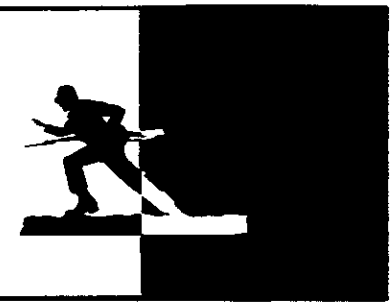
TRAINING NOTES



SEAD Planning
For Air Assault Operations

LIEUTENANT ROBERT L. BATEMAN

Except for the 101st Airborne Division (Air Assault), few infantry units have the resources to conduct full-scale air assault operations. Light infantry units may have the assets to conduct platoon and company insertions, but even they have only rare occasions—such as external evaluations—when they control all the assets needed for a full battalion task force air assault. As a result, few infantry leaders ever have an opportunity to learn about planning for the suppression of enemy air defenses (SEAD), which is required for the air movement phase of any air assault operation.

Air assault operations are also combined arms operations. Too often, however, the training appears to include only two branches—infantry and aviation. Whenever possible, air assault exercises should include field artillery and—depending upon the projected threat level, air defense artillery as well. An especially ambitious battalion training scenario might even be a joint operation with Air Force, Navy, or Marine Corps attack aircraft and the attendant tactical air control party (TACP) provided by the Air Force. These assets aim at one goal—providing security for the assault helicopters while they carry the infantry to the landing zone.

An infantry leader who can incorporate SEAD planning into his original assault plan can effectively map out his ground scheme of maneuver and ensure that the aircraft arrive at the landing zone (LZ) safely and on time.

SEAD is the most critical task of an air assault, even before the actual ground scheme of maneuver. If the assault aviation aircraft are shot down or forced back before they unload the infantrymen, there can be no ground scheme of maneuver. Yet, infantrymen at battalion level rarely plan for and train on this complex phase.

Aviators tend to describe the difference between air movement operations and air assault operations in simple terms: *Air movement takes place behind the forward line of own troops (FLOT), while an air assault crosses the FLOT.* Both are useful to the ground maneuver commander, but the cross-FLOT operation is more complex. All combat operations depend upon the tactical situation and, as any Ranger student learns, the first phase of any operation is security. Planning for a SEAD mission provides that security to the air movement phase of the air assault.

As with any operation, the most important phase of the battle often takes place before anyone fires a shot, during the intelligence preparation of the battlefield (IPB). With a SEAD mission, the IPB is especially important. A unit cannot suppress an enemy air defense site if it does not have precise knowledge of the location and the number and type of weapons that are there.

Planning a mission against a ZSU-23-4 Shilka is different from planning one against a battery of S-60 57mm automatic antiaircraft cannon guided by a Flap Wheel radar. The dispersion of the latter target would require more munitions for suppression, although disabling the radar with pinpoint fires could be an alternative to the wide area suppression of the firing batteries. In either case, though, intelligence is the key. For a successful air assault, an infantry planner must know both the location of the enemy at the objective and the location and strength of enemy positions along his proposed route.

SEAD mission planning uses at least one of three assets: field artillery,

attack aviation aircraft, or close air support (fixed-wing attack aircraft). Of these, the preferred is naturally the field artillery, since it is not vulnerable to counterfire from an air defense unit. But enemy air defense units are not likely to be placed conveniently close to the FLOT and within the range of our available field artillery. Closer to the FLOT, we are more likely to encounter smaller manpacked air defense assets—such as the SA-7 and SA-14, and even such American-made weapons as Redeye and Stinger missiles.

Depending upon the threat, several factors must be considered in SEAD mission planning. Obviously, the location and type of ADA assets to expect are the two biggest questions. But a professional infantry leader should also be at least passingly familiar with the ranges, capabilities, and guidance systems of most major ADA systems.

