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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
AFTTP 3-2.59**

August 2009

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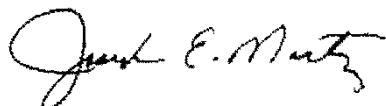
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MULTI-SERVICE TACTICS, TECHNIQUES, AND PROCEDURES

FOREWORD

This publication has been prepared under our direction for use by our respective commands and other commands as appropriate.



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PREFACE

1. Purpose

This publication provides a single source multi-Service tactics, techniques, and procedures (MTTP) publication that focuses on conducting kill box operations at the operational and tactical levels of warfighting in order to facilitate the expeditious air-to-surface lethal attack of targets which may be augmented by or integrated with surface-to-surface indirect fires.

2. Scope

This publication is designed for use at the operational and tactical levels for training, planning, and conducting kill box operations. This MTTP outlines multi-Service kill box planning procedures, coordination requirements, employment methods, and command and control responsibilities. It is consistent with joint doctrine and provides principles that can assist planners to coordinate, deconflict, synchronize, and implement kill box procedures among the components assigned to a joint force. This publication has worldwide application and is intended to supplement Joint Publication (JP) 3-09, *Joint Fire Support*.

3. Applicability

This publication provides the joint force commander (JFC) and Service components unclassified kill box MTTP. The target audience includes commanders, the operations section (current operations, fires, and future plans), and the intelligence section of Service components, and their main subordinate elements (i.e., Army corps, Marine expeditionary force, Navy numbered fleet, and Air Expeditionary Task Force) and their counterparts on the JFC's staff.

4. Implementation Plan

Participating Service command offices of primary responsibility will review this publication, validate the information and, where appropriate, reference and incorporate it in Service manuals, regulations, and curricula as follows:

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¹ **Marine Corps PCN: 144 000160 00**

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- b. This publication reflects current joint and Service doctrine, command and control organizations, facilities, personnel, responsibilities, and procedures. Changes in Service protocol, appropriately reflected in joint and Service publications, will likewise be incorporated in revisions to this document.
- c. We encourage recommended changes for improving this publication. Key your comments to the specific page and paragraph and provide a rationale for each recommendation. Send comments and recommendations directly to—

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SUMMARY OF CHANGES

The following is a summary of changes for FM 3-09.34/MCRP 3-25H/NTTP 3-09.2.1/AFTTP 3-2.59, *Multi-Service Tactics, Techniques, and Procedures for Kill Box Employment*.

This revision presents new and updated material to the reader. The organization of the publication has been changed to: Chapter I – Overview; Chapter II – Command and Control Responsibilities; Chapter III – Planning; Chapter IV – Execution; Appendix A – Immediate Kill Box Decision Flow Charts; and Appendix B – Kill Box Coordination Vignettes.

In addition, this revision:

- Adds a new chapter explaining command and control responsibilities.
- Expands the planning chapter to include graphical descriptions of the kill box planning process and its relationship to the joint targeting process.
- Describes the execution process to include strike coordination and reconnaissance (SCAR).
- Removes three appendices because they referenced tactics, techniques, and procedures no longer in practice: Example Procedures for Establishing Kill Boxes, Theater-Specific Kill Box Procedures, and the Common Geographic Reference System.

***FM 3-09.34
MCRP 3-25H
NTTP 3-09.2.1
AFTTP 3-2.59**

***FM 3-09.34** US Army Training and Doctrine Command
Fort Monroe, Virginia
MCRP 3-25H Marine Corps Combat Development Command
Quantico, Virginia
NTTP 3-09.2.1 Navy Warfare Development Command
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AFTTP 3-2.59 Curtis E. LeMay Center for Doctrine
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4 AUGUST 2009

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

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***This publication supersedes FM 3-09.34, MCRP 3-25H, NTTP 3-09.2.1, AFTTP(I) 3-2.59, 13 June 2005.**

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EXECUTIVE SUMMARY

KILL BOX

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

The Kill Box MTTP reinforces kill boxes as three-dimensional areas used to facilitate the integration of joint fires while also being a permissive fire support coordination measure (FSCM) in accordance with JP 3-09, *Joint Fire Support*. The publication offers a detailed explanation of kill box employment and provides information to effectively organize, plan, and execute kill box procedures.

The purpose of this publication is to provide planners and operators with a single source MTTP manual that focuses on employment of kill boxes at the operational and tactical levels of warfighting to facilitate the expeditious air-to-surface lethal attack of targets which may be augmented by or integrated with surface-to-surface indirect fires. The target audience includes commanders, operations and intelligence sections of Service components, and their counterparts on the JFC's staff.

Chapter I Overview

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

Chapter II Command and Control Responsibilities

Chapter II outlines command and control duties, establishing authority, control of assets, and coordination/deconfliction responsibilities.

Chapter III Planning

Chapter III provides an overview of kill box planning and coordinating considerations. It also details the kill box establishment process 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.

Chapter IV Execution

Chapter IV describes factors and procedures involved in conducting kill box operations, such as SCAR.

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Chapter I

OVERVIEW

1. Definition and Purpose

a. Definition: A kill box is a three-dimensional area used to facilitate the integration of joint fires. It is a permissive FSCM as described in JP 3-09, *Joint Fire Support*.

b. Purpose: When established, the primary purpose of a kill box is to allow lethal attack against surface targets without further coordination with the establishing commander and without terminal attack control. 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.

Note: *All aircrew conducting air interdiction within the confines of a kill box will execute their mission in accordance with rules of engagement (ROE) and special instructions (SPINS) applicable to air interdiction.*

2. Establishment

a. Supported component commanders, acting on JFC authority, establish and adjust kill boxes in consultation with superior, subordinate, supporting, and affected commanders. Requirements for kill boxes and other control measures are determined using normal component targeting and planning processes and are established and approved by commanders or their designated staff (e.g., G-3, fire support coordinator [FSCoord]). Information about the type, effective time, duration, and other attributes will be published and disseminated using existing voice and digital command and control (C2) systems. Kill boxes should be canceled when no longer needed.

b. There are two types of kill boxes: blue and purple. Chapter 3 provides further details.

(1) Blue Kill Box. A blue kill box permits air interdiction in the kill box without further coordination from the establishing headquarters (HQ).

(2) Purple Kill Box. A purple kill box permits air interdiction in the kill box without further coordination from the establishing HQ while allowing land and maritime component commanders to employ surface-to-surface indirect fires. The end state is maximum use of joint fires within the kill box to create synergistic effects with maximum potential for engaging targets.

c. Kill box characteristics:

(1) Target Area. The location and size of the kill box are determined by the expected or known location of targets in a specified area. The dimensions of a kill box are normally defined using an area reference system (i.e., Global Area Reference System [GARS]) but could follow well defined terrain features or be located by grid coordinates or by a radius from a center point. The

standard dimensions using GARS would be a cell (30 minute (min) by 30 min [approximately (approx) 44 kilometer (km) by 44km] area), quadrant (15 min by 15 min [approx 22km by 22km] area), or keypad (5 min by 5 min [approx 7.5km by 7.5km] area). Reference JP 2-03, *Geospatial Intelligence Support to Joint Operations*, for further information concerning GARS.

(2) **Airspace.** The airspace block located above the kill box target area is protected and extends from the surface (or coordinating altitude if established) up to a ceiling established by the airspace control authority. The airspace for a purple kill box includes a floor and a ceiling to enable separation between aircraft delivering air-to-surface fires, trajectories of surface-to-surface indirect fires, surface-to-air fires, and other aircraft. The height of the ceiling should be established in the Airspace Control Plan (ACP), Airspace Control Order (ACO), or SPINS to permit standardized planning for other airspace uses. These parameters are developed by coordination between fire support and airspace organizations.

3. Employment

- a. Kill boxes are normally used when a support relationship already exists between two or more functional or Service components and a theater-specific concept of operations (CONOPS) has been established for the integration and deconfliction of fires and airspace. The goal is to reduce the coordination required to fulfill support requirements with maximum flexibility while preventing fratricide.
- b. Kill boxes support the commander's objectives and CONOPS. As such, all target engagements within a kill box must adhere to the establishing commander's scheme of maneuver and designated target priorities, effects, and timing of fires.
- c. A kill box will not be established for close air support (CAS) missions. If a CAS mission is required within an established kill box, the portion of the kill box requiring detailed integration should be closed.
- d. C2 updates on kill boxes (e.g., altitude restrictions, frequency use, and control measures within the kill box) are accomplished via appropriate C2 systems.
- e. The establishment of a kill box is usually in support of a targeting decision. The kill box assists target engagement by identifying the area where effects are desired. Opening a kill box facilitates the targeting process described in JP 3-60, *Joint Targeting*, but does not replace the requirement for intelligence, surveillance, and reconnaissance (ISR) or for assigning assets to attack targets. These actions are conducted within the standard joint and Service targeting cycles in conjunction with the air tasking cycle.
- f. Kill boxes can augment traditional FSCMs, such as fire support coordination lines (FSCLs), coordinated fire lines (CFLs), and battlefield coordination lines (BCLs). They also help the commander focus the effort of air interdiction and indirect fire assets.

4. Considerations

- a. The JFC or establishing commander makes the decision to use a kill box and determines size, location, and timing based on careful consideration of the situation and CONOPS. Other factors for the JFC to consider are: disposition of enemy/friendly forces, anticipated rates of movement, surface-to-surface indirect weapons capabilities, concept and tempo of the operation.
- b. FSCMs are not mutually exclusive so a kill box could contain other measures within its boundaries to include: no-fire areas (NFAs), restricted operations area (ROA)/restricted operations zone, or airspace coordination areas (ACAs). Restrictive FSCMs and airspace coordinating measures (ACMs) will always have priority when established in a kill box.
- c. Optimally, there should be no friendly ground forces within or maneuvering into an established kill box. If circumstances require otherwise (e.g., long-range reconnaissance patrols, special operations forces (SOF) teams), then NFAs must be established to cover those forces or the kill box must be cancelled. The establishing commander must maintain awareness on locations of friendly ground forces and the status of kill boxes within the operational area and maintain timely kill box management to prevent fratricide.
- d. Kill Box Coordinator (KBC). A KBC is assigned per kill box to: deconflict aircraft; manage/direct effective target engagement; and provide battle damage assessment. See chapter 4 for detailed information concerning kill box coordination.
- e. All aircraft not assigned to an active kill box are restricted from flying through or delivering air-to-surface munitions into the kill box unless coordinated with the KBC. Effects and trajectories of surface-to-surface indirect fires also are not allowed, without coordination, to pass through the airspace of an active kill box. Commanders facilitate coordination through their appropriate fire support personnel and airspace organizations to deliver surface-to-surface indirect fires into or through an established kill box.
- f. Authority to engage is not automatically granted by the establishment of a kill box; the kill box reduces and/or eliminates coordination with the establishing HQ for mission accomplishment because all requirements for targeting guidance, clearance of fires, and deconfliction with other ground assets are accomplished in the process of establishing the kill box. Engagement authority is granted through standard mission orders, but does not relieve aircrew of the responsibility for complying with mission requirements such as designated target priority, effects, and timing of fires; positive identification (PID); collateral damage estimation (CDE); ROE; or SPINS.
- g. Integration of air-to-surface fires and surface-to-surface indirect fires requires application of appropriate restrictions: altitude, time, or lateral separation. The establishing commander will determine which restrictions are appropriate for the mission and ensure dissemination through the appropriate C2 nodes.

h. Surface-to-surface direct fires are not restricted by the establishment of a kill box. However, it is important to recognize that in certain terrain, Army direct fire guns, missiles, and rockets may be employed from high terrain and the gun-target line of these weapons should be considered by aircraft operating in the kill box.

5. Graphic Portrayal

a. A kill box is graphically portrayed by a solid black line defining the area borders. The kill box will be listed as either a “BKB” (blue kill box) or a “PKB” (purple kill box) and the commander will assign a measure number (001-999), establishing HQ, and affected altitudes. In addition to the kill box name, a date-time group (DTG) depicting the “established” and “cancelled” times for the kill box must be included. The “established” and “cancelled” times may be written as on-order. The unit identifier for the establishing HQ will be consistent with designations in operation plans and operation orders (OPORDs). Units and/or automation systems may add color to the boxes for visual recognition; however, the basic graphic follows the standards of an FSCM. Kill box names will not be used more than once. See figure 1 for an example of a joint force land component commander (JFLCC) established blue kill box.

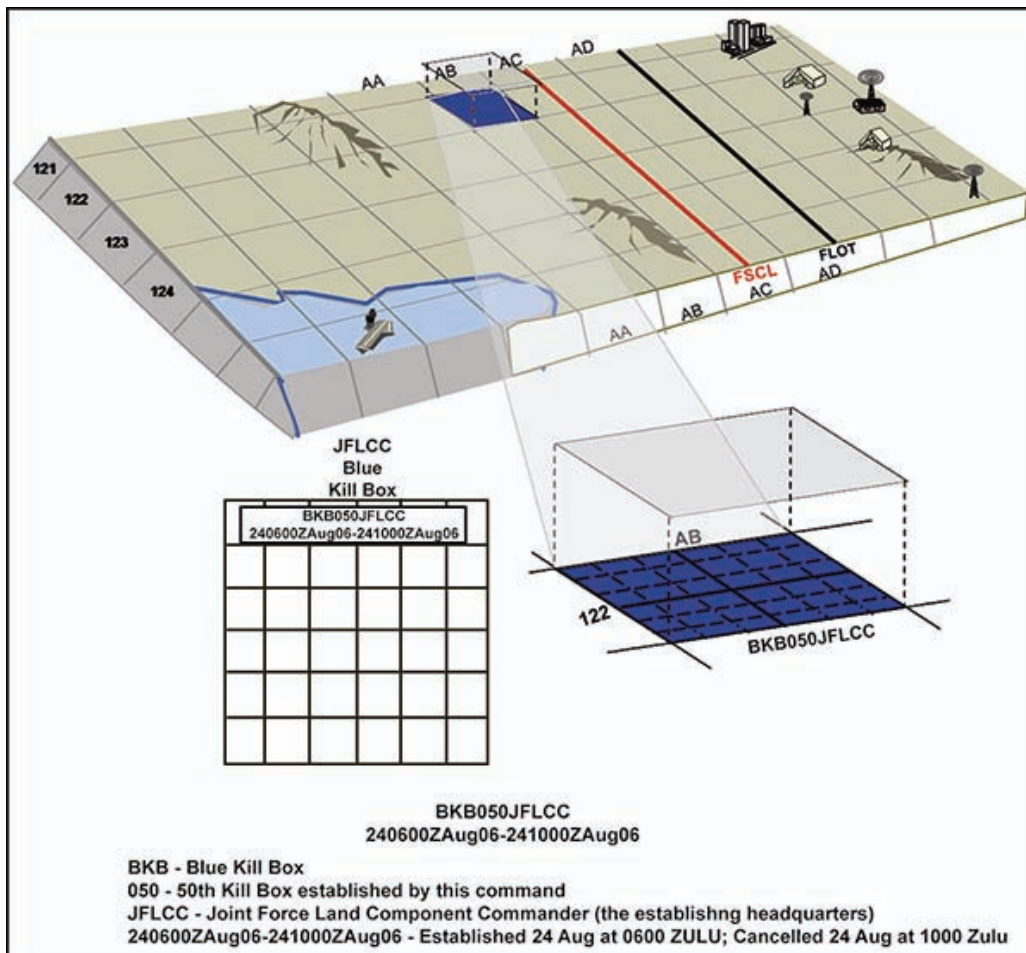


Figure 1. Blue Kill Box Graphic Portrayal

d. Kill box interdiction is not intended to replace existing procedures for CAS or preplanned air interdiction against fixed targets. The option for kill box usage rests with the supported commander during the theater/JOA-wide air interdiction effort including JFLCC and JFMCC AO.

e. Service and joint procedures for coordination, clearance of fires, and deconfliction described in documents such as JP 3-09, *Joint Fire Support*, OPORDs, and SPINS apply across all components subordinate to the JFC.

