

DOD TRI-SERVICE
AIR-DELIVERED
LAND MINE PROGRAM



Gator





NAVAL WEAPONS CENTER

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FOREWORD

This publication describes the tri-service Gator weapons system, an air-delivered land mine field designed for use against enemy tanks and personnel. While the Air Force is the lead service and has overall responsibility for the tri-service program, the role of each service is defined in the text.

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INTRODUCTION

The Gator Weapon System is an air-delivered land mine field designed for use against enemy tanks and personnel. Gator is part of the tri-service (Army, Air Force, and Navy/Marine Corps) Family of Scatterable Mines (FASCAM) that provides quick-strike antiarmor and antipersonnel mine emplacement through air, artillery, and special-purpose ground vehicle delivery techniques.

Gator provides U.S. military forces with a unique new tactical capability: for the first time in military history, a minefield can be emplaced on enemy sites not under U.S. control. Gator is designed to lay an antitank minefield as large as 75,000 square meters. Another significant advantage is that attacks on the enemy can be carried out without sending fighter-bombers against the enemy's mobile air defenses.

Gator uses a free-fall cluster munition dispenser for delivery. Mine delivery can be achieved from a variety of aircraft and bomb racks. Deployment is rapid. Gator minefields automatically clear themselves for use by friendly forces by means of a self-destruct mechanism contained in each mine.

Because of separate tactical requirements, two versions of the Gator Weapon System have been developed—the Air Force CBU-89/B (Figure 1) and the Navy/Marine Corps CBU-78/B (Figure 2). Both versions use the same Army-developed antitank (AT) and antipersonnel

FASCAM CONCEPT

The FASCAM concept (Figure 4) was developed by the U.S. Army Armament Research and Development Command in association with the Air Force and the Navy, providing remotely activated and deactivated weapons with quick strike emplacement capabilities to counter the growing strength and technology of the enemy. The Army, Air Force, and Navy/Marines now jointly use different members of this common mine family at reduced costs with no duplication of effort. Members of the FASCAM system are as follows:

- ADAM Area Denial Artillery Munition (AP)
- RAAM Remote Antiarmor Artillery Mine (AT)
- MOPMS Modular Pack Mine System (AT/AP)
- GEMSS Ground Emplaced Mine Scattering System (AT/AP)
- Gator Aircraft Delivered Mine System (AT/AP)
- Volcano Helicopter Emplaced Mine System (AT)