For example, planning an air corridor around a suspected ZSU-23-4 site could involve a detour of 20 to 25 kilometers, depending upon the terrain, while planning to avoid a static S-60 57mm antiaircraft site might involve only a 10-kilometer circuit. Although the 57mm system should have the longer range, the ZSU-23-4 is a tracked system with an internal fire control radar that determines target range, altitude, and bearing and provides its own firing data. These factors make it much more accurate than the visually guided S-60. Also, the mobility inherent in the tracked vehicle makes it more difficult for planners to know exactly where it might be at the time the aircraft will be in the area (without realtime intelligence), while the towed S-60 is more likely to be unhitched and left in place for longer periods. Given this example, it is probably best to assign a SEAD mission to the ZSU-23-4 sites and plan a route around the S-60 sites.

Determining the length of a SEAD depends upon three items: the range of threat ADA weapons, the terrain along the projected flight route, and the planned method of flight—low-level, contour, nap-of-the-earth (NOE)—determined by mission requirements. For example, nap-of-the-earth is slow

but comparatively safe, while the contour method is fast but exposes a unit to the maximum range of all the ADA systems in the area, therefore requiring more SEAD missions.

Knowledge of enemy weapons is critical here also, especially knowledge of enemy tracking and guidance systems. Essentially, the SEAD should last the entire time the assault elements are exposed to fire from the threat, plus 30 seconds before those units pass through the area and 30 seconds after they leave. A unit that plans to use the contour flight method because the mission requires speed enroute must therefore anticipate firing a longer SEAD mission at each potential enemy ADA location. The reason is that the unit will be tracked visually or on radar for a long time because it will not be masked (concealed) by terrain.

The alternative, flying NOE, means short SEAD missions, because the aircraft will be exposed only for a short period as they fly slowly along a more direct route but place terrain between themselves and the ADA. (The difference between modes of flight decreases when the terrain is flat and without vegetation, as in the desert where there is little to hide an aircraft.)

Finally, the mission objective could be compromised, even when the air assault force is never visually acquired by enemy weapons. ADA radars have a much longer range than the actual munitions they control, and masking can hide a unit from the radar beams as well as the munitions and conceal the final destination. An effective SEAD program can also reduce the threat of compromise.

Indirect Fire SEAD

Because of the accuracy, firepower, and sustainability of the artillery, there are few restrictions on FA SEADs, other than the range of the howitzers. They have the added advantages (as opposed to helicopters and fixed-wing attack aircraft) of not being under any direct threat from the targets and, barring counterbattery fires, can fire several SEAD missions either in succession or simultaneously.

There are two main methods of controlling the SEAD fires of the field artillery. The first is to synchronize the SEAD missions with the H-Hour sequence; the second is to fire the SEAD on command. Both methods are workable, but each has special considerations that affect their employment. Often, it is best to mix them on the basis of the METT-T factors found along the air route.

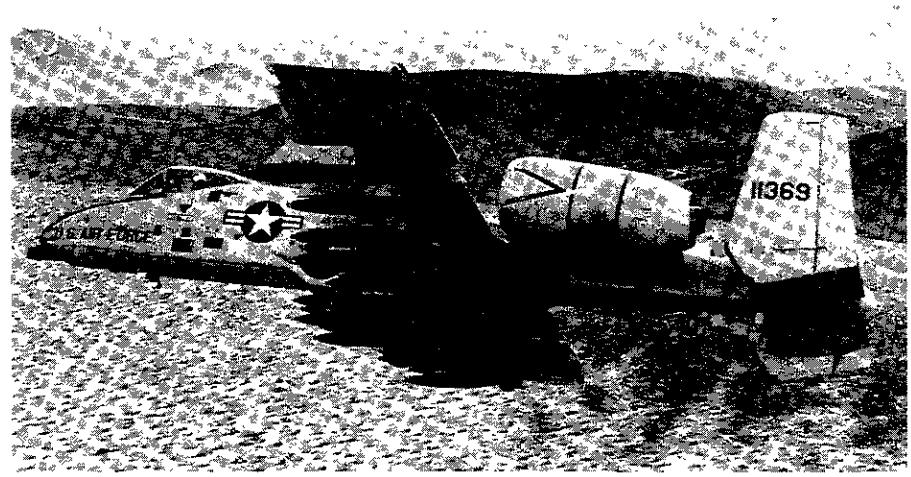
H-Hour synchronization entails firing planned SEAD missions along the route and incorporating the timing of these fires to coincide with the H-Hour. (In an air assault, this is the time the first lift is to arrive at the LZ.) This method provides a solid timeline on which the H-Hour may be moved but the time of impact of individual SEAD missions may not. Command and control are therefore simpler because all elements work on the same timeline. Using the H-minus times specified, the SEAD