2. Joint Force Commander

a. Duties. The JFC develops guidance for kill box employment within the JOA. Guidance is promulgated through JFC and component orders. The JFC also directs the use of an area reference system (e.g., GARS).

b. Establishing Authority. The JFC normally delegates the component commanders as the establishing authority for all kill boxes. A commander establishing a kill box is responsible for coordinating and notifying all affected commanders and forces.

(1) The JFC establishes supported and supporting relationships as outlined in JP-1, *Doctrine for the Armed Forces of the United States*; and JP 3-0, *Joint Operations*. These relationships tie directly to kill box establishing authority through each phase. Commanders and designated supported commanders with jurisdiction over the operational area where kill boxes are located have the authority and responsibility to establish kill boxes within their assigned areas.

(2) Once establishing authority is given to component commanders, the JFC maintains visibility on all kill boxes within the JOA and adjudicates cross-component coordination and establishment issues. In the case where the JFC retains operational control of certain portions of the JOA, the JFC joint fires element (JFE) controls the establishment of kill boxes within that operational area.

c. Coordination and Deconfliction. The JFC designates command relationships among the components in the operational environment. Within their AO, land and maritime commanders are designated the supported commander for the integration and synchronization of maneuver, fires, and interdiction. Accordingly, land and maritime commanders designate the target priority, effects, and timing of interdiction operations within their AO. Outside of those AOs, the JFC normally designates the joint force air component commander (JFACC) as the supported commander for interdiction within the JOA. A component supporting another with fires must deconflict and integrate those fires with the supported component. It is important that aircrews clearly understand the operational environment they are operating in, who the supported commander is, and the target priorities in the affected kill box.

d. Airspace Control Authority. The JFC accomplishes airspace control in the operational area by designating the airspace control authority and defining the relationship between the airspace control authority and component commanders.

The airspace control authority is responsible for coordinating and integrating airspace use within the JOA. The airspace control authority establishes an airspace control system (ACS) that is responsive to the needs of the JFC, integrates the ACS with the host nation, and coordinates/deconflicts user requirements. The airspace control authority develops the ACP, and after JFC approval, distributes it to all airspace users. The ACP is directive for all airspace users to include manned and unmanned aircraft and indirect fires. The ACP is further defined through the ACO, air tasking order (ATO) and SPINS. The airspace control authority does not have the authority to approve, disapprove, or deny combat operations. That authority is only vested in operational commanders. However, the airspace control authority is responsible for all JOA airspace control procedures which are approved by the JFC and are derived entirely from JFC authority. The airspace control authority acts on behalf of the JFC after approval of the ACP. If the airspace control authority and an affected component commander are unable to obtain agreement on an airspace issue, the issue will be referred to the JFC for resolution. Joint airspace control provides the JFC operational flexibility to employ forces effectively throughout the JOA.

e. Development and Distribution of Kill Box Procedures. Kill box employment will affect both the execution of fires and airspace control throughout the JOA to include the AO of the JFLCC and JFMCC. The JFC's OPORD should outline the broad kill box employment concept. The concept is further refined via collaborative planning between the JFCs components and functional commanders. Once defined, kill box procedures within the JOA must be distributed by means of the JFC's ACP; the JFACC's ACO, ATO, SPINS, and component OPORDs; and coalition releasable documents. Kill box procedures, like all other procedures, must be reviewed as changes occur in the operational environment and as operations transition from one phase to another in accordance with (IAW) JP-5.0, *Joint Operation Planning*.

3. Joint Force Land Component Commander

a. Duties. The JFLCC plans, coordinates, and employs kill boxes within a scheme of maneuver consistent with the JFC's intent. The land component may vary in both size and capability based on the size and composition of the deploying US Army and US Marine Corps (USMC) forces. The fires cell (FC) designated by the JFLCC is the primary agency for planning, coordinating, and establishing kill boxes.

b. Establishing Commander. The JFLCC exercises establishment authority as delegated by the JFC.

c. Control of Assets. The JFLCC establishes kill boxes through his staff and liaisons. The JFLCC uses the Army forces (ARFOR) FC or Marine Corps forces (MARFOR) force fires coordination center (FFCC) to disseminate kill box information to the battlefield coordination detachment (BCD) and/or component liaisons. The following cells and liaisons have input and coordination responsibilities to the primary staff with regard to kill box employment: air support

operations center (ASOC)/tactical air control party (TACP), air liaison officer (ALO), air and naval gunfire liaison company (ANGLICO), special operations liaison element (SOLE), Marine liaison officer (MARLO), and the BCD. If required, liaisons between the ARFOR and MARFOR will also be exchanged.

(1) ARFOR

(a) Duties. The primary function of the ARFOR is to command and control forces to meet the JFLCC's and JFC's intent. The FC within the ARFOR is responsible for planning, coordinating, and publishing procedures in component OPODs/annexes, as well as employing kill boxes in the ARFOR's AO. This includes establishing kill boxes, designating target priorities, effects, and timing of fires, and determining interdiction tasks within the ARFOR's AO.

(b) Establishing Commander. The ARFOR commander, designated by the JFLCC or JFC as the AO commander, is the establishing authority for kill boxes within that AO.

(c) Control of Assets. The commander's FC and subordinate echelons, in conjunction with assigned US Air Force (USAF) ASOC elements, control/deconflict fires and aviation assets within kill boxes.

(2) MARFOR

(a) Duties. The Marine air-ground task force (MAGTF) is the USMC's principal organization for all missions across the full range of military operations. Within a Marine expeditionary force, the FFCC implements the MAGTF commander's intent. The FFCC within the MARFOR is responsible for planning, coordinating, and publishing procedures in component OPODs/annexes, as well as employing kill boxes in the MARFOR's operational area. This includes establishing kill boxes; designating target priorities, effects, and timing of fires; and determining interdiction tasks within the MARFOR's AO.

(b) Establishing Commander. The MARFOR commander, when designated by the JFLCC or JFC as the AO commander, is the establishing authority for kill boxes within that AO.

(c) Control of Assets. The commander's FFCC and subordinate echelons, in conjunction with the Marine air command and control system (MACCS), controls/deconflicts fires and aviation assets within kill boxes.

4. Joint Force Maritime Component Commander

a. Duties. When the JFC designates a JFMCC AO, the JFMCC is the supported commander within the AO. As supported commander, the JFMCC is responsible for planning, coordinating, and publishing procedures in component OPODs/annexes and employing kill boxes within the maritime operational area.

This includes designating target priorities, effects, and timing of fires, and determining interdiction tasks within the maritime AO. The JFMCC's organizational construct and kill box duties may vary depending on the military operation.

b. Establishing Commander. The JFMCC, designated by the JFC as the maritime AO commander, is the establishing authority for kill boxes within the maritime AO.

c. Control of Assets. The control of assets assigned to a kill box in a maritime AO will align with maritime component commander (MCC) strike (or maritime fires) CONOPS as outlined per the MCC OPORD, or the MCC portion of the JFC OPORD. A maritime operations center may delegate authority to the composite warfare commander (CWC) for control and deconfliction of fires and aviation assets within kill boxes. During expeditionary strike group (ESG) operations separate from the carrier strike group, subordinate echelons in conjunction with the Navy tactical air control system, control and deconflict fires and aviation assets within kill boxes. During some ESG operations the MACCS may also be involved in the control of kill boxes in the maritime operational area.

5. Joint Force Air Component Commander

a. Duties. The joint air operations center (JAOC) is the JFACC's primary element for planning, coordinating, and employing kill boxes IAW the JFC's intent. Normally, the JFACC will be designated by the JFC as the area air defense commander and the airspace control authority.

(1) The airspace control authority is responsible for coordinating with all kill box establishing authorities on airspace planning.

(2) Normally the ASOC, as a direct subordinate element of the air operations center (AOC), assigns theater air assets in kill boxes established in the JFLCC's AO.

b. Establishing Commander. When designated by the JFC, the JFACC is the establishing authority for kill boxes in unassigned areas of the JOA.

c. Control of Assets. The JFACC, when designated as the airspace control authority, uses the ACS to task and control theater air and space power within the JOA. The senior element of the ACS is the JAOC. Within the JAOC, the combat plans and combat operations divisions control kill box interdiction.

(1) Combat Plans. Target nominations requiring kill boxes for prosecution are coordinated by combat plans during the ATO planning cycle. The master air attack plan (MAAP) team will assign capabilities to meet required effects in the kill boxes through coordination with Service liaison officers (LNOs) (i.e., BCD, MARLO, naval and amphibious liaison element (NALE), SOLE, and the ASOC/TACP).

(2) Combat Operations. Kill boxes planned during ATO execution will be planned by the offensive operations team through coordination with affected components' FCs or their LNOs and the ASOC/TACP.

6. Joint Force Special Operations Component Commander

- a. Duties. The joint force special operations component commander (JFSOCC) plans, coordinates, and employs kill boxes in a scheme of maneuver consistent with JFC's intent. A JFE embedded in the joint operations center (JOC) serves as the focal point for all joint fires issues, including the coordination and establishment of kill boxes within any joint special operations area (JSOA). The JFSOCC can employ forces as one or more subordinate joint special operations task forces (JSOTFs). When established, each JSOTF will form its own JFE. These JSOTFs normally operate within a designated JSOA which may also be located within another component's AO.
- b. Establishing Commander. The JFSOCC exercises establishment authority as delegated by the JFC.
- c. Control of Assets. The JFE coordinates the establishment of the kill box with other component HQ. Embedded in the JSOTF JFE is a joint air coordination element (JACE), which is the SOF equivalent of an ASOC or direct air support center (DASC). The JACE functions as the focal point for air support requests (ASRs) and advises the JFSOC/JSOTF on effective use of air power in support of SOF. The JACE works directly with the SOLE at the JAOC to coordinate the appropriate airspace required for all kill boxes established by the JSOTF(s).
 - (1) When a JSOA is located within another component's operational area, the JSOTF JFE may coordinate directly with that component's FC for any fire support assets allocated or apportioned specifically for operations within kill boxes.
 - (2) When a JSOTF is in support of a component commander other than the JFSOCC, the JSOTF JFE may coordinate directly with the supported commander's FC for FSCM requirements. Joint fires support and kill box requirements for all SOF teams operating within another component's AO and outside of a JSOA are coordinated by the JSOTF's special operations command and control element (SOCCE) collocated with the other component's FC. SOCCEs may also be employed at each of the other components' HQ such as a corps or MAGTF. In such cases, kill box establishment will follow the procedures established by that component commander.

Chapter III

PLANNING

1. General

- a. The JFC establishes detailed procedures and CONOPS for successful kill box employment within the JOA by promulgating guidance and priorities. Additionally, the JFC normally delegates authority to component commanders for establishing and adjusting 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 and notifying all affected forces.
- b. An area reference system facilitates the structural and procedural requirements for using kill boxes, but the system is not a mandatory requirement.
- c. Kill box procedures will not be ideal for every situation. Mission, enemy, terrain and weather, troops and support available–time available/and civil considerations and requirements for terminal attack control may determine that other procedures would be more effective.

2. Kill Box Types

a. Blue Kill Box (BKB).

(1) Primary Purpose. The primary purpose of a BKB is to permit air interdiction in the kill box without further coordination with the establishing HQ. If the kill box is active, air-to-surface munitions (and their trajectories) delivered by aircraft not assigned to the BKB must be coordinated. All aircraft not assigned to an active BKB are restricted from entering unless coordinated with the KBC or appropriate C2 nodes. The airspace included by a BKB extends from the surface up to the limit established by the airspace control authority. Surface-to-surface direct fires are not restricted by the establishment of a BKB.

Note: *Coordination is required with established HQ appropriate fire support and airspace organization if ordnance is to be delivered from outside the airspace defined by the kill box.*

(2) Permits Rapid Engagement. A BKB minimizes the restrictions on air-to-surface fires while also protecting aircraft. Effects and trajectories of subsurface-to-surface indirect fires or surface-to-surface indirect fires are not allowed to pass through the BKB. Land and maritime force commanders must coordinate with appropriate fire support and airspace organizations to deliver subsurface/surface-to-surface indirect fires into or through an established BKB. The primary purpose of permissive FSCMs is to facilitate the attack of targets. See figure 2.

