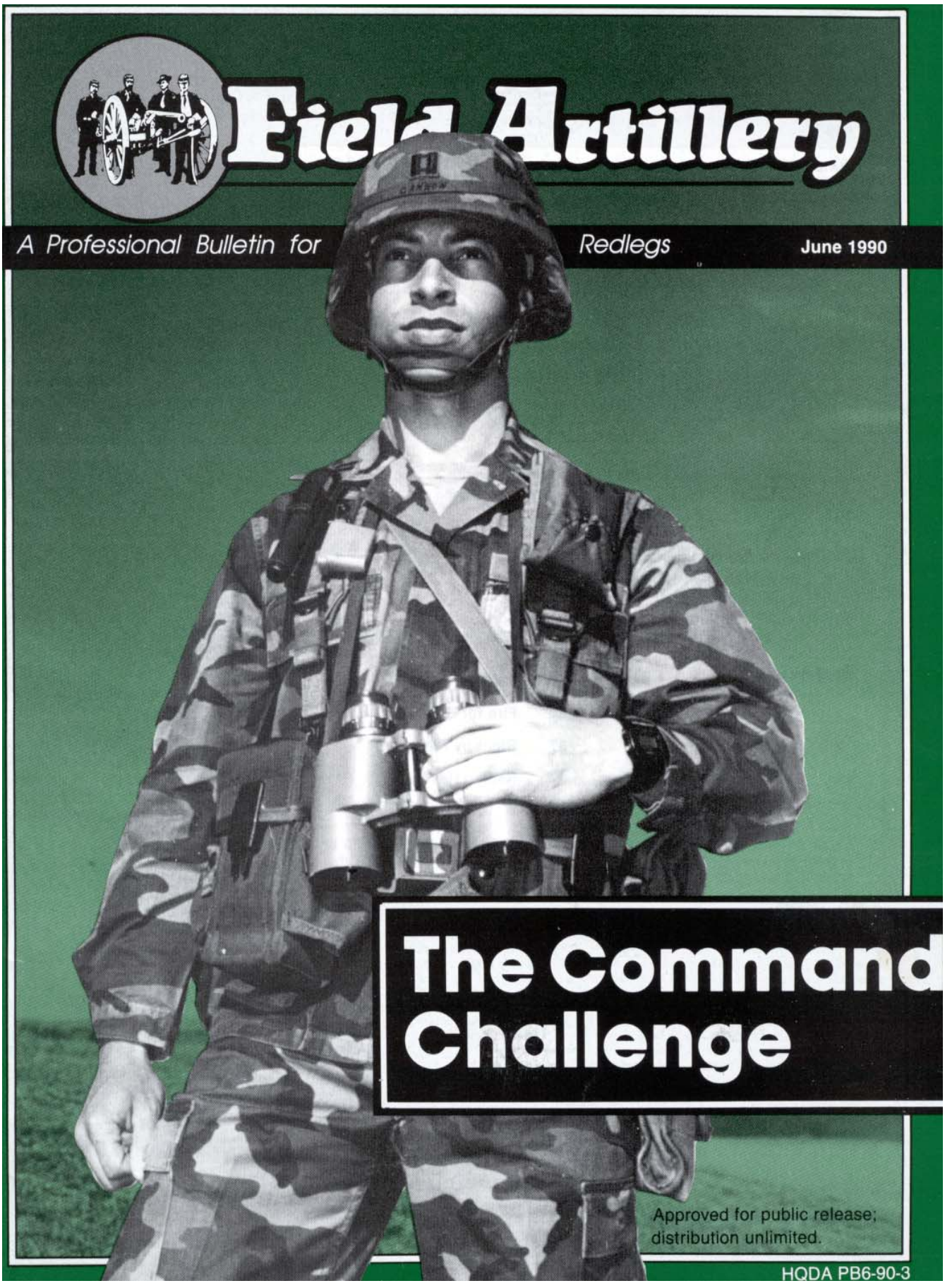
Field Artillery
A Professional Bulletin for Redlegs
June 1990
The Command Challenge
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FA Command—Privilege and Responsibility

Command is fun! I've heard that phrase often. It's fun if you've prepared yourself for the pressures and demands. And it's fun if you've made a commitment to a life of service and can subordinate your self-interest for the "greater good."

But successful command requires more than preparation and commitment; it requires tireless effort and attention to detail—planning and more planning, listening and more listening, constant additional study and long, long hours of just being there. Then there's paperwork, leadership by walking around, constant evaluation and standard setting, the enforcing of discipline and the providing of ethical guideposts. And there are many more facets that require astounding mental flexibility and physical stamina. All in all, command is a heavy responsibility.

Somehow, though, commanders manage to get it all done in spite of the pressures. We have ready forces—Operation Just Cause proved it. And we all should take pride in its success because any of our units could have done the same thing. We have well-trained, confident, competent soldiers and leaders.

The privilege of command, on the other hand, lies in *service* to the country—of knowing you've done an extremely difficult and important job very well. Having served as a commander, you will have been instrumental in safeguarding the ideals and freedoms that make this the greatest nation in the world. Being allowed such an opportunity is, indeed, an honor and a privilege. And the best commanders consider this the only privilege they're entitled to.

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On the Move

MAJOR GENERAL RAPHAEL J. HALLADA

Meeting the Command Challenge

Command is no doubt the most challenging and rewarding endeavor one can undertake in our profession. This is especially true of battery command. At no other time in your career will your personality and inspiration, indeed your every action, have such a direct impact on so many people. It's easy to see why successful battery-level command is considered such an important rite of passage for an officer.

Command and the art of military leadership associated with it have been studied for centuries. Volumes have been written on the subject, and it's discussed at all levels in our military schools. I could not hope to recap all this wisdom in this brief column, but I mention a few basics of command to our new or prospective battery commanders that can't be overemphasized. These basics are easily discussed but often difficult to execute. (All, I might add, apply to all levels of command.)

Leading

The challenges of command are immense and can seem overwhelming to the new commander. Given the myriad of requirements and the tremendous weight of responsibility, many commanders forget it's not their place to do it all. As the commander, you're the leader of a *team* of subordinate leaders and good soldiers, all of whom are concerned with getting the job done and done well. Your job is to build and strengthen that team, plot a course for and guide it, set and enforce standards, focus the team's efforts on the mission and ensure the care of its members.

To provide direction, you must be tactically and technically proficient—you must know your business. Brilliance isn't a prerequisite for command, but competence is. You must be a student of your craft and be able to impart that knowledge to your subordinates. A lack of competence on your part could mean disaster for your soldiers and the mission, and this realization should drive you to strive continually to improve your knowledge and abilities.

Teach your unit to attend to details. Insist your subordinates do the correct things and do them correctly. Require them to be thorough, practice the basics and do routine things routinely. Meanwhile, you must give responsibility, encourage initiative and innovation and allow flexibility.

It goes without saying that you must lead by example 24 hours a day, seven days a week. Be proficient and physically fit and adhere to standards, demonstrating for your soldiers how they should perform. Finally, as the commander, you must take aim at excellence and pursue it in all your unit does.

Training

Tough, realistic, challenging and meaningful training is our number-one priority in peacetime, and in war, it's second only to the fight itself. Teaching soldiers how to fight and survive on the battlefield is the most important thing a commander does for them.

It's a fact of life that units are pushed and pulled from many directions. They must balance numerous and sometimes conflicting requirements, carefully manage resources and react to unforeseen problems. Through all this, as commander, you continually must maintain a war-fighting focus for your unit. Never forget that the ultimate purpose of our Army and your unit is to fight and win on the battlefield and that a lack of preparedness in peacetime won't be remedied suddenly when your unit is called to war. Given this, you must prioritize the unit's activities to ensure training is never secondary. You must train well and make all else fit around it.

Ensure training is always done to a standard. Once the standard is achieved, raise it. Training should always challenge the soldier to reach a little farther, to improve a little more. Through challenging training, you not only help your soldiers and unit grow and become more proficient, but you also encourage confidence, pride and retention.

We certainly can't overlook that you, as commander, also have the responsibility of continually training and developing your subordinate leaders, particularly your officers who will one day be commanders themselves.

Caring

The maxim "Mission First, People Always" holds true as a guiding rule of command. Caring for soldiers is your sacred trust. It means looking after the well-being of your soldiers by ensuring they are properly fed, have adequate quarters, receive good medical care and are "straight" with their finances. It means ensuring they live and work safely, on duty and off. Caring also extends to the soldiers' families, which occasionally may require some courage on your part to get into the personal business of others.

Caring does not, however, mean coddling. Tough training is your most important activity and the highest form of caring for your soldiers and their families. Good training gives your soldiers the ability to win the fight and survive to return home.

Caring does, however, require knowing when a unit has reached its limit and when an activity has progressed beyond its worth and become an exercise in misery. You must realize quickly when enough is enough.

Caring is reflected in your unit discipline. One soldier's failure to work as part of the team detracts from the good soldiers in peacetime and may cost them their lives in war.

Finally, as commander, you must realize that caring sometimes involves some risks. Have the courage to do what it takes to meet the needs of your soldiers, to do what's right when it needs to be done.

Sterling Example

The Field Artillery is a corps of superb, truly professional soldiers who deserve the very best leadership. Superior leadership has always been our hallmark, and our commanders have been and always must remain its sterling example.

Incoming

LETTERS TO THE EDITOR

3x8 Platoon Leader

In the August 1989 response to "3x8 Synchronization on the Battlefield" [original article by Captain William R. Lodwick, February 1989], Captain Edward J. Boylan, an instructor in FSCAOD [Fire Support and Combined Arms Department, Field Artillery School], stated the platoon leader in a 3x8 battery belongs with the advance party. He contends the duties there are paramount and require his attention—sweep of the position, supervision of the advance party and emplacement of the aiming circle.

This approach fails to use the leadership assets in the unit efficiently. The traditional role of the battery commander in site selection, survey control and advance party operations is not eliminated by 3x8, rather it becomes more important. While busy, the commander can and must perform these tasks for the two platoon advance parties. To assist him, the commander now has two sergeants first class, each capable of preparing positions for four-gun platoons.

Meanwhile back in position, a firing unit responds to multiple fire missions, defends its position, reacts to chemical and conventional threats, treats casualties, maintains vehicles and equipment, resupplies ammunition, improves the position, cares for soldiers and more. This is the only logical place for a platoon leader. In position with his platoon sergeant, he must supervise his guns and his soldiers, then lead them to their next firing location.

Major Richard P. Formica, FA
CGSC, Fort Leavenworth, KS

Response to "Danger Close: A Historical Perspective on Today's Close Support"

I would like to extend my sincere appreciation to Major Thomas G. Waller, Jr., for his very well-written article on "Danger Close: A Historical Perspective on Today's Close Support" [First Place, History Writing Contest, October 1989]. As a Vietnam-era FO [forward observer] (1968-69), I can attest to how important it is to call in artillery or mortar fire at 100 meters. But I received at least some close artillery training at Fort Sill [Oklahoma] prior to my overseas tour, which many FOs do not get now. Major Waller has singled out, in my opinion, one of our greatest weaknesses in FO training, especially in the Reserve Component artillery units.

There are many obstacles to correcting this training flaw. The major one is the prevailing attitude that all lessons learned in our last war are not applicable today. Another attitude is that training safety is so important that most training sites for Field Artillery units prohibit calls for fire less than 1,000 meters from troops. Bunkers that were used for close artillery and mortar fire have fallen into disuse and have not been refitted for present-day usage in most Field Artillery training sites throughout the states and US territories.

At Fort Sill, problems in determining quadrant for intervening crest between the FO and the guns is only lightly touched upon since the prevailing attitude is that the FO is more than 1,000 meters from the target. This aspect of training is critical since clearing the FO's position in close fire support can mean life or death for our forward friendly troops. I do not know of any classes being given on the BCS [battery computer system] or BUCS [back-up computer system] dealing with this problem or of any classes on the FDO's [fire direction officer's] using manual means to check the clearing of the position.

The situation presented by Major Waller should be carefully analyzed by our command structure. Our FO's will be calling in close artillery support to survive as history has proven time and time again. These FOs must train and practice close indirect fire support to achieve the competence and confidence necessary to win the next war.

LTC William F. Pennock, USAR
2d MTC PR Detachment
Fort Buchanan, PR

Heavy Forces Need Mortars

Major (Retired) Edward J. Stiles' letter "No Mortars in Heavy Forces" in the February 1990 issue of ***Field Artillery*** was excellent. Although I don't agree with all of his points, I thought Major Stiles raised several valid issues concerning the operational utility of mortars in heavy forces.

In my opinion, a mortarman's greatest nemesis is peacetime training. Mortars don't obtain laser kills in the Mojave Desert or shine during maneuvers in Europe. Most of the time, mortars go along for the ride. But don't kid yourself. When the shooting starts, the script changes—drastically.

Combat veterans probably would assess a maneuver commander's strategy to "do without mortars" as a formula for disaster. Heavy-force combat experience is in short supply in the US Army. Division-sized heavy forces haven't seen mid-intensity combat since World War II. Further, the post-Vietnam pool of infantry officers with mortar experience has all but dried up due to force structure reorganization, attrition and retirement.

And unfortunately, the inherent shortcomings of peacetime training can lead to bad habits and omnipotent mindsets among Abrams- and Bradley-equipped battalions.

Current Trends

A review of contemporary developments in armies that have recent heavy-force combat experience reveals mortar influence to be on the rise rather than in demise. After fighting two major wars since 1973, the Israeli Defense Force (IDF) maintains both a 120-mm and a Sherman-mounted 160-mm mortar capability in its heavy forces. Moreover, each Israeli Merkava Mark III tank is equipped with a turret-mounted, gunner-under-armor 60-mm mortar capable of firing high-explosive (HE), smoke and illumination.

Let's take another example of heavy-force attitudes about mortars. After eight years of fighting, Iraq has developed two new heavy mortar systems. First, a 160-mm mortar capable of engaging targets at 8,000 meters has been turret-mounted on a Soviet T-54 tank chassis. Also, a four-tube, 120-mm salvo mortar system has been mounted on a Soviet MT-LB armored carrier. The 120-mm salvo mortar system is operated by a four-man crew and has a maximum range of 10,000 meters.

Vulnerabilities

As US Army strategic attention shifts from Europe to the Third World, heavy force vulnerabilities to unfavorable terrain and infantry-heavy threats take on new importance. Yet a J-series heavy division with five mechanized infantry battalions has only half the dismounted infantry strength of a light infantry division.

Heavy forces have extensive potential for direct-fire "dead space." In the defense, Abrams tanks and Bradley fighting vehicles occupy hull-defilade firing positions to protect against direct antiarmor fire. In these positions, tank guns, 25-mm automatic cannons and 7.62-mm coaxial machine-guns can be depressed only 10 degrees below-the-horizontal. Enemy personnel targets that appear in dead space (i.e., below the maximum gun-depression limit) cannot be easily engaged without simultaneously increasing vehicle vulnerability to antiarmor fire. With mortars, maneuver commanders can call for a high volume of close-in fire directly into the dead space.

There's another type of dead space that could adversely impact on heavy-force freedom of action. Mortars are needed to suppress small, terrain-masked point targets that can interfere with friendly operations. For example, a single 82-mm Vasilek automatic mortar employed in a direct-fire mode can fire up to 60 rounds per minute to a maximum range of 5,000 meters from a reverse-slope firing position. Likewise, with the Soviet Plamya. The new AGS-17 30-mm grenade launcher can spray an area target at a range of 1,750 meters with up to 70 rounds per minute.

Mortars also are useful in suppressing enemy antiarmor missile gunners. During the 1973 Yom Kippur War, the IDF elected to rely almost exclusively on brute force and direct firepower in the Sinai. As a result, the IDF lost a substantial portion of its armored force to Egyptian Sagger gunners.

Space Trade-Offs

Major Stiles' suggestion of using mortar spaces to add cannons to the direct-support (DS) artillery battalions would aggravate the overall firepower potential in a heavy division. At equal manpower trade-off, maneuver battalions would lose about two heavy mortars for each additional 155-mm howitzer gained. Notwithstanding range limitations, even a 4.2-inch mortar can fire faster on its worst day than a 155-mm howitzer on its best.

In the last cross-branch transfer of spaces, infantry mortars lost their "eyes" and self-contained deployment and employment flexibility to the fire support team (FIST).

Responsiveness

Major Stiles indicated heavy mortar training has become a significant problem. That shouldn't be a surprise, considering mortar's minority status in heavy forces. One way heavy mortar platoons could improve their peacetime image and operational utility in heavy forces is to enhance their responsiveness.

The current heavy mortar platoon is organized with two three-tube firing sections. However, J-series tank and mechanized infantry battalions have added a fourth maneuver company, increasing the likelihood that three will be habitually committed. If the mortar platoon was internally realigned into three two-tube firing sections, three maneuver companies could be supported simultaneously.

Mortar platoon realignment would permit firing sections to be assigned DS missions for committed maneuver companies. The DS mission would reduce the automatic loss of mortar engagement range to set-back distance, increase across-FLOT [forward line of own troops] influence of maneuver company commanders and establish a closer "eyeball-to-eyeball" relationship between mortars and maneuver companies. Platoon realignment would reduce mortar remoteness by bringing them closer to the battle.

Further, if heavy mortar platoons were trained to operate without a fire direction center (FDC), mortar squads could be employed closer to the FLOT with squad leaders acting as expedient forward observers (FOs).

When operating without an FDC, mortar squads could be dispersed to a greater extent, lessening the impact of enemy countermortar fire. Moreover, whenever radio frequencies get jammed, units operating without the new single-channel ground and airborne radio system (SINCGARS) could be employed in a more autonomous mode. It would be feasible and desirable for mortar units to exercise positive control over the employment of terminally guided antiarmor mortar projectiles (TGAMP) when operating without an FDC.

Training

Heavy mortar platoons face three significant training obstacles. First, the mortar platoon leader lacks a self-contained mortar system capability. FO teams assigned to mechanized rifle platoons are from the artillery FIST. Training schedule conflicts have to be resolved at the battalion level. No other platoon leader in the Army has this problem.

Second, tank platoons are not habitually assigned FOs. There were valid arguments when this decision was made. Tanks have limited space to

carry non-crew members. Further, tanks are habitually task-organized with mechanized infantry units that have FOs at the platoon level.

However, heavy-force employment in the Third World could result in decentralized operations over vast areas. Tanks may not always have the luxury of supporting infantry or having access to their FOs.

Finally, the cost of training ammunition could be a significant obstacle to realistic peacetime training. My suggestion here would be to develop a simple 60-mm mortar sub-caliber device for the 120-mm mortar. The 4.2-inch mortar has such a device. My platoon fired hundreds of 60-mm mortar rounds during training at Grafenwoehr and Hohenfels [West Germany]. The savings between firing a 60-mm HE round ($90) and a 120-mm HE round ($394) would be significant when factored by the entire heavy force structure.

Conclusion

Mortars can serve a useful purpose in heavy forces. However, if neglected and shelved during peacetime, a responsive mortar capability will not be available to support an operational contingency.

The US Army should not permit mortarmen to become an endangered species in heavy forces.

COL (R) Richard K. Fickett, IN
Annandale, VA

Another Response: A Real Need for Mortars

I was interested in Mr. Stiles' proposal to garner all the Army's heavy mortar assets for conversion to Field Artillery systems and replace them with almost nothing (Incoming, "No Mortars in Heavy Forces," February 1990). Unfortunately, the good points he makes are overshadowed by a rehash of nearly every myth I've heard about mortars.

Mortars are important because they are *mine*. They can't be allocated to anybody else. When my forward rifle company is under close assault, my FSO [fire support officer] and I need immediate response from a high-rate-of-fire system powerful enough to kill infantry and neutralize the guns on their APCs [armored personnel carriers].

No breech-loaded howitzer can do this as well as muzzle-loaded heavy mortars under the direct control of my FSOs. No artillery system can compete in either speed of response or in quantity of lethal fragments, and this is doubly true if I'm *not* the battalion with priority of fires.

Nor do I want them to try. Available artillery is used to kill and suppress deeper and stronger targets such as tanks and ATGMs [anti-tank guided missiles] and mounted reinforcements.

We certainly are having problems with the 4.2 inch (107-mm) mortar, and I make no apologies for that. All these problems revolve around the age of the 4.2-inch systems in use and the new ammunition designed to increase range at the expense of rate of fire. The fact is the old ammunition works just fine, and I'll gladly sacrifice the range increase to get my rate of fire back.

To me, all these are simple fixes, given the money. There is no shortage of quality mortar systems out there on the shelf. Their popularity in the world speaks for their effectiveness. Now for some of the myths:

Heavy Mortars Lack Lethality.

Nonsense. Within their burst radii, would you rather be shot at by one 155-mm howitzer round or five 107-mm mortar rounds? The 4.2-inch mortar exceeds the lethality of the entire 105 howitzer towed family and certainly will degrade or neutralize APC gunners within its range. From experience, I can tell you that you don't want to be either mounted or dismounted underneath a 105 or 107 round when it goes off. The 60-mm mortar is a good system, but it in no way approaches the 107-mm mortar in effect on target.

Mortars Compete with Field Artillery for FSO Coordination Assets.

Again, nonsense. Any second lieutenant graduate of the Artillery School's Five-Day War can build you a fire support matrix that ensures full utilization of mortars through direct communications among the platoon FSOs and the mortar FDCs, bypassing all artillery coordination assets entirely. Step out your back door and watch FAOBC's [Field Artillery Officer Basic Course's] Operation Quick Strike one month—they do it well.

By the way, those platoon FSOs, fire support sergeants and RTOs [radio-telephone operators]—more than three-fourths of the FIST [fire support team]—came out of our mortar platoon's forward observer sections in the late 1970s when the FIST was created. I never had a problem with mortar utilization when my platoon FOs and company FO's deputy were raised and trained as mortar-men. (My problem back then was *artillery* utilization.)

We need to spend more time making believers out of this generation of FSOs.

Mortars are Less Accurate and Less Safe.

Track-mounted mortar sections are configured and trained to displace rapidly and often, counteracting their limited range and ease of detection by radar. During displacement, each gun can fire separate hasty missions independent

of one another—a capability Artillery only practices with the HIP (howitzer improvement program) M109.

Because of these tactics, we usually don't get to survey-in mortars. From a surveyed or registered position such as in the defense, however, their first-round accuracy is comparable to howitzers unless the winds are very erratic.

We have *always* applied Met [meteorological] corrections to heavy mortars, and the mortar ballistic computer now allows us to apply Met to 81-mm gunnery as well, enhancing the first-round accuracy of that system. The computer also allows us to increase unit dispersion by offsetting individual guns, adding to their survivability.

In a busy year, my three mortar platoons (two 4.2-inch and one 81-mm) have fired as many as 28,000 rounds in support of FAOBC and 13F AIT [Fire Support Specialist advanced individual training]. Most of them are shot in coordination with 105-mm howitzers, allowing a comparison. We have not had a short round with point-detonating fuzes in more than three years and only have had three premature airbursts, which were attributable to malfunctioning proximity fuzes. None of these rounds would have endangered forwardly deployed infantrymen.

The standard claim is that mortar ammunition is not made to the exacting standards of howitzer rounds, making them unsafe to shoot over the heads of troops in training. Our experience in hundreds of thousands of rounds does not support this claim, given proper care of the ammunition.

Abrams/Bradleys Outrun M113-Series Mortar Carriers.

Only if somebody goofs and lets them. The real advantage of our new tanks and fighting vehicles is their dash speed during maneuvers and when in range of an opponent's direct-fire weapons. Their sustained speed in an operation is slowed by the whole aggregate of CS [combat support] and CSS [combat service support] vehicles, such as FSVs [fire support vehicles], M109 howitzers, ammunition trucks, fuelers, Vulcans and, of course, mortar carriers. We can use a new mortar carrier, but the one we have now is hardly a showstopper.

Is it more vulnerable than an M109? Sure. But the speed with which it can displace, shoot and displace again is more akin to a HIP than an M109, making it survivable in all but the most ponderous artillery fire when even an M109 wouldn't survive.

Mortarmen are Poorly Trained.

Today's mortar sections are probably as proficient as any in our history. Most of the problems I've seen recently revolve around utilization and integration. It's ridiculous to demand that two sections per battalion that have six-kilometer systems with a six-minute set-up time and limited bullets provide continuous fire support for a deep attack at 20 miles per hour. This won't work well with any mortar carrier, however fast. We must give mortars a critical but more limited role in the attack and get them there do to it.

Are mortar sections as polished as howitzer batteries? Often not. One big difference is found in the standards in training commission (STRAC) manual and actual training ammunition authorizations: mortar crews get to shoot a lot less of the real thing than their artillery counterparts—in many cases, less than half as much. I've found that sub-caliber training (while better than nothing) is a weak substitute for training with real bullets.

Nor have I found many infantry lieutenants who didn't want a mortar platoon once they've commanded rifle platoons. The Infantry Mortar Platoon Officer Course (IMPOC) always has been in high demand, and most lieutenants are apprehensive about commanding mortars one day at the company level without having had any mortar experience.

The bottom line is the degree of emphasis and support commanders give their mortar and FSO training. (FSOs often share equal blame when mortars are ineffective on the battlefield.)

In five tours with infantry battalions, I've seen both mortar and artillery units I would allow to light my cigar with WP [white phosphorous]. I've seen others of both "flavors" I don't want my soldiers to be on the same reservation with. Happily, I've seen very few of the latter in recent years.

Conclusion

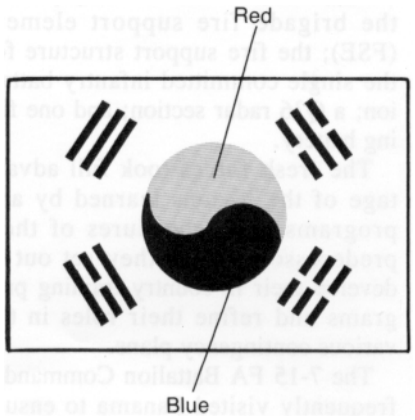
Me biased? Yes. But in the 10th day of the big fight when the majority of our high-speed fire control and communications marvels are broken, I need a simple system under my personal control that can save my infantrymen defending against close assault. I've seen nothing that rivals the heavy mortar for that role.