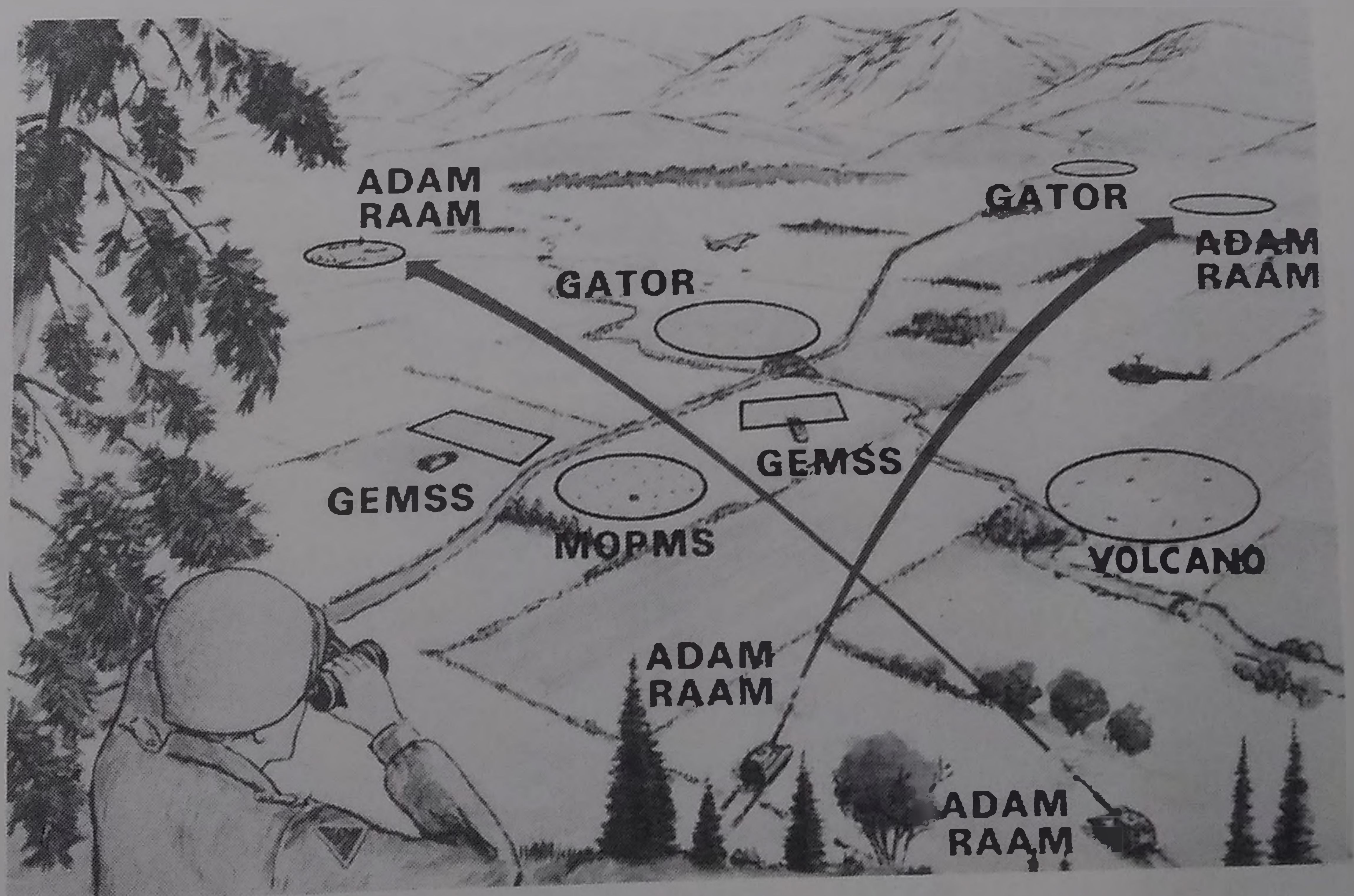
process and aid the mobilization effort. The FASCAM commonality concept began with the RAAM and ADAM programs and continued with GEMSS, Gator, and MOPMS.