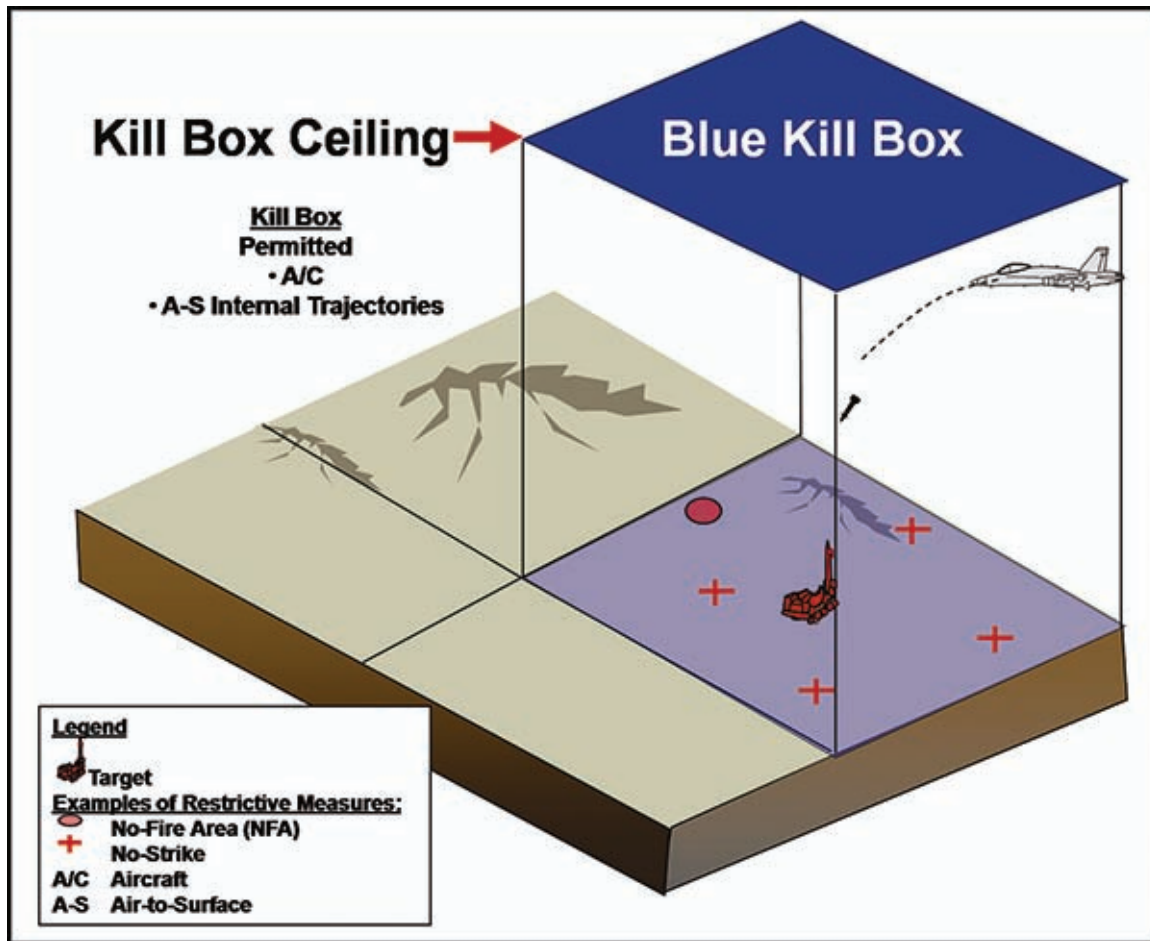


Figure 2. Blue Kill Box

b. Purple Kill Box (PKB).

(1) Primary Purpose. The primary purpose of a PKB is to permit air interdiction in the kill box without further coordination with the establishing HQ while allowing land and maritime component commanders to employ surface-to-surface indirect fires. The PKB allows joint fires in the kill box to create synergistic effects with maximum potential for engaging targets. Surface-to-surface direct fires are not restricted by the establishment of a PKB.

(2) Permits Integration of Fires. A PKB permits the integration of surface-to-surface indirect fires with air-to-surface fires in the PKB without further coordination. Air-to-surface and surface-to-surface indirect fires are deconflicted by altitude separation. If other deconfliction techniques are employed, the establishing HQ will coordinate with the air component to define the appropriate deconfliction technique. All aircraft not assigned to an active PKB are restricted from flying through the airspace unless coordinated. Also, air-to-surface munitions (and their trajectories) delivered by aircraft not assigned to the kill box will not penetrate the boundaries of a PKB unless coordinated. See figure 3.

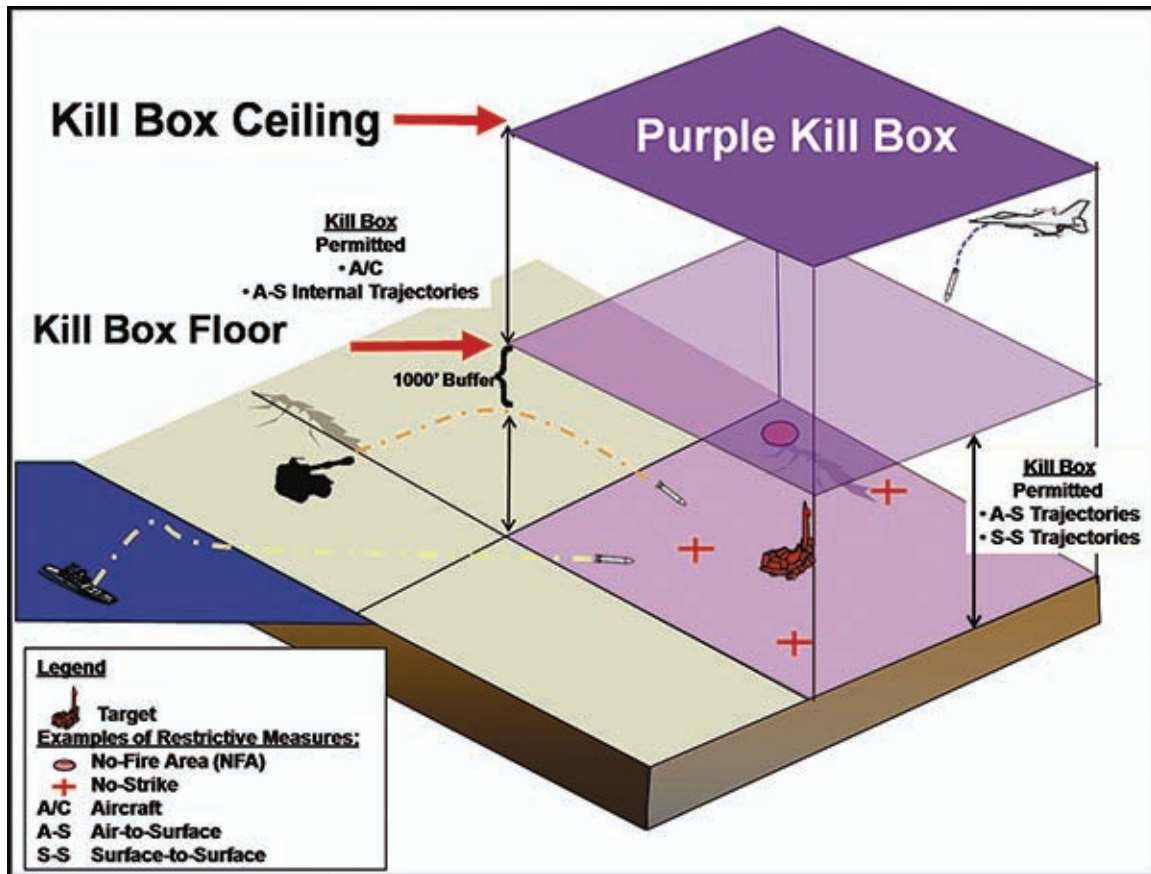


Figure 3. Purple Kill Box

3. Kill Box Terminology

a. Since a kill box is a FSCM, standard fire support terminology applies. Though the following definitions are not listed in joint doctrine, each FSCM term is commonly accepted in the fire support community:

(1) Established. A kill box is in effect. The kill box has been planned and approved with an effective time. Information about the establishing time, duration, and other attributes are published/disseminated using existing voice or digital C2 systems.

(2) On-Order. A kill box is planned but does not have an effective time. Additional information and coordination is required for the kill box to be established. Typically, on-order measures are event triggered (e.g., target time of appearance in the operational area is unknown during planning).

(3) Cancelled. The kill box is no longer established and if the commander needs additional supporting fires then a new FSCM may need to be requested.

b. A kill box status is either open or closed. Though the following definitions are not listed in joint doctrine, the terms are described as they relate to kill boxes:

(1) Open. Term used to describe a kill box or a portion of a kill box that is open to fires without further coordination or deconfliction. An established kill

box is inherently open, until closed or cancelled. Within an open kill box, the airspace will be designated as either active or cold.

(a) Active. A kill box that has aircraft operating within the confines of the kill box (to include unmanned aircraft systems [UASs]).

(b) Cold. A kill box that does not have aircraft operating within the confines of the kill box (to include UASs).

(2) Closed. Term used to describe a kill box or portion(s) of a kill box where fires or effects of fires are not allowed without further coordination. A closed kill box does not restrict the airspace associated with the kill box, unless specified by an air controlling agency.

4. Planning Considerations

a. Kill boxes can be used in conjunction with other existing FSCMs. Kill boxes can be established anywhere in the JOA where expeditious target engagement is required, to include rear areas. A kill box should also be considered in areas where a traditional FSCM (e.g., the FSCL) is not defined or has not been established.

b. Kill boxes are not required for all air interdiction missions. They are only used to reduce coordination requirements between forces and facilitate the attack of targets. Kill boxes are particularly useful in the following situations:

(1) Facilitating interdiction of mobile targets.

(2) Facilitating engagement of targets in areas where target locations are imprecise or unknown.

(3) Focusing joint fires in areas not requiring detailed integration of fires and maneuver, such as shaping fires.

(4) Facilitating engagement of targets in areas short of the FSCL, including planned joint integrated prioritized target list (JIPTL) air interdiction targets.

(5) Facilitating engagement of planned interdiction targets when FSCL moves (i.e., the FSCL move causes the targets to be short of the measure).

(6) Facilitating a battle hand-off from a ground commander to an air commander. In this situation, the ground commander recognizes a threat or threats in the AO that ground forces are unable to prosecute and hands the targets to the air component for prosecution.

(7) Facilitating SCAR missions in identified target areas of interest (TAIs).

(8) Facilitating engagement of time sensitive targets.

(9) Facilitating execution for the suppression of enemy air defenses.

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

- (1) Determine the applicability of kill boxes in support of the CONOPS and scheme of maneuver. Kill boxes are intended to facilitate engagement of targets in conjunction with the commander's concept of operations.
- (2) Determine the establishing authority. This is normally a straightforward task when the kill box falls within a single operational area. Establishing authority is either designated by the JFC or delegated to the commander of the operational area. For kill boxes that straddle boundaries, coordination between affected commanders must establish who will take responsibility for establishing the kill box. The kill box establishment does not geographically alter any portion of either commander's operational area, nor does it modify either commander's authority to alter/cancel the kill box. Cross-boundary coordination simply identifies which owner will be designated the establishing commander.
- (3) Assign and disseminate the name of the kill box for integration into OPORDs/SPINS/etc.
- (4) Determine airspace requirements based on weapons flight paths, maneuvering capability, delivery systems capabilities/limitations, terrain, and the enemy. These considerations may be applied to any aircraft delivering precision munitions from high altitude in a level delivery. Additional airspace deconfliction, including ACMs, may be required. Special considerations may be required for certain stand-off weapons, such as Tomahawk land attack missiles or conventional air-launched cruise missiles with respect to flight path deconfliction.
- (5) Determine the effective time required for the kill box to accomplish the commander's objectives.
- (6) Determine friendly locations and capabilities. This determination includes SOF and other government agency personnel. This process can be difficult and will require prior establishment of coordination procedures outside of military only channels.
- (7) Determine location of other FSCMs and ACMs.
- (8) Ensure restrictive fire support coordination measures (e.g., restrictive fire area, NFA, or a closed portion of the kill box) take precedence over kill boxes to protect friendly forces on the ground.
- (9) Consider the range and trajectory of surface-to-surface indirect fires and their impact within the kill box.
- (10) Develop a communications plan. Kill box frequencies must be considered in the development of the communications plan, including communication nets between C2 and fire assets. Ideally, each kill box will be assigned a unique frequency.

(11) Adhere to theater ROE. Target engagement within an established kill box must adhere to applicable elements of theater ROE (e.g., ROE for air integration). Planners at the joint and component level should assess the current ROE for appropriate or unduly restrictive target engagement criteria within kill boxes and request appropriate ROE adjustments, as required.

(12) For surface-to-surface indirect fires, know the planned maximum ordinate altitude. The fires element will normally plan at least a 1,000 foot vertical buffer between the maximum ordinate within the kill box and the floor of the purple kill box air space. During deliberate planning the maximum ordinate altitude may not be known; however, this altitude will be planned based on best available data and then adjusted prior to execution. Target sets, weapon systems, and firing unit locations (range-to-target) must be considered.

(13) Develop a contingency plan to minimize the impact of established kill boxes on surface-to-surface indirect fires. The established kill box may prevent attack of targets beyond the measure (due to trajectory restrictions) unless it is closed or cancelled. Ground force planners should consider planning for air support in those areas if fires are required. As an example, in a linear operation, planning kill boxes (especially blue kill boxes) short of the FSCL may limit surface-to-surface indirect fires between the kill box and the FSCL.

(14) Determine the special considerations required by unique trajectory munitions (e.g., the XM982 Excalibur and M31 Guided Missile Launch Rocket System) due to their non-ballistic trajectories when utilized in close proximity to kill boxes. Ballistic impact point (for XM982) calculations must be determined and checked manually for kill box violations.

5. Kill Box Planning Process

Kill box planning falls under the purview of the joint targeting cycle. Planned kill boxes are developed/established to support JFC or component commander CONOPS, schemes of maneuver, and corresponding targeting efforts. Dynamic targeting is the process during phase 5 of the joint targeting cycle which establishes immediate kill boxes and validates planned kill boxes. Figure 4 correlates kill box development with the joint targeting cycle, air tasking cycle, and the ATO development timeline.

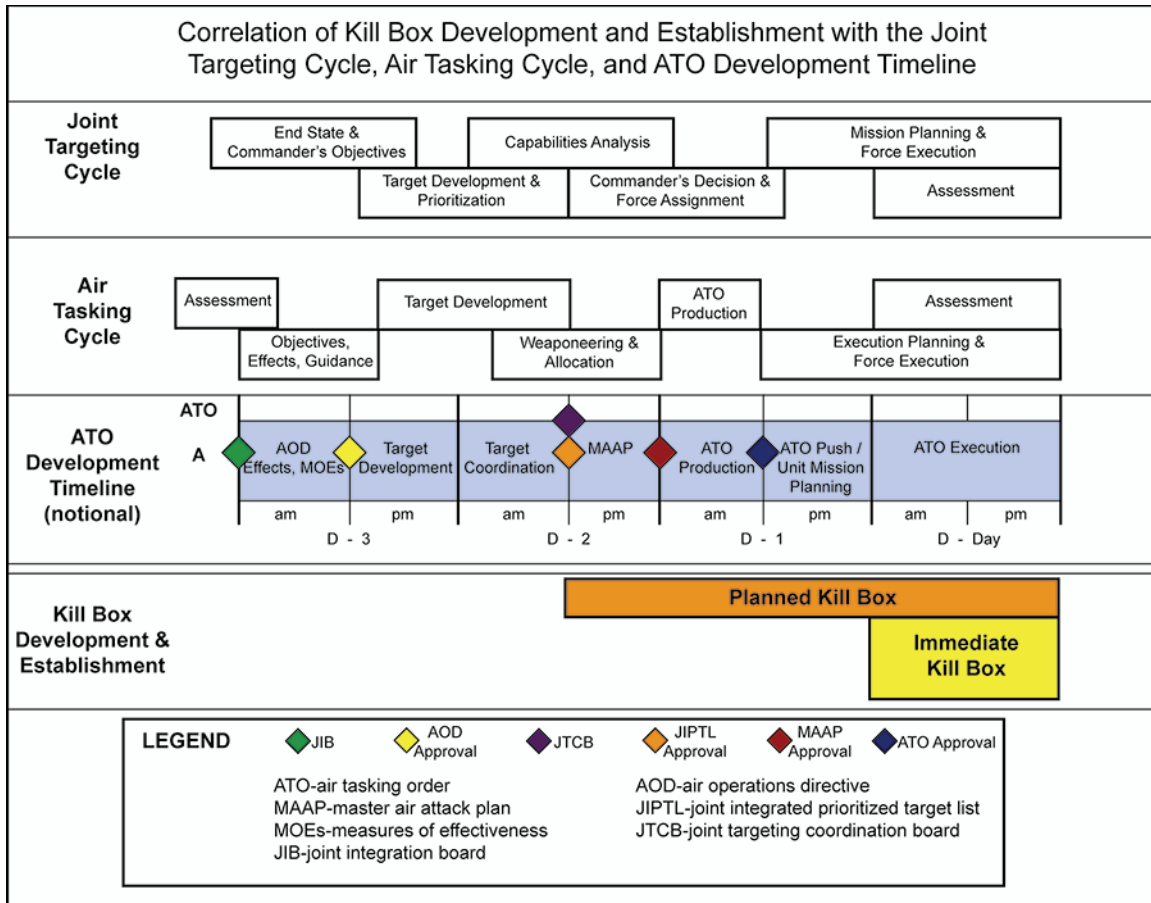


Figure 4. Kill Box Development Correlation

a. **Planned Kill Boxes.** The requesting commander begins development of kill boxes to support operations following the joint targeting coordination board approval of JIPTL targets. If a kill box is within the requesting commander's AO, then that commander is both the establishing commander and the supported commander. If a commander requests a kill box that is in another commander's AO, the commander assigned the AO has the authority to approve or disapprove the request. Cross-boundary establishment of kill boxes requires coordination using similar procedures as for cross-boundary fires. Figure 5 illustrates the detailed procedures for planned kill box development and establishment.