We need to study Dien Bien Phu, Grenada and maybe even Operation Just Cause [Panama, December 1989] to learn some of the artillery's limitations in smaller fights. Then we must ensure our mortarmen and FSOs fill those gaps.

Given the rough times ahead for our force structure, it's time we begin playing team ball to better solve a real problem—saving that forward rifle company.

LTC Robert L. Smalser, IN
Cdr, 4-31 IN
Fort Sill, OK

CORRECTION: *Field Artillery sincerely regrets printing the incorrect national flag (Taegeuk flag) of the Republic of Korea, a valued Ally, in the article "ROK Artillery—Present and Future," February 1990. We also thank Korea Explosives Company, Limited, of Chung-buk, Korea, for calling it to our attention. The correct flag is pictured below.*

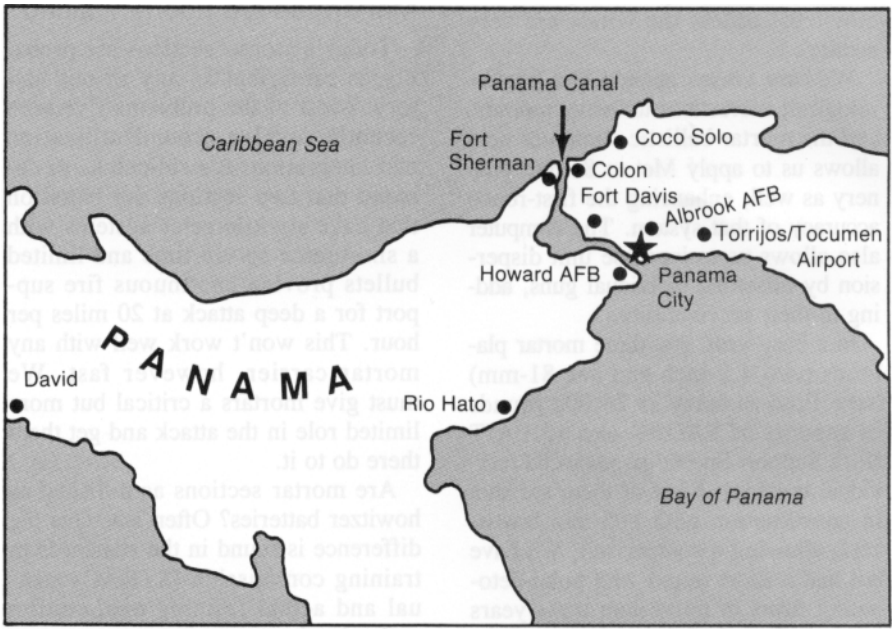


Bayonet Artillery in Operation Just Cause

by Colonel Joseph E. DeFrancisco

Nimrod Dancer in Panama paved the way for the 7th Infantry Division (Light), or 7ID(L), Fort Ord, California, successes in Operation Just Cause. [See the article "Nimrod Dancer Artillery: Fire Support in Low-Intensity Conflict" by Colonel DeFrancisco and Major Robert J. Reese, April 1990.] Experiences from that May 1989 emergency deployment and the knowledge gained from the follow-on sustainment operations sensitized the entire Division to the nuances of low-intensity conflict (LIC) in Panama. When operations short of war suddenly turned hot in December, the Division was ready.

This article examines the role of the 7th Division's Bayonet Artillery in Just Cause. It isn't, however, a definitive examination of that operation or the 7ID(L)'s participation in it.



The Area of Operations for Just Cause—Panama, December 1989

Forces in Place

October 1989 saw a changing of the guard in Task Force (TF) Atlantic. The 7ID(L) 3d Infantry Brigade relieved the original Nimrod Dancer unit—the Division's 9th Infantry Regiment. The 3d Brigade's direct support (DS) battalion, 7th Battalion, 15th Field Artillery (7-15 FA), provided a brigade fire support section (FSS), which is the artillery part of the brigade fire support element (FSE); the fire support structure for the single committed infantry battalion; a Q36 radar section; and one firing battery.

The fresh forces took full advantage of the lessons learned by and programs and procedures of their predecessors. Then they set out to develop their in-country training programs and refine their roles in the various contingency plans.

The 7-15 FA Battalion Commander frequently visited Panama to ensure TF Atlantic fire support was on track. He also provided a FSS for the Division's Aviation Brigade headquarters that commanded and controlled TF Aviation during Just Cause.

The long-recognized requirement for a fire support structure for aviation surfaced again in Panama. Since this requirement hasn't been resourced, the structure had to come out of existing assets. With the 7-15 FA in Panama, the tasking fell to them. Not only did the Battalion Commander fill it, but he also personally ensured the ad hoc section was integrated with the other FSEs in-country.

By the 20 December D-Day, in-place artillery assets were positioned and trained to execute their fire support roles.

Forces Deployed

Within 16 hours of notification, the first planeload of 7ID light fighters lifted off from Travis Air Force Base, California, en route to Torrijos/Tocumen International Airport in Panama. This lead element included the Division tactical command post (DTAC) and Division Ready Brigade 1 (DRB1), specifically tailored for the mission. A five-man FSS headed by the Division assistant fire support coordinator (AFSCOORD) flew in with the DTAC.

As a rapid deployment force, the 7ID(L) uses readiness cycles with certain units prepared for deployment. The unit in the "Mission Cycle" is the Division's DRB1—in this case, the 2d Infantry Brigade. The DRB1 began deploying from Fort Ord on D-1, 19 December 1989.

DRB1 Artillery

The 6-8 FA was part of DRB1. While certain mission contingencies argued for deploying a full DS battalion as part of DRB1, available sorties dictated otherwise. After intensive coordination with the 2d Brigade staff, the Battalion Commander tailored a package that met the combat requirements but stayed within his allocated airframes. His package consisted

of 18 howitzers, a Q36 radar section and all available fire support teams (FISTs).

Among his many innovations, he placed each firing battery commander in a position and azimuth determining system (PADS) vehicle, thus eliminating three high-mobility multipurpose wheeled vehicle (HMMWV) spaces while ensuring survey was available to all elements in the upcoming dispersed operation. (The modified table of organization and equipment, or MTOE, for a light DS battalion includes only two PADS. The third came from the Headquarters and Headquarters Battery of the Division Artillery.)

DRB2 Artillery

No sooner had DRB1 deployed to Panama than DRB2 (the 9th Regiment still at Fort Ord) was alerted for movement. By that time, the tactical situation and desire to minimize collateral damage obviated the need for additional artillery delivery or command and control assets. Nonetheless, the 2-8 FA Commander accompanied the complete brigade fire support structure that deployed with the 9th Regiment.

The 2-8 FA Battalion Commander had deployed on Nimrod Dancer in May and had spent five months in Panama working closely with the Regiment and its commander. Together they had gained tremendous knowledge of Panama and the complexities of LIC in that country. It came as no surprise when the Regimental Commander asked for his FSCOORD, even though none of the Battalion's howitzers was deploying.

7th Artillery

By D + 3, there were more than 500 Bayonet Artillerymen in Panama. They represented all three DS battalions and the Headquarters and Headquarters Battery of the Division Artillery. They manned four six-gun firing batteries, two Q36 radar sections, the fire support structures for two infantry brigades and the TF Atlantic headquarters plus one of its battalions and FSSs for the Aviation Brigade headquarters and the Division headquarters. As the experience of Nimrod Dancer had foretold, artillerymen would undertake many nonstandard missions.

A 7th Infantry Division Artillery howitzer is emplaced after an air assault operation in Just Cause.

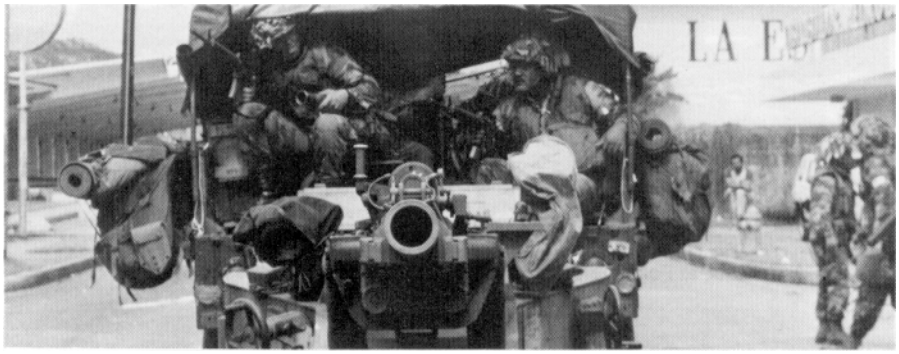
A 7-15 FA Firebase at Fort Sherman

B/2-8 FA's Firebase "Bulldog" at Fort Davis

The 2-8 FA's radar section gets ready for an airmobile operation.

Security Forces. Infantry and some 6-8 FA FIST Redlegs cover a building being cleared.

Some of the 2-8 FA moves from Fort Sherman to Coco Solo.



Soldiers of the 6-8 FA displace through downtown Panama City.

FIST soldiers of the 6-8 FA prepare to search a building in downtown Panama City.

Operations

The 7ID(L) in-place forces participated fully in D-Day, H-Hour operations. By 20 December, TF Atlantic included not only a 7ID(L) infantry battalion, but also one from the 82d Airborne Division, Fort Bragg, North Carolina.

Forces in Place

The 3d Brigade fire support officer (FSO) accompanied the Brigade Commander everywhere during the first three days of Just Cause. He had the means to call on all available fire support in country; however, the limited threat, restrictive rules of engagement and the overwhelming success of the initial short, violent attacks limited its use.

Nonetheless, 7ID(L) fire supporters contributed to the early TF Atlantic battles in a number of ways, especially at Colon and Coco Solo. The FIST soldiers accompanied and fought as infantrymen, maintained contact with delivery units and controlled supporting Air Force OA37 and AC130 aircraft in the Colon area. Even though the aircraft delivered very little live ordnance, their deterrent effect and ability to locate enemy positions were significant.

Bravo Battery, 7-15 FA, provided artillery support for TF Atlantic. Following the Nimrod Dancer pattern, the Battery operated in two platoons: one at Fort Sherman and the other at Fort Davis. The Sherman platoon fired illumination in support of the early attacks, while the Davis platoon moved by road to Colon where its 18-round direct-fire mission helped quell resistance in that city. Having demonstrated its capabilities, the Battery's follow-on value was primarily its psychological impact on the opposition, deterring further resistance.

TF Aviation also played a key role in the early fighting. The Division's Aviation Brigade Commander controlled one of his battalions, two aviation battalions from other units and several other aviation assets. An FSO from 7-15 FA participated in several planning sessions with the Brigade, both in Panama and at Fort Ord.

By D-Day, he was familiar with the contingency plans and was efficient as a member of the Brigade staff. Working from the TF headquarters, the FSO coordinated all fire support—mostly Air Force assets—for the aviation combat missions flown in the opening days of Just Cause.

Forces Deployed

The 2d Brigade Task Force (DRB1) began landing at Torrijos/Tocumen International Airport early on 20 December. For several days, they helped the US Rangers, who had captured the facility, with local security. Except for a two-gun airmobile raid (aborted because of a hot landing zone), all the 6-8 FA's howitzers remained laid and ready to fire until they moved west by night convoy.

After releasing Charlie Battery to the 9th Regiment, which had deployed to Panama City and was under the operational control (OPCON) of the 82d Airborne Division, the rest of the 6-8 FA closed on Howard Air Force Base. From there they split again. Bravo Battery accompanied 5-21 Infantry (IN) in a C130 aircraft

deployment to David in the far western reaches of Panama.

Bravo Battery, 6-8 FA, and the 5-21 IN were the nucleus of the 2d Brigade team that had done extremely well during a Joint Readiness Training Center (JRTC) rotation just two months before. The understanding and mutual respect gained in the JRTC experience paid dividends throughout Just Cause. Meanwhile, the 6-8 FA's truncated headquarters and Alpha Battery moved with elements of the 2d Brigade to Rio Hato.

7th Artillery

By 26 December, the Division Artillery assets were spread over a wide area of Panama. Bravo Battery, 7-15 FA, supported TF Atlantic at the Caribbean end of the Canal. Charlie Battery, 6-8 FA, was in Panama City supporting the 9th Regiment. Bravo Battery, 6-8 FA, at David and Alpha Battery, 6-8 FA, at Rio Hato both supported dispersed elements of the 2d Brigade. One Q36 radar was in the vicinity of Panama City (under the operational control of Joint Task Force, or JTF, South), the other at Rio Hato. The FSSs and FISTs were with their supported infantry formations.

Pacification and Stability Operations

Already the lessons of Nimrod-Dancer were ringing true. In the absence of the need for firepower, artillerymen were called upon to perform other important tasks. The professionalism, discipline and flexibility of our young soldiers and junior leaders allowed them to execute critical non-artillery missions, which were major contributors to success in the low-intensity conflict.

Search and Secure. Shortly after arriving at Rio Hato, the 2d Brigade Commander moved his headquarters and the bulk of his remaining infantry forces to David. There they joined the 5-21 IN and Bravo Battery, 6-8 FA, and began their mission to search and secure the multitude of towns and military installations in the far western region of Panama.

The enormous tasks of operating the Brigade logistics base at Rio Hato and pacifying the four surrounding provinces and six major towns fell to the 6-8 FA Battalion Commander. To do the job, he had part of his own headquarters, his Alpha Battery, elements of two rifle companies and an engineer platoon.

Pacification included searching for and accepting the surrender of former Panamanian Defense Force soldiers and weapons, providing security for US forces and Panamanian civilians, maintaining law and order and turning over local government and police responsibilities to the legitimate Panamanian officials. One of the six towns under his control was the responsibility of the Alpha Battery Commander. Another was under an infantry battalion FSO who had temporary command of an infantry platoon to help carry out his mission.

Without question, the Brigade Commander and his DS Battalion Commander had developed mutual trust and confidence and operational familiarity during their 18 months of coincident command. Through a series of exercises (including two JRTC rotations) the Brigade Commander had come to recognize and rely on the flexibility his DS battalion offered. Once in combat, he didn't hesitate to give the 6-8 FA tough, non-artillery missions. The 6-8 FA Battalion Commander and his soldiers responded with high-quality unit and individual performances.

S5. Much the same held true in the other areas of operation. In TF Atlantic, fire supporters were heavily involved in the pacification of Colon.

After participating in the initial fighting, a battalion FSO became the de facto S5 for his supported infantry battalion. He set up his battalion FSS in the Colon fire station. From there, he established liaison with important city agencies, offered referrals for humanitarian services and participated in gathering intelligence and collecting weapons.

CPs and Infantry Searches. Other responsibilities included security operations at Forts Sherman and Davis and Coco Solo. In the 9th Regiment area of operations, 2-8 FA fire supporters did everything from establishing alternate battalion and company command posts (CPs) and guarding key government facilities to participating in nerve-racking building-by-building and room-by-room searches with their infantry counterparts in Panama City.

Return to Fort Ord

As pacification projects progressed rapidly with negligible resistance, the requirement for deployed artillery assets declined further. Since the opening fire fights, cannon delivery assets had been used only in isolated show-of-force missions such as live fire into unoccupied areas in the western provinces and a display of combat power in a threatening direct-fire mode at roadblocks and in built-up areas.

While these missions and the very presence of cannon throughout the country had the desired deterrent impact on Noriega loyalists, the presence of artillery was deemed incongruous with the emerging pacification efforts. Moreover, there was a drive to begin the redeployment of heavy equipment and troops in keeping with the reduced threat. For these reasons, the 7ID(L) leadership reduced the artillery support to one two-howitzer platoon per committed brigade.

Forces in Place. In keeping with the Nimrod Dancer model, Bravo Battery, 7-15 FA, had been conducting split-battery operations since its arrival in Panama in November. With some key additions from the 6-8 FA, it transformed itself from two three-gun platoons into three two-gun platoons. The Battery headquarters and one platoon stayed with TF Atlantic, one platoon moved to Panama City to support the 9th Regiment and the third platoon convoyed to Rio Hato to meet the 2d Brigade as they withdrew from the western reaches of Panama.

Forces Redeployed. Meanwhile, the 6-8 FA Commander consolidated his batteries at Howard Air Force Base and began redeployment preparations. By D + 19, all of 6-8 FA's howitzers were at Fort Ord.

Other than the Nimrod Dancer sustainment forces of the 7-15 FA, the only Bayonet Artillerymen remaining in Panama were those in the various FSSs and FISTs with their respective maneuver formations. By early February, all Bayonet Artillerymen had returned to Fort Ord.

Decentralized Command and Control

From its headquarters at Albrook Air Force Base, Panama, the Division

exercised command and control (C^2) over its widely dispersed elements. Under direct Division control were TF Atlantic, TF Semper Fi and the Division's 2d Brigade. The Division also monitored closely the activities of its 9th Regiment (OPCON to the 82d Division) and TF Aviation, which was built around the Division Aviation Brigade but responded directly to JTF South.

Communications

Excellent communications coupled with the command group's constantly visiting troop units greatly enhanced C^2. The Division received and interpreted directives from JTF South then rapidly transmitted implementing orders to its subordinate units. Feedback came quickly over secure communications and, as in many cases, through face-to-face meetings with commanders. Still, because of the nature of operations, C^2 was greatly decentralized.

A Bayonet Artilleryman lays his M102 howitzer, preparing to fire in Just Cause.

Artillery

Decentralization was especially true in the case of the Field Artillery. While the delivery units supporting the Division's maneuver elements had a tactical mission of direct support, they were in essence attached to those maneuver units. The 7-15 FA elements had been in Panama before hostilities, attached to the 3d Brigade as part of TF Atlantic. The 6-8 FA elements had deployed as part of DRB1 (2d Brigade), by definition a task force that includes an attached DS battalion. Also, the 2-8 FA elements deployed as part of DRB2 (9th Regiment).

The D + 2 decision to curtail the deployment of artillery delivery and C^2 elements precluded the deployment of the Division Artillery TAC as well as 2-8 FA's howitzers. The decision meant that artillery units would remain attached to their supported maneuver units.

The senior artilleryman at the Division headquarters, either the Division FSCOORD or the ASFCOORD, provided oversight of artillery units and advice on fire support issues. Given the nature of the enemy indirect-fire threat, the scope of combat and follow-on operations, the restrictive rules of engagement, the requirement to preclude collateral damage and the limited duration of the operation, this decision was correct.

LIC Lessons

Experiences in Just Cause validated important conclusions drawn from Nimrod Dancer. The 7ID(L)'s ability to efficiently project combat power validated the light infantry division's viability as a rapid deployment force.

Light divisions increase the options available to National Command Authorities and allow them to respond to threats with the appropriate mix of forces necessary to execute national policy. In the case of Just Cause, execution of national policy required quick, decisive action followed by stability operations designed to support a democratic government, deter aggression against it and protect American lives and property.

METL

The 7ID(L)'s ability to respond effectively to these missions is a product of its implementation of Army-wide training policies. The battle-focus concept articulated in *FM 25-100 Training the Force* is a way of life in the Division. In the Division Artillery, as throughout the Division, mission-essential task list (METL) development is the subject of many officer and NCO professional development sessions. The ongoing process is subject to refinement, as happened when the 2-8 FA incorporated LIC operations into its METL, based on Nimrod Dancer experiences.

Building a METL-based training program then habitually training as combined-arms teams ensured combat readiness. Participation in battle command training programs (BCTPs) and JRTC rotations reinforced the combined-arms approach and built strong, flexible teams throughout the Division.

Artillery contributions to the various Division teams fall *roughly* into two METL tasks: delivery of fires and fire support coordination.

Fires. Previously discussed mission, enemy, terrain, troops and time available (METT-T) conditions restricted our delivery of fires. But, the role of cannons was significant. In effect, they contributed to the implementation of the national military strategy of deterrence at the tactical level.

The overt presence of cannons had a distinct impact on real and potential opposition. When howitzers were incorporated into a roadblock, no one attempted to run the road block. When howitzers were laid to cover buildings designated for search, no one hindered the search. When howitzers

fired illumination in response to sniper fire, the snipping stopped.

In LIC, the 105-mm howitzer is a major weapon. It became a symbol of US resolve and potential destructive power. It showed we meant business.

Fire Support Coordination. From the Division through platoon levels, fire support coordination was executed by habitually associated teams well-trained and seasoned on several exercises and evaluations. Given the paucity of indirect fire and the nature of pacification efforts, these teams found themselves performing several non-artillery missions. Their ability to execute these missions is a testament to their professionalism and the level of cooperation among each and its supported elements.

Combat operations in Panama again highlighted the excellence of our force, especially junior officers and NCOs. They routinely demonstrated the skills necessary in their designated specialities and the initiative to meet other challenges.

Our leader development programs in schools and units are producing disciplined, competent junior leaders. Whether conducting a live-fire raid in Colon, collecting weapons at Rio Hato or searching houses in Panama City, our junior leaders performed in the true spirit of artillerymen. They supported the scheme of maneuver by fire support or any other means dictated by the situation.

Preparation Training

In addition to the Nimrod Dancer experience, two other events played key roles in the Division's preparation for Just Cause: two JRTC rotations and two BCTP exercises.

JRTC Rotations

On the first rotation at Fort Chaffee, Arkansas, the 6-8 FA pioneered the use of the Q36 radar and artillery live fire. From that time until the second JRTC rotation, the DS Battalion Commander and 2d Brigade Commander continued to forge a strong professional relationship as they refined the integration of fire support into brigade and battalion operations on several field exercises and deployments.

The second rotation in October was at Fort Huachuca, Arizona, an experimental rotation away from Fort Chaffee. This rotation appeared to be the crowning achievement of their efforts as the Brigade's battalion task force earned high marks in all areas, including the integration of fire support, the use of the Q36 radar and artillery live fire.

When the call to arms came on 19 December, this strong team was DRB1. It was well-prepared.

BCTP Training

Most light infantry operations focus on brigade task force or below. In fact, 7ID(L)'s principal training vehicle, the Bold Thrust program, is patterned on the JRTC battalion task force model. Therefore, many light division artilleries spend a great deal of time training and evaluating individual battalions to prepare them to provide quality fire support for their designated maneuver brigades. But a light division also must be prepared to fight as a division.

The 7ID(L) Division BCTP exercise in September 1988 and the sustainment training that followed focused attention on this vital task. Then the I Corps BCTP in November 1989 provided senior division leaders and their staffs the opportunity to examine and sharpen these critical skills in a realistic, intense environment. The challenges were great but so were the rewards.

The members of the 7th Division staff learned to work as a team in a tactical setting and gained a better sense of their commander's style and an improved feel for dealing with higher, lower and adjacent headquarters. Division major subordinate commands (MSCs) were able to refine their understanding of their role in division-level combat operations.

A professional bonding developed throughout the Division command and staff elements. This bonding reinforced a feeling of oneness within the Division and highlighted the importance of the integration of combat, combat support and combat service support elements in division operations. BCTP had a direct and positive impact on Division operations in Panama.

Conclusion

Just Cause showed LIC operations require a wide range of combat support activities. We must consider them and, where appropriate, make them part of our METL.

Then we must train for those tasks in combined-arms teams, building skills, mutual confidence and flexibility to meet the diverse challenges we'll face in LIC operations.

Colonel Joseph E. DeFrancisco commands the 7th Infantry Division (Light) Artillery, Fort Ord, California. He commanded three batteries and the 1st Battalion, 84th Field Artillery, 9th Infantry Division (Motorized), Fort Lewis, Washington. A graduate of the Army War College, Carlisle Barracks, Pennsylvania, Colonel DeFrancisco also holds a master's degree from Rice University, Texas. He has had two tours each in Vietnam and West Germany, taught history at the US Military Academy at West Point, and was Chief of the War Plans Division, Office of the Deputy Chief of Staff for Operations and Plans, Washington, D.C.

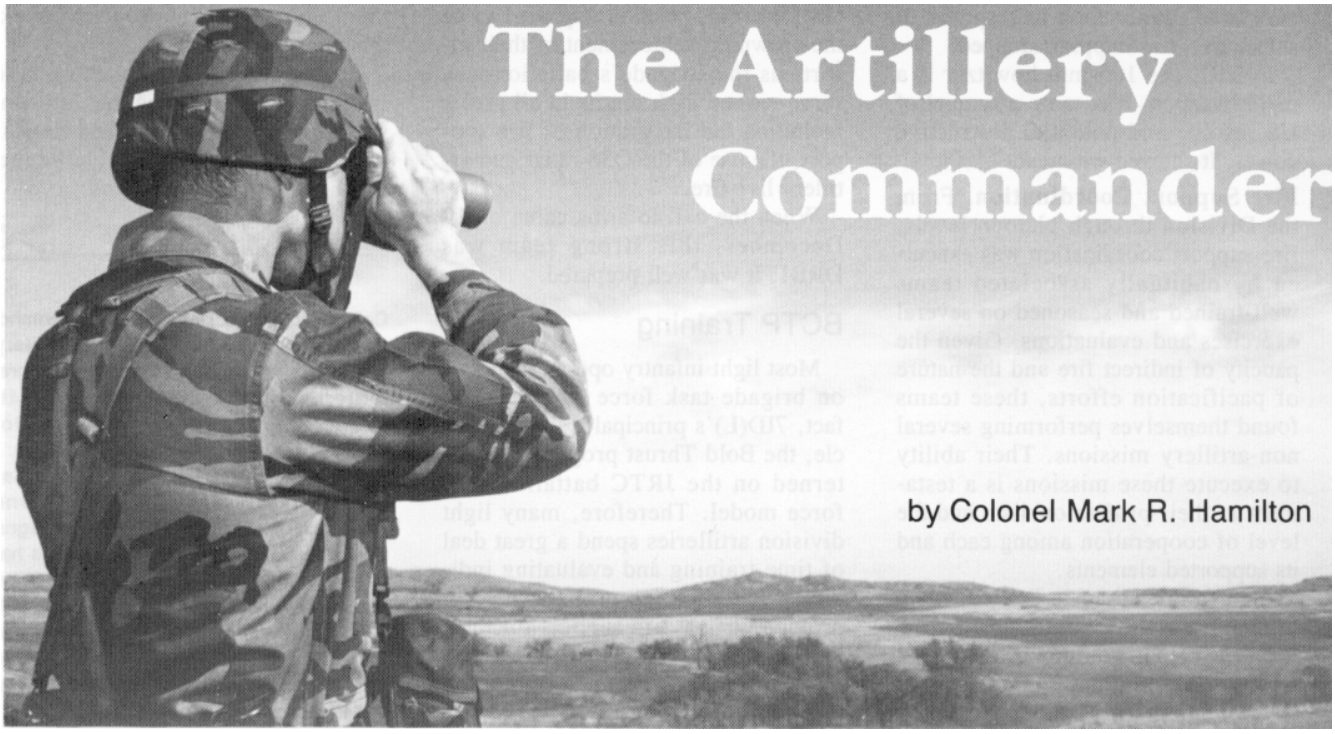
History of 319 Airborne FA Regiment

The 319th Airborne Field Artillery Regiment (AFAR) is currently looking for the names and addresses of all who have served in the Regiment. The purpose of this is to create a data base to allow those who have contributed to the Regiment's proud history to maintain contact with the unit.