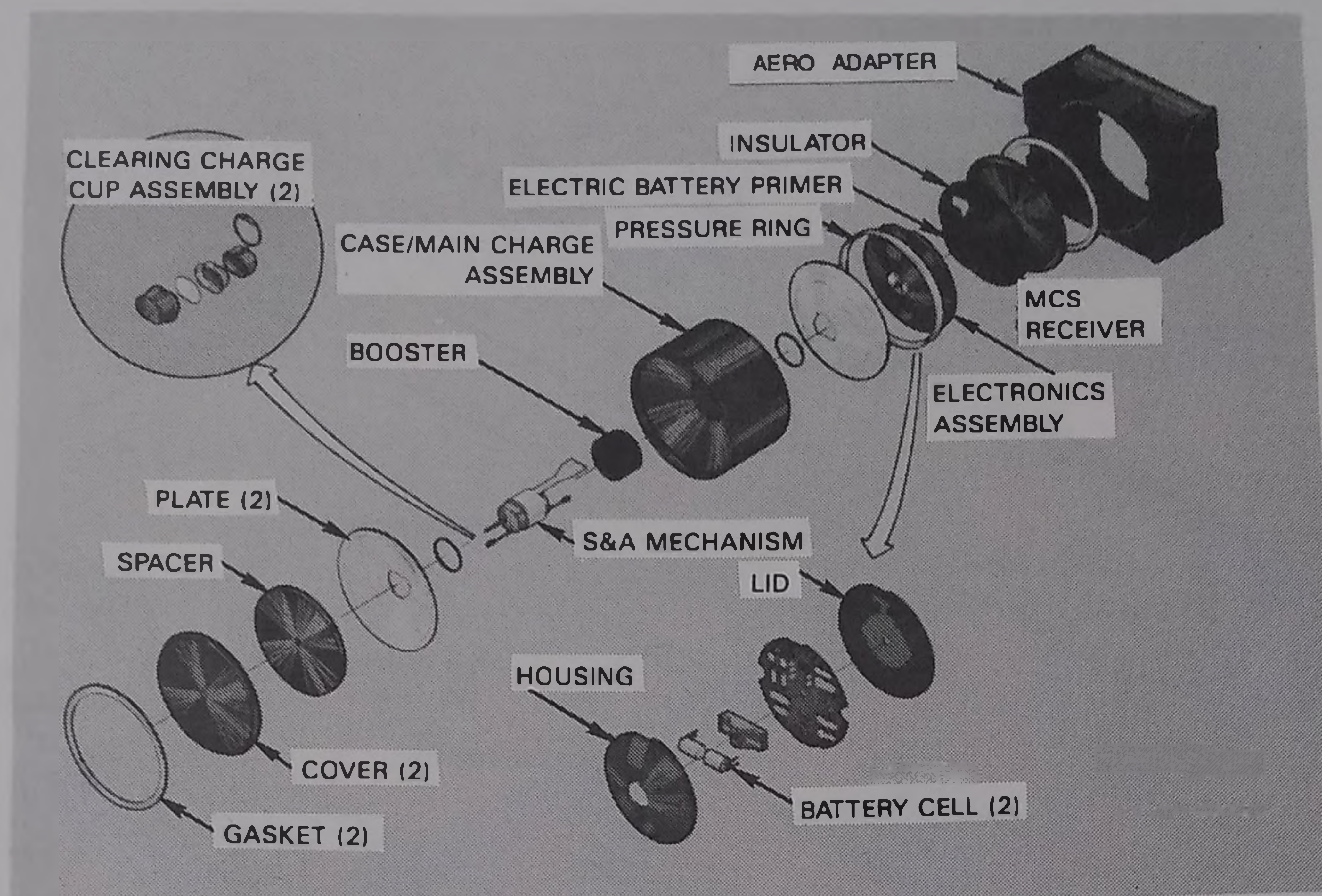
Subassemblies of FASCAM mines have been designed to incorporate as many common parts and functions as possible. For example, the safe and arming (S&A) mechanisms used in MOPMS and Gator are identical, and a number of the S&A parts are used in the GEMSS. The electroexplosive device is common to all FASCAM mines. The antitank mines share a common clearing charge; a number of parts in RAAM, GEMSS, and Gator have identical configurations as shown in Figure 5a, b, c. The antipersonnel mines share substantial commonality in the triplines used to detonate the submunitions.

Gator was developed by modifying the Army's GEMSS to facilitate air delivery.

MINE COMMONALITY

Similarities among the FASCAM mine components reduce the time and cost required for the manufacturing





(c) Gator 91/B Mine.

FIGURE 5. (Continued.)

GATOR WEAPON SYSTEM DESCRIPTION

WEAPON CHARACTERISTICS

The Gator weapon system is a cluster bomb unit (CBU). The Navy/Marine Corps Gator is designated the CBU-78/B and uses the SUU-58/B subsonic dispenser. This dispenser was modified for Gator from the Mk 7 Mod 6 (Rockeye) dispenser, which is a 500-pound-class bomb store. An exploded view of