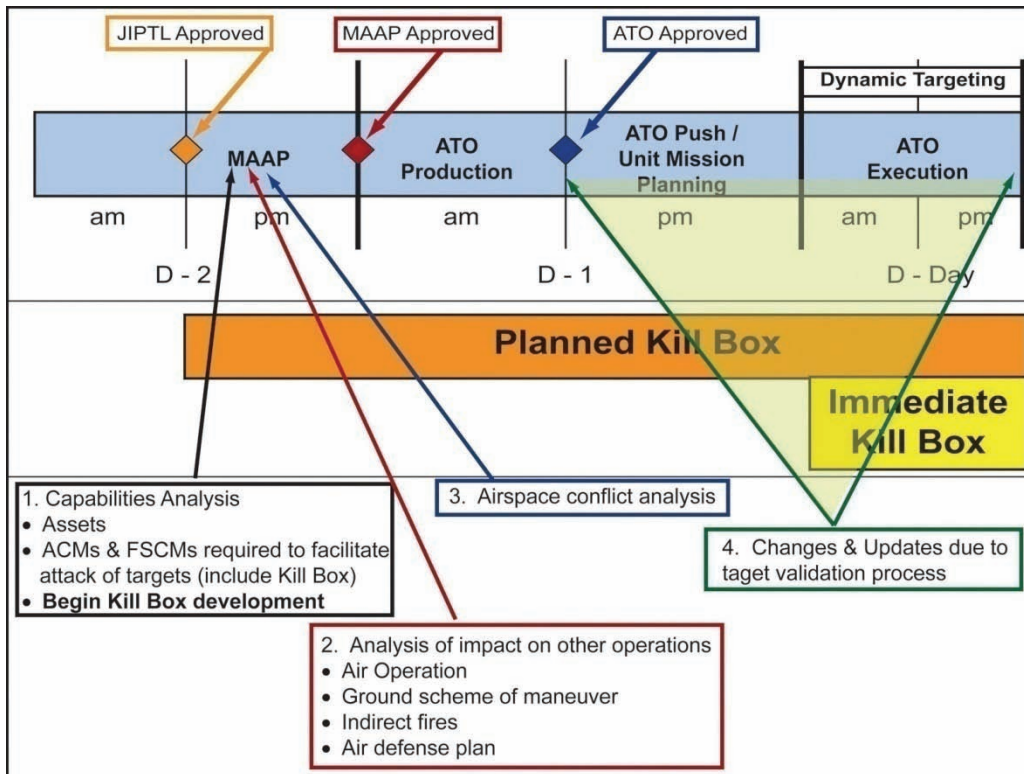


Figure 5. Planned Kill Box Development

(1) Development. Once a determination is made that a kill box is required, the initial FSCM attributes (priority, location, airspace, and time) will be developed. These attributes must be coordinated with affected components and airspace controlling agencies. Coordination includes determination of target and effect priorities, ISR, intelligence preparation of the operational environment (IPOE), availability of assets, assignment of tactical C2, and integration into the airspace control authority's airspace plan. The establishing HQ names the kill box and coordinates establishment with all appropriate commands and C2 agencies. Cross-component coordination and deconfliction of nominated kill boxes should be accomplished using the JFC-designated joint fires C2 system [e.g., theater battle management core system (TBMCS), Advanced Field Artillery Tactical Data System (AFATDS), and Joint Automated Deep Operations Coordination System (JADOCS)]. Procedures for each theater may vary. See figure 6 for the kill box request format.

Kill Box Request
<p>Target Set/ASR #/TGT #:</p> <p>“ _____ ”</p>
<p>Geographic Limits/Kill Box Location:</p> <p>“ _____ ”</p>
<p>Effective Times: “ _____ ”</p> <ul style="list-style-type: none"> • <i>Identify the date-time group (DTG) the kill box is established.</i> • <i>Identify the DTG or the event that will cancel the kill box.</i>
<p>Kill Box Type: <i>(and requested floor for purple kill box):</i></p> <p>“ _____ ”</p> <p style="text-align: center;"><i>(Identify whether it is blue or purple)</i></p>
<p>Establishing Commander:</p> <p>“ _____ ”</p> <p style="text-align: center;"><i>(Identify the establishing commander)</i></p>
<p>Establishing Commander’s Targeting Guidance:</p> <p>“ _____ ”</p> <ul style="list-style-type: none"> • Priorities: <i>(List the targets)</i> • Effects: <i>(Identify the desired effects)</i> • Restrictions:
<p>Remarks:</p> <p>“ _____ ”</p> <p style="text-align: center;"><i>(Give any additional information: e.g., NFA, no strike, etc.)</i></p>

Figure 6. Kill Box Request Format

(a) JFACC. Kill box development begins when the approved JIPTL arrives in the MAAP cell. Inside the cell, air planners/component liaisons match JIPTL targets to available assets and required kill boxes become geographically apparent. Kill box locations developed to support the JIPTL prosecution are then passed to combat plans airspace planners to determine conflicts. Any conflicts are worked out between the identified organizations.

(b) JFLCC/JFMCC/JFSOCC. Simultaneously, the component fires support coordination agencies determine kill box requirements and deconflict kill boxes with the scheme of maneuver, other FSCMs, and friendly force locations. Airspace deconfliction analyzes potential impact on friendly air operations, airspace requirements, surface-to-surface fires, and air defense plans. The coordination/deconfliction results will be merged to integrate kill boxes with the commander's intent, scheme of maneuver, and fire support plan.

(2) Approval, Distribution, and Establishment. Following coordination and deconfliction, the establishing commander approves the kill box. To complete the kill box planning process, the kill box attributes must be distributed to all affected commands. The planned kill box attributes and information are passed to all affected C2 agencies via the designated joint fires C2 systems. The kill box is published in all applicable orders to include the ACO and fragmentary orders.

(3) Validation. After promulgation, kill box attributes are updated as required, driven by the target validation process. During this continuous process, validation determines:

- (a) If planned targets still contribute to objectives (including changes to plans and objectives).
- (b) If targets are accurately located.
- (c) How planned actions will impact other friendly operations. This analysis may result in changes to the kill box attributes (e.g., location, size, target priorities, effective time, or cancellation).

b. Immediate Kill Boxes. As targets of opportunity are identified which require air interdiction, air and fire support elements determine if kill boxes will facilitate operations. An immediate kill box is one identified too late, or not requested in time, to be included during deliberate targeting. Immediate kill boxes are developed and established using dynamic targeting. Component current operations C2 agencies conduct the required coordination and deconfliction as detailed in the planned kill box development paragraph above. Also, when plans change and planned kill boxes must be adjusted, dynamic targeting can manage those changes (IAW the validation process shown above). See figure 7 for information correlating immediate kill box development with the dynamic targeting steps.

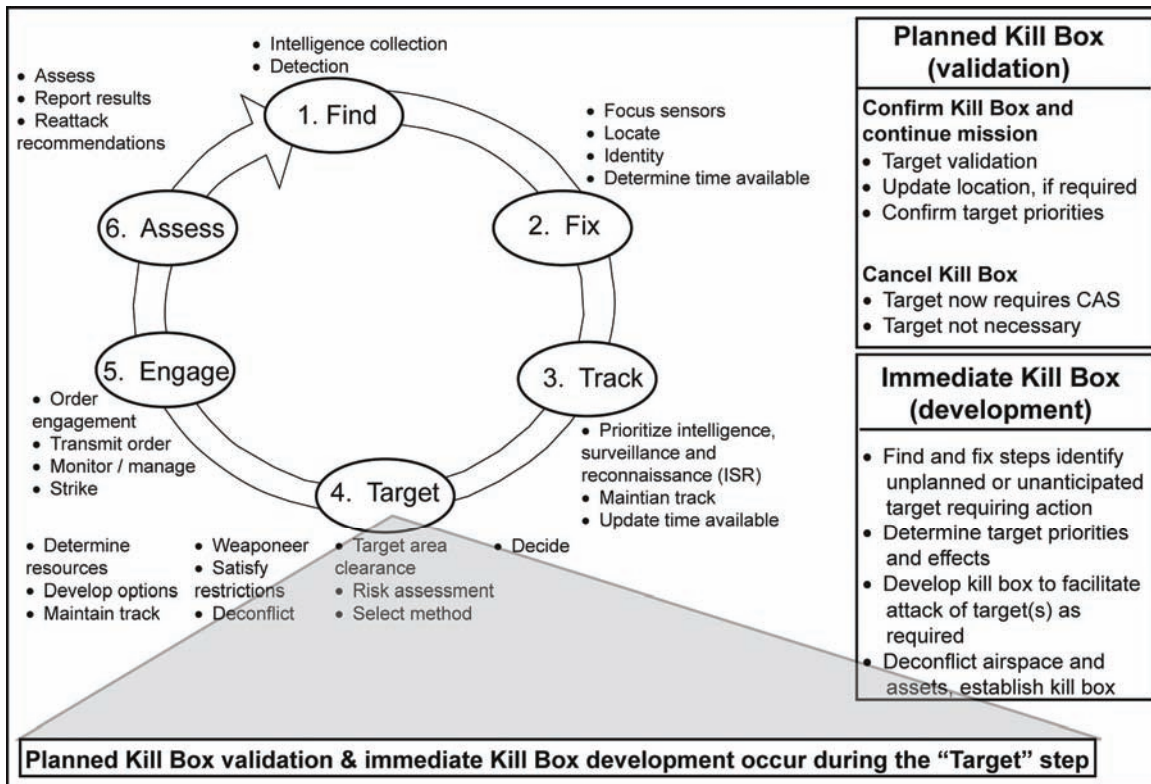


Figure 7. Dynamic Targeting Steps

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Chapter IV

EXECUTION

1. Execution of Operations Within Kill Boxes

- a. The kill box is designed to rapidly facilitate planned and immediate air interdiction. Operations typically associated with kill boxes include SCAR and dynamic targeting. Electronic attack may also be employed within a kill box to facilitate fires and provide synergy of prosecution for a given target.
- b. Execution begins when a component commander establishes a kill box.
- c. Planned kill boxes are identified during component planning and targeting, and after coordination/deconfliction with other affected components/agencies the establishing commander will disseminate/publish the kill box in applicable orders and the ACO per the JFC's concept for fires and the ACP.
- d. Immediate kill boxes are established by the current operations sections within each command and are disseminated via appropriate means (voice and digital) to ensure visibility across the joint force. If the establishing commander needs to establish a kill box that cannot be promulgated through normal orders, a liaison element such as a BCD or a C2 node such as the DASC/ASOC must inform the JAOC that a kill box was established and its effective time. The JAOC will promulgate the new FSCM to all C2 nodes.

2. Kill Box Entry/Exit

- a. Entry into kill boxes in a JFLCC's AO will normally be controlled by a C2 node associated with the senior FC (e.g., DASC/ASOC); conversely, entry into a JFACC established kill box will normally be controlled by the JAOC or subordinate tactical air control system (TACS) element. A kill box status is either open (active/cold) or closed.
- b. Planned missions into a kill box should expect minimal C2 communications/coordination assuming no ATO or targeting priority changes. As time and conditions permit, amplifying information may be passed. Immediate tasking may include some or all of the information in figure 8, C2 Agency Briefing. In either case, at a minimum, C2 will pass kill box assignment, status, targeting priorities, and working frequency.

Command and Control Agency Briefing (Information Passed from C2 Agency to Aircraft)	
Kill box name and status:	“ _____ ”
Kill box floor <i>(not required for blue kill box):</i>	“ _____ ”
Targets:	“ _____ ” <i>(priorities, targets being worked, etc.)</i>
Threats:	“ _____ ”
Friendlys:	“ _____ ” <i>(all applicable air and ground assets in vicinity of kill box)</i>
Coordinator:	“ _____ ” <i>(call sign and net)</i>
Ordnance Restrictions or Requests:	“ _____ ”
Remarks:	“ _____ ” <i>(Restricted targets, other FSCMs/ACMs, hazards munitions, UAS operations, etc.)</i>
<p>Example—Planned interdiction mission assigned to a cold kill box: <i>“Python 21, cleared to cold kill box 132LN, blue, working frequency TAD 15.”</i> (“Blue” denotes air is the only weapons platform being used for this particular mission.)</p> <p>Example—Immediate Interdiction mission into an active kill box: [Airborne Warning and Control System (AWACS)] <i>“Python 21, contact Warhawk for retasking.”</i> [ASOC] <i>“Python 21, proceed into active kill box 134LV, purple 120. Target priorities are tanks, self-propelled, and towed artillery. Possible SA-8 in quadrant 2. Contact kill box coordinator, Hoss 11 on Red 10.”</i></p> <p>Note: “Purple 120” in this example denotes the kill box floor is 12,000 ft mean sea level (MSL) due to surface-to-surface fires.</p>	

Figure 8. C2 Agency Briefing

3. Coordination Within an Active Kill Box

- a. Aircraft operating within a kill box will be on an assigned kill box frequency or have a previously coordinated deconfliction plan.
- b. When multiple flights or formations are conducting operations within the same kill box, deconfliction of attacks/airspace is required. Aircrew employing weapons within a kill box should ensure that the entire trajectory of the munition and its effects remain within the lateral/vertical limits of the kill box unless previously coordinated.
- c. C2 nodes must coordinate for additional airspace if required when weapons employment occurs outside the assigned airspace (e.g., an aircraft delivering a standoff munition outside the lateral/vertical limits of a kill box for impact within the kill box). Aircraft on ATO assigned missions employing weapons into or through an open kill box should coordinate with either the C2 agency or KBC (if one is present). At a minimum, prior to weapons release the aircraft should make an advisory call on the kill box frequency.
- d. Normally, the C2 agency will assign KBC duties to the first manned flight to enter a given kill box. Any combat aircrew can perform the basic duties of the KBC. The primary responsibility of the KBC is to deconflict attacks/airspace within the kill box. When possible, the KBC will provide the following:
 - (1) Expeditiously flow interdiction aircraft into and out of the target area.
 - (2) Prevent redundant strikes against previously destroyed targets.
 - (3) Provide targeting information/location.
 - (4) Provide target marks.
 - (5) Support laser-guided weapons.
 - (6) Confirming, locating, suppressing, and/or destroying surface-to-air threats.
 - (7) Providing bomb hit assessment.
- e. If a strike coordination and reconnaissance coordinator (SCARC) aircrew is the first manned aircraft in a kill box, the SCARC will assume both KBC and SCARC duties. SCARCs can also provide the following IAW FM 3-60.2; MCRP 3-23C; NTTP 3-03.4.3; and AFTTP 3-2.72 *Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance*.
 - (1) Target prioritization and engagement.
 - (2) PID.
 - (3) CDE, including weapons/target pairing.
- f. Forward air controller (airborne) (FAC[A])—USAF, US Navy, and USMC FAC(A)s—are all capable of performing the SCARC mission.