Any Redleg who served in the 319th AFAR (to include those who served with the 173d Airborne Brigade) should send his name and address to the Commander, ATTN: S1, 319th Airborne Field Artillery Regiment, Fort Bragg, North Carolina 28301-5100.

If you have questions, call the 82d Airborne Division Artillery Assistant Adjutant at (919) 432-2515/7184.

Major John J. Howard, FA
Adjutant, 319 AFAR
Fort Bragg, NC



The Artillery Commander

by Colonel Mark R. Hamilton

Field Artillery officers are the most fortunate of soldiers. Both early in and continuously during their careers, they work closely with all the maneuver arms, Army aviation, Air Force and, more rarely, the Navy. Further, they're introduced far earlier in their careers to the demands of communication over multiple nets and long distances. They have to consider the movement of large tonnages of Class V to supply the guns. The relationship of the artillery with intelligence, as a battlefield operating system, is multi-faceted, and this relationship is a functional part of the operational planning at every level.

The artillery officer's support consists of representing the *majority* of firepower available to a unit, regardless of arm or type. His involvement is total in the training and war-fighting of the unit. With time, what this experience adds up to is an officer who sees the whole battlefield and adjusts to the unique requirements of various sources of firepower—a lot of responsibility.

This article discusses some critical command responsibilities and techniques to carry them out at the battery and artillery battalion levels. As is true at all levels of command, training "smart," ensuring standardization, sharing knowledge and establishing coordination relationships are important if artillery commanders are to build successful war-fighting units.

As a leader, the battery commander must trust those he has trained.

The Battery Commander

Battery command is one of the most difficult of jobs. No other duty requires at so low an echelon the training of subordinates to perform such critical battlefield tasks with so little direct supervision.

It's a sobering thought that the battery commander doesn't select the target, call in the grid, compute the data, lay the battery, set off deflection or quadrant or cut the charge—he's only responsible for the results. That responsibility demands a certain leadership style and training philosophy.

As a leader, the battery commander must trust those he has trained. This

isn't blind trust or desperate hope. It's the trust that grows from having guided and supervised the training to standards. He must know, set and enforce those standards.

The greatest shortfalls have little to do with soldiers' failing to give the task their best efforts. Far more often, a shortfall stems from the soldiers' lack of understanding as to exactly what they're supposed to do.

Training Analysis

FM 25-100 Training the Force has introduced the idea of deriving mission-essential task list (METL) tasks from mission, guidance and directives. For the battery commander, the continuation of that derivation process is his essential starting point for a successful command.

The lead question must be, "What is it we're trying to do here?" That may not sound like the answer would give much training insight, but you'd be surprised at how often units train without clearly understanding "What it is we're trying to do."

It won't be much of a shock to learn that the first answer to that question will sound a lot like, "We're trying to shoot, move and communicate." That's a good start but not enough to work with.

For the battery commander, the lead question must be, "What is it we're trying to do?"

For the battery commander, the answers are in the details. "What do I have to do to move this unit?" He must examine the task of battery movement to discover what subordinate tasks he needs to accomplish first, how long they take and which require special training or tools.

By sharing the results of his analysis with his soldiers, the battery commander not only sets the standards and lays out the training plan and sequence, but he also shares why "this" is first and must go before "that" or why two or more tasks must be done concurrently. He establishes a pattern of expectation that makes supervising tasks a lot easier for his chain of command.

Battle Drills

In doing his detailed analysis, the battery commander will discover that many of the tasks lend themselves to battle drills. Fortunately, those who have gone before have recorded a wide array of battle drills in various training documents.

The larger the task organized into a battle drill, the more training he can measure by an objective standard and observe as a familiar pattern. Occupation, hasty displacement and airmobile drills, etc., are examples of "higher order" battle drills.

Perhaps more than any other person, the commander of artillery needs to understand the usefulness of drills. Because he doesn't direct every movement of sub-elements and because the battery isn't divided into subordinate commands, using repeated patterns practiced in battle drills is essential to command and control complex unit missions.

Standardization

At the heart of the battle drill is the unyielding commitment to standardization. There's a best way to do things. Rarely will the best way be improved by constant, minor modification. The reason it's the best way is it's the way everyone has learned the task and the way supervisors have learned to supervise.

The biggest threat to standardization is lack of discipline. Most section chiefs have been through the standardization "kick" a dozen times. Their first impulse may be to outlast the latest fad. Success depends on letting everyone know early that the standard is here to stay and then never letting up.

The commander must give his subordinate leaders training to "certify" them in critical skills.

Training Key Subordinates

Standardization and battle drills are two of the three keys to successful battery command. The third is training key subordinates. When the battery commander continues to ask, "What is it we're trying to do here?" he soon discovers that parts of "shoot, move and communicate" require the unit to maintain. Who's going to supervise maintenance?

The battery commander can fix the responsibility relatively easily, but he owes his maintenance leaders more than that. He must train those supervisors. He needs a certain number of leaders proficient in maintaining radios, some few more in crew-served weapons, a larger number in the prime mover of the unit and so forth. The commander must give his subordinate leaders the training to be "certified" in these skills.

This training certainly will require help from elements outside the battery. These may come from post schools, the battalion or division artillery, or even a sister battery that has an expert.

The Battalion Commander

Unlike battery command, battalion command is the first and last job for

which an officer is totally trained. The only real complications he may have are in establishing the right relationships with two critical groups: battery commanders and the maneuver brigade commander and his staff.

His Commanders

The battalion commander is more nearly the peer of the division commander than of his battery commanders. This is neither an ego stroke nor a put-down of battery commanders; it's a fact a battalion commander must recognize to provide the level of guidance and supervision necessary for his battalion's success. He does his battery commanders a great disservice if he assumes they know more than they do about command or their Branch or profession.

Obviously, battalion commanders must concentrate on standardization, battle drills and training key subordinates. The battalion commander and his staff can help each battery in its analysis of "What is it we're trying to do here?" Many of the drills and most standardization should apply across the entire battalion. This just makes sense from both training and war-fighting perspectives.

Training key leaders often involves resources only available at the battalion level. The battalion commander will want to monitor leader skill qualification training. With the battalion commander's input, the battery commanders will train their subordinates quite well, and the battalion commander will encounter only minor difficulties in controlling freelancing on established standards. But other areas offer slightly greater challenges.

Training Assessment. The greatest legacy a battalion commander can leave his battery commanders is to teach them how to assess their units' strengths and weaknesses. FM 25-100 establishes the need to assess training. The "how to" of that need is left to the battalion commander.

There's a subtle but critical distinction between information gained during an external evaluation and that gained in a training assessment. Not even the best of external evaluations can assess training. The evaluation discovers what's *not right*. A training assessment discovers what's *wrong*. The distinction is one of cause and effect.

A gun crew does the Cannoneers' Hop—training critical for howitzer crews.

The external evaluation determines the unit failed to achieve the right effect (fire mission time or accuracy, movement time, etc.). The training assessment determines which of the many interdependent actions leading to the desired effect went astray and why. And trainers need to know the cause to focus their training.

This ability to assess unit strengths and weaknesses is very highly developed at the battalion-commander level and very poorly developed at the battery-commander level. The battalion commander's failure to train his battery commanders to assess training can be critical.

It's tempting for the battalion commander to point out something that's not right and assume his battery commander knows what's wrong. Often, the battalion commander knows that condition "X" usually means you must check "A," "B" and "C," but his battery commander doesn't. The additional decade spent in the Army fills in a lot of gaps that require experience as much as reason.

If he doesn't teach this skill to his battery commanders, the result isn't chaos; the result is unfocused training—inefficient training. His battery commanders will train for entire tasks instead of just those subordinate tasks responsible for failure.

For example, failure to conduct a deliberate occupation within time standards (the evaluation) may lead to a training assessment (by the battery commander) that his unit needs to conduct several deliberate occupations. His assessment boils down to something like, "We're slow; we need more practice." A more focused assessment may determine the gun guides aren't being given time to rehearse their routes and are slow in positioning guns, are running over communication lines, etc. The training requirements to correct the second assessment are quite different from those required to correct the first.

At the same time, it's quite likely many repetitions of the occupation task will lead to apparent success by solving the gun positioning issue by trial and error. The real training problem—failing to allow enough time for gun guides to rehearse—won't resurface until the next external evaluation. Because the price is only inefficiency and the evaluations tend to be spread out in time, the fact that a battery is "busting a gut" training on the wrong thing escapes notice too often.

One way to teach a battery commander the assessment skill is to discuss with him the training objectives for the next timeframe or field exercise. The battalion commander

shouldn't simply review the objectives. A review allows the battalion commander to assume motivations for selected training that may not be accurate. By discussing the objectives, he can discern how well the battery commander has assessed guidance, directives and evaluations.

A simple series of questions will show a great deal. The first question should discover specific skills the battery's soldiers need training in rather than larger subject headings: "What, exactly, do you intend to train on under the heading of RSOP [reconnaissance, selection and occupation of position]?" The first question discovers the specific skills the battery commander wants to teach; the next investigates trade-offs: "Why have you chosen to give priority to that skill versus others that may need work?" Then the battalion command determines the depth of the training as well as the need for simple repetition: "Who's going to provide the instruction and measure the results?" The final question underscores quality control in the instruction: "How are you assured the instructor is qualified to teach the task to standards?"

The battalion commander only can ask these questions one-on-one. It's the most valuable time he'll spend with his battery commanders.

Training Conditions. There's one other area of training where the battalion commander can be of great assistance to the battery commander and the battalion at large: training conditions. Of all the training I've seen that fell short of standards, none was because the unit was unaware of the task. None was because the unit was unaware of or disagreed with the standard. I believe every man who told me, "We never had any problem meeting the standards in training." The problem, in many cases, was one of conditions.

Honest soldiers don't fool themselves as to whether or not their unit met the standards, but many a soldier—pure of heart—has fooled himself and his unit about conditions. The difference in combat and training conditions can be very subtle and ruin the seemingly most carefully planned training.

One example stems from the reality that the battalion staff that's going to execute the training will probably plan the training. As a battalion fire direction officer (FDO), knowing what fire mission is coming next is a much different condition than being taken by surprise.

When dealing with more complex missions, the difference in being forewarned or not may well be the difference between meeting time standards and not meeting them. Knowing what firing point the battery is moving to next, knowing eight hours ahead the time of the airmobile operation and so forth are examples of conditions that may affect performance.

The questions should be "How will we do this in battle?" and "What will I know in war?" A thorough investigation will add a great deal to understanding the realistic conditions required for the unit's training.

There are pleasant surprises as well. If a unit failed in firing final protective fires (FPF), it may want to consider the conditions under which the mission was sent. The unit shouldn't be penalized for failing to respond quickly enough to a 30-second FPF mission that comes out of the blue. In war, the section already will be in position when told to fire the FPF—standing between the gun trails in the middle of a mission for the same unit. Units should train for the conditions they'll most likely face in war.

Maneuver Commander

One relationship the battalion commander must establish while serving as the brigade fire support coordinator (FSCOORD) if he's to contribute the maximum to his battalion's wartime readiness is his relationship with the maneuver commander.

The artillery lieutenant colonel has a wealth of experience. The odds are excellent he has more table of organization and equipment (TOE) time than his maneuver counterpart as there are more TOE positions at the field-grade ranks for artillerymen than for any other branch (in raw numbers). This is important as a basis for confidence that experience and opportunity have combined to prepare the artillery battalion commander for his role as a brigade FSCOORD.

The maneuver brigade commander will be in charge of the battle. I've never met an artilleryman who challenged that. It's the direct responsibility of the FSCOORD to see that all fire support reasonably available to the brigade is considered, requested and used appropriately. And he can't be in a reactive mode. If he allows the maneuver commander to form his maneuver plan without regard to fire support assets and their contributions to the battle, synchronization isn't likely. This isn't a news flash, but it remains a significant problem.

A decade of reports from the National Training Center (NTC), Fort Irwin, California, have said the artillery didn't get into the fight. Obstacles weren't covered because the artillery was planned in support of an obstacle plan that was changed at the last minute without regard to fire support. Incomplete preparations or ineffective positioning of observers resulted from changes to the maneuver plan literally minutes before the battle. The only way to make progress is for artillery battalion commanders to educate their maneuver brigade commanders.

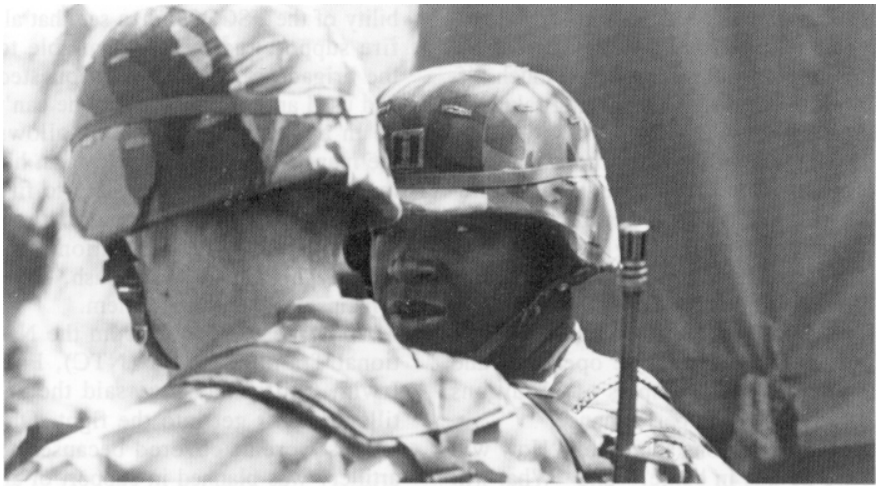
That shouldn't be insulting to the brigade commander. He was promoted to his rank and position based on branch expertise. No one can synchronize assets he doesn't understand.

The FSCOORDs must show the maneuver brigade commanders how they can support them in war. And maneuver commanders can't learn that in firepower demonstrations. They should see typical artillery units in road marches, occupations and air movements. They should be given a feel for displacement times, real estate requirements and so forth.

In the tactical operations center, they need to learn what boundaries and other fire support coordination measures mean to the artillery. For example, direct-fire systems can fire across boundaries. A full understanding of the procedures and time required to shoot indirect fire across a boundary isn't common knowledge among maneuver commanders.

The maneuver commander who's going to synchronize the fight has to have a feel for the majority of his firepower. And giving him that feel is a critical duty of the artillery battalion commander.

For the most part, the brigade commander will welcome the opportunity to learn more about his firepower.



FA commanders must share their knowledge with all levels of their command—building expertise and teamwork.

But it requires some vulnerability on the part of the battalion commander to show his unit in a representative light—not necessarily the best light. One can't synchronize based on the notion of the best unit having its best day.

The relationship between the maneuver commander and his FSCOORD must be based on mutual respect and confidence in expertise. Such a relationship will do as much for the war-fighting preparedness of a unit as anything can.

Conclusion

Certainly, many could write books about battery and battalion command. This article only briefly discusses some areas critical for commanders to build war-fighting readiness.

Artillery commanders must train intelligently and relentlessly to standards under realistic conditions—helping to ensure preparedness. They must share their knowledge with all levels of their command—building expertise and teamwork. And certainly not least, artillery commanders must educate maneuver commanders so they can make the most of their firepower—leading the way to synchronization and success.

Colonel Mark R. Hamilton commands the 6th Division (Light) Artillery, Fort Richardson, Alaska. His assignments include serving as a forward observer with the 1st Cavalry Division in Vietnam; battery commander with the 1st Infantry Division at Fort Riley, Kansas; and Assistant Professor of English at the United States Military Academy, West Point. He also served as Executive Officer of the 2d Battalion, 4th Field Artillery, and S3 of the 9th Infantry Division (Motorized) Artillery, both at Fort Lewis, Washington. On the Department of the Army Staff, Washington, D.C., Colonel Hamilton has served as Chief of the Unit Manning Division, Deputy Chief of Staff for Personnel, and Special Assistant and Speechwriter for the Chief of Staff of the Army.

View from the Blockhouse

FROM THE SCHOOL

MTPs Coming

The Army training and evaluation program (ARTEP) manuals are starting to go by the wayside and are being replaced by mission training plans (MTPs). MTPs enhance units' abilities to plan and conduct training in preparation for their external evaluations. They'll replace single-volume ARTEPs with a publication for each type of unit, e.g., 155-mm, 8-inch, etc. For example, *MTP 06-367-20 Cannon Platoon* is tailored specifically for 155-mm self-propelled or towed (3x8) firing platoons. One MTP is dedicated to Field Artillery battalion missions: fire support and other combined-arms missions. As front-end analyses at the various levels are completed, other MTPs may be dedicated similarly.

MTPs are training documents that provide table of organization and equipment (TOE) units with the "how" and "what" of training to achieve critical wartime mission proficiency. Detailed training and evaluations outlines (TEOs) of these missions and exercises and other related training aids are in each MTP to help field commanders plan and execute effective training.

As you can imagine, replacing ARTEP manuals is not an instantaneous process. The ARTEPs won't be completely superseded until all MTPs are fielded. Some are

MTP Number	Title	Coordinating Draft	DA Print
06-037-30	Cannon Battery, 155-mm (3x6)	Sep 87	Mar 89
06-398-30	MLRS Battery	Feb 87	Jul 89
06-525	MLRS Battalion	Nov 88	Jan 90
06-127-30	Cannon Battery, 105-mm Towed	Jun 88	Apr 90
06-115-20	Battalion Fire Support	Jun 88	Apr 90
06-367-20	Cannon Platoon, 155-mm (3x8)	Mar 89	Sep 90
06-447-20	Cannon Platoon, 8-inch (3x8)	Mar 89	Sep 90
06-367-30	Cannon Battery (3x8)	Mar 89	Sep 90
06-115	Cannon Battalion	Jan 89	Sep 90
06-397-30	Cannon Battery, 8-inch (3x4/3x8)	May 89	Sep 90
06-167-30	Cannon Battery, 155-mm Towed (3x6)	Jun 90	Sep 90
06-100-30	Headquarters and Headquarters Battery of the Corps and Division Artillery and FA Brigade	Sep 91	Dec 93
06-100-31	Tactical Operations Center	Sep 91	Dec 93
06-597-30	Lance Battery (3x4)	Mar 92	Jun 93
06-597-26	Lance Platoon	Mar 92	Jun 93
06-595	Lance Battalion	Sep 93	Dec 95
06-307-30	Division Target Acquisition Battery	Sep 93	Dec 95
06-500	Warhead Detachment	Sep 93	Dec 95

The Projected Dates for MTPs to be Available to the Field

still in the development phase, others are about to be printed by the Department of the Army (DA).

Before an MTP goes to DA for printing, a coordinating draft is sent to Active, Reserve and National Guard units at the battalion, brigade and division levels. Comments are solicited and incorporated into a second draft. Once all comments are consolidated, the revised version is sent to selected commanders for review. The final draft is then sent to Fort Eustis, Virginia, for DA printing.

The chart shows the projected dates for release of the MTPs currently in production. If you've received a coordinating draft of an MTP, use it for your training. If not, the current ARTEP is applicable until the MTP for your TOE unit is released. If the MTP that applies has been printed, you can request it on standard DA Form 12-12E Request for Establishment of a Publication Account (ARTEP/MTP). The Field Artillery School only keeps file copies of MTPs and can't furnish copies to units.

If units have questions about MTPs, call the Unit Training Branch, Directorate of Training and Doctrine, at the Field Artillery School, Fort Sill, Oklahoma, AUTOVON 639-5004 or 2064 or commercial (405) 351-5004 or 2064.

Historical Vignette: The Field Artillery Commander

With the introduction of indirect fire at the turn of the 20th century and later the fire direction center (FDC) in the 1930s, the role of the Field Artillery commander changed dramatically. The two changes met stiff resistance but, when adopted, revolutionized the way the commanders waged war.

Indirect Fire

Even though indirect fire concealed the battery from small-arms fire and hostile artillery, many American Field Artillerymen preferred direct fire because it was easier and faster. Americans finally adopted indirect fire only after the Japanese effectively employed it in the Russo-Japanese War of 1904-05. Among indirect fire's major advocates, Chief of Artillery, Brigadier General John P. Story (1904-05), concluded it had led to the Japanese success in their war with the Russians, and it should be used by the Americans. With Story's and other Field Artillerymen's influence, the Army standardized indirect fire in 1905.

Adopting indirect fire proved to have monumental implications for the Field Artillery commander. During the age of direct fire with smoothbore Field Artillery, each gun crew fired its piece independently with little concern for teamwork with the rest of the battery. With the advent of indirect fire, the forward observer, who was often the battery commander, aimed the guns because he was the only person in a position to see the target. As a result, the battery became a firing unit—not just a tactical element while the battery commander assumed responsibility for directing fire as the forward observer. Previously, the battery commander only identified the target, supervised fire discipline, provided for the security of his battery and replenished ammunition. He generally didn't direct fire, even though he could have if he wanted.

FDC

In the 1930s, the creation of the FDC had an equally profound impact upon the Field Artillery commander. Seeking to improve close support, Major Orlando Ward, Director of the Gunnery Department at the Field Artillery School, and his instructors centralized computing firing data in the battalion. Using their procedures, the battalion commander dispatched forward observers from the batteries and the center. Then, using information furnished by the observers, the center synchronized fire on the most dangerous target.

The center radically altered the battalion commander's role. Before its development, the battalion commander assigned duties to each battery, oversaw the expenditure of ammunition and informed his battery commanders about the situation but rarely interfered with firing. Because of the FDC, the battalion commander directed fires, and the battery commander conducted fires.

Many American Field Artillerymen of the late 1930s, however, resisted adopting the FDC. In emotionally charged articles in the *Field Artillery Journal*, many senior Field Artillerymen argued that the battery commander should direct fires. Chief of Field Artillery, Major General Birnie Upton, for instance, stubbornly fought using the center because he opposed taking away any prerogatives from the battery commander. Only after impressive field demonstrations were held in 1941 by the Gunnery Department (Lieutenant Colonel H.L.C. Jones, and his instructors) did Chief of Field Artillery, Major General Robert M. Danford, and Army Chief of Staff, General George C. Marshall, finally accept the center.

Conclusion

By adopting indirect fire and the fire direction center, the role of the Field Artillery commander underwent a significant transition between the turn of the century and World War II. Each step of the way, however, the changing role encountered stiff resistance because it entailed abolishing some traditions and introducing new ways.

Dr. Boyd L. Dastrup
Command Historian
Fort Sill, OK

So, You Wanna' Be a Commander?

by Major Rodney O. Luce

So you want to command. You're not alone. Most young Redleg officers want to be battery commanders. As a step toward self-improvement and moving ahead in the system, it's an honorable goal. Being a commander is required for branch qualification and is seen as necessary for promotion. Most officers agree it's the high point of their battery-grade years. The fun, personal recognition and responsibilities make the job hard to beat during the first 10 years of commissioned service.

While the idea of becoming a commander is exciting to you, what about your responsibilities to the soldiers in your battery? You're responsible for their accomplishments, advancements and opportunities for self improvement.

To command well, you must be a professional leader, something you've been preparing for by personal study. You've attended classes on leadership, studied military leadership doctrine and observed your bosses and NCOs to discover the leadership techniques best suited for you.

But there's more to it than that. You must first ***know yourself***—the introspection necessary for a good leader. This article leads you through self-examination steps to help prepare you to command successfully.

Leader Introspection

Sun Tzu (circa 400 BC) said, "Know the enemy and know yourself; in a hundred battles, you will never be in peril." Too often, however, one has only academic knowledge of beliefs, values and ethical standards—the basis of leadership. What's missing is a critical evaluation of how these principles apply to you.

To be a professional leader, you must know what you believe and make choices based on these beliefs. You must be able to separate your beliefs, values and standards from what you think others expect of you. When you know what you value and why you value it, you're on the right path to becoming a professional and successful leader.

Key to your success as a professional is your ability to answer these questions: What's a professional? What do I believe and value? and How do my beliefs compare to the professional Army ethic?

Professionalism Defined

The first question is, What's a professional? Samuel P. Huntington in his book *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Harvard University Press, 1957), defined a military leader as meeting three criteria:

Specialized Expertise. Your job must be identified by our society as a profession, requiring special skills and knowledge. The military officer in America meets that criterion.

Corporateness. The profession must have a sense of organizational unity. Specifically, it must show a collective sense of discipline and training. The officer corps meets this criterion as a whole. But to be a professional, you also must internalize these feelings of unity, discipline and training.

Responsibility. In addition to being a practicing expert in your field, you must have a sense of responsibility to serve others. To do this, you must openly conform to the technical and ethical standards of the job. This last criterion confirms the need for you to understand your beliefs.

