

FM 3-09.12
MCRP 3-16.1A

Tactics, Techniques, And Procedures for Field Artillery Target Acquisition



U.S. Marine Corps

PCN 144 000085 00

Preface

This publication contains the doctrine, organization, tactics, techniques, and procedures required to manage field artillery target acquisition (TA) organizations, systems, personnel and equipment. It updates information formerly contained in [FM 6-121](#) and incorporates emerging doctrine and information about targeting, the military decision making process (MDMP), new equipment, and Advanced Field Artillery Tactical Data System (AFATDS) considerations as they apply to the functions performed by the targeting officer and the radar section leader.

The material contained in this manual applies to all personnel involved in the targeting and target acquisition process. These personnel include:

- Maneuver commanders and their staffs.
- Field artillery commanders and their staffs.
- Fire support element (FSE personnel).
- Members of division artillery and FA brigade tactical operations centers.
- Personnel assigned to target acquisition batteries, target acquisition detachments, and radar platoons.
- Other personnel involved in the targeting or intelligence processes.

This manual describes current and emerging TA organizations. These organizations include target acquisition batteries and radar platoons of active and reserve components, the corps target acquisition detachment (CTAD), radar platoons of the interim brigade combat team (IBCT) and interim division artillery (IDIVARTY), and the STRIKER platoon. Technical and tactical considerations for employing weapons locating radars are discussed in detail. This includes the AN/TPQ-47 that is currently being developed. New information contained in this manual includes duties and responsibilities for key TA personnel, rehearsals, stability operations and support operations, rotary and fixed wing radar movement procedures, and automated target data processing. The methodology used by weapons locating radars to acquire, track and locate threat weapon systems is also discussed.

Users at different echelons will focus on different chapters and appendices based on their specific mission requirements and operational focus. [Chapter 1](#) discusses targeting, MDMP, and rehearsals from a target acquisition viewpoint. [Chapters 2](#) and [3](#) provide information about TA organizations and TA personnel duties and responsibilities. [Chapter 4](#) is focused on the technical aspects of employing weapons locating radars and the associated requirements. [Chapter 5](#) discusses tactical employment and management of radar systems. This chapter provides information required for commanders and their staff to effectively employ radars in support of military operations. Finally, [Chapter 6](#) discusses stability operations and support operations and associated radar employment considerations. The information in the supporting appendices provides the additional technical information and procedures required to facilitate the effective employment of radar systems.

The provisions of this publication are the subject of the following North Atlantic Treaty Organization (NATO) Standardization Agreements (STANAGs) and Quadripartite Standardization Agreements (QSTAGs):

- 2008/503, Bombing, Shelling, Mortaring, and Location Reports.
- 2029/514, Methods of Describing Ground Locations, Areas, and Boundaries.

The proponent of this publication is Commandant, US Army Field Artillery School (USAFAS), ATTN: Requirements Development Determination and Integration (ATSF-FD), Fort Sill, OK 73503-5600.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

FM 3-09.12 (FM 6-121)
MCRP 3-16.1A
21 JUNE 2002

By Order of the Secretary of the Army:

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0215608

DISTRIBUTION: *Active Army, Army National Guard, and U.S. Army Reserve:* To be distributed in accordance with the initial distribution number 110068, requirements for FM 3-09.12.

By direction of the Commandant of the Marine Corps

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Chapter 1

Targeting, Target Acquisition, and the Military Decision Making Process

This chapter provides an overview of targeting fundamentals, field artillery target acquisition processes, and target acquisition integration into the military decision making process (MDMP). Target acquisition, by nature, is an integral part of the targeting process and requires the interaction among many groups within a given organization. Field artillery target acquisition plays a key role in the targeting process. Without accurate targeting data, indirect fire systems are of limited value. Targeting is a command responsibility that requires the participation of key members of maneuver and field artillery coordinating and special staffs. It is a critical component of the MDMP that focuses battlefield operating systems to achieve the commander's intent. As such, the targeting process focuses on mission requirements. The mission, commander's intent and guidance drive the targeting process. These inputs allow unit personnel to determine the targets to be engaged, how to locate and track the targets, when and how to engage the targets, along with determining if, when, and how target assessment will be accomplished. The methodology used to drive the targeting process is Decide, Detect, Deliver and Assess (D3A). This chapter discusses D3A, the role of field artillery target acquisition (TA) and how TA fits into the MDMP process.

DEFINITION OF TARGETING

Targeting is the part of the military decision making process used to focus battlefield operating systems (BOSs) to achieve the commanders intent. The methodology used to translate the commander's intent into a plan is decide, detect, deliver, and assess. The functions associated with this methodology help the commander decide what to attack, how to acquire those targets, and when those targets are acquired, how to attack them in a way that disrupts, delays or limits the enemy's ability to achieve his objectives. Simply stated, *targeting is the process of selecting targets and matching the appropriate response to them, taking account of operational requirements and capabilities.*

TARGETING METHODOLOGY

Targeting is a combination of intelligence functions, planning, battle command, weaponeering, operational execution and combat assessment (CA). The D3A methodology facilitates the attack of the right target at the right time with the most appropriate asset. Integral to this process is target tracking. Tracking is essential to the detect and deliver functions. Tracking