- g. As the complexity of operations within a kill box increases, C2 nodes should make every effort to assign SCARCs or FAC(A)s to the kill box. KBCs will relinquish control to SCARCs/FAC(A)s checking into the kill box.
- h. UAS kill box operations:
- (1) UASs will not normally serve as KBCs or SCARCs. However, some units are capable and specifically trained and equipped to perform these roles and can perform the KBC or SCARC roles when assigned or required.
 - (2) UASs can pose significant challenges to kill box planning and deconfliction due to their small size and limited ability to avoid other aircraft.
 - (3) UAS operations within a kill box also present coordination challenges.
 - (a) Many UASs do not have voice communications.
 - (b) UASs with voice communications may experience inherent delays and the transmissions may be limited by line of sight restrictions.
 - (c) Directions to the UAS platform without radios must be relayed from the KBC to a C2 node and then to the UAS ground control station.
 - (4) UASs without radios should normally not operate within the airspace of a blue kill box without prior coordination. Within a JFLCC AO, non-radio equipped UAS operations within the lateral confines of a purple kill box should operate at least 1,000 ft below the floor of the kill box.
- i. Prior to entry into an active kill box, all flights will check in with the KBC using figure 9, the kill box check-in briefing. This briefing may be abbreviated for brevity or security (e.g., “as fraged” or “with exceptions”).

Kill Box Check-in Briefing (Passed to Kill Box Coordinator Before Entering)	
Mission Number:	“ _____ ”
Number and Type of Aircraft:	“ _____ ”
Position and Altitude:	“ _____ ”
Ordnance:	“ _____ ” <i>(laser codes as applicable)</i>
Playtime:	“ _____ ”
Additional Aircraft/Aircrew Capabilities:	“ _____ ”
Remarks:	“ _____ ” <i>(include assigned target from ATO or C2 if applicable, including target location and time on target [TOT])</i>
Example:	<i>“Hoss 11(KBC), Python 21(flight)-mission # 2301, 4 F-16s entering 134LV from the south, Angels 15, 4 X GBU 12 ea plus 20 mm, Laser code 1114 in sequence, 35 mins TOS, SADL/Litening Pod.”</i>

Figure 9. Kill Box Check-in Briefing

4. Target Engagement

- a. The KBC will relay specific kill box/target information to strike aircraft using figure 10, the kill box attack briefing. The deconfliction portion of the attack brief, including general attack flow from KBC to striker aircraft, is directive. Strike aircraft must comply with deconfliction instructions or coordinate otherwise.
- b. The targeting portion of the attack brief from the KBC to strike aircraft is not directive. Under the ATO/SPINS/interdiction ROE, strikers are responsible for meeting their own PID, CDE, and target engagement requirements. If a strike aircraft enters a kill box with a previously assigned target, the KBC is only responsible for providing airspace deconfliction.

Kill Box Attack Briefing (KBC to Striker Aircraft)
<p>Deconfliction Instructions:</p> <p>“ _____ ” <i>(Block altitude, keypads/quadrants, georef, flow, timing)</i></p>
<p>Target Description:</p> <p>“ _____ ”</p>
<p>Target Location:</p> <p>“ _____ ” <i>(Coordinates, geographic references, etc.)</i></p>
<p>Target Elevation:</p> <p>“ _____ ”</p>
<p>Remarks:</p> <p>“ _____ ” <i>(Buddy-laze plan, mark, time on target (TOT), threats, UAS, etc.)</i></p>
<p>Example: <i>“Python 21, Hoss 11, remain in Quadrant 4, Angels 15. Your target: column of 4 APCs oriented north to south with dismounted infantry, location N3701.034 / W07601.089, elevation 69 ft.”</i></p>

Figure 10. Kill Box Attack Briefing

- c. Strike aircraft may be assigned to a kill box with aircrew conducting SCAR. Reference FM 3-60.2; MCRP 3-23C; NTTP 3-03.4.3; and AFTTP 3-2.72 *Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance*, for specific SCAR procedures.
- d. When checking out of a kill box, departing KBCs/SCARCs will execute a positive handoff to the appropriate flight, if applicable, and notify C2. If no flights are available, the KBC/SCARC will execute a positive handoff with C2.

Appendix A

IMMEDIATE KILL BOX DECISION FLOW CHARTS

The four flow charts listed in this appendix are intended for use by staff agencies to expedite the establishment of immediate kill boxes. Each diagram provides an overview of the decisions and coordination required to establish immediate kill boxes. Not shown, but understood, is that the steps in the charts occur within dynamic targeting of the joint targeting process. The need for a kill box is based on facilitating targeting decisions made during that process (e.g., what target, what effects, when to strike, what strike asset, clearance and deconfliction issues). Prior to use, the flow charts should be adjusted to reflect current theater conditions.

1. Joint Force Air Component Commander Requesting Immediate Kill Box

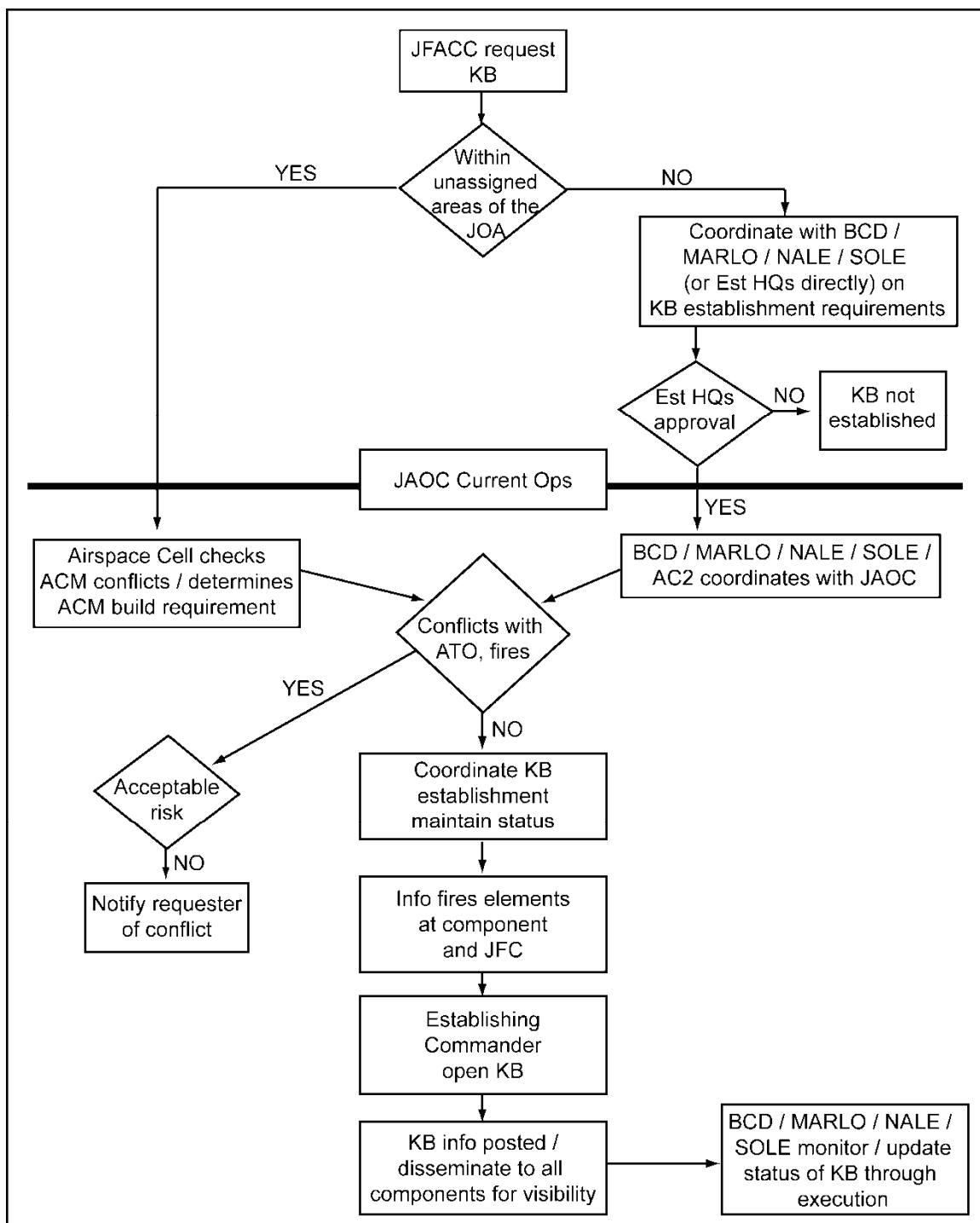


Figure 11. JFACC Decision Flow Chart

a. Figure 11 outlines the coordination required for the JFACC to request an immediate kill box.

b. Is the kill box within an unassigned area of the JOA? **If Yes:**

- (1) The combat operations airspace cell will build the kill box within the airspace deconfliction tool to determine if conflicts exist.
- (a) If there are no conflicts, the kill box is approved and established.
 - (b) If conflicts exist the airspace cell will work with the requesters for both the kill box and the ACM that the kill box conflicts with to determine a workaround.
- c. Is the kill box within an unassigned area of the JOA? **If No:**
- (1) The JAOC will begin coordination with the BCD, MARLO, NALE, SOLE or establishing HQ directly on kill box establishment requirements.
- (a) If the establishing HQ denies the request, the kill box is not established.
- d. If the establishing HQ approves the kill box request, the BCD, MARLO, NALE, or SOLE will coordinate with the combat operations airspace cell to determine if conflicts exist within the airspace deconfliction tool. Notably, some FSCMs/ACMs are not recognized by C2 systems such as TBMCS and AFATDS. For further information, consult FM 3-60.2; MCRP 3-23C; NTTP 3-03.4.3; and AFTTP 3-2.72, *Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance*, appendix C, "ACM and Fires System Coordination."
- If there are no conflicts with the ATO/fires, the BCD, MARLO, NALE, or SOLE will disseminate kill box establishment information to the fires elements of subordinate and supporting forces along with higher HQ (e.g., JFE). The combat operations division will notify affected C2 nodes of the kill box information and establishment.
 - If conflicts exist, the airspace cell will work with the requesters for both the kill box and the ACM to resolve conflicts to determine a workaround. Once deconfliction has taken place the kill box is established and information is disseminated.

2. Army Maneuver Unit Requesting Immediate Kill Box

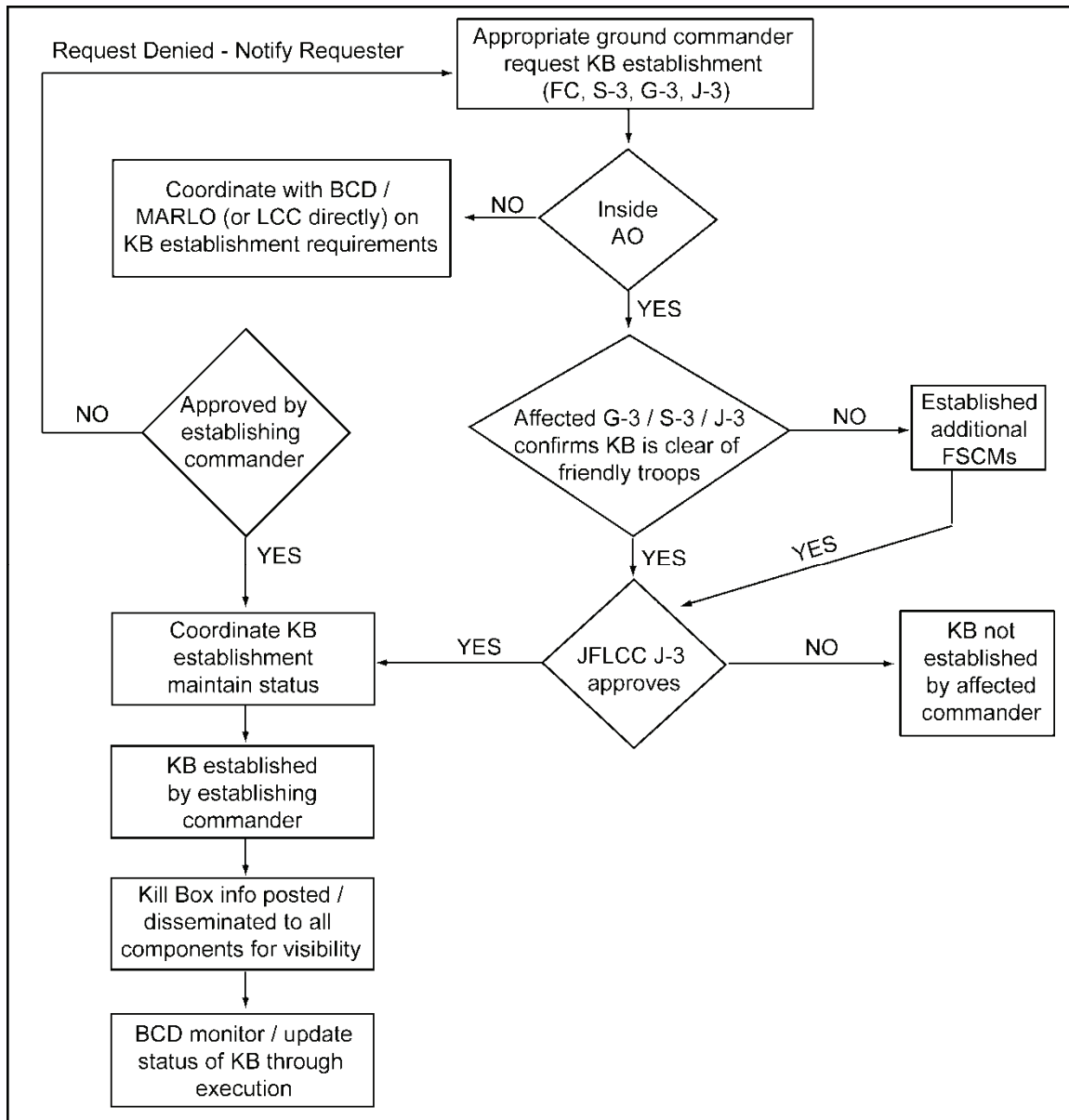


Figure 12. Army Maneuver Unit Decision Flow Chart

- a. Figure 12 outlines the coordination required for an Army maneuver unit to request an immediate kill box. For example, the fire support coordinator (FSCOORD) in consultation with the operations staff officer (G-3/S-3/J-3) and ALO could recommend that an immediate kill box be established.
- b. Is the kill box in the unit's AO? **If Yes:**
 - (1) Can G-3/S-3/J-3 confirm that there are no friendlies within the area of the kill box?
 - (a) If yes, the kill box recommendation goes forward.