Beliefs and Values

The second question is often very difficult to determine—What do I believe and value? To begin this analysis, you must understand what beliefs and values are.

Beliefs. These are ideas you hold to be true but can't prove. They're the fundamentals of your understanding of life—your religious ideas and your concept of human nature.

Values. On the other hand, values deal with the importance you place on things. What value do you put on the things you believe? How do you prioritize them? How do you resolve conflicts among them? Only you can determine the answers to these questions, and it requires you take the time and effort to study the choices you make in your day-to-day activities.

For example—it's late in the day and the training officer has been through the motor pool with you. The work day has 25 minutes left. You believe in the importance of maintenance, *and* you believe in the importance of the family. Now you must weigh the value of each and choose between sending your soldiers home early and performing additional maintenance on your equipment. Under the circumstances, what do you choose? Why?

The Answer. Once you understand the question, you're better prepared to answer it. Perhaps the best way to do this is to confront each issue. You must face and answer questions about life. In doing this, you force yourself to argue the pros and cons of each choice you make, ensuring the choice is based on your beliefs, not on convenience or someone else's expectations.

While you're evaluating each question, you must check your answer for consistency with your other beliefs. Does it support other decisions you've made? Does it send conflicting signals to others about your goals, standards or policies? In the final analysis, you must have a consistent set of beliefs and values you thoroughly understand.

Professional Army Ethic

With a clearer understanding of your beliefs and values, you're now prepared to ask the question, How do my beliefs compare to the professional Army ethic?

You can't command successfully if your beliefs and values are in conflict with the stated values of the military profession. These are defined in our doctrine in *FM 22-100 Military Leadership*, are clarified further in the professional journals and are observable in the behavior of successful senior leaders.

To begin this process, you must study FM 22-100. This requires more than just reading it. You must clearly understand the manual and military doctrine on values before you can progress in your professional development.

You'll find that what's expected of you isn't easy. The military expects you to be selfless. You must think first of how your decisions and behavior affect your soldiers, peers and mission accomplishment in your daily activities.

Your concern about others must be a way of life, not just your behavior while on duty. You can't be an actor, being selfless one minute and selfish the next. During times of stress, this facade will collapse. Your fellow soldiers must believe you'll always make selfless decisions for the sake of the unit and mission accomplishment.

Professionalism Applied

Having answered the three questions about professionalism, you now know that "living" the answers requires daily growth and understanding. The remainder of this article discusses professional decisions you must make and methods for your continued professional growth.

The Chief of Staff of the Army General Carl E. Vuono's sixth fundamental imperative deals with training leaders ("The United States Army: A Strategic Force for the 1990s and Beyond," February 1990). As a commander, you'll train your subordinate officers and NCOs daily. You'll set the example for your soldiers, administer their military justice and teach, mold and guide them. In all this, you'll be developing your leaders, and you must be consistent.

You'll be preparing your soldiers for combat and the possibility they could have to make the greatest sacrifice possible. They'll trust you to prepare them to serve their country in the best way.

As you take the guidon, it'll suddenly matter where you stand on every issue. You'll be the only fish in the fishbowl. Your soldiers will watch you around the clock. They'll see what you do and what you don't, what you ignore and what you emphasize.

Leader Decisions

Your actions may help you learn more about your beliefs as you relate them to the military ethic. Daily you'll build your image.

Timeliness. Why is it important you make it to meetings on time? First, it tells others at the meeting their time is important to you. Second, you were told to be there at a certain time, or you told others you would be there.

In either case, the military demands absolute trust in its leaders. Your word is your bond. These are straws in your haystack of professionalism.

Consistent Standards. Why is it important you take corrective action when you see something wrong? It *shows* the standards you're willing to accept.

The way you correct soldiers tells a lot about you. Do you correct the individual present, his supervisor or talk to his first sergeant? (Time and the situation dictate your response.) Is the fault because of a personal or training problem? What will your actions result in? In every case, the person committing the fault must know you don't accept his performance and must see you enforce your standards consistently. More straws . . .

Professional Growth Continued

How can you practice making decisions? Ask yourself questions and practice different answers to better understand your options while still in a safe environment. You have a number of formal and informal opportunities throughout your career.

Formal. The Army has a number of formal leadership programs during all phases of your training. But these classes are only as good as you make them. If you don't use that time to examine your beliefs and bounce them off your peers, you'll miss the most valuable part of the training.

The Army spends time and money to bring in guest speakers to talk about leadership during courses. This allows you to compare your beliefs and values with those of successful leaders in your profession.

Does the Army waste its money on these speakers? It does if you can't outline the speech of the last leader you heard. Could you outline it 30 minutes after he quit talking? Did you listen to what he said and compare it to your beliefs as quickly as he spoke? It becomes obvious that if you don't take notes, you won't be able to compare your beliefs and values with the speaker's, probably one of the most successful military leaders in the Army.

Informal. You also have opportunities for informal training. The most obvious ones are officer professional development programs and social hours at the Officers' Club. Other opportunities are the social and fitness programs encouraged by units. Working out in the gym or running with a fellow officer is usually an excellent time to discuss current issues and evaluate different solutions.

Final Thoughts

In these times of a leaner, meaner Army, we can't afford to relax our professional standards. The consequences would be far-reaching. President George Bush recently said, "Never before has our leadership been so crucial, because while America has its eyes on the future, the world has its eyes on America."

Before you take the guidon and stand before your troops, take advantage of every opportunity to examine your beliefs and values.

Major Rodney O. Luce is the S3 of the 1st Battalion, 12th Field Artillery, III Corps Artillery, Fort Sill, Oklahoma. Until recently, he was a Small Group Leader in the Field Artillery Officer Advanced Course, Fire Support and Combined Arms Operations Department, Field Artillery School, Fort Sill. He also was an instructor in the Army Reserve Officer Training Course (ROTC) at Cornell University, New York. Major Luce commanded Headquarters and Headquarters Battery, 2d Battalion, 35th Field Artillery, 24th Infantry Division (Mechanized), Fort Stewart, Georgia. He's a graduate of the Command and General Staff College, Fort Leaven-worth, Kansas, and holds a master's degree from Central Washington University, Washington.

Redleg News

ITEMS OF GENERAL INTEREST

Article 15s—New Criteria for Filing in R-Fiche

Any NCO who receives an Article 15 on or after 25 January 1990 faces new criteria for having it filed in the performance portion (P-fiche) of his official military personnel file (OMPF) instead of the restricted portion (R-fiche). Changes to AR 610-10 Individual Military Personnel Records require the OMPF custodian to file the Article 15 in the P-fiche when the commander directs it be filed in R-fiche if—

- Previous Article 15s in the R-fiche have *not* been set aside completely, or
- The soldier was a sergeant or higher before the punishment imposed on a previous Article 15 filed in the R-fiche.

When the OMPF custodian files the new Article 15 in the P-fiche instead of the R-fiche as the commander imposing the punishment directed, he'll notify the commander. Procedures for an NCO to request transfer of an Article 15 from his P-fiche to his R-fiche remain the same.

If you have questions about these changes or need more information, call the Field Artillery Enlisted Branch, US Total Army Personnel Command (PERSCOM), Alexandria, Virginia, at AUTOVON 221-0304.

SFC Charles Blount
FA Enlisted Branch
PERSCOM

M109 Crew Trainer

Would you like to fire more than 600 rounds of mixed ammunition and fuze combinations in 48 hours of sustained operations at practically no cost? Would you like to train your howitzer crews until each chief of section knows his job under all conceivable conditions regardless of the cost? Soon you can.

After the artillery observer/controllers at the National Training Center (NTC), Fort Irwin, California, noted that several howitzer crews couldn't conduct live firing, maintain the required rates of fire or fire accurately, the Field Artillery Training Center (FATC), Fort Sill, Oklahoma, developed the Turret Simulator Trainer Crew (TSTC), an M109 crew trainer.

Usually, trainers at the FATC focus on teaching *new* soldiers to function as crew members during firing operations. The soldiers spend 25 percent of their time in advanced individual training (AIT) on crew duties during firing operations. They perform dozens of repetitions as the #1 cannoneer, assistant gunner and #3 cannoneer; then they go to the field for a live-fire exercise to practice crew duties in a tactical environment. Unfortunately, firing units don't have the time or the money to train this way.

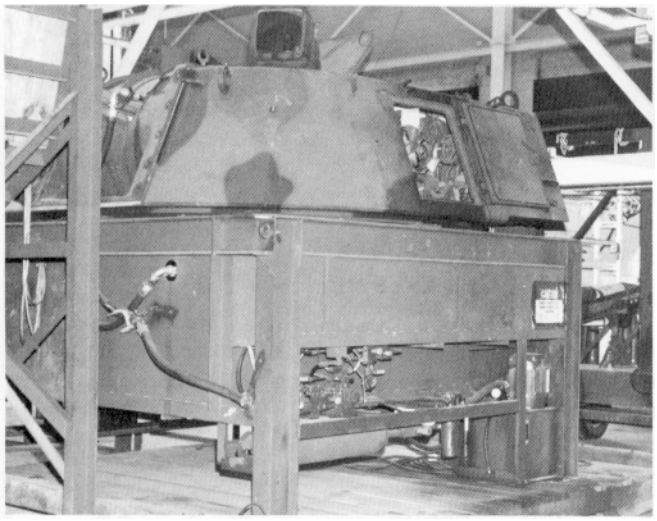
The Infantry has a simulator for the tube-launched, optically tracked, wire-guided (TOW) missile, and Tankers have the unit conduct-of-fire trainer (UCOFT)—even mortar sections have a sub-caliber round that lets them practice

as a team. Cannoneers need to be honing their skills on simulators alongside their combat brothers.

The Trainer

We're now testing the TSTC, an M109A2 turret mounted on a frame that allows +/- 100 mils traversing and -50 to + 700 mils of elevation. The rammer and recoil systems operate as an M109 for maximum realism and training value. During recent testing of the crew trainer, a howitzer crew from III Corps Artillery, Fort Sill, "fired" more than 600 rounds per day of multiple- and single-round target engagements.

If the trainer is developed, units will be able to practice their missions without waiting for a field training exercise (FTX) or training center rotation. Howitzer chiefs of section will be able to cross-train soldiers in all crew duties, using full size and weight inert ammunition. Units will be able to use any inert ammunition; we have "fired" inert high explosive (HE), smoke, white phosphorous (WP) and dual-purpose improved conventional munitions (DPICM)—all with the desired fuzes and at high rates of fire. The TSTC interfaces with a fire direction center (FDC) for all types of fire missions and can simulate a "dirty" battlefield or night conditions.



For active duty or Army Reserve and National Guard units, the TSTC can be trailer-mounted and towed behind a 5-ton truck or mounted in a permanent facility that has 220-volt power.

Its Development

In this era of budget cuts and environmental concerns, we need a cost-effective, simple system to train howitzer sections on multiple-round fire missions. We need a system that trains AIT M109 crew skills to standard in less time and at a fraction of the cost of current training. We need the crew trainer and we need it now.

The current trainer is a prototype, a joint effort of FATC and industry. The next development step is to create a Training Devices Need Statement and to have the simulator undergo testing at Fort Sill. This process may take as long as seven years and includes many decision points where the trainer can be cancelled for lack of funds. Ideally, cannoneers will have four trainers per M109 battalion at the end of the next decade.

If units have questions/comments, write the Commander, FATC, Fort Sill, Oklahoma 73503 or call AUTOVON 639-6120/4406 or commercial (405) 351-6120/4406.

COL Robert H. Scales, Jr.
Cdr, FATC
Fort Sill, OK

CAS^3 Completion Requirements and Enrollment Changes

Any Year Group 81 officer who has not yet completed the nine-week Phase II of the Combined Arms and Services Staff School (CAS^3) at Fort Leavenworth, Kansas, must do so by the end of FY 90. Failure to attend may jeopardize promotion and staff college selection. FY 90 classes also are open to captains in Year Groups 82 and later who have completed their advanced courses and Phase I of CAS^3.

For reporting dates, refer to the Army training requirements and resource system (ATTRS) computer network or call the CAS^3 Operations Office at AUTOVON 552-2113 or 2602. Direct other questions to the senior Field Artillery representative on the CAS^3 faculty, Colonel Robert Steelman, at AUTOVON 552-5611, Extension 301.

Captains must report to the Fort Leavenworth billeting office in Hoge Barracks by 1200 on their reporting date, one day before the class starts. They must bring a copy of their CAS^3 Phase I completion certificate. The School of Corresponding Studies (SOCS) no longer accepts hand-delivered Phase I material for scoring. Captains reporting for Phase II without a Phase I completion certificate will *not* be enrolled.

The Combined Arms Center Commander and Command and General Staff College (CGSC) Commandant have made two changes that impact on planning for CAS^3 completion. First, enrollment in Phase I is now automatic upon graduation from the advanced course. Captains have two years after advanced course graduation to complete Phase I. Second, CAS^3 graduation is a prerequisite to enrolling in the CGSC nonresident (correspondence) course.

Watch for these and other changes in DA Pam 600-3 Commissioned Officer Professional Development and Utilization as mandatory CAS^3 attendance becomes institutionalized in the officer professional development and selection policies.

LTC John E. McNett, SC
Ops Off, CGSC
Fort Leavenworth, KS

How Do I Prepare for Battery Command?

by Majors Robert J. Fronzaglia and William D. Brosnan

Major Arthur T. Tillery
Small Group Leader
US Army Field Artillery School
Fort Sill, Oklahoma 73503
June 1, 1990

First Lieutenant Louis B. Tenant
1st Platoon, B Battery
9th Battalion, 99th Field Artillery
APO New York 09999

Dear Lou,

It was great to read you're having fun as a platoon leader. I understand you're headed here for the 1-91 FAOAC [Field Artillery Officer Advanced Course]. That means you'll be here for one of our "warm" Fort Sill winters.

You mentioned you're looking forward to battery command after FAOAC and asked for advice on how to prepare for it. First, I thought I'd describe the BC [battery commander] training you'll receive in FAOAC. Then I'll address the main concerns FAOAC students have about being BCs.

BC Training

The goal of FAOAC is to help you build your skills to be both an FSO [fire support officer] and BC. We have more than 120 hours of formal BC-related training.

I can see you squirming as you think about sitting through those classes. Don't! In FAOAC, your small group leader will help students lead classes in a seminar format. The idea is to summarize Army doctrine in each area and then use practical exercises, films and personal experiences to generate discussions. This is very effective for classes on leadership, training, field operations and the UCMJ [Uniform Code of Military Justice].

We teach most of the supply and maintenance classes through lectures. These classes cover the technical knowledge, ideas and systems you'll need as a BC. During those classes, you'll also focus on the artillery system of your next assignment. This is a super opportunity to update your maintenance and gunnery skills.

There are two symposiums in FAOAC. The first is the Leadership Symposium. For this one, we match 30 to 40 students with a colonel, CSM [command sergeant major], battalion commander, international officer and civilian leader from the Lawton business community. Each group spends a day discussing a wide range of topics of interest to the students.

The second symposium is the Taking Command Seminar. We link up students going to a certain command (Fort Riley, Kansas; West Germany, etc.) with small group leaders who've been assigned there. The small group leaders give students advice and share lessons learned about being a successful BC in that area.

These classes and symposiums will help prepare you to be a BC. The beauty is that FAOAC is what you make it. Neither you nor your small group leader are constrained to a lock-step approach in any area. So start thinking now about the skills you think you'll need to be a successful BC. Then make sure you work on them while you're here.

That's the formal FAOAC BC training program. But BC training is ongoing throughout FAOAC, especially during the Small Group Phase. By preparing classes, giving briefings, learning to work with others, etc., you'll develop skills needed to command. Often, the most important questions about command come up during practical exercises and in the Snow Hall Snack Bar.

BC Concerns

Yeah, yeah, I know. You're thinking, "Enough about FAOAC. Where are those suggestions about being a successful BC?" I could describe in detail how great a BC I was, but I'll save those war stories for later. For now, let me tell you the questions asked most often by students.

What Should I Look for During my Change-of-Command Inventory?

When students ask this, they're usually interested in the best way to count. Based on our many "footlocker talks," you and I both know the inventory is much more than counting open-end wrenches and pillow cases. To do it the right way, you should consider several things:

FAOAC BC-Related Training

Contents	Hours
Leadership Doctrine	1
Duties, Responsibilities and Authority	3
Personal Values and the Profession of Arms	1/2
Professional Ethics	2.5
Ethical Decision Making	1
Leadership that Directs and Implements	2
Communicating as a Captain	2
Motivational Leadership	4
Leaders as Mentors	2
Leader Counseling Program	3
Command Climate	1
Taking Charge	3
Team Building and Unit Cohesion	4
Plan Field Artillery Battalion Employment	2
Combat Service Support (CSS) Doctrine	6
Soldier Health Maintenance	1
Practical Exercise: Brigade Defense, Federal Republic of Germany (Positioning Batteries and CSS for the Heavy Division)	
Plan Battery Reconnaissance, Survey and Occupation of Position (RSOP)	4
Plan Battery RSOP in Urban Terrain	4
Recommend Field Artillery Survivability Techniques	1
Article 31/Rights Warnings	1
Authorize and Conduct Searches and Seizures	1
Administrative Options	1
Conduct an Article 15 Proceeding	1
Prefer and Forward Court-Martial Charges	1
Impose Pretrial Restraint	1
Philosophy of Military Justice	1
Training Management	24
Taking Command Seminar	3
Leadership Symposium	12
Implement and Manage a Unit Personnel Reliability Program (PRP)	1
Officer Professional Development	16
NCO Efficiency Reports	1.5
Battery Supply Operations	8
Preventive Maintenance Checks and Services (PMCS)/Gunner's Test/Organizational Maintenance	8

Supply Accountability. Look at it this way: if you conduct a change-of-command inventory correctly, you should get a perfect rating on a CI [command inspection] the day after taking command. This may be the only time you can focus all your efforts in this area. Make the most of it.

First, review all supply references, unit SOPs [standing operating procedures], higher headquarter SOPs, CI inspection lists, battalion commander's pre-inventory guidance, battalion S4's guidance, etc. Then develop a plan for the inventory. Include a way to assess the inventory. One technique is to have the battalion S4 review all documents.

As you proceed, inspect serviceability and document your findings—create shortage lists, recommend reports of survey, etc. Finally, create a supply system that maintains CI standards at all times.

Command Climate. Although supply accountability is your objective, look at the inventory process as a way to establish your command climate. It's the first time your soldiers will have to size you up—check out your appearance, mannerisms and personality. Think about the tone you want to set during command, and begin working on it during the inventory.

Soldier Discipline. While inspecting, also assess discipline in the unit. Look at the morale of the soldiers and leaders. See if systems are in place to support them and the mission.

Are the billets up to your standards? What condition are the vehicles and motor pool in? When was the last time aiming circles were declinated? How many prescribed load list items are at zero balance? How do soldiers respond to NCOs during this "exciting" time? The answers to these questions will help you prioritize your actions before taking command.

What's the Best Way to Build a Strong Relationship with my 1SG [First Sergeant]?

You must work on this relationship from day one. It's the cornerstone for your command climate and will set the tone for the attitudes and job performance of your soldiers, NCOs and officers.

To establish this relationship, use the "Stop-Look-Listen" approach. First, stop. Don't try to change things overnight. It can't be done, and you'll probably screw up things better left alone. Then, look. Find out how the old BC worked with the 1SG to get the job done. Then, listen. Listen to your 1SG. Remember, he has spent more time in the chow line than you have in the Army. He has a lot of knowledge and experience. Use it—it's free!

What about my Relationship with my Other NCOs?

My advice here is to get "lazy." Let NCOs conduct daily business within your guidelines. Let them do the things they do best—train, maintain and lead. You focus on commanding, planning and establishing policy. Don't forget, if you could do it all, you'd be the only person on the MTOE [modified table of organization and equipment].

This point was driven home to me by one of my 1SGs. One day as I sat in my office, he walked in and set up an easel with butcher paper. He said, "Sir, use this to plan where you want us to go. I've got a hundred soldiers to make sure we get there."

What's the Relationship Between a BC and a CSM?

Many officers don't realize that CSMs play major roles in their commands. The CSM is the second most important NCO to a BC. He's the role model for all soldiers and NCOs in the battalion, including your ISG. Besides yourself, he's the only person who'll task your 1SG.

The CSM is another set of eyes and ears for the battalion commander. He's the person who recommends the assignment of soldiers and NCOs. All of this, coupled with his many years of experience as a 1SG, makes him an invaluable resource. He can make your life as a BC a lot easier.

What Relationship Should I have with my Officers?

Remember, you're not one of the boys anymore—you're *the boss*. You have a moral responsibility to train them in their current jobs and prepare them for command. (Remember old what's-his-name in Bravo Battery? Remember how his officers were always in the dark?) Communication is the name of the game. If you want your officers to be successful BCs, you have to show them how.

Make it your goal to teach them as much as possible about all areas of the battery. Have daily meetings on supply, maintenance, training, etc., and include them in all UCMJ actions. Praise their achievements to the battalion commander, and keep their mistakes to yourself.

Most important, keep a command distance. Professional respect is more important than personal friendship. I've seen too many BCs lose their objectivity by getting too close to their officers. As a result, their pats on the back or kicks in the butt lost their effect because they were given and taken within a framework of friendship.

If you develop a professional rapport, the friendships you wanted with your officers will develop *after* you've left command. Even more rewarding is when you find out they've commanded and did it the right way—with a little help from you, of course!

What is the Best Way to Administer UCMJ?

Every FAOAC class raises the same questions about Article 15s, courts-martial, etc. Just remember this: discipline includes both punishments and rewards.

Use the following steps to establish and maintain unit discipline. Identify what you want to achieve in your discipline program and develop a plan to achieve it. Create systems to execute your program, to include pats on the back, rewards, awards, counseling, UCMJ actions and discharges. Develop ways to determine if your program is meeting your unit's needs.

I always warn my students not to play games in this area. When you reward or punish, you send a message to the battery. You tell them you either mean what you say or you don't. Here's what I said in my first speech about discipline during my second command.

I take UCMJ action seriously. I don't offer Article 15s that I can't take to a court martial. If you're a good soldier and get in trouble, you'll be punished, but your good performance will weigh in your favor. If you're a soldier who has been a discipline problem, your performance will weigh against you.

Also, if you good soldiers have seen some bad soldiers "get over" on an incident or two, don't worry. Bad soldiers can win many battles, but as the BC, I only have to win one battle to win the war.

I also tell students to keep things on a professional level. Don't become emotionally involved in "getting" a soldier. If a soldier is really bad, in time he'll end up in your office.

What Kind of Relationship is Best with the Staff and Fellow Commanders?

Many students describe a typical staff call this way: The S1 starts by "dropping a dime" on the BCs for late officer and enlisted efficiency reports. Then the BCs turn on each other. Finally, the Old Man and the Executive Officer get involved.

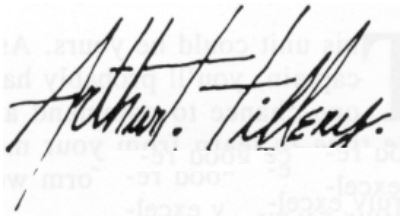
The relationship I've seen work best is to "cooperate and graduate." The battalion is as much a team as your battery. You must work with your fellow commanders and staff if the battalion is to succeed. Sharing information with your peers will get the job done more easily and quickly. The "top-block" BC not only does great things for himself and his battery, but also shares his ideas and successes with others.

Closure

Well, Lou, time to close. I've given you enough to think about during the next few months. I can't give you the Sill Solution for successful command because there isn't "A Solution," just general guidelines. My advice is to be yourself.

As a BC, you'll have more control over the lives of your soldiers than in any other assignment. Set your goals and standards high before you walk in the door. Challenge your soldiers—they expect that. It's up to you to set the command climate for the battery, so don't wait to take the guidon to get ready for command.

Sincerely,



Arthur T. Tillery
Major, Field Artillery

Major Robert J. Fronzaglia is the S3 of the 2d Battalion, 17th Field Artillery, III Corps Artillery, Fort Sill, Oklahoma. Until recently, he was a Small Group Leader for the Field Artillery Officer Advanced Course in the Fire Support and Combined Arms Operations Department, Field Artillery School, Fort Sill, Major Fronzaglia has commanded A Battery, 1st Battalion, 20th Field Artillery, and C Battery, 1st Battalion, 27th Field Artillery, and served as both a battalion and brigade fire support officer, all in the 4th Infantry Division (Mechanized), Fort Carson, Colorado. He also served as the Program and Budget Staff Officer at US Army, Europe Headquarters, Heidelberg, West Germany.

Major William D. Brosnan is Chief of the Advanced Fire Support Branch and, until recently, a Small Group Leader in the Field Artillery Officer Advanced Course in the Fire Support and Combined Arms Operations Department, Field Artillery School. He has commanded the 15th and 69th Field Artillery Detachments in West Germany, and E Battery, 82d Field Artillery (Target Acquisition), at Fort Hood, Texas. Major Brosnan also has served as a direct-support battalion S3 and the Division Artillery S4 of the 1st Cavalry Division Artillery and on the G3 Staff for III Corps, all at Fort Hood.

A Framework for Excellence

by Major Lester C. Jauron

Firing platoon operations consistently failed to sustain the fight . . . Preparing to deliver ammo caused actual injury to soldiers . . . Standards of discipline and technical competence lacking . . . Howitzer crew drill did not meet minimum Army standards.

From Various National Training Center After-Action Reviews

This unit could be yours. As a captain, you'll probably have one chance to command and little time to learn from your mistakes. You'll have to perform well from day one.

Many units can produce good results, but only a few are truly excellent. Their excellence is a function of consistency—they meet the standards even on their worst days. Any unit with reasonably intelligent leadership can perform well on a scheduled event. Excellent units meet the standards on all events without intensive preparation.

The secret to leading a unit to excellence, quite simply, is to do everything well. If the unit does everything well, the leader can concentrate on making it better. In units lacking consistency, leaders concentrate on fixing problems not achieving excellence.