will automatically deliver suppressive fires at times that should coincide with the time the air assault units fly through the threat area.

The drawback is a loss of flexibility; mission time of impact cannot change unless a new H-hour sequence is initiated, all the units involved are informed, and a new time sequence begins. This requires secure, uninterrupted communications and a higher headquarters that allows a change in H-Hour. This leaves the possibility that the air assault element will slow down or speed up at some point after the LD time, but before H-hour. If this happens, the result could be much the same as that of the World War I infantrymen who fell too far behind a creeping artillery barrage; the artillery support continues forward, leaving the unit exposed to an enemy who is no longer suppressed as planned.

The other method is flexible control of the SEAD fires by the air mission commander or air battle captain (AMC/ABC). In this method, targets are pre-plotted, but they fire on command from the AMC/ABC when he arrives at an aerial checkpoint (ACP). This ACP acts as a trigger line and should be planned on the basis of the predicted air speed of the aircraft, the time it will take the FA to lay its guns, and flight time of the artillery rounds so that the rounds hit while the aircraft are still outside the threat area. By firing each SEAD just before the aircraft actually arrive (as opposed to the time when they should arrive), there is no guesswork. The tradeoff is the need for even more communications over the net.

By combining these methods of control, the infantry leader can plan a flexible SEAD that requires little command and control just before H-Hour—the most critical time. Flexible, on-call SEAD missions controlled by the AMC/ABC should be established for most of the air route to and from the LZ. Then, at a predetermined point five to ten minutes from the LZ, an H-Hour sequence can be initiated with a time hack to all stations from the AMC/ABC. From this point on, the FA SEAD missions are automatic and require no more radio transmissions. This frees the AMC/ABC and allows him to control the close-in battle as it develops up to the point when the infantry lands on the LZ.



An air assault unit leader should have some knowledge of fixed-wing aircraft and their SEAD capabilities.

The relative inflexibility of the H-Hour SEAD plan is offset by the benefit of lightening the load on the AMC/ABC and permitting him to manage the other assets that may be under his control (attack helicopters, fixed-wing attack jets, and the like). Additionally, there is less concern over the exact timing needed for the H-Hour SEAD because the aircraft are already very close to the LZ.

The biggest drawback to FA-supported SEAD is FA response time. By the time a FA unit can fire an accurate, unplanned immediate suppression SEAD mission, the engagement of aircraft moving at 120 knots by missiles flying at supersonic speeds may be over. Closing this gap and providing SEAD beyond FA range is the role of the attack helicopter.

Attack Helicopter SEAD

Attack helicopters are obviously the most flexible aircraft for the SEAD mission and the most responsive for unexpected threat suppression. Still, they have a major drawback in that they are in flight themselves and therefore susceptible to the same ADA weapons they are trying to suppress.

In an air assault, attack helicopters fill two roles—close escort and route reconnaissance. Since the aviators know best how to employ their weapons, specific planning for these two assignments should be left to them. But infantry leaders might benefit from the following guidelines for employing attack helicopters in the air assault:

• Conducting SEAD missions against sophisticated ADA systems requires time and detailed planning. Often this means an attack helicopter element will conduct a deliberate attack that is independent of the air assault against the site. With limited aircraft assets, the attack aircraft on a route reconnaissance may be forced to plan for this contingency. This means the route reconnaissance aircraft will need to be well forward of the lift element (separated by time or distance) so they can conduct a safe, low-level, deliberate attack before the lift elements arrive in the threat area.