- (b) If no, the G-3/S-3/J-3 and the FSCOORD must make recommendations for additional FSCMs to protect those troops.
- (2) Notify the air defense artillery (ADA) LNO to establish a kill box. Coordinate on the LNO's risk assessment, if submitted.
- (3) Can the ALO/TACP ensure that the kill box establishment will not adversely affect air operations in support of the maneuver force or JFLCC operations?
 - (a) If yes, the kill box recommendation goes forward.
 - (b) If no, the ALO LNO must provide a risk assessment to the commander along with his/her recommendations.
- (4) Weighing all the information and recommendations, the maneuver commander makes his/her decision on establishing the kill box.
 - (a) If yes, the kill box is established.
 - (b) If no, the kill box is not established.
- c. Is the kill box in the unit's AO? ***If No:***
 - (1) The FC coordinates with the commander of the AO where the kill box is to be located and recommends that a kill box be established and provides all the information concerning the establishment of the kill box.
 - (2) The staff of the affected commander performs steps in b(1), (2), and (3).
- d. Does the affected component commander approve the establishment of a kill box in the AO?
 - (1) If yes, the kill box information is established.
 - (2) If no, the kill box is not established.
- e. Can the JFLCC clear the kill box for all friendly forces (e.g., SOF/other government agencies)?
 - (1) If yes, the kill box information is disseminated to all component commanders prior to establishment.
 - (2) If no, the JFLCC operational fires directorate (OFD)/FC must establish additional FSCMs to protect those forces.

3. Marine Air-Ground Task Force Ground Combat Element Requesting Immediate Kill Box

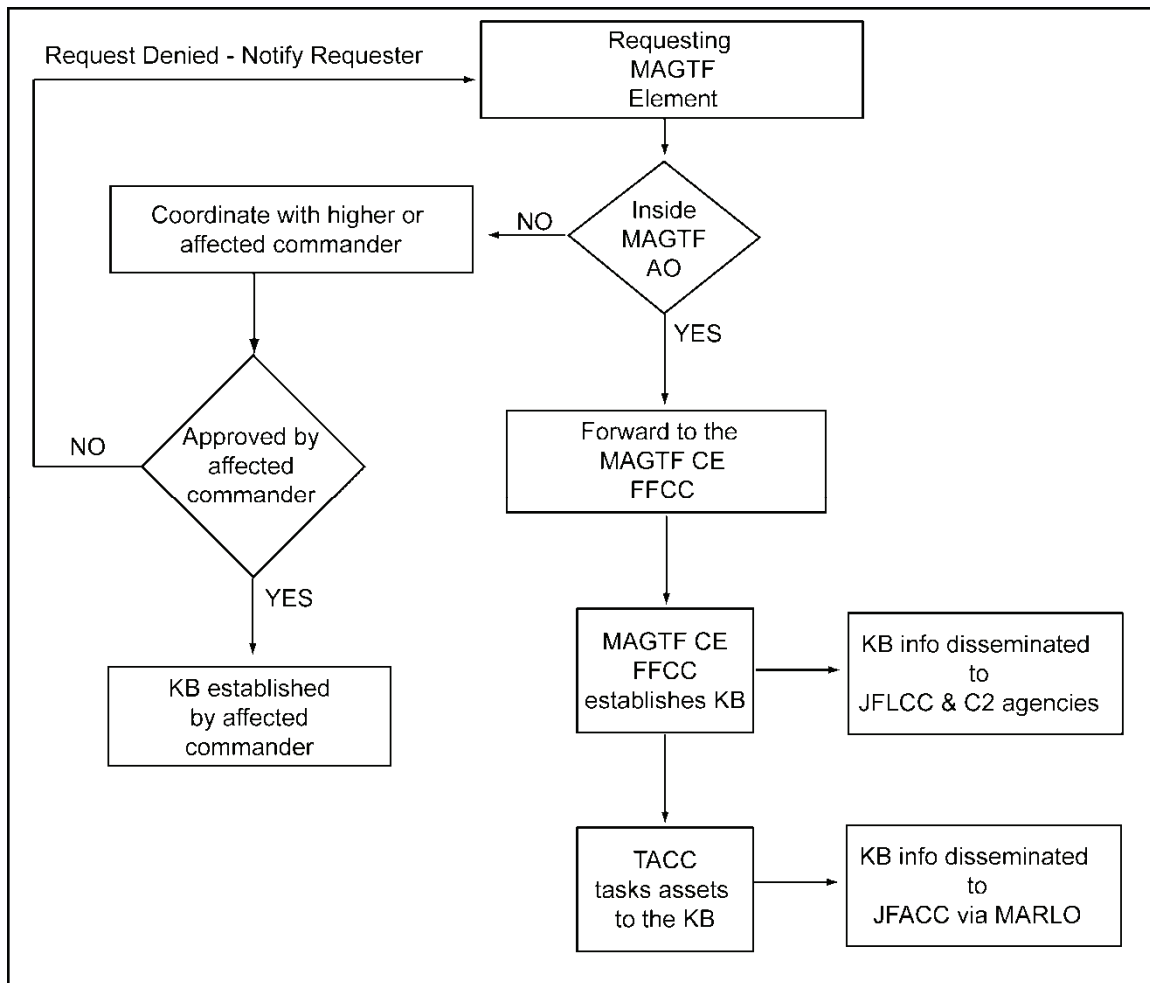


Figure 13. MAGTF Decision Flow Chart

a. Figure 13 outlines the coordination required for MAGTF subordinate elements or the command element to request an immediate kill box.

(1) Is the kill box in the requesting unit's AO? **If Yes:**

(a) Can S-3/G-3 confirm that there are no friendlies within the area of the kill box?

- If yes, the kill box recommendation goes forward.
- If no, the S-3/G-3 and the fire support coordination center/FFCC must make recommendations for additional FSCMs to protect those troops.

(2) Can the AO ensure that the kill box establishment will not adversely affect air operations in support of other MAGTF operations?

(a) If yes, the kill box recommendation goes forward.

- (b) If no, the AO must provide a risk assessment to the commander along with his/her recommendations.
- (3) Weighing all the information and recommendations, the MAGTF commander makes his/her decision on establishing the kill box.
 - (a) If yes, the kill box is established.
 - (b) If no, the kill box is not established.
- b. Is the kill box in the MAGTF's AO? ***If No:***
 - (1) The FFCC coordinates with the commander of the AO where the kill box is to be located and recommends that a kill box be established and provides all the information concerning the establishment of the kill box.
 - (2) The staff of the affected commander performs steps in a(1), (2), and (3).
- c. Does the affected commander approve the establishment of a kill box in the AO?
 - (1) If yes, the kill box information is established. Kill box details are provided to the JFACC by the MACCS to ensure appropriate cross component air command and control coordination is conducted.
 - (2) If no, the kill box is not established.

4. Joint Force Maritime Component Commander Requesting an Immediate Kill Box

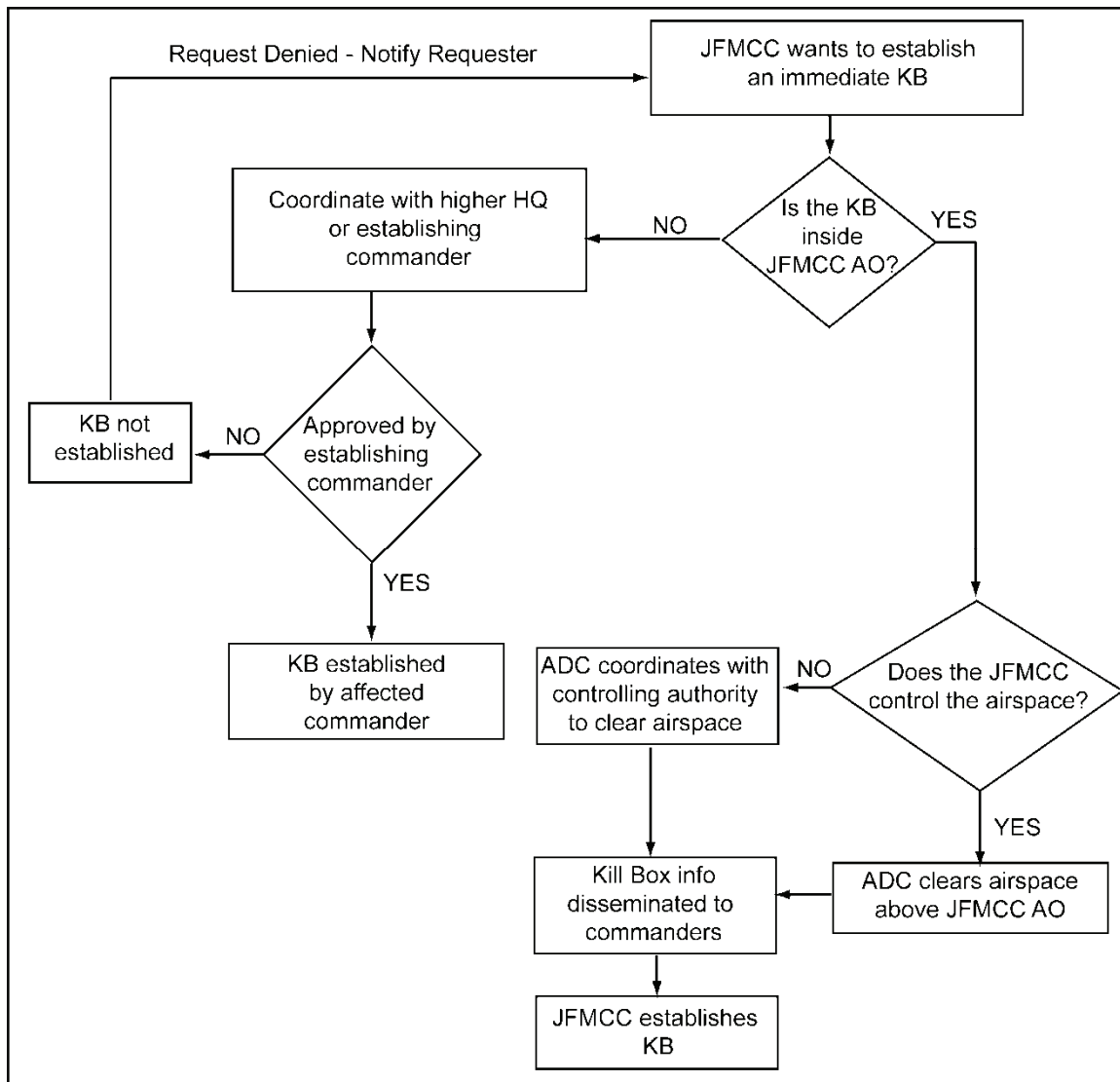


Figure 14. JFMCC Decision Flow Chart

a. Figure 14 outlines the coordination required for maritime forces to request an immediate kill box.

b. Is the kill box in the JFMCC AO? **If Yes:**

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

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

(b) If no, the ADC coordinates with the airspace control authority (normally delegated to the chief of combat operations working for the JFACC in the JAOC) to clear the airspace defined by the kill box.

c. Is the kill box in the JFMCC AO? **If No:**

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

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

(a) If yes, the kill box information (kill box type, location, establishing HQ, and time established) is disseminated to all component commanders prior to establishment.

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

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Appendix B

KILL BOX COORDINATION VIGNETTES

The following vignettes demonstrate how the kill box process can be implemented across components. The examples explore different possibilities and illustrate key concepts in kill box coordination. However, they are not intended to be all-inclusive.

1. JFLCC Nominated Blue Kill Box Inside the JFLCC's AO

a. During the military decision making process, a division FC subordinate to the JFLCC has identified an enemy armored force well beyond the forward line of own troops (FLOT) and beyond the expected movement of friendly forces for the next 48 hours. In order to shape the operational environment, the division FSCoord and ALO identify a TAI, submit an ASR, and plan a blue kill box to facilitate attack of this target. The northeast quadrant of the cell is not required (based on terrain geography, friendly graphics, or other reasons). Establishment of the blue kill box will allow air assets to attack this enemy formation without further coordination. It is noted that a previously established NFA (over a protected bridge) is located in the southeast (SE) quadrant of the kill box. The kill box will not adversely affect ADA coverage for the land component. In addition to the ASR, the FC will submit the following kill box request to the JFLCC.

b. Kill Box Request.

Target Set/ASR #/TGT #: _____

Geographic Limits/Kill Box Location: Using the area reference system, quadrants northwest (NW), SE, and southwest (SW) of cell 124LK is identified as a kill box.

Effective Times:

Established at 240600ZAug04

Cancelled 260600ZAug04 or on-order

Kill Box Type: BLUE

Establishing Commander: JFLCC

Establishing Commander's Targeting Guidance:

Priorities: Tanks, ADA, and armored vehicles.

Effects: Destroy/neutralize when found.

Restrictions: Do not destroy bridges or road networks. No scatterable munitions near bridges, roads, or road intersections.

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

c. The ARFOR FC conducts initial coordination with the BCD.

(1) For a planned kill box, the ARFOR sends a kill box FSCM to the BCD Global Command and Control System-Army (GCCS-A) and AFATDS and an ACM request to the BCD tactical airspace integration system (TAIS). The FSCM is incorporated into the common operational picture (COP) via COP

synchronization. The BCD TAIS sends the ACM request to TBMCS/WebAD. Combat plans airspace C2 section incorporates the kill box ACM request into the air battle plan for the appropriate ACO period. BCD coordinates with the MAAP team, to assign appropriate air resources and build missions to accomplish the desired effects in the ARFOR kill box. The ATO is published with missions directed to the kill box and the ACO contains the kill box as an airspace measure.