This article gives you some ideas about how to develop consistency in your unit from day one. A few words of caution: just using this framework won't make your unit excellent. Your total commitment to excellence is essential to make these ideas work.

Take Charge Immediately

Get ready to lead the unit before you start counting widgets in the inventory. Become an expert on technical and tactical matters and leadership.

Study the unit before you get there. Look at the modified table of organization and equipment (MTOE), policy letters and past Army training and evaluation program (ARTEP) and command inspection results to get an idea where the unit stands. Then during the inventory, see if its level of accountability matches your perceptions.

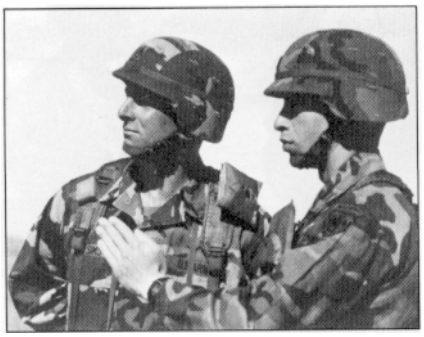
After you've assessed the unit, prepare your officer efficiency report (OER) support form and give copies to your key subordinates. They'll appreciate knowing your goals.

The change of command inventory is critical—do it correctly. It's your first opportunity to inspect and assess the unit. But remember, the soldiers also will be assessing you. The impressions you make will be long-lasting.

During the inventory, usual problem areas include publications, nonexpendable shortage annexes, furniture, linen and unused, unserviceable or excess equipment. Use the correct catalog, manuals and hand receipts, and make it a matter of record if you don't have them. Then count again when you get the right references. Look at your nonexpendable shortage annexes before the inventory and after you've initiated relief from accountability actions. Don't assume they're straight.

Count everything, including expendable items and equipment evacuated for maintenance. You can hold soldiers accountable for expendable equipment. Support maintenance shops can lose equipment, even if it's on a valid job order.

Anything the supply sergeant is responsible for is suspect. As with mechanics, supply sergeants often make their own property last priority. Unused, unserviceable or excess equipment ends up in the supply



Shaping soldiers' values is one of the most important functions of a commander.

room. These items often "walk."

Don't overlook furniture or linen. Since individual soldiers sign for these items, accountability is more difficult. Look at your in- and out-processing procedures if you have problems.

After you've counted everything, fixed your hand receipts and initiated relief from accountability documents, follow up. Turn in unserviceable tools, order items on relief documents and have a method for tracking requisitions. Remember, the action isn't complete until the soldier has the missing item in his hand.

Shape Soldiers' Values

A soldier's perceptions are reality—at least to him. Find out what he thinks, use the feedback and shape his values. Shaping soldiers' values is one of your most important functions as a commander.

Group feedback sessions are a good way to shape soldier values, correct misperceptions and get feedback. Talk to the junior enlisted soldiers first. Ask them three questions: What do we do well? What do we do poorly? What looks good but is really broken? Then repeat the process with the junior and senior NCOs and the officers. Their honesty will surprise you as will the differences among the groups.

Another effective tool is the unit climate profile (UCP), a survey about the unit you can administer yourself. Do it as part of the taking-command process and after you've had a chance to have an impact. It'll give you useful feedback on your performance. You can get the *DA Pam 600-69 Unit Climate Profile Commander's Handbook* through the publications system.

Get your message across to the soldiers. The message should include four elements. First, their contributions are important. Second, their efforts are appreciated and will be recognized. Third, standards in the unit are high and belong to them. And fourth, taking care of each other is absolutely expected.

Make it your goal to see every soldier every day. Talk to soldiers during your daily rounds, during formations and by using forums such as the equal opportunity council. Listen and ask detailed questions. Use a commander's bulletin board to share soldiers' accomplishments.

Set Standards for Unit Appearance

Unit appearance is an area where you can have an immediate impact. By establishing what you expect up front, you show the soldiers how you feel about standards, and they see the results immediately.

Don't accept cigarette butts in the battery area or trash in the cabs of vehicles. Expect everything to be in its place and accept no excuses. Make your office an example of what you expect. After you've established the standard, never back off. By doing this, you set the tone for your entire command.

Develop Consistency

Every unit has more requirements than assets. This means a unit getting "As" in one area probably is getting "Fs" in another. Converting these "Fs" to "As" and "Bs" is difficult, time-consuming and frustrating. Wouldn't it be better to get straight "Bs" and always be ready to meet the standard or take an inspection?

The chart (Page 28) shows the relationship between results and soldier efforts over time. Many units peak for major events, forcing their soldiers to work extremely hard getting ready. The gray line in the chart represents an increase or decrease in soldier efforts in an "event" unit, one that performs well sporadically. The increase before the event translates into intense soldier effort while the decrease afterwards means the unit will go through the same process next time.

The soldier efforts of an excellent unit are shown in black. Notice the valleys are higher and the slopes less steep. This means soldiers don't work as hard getting ready for an event but work harder after it's over. This approach allows the unit to perform to standard all the time. And soldiers like it better too. What follows are some ideas to help your unit achieve a consistent "B" average.

Set Achievable Goals

Make a list of monthly, quarterly and yearly objectives. Get input from your key players, but keep the list short—six items is enough. Make sure the goals are achievable in the time you allow.

Then distribute your list to the soldiers. They'll appreciate knowing what you're trying to do. Finally, refer to your list often. You'll be surprised how often short-term pressures will distract you from your goals.

Know What the Unit Must Do

Make a matrix listing every event a group of soldiers in your unit must complete and the frequency with which they must do it. Include mission-essential task list (METL) tasks, services on all equipment, inventories and administrative requirements. Then base your training schedule on the matrix.

You'll have more events than time, so you must combine events. Practice first aid on the range, track fire drills while on alert and do radio distance checks during command maintenance.

Always execute to standard. During execution, leader involvement is key. If the event is on the matrix, it's important and leaders should be there. Excellent units know what they have to do and only defer requirements by choice—not oversight.

Set and Enforce Standards

Every standard in the Army exists for a good reason. Standards lead to standardization, which leads to efficiency. For instance, standard openings in camouflage nets allow soldiers to transfer ammunition from gun to gun at night. Standard section layouts allow soldiers to move from gun to gun with minimal loss in efficiency.

Make standards nonnegotiable, but always be willing to explain why. Excellent units move forward, they don't backslide. Never back off from a standard once you've implemented it.
Inspect by walking around. Look at

your training, billets, motor pool, vehicles, supply room and other facilities daily. Never walk away from a standards violation without taking action. This is especially critical after major events. There's always a tendency to relax after a big event, but never give in to this temptation.

When you set and enforce standards, explain why. You want *your* standards to become *their* standards. Taking time to explain why is key to getting soldiers to "buy into" what you're doing. When soldiers enforce standards themselves, the unit is on its way to becoming excellent.

Train "Smart"

Get your—NCOs' input into your training program—NCOs are responsible for individual training. Then, give them the guidance, assets and time to do it.

Develop a way to evaluate individual skills. This gives the NCOs feedback and is required under the individual training and evaluation program (ITEP). One way is to have an expert test soldiers to see if they can perform to standard tasks recently taught. This allows you to assess training effectiveness and soldiers' competence.

Set goals for your soldiers. These may exceed the Army standard—who wants a battery Army physical fitness test (APFT) average of 185? Then reward soldiers who consistently meet or exceed the goals.

Use "Sergeant's Time" training. Give your NCOs a dedicated block of time for individual training and ruthlessly eliminate distractors. Match your Sergeant's Time with that of support agencies. Require soldiers to schedule appointments around the time. Meet detail requirements using complete sections or platoons. You'll never eliminate distractors completely, but you can minimize their impact.

In collective training, stick to the basics and stress battle drills. Use METL, battle focus, standardized external evaluation (SEE) and Combat Training Center results and trends to set clear, achievable goals. Then compete to meet them—not against each other. Always keep score and give the soldiers feedback on how they did.

You may not have the technical expertise, assets or time to train all elements in the battery. So, don't be afraid to use outside help. But remember, the product is still your responsibility.

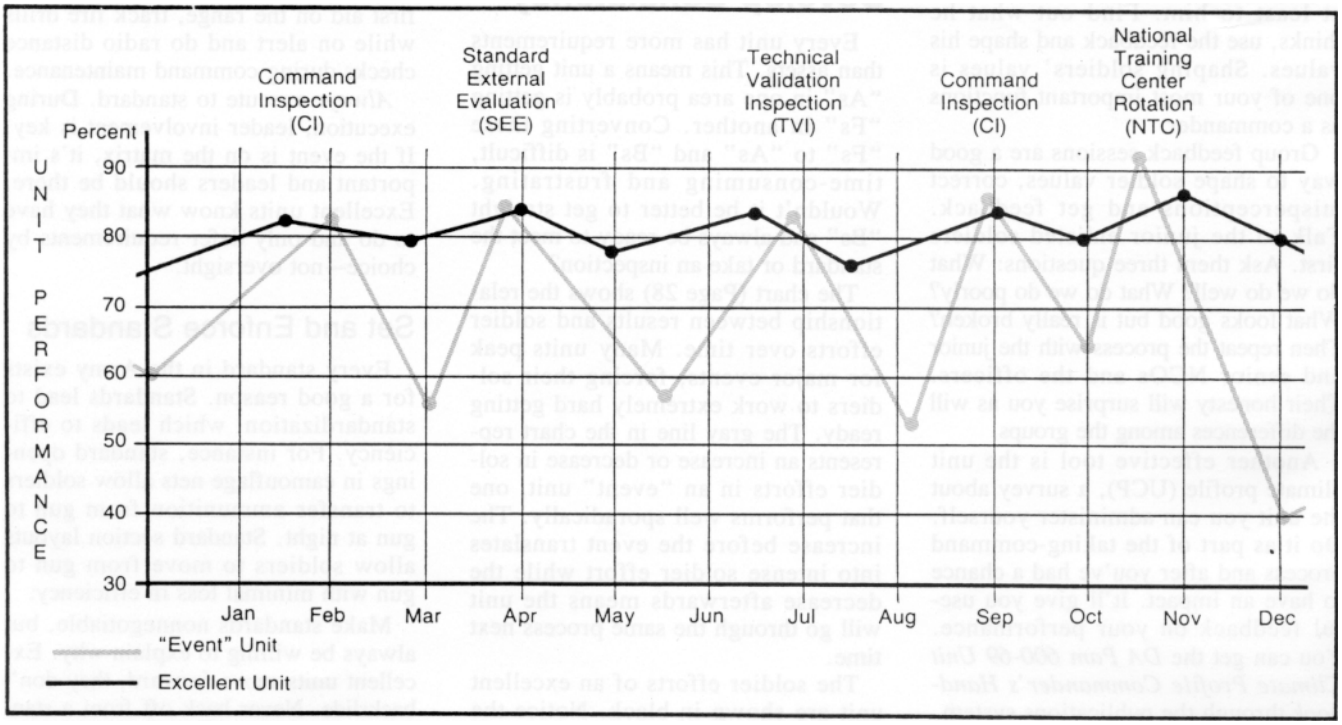
After-action reviews (AARs) offer key feedback to fix training problems. Don't wait—conduct them immediately and use the results. Make sure all your leaders use the AAR process, not just you.

First Lieutenant James Sprackling and Staff Sergeant Glenn Keeter, A/2-2 FA, discuss the day's training.

Train Lieutenants

Don't expect your lieutenants to be totally competent—it's your job to make them that way. Challenge them by giving them meaningful tasks, and counsel them often. As lieutenants, officers learn the basic skills they'll carry with them their entire careers. Don't deprive them of any opportunities.

To ensure each lieutenant gets the skills he needs, develop a lieutenant's job book. Base it on the military qualification system (MQS) and build from there. Include the things he'll need to know as a battery commander: tactics, individual skills, maintenance, supply, military justice and unit administration. Make him an expert



Notice the high peaks and low valleys of the "event" unit. Unfortunately, there's no guarantee we won't go to war in March, May or October. The graph of the excellent unit is much more desirable from both the mission and soldier perspectives.

Captain Anthony Copeland, A/2-2 FA Commander, discusses the next step with First Lieutenant James Sprackling, helping to prepare him for battery command.

on all key items of equipment in the unit.

Make time for battery officer professional development (OPD) classes. Have the lieutenants present training, and bring in outside experts to give them different perspectives. Seeing your former lieutenants succeed as battery commanders is tremendously rewarding.

Use Checklists

Format your standing operating procedures (SOPs) as checklists. Tactical units aren't think-tanks—they execute. A good checklist allows a new soldier to accomplish a task without wasted effort.

Most tasks lend themselves to checklists: transition to war; deployment; after-operations recovery; reconnaissance, selection and occupation of position (RSOP); and command maintenance. After developing a checklist, insist everyone follows it.

After each event, update the checklist as part of the AAR. Make your checklists living documents. One of the hallmarks of a good unit is its ability to react to the loss of a key leader. Good checklists allow it to do this.

Use Command Inspection Books

Keep your command inspection areas straight all the time. Someone must be responsible for each area, and a unit expert should check it.

Develop a command inspection book for each area. It should include the area checklist, appointment orders, the name and telephone number of higher headquarters inspectors, a record of any coordination with these inspectors and the results of the last inspection conducted at each level.

Require your unit experts to inspect the areas often. The goal is to keep your unit straight all the time. You'll be amazed at how much time this saves preparing for inspections. The unit also will get the full benefit of the programs. In unique units without battalion staffs (e.g., target acquisition or division artillery headquarters batteries), a program like this is absolutely essential.

Create Family Programs

The soldier's family is more important to him than his job. Family support groups offer a way to keep families involved. In every unit there are spouses willing to get involved, so use them to help run the program.

Use every opportunity to keep families informed. Talk to the spouses quarterly and before each major deployment. Give them a rundown on upcoming training events, and let them know how to get things done when the unit is gone. Know which soldiers have potential family problems, and get them the help they need. Make sure your family support group contacts each family weekly when your unit's in the field.

Unit open houses and family days pay big dividends. They offer great ways to get families involved. They also allow spouses to see what the soldier does at work. Spouses then understand the demands on their soldiers and are more comfortable surfacing problems to the chain of command.

Have regularly scheduled activities to keep families involved. For example, have a battery party every payday. If spouses know when the event will be, they're more likely to come. Then use these activities to put out important information.

Many soldiers are terrible about delivering fliers to their spouses. Use a different color paper for anything going to spouses. After a while, the spouses will begin "shaking down" their soldiers looking for pink or blue papers.

See your soldiers where they live. It's not hard for a commander or first sergeant to arrange an invitation to a soldier's home. Soldiers usually won't tell you about their personal lives. If you don't make the effort, you might not find out about their problems until it's too late.

The bottom line on families is that they are an important part of your team. Keeping them informed, taking an interest in them and helping them solve their problems leads to happier, more productive soldiers.

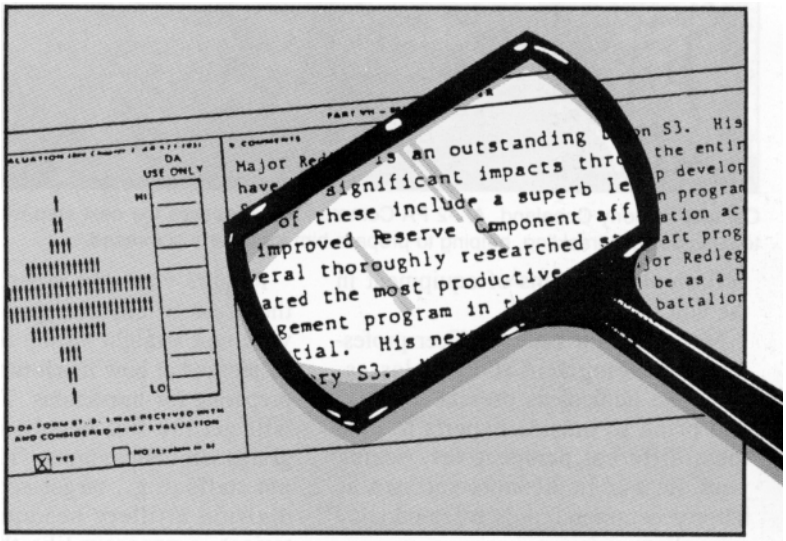
Conclusion

The surest way to earn a reputation as a superb battery commander is to lead a unit that consistently does everything well. Your battalion commander doesn't want you to have the best battery in the Army. He wants a strong *battalion.* In strong battalions, all the batteries are good. Most battalion commanders balance the units using people with various skills and abilities. When your battalion commander leaves you alone or asks your ideas to help others, you know you're doing things correctly.

The key to ingraining excellence is to do everything well while getting better all the time. If you put the right systems in place, take care of soldiers and their families and have a total commitment to the unit and the Army, the unit you lead will be an excellent one.

Major Lester C. Jauron commands B Battery, 5th Battalion, 30th Field Artillery, one of the Field Artillery Officer Advanced Course (FAOAC) batteries, at Fort Sill, Oklahoma. Until recently, he was a Small Group Leader for the FAOAC in the Fire Support and Combined Arms Operations Department at the Field Artillery School, Fort Sill. Major Jauron has served in the 1st Battalion, 78th Field Artillery, Fort Hood, Texas, as a battery executive officer and the Battalion S1 and S4. He commanded A Battery, 2d Battalion, 41st Field Artillery, and A Battery, 25th Field Artillery (Target Acquisition), 3d Infantry Division, both in West Germany.

Developing a Senior-Rater Philosophy



by Colonel Joseph P. Monko, Jr.

The current officer efficiency report (OER) system, centered around DA Form 67-8 US Army Officer Evaluation Report, has proven to be an exceptionally effective tool for rating officers fairly. In fact, it may well be the most effective system used by any military service. The relatively long time (more than 10 years) it has been in effect is a clear indication of the robustness of the 67-8 system.

With few exceptions, all favorable or adverse career actions (promotions, schooling, command selection and retention) are based on the collection of reports in an officer's file. And the senior-rater portion of the report is a key factor in an officer's success. Although all portions of the report are important, the senior-rater portion keeps coming up as the single most important.

In addition to their impact on individual reports, senior raters have an even greater impact on the overall OER system. This concerns the philosophy they establish within their organizations.

The purpose of this article is to stimulate thought on the development of an OER philosophy by senior raters, particularly officers entering into command. I don't propose to tell you specifically how to do it—only to give you a "straw man" with some thoughts to serve as a starting point. A senior-rater philosophy should include at least five principal parts: rating scheme, counseling plan, profile spread, center-of-mass concept and face-to-face close-out interviews.

Rating Scheme

All organizations must publish rating schemes. The senior rater needs to ensure the scheme in his organization reflects his leadership style and philosophy.

He should strive to have a clean, sensible scheme that facilitates command and control of the organization, one that's also administratively correct. A good rule of thumb to follow is to have the scheme follow operational lines whenever possible—emphasizing tactical efficiency over garrison or administrative ease.

At the battalion level, the battalion commander should rate or senior rate all officers. Not only is he the most experienced officer in the unit, he's also in the best position to judge the potential of his officers despite the diversity of their day-to-day jobs. For the senior rater portion of the report, *potential* not performance must be the overriding consideration. The battalion commander can apply this consistently across the unit.

Counseling Plan

The counseling provisions of the 67-8 system are some of its strongest points. Exactly how a senior rater intends to counsel his officers is the cornerstone of his OER philosophy.

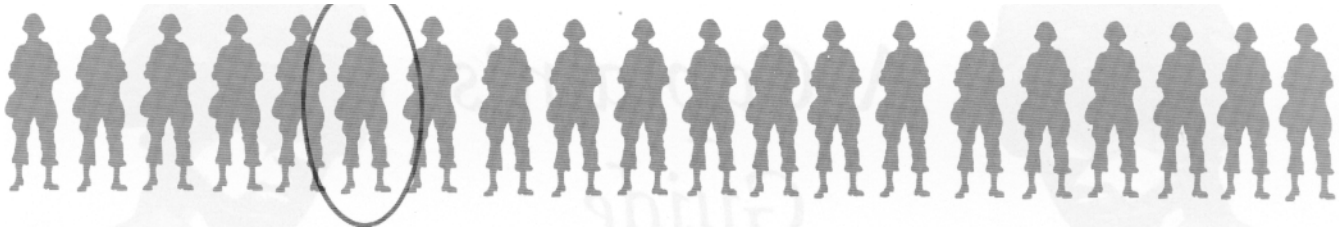
While raters are required to counsel their officers using DA Form 67-8-1 Officer Evaluation Report Support Form (referred to as the dash-one), senior raters only are required to review the completed dash-one. This, of course, doesn't prevent them from counseling those officers they senior rate.

Such counseling reaps enormous benefits. It gives the senior rater the chance to affect the objectives set by the rated officer and the rater and lets them know he's now "signed up" for those objectives.

It also gives the senior rater the opportunity to ensure his subordinates understand his philosophy and are headed in the direction he wants the organization to go. Furthermore, he gets to know his officers better and understand where those officers think they're headed.

Finally, by being part of the dash-one counseling process, the senior rater has a better basis for evaluating the performance of the rated officer during the rating period and providing any further counseling as needed to increase effectiveness.

Obviously, the size of the organization and the number of officers senior rated will make a difference as to how much counseling the senior rater



can do and how detailed it can be. But the concerned, caring senior rater needs to be part of the counseling process.

Profile Spread

A senior rater has to decide what his profile spread will be before he begins rating. This consists of two parts: how many blocks will make up the profile and where they'll be on the scale.

A profile spread of three blocks is the minimum needed to project a valid senior-rater profile, using the center-of-mass concept. The top block in the profile represents above center of mass, the second block represents center of mass and the third block represents below center of mass.

Some senior raters choose to have four or more blocks in their spread in an attempt to further refine their ratings. Any of these senior-rater profiles is valid as long as the majority of the checks aren't in the top block of the profile.

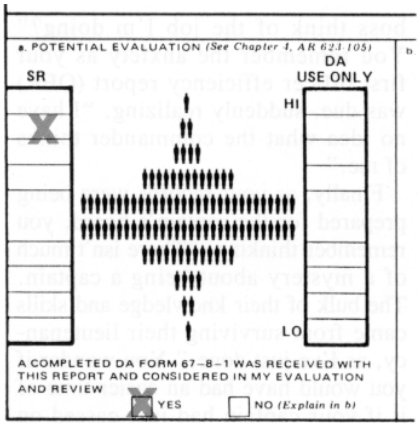
Once the senior rater decides on the number of blocks he'll have in his profile, he must determine his scale. Most senior raters place the highest block in their profile in the top block. This gives a clear picture of the senior rater's intention. Some officers chose to put their profile spreads somewhere down in the scale, leaving zeros in the higher blocks. Although this is a valid profile, in my opinion it serves little practical purpose.

Center-of-Mass Concept

At this point, the senior rater has to apply the center-of-mass concept to his proposed profile as well as decide what constitutes placement in relation to the center of mass. He has to decide what it takes (in a general sense) to be above center of mass, in his center of mass or below center of mass.

This is a subjective call on the part of the senior rater, based on his judgment of the rated officer's *potential*. Without some clear thought on this, the senior rater won't be able to counsel his subordinates adequately and quickly may find himself with an invalid, unworkable profile.

One note of importance. At this point in the life of the 67-8 system, a below-center-of-mass block check is an indicator of a lack of potential for further schooling, promotion or, possibly, even retention. If a senior rater considers this to be the rated officer's potential, then a below-center-of-mass block check is appropriate.



The senior rater has to apply the center-of-mass concept to his profile.

Face-to-Face Close-Out

Face-to-face presentation of a completed OER isn't required of senior raters, but it's a technique that can have a dramatic and profound impact on an organization. The senior-rater portion of an OER is going to impact on the rated officer's future. Certainly it warrants the senior rater's time to go over it with him in person.

During the review session, the senior rater ought to make sure the rated officer understands everything on the report and what the intent is. In addition, he should let the rated officer know what his profile is at that time.

Finally, he should pass on any positive or negative comments or suggestions that weren't in the report. The senior rater who faces each officer he senior rates with the completed report will go a long way toward leader development and build a spirit of trust and confidence so necessary for success in combat.

Summary

Each senior rater's OER philosophy is, and should be, unique—based on his beliefs and leadership style. These five points, coupled with your own thoughts, should help you develop your own philosophy.

Once you've defined your senior-rater philosophy, your counseling plan and face-to-face close-out interviews will clarify your philosophy for the entire unit. They'll also give the rated officers open, clear feedback from their senior leader—something they deserve.

Colonel Joseph P. Monko, Jr., is the Chief of Staff of the US Army Field Artillery Center and Fort Sill, Oklahoma. Until recently, he was the Chief of the Surety and Management Division, Office of the Deputy Chief of Staff for Operations and Plans, Washington, D.C. He also served as Chief of the Field Artillery Assignments Branch of the Total Army Personnel Command (PERSCOM), Alexandria, Virginia. He has commanded five batteries and the 2d Battalion, 320th Field Artillery, 101st Airborne (Air Assault) Division, Fort Campbell, Kentucky. In his 22 years on active duty, Colonel Monko has commanded units for almost eight years. He's scheduled to take command of the Field Artillery Training Center, Fort Sill, this month.

A Captain's Guide to Training Lieutenants

by Captain Jeffrey A. Appleget

You've just completed the Field Artillery Officer Advanced Course and are proceeding to your next duty station where you'll be assigned to a 155-mm M109A2 self-propelled howitzer battalion. Your unit has said there are several command slots opening up during the next several months. The realization suddenly hits you—"Soon, I'll be leading lieutenants."

You think back, not so long ago, to your lieutenancy and its trials and tribulations, and you try to remember what you needed and expected from your captains. You remember crisis management as a term that described many of those days as your captain sent you to put out fires and fix problems. After a while, reporting to work each day was a surprise with your wondering where the fire would be today.

You remember your first real dealings with NCOs who were supposed to work for you but seemed to know a lot more than you did. And you had wondered. "Just what am I supposed to provide them—what is it they expect of me?"

