37 forward position, directs the action of combat aircraft engaged in
38 close air support and other offensive air operations. A qualified
39 and current joint terminal attack controller will be recognized
40 across the Department of Defense as capable and authorized to
41 perform terminal attack control. Also called JTAC. (JP 1-02)

42 **kill box** - A three-dimensional area reference that enables timely, effective coordination
43 and control and facilitates rapid attacks. (JP 1-02)

44 **linear and non-linear battlefield** – The full dimensional joint campaign is in major
45 respects 'nonlinear.' That is, the dominant effects of air, sea, space,
46 and special operations may be felt more or less independently of

1 the front line of ground troops. The impact of these operations on
2 land battles, interacting with the modern dynamics of land combat
3 itself, helps obtain the required fluidity, breadth, and depth of
4 operations. In the same way, land operations can provide or
5 protect critical bases for air, land, sea, and space operations and
6 enable these operations to be supported and extended throughout
7 the theater. (JP 1)

8 **Littoral** – 1. Seaward: Area from the shore to the open ocean that must be controlled to
9 support operations; 2. Landward: Area inland from the shore that
10 can be supported and defended directly from the sea. (NWP 1-02)

11 **Marine expeditionary brigade** – A Marine air-ground task force that is constructed
12 around a reinforced infantry regiment, a composite Marine aircraft
13 group, and a brigade service support group. The Marine
14 expeditionary brigade (MEB), commanded by a general officer, is
15 task-organized to meet the requirements of a specific situation. It
16 can function as part of a joint task force, as the lead echelon of the
17 Marine expeditionary force (MEF), or alone. It varies in size and
18 composition, and is larger than a Marine expeditionary unit but
19 smaller than a MEF. The MEB is capable of conducting missions
20 across the full range of military operations. Also called MEB. (JP
21 1-02)

22 **Marine expeditionary force** – The largest Marine air-ground task force (MAGTF)
23 and the Marine Corps principal warfighting organization,
24 particularly for larger crises or contingencies. It is task-organized
25 around a permanent command element and normally contains one
26 or more Marine divisions, Marine aircraft wings, and Marine force
27 service support groups. The Marine expeditionary force is capable
28 of missions across the range of military operations, including
29 amphibious assault and sustained operations ashore in any
30 environment. It can operate from a sea base, a land base, or both.
31 Also called MEF. (JP 1-02)

32 **master air attack plan** – A plan that contains key information that forms the
33 foundation of the joint air tasking order. Sometimes referred to as
34 the air employment plan or joint air tasking order shell.
35 Information that may be found in the plan includes joint force
36 commander guidance, joint force air component commander
37 guidance, support plans, component requests, target update
38 requests, availability of capabilities and forces, target information
39 from target lists, aircraft allocation, etc. Also called MAAP. (JP 1-
40 02)

41 **mean sea level** – The average height of the surface of the sea for all stages of the tide;
42 used as a reference for elevations. Also called MSL (JP 1-02)

43 **naval surface fire support** – Fire provided by Navy surface gun and missile systems
44 in support of a unit or units. Also called NSFS. (JP 1-02)

1 **no-fire area** – An area designated by the appropriate commander into which fires or
2 their effects are prohibited. Also called NFA. (JP 1-02)

3 **no-strike list** – A list of geographic areas, complexes, or installations not planned for
4 capture or destruction. Attacking these may violate the law of
5 armed conflict or interfere with friendly relations with indigenous
6 personnel or governments. Also called NSL. (JP 1-02)

7 **operational area** – An overarching term encompassing more descriptive terms for
8 geographic areas in which military operations are conducted.
9 Operational areas include, but are not limited to, such descriptors
10 as area of responsibility, theater of war, theater of operations, joint
11 operations area, amphibious objective area, joint special operations
12 area, and area of operations. (JP 1-02)

13 **positive identification** – Identification criteria established in the rules of engagement
14 that requires a potential target to be identified as a valid target
15 prior to engagement. Positive identification criteria may vary from
16 operation to operation because the joint force commander and
17 subordinate commanders will establish requirements for positive
18 identification prior to combat operations, in order to achieve the
19 required confidence of target identification for engagement. Also
20 called PID. (This term and its definition are applicable only in the
21 context of this publication and cannot be referenced outside this
22 publication.)

23 **restricted operations area** – Airspace of defined dimensions, designated by the
24 airspace control authority, in response to specific operational
25 situations/requirements within which the operation of one or more
26 airspace users is restricted. Also called ROA. (JP 1-02)

27 **restricted target list** – A list of restricted targets nominated by elements of the joint
28 force and approved by the joint force commander. This list also
29 includes restricted targets directed by higher authorities. Also
30 called RTL. (JP 1-02)

31 **rules of engagement** – Directives issued by competent military authority that
32 delineate the circumstances and limitations under which US forces
33 will initiate and/or continue combat engagement with other forces
34 encountered. Also called ROE. (JP 1-02)

35 **Special Forces operational detachment A (SFODA)** – The primary operational
36 element of a Special Forces company, an A-Team consists of 12
37 Special Forces soldiers. (FM 3-05.20)

38 **special operations command and control element** – A special operations command
39 and control element (SOCCE) that is the focal point for the
40 synchronization of special operations forces activities with
41 conventional forces operations. It performs command and control
42 or liaison functions according to mission requirements and as
43 directed by the establishing special operations forces commander.
44 Its level of authority and responsibility may vary widely. It
45 normally collocates with the command post of the supported force.