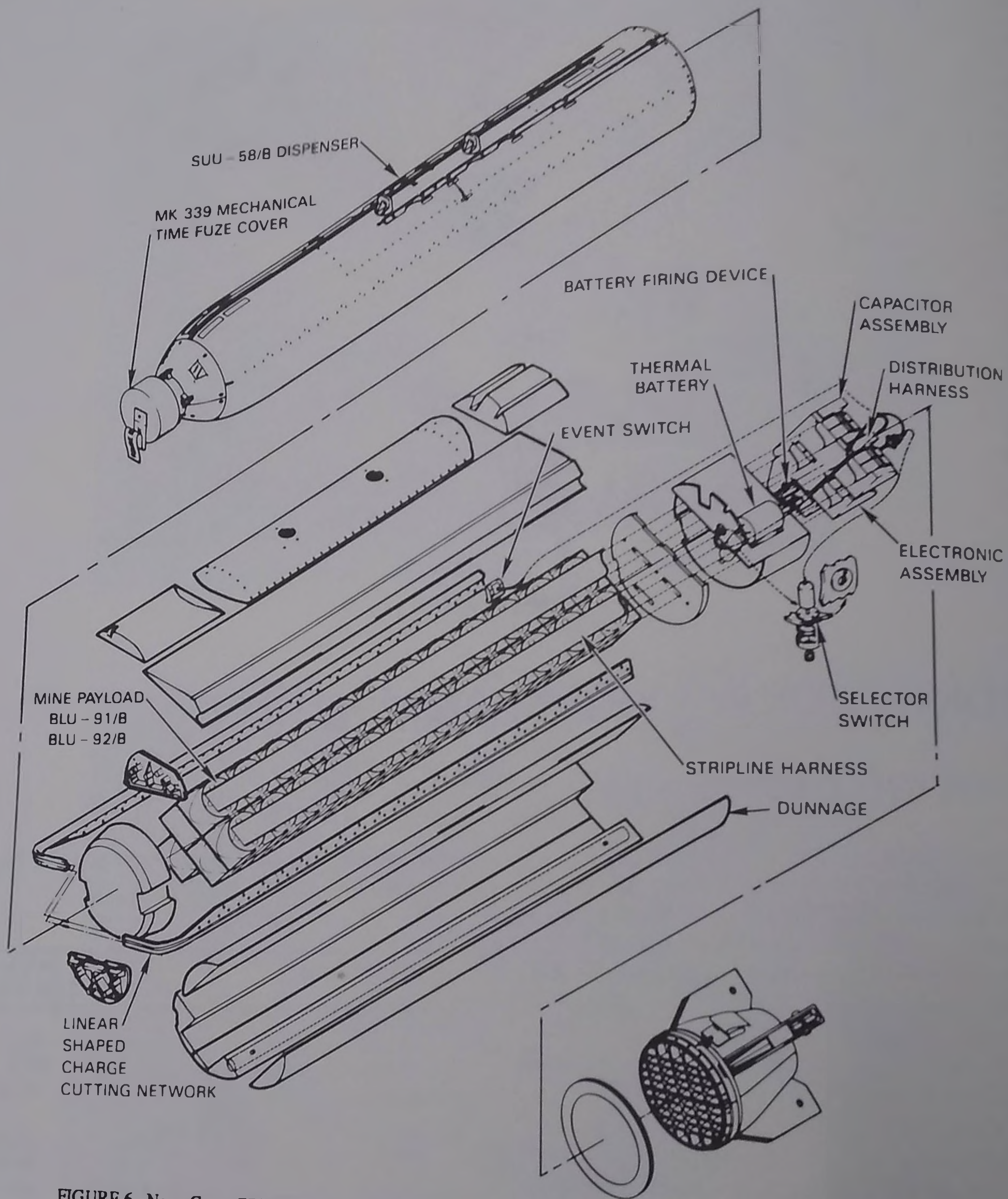


FIGURE 6. Navy Gator CBU-78/B.

DEVELOPMENT PROGRAM

The Gator weapon system is designed for air delivery of target-activated submunitions to strategically disrupt the movement of enemy ground troops and tanks. Gator was developed through a tri-service approach, using the unique capabilities of the Air Force, Navy, and the Army. Responsibilities in the Gator weapon program include the following:

- The Air Force, who manages the Gator program, tested the system and developed the SUU-64/B non-spin tactical munitions dispenser for the Air Force version of Gator.
- The Navy developed the kit modification unit (KMU) that adapts Gator mines to either the Navy or Air Force dispenser and developed the SUU-58/B dispenser used in the Navy version.
- The Army developed the BLU-91/B antitank and BLU-92/B antipersonnel mines.

OPERATIONAL CONCEPT

Gator, a force multiplier weapon, is used to increase the operational effectiveness of other weapons, such as an attack from air support. Gator is especially effective when ground forces face overwhelming odds. Gator can be effectively used to accomplish varying objectives against the enemy:

- Delay advance
- Interdict supplies and reinforcements
- Column

Another effective use of Gator mines is to deliver mines in front of attacking hostile forces to deny approach to friendly troops operating in the area. By the time the enemy forces can continue their advance, the friendly

troops have been replenished and are ready for defense. A delay tactic such as this can deny hostile forces access to unsupplied troops, airfields, oilfields, or other strategically useful terrain.

GATOR PROGRAM MANAGEMENT

The Air Force is the lead service and has the overall responsibility for the Gator tri-service program. The Air Force program structure and the Navy program organization are shown in Figures 30 and 31.

Cognizant and support activities for the Gator program, which are nationwide, are listed for informational purposes in the table which follows.

Cognizant Activity	Support Activity
Air Force: Hill Air Force Base, Utah	Eglin Air Force Base, Fla. Nellis Air Force Base, Nev.



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