After a few months on the job as a lieutenant, you recall wondering about your performance. "How do I stack up against my peers?" and more importantly, "What does my boss think of the job I'm doing?" You remember the anxiety as your first officer efficiency report (OER) was due, suddenly realizing, "I have no idea what the commander thinks of me."

Finally, as your records were being prepared for the captain's board, you remember thinking, "There isn't much of a mystery about being a captain. The bulk of their knowledge and skills came from surviving their lieutenancy, as I've just done." You wonder if you would have had an easier time of it if your captain had just passed on some of that hard-won wisdom.

Stirring from your reverie, the words role model and the concept of mentoring move to the forefront of your thoughts. You are now the captain—soon to be leading lieutenants. "The young lieutenants will watch me—expect me to set the standard from the way I wear my uniform or handle a soldier's upset wife to calming the irate battalion commander or cooling the incensed first sergeant." You'll mold these lieutenants by your actions, consciously or unconsciously.

The enormous responsibility of the task is impressed upon you, and you repress an urge to panic, "Where do I start?" Your recollections bring to you the answer: "I'll tell them what I know, what I remember. I won't let them make the same mistakes or face the same uncertainties I did."

You pick up a pencil and start to write, outlining the lessons you're going to impart to these new guys.

Managing Time

Most lieutenants don't know how to manage their time effectively, which is critical for lieutenants to be effective leaders. Organizing skills and setting priorities are essential subsets of time management. The following procedure should help start your lieutenants toward creating an effective time-management system.

"Plug Him In"

First, the lieutenant must understand his significant duties and responsibilities (via the OER support form). He also must understand the significant events on the long- and short-range training calendars. Lastly, he must understand your priorities as his boss. With your goals for the week, the previous management tools and the weekly training schedule in hand, he should be prepared to plan his week to use his time to the maximum.

Ensure you're both clear on key events he must attend, such as maintenance and special weapons training

for a firing battery executive officer. Then, tell him where you want him for other key events. Whatever time is left is his to plan, but you may want to monitor his schedule in the beginning to check his priorities.

Check His System

The lieutenant's finished time-management product can be as simple as the upcoming weekly training schedule, highlighted and supplemented with notes. This should be further amplified with a 3x5 card done each day, scheduling the next day's critical events by time, place and priority. Using the 3x5 in conjunction with the long- and short-range training plan plus your monthly guidance, your lieutenant should be well-motivated and well-oriented—ready to execute.

Inspecting

Often, even if a lieutenant is in the right place at the right time, he still may be unclear about what he's supposed to be doing. Most lieutenants know their primary job is to inspect their areas of responsibility, but many don't know how to inspect.

As a captain, you already know the priorities of your boss, many times learned through his inspections. Take your lieutenant through his areas of responsibility and show him the standards you expect and what he should be looking for.

Inspections shouldn't be a game where he only takes care of the things you check. If you vary your inspection practices and cover all the key areas, your lieutenant will soon be a thorough inspector. When you first take your lieutenant through his areas, set aside enough time so you can check and set your standards in every area.

Correcting Deficiencies

Now that your lieutenant is where he should be, inspecting his areas of responsibilities, he's going to find areas not up to standards. One of the most difficult challenges for a lieutenant is correcting shortfalls or areas of difficulty.

At the lieutenant's level, there's much he can do to rectify almost any problem he finds. Indeed, many times it'll be much easier for him to fix a problem himself rather than make his NCOs correct the problem. But many lieutenants don't know how to take corrective action.

One of the lessons taught in the precommissioning and basic courses almost universally is the differences in the responsibilities and duties of officers and NCOs: officers plan and inspect and sergeants execute. But many lieutenants find it difficult to impart instructions to their NCOs.

This area will be difficult for you to evaluate, although not impossible. Your powers of observation should provide some clue—what are they each (NCO and lieutenant) doing to solve the problem? You also can take the direct approach and ask the lieutenant what actions he's taking to correct it.

Careful listening should point to who is doing what. His answer should include his instructions to his NCOs, including a firm date and time for his follow-up inspection. If his discussion centers on what he's doing, he's probably doing the work, and the sergeants are obligingly allowing him to do so. Remember, if this is the case, counseling the NCO will just exacerbate the situation. The lieutenant must be in charge, regardless of the age or experience differences between him and his NCOs.

"I'll tell them what I know . . . I won't let them make the same mistakes or face the same uncertainties I did."

. . . show him the standards you expect and what he should be looking for.

The lieutenant should be in charge, regardless of the age or experience differences between him and his NCOs.

Role Modeling

Your lieutenant is now functioning quite efficiently in his job—managing his time, inspecting, identifying problems and having his people fix those problems to his standards. Not surprisingly, he has more time since he has discovered how to do his job more effectively and efficiently. Now it's time to prepare him for his next job—as a captain.

The best way to do this is to go on leave and make him the boss. Make sure he's prepared as well as possible, and have a fellow commander subtly monitor his progress while you're away. But let him have a taste of the job before he gets there.

Some preparatory training includes having him sit in on Article 15 proceedings, taking him to command and staff meetings and having him shadow you as you accompany the battalion commander on inspections through your unit. Showing him the way you plan your days by prioritizing and organizing also should be helpful. Provide him a schedule of what you would check, meetings you would attend and your priorities, along with amplifying notes that cover the period of your absence. Then, go on leave and enjoy it!

In units with more than two lieutenants, it'll be impossible to let them all have a chance at command. But give each one a good preview of his next job before he gets there, if at all possible.

. . . prepare him for his next job . . . go on leave and make him boss.

Communicating

Training your lieutenant is an ongoing process, even after he has proven he can handle his next job. There are several professional skills he should be working on constantly as he's mastering his job.

Give Him Every Opportunity to Write

Writing is an area lieutenants are often weak in. One method of improving these skills is to have your lieutenant write and edit awards for his people. This is a more burdensome process for you than doing it yourself or having your shadow clerk write them, but it gives you the opportunity to review and critique his abilities in an area that is essential to an aspiring officer.

Another check on writing skills is requiring a written evaluation of assigned reading. You also may have him write reports or replies by indorsement (RBIs) when required. Writing or rewriting standing operating procedures (SOPs) helps to ease your paperwork load while providing your lieutenant another opportunity to develop these skills. Any method requires you to plan carefully to ensure he meets suspenses to your standards.

Teach Him to Read, Read, Read

Reading is also a skill lieutenants should develop further to become better professionals. Lieutenants should already have a working knowledge of the field and training manuals relating to their branches. Having them re-read areas you feel require additional emphasis keeps them current doctrinally and emphasizes your priorities in those areas. Other professional books and publications, such as the appropriate branch or other military magazines, have information for professional and personal development.

Requiring a short written review on an assigned reading is a good method of monitoring both reading comprehension and writing skills. A monthly reading program should be an integral part of officer professional development (OPD) at the battery or battalion level.

Practice His Speaking Skills

Oral communications skills are essential for any officer. Presenting classes and briefings, formally or informally talking to the unit and oral counseling are some examples of oral skills required at the battery level. Assigning a lieutenant a class or briefing in an area unfamiliar to him is a good method of increasing his personal knowledge as well as providing the opportunity to evaluate his composure, ability to handle stress, thought verbalization and other briefing techniques.

Talking to troops, whether giving the weekend safety briefing or outlining the tasks for command maintenance, helps him learn how to relate to the troops and gives him experience talking in front of a large audience. In any event, it's always a good idea for you, the boss, to listen to the briefing or class beforehand to ensure he's well-prepared and properly focused.

Feedback

You now have your lieutenant working hard in the many areas you have introduced him to as he attempts to become a better officer. A valuable training tool you must provide him is feedback. Feedback comes in many forms, three of which I discuss: monthly counseling, after-action reviews (AARs) and OER counseling.

AARs are ideal for critiquing training events.

. . . the perfect lieutenant hasn't been born yet . . . give him room to grow.

Before these discussions, however, you must lay a firm foundation for a lieutenant's work with the OER support form. This form should give him a thorough understanding of his significant duties and responsibilities. For new lieutenants or lieutenants working in a new job, the more detail incorporated into the form, the better.

It may be easier for you, as the boss, to write the initial support form for your lieutenant. This allows you to establish some of the standards and goals you expect him to achieve. It also gives him a guideline to examine and inquire about. As required, you both must agree to and initial the document within 30 days of the beginning of his rating period.

Counsel Him Monthly

Monthly counseling is no stranger to many of us—most units require their soldiers be counseled each month. Amazingly enough, we hardly ever offer this superb feedback to our young developing officers.

Written monthly counseling will pay tremendous dividends. First, it gives the lieutenant honest, hard-copy feedback on his job performance. It should include an assessment of strengths, areas needing improvement and professional development goals. It also lets him know you are concerned about his development and improvement yet hold him accountable for his performance. Finally, it sets an example for him to follow—he should counsel his subordinates just as he has been counseled.

Have Regular AARs

The AARs are ideal for critiquing training events, especially during field training exercises. *FC 25-20 A Leader's Guide to After-Action Reviews* is very helpful—the thrust is to gather key players at the completion of a training phase or event to discuss what just occurred. You should facilitate but not lead the discussion.

The purpose is to have the key personnel tell what they did (right and wrong) that contributed to the result. Holding an AAR with your lieutenant should give him training feedback as well as additional insight into the critical sub-tasks his subordinates are and are not mastering.

The AAR forces leaders to think through what just occurred and why. Thus, you'll be able to monitor your lieutenant's thought processes and perspective and the level of understanding his subordinates have on that particular requirement.

Counsel Him on His OER

The last form of feedback you should provide your lieutenant is OER counseling. This should be written, just as monthly counseling is. You should be able to justify any rating you give the lieutenant, substantiated by your monthly counselings. A lieutenant ***should not*** find out about his weaknesses by reading his OER.

Just as with your monthly counseling, your OER counseling should praise his strengths and be brutally honest about his weaknesses with specific areas for improvement identified and the corrective actions delineated. Even the very best lieutenants aren't perfect and have room to grow. You owe it to them to let them know where they stand and, at the same time, give them that room to grow.

After Command

You just finished counseling your last lieutenant on his OER. Although none of them was perfect, they all made noticeable progress in many areas during your command. None was surprised at your evaluation since he knew what you expected from him, and he had been counseled regularly over the course of the rating period.

The battalion commander is impressed with your counseling techniques and with the rapid progress your lieutenants have made. But it's time to move on. And when you have the chance, you're ready for the challenge—train more lieutenants!

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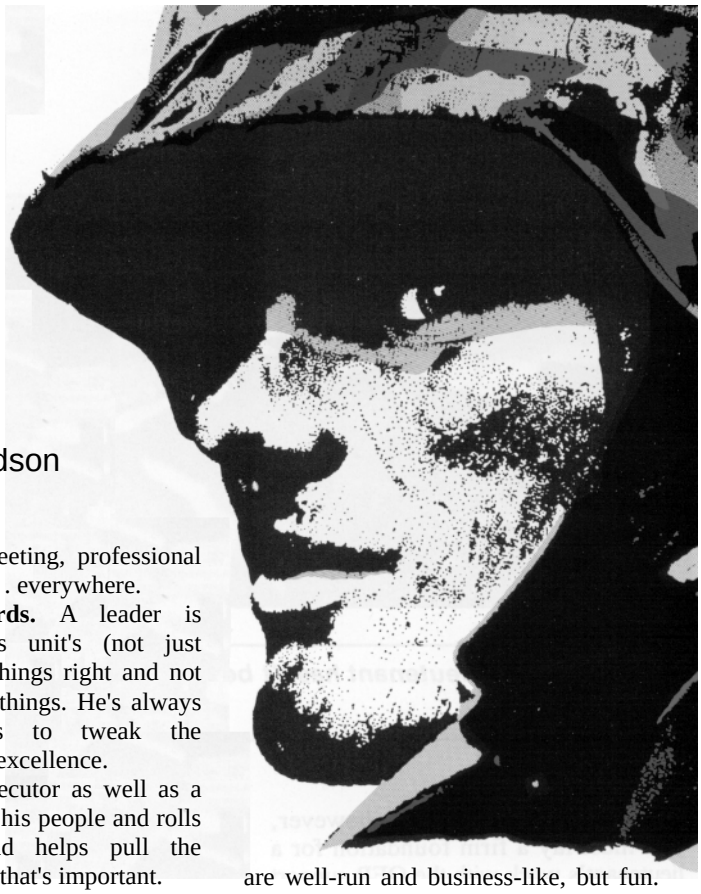
Leadership — *The Catalyst for High Performance*



by Lieutenant Colonel (Retired) Gary K. Richardson

Simply managing, supervising and administering a unit won't make it high-performing or even well-performing. Excellence requires leadership.

Leadership is a human touch. It's allowing people the freedom to be creative and to push the limits of their current efforts. The natural consequence of this risk-taking is they'll make mistakes. If those mistakes are used as learning events rather than opportunities to beat hell out of them, the potential for high performance will exist. I say "potential" because excellence requires much more.

> ***You can't be afraid of stepping on toes if you want to go dancing.***
>
> Lewis Freedmen

Leading Characteristics

Leaders have certain characteristics that enable them to raise an organization to greatness.

• **Vision.** A leader has a vision of what he wishes his unit to be. He always has an agenda (mission). A leader sees entire puzzles, not just pieces—the future, not just the present.

• **Persistence.** A leader not only has an agenda, but he's also determined to carry it through. He's a role model of consistency. Every time an opportunity presents itself, the leader "talks" the agenda—at every hail and farewell, award ceremony, meeting, professional development class . . . everywhere.

• **High Standards.** A leader is concerned with his unit's (not just individual's) doing things right and not just doing the right things. He's always looking for ways to tweak the organization toward excellence.

A leader is an executor as well as a strategist. He knows his people and rolls up his sleeves and helps pull the howitzer apart when that's important.

The leader knows he's on a joint educational venture with his people. The leader who demonstrates a willingness to learn new tricks will impart an "ok-ness" about that to the unit.

• **Direct Communications.** The leader is a relentless communicator. He coaches, he praises, he cajoles. He emphasizes the richest communications medium—face-to-face.

The leader finds time to be visible, to listen (with the heart) and not just to talk. He knows he can't really lead if he doesn't know the people to be led.

• **Team Building.** A leader thrives on team building. He's an expert at bringing people together, breaking down barriers, opening up channels of communications and rallying the troops to the cause. He thinks in terms of "we" not "I."

He gives authority commensurate with responsibility and finds ways to turn the spotlight on others when they come through. The leader uses the powers of his office to remove obstacles from the team's work.

He uses meetings to share information and spark motivation. His meetings are well-run and business-like, but fun. They aren't social events.

• **Self-Confidence.** A leader is comfortable with himself. He has the capacity to hear bad news and contrary opinions. He has a strong enough sense of self-esteem to not have to "win" every point of every discussion. Accordingly, he's more likely to hear the candid "ground truth" of the organization.

• **Integrity.** A leader places a premium on fairness with all parties. Playing favorites in public builds jealousies and detracts from the team concept. A leader makes the hard decisions to do what's right.

> ***Leadership is not choosing sides—it's bringing sides together.***
>
> Jesse Jackson

Facilitating Change

The following is a model for leaders to facilitate change in their organizations—help

make them high-performing.

Step 1: Initiation. Determine the major players to be involved in making the unit the excellent organization it could be. Identify *all* the people who need to be involved. In addition to identifying those who are part of the solution, identify those who are part of the pollution. They require new training, a new attitude or a new place to work—in that order.

Step 2: Overview. In planning the implementation of any change once you have identified the players, show them how their parts fit in the change or have them be a part of creating the change. Give them the big picture and the importance of their contributions in the larger effort.

A group becomes a team when each member is sure enough of himself and his contribution to praise the skills of others.

Norman G. Shidle

Step 3: Consequences. As early as possible and as specifically as possible, report the formal and informal rewards soldiers will receive if they do their part in the change effort. "Walk your talk" by rewarding their work in public and doing it frequently. Report also the formal and informal sanctions for not supporting the change. Walk your talk by censuring those who are not supporting the plan. Do so in private, but be assured the word will get around.

Step 4: Tools. You're asking people to change. More often than not, change is very painful and even scary. You need to give them tools such as information, technology, training, manpower, money, decreased bureaucratic red tape and an appropriate amount of decision-making power (authority with responsibility).

Step 5: Modeling. Soldiers will do what you do, not what you say. Show leadership. Over time, the leader needs to model the change and do it with high visibility. Tom Peters (*Passion for Excellence*) says that in a major change effort, fully 50 percent of the leader's calendar should reflect direct involvement in the change.

Step 6: Maintenance. There's an ongoing need for maintenance in the change effort—monitoring and nurturing. Create a five-minute stump speech about the change, give the speech daily and honor the change heros. Applaud the risk-takers.

Foster an increased rate of mistake making as early as possible and as quickly as possible. Mistakes (experience) are the power pellets used to fuel the ascent up the learning curve. Leaders must underwrite mistakes.

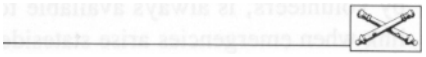
This maintenance is ongoing until the change is fully implemented. You will know that when you (1) see a significant number of people (critical mass) behaviorally embracing the change; (2) hear people verbalize the nature and the process of the change and describe the new behaviors associated with the change (they'll do this with passion); and (3) finally, in a crisis situation, watch the quick reaction in the new way that reflects their internalizing the change.

It's amazing how much can be accomplished if no one cares who gets the credit.

John Wooden

Creating the Atmosphere

Achievers must be able to take risks, get fresh, clear feedback and see a link between their actions and the desired results. They can't flourish in a unit where feedback is general and seldom, rewards are tied to events or seniority versus performance, and failure (an inevitable consequence of risk-taking) is punished rather than treated as a learning event. And it's the leader's job to create the atmosphere for achievers to flourish—to be the catalyst.



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Right by Piece

NOTES FROM UNITS

The 41st Field Artillery Brigade—Family Support in Action

Approximately halfway between Darmstadt and Aschaffenburg, West Germany, Babenhausen Kaserne is the home of the 41st Field Artillery Brigade—the Railgunners—three of its battalions and the 77th Maintenance Company. Its remaining two Field Artillery battalions are at Fliegerhorst Kaserne in Hanau. Fifteen kilometers to the west is Muenster Kaserne, another portion of the Babenhausen Subcommunity. The units at Muenster maintain and guard the contingency ammunition earmarked for the Brigade, and the Brigade is tasked to control and supervise the wartime outload of the bunkers. Thus, all the soldiers in Babenhausen and Muenster have direct, daily professional links that carry over into their social lives as they share the same housing areas and post facilities.

This homogeneous environment complements the community's efforts to attain the best possible quality of life,

and the Army recently recognized this quality of life. Babenhausen, as a part of the Darmstadt Military Community, won this year's Army Community of Excellence competition for mid-sized installations outside the continental US.

Subcommunity commanders, past and present, have the reputation of continuously planning to ensure effective and efficient programs, services and facilities are available for the future. We don't conduct business as usual. Through feedback from community residents, we constantly develop strategies and articulate our needs to improve all aspects of community life. And our programs are designed to help soldiers and their families throughout their assignment in Babenhausen. When we do our job correctly, we have citizens who show community pride in what we have and who we are.

Helping Agencies

Programs are available to families who find themselves in difficult times: Parents Encouraging Parents, the Outreach Program, financial and consumer affairs counseling, and the food-locker program are all provided by Army Community Services (ACS). Red Cross, staffed primarily by volunteers, is always available to provide that needed link when emergencies arise stateside.

Military life in Europe creates periods where soldiers are in the field and families are "alone" in the rear; however, families are never alone. Each battalion conducts predeployment briefings for families before lengthy field exercises. These briefings include information on community services available for the families, actions to take in the event of an emergency, financial advice and check-cashing information, mail procedures to and from the field location and special battalion programs to help the families while their sponsors are away from home. Each battalion leaves a rear detachment to help families that need assistance, and sister battalions that aren't in the field at the same time provide administration through their Personnel Action Centers.

Each battalion wives' group maintains a "chain of concern" for wives to help them when the husbands are in the field. The day-to-day pressures of life without the husband and father at home often create the need for families to be able to talk to people who are undergoing similar challenges.

Total-Community Involvement

Several programs allow community planners to exchange information and views with those soldiers and families residing in housing and encourage special projects. Feedback obtained in town hall meetings allows the community to improve its services. In addition, the community's bi-weekly bulletin provides a flow of information on upcoming events.

Big Brother. We believe if you draw from the community, you should put something back into the community, and the Big Brother Program creates the inextricable link

With programs such as Big Brother, the entire community joins in making Babenhausen Kaserne a better place to live.

between the soldier and his community, which is vital to success in all activities. Units on post actively help community agencies improve the quality of life for everyone. It's not uncommon to find soldiers from the 4th Battalion, 77th Field Artillery (4-77 FA), driving buses for Youth Services trips, the 1-27 FA helping the elementary school with its playground equipment or the 4-18 FA repainting the Child Development Center.

Wives' Clubs. The kaserne's wives' clubs are dedicated partners in community life. They plant flowers in the spring and fall throughout the kaserne, raise money for welfare projects and recently donated an information booth, located in the PX mall, for the benefit of the community.

German-American Relationship. Our soldiers and families know they are guests in Babenhausen, and friendly, continuous interaction with the local German population has resulted in close ties between our two communities. This has yielded benefits from new rental housing projects to lasting friendships.

Our relationship with the Luft Sport Club is a perfect example of German-American cooperation. The airfield is a part of the Kaserne, but joint agreements allow the Glider Club to use the airstrip. Soldiers and their family members may become members of the Club at reduced rates and not only can take rides in the gliders, but also can work toward getting pilots' licenses.

Other activities show the strong relationship we maintain with our host Ally. The annual forest walk by German and American community leaders highlights the delicate

Health-Risk Assessment, the first such program in V Corps, is for the 41st Field Artillery Brigade soldiers and their family members.

Program	Description	Program	Description
Hello	ACS welcome an orientation for new soldiers; each battalion has a similar program.	Wide Range of Youth Sports and Activities	Sports: basketball, football (Darmstadt Champions in four of the last seven years), baseball and gymnastics. Activities: ballet, summer day camp (children, ages 6-12), teen and preteen dances and the Easter Egg and 4th of July Festivals.
Health-Risk Assessment	The first such program in V Corps for soldiers and their families.		
Headstart	Education Center program to teach soldiers German.	Modern Motor Pools	• Heated maintenance bays with overhead cranes for increased efficiency. • Built-in oil separators to protect the local environment. • High-pressure vehicle baths and new wash racks.
Shuttle Bus	A service for soldiers and their families living in surrounding towns to the Kaserne, the 97th General Hospital in Frankfurt and support facilities in Hanau.		
		Award-Winning Dining Facility	1986 V Corps Connelly Award, in part for modernization that allowed it to reduce the number of cooks.
Increased Postal Service	With the APO in a new facility, service almost doubled to 44 hours per week.		
		Active Recreation Center	Battery-sized units participate in at least six sports leagues per year. Other Activities: billiards and table tennis tournaments, television/video rooms, outings to roller and ice skating rinks, tours of historical landmarks and castles and trips such as those to the Vatican on Christmas Eve and the battlefields of Bastogne and Verdun.
"Stateside Dining" Food Mall	Included in the renovated and enlarged PX and commissary facilities.		
Brigade Dining Facility School Lunches	Daily hot lunches for elementary students (kindergarten through Sixth Grade) served in their multipurpose room.		
School Medical Care	Brigade supplemental medical care for the elementary school during school hours.	Department of Defense School-Teacher Orientation	Includes hands-on demonstrations of the work of their students' soldier parents.
In-Home Day Care Center Certification	Sponsored by Child Development Services, which is mandatory.	Energy Awareness and Safety Weeks	Year-around efforts highlighted by designated weeks, serving as the standard for other communities.

In addition to the more common ACS, legal assistance, Chaplain's and other programs, Babenhausen Kaserne has unique or highly successful ones that helped its parent community Darmstadt Military Community win the 1989 Army Community of Excellence Award.

ecological balance of the local environment. The Saint Barbara's Run, sponsored by the Brigade, brings together many of the best runners in both communities. German-American Week events include a concert in the park by the 8th Infantry Division Band, a Kaserne Open House and a Western Bar-B-Que held on the Kaserne's soccer field. The Kaserne's units are invited to participate in Babenhausen's annual Fasching Parade. A German-American Volksfest, New Year's Reception, Christmas Tree Lighting Ceremony with live Nativity Scene provided by local German farmers, and the German-American Thanksgiving Dinner are all activities that everyone looks forward to.

Fliegerhorst Community Excellence

The Brigade's units located at Fliegerhorst Kaserne have many programs unique to their location and missions, and the Hanau Military Community has a wide range of programs and services to make an assignment there personally and professionally memorable. The 3-20 FA publishes an information booklet filled with tips regarding community services and upcoming battalion events. In addition, the wives' groups provide a translation service for the battalion's families and organize theme-oriented events, such as Easter Day and Winter Dinner, throughout the year. The 1-32 FA's wives' groups operate the Lady Lance Concession Stand to raise money for unit activities and conduct a monthly SUMMON (Single Unaccompanied Military Munch or Mend). This activity includes free uniform sewing and a sit-down, home-cooked meal.

Command Emphasis

The Brigade and each of the battalions take very seriously the responsibility to help families help themselves. It's the combination of professional competence, concern, caring and support that makes the 41st Field Artillery Brigade and the Babenhausen Community a better place to live.

Colonel David A. Schulte
Cdr, 41st FA Bde

USMC Battery Deployment Program

by Captain Jack E. Miller, Jr., USMC

Marine Corps artillery batteries from Camp Lejeune, North Carolina; Camp Pendleton, California; Kaneohe Bay, Hawaii; and Okinawa have been participating in the Unit Deployment Program (UDP) since its approval on 5 October 1985. The program is designed so batteries from participating direct-support (DS) battalions spend six months on Okinawa and 18 months at their respective stateside bases.