• Close escort aircraft, usually flying on the flanks of the lift elements, are there to provide immediate suppression on previously undetected ADA sites that may fire on the lift elements. These aircraft are under the control of the AMC/ABC, not the air assault task force commander. Their sole mission is escort, with the possible follow-on mission of preparing the LZ before the actual insertion. They should not attack any targets of opportunity that may be spotted enroute until they have completed their primary mission.

• Attack helicopters have three basic types of weapon systems—guided missiles (TOW/Hellfire), unguided rockets (2.75-inch "Hydra" free flight aerial rockets [FFAR]), and cannon (AH-1Fs

have 20mm "Gatling" guns, and AH-64s carry 30mm chain guns). An infantry leader should be familiar with these weapons, their capabilities, and the sighting systems used to control them. Otherwise, he may plan for missions and assign tasks that exceed the capabilities of the aircraft available. For example, he might plan a SEAD using AH-1F helicopters at night against a mechanized threat system (ZSU 57-2, SA-9) that has a large thermal signature. Knowing the enemy should be engaged at the maximum possible range, he plans for a four- to eight-kilometer Hellfire shot. When he takes his plan to the aviators, however, he finds he must scrap it—first, because AH-1s cannot fire the Hellfire fire-and-forget missile (only TOWs) and second, because the AH-1 lacks thermal imaging equipment. This leaves the AH-1 pilots trying to fire a four-kilometer TOW shot, using only night vision goggles, at a camouflaged target that they must find, identify, and track from a helicopter bouncing along barely 50 feet off the ground.

• Attack helicopters equipped with 2.75mm FFARs can fire both direct and indirect fire missions. Normal range for an indirect fire shot is 5 to 6 kilometers. When firing indirect the 2.75mm FFAR is an area weapon with a target box of 200 by 400 meters. These rockets have warheads of various size (most are 10 pounds), and fuze settings that may be changed depending upon the planned target.

Fixed-Wing Attack Aircraft

Planning for such fixed-wing attack aircraft as the A-10, F-18, EF-4, or EF-111 is generally well beyond the scope of an infantry battalion air assault. The best way for the infantry commander to plan the use of these assets, if they are available to provide direct support, is to give the Tactical Air Control Party (TACP) all the information possible and ask how to use them. Once again, however, this is an area in which the professional infantry leader should have at least a passing knowledge of the supporting systems. He should remember that the TACP moves with the infantry and may also become inaccessible when he most needs to contact them.

By planning for SEAD as an integral part of his air assault operation, the infantry leader can help make sure his mission has the best chance of succeeding on the ground because all his assets arrive alive and intact when they reach the LZ. Using the combined arms approach and providing for both flexible and responsive command and control in his SEAD plan, he develops a plan that provides security to his element as well as to the aviation unit. With his thorough knowledge of both threat and friendly weapons, he can develop a realistic risk assessment and plan the measures he can take to lower the risk. For these reasons, the SEAD plan must be an important part of the infantry leader's planning.

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Medical Operations
In a Mechanized Infantry Battalion

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One of the most difficult missions on any battlefield is taking care of casualties. The mental and physical stress of battle soon drains a task force of its ability to render treatment quickly and to evacuate casualties from the front line to the battalion aid station.

Unfortunately, the medical platoon in a 1,000-man task force is authorized only 38 men, and only 25 of these deploy forward with the maneuver companies. Furthermore, since the platoon is not always at full strength, medical support in any future conflict will clearly require careful planning and a team effort.

The experiences of one mechanized infantry battalion—the 3d Battalion, 12th Infantry, 1st Armored Division—in preparing for a rotation to the Combat Maneuver Training Center (CMTC) may help other battalions plan their own medical support.

Under the modified tables of organization and equipment, a mechanized infantry battalion's medical platoon is organized into four sections—headquar-