(2) For an immediate kill box, the BCD informs the combat operations airspace cell who will identify and resolve conflicts. The kill box is then built into the ACO and ATO change once the kill box is approved by the JFLCC.

d. JFLCC approves the kill box.

(1) Planned kill boxes are requested and approved within the standard air tasking cycle in boards, bureaus, centers, cells, and working groups (B2C2WGs).

(2) Immediate kill boxes are requested and approved in B2C2WGs.

e. A blue kill box is established by the JFLCC FC in AFATDS as an ACA for quadrants NW, SE, and SW of cell 124LK, from surface to the standard kill box height as identified in the SPINS (e.g., 25,000 ft mean sea level [MSL]). This restricts surface-to-surface indirect fires from entering or passing through the kill box without further coordination. The identified NFA (over the bridge) takes precedence over the kill box.

(1) The JFLCC FC informs subordinate elements so that all field artillery, air defense, and army aviation units know about the kill box.

(2) Air defense assets identify the kill box as a weapons hold area (weapons control status "Hold").

(3) The airspace command and control (AC2) cell identifies the kill box for restricted operations that will prevent Army aviation assets from entering the airspace.

f. Until kill boxes seamlessly appear in maneuver control systems, a best practice is for the division/corps G-3 to create a phase line at some distance from the kill box to alert of any unanticipated arrival of friendly troops, triggering the cancellation of the kill box before the planned end time, if required.

2. JFACC Nominated Blue Kill Box Outside the JFLCC's AO

a. During IPOE, the JFLCC identifies a mobile free rocket over ground (FROG)-7 battery operating within the littoral region of the JFMCC AO, able to influence future maneuver operations, and nominates it for inclusion to the JIPTL. The JFC validates the JIPTL and during the MAAP cycle air component aircraft are assigned the responsibility for its destruction. The target is identified as mobile and, without a desired point of impact, the target can best be serviced through kill box interdiction. Therefore, a kill box request is submitted.

b. Kill Box Request.

Target Set/ASR #/TGT #: _____

Geographic Limits/Kill Box Location: Using the area reference system, the entire cell 132AW is identified as a kill box.

Effective Times:

Established at 240600ZAug04

Cancelled 260600ZAug04 or on-order

Kill Box Type: BLUE

Establishing Commander: JFMCC

Establishing Commander's Targeting Guidance:

Priorities: FROG-7, tanks, ADA, and armored vehicles.

Effects: Destroy/neutralize when found.

Restrictions: Do not destroy bridges or road networks.
No scatterable munitions near bridges, roads, or road intersections.

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

c. Because the target area is partially within the JFMCC AO and partially within the JFC's unassigned AO (for which the JFACC is responsible), the JFACC must coordinate with the JFMCC and receive approval for creation of the blue kill box. The NALE rep in the MAAP cell is tasked to gain JFMCC approval for this kill box.

d. In this scenario, the JFMCC does not have operations that would be adversely impacted by the JFACC requested blue kill box and approves its creation. Since the JFMCC boundary splits the kill box, the coordination for kill box establishment also determines the establishing authority. In this case, the decision is made that the JFMCC will be the establishing authority. Because of bandwidth limitations while afloat, the JFMCC AFATDS is unable to promulgate, therefore the JFMCC requests the BCD input the kill box into AFATDS. A JFMCC blue kill box is entered by the BCD in AFATDS as an ACA for cell 132AW, from surface to the standard kill box height as identified in the SPINS (e.g., 25,000 ft MSL). The MAAP team produces an ACM request to the Combat Plans airspace cell to determine potential conflicts. Conflicts are identified and resolved, and the kill box is built into the ACO and the ATO is published.

e. Following JFACC interdiction sorties that successfully destroy the FROG-7, the JFACC requests cancelation of the blue kill box and so the JFMCC cancels it. JFACC combat operations airspace personnel will deactivate (cancel) the kill box airspace in the ACO; the establishing HQ will delete the kill box in AFATDS, coordinate with the AC2 personnel, and will also notify the JFLCC that the targeted FROG-7s have been destroyed.

3. JFMCC Nominated Purple Kill Box Inside the JFLCC's AO

a. A Marine expeditionary brigade level amphibious assault is scheduled to take place in 5 days within an amphibious objective area designated by the JFC. The intelligence section of the command element briefs the ground combat element commander (regimental combat team [RCT] commanding officer [CO]) on an enemy high speed armor avenue of approach that transits from the JFLCC AO. The RCT CO determines the need to shape the amphibious landing area in preparation for the amphibious assault. This will allow air assets and naval surface fire support (NSFS) to engage targets in the area without further coordination. The JFMCC anticipates their surface-to-surface trajectories in the purple kill box to be no higher than 6,500 ft MSL and using UAS in the kill box for target location and tracking, operating between 7,000 ft and 9,000 ft MSL. The JFMCC FSCOORD and air officer recommend establishing a purple kill box within the JFLCC AO, along the enemy avenue of approach. The location of the kill box is well forward of the JFLCC's FLOT, but short of the FSCL and the airspace is controlled by the ASOC within the JFLCC.

b. Kill Box Request.

Target Set/ASR #/TGT #: _____

Geographic Limits/Kill Box Location: Using the area reference system, the entire cell 129AW is identified as a kill box.

Effective Times:

Established 240600ZAug04

Cancelled 260600ZAug04 or on-order

Kill Box Type: PURPLE

Recommended floor is 10,000 ft MSL.

Establishing Commander: JFLCC

Establishing Commander's Targeting Guidance:

Priorities: Tanks, armored vehicles, artillery.

Effects: Destroy.

Restrictions: Do not destroy bridges or road networks. No scatterable munitions near bridges, roads, or road intersections.

Remarks: No friendlies are within the proposed kill box. NFAs have been established around restricted and no-strike targets. Cross-boundary fires (specifically including surface-to-surface) from the JFMCC into the approved purple kill box are authorized, providing that weapon trajectories and weapon effects are confined with the purple kill box and require no further coordination.

c. Upon receiving the JFMCC request, JFLCC confirms requested purple kill box does not affect his scheme of maneuver.

d. JFLCC approves and establishes the purple kill box.

e. A purple kill box is established by the JFLCC FC in AFATDS as an ACA for cell 129AW, from 10,000 ft MSL with a standard kill box height as identified in the SPINS (e.g., 25,000 ft MSL). This restricts surface-to-surface indirect fires from

entering or passing through the airspace portion of the purple kill box without further coordination. Cross-boundary surface-to-surface fires from the JFMCC into the purple kill box are also authorized. (The creation of the kill box does not automatically remove the restrictions of the boundary—in this case; the restrictive boundary within the kill box has been specifically coordinated.)

- f. The BCD informs the MAAP team, who processes an ACM request to the combat plans airspace cell to determine potential conflicts. Once conflicts are resolved, the kill box is built into the ACO and the ATO is published.
- g. The JFLCC FC informs subordinate elements so that all field artillery, air defense, and army aviation units are aware of the kill box.
- h. Air defense assets identify the kill box as a weapons hold area (weapons control status “Hold”).
- i. The AC2 cell and TACS identifies the kill box for restricted operations that will prevent aviation assets from entering the airspace.
- j. A best practice is for the division/corps G-3 to create a phase line at some distance from the kill box to alert the fires cell/G3 of any unanticipated arrival of friendly troops, triggering the cancellation of the kill box before the planned end time, if required.

4. JFLCC Nominated Purple Kill Box Inside the JFLCC's AO

a. Anticipating an upcoming planned movement of the FSCL, the Corps G-2 and FC have identified an area where suspected enemy forces will continue to operate short of the FSCL and beyond the expected movement of friendly forces for the next 24 hours. The Corps commander's guidance to the fires brigade commander is to continue to attack these enemy forces with airpower and with long range artillery fires. The Corps FSCOORD, fires brigade commander and ALO/ASOC recommend the establishment of a purple kill box over the identified area after determining the lateral limits of the kill box and identify an altitude floor which will permit maximum use of artillery fires with fixed wing assets. The altitude floor will also allow for most effective employment of Corps UAS operating below the floor. Establishment of the purple kill box will allow air assets to attack enemy formations throughout the area without further coordination; allow Corps UAS to continue to monitor the area; and allow artillery to engage detected high payoff targets. There are established NFAs around numerous restricted and no-strike targets (religious and cultural sites) located within the confines of the requested kill box. SOF and long range surveillance unit teams in the area require several more NFAs be established. The FC submits the kill box request to the JFLCC FC.

b. Kill Box Request.

Target Set/ASR #/TGT #: _____

Geographic Limits/Kill Box Location: Using GARS, the entire cell 134LV is identified as a kill box.

Effective Times:

Established at 180600ZAug08

Cancelled 190600ZAug08 or on-order

Kill Box Type: PURPLE

Recommended floor is 12,000 ft MSL.

Establishing Commander: JFLCC

Establishing Commander's Targeting Guidance:

Priorities: Tanks, armored vehicles, and C2 nodes.

Effects: Destroy/neutralize when found.

Restrictions: Do not destroy bridges or road networks. No scatterable munitions near population centers, bridges, roads, or road intersections.

Remarks: Friendly forces are within the proposed kill box. NFAs have been established around these forces along with numerous restricted and no-strike targets.

c. The ARFOR FC conducts initial coordination with the BCD. The ARFOR sends a kill box FSCM to the BCD GCCS-A and AFATDS and an ACM request to the BCD TAIS. The FSCM is incorporated into the COP via COP synchronization. The BCD TAIS sends the ACM request to TBMCS/WebAD. Combat plans airspace C2 section incorporates the kill box ACM request into the ABP for the appropriate ACO period. BCD coordinates with the MAAP team, to assign appropriate air resources and build missions to accomplish the desired

effects in the ARFOR kill box. The ATO is published with missions directed to the kill box and the ACO contains the kill box as an airspace measure.

d. JFLCC establishes the kill box. Planned kill boxes are requested and approved within the standard air tasking cycle in B2C2WGs.

e. A purple blue kill box is established by the JFLCC FC in AFATDS for cell 134LV, with a floor of 12,000 ft MSL to the standard kill box height as identified in the SPINS (e.g., 25,000 ft MSL). This restricts surface-to-surface indirect fires from entering or passing through the upper portion (12,000 – 25,000 ft) of the kill box. The established NFAs have priority over the kill box.

f. The JFLCC FC informs subordinate elements so that all field artillery, air defense, and army aviation units are aware of the kill box.

g. Air defense assets identify the kill box as a weapons “Hold” area.

h. The AC2 cell identifies the kill box as a ROA that will prevent Army aviation assets from entering the airspace.

5. JFSOCC Nominated Purple Kill Box Outside the JFLCC's AO

a. At the beginning of major operations and campaigns, JFSOCC is assigned the mission of securing and protecting gas and oil platforms (GOPLATs) off the coast inside the JFMCC's AO. There are hostile forces on the GOPLATs as well as fast and shore attack craft known to be in the vicinity. To accomplish both of these missions, the JFSOCC requests and receives JFC approval for a JSOA surrounding these platforms. The mission analysis shows that securing the GOPLATs can be accomplished within the JSOA with JFSOCC assets, but additional resources are required to protect the platforms from attack craft outside the JSOA. The JFE embedded in the JFSOCC JOC sends the following kill box request to the JFMCC FFCC for a purple kill box between the shore and the JSOA to facilitate NSFS and air support against approaching fast attack craft. Anticipated max ordinate for available 5 inch NSFS is 1,500 ft MSL, so the recommended floor for the purple kill box is 3,000 ft MSL.

b. Kill Box Request

Target Set/ASR #/TGT #: Enemy fast attack craft between the JSOA and the shore.

Geographic Limits/Kill Box Location: Using the area reference system, the entire cell 31K and quadrants NW and SW of 31L is identified as a kill box.

Effective Times:

Established at 210600ZAug04

Cancelled 230600ZAug04 or on-order

Kill Box Type: PURPLE

Recommended floor 3,000 ft MSL.

Establishing Commander: JFSOCC

Establishing Commander's Targeting Guidance:

Priorities: Fast attack boats, other hostile vessels.

Effects: Destroy/neutralize when found.

Restrictions: Per the JFMCC restriction, no mine laying operations inside the kill box.

Remarks: Notify JACE if engagements of targets reach kill box keypads closest to JSOA, and advise of any leakers.

c. The JSOCC JFE conducts coordination with the JFMCC JFE. For a planned kill box, the NALE and SOLE plans element informs the MAAP team in the AOC. The AOC then processes an ACM request to the combat plans airspace cell to determine potential conflicts. Conflicts are identified and resolved, and the kill box is built into the ACO and the ATO is published if the JFMCC approves the kill box. For an immediate kill box, the NALE and SOLE operations element informs the combat operations airspace cell who will identify and resolve conflicts. The kill box is then built into the ACO and ATO change once the JFMCC approves the kill box.

- d. JFMCC approves the kill box:
 - (1) Planned kill boxes are requested and approved within the standard air tasking cycle.
 - (2) Immediate kill boxes are requested and approved (best case) in the tactical flag command center or (worst case) by the current operations watch.
- e. A purple kill box is established by the JFMCC FFCC. The decision is relayed to the NALE and input into TBMCS by the AOC airspace cell using Web AD.
- f. The JFMCC propagates the kill box information using the CWC system to the ADC, sea combat commander, strike warfare commander, and information operations warfare commander. The information is further propagated using real time voice communications (immediate) or through daily intentions messages (planned).
- g. JFMCC command and control assets (airborne, surface) are identified for the kill box and are subordinate to the ADC.
- h. The CWC identifies the kill box for restricted operations and requires all air interdiction assets to check in with ADC via Red Crown, or in an amphibious operation Green Crown, prior to entering the AO.