While the program serves several purposes, it was primarily implemented to stabilize the DS battalions on Okinawa by reducing the constant turnover of personnel on one-year unaccompanied tours and to save money by sharply reducing the number of permanent change of station (PCS) moves to Okinawa. Since the Army is studying the possibility of a similar program for its units in Germany and Korea, this article, though not all-inclusive, gives future Marine and Army battery commanders some insight into the Corps' administration of and operations and logistics for deploying batteries to Okinawa.

Administration

The administrative burden UDP places on deploying batteries at both the parent and the gaining battalions is significant and one of the biggest concerns to the battery commander. The three artillery regiments in the Corps have published a joint regimental order that establishes milestones (see Figure 1). Meeting these milestones makes the transition easier on everyone responsible for administrative matters.

Completion Date	Milestone
D-210	Begin career planning interviews.
D-90	Stabilize personnel.
D-90	Begin record-book audit.
D-80	Submit dependent allotment requests.
D-60	Identify advance party.
D-45	Present legal briefing.
D-40	Begin leave block.
D-10	Complete all record-book entries.

Figure 1: Joint Regimental Order Outlining Key Administrative Milestones for UDP

It's, of course, ultimately the battery commander's responsibility to accomplish these events. To do so, he must coordinate closely with the battalion personnel officer and ensure his first sergeant is intimately involved in the process.

One of the most time-consuming administrative events that must begin well before deploying is completely auditing each individual's record book. The battery commander must ensure all entries affecting pay, promotions, dependent information, legal matters, etc., are up-to-date. If done, the burden on the gaining battalion personnel officer is greatly lessened.

Briefings

The deploying battery commander will want to set up a family separation briefing approximately 45 days before deploying. The briefing should focus on areas that affect the morale, welfare and motivation of his married Marines, especially those who will be separated from their families for the first time. Opening remarks should tell the dependents why the unit is deploying, the duration of the deployment and what exercises and operations the battery can expect to participate in while deployed.

The chaplain and family services representatives should discuss ways to cope with the stress of separation and offer points of contact should problems arise (i.e., Red Cross, Navy Relief Society, Family Advocacy, etc.). A medical representative should discuss health care available on and off base and the Champus Program. The next topic should be financial planning that details the benefits of separate checking accounts, monthly allotments and adequate family support.

Finally, the battery commander should introduce key spouses whom other spouses can contact for help, if necessary. In addition to the separation briefing, the commander should set up a family-day picnic so spouses and children can get acquainted and establish support channels.

Another presentation that will pay big dividends is a legal briefing for all hands. It should cover topics such as wills, powers of attorney and Servicemen's Group Life Insurance (SGLI). Form wills and powers of attorney should be completed that day.

Completion Date	Milestone
D-180	Contact gaining battalion commander for exercise/training information.
D-90	Conduct field exercise; assess battery training level.
D-80	Contact gaining S3 to begin coordinating training facilities/ranges.
D-60	Conduct field exercise; re-assess battery training level. Update gaining S3.
D-30	Complete required semiannual/annual training.
D-10	Complete training/record-book entries.
D + 5	Conduct area familiarization briefing/tours.

Figure 2: Key Training Milestones for UDP

Leave

Before any extended deployment, a commander should allow his troops to take at least 15 days leave, if possible. This requires some detailed planning to ensure preventive and corrective maintenance schedules don't suffer and result in poor equipment readiness. Key maintenance people and other Marines needed for equipment turnovers should take their leave at the beginning of the leave block (Figure 1) to ensure they're present the last 15 to 20 days before deploying.

Operations and Training

The combat readiness of a battery will largely depend on when it stabilized and how much training it accomplished before deploying. Ideally, the battery's personnel situation will be stabilized at least 90 days before deploying to give the commander time to get to know his Marines and determine where they stand in the training cycle. Batteries should be able to accomplish all basic artillery tasks, but they also may have to conduct special training to support exercises or operations that will occur during the deployment. See Figure 2 for some key training milestones.

Training Readiness

The obvious way to find out what training exercises or operations the battery will participate in is for the battery commander to write or call the gaining battalion commander and ask. At the same time, the battery commander can let him know where the battery is in the training cycle and give him the training goals and objectives.

The gaining S3 can then determine the availability of ranges and facilities to support the battery. This needs to be accomplished as early as possible, especially if deploying to Okinawa, because ranges and facilities are limited and in-demand. And if a battery can complete all or most of its annual and semiannual training requirements before deploying (i.e., safety exams, rifle or pistol requalifications, physical fitness tests, essential subjects tests, water survival training, etc.), it can focus on artillery-specific and special training while deployed.

Exercises and Training

Marine Corps units deploying to Okinawa may participate in one or more joint and (or) combined training exercises in the Philippines, Iwo Jima, Mount Fuji, Japan or South Korea. Because of the live firing, the favorite of these for artillery batteries is Bear Hunt and Fog Rain, which occur September through December in South Korea.

For rotations in which a battery doesn't participate in one of the off-island exercises, the Central and Northern Training Areas of Okinawa are unique. Excellent facilities and ranges are available where Marines can shoot any weapon in the inventory or conduct jungle warfare training. Training on Okinawa can be restricted somewhat because of the changing political climate, but if commanders stay abreast of these developments, use their imaginations and plan accordingly, they can conduct very worthwhile training.

Logistics

The logistics involved in preparing for a deployment is extensive and requires considerable coordination between the battery commander and the battalion S4. (See Figure 3 for key logistical milestones.) Two major areas of concern are embarkation and equipment turnovers.

Embarkation

Higher headquarters will iron out most of the embarkation details for the battery. They'll let it know when the advance party and main body are scheduled to leave, what type of aircraft they'll embark on, how many buses will take them to the terminal and when to stage and load baggage. The battery simply will have to provide flight manifests, personnel numbers, a battery embarkation point of contact and loading team. The commander needs to allow time on his training schedule for a customs and immigrations briefing, baggage inspection and palletizing, and household goods and private vehicle storage.

If the troops pay close attention, the customs and immigrations briefing

Completion Date	Milestone
D-180	Establish turnover files/desk-top procedures for incoming battery.
D-90	Begin health/dental screening.
D-90	Submit advance party roster and Military Airlift Command (MAC) channel request.
D-90	Begin equipment accountability/serviceability inventories/inspections.
D-60	Immunize the unit.
D-45	Confirm airlift requirements.
D-30	Complete health/dental screening.
D-30 to D-15	Advance party departs; incoming advance party arrives. Begin turnover.
D-15	Prepare flight manifests.
D-5	Complete turnovers.
D-2	Stage and palletize baggage/cargo.

Figure 3: Key Logistical Milestones for UDP

Marines of B Battery, 1st Battalion, 10th Marines, fire their M198 howitzers at Chipori direct-fire range, Republic of Korea, during Exercise Bear Hunt 89.

can save a lot of time once the battery arrives in Okinawa. The customs officer will identify contraband that can't be brought into the country, outline the customs inspection procedures and paperwork and tell what immunizations are required.

The amount and type of personal baggage each individual can take are limited by the aircraft type, number of pallets authorized per unit and weight allowances. Personal baggage usually consists of one seabag, one garment bag and one small carry-on bag per man. These bags then have to be palletized to specified dimensions on Air Force 463L pallets for loading. The commander must schedule inspections to ensure the battery doesn't pack contraband and it doesn't exceed the weight limits and dimensions.

Since the battery will deploy under group temporary additional duty (TAD) orders for six months, personnel can store their household goods with the traffic management office (TMO) in non-temporary storage for the duration of the deployment. The battery can consolidate a list of those troops who want to do so, and the TMO can store the goods in one or two days.

The battery commander also can set up a private vehicle storage lot for those troops who can't leave their vehicles with friends or family. The best choice, of course, is to leave the vehicle with someone who'll maintain it properly.

Equipment Turnovers

Equipment turnover at both ends is a major evolution—as big as any annual logistical readiness evaluation and, in many regards, much more difficult to prepare for and conduct. Since all weapons, equipment, supplies and publications are to be turned over, the battery must identify SL-3 (list of major weapons systems components) shortages, unserviceable items and corrective maintenance problems early and start to correct the discrepancies *immediately*.

The battery executive officer is responsible for receiving and signing for equipment and facilities at the other end. He'll need to arrive on Okinawa 20 to 30 days before the main body to begin the myriad of inventories, barracks inspections, limited technical inspections and equipment operational checks. He'll need an advance party of 10 to 15 Marines, at least one from each commodity area, to help him. The battery commander signs as the responsible officer on his next quarterly inventory.

But the executive officer doesn't stop there. He must begin scheduling and coordinating training and facilities to support the battery's training goals and objectives. Also, he schedules Status of Forces Agreement licensing for the battery drivers and sets up unit indoctrination and familiarization briefings and tours. His responsibility in the turnover process is important so the main body can go to work immediately.

Conclusion

Battery UDP has several advantages and a few disadvantages that can be overcome with close coordination and planning. Like the infantry battalions on UDP, artillery batteries can expect to develop unity, continuity and esprit de corps as they stay together longer and escape the personnel turbulence that one-year tours create.

The DS battalions to which those batteries are attached on Okinawa may not experience that same degree of stability. But their staffs make up for it by supporting the deployed batteries as "one of their own," regardless of the lengths of their stays.

The UDP batteries have to rely heavily on both the sending and receiving battalions' administrative sections for support because of the increased unit diary and record-book entries affecting pay, promotions and personnel actions. If batteries can stabilize early to begin record-book auditing and conduct an administrative stand-down, it can be a smooth evolution. The process also helps the commander get to know his troops so he can provide the kind of leadership continuity the program is designed to allow.

The toughest part of UDP is the turnover of equipment. The gear has got to be in the best condition possible if the transition is to be an easy one. To do this, the battery commander must stay attuned to the state of readiness of his equipment, identify problems and fix those problems early in the cycle.

While battery UDP is time-consuming, manpower-intensive and has a few inherent problems, the program is maturing and becoming easier to execute as battalion staffs become more intimately involved in the rotation process. Best of all, it offers the commander a unique opportunity to build unit cohesion and exercise his leadership to the fullest.

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The FA Commander and M L R S

by First Lieutenant Charles I. McFarland

Field Artillery doctrine through the next century relies heavily on the multiple launch rocket system (MLRS). With this commitment comes the necessity for increased consideration of this relatively new and utterly unique weapon system.

The Field Artillery commander *must* be aware of the many characteristics of MLRS that differ from traditional cannon artillery to effectively employ it. This article outlines some areas critical to MLRS employment to encourage increased consideration of its many unique aspects.

Fire Planning

The controlling Field Artillery headquarters must plan MLRS fires. MLRS units have no organic capability to perform fire planning or to make decisions on the suitability of targets for engagement.

Although counterfire targets will probably be the most frequent mission for MLRS, the system's long range makes it suitable to attack deeper targets. In the *decide* phase of fire support planning, the commander determines the targets he expects may be suitable for MLRS fires. The targets include large ones, those located with large target location errors (TLEs), those he wants to have a high percentage of damage and targets beyond the range of cannons. (The MLRS launcher range is from eight to 30-plus kilometers.) Because of launcher and ammunition availability, MLRS fires must be limited to high-payoff targets.

Fire planners must know MLRS target criteria when planning for it. Mission requests must include target types the MLRS fire direction system (FDS) considers valid (see *TC 6-60 MLRS Operations*). The target size can't exceed 2,000 meters by 1,000 meters for rectangular targets, 1,000 meters by 1,000 meters for square ones or a 500-meter radius for circular targets. In addition, MLRS sub-munitions are ineffective against "hard" targets, such as tanks.

Launcher Availability

Fire planners also must be aware of launcher availability. MLRS uses three response postures for planning purposes (see Figure 1). Commanders should plan on no more than six launchers per battery available at a time. The other three could be conducting maintenance, sleeping or in a "Cool" mode. The MLRS commander must give guidance on how many launchers he can provide during a period.

An important consideration when planning MLRS fires is that the ablative coating, the material that protects the exposed metal parts of the launcher during firing, only lasts for 108 rockets. Repair can take up to 24 hours, significantly affecting launcher availability. (The new neoprene panel doubles the launcher's cover life expectancy

Response Posture	Definition	Time from Receipt of Mission to Firing
Hot	Ready for Fire Mission	4 Minutes plus Travel from Hide Area to Firing Point
Cool	Stabilization Reference Package Off (Requires Time for Gyro to Stabilize)	Hot Response Time plus 8 Minutes Stabilization Time
Cold	Out of Action	30 Minutes

Figure 1: The Three MLRS Launcher Response Postures

and takes only three to four hours to repair. MLRS systems in Europe have been retrofitted with the panels, and those in the continental US are scheduled to be retrofitted by July.)

Also, the technical complexity of the launcher system at times can require troubleshooting for an hour or more to identify a maintenance problem. This, combined with the accessibility of repair parts, has a major impact on the availability of launchers.

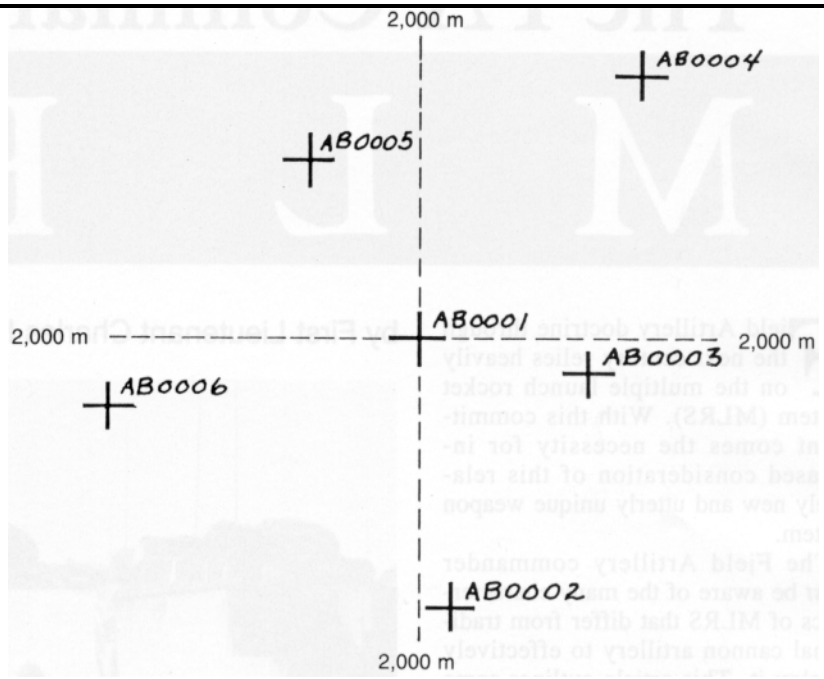
Schedule of Fires

A schedule of fires for MLRS should include no more than six missions per battery (based on launcher availability). Any more than one fire mission per launcher requires up to 20 minutes between missions to allow for movement and reload.

However, an MLRS battery, through the FDS, can fire on targets within 2,000 meters of each other as a single multiple-aim point mission. MLRS can fire up to 6 different aim points in a single mission, depending on the number of rockets required per target (see Figure 2). Although having 6 targets in a 2000-meter radius or achieving the desired effects on each target with two rockets is unlikely, the capability to fire in this manner exists. But the FDS operator must compute this procedure manually.

The FDS can store four fire plans with a total of 54 targets. The planned targets are sent to the launchers as time-on-target (TOT) missions. The FDS programming requires that H-Hour be input 30 minutes before the first mission. And on-call schedules should be sent to the FDS at least 30 minutes before H-Hour to allow lead time for processing at the FDS and the launcher.

Launchers then can shoot within three to five minutes of receiving the mission, assuming enough rockets are on board. If the launchers have to reload, response time may take up to 20 minutes.



Aimpoint	Target #	E Shift	N Shift	# Rounds
01 of 06	AB0001	+ 0000	+ 0000	02
02 of 06	AB0002	+ 0300	– 1700	02
03 of 06	AB0003	+ 0900	– 0200	02
04 of 06	AB0004	+ 1500	+ 1800	02
05 of 06	AB0005	– 0500	+ 1000	02
06 of 06	AB0006	– 2000	– 0400	02

Note: Each target shift can't exceed 2,000 meters easting and 2,000 meters northing.

Figure 2: The MLRS can fire on targets within 2,000 meters of each other in a single multiple-aim point mission. It can fire up to 6 different aim points in a single mission.

Acquiring Targets—Firefinder

There will be no shortage of targets for MLRS on the battlefield. The challenge for the fire support coordinator (FSCOORD) is to decide what types of targets he wants MLRS to fire on, which acquisition means needs to acquire MLRS targets and how to send those targets to the MLRS FDS.

The most likely source of MLRS targets is the Firefinder radar. The commander has several options concerning how Firefinder-generated targets will be transmitted to the MLRS unit. Whoever controls the radars should rehearse passing targets to the FDS before the mission to work out any bugs that may occur in the message formats. Since Firefinder only generates target sub-types of mortar/artillery "unknown," the tactical fire direction system (TACFIRE) or the MLRS FDS should change the subtype to light, medium or heavy.

One option to consider is the Firefinder-to-MLRS FDS direct interface. The Firefinder-MLRS direct interface can result in an extremely effective counterfire battle. However, this interface creates a series of issues that must be addressed.

One of the most significant issues is that TACFIRE is out of the net. Therefore, commanders must ensure the intelligence gathered by Firefinder, usually automatically sent to TACFIRE, is available. Also, the operations officer will have to have some idea of which Firefinder-generated targets to fire because the FDS can't prioritize targets automatically as TACFIRE can. This means the commander's guidance must be thoroughly briefed to the MLRS battery operations officer before the battle.

Ammunition Considerations

More so than with any other weapon system, ammunition resupply capabilities will dictate how to employ MLRS to support the battle. Because

of the large size and weight of the launch pod/container (LP/C), high-volume resupply is difficult. To understand the significance of this issue, one must first understand the MLRS ammunition resupply system and its limitations.

Resupply System

Each MLRS battery has three ammunition sections of six heavy expanded-mobility tactical trucks (HEMTTs) per section. The HEMTTs each have a heavy expanded-mobility ammunition trailer (HEMAT). These resupply vehicles (RSVs) can carry six LP/Cs per vehicle and trailer.

One of the three ammunition sections is attached to each firing platoon. The section supplies ammunition to the platoon's three launchers at a load supply point (LSP) in the platoon's operations area. As launchers deplete their on-board rounds, they return to the LSP to reload. As LP/Cs are loaded on the launchers, the firing platoon leader dispatches an RSV to replenish the LSP. The RSVs go to the battery headquarters where the logistics operations center dispatches a convoy of all three platoons' empty RSVs to the ammunition transfer point (ATP) or ammunition supply point (ASP) supporting the battery (see Figure 3).

MOADS

Under the new maneuver-oriented ammunition distribution system (MOADS), MLRS units can expect to receive ammunition support from a fourth ATP in the division rear. This ATP is dedicated to high-volume and high-tonnage ammunition for the corps artillery and MLRS and can handle 970 short tons (STs) per day.

The division MLRS battery needs an average of 450 STs of ammunition daily. The corps battalion needs an average of 1,350 STs per day. (See Figures 4 and 5.)

Concerning this fourth ATP, the Field Artillery commander, through the division ammunition officer (DAO) or corps support command, must address three issues:

1. Can the ATP support the volume of resupply required by MLRS?
2. How far forward can the ATP be to reduce RSV turnaround time?
3. Is the ATP organized to facilitate rapid resupply with the materiel handling equipment (MHE) organic to the MLRS RSVs?

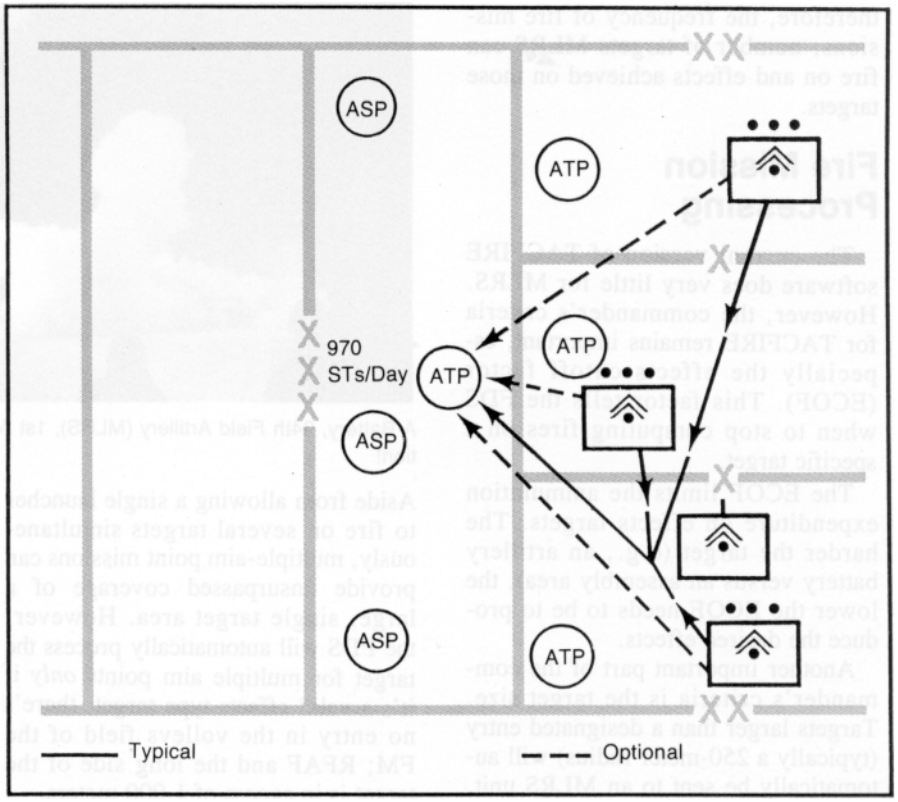


Figure 3: MLRS Ammunition Resupply Options

LP/C per Launcher per Day		Percent of Time/Day
Sustained	16	71
Surge	30	20
Peak	47	4
Average LP/C per Launcher per Day = 20		

Figure 4: Ammunition Expenditure of an MLRS Battery

20 LP/C per Launcher per Day X 9 Launchers in Each Battery
= 180 LP/C per Battery per Day
= 450 STs per Battery per Day

180 LP/C per Battery per Day X 3 Batteries in Each Corps MLRS Battalion
= 540 LP/C per Battalion per Day
= 1,350 STs per Battalion per Day

6 LP/C per RSV per Battery Sortie
= 15 STs per RSV per Sortie
450 STs per Battery per Day = 30 RSV Sorties per Battery per Day

450 STs per Battery per Day X 3 Batteries in Each Corps MLRS Battalion
= 1,350 STs per Battalion per Day
= 90 RSV Sorties per Battalion per Day

Figure 5: MLRS Ammunition Resupply Requirements

The answers to these questions will dictate the controlled supply rate and,

therefore, the frequency of fire missions, number of targets MLRS can fire on and effects achieved on those targets.

Fire Mission Processing

The current version of TACFIRE software does very little for MLRS. However, the commander's criteria for TACFIRE remains important, especially the effects cutoff factor (ECOF). This factor tells the FDS when to stop computing fires on a specific target.

The ECOF limits the ammunition expenditure on effects targets. The harder the target (e.g., an artillery battery versus an assembly area), the lower the ECOF needs to be to produce the desired effects.

Another important part of the commander's criteria is the target size. Targets larger than a designated entry (typically a 250-meter radius) will automatically be sent to an MLRS unit. In fact, TACFIRE only will select an MLRS unit to fire if the target size exceeds minimum MLRS size or if the target is out of the range of cannon artillery.

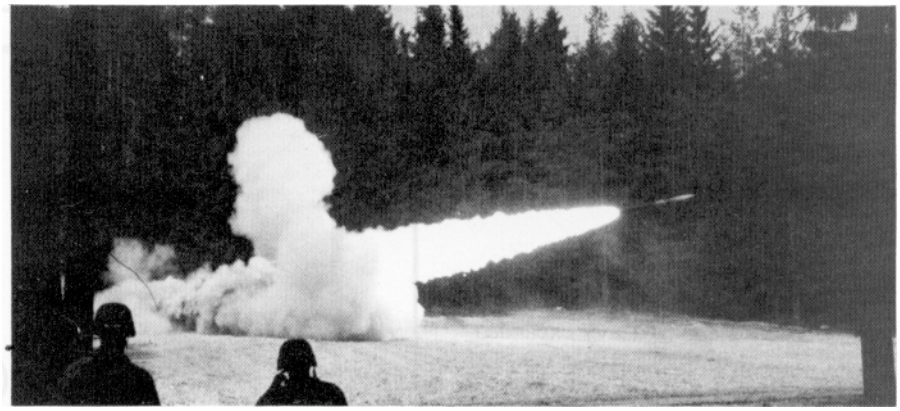
Effects Processing

TACFIRE doesn't compute effects processing for MLRS; the MLRS FDS does it at the battery fire direction center (FDC). Because of this, targets are frequently sent to the MLRS battery as volley targets with a standard entry in the volleys field, usually six rockets.

The problem with this habit is twofold. First, routinely firing a standard number of rounds on every target negates the value of effects processing. The number of rounds fired will seldom be appropriate for the target. Obviously, firing too few rounds results in less than the desired effects.

Just as significant is that firing too many rounds unduly strains an already limited ammunition resupply system, increases the risk of being acquired, unnecessarily stresses the sometimes sensitive launcher system and causes unnecessary wear and tear on the ablative coating or neoprene panels.

Second, one of the unique characteristics of the system is its ability to fire multiple-aim point missions.



A Battery, 94th Field Artillery (MLRS), 1st Armored Division Artillery, West Germany, in action!

Aside from allowing a single launcher to fire on several targets simultaneously, multiple-aim point missions can provide unsurpassed coverage of a large, single target area. However, the FDS will automatically process the target for multiple aim points *only* if it's a valid effects-type target, there's no entry in the volleys field of the FM; RFAF and the long side of the target is in excess of 1,000 meters.