1 The SOCCE can also receive special operations forces operational,
2 intelligence, and target acquisition reports directly from deployed
3 special operations elements and provide them to the supported
4 component headquarters. The SOCCE remains under the
5 operational control of the joint force special operations component
6 commander or commander, joint special operations task force. Also
7 called SOCCE. (JP 1-02)

8 **special operations forces** – Those Active and Reserve Component forces of the
9 Military Services designated by the Secretary of Defense and
10 specifically organized, trained, and equipped to conduct and
11 support special operations. Also called SOF. (JP 1-02)

12 **special operations liaison element** – A special operations liaison team provided by
13 the joint force special operations component commander to the
14 joint force air component commander (if designated), or
15 appropriate Service component air command and control
16 organization, to coordinate, deconflict, and integrate special
17 operations air, surface, and subsurface operations with
18 conventional air operations. Also called SOLE. (JP 1-02)

19 **strike coordination and reconnaissance** – A mission flown for the purpose of
20 acquiring and reporting deep air support targets and coordinating
21 armed reconnaissance or air interdiction missions upon those
22 targets. Also called SCAR. (MCWP 3-23.2)

23 **supported commander** – 1. The commander having primary responsibility for all
24 aspects of a task assigned by the Joint Strategic Capabilities Plan
25 or other joint operation planning authority. In the context of joint
26 operation planning, this term refers to the commander who
27 prepares operation plans or operation orders in response to
28 requirements of the Chairman of the Joint Chiefs of Staff. 2. In the
29 context of a support command relationship, the commander who
30 receives assistance from another commander's force or capabilities,
31 and who is responsible for ensuring that the supporting
32 commander understands the assistance required. (JP 1-02)

33 **supporting arms coordination center** – A single location on board an amphibious
34 command ship in which all communication facilities incident to the
35 coordination of fire support of the artillery, air, and naval gunfire
36 are centralized. This is the naval counterpart to the fire support
37 coordination center utilized by the landing force. Also called SACC.
38 (JP 1-02)

39 **supporting commander** – 1. A commander who provides augmentation forces or other
40 support to a supported commander or who develops a supporting
41 plan. Includes the designated combatant commands and Defense
42 agencies as appropriate. 2. In the context of a support command
43 relationship, the commander who aids, protects, complements, or
44 sustains another commander's force, and who is responsible for
45 providing the assistance required by the supported commander.
46 (JP 1-02)

- 1 **synchronization** – 1. The arrangement of military actions in time, space, and purpose
2 to produce maximum relative combat power at a decisive place and
3 time. 2. In the intelligence context, application of intelligence
4 sources and methods in concert with the operation plan. (JP 1-02)
- 5 **tactical air command center** – The principal US Marine Corps air command and
6 control agency from which air operations and air defense warning
7 functions are directed. It is the senior agency of the US Marine air
8 command and control system that serves as the operational
9 command post of the aviation combat element commander. It
10 provides the facility from which the aviation combat element
11 commander and his battle staff plan, supervise, coordinate, and
12 execute all current and future air operations in support of the
13 Marine air-ground task force. The tactical air command center can
14 provide integration, coordination, and direction of joint and
15 combined air operations. Also called Marine TACC. (JP 1-02)
- 16 **tactical air control party** – A subordinate operational component of a tactical air
17 control system designed to provide air liaison to land forces and for
18 the control of aircraft. Also called TACP. (JP 1-02)
- 19 **target area of interest** – The geographical area where high-value targets can be
20 acquired and engaged by friendly forces. Not all target areas of
21 interest will form part of the friendly course of action; only target
22 areas of interest associated with high priority targets are of
23 interest to the staff. These are identified during staff planning and
24 wargaming. Target areas of interest differ from engagement areas
25 in degree. Engagement areas plan for the use of all available
26 weapons; target areas of interest might be engaged by a single
27 weapon. Also called TAI. (JP 1-02)
- 28 **terminal attack control** – The authority to control the maneuver of and grant
29 weapons release clearance to attacking aircraft. (JP 1-02)
- 30 **time on target** – 1. Time at which aircraft are scheduled to attack/photograph the
31 target. 2. The actual time at which aircraft attack/photograph the
32 target. 3. The time at which a nuclear detonation as planned at a
33 specified desired ground zero. Also called TOT. (JP 1-02)
- 34 **unmanned aerial vehicle** – A powered, aerial vehicle that does not carry a human
35 operator, uses aerodynamic forces to provide vehicle lift, can fly
36 autonomously or be piloted remotely, can be expendable or
37 recoverable, and can carry a lethal or nonlethal payload. Ballistic
38 or semiballistic vehicles, cruise missiles, and artillery projectiles
39 are not considered unmanned aerial vehicles. Also called UAV. (JP
40 1-02)
- 41 **Winchester** – No ordnance remaining. (FM 3-54.10, MCRP 3-25B, NTPP 6-02.1,
42 AFTTP(I) 3-2.5, ALSA, *Multi-Service Brevity Codes*)

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