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GLOSSARY

PART I – ABBREVIATIONS AND ACRONYMS

A

AC2	airspace command and control
ACA	airspace coordination area
ACS	airspace control system
ACM	airspace coordinating measure
ACO	airspace control order
ACP	airspace control plan
ADA	air defense artillery
ADC	air defense commander
AFATDS	Advanced Field Artillery Tactical Data System
AFI	Air Force instruction
AFTTP	Air Force tactics, techniques, and procedures
ALO	air liaison officer
ALSA	Air Land Sea Application Center
ANGLICO	air and naval gunfire liaison company
AO	area of operations
approx.	approximately
ARFOR	Army forces
ASOC	air support operations center
ASR	air support request
ATO	air tasking order
AWACS	Airborne Warning and Control System

B

B2C2WG	boards, bureaus, centers, cells, and working groups
BCD	battlefield coordination detachment
BCL	battlefield coordination line
BKB	blue kill box

C

C2	command and control
CAS	close air support
CDE	collateral damage estimate
CO	commanding officer
CONOPS	concept of operations
COP	common operational picture
CWC	composite warfare commander

D-F

DASC	direct air support center
DTG	date-time group
ESG	expeditionary strike group
FAC(A)	forward air controller (airborne)
FC	fires cell
FFCC	force fires coordination center
FLOT	forward line of own troops
FM	field manual
FROG	free rocket over ground
FSCL	fire support coordination line
FSCM	fire support coordination measure
FSCoord	fire support coordinator
ft	foot

G

G-3	Army or Marine Corps component operations staff officer (Army division or higher staff, Marine Corps brigade or higher staff)
GARS	Global Area Reference System
GCCS-A	Global Command and Control System-Army
GOPLAT	gas and oil platform

H-I

HQ	headquarters
IAW	in accordance with
IDN	initial distribution number
IPOE	intelligence preparation of the operational environment
ISR	intelligence, surveillance, and reconnaissance

J

JACE	joint air coordination element
JADOCS	Joint Automated Deep Operations Coordination System
JFACC	joint force air component commander
JAOC	joint air operations center
JFC	joint force commander
JFE	joint fires element
JFLCC	joint force land component commander
JFMCC	joint force maritime component commander
JFSOCC	joint force special operations component commander
JIPTL	joint integrated prioritized target list
JOA	joint operations area

JOC	joint operations center
JP	joint publication
JSOA	joint special operations area
JSOTF	joint special operations task force

K-L

KB	kill box
KBC	kill box coordinator
km	kilometer
LeMay Center	Curtis E. LeMay Center for Doctrine Development and Education
LNO	liaison officer

M

MAAP	master air attack plan
MACCS	Marine air command and control system
MAGTF	Marine air-ground task force
MARFOR	Marine Corps forces
MARLO	Marine liaison officer
MCC	maritime component commander
MCCDC	Marine Corps Combat Development Command
MCRP	Marine Corps reference publication
MILSTRIP	military standard requisitioning and issue procedure
min	minute
MSL	mean sea level
MTTP	multi-Service tactics, techniques, and procedures

N

NALE	naval and amphibious liaison element
NASUP	Navy Supplement Publication
NFA	no-fire area
NSFS	naval surface fire support
NTTP	Navy tactics, techniques, and procedures
NW	northwest
NWDC	Navy Warfare Development Command
NWP	Navy warfare publication

O

OFD	operational fires directorate
OPORD	operation order

P

PID positive identification
PKB purple kill box

R

RCT regimental combat team
ROA restricted operations area
ROE rules of engagement

S

S-3 battalion or brigade operations staff officer (Army; Marine Corps
battalion or regiment)
SADL situation awareness data link
SCAR strike coordination and reconnaissance
SCARC strike coordination and reconnaissance coordinator
SE southeast
SOCCE special operations command and control element
SOF special operations forces
SOLE special operations liaison element
SPINS special instructions
SW southwest

T

TACP tactical air control party
TACS tactical air control system
TAI target area of interest
TAIS tactical airspace integration system
TBMCS theater battle management core system
TGT target
TOS time on station
TOT time on target
TRADOC United States Army Training and Doctrine Command

U-Z

UAS unmanned aircraft system
US United States
USAF United States Air Force
USMC United States Marine Corps

PART II - TERMS AND DEFINITIONS

- air defense artillery** – Weapons and equipment for actively combating air targets from the ground. Also called ADA. (JP 1-02)
- air liaison officer** – The senior tactical air control party member attached to a ground unit who functions as the primary advisor to the ground commander on air power. An air liaison officer is usually an aeronautically rated officer. Also called ALO. (JP 1-02)
- airspace coordinating measures** – Measures employed to facilitate the efficient use of airspace to accomplish missions and simultaneously provide safeguards for friendly forces. Also called ACMs. (JP 3-52)
- airspace control order** – An order implementing the airspace control plan that provides the details of the approved requests for airspace coordinating measures. It is published either as part of the air tasking order or as a separate document. Also called ACO. (JP 1-02)
- airspace coordination area** – A three-dimensional block of airspace in a target area, established by the appropriate ground commander, in which friendly aircraft are reasonably safe from friendly surface fires. The airspace coordination area may be formal or informal. Also called ACA. (JP 1-02)
- air support operations center** – The principal air control agency of the theater air control system responsible for the direction and control of air operations directly supporting the ground combat element. It processes and coordinates requests for immediate air support and coordinates air missions requiring integration with other supporting arms and ground forces. It normally collocates with the Army tactical headquarters senior fire support coordination center within the ground combat element. Also called ASOC. (JP 1-02)
- air tasking order** – A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties, capabilities and/or forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, etc., as well as general instructions. Also called ATO. (JP 1-02)
- amphibious objective area** – A geographical area (delineated for command and control purposes in the order initiating the amphibious operation) within which is located the objective(s) to be secured by the amphibious force. This area must be of sufficient size to ensure accomplishment of the amphibious force's mission and must provide sufficient area for conducting necessary sea, air, and land operations. Also called AOA. (JP 1-02)
- area air defense commander** – Within a unified command, subordinate unified command, or joint task force, the commander will assign overall responsibility for air defense to a single commander. Normally, this will be the component commander with the preponderance of air defense capability and the command, control, and communications capability to

plan and execute integrated air defense operations. Representation from the other components involved will be provided, as appropriate, to the area air defense commander's headquarters. Also called AADC. (JP 1-02)

area of operations – An operational area defined by the joint force commander for land and maritime forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. Also called AO. (JP 3-0)

battle damage assessment – The estimate of damage resulting from the application of lethal or nonlethal military force. Battle damage assessment is composed of physical damage assessment, functional damage assessment, and target system assessment. Also called BDA. (JP 3-0)

battlefield coordination detachment – An Army liaison that provides selected operational functions between the Army forces and the air component commander. Battlefield coordination detachment located in the air operations center interface includes exchanging current intelligence and operational data, support requirements, coordinating the integration of Army forces requirements for airspace coordinating measures, fire support coordination measures, and theater airlift. Also called BCD. (JP 3-03)

battlefield coordination line – A fire support coordinating measure similar to a fire support coordination line (FSCL), which facilitates the expeditious attack of targets with surface indirect fires and aviation fires between this measure and the FSCL. To facilitate air delivered fires and deconflict air and surface fires, an airspace coordination area will always overlie the area between the battlefield coordination line (BCL) and the FSCL. BCL location is graphically portrayed on fire support maps, charts, and overlays by a solid black line with the letters "BCL" followed by the establishing headquarters in parentheses above the line and effective date-time group below the line. Also called BCL. (MCRP 5-12C)

boundary – A line that delineates surface areas for the purpose of facilitating coordination and deconfliction of operations between adjacent units, formations, or areas. (JP 1-02)

close air support – Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. Also called CAS. (JP 1-02)

command and control – The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and

operations in the accomplishment of the mission. Also called C2. (JP 1-02)

coordinated fire line – A line beyond which conventional and indirect surface fire support means may fire at any time within the boundaries of the establishing headquarters without additional coordination. The purpose of the coordinated fire line is to expedite the surface-to-surface attack of targets beyond the coordinated fire line without coordination with the ground commander in whose area the targets are located. Also called CFL. (JP 3-09)

data – Representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means. Any representations, such as characters or analog quantities to which meaning is or might be assigned. (JP 1-02)

date-time group – The date and time, expressed in digits and time zone suffix, at which the message was prepared for transmission. (Expressed as six digits followed by the time zone suffix; first pair of digits denotes the date, second pair the hours, third pair the minutes, followed by a three-letter month abbreviation and two-digit year abbreviation.) Also called DTG. (JP 1-02)

direct air support center – The principal air control agency of the US Marine air command and control system responsible for the direction and control of air operations directly supporting the ground combat element. It processes and coordinates requests for immediate air support and coordinates air missions requiring integration with ground forces and other supporting arms. It normally collocates with the senior fire support coordination center within the ground combat element and is subordinate to the tactical air command center. Also called DASC. (JP 1-02)

direct fire – (DOD) Gunfire delivered on a target, using the target itself as a point of aim for either the gun or the director. (Note: the Army definition includes missile and rocket fire.) See FM 3-20.21 (FM 7-20)

fire support coordination line – A fire support coordination measure that is established and adjusted by appropriate land or amphibious force commanders within their boundaries in consultation with superior, subordinate, supporting, and affected commanders. Fire support coordination lines facilitate the expeditious attack of surface targets of opportunity beyond the coordinating measure. A fire support coordination line does not divide an area of operations by defining a boundary between close and deep operations or a zone for close air support. The fire support coordination line applies to all fires of air, land, and sea-based weapon systems using any type of ammunition. Forces attacking targets beyond a fire support coordination line must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide. Supporting elements attacking targets beyond the fire support coordination line must ensure that the attack will not produce adverse effects on, or to the rear of, the line. Short of

a fire support coordination line, all air-to-ground and surface-to-surface attack operations are controlled by the appropriate land or amphibious force commander. The fire support coordination line should follow well-defined terrain features. Coordination of attacks beyond the fire support coordination line is especially critical to commanders of air, land, and special operations forces. In exceptional circumstances, the inability to conduct this coordination will not preclude the attack of targets beyond the fire support coordination line. However, failure to do so may increase the risk of fratricide and could waste limited resources. Also called FSCL. (JP 3-09)

fire support coordination measure – A measure employed by land or amphibious commanders to facilitate the rapid engagement of targets and simultaneously provide safeguards for friendly forces. Also called FSCM. (JP 3-0)

forward air controller (airborne) – A specifically trained and qualified aviation officer who exercises control from the air of aircraft engaged in close air support of ground troops. The forward air controller (airborne) is normally an airborne extension of the tactical air control party. Also called FAC(A). (JP 1-02)

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

fragmentary order – An abbreviated form of an operation order issued as needed after an operation order to change or modify that order or to execute a branch or sequel to that order. Also called FRAGORD. (JP 5-0)

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

indirect fire – Fire delivered on a target that is not itself used as a point of aim for the weapons or the director. (JP 1-02)

joint air operations center – A jointly staffed facility established for planning, directing, and executing joint air operations in support of the joint force commander's operation or campaign objectives. Also called JAOC. (JP 1-02)

joint fires – Fires delivered during the employment of forces from two or more components in coordinated action to produce desired effects in support of a common objective. (JP 3-0)

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

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

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

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

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

joint operations area – An area of land, sea, and airspace, defined by a geographic combatant commander or subordinate unified commander, in which a joint force commander (normally a joint task force commander) conducts military operations to accomplish a specific mission. Also called JOA. (JP 3-0)

joint special operations area – An area of land, sea, and airspace assigned by a joint force commander to the commander of a joint special operations force to conduct special operations activities. It may be limited in size to accommodate a discrete direct action mission or may be extensive enough to allow a continuing broad range of unconventional warfare operations. Also called JSOA. (JP 3-0)

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

kill box – A three-dimensional area used to facilitate the integration of joint fires. (JP 3-09)

littoral – The littoral comprises two segments of battlespace: 1. Seaward: the area from the open ocean to the shore, which must be controlled to support operations ashore. 2. Landward: the area inland from the shore that can be supported and defended directly from the sea. (JP 3-32)

Marine expeditionary brigade – A Marine air-ground task force (MAGTF) that is constructed around a reinforced infantry regiment, a composite Marine aircraft group, and a combat logistic regiment. The Marine expeditionary brigade (MEB), commanded by a general officer, is task-organized to meet the requirements of a specific situation. It can function as part of a joint task force, as the lead echelon of the Marine expeditionary force (MEF), or alone. It varies in size and composition and is larger than a Marine expeditionary unit but smaller than a MEF. The MEB is capable of conducting missions across the full range of military operations. In a joint or multinational environment, it may also contain other Service or multinational forces assigned or attached to the MAGTF. Also called MEB. (MCRP 5-12C)

Marine expeditionary force – The largest Marine air-ground task force (MAGTF) and the Marine Corps principal warfighting organization, particularly for larger crises or contingencies. It is task-organized around a permanent command element and normally contains one or more Marine divisions, Marine aircraft wings, and Marine logistic groups. The Marine expeditionary force is capable of missions across the range of military operations, including amphibious assault and sustained operations ashore in any environment. It can operate from a sea base, a land base, or both. In a joint or multinational environment,

it may also contain other Service or multinational forces assigned or attached to the MAGTF. Also called MEF. (MCRP 5-12C)

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

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

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

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

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

positive identification – Identification criteria established in the rules of engagement that requires a potential target to be identified as a valid target prior to engagement. Positive identification criteria may vary from operation to operation because the joint force commander and subordinate commanders will establish requirements for positive identification prior to combat operations, in order to achieve the required confidence of target identification for engagement. Also called PID.

restricted operations area – Airspace of defined dimensions, designated by the airspace control authority, in response to specific operational situations/requirements within which the operation of one or more airspace users is restricted. Also called ROA. (JP 3-52)

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

special operations command and control element – A special operations element that is the focal point for the synchronization of special operations forces activities with conventional forces activities. It performs command and control functions according to mission requirements. It normally collocates with the command post of the supported force. It can also receive special operations forces operational, intelligence, and target acquisition reports directly from deployed special operations elements and provide them to the

supported component headquarters. It remains under the operational control of the joint force special operations component commander or commander, joint special operations task force. Also called SOCCE. (JP 3-05.1)

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

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

strike coordination and reconnaissance – A mission flown for the purpose of detecting targets and coordinating or performing attack or reconnaissance on those targets. Strike coordination and reconnaissance missions are flown in a specific geographic area and are an element of the command and control interface to coordinate multiple flights, detect and attack targets, neutralize enemy air defenses and provide battle damage assessment. Also called SCAR. (JP 3-0)

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

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

synchronization – 1. The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time. 2. In the intelligence context, application of intelligence sources and methods in concert with the operation plan to ensure

intelligence requirements are answered in time to influence the decisions they support. (JP 2-0)

tactical air control party – A subordinate operational component of a tactical air control system designed to provide air liaison to land forces and for the control of aircraft. Also called TACP. (JP 1-02)

target area of interest – The geographical area where high-value targets can be acquired and engaged by friendly forces. Not all target areas of interest will form part of the friendly course of action; only target areas of interest associated with high priority targets are of interest to the staff. These are identified during staff planning and wargaming. Target areas of interest differ from engagement areas in degree. Engagement areas plan for the use of all available weapons; target areas of interest might be engaged by a single weapon. Also called TAI. (JP 1-02)

terminal attack control – The authority to control the maneuver of and grant weapons release clearance to attacking aircraft. (JP 1-02)

time on target – 1. Time at which aircraft are scheduled to attack/photograph the target. 2. The actual time at which aircraft attack/photograph the target. 3. The time at which a nuclear detonation as planned at a specified desired ground zero. Also called TOT. (JP 1-02)

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**FM 3-09.34
MCRP 3-25H
NTTP 3-09.2.1
AFTTP 3-2.59**

4 August 2009

By Order of the Secretary of the Army

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Supersedes AFTTP(I) 3-2.59, 13 June 2005.