There's a disadvantage in firing the computer solution for effects-type targets: no one knows how many rounds the computer will select to fire. Firing effects targets without regard for ammunition expenditure could quickly run the MLRS out of rockets. The commander must have an idea of what percentage of effects MLRS can achieve in relation to how many rockets he can afford to shoot.

A possible solution to this dilemma is to locally produce an abbreviated *Joint Munitions Effectiveness Manual* (JMEM) for the controlling Field Artillery headquarters to use. The MLRS FDS can compute the number of rounds required to achieve different levels of effects, based on range to potential targets and target type/subtypes. This process can take place before each battle and takes only a few minutes. It allows the FSCOORD to take full advantage of effects processing and multiple aim points while maintaining ammunition accountability.

Response Time

Once the FDS receives a fire mission, a typical response time at the FDC (depending on how many missions are currently in the queue) can run from one to three minutes or longer if a downrange mask check is initiated. When a launcher gets the mission, it can fire the mission in three to five minutes (assuming no movement time). The launcher can take up to eight or nine minutes to fire if it has to move a great distance from the hide area to the firing point. When you add the response times for the various other elements in the net, the total response time can be as much as 15 minutes.

Training

Effective MLRS employment depends on an understanding of the capabilities and limitations of the system and the Field Artillery commander's active integration of MLRS fires in his planning. Fire support elements (FSEs) must manually intervene frequently in fire planning and fire direction operations for MLRS. Because of this, it's of the utmost importance that FSEs train regularly with the MLRS units in a realistic manner.

All too often, the MLRS is subjugated to a minor role in training exercises because of either a lack of understanding of the system or an emphasis on cannon training. Field Artillery commanders must recognize the need for continuous and realistic training, such as TACFIRE-FDS and Firefinder-FDS sustainment training, and actively integrate MLRS into fire support planning training.

The Future

In the coming years, the MLRS will play an increasingly larger role in the Field Artillery mission. With this commitment will come many new issues to address. We'll strain the ammunition resupply system even

further when each heavy division has an MLRS battalion to resupply during combat—even more so when we add the MLRS family of munitions (MFOM) and the Army tactical missile system (Army TACMS).

The next TACFIRE software version will interface better with the FDS, easing tactical fire control. And the combination of Army TACMS with the joint surveillance and target attack radar system (JSTARS) and other future sensors promises to allow us to deliver overwhelming fire support for the deep battle—including the fires of MLRS.

First Lieutenant Charles I. McFarland is a multiple launch rocket system (MLRS) Firing Platoon Leader in B Battery, 6th Battalion, 27th Field Artillery, III Corps Artillery, Fort Sill, Oklahoma. He's an Honor Graduate of the MLRS Cadre Course and a Commandant's List Graduate of the Field Artillery Officer Basic Course, both at Fort Sill. Lieutenant McFarland served as an augmentee Observer/Controller at the National Training Center, Fort Irwin, California, and as an Army Training and Evaluation Program (ARTEP) Evaluator for the 2d Infantry Division's MLRS battery in 1989. He was the Firing Platoon Leader for the Army tactical missile system's (Army TACMS') first flight test at White Sands, New Mexico this year.

Redleg Review

BOOK REVIEWS

Hitler's Generals

Edited by Correlli Barnett. New York: Grove Weidenfeld, 1989. 497 pages. $24.95.

Correlli Barnett, the author of two volumes of military biographies (*The Desert Generals* and *The Swordbearers*) has edited a new collection of biographical essays titled *Hitler's Generals*. The goal of these biographies is to address the relationship between Hitler and his generals, including general staff officers and field commanders, and the relationships among the generals themselves. Included are sketches of Fritsch, Beck, Witzleben, Stuelpnagel, Speidel, Brauchitsch, Halder, Blomberg, Keitel, Jodl, Warlimont, Rundstedt, Reichenau, Manstein, Kleist, Kesselring, Rommel, Model, Arnim, Paulus, Senger, Kluge, Dietrich, Manteuffel, Guderian and Student. Among the authors of the biographies are Robert O'Neill, Walter Goerlitz, Field Marshal Lord Carver, Samuel Mitcham, Martin Blumenson, Kenneth Macksey and General Sir John Hackett.

Barnett starts the book with an introductory essay on Hitler, emphasizing Hitler as the Supreme Commander and the impact of his strategic decisions on his generals. He also introduces one of the major themes of the book, ". . . the central mystery of why a generation of able commanders and staff officers from the most deeply professional officer corps in the world became subservient to his purposes, why the best of them failed to deflect him from his disastrous decisions, why most of them continued to serve him with zeal, or at least with a resigned sense of duty, until sacked or until the Third Reich's final wreck."

For every well-known Third Reich commander of World War II, the book includes a lesser known, but not less important figure. The first essay is a joint biography of Werner von Fritsch, Army Commander in Chief, and Ludwig Beck, his Chief of Staff, who were both removed by Hitler in 1938 for their opposition to his plans for military expansionism. Another essay addresses the three principal staff officers of the Oberkommando der Wehrmacht: Keitel, Jodl and Warlimont. The essays document the early careers of the generals, concentrating on their assignments during World War I and on important jobs during the build-up of the German Army under Hitler.

For the most part, the biographies provide insight into their subjects, reflecting significant research and effort to understand the individual. Perhaps the most sensitive essay is the sketch of Frido von Senger und Etterlin, written by his son Ferdinand and completed by his grandson (after the death of Ferdinand). The most disappointing biography is the Blumenson chapter on Rommel, which has little new to say about Rommel and his relationship to Hitler or his peers. The reader can gain more insight into Rommel by reading the chapters on Rundstedt, Kesselring and Kluge.

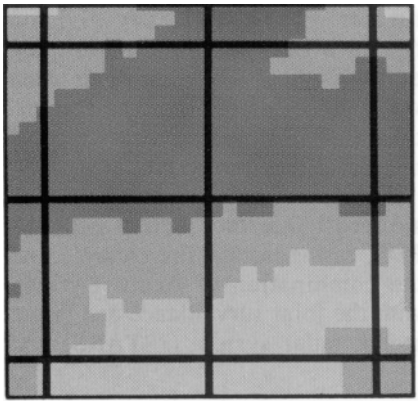
The reader undoubtedly will wish for biographies of other important generals of the Third Reich. This reviewer would have liked a biography of General Balck and also an appreciation of General von Seeckt, who trained so many of these commanders in the period before Hitler came to power.

Barnett's judgment of the German officer corps is "professionalism is not enough; obedience to an oath and to orders is not enough. What their traditions, upbringing and training had failed to give Hitler's generals was a wider sense of political and social responsibility; a belief that to obey their own consciences constituted the highest duty of all."

This book should be of special interest to Redlegs because several of Hitler's generals were originally Field Artillerymen (10 of the 26 in this book). From reading biographies such as these, we can understand the strengths and weaknesses of these officers for our own professional and personal growth.

CPT David Emery, FA
New Hampshire ARNG
Derry, NH

BCTP Warfighter and the Heavy Division



Simulation Series

by Colonel Robert S. Ballagh, Jr., and Major Virgildee Daniel

The dynamic yet perishable skills of fire support must be honed in a challenging environment. With the advent of Warfighter, the division or corps command post exercise (CPX) component of the battle command training program (BCTP), heavy divisions can realistically simulate combat decision making, including a demanding integration of fire support. The positive effect of this for professional growth and training within a division can't be overemphasized.

Warfighter Workstation OIC: Div Arty Executive Officer		
DS Cell (DS and Reinforcing Field Artillery Units)		
Cell OIC	*DS Battalion S3*	
Operations Officer Intelligence and Targeting NCOIC VFMED Operator Radio-Telephone Operators (RTOs)	Battery Commander Battalion S2 Battalion Operations or Intelligence Sergeant 2 13F 5 Several MOSs	This part of the Cell performs CP functions.
Assistant Operations Officer (Fire Direction Officer or FDO) Computer Operators	Battery Commander or Executive Officer 2 LTs (Supervised by Assistant Operations Officer)	These three perform JESS computer functions.
Administrative/Logistics Operators	Battalion S1 and S4	These two perform combat service support (CSS) and JESS functions.
Total: 16 Personnel		
GS Cell (GS and GSR Units)		
Cell OIC	*Battery Commander or Executive Officer*	
Computer Operator NCOIC VFMED Operator RTOs	Platoon Leader Platoon Sergeant 1 13F 2 Several MOSs	This part performs CP and JESS Functions.
Administrative/Logistics	Personnel and Administration Center NCO and Supply Sergeant	These two perform CSS and JESS functions.
Total 8 Personnel		

Warfighter Workstation Staffing. Our two DS battalions each took shifts in the DS Cell. The GS Cell was composed of personnel from both the MLRS and target acquisition batteries, augmented by the VFMED operators.

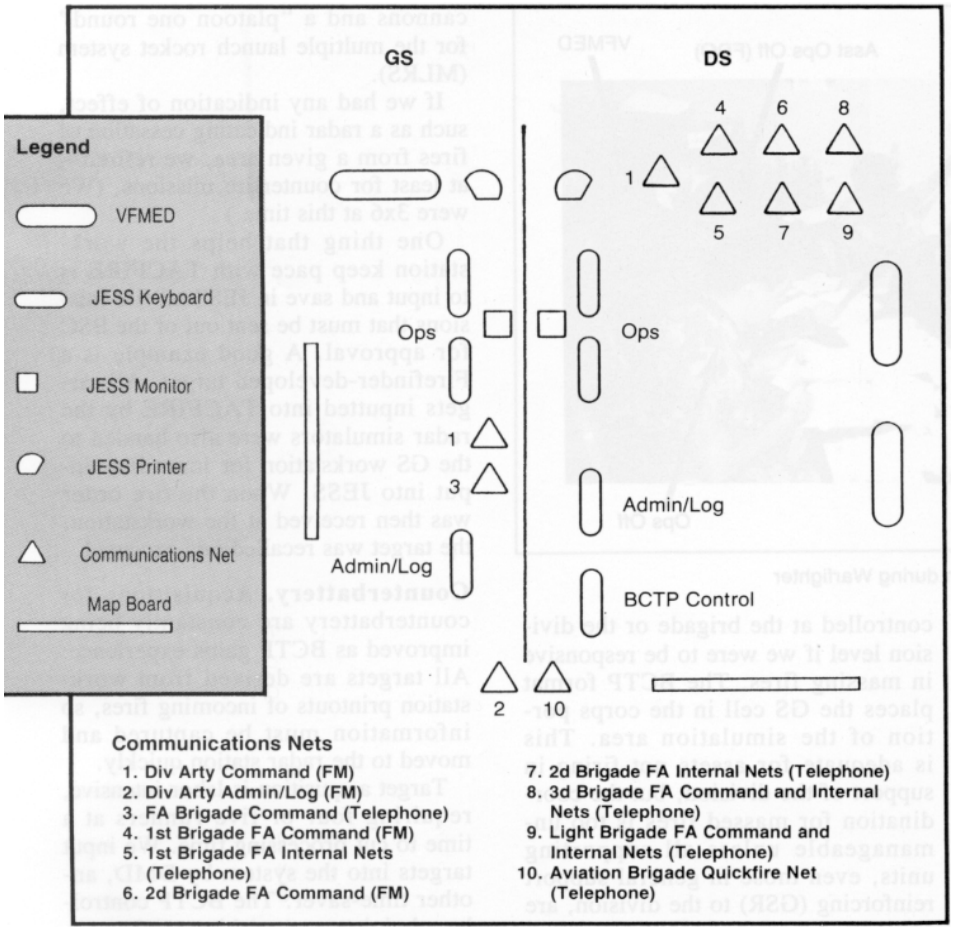
The 5th Infantry Division (Mechanized), Fort Polk, Louisiana, has limited opportunities to work with either a corps artillery or a reinforcing Field Artillery brigade. During our Warfighter exercise, we practiced with both. The lessons learned about integrating and coordinating fire support were invaluable to our future training and standing operating procedure (SOP) development.

Warfighter Scenario

The scenario for our Warfighter put the 5th Mech in a reinforcing role in the central European theater. The Division Artillery (Div Arty) was forwardly deployed in a general support (GS) role under our reinforced corps artillery's control at the start of the exercise (Startex), while the Division (-) occupied a tactical assembly area.

The corps campaign plan required the 5th Mech to move forward with minimum signature and counterattack through a division in contact. A successful attack would allow the previously committed division to withdraw and reorganize.

The first significant fire support challenge was to reintegrate the Div Arty into the Division's maneuver while executing a forward passage of



Div Arty Workstation Schematic

lines through a unit in contact. Critical to this was the reorganization of all artillery in the sector and the 5th Div Arty's assumption of force artillery headquarters responsibility.

From this exercise, we learned lessons about our preparation, training and support structure for combat; division fire support coordination and targeting; and Div Arty operations.

Preparation, Training and Support Structure

The BCTP-sponsored week-long seminar at Fort Leavenworth, Kansas, gives the division commander an opportunity to develop better ways to communicate his intent while his key staff and commanders learn how to respond and expand upon it. Theoretically, this happens in the normal training routine. But seldom do commanders enjoy such an intense week with so few distractions to allow quality growth of their leadership team.

Preparation

We recommend that brigade fire support coordinators (FSCOORDs) be part of the seminar, although they aren't part of the standard list of attendees. Their inclusion enhanced our integration of the scheme of maneuver and the scheme of fire support. Involving the brigade FSCOORDs with their commanders in the dialogue of the broader division focus proved to be a critical preparation step.

The seminars have another benefit. The Battlestaff, that core of key majors and captains who translate guidance into plans and orders, becomes a close, supportive team as it develops the staff products during the seminar. It's critical the team remain together throughout the planning and execution of the Warfighter CPX. The teamwork and mutual trust developed is an indispensable chemistry that commanders often overlook. The division's chief of staff is crucial here.

Training

Division staff members can't escape the need to train. The 5th Infantry Division has had very robust quarterly CPXs for years. Therefore, we've had staff dialogues and have tested and revised our SOPs regularly in a division operations environment. This training was the firm foundation upon which we prepared for Warfighter.

Units need regular access to the joint exercise simulation system (JESS) game used to drive Warfighter. Its subtleties can overwhelm you if you're not technically proficient in the system, and system skills are perishable. We don't have JESS at Fort Polk, so our people's simulation expertise in replicating the various battalions and other divisional elements was critical.

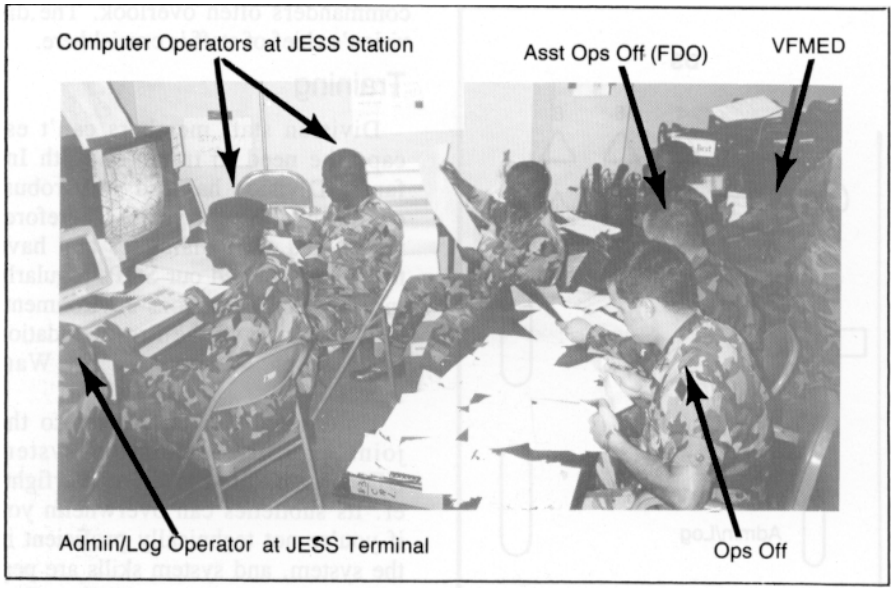
Fortunately, we trained individuals during two CPXs within four months of our exercise. One major benefit was our participating in the III Corps Warfighter at Fort Hood, Texas. We learned valuable lessons about division operations in the corps context, including how to translate map-based plans into time and space within the JESS framework.

The "battle of the keyboards" closely approximates the various difficulties units can expect to encounter during movement and in resupply operations. We were neither prepared for the battlefield congestion nor for the time required to move units even moderate distances. Each brigade was a workstation (the JESS "fighting element"), so brigade commanders and staffs got firsthand exposure to what their battalions would face in running the simulation.

Support Structure

Artillery commanders were challenged to keep their artillery moving and survivable on the JESS battlefield. The task to disperse and yet mass fires was compounded by a variety of problems discussed later.

We drilled on these lessons learned at Fort Hood and geared our last CPX to replicate the intensity and rules we would face during Warfighter. We got JESS equipment from Fort Hood and fought a division battle. Division, brigade and separate battalion command



The DS Cell of 5th Infantry Div Arty Workstation during Warfighter

posts (CPs) were established in field sites, and our entire communications infrastucture was exercised, including the tactical fire direction system (TACFIRE).

BSC. Subordinate battalion and company personnel manned the battle simulation center (BSC). We simplified this by making a battalion commander and his staff responsible for a 12-hour shift. This meant a coordinated team was already in place, not one built artificially for the CPX. Each battalion commander, therefore, had his own fire support officer (FSO) and fire support element (FSE) staff supporting him, including a variable format message entry device (VFMED) and a digital message device (DMD) in the workstation.

For artillery operations, both GS and direct support (DS) commitments have to be met as well as counterbattery radar operations. Our battalion commanders, as brigade FSCOORDs, were players and weren't allowed to supervise a workstation. We developed and trained with a system that has stayed with us for simulations beyond the Warfighter exercise.

We gained flexibility by placing the GS and DS artillery cells close together. The Div Arty executive officer could manage both from a central location, orchestrating changes in organization for combat and reacting to logistical difficulties brought on by the simulation.

All cannon and rocket units firing for the division, regardless of their tactical missions, had to be centrally controlled at the brigade or the division level if we were to be responsive in massing fires. The BCTP format places the GS cell in the corps portion of the simulation area. This is adequate for assets not firing in support of the division, but the coordination for massed fires is too unmanageable unless all supporting units, even those in general support reinforcing (GSR) to the division, are controlled out of a single complex supervised by the senior artillery simulator.

The price for this is a significant logistical problem because of the way JESS' logistical nodes are built. It is conceivable for the artillery workstation to be supported logistically by up to five different logistical workstations, which makes a system of central record keeping for artillery units absolutely essential.

TACFIRE. Particularly challenging was the laydown for communications required to bring TACFIRE and FM voice into the BSC. Wire lines were at a premium, and we couldn't replicate all nets. This communications system is so critical that it requires constant attention. The shift battalion had both its signal officer and wire teams present at all times.

Using TACFIRE presented several problems. The algorithms for volume of fire in TACFIRE and JESS aren't compatible. Experience led us to double the volume of fire indicated in TACFIRE to obtain adequate results. Roughly stated, this means a "battalion six rounds" was about right for cannons and a "platoon one round" for the multiple launch rocket system (MLRS).

If we had any indication of effect, such as a radar indicating cessation of fires from a given area, we refired—at least for counterfire missions. (We were 3x6 at this time.)

One thing that helps the workstation keep pace with TACFIRE is to input and save in JESS all fire missions that must be sent out of the BSC for approval. A good example is a Firefinder-developed target. All targets inputted into TACFIRE by the radar simulators were also handed to the GS workstation for immediate input into JESS. When the fire order was then received at the workstation, the target was recalled and executed.

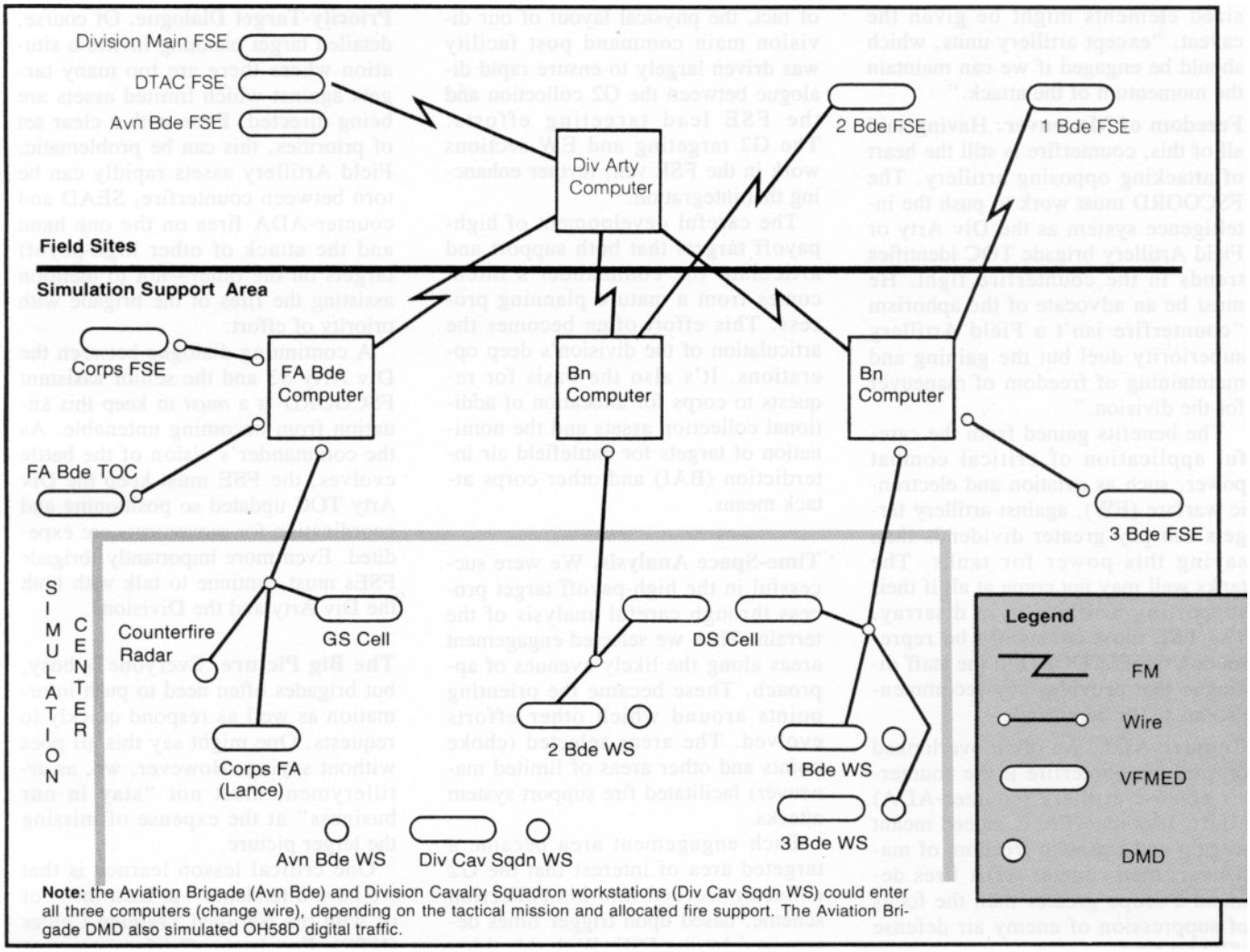
Counterbattery. Acquisitions for counterbattery are constantly being improved as BCTP gains experience. All targets are derived from workstation printouts of incoming fires, so information must be captured and moved to the radar station quickly.

Target acquisition is labor-intensive, requiring four or five runners at a time to cut processing time. We input targets into the system by DMD, another time-saver. The BCTP controller administers acquisition rates.

On the other hand, this greatly stresses the counterfire processing section's operating in the Div Arty or Field Artillery brigade tactical operations center (TOC) as all missions are handled through the TACFIRE system. The processing workload is taxing, even in this simulation.

Massing Fires. Our unit organization also was critical. We quickly learned that maneuvering the Field Artillery unit as a battalion entity (battery for MLRS) facilitated everything except survivability. Losses mount quickly in the JESS algorithm. We found cannon battalions survived best when kept at battery level and MLRS at platoon level. This presented massing problems, however, as each firing unit has to attack the target individually.

JESS doesn't have a function to mass individual fire missions. The workstation must either fire a higher volume from a single unit or execute several sequential fire missions at the same target. Sequential missions don't achieve the same effect as the higher volume from a single unit. Of



The 5th Div Arty Warfighter TACFIRE Network

course, this increased the risk of inviting opposing counterfire, but keeping multiple firing units in survivability moves was an effective correction.

JESS is a real-time system. One can move and (or) fire at any time, rather than in a set sequence of larger game events, such as those experienced with First Battle.

Finally—and this can't be overstressed—once we trained this team, *we didn't change the players between the rehearsal CPX and our Warfighter*.

Aerial Fire Support Team (AFST). JESS doesn't recognize the AFST and OH58D helicopter. Everything must be done off-line and scripted to the ongoing scenario. Intelligence play for Warfighter is a people-intensive effort with the AFST *worked in.*

We proposed one system, covering issues from acquisition of combat information and targets to maintenance determination and battle losses. BCTP had its own system. A meld was achieved and, as with the counterfire radar system mentioned earlier, this system will continue to evolve as units gain experience both in the field and in simulations. The key is to know what you want your AFSTs to do and to present your SOP early to the BCTP team so you can agree on how to use them.

Division Fire Support Coordination and Targeting

Counterfire is only one component of the counterbattery or countermortar effort. One significant lesson we learned is not to relegate this critical fight solely to the Field Artillery. Admittedly, our system is most adept at handling individual targets in terms of both acquisition and responsiveness. However as your perspective grows and the opposing artillery structure becomes apparent, the division commander must consider using air, ground and artillery assets to attack opposing artillery.

Fire Support Coordination

If the division commander says he must be assured of 60 percent kills against the opposing artillery while keeping his own losses of tubes and launchers to a minimum, the FSCOORD can't do it alone. The G2 has a major role to play through electronic and signals intelligence. Air Force and Army aircraft can take the heart out of a threat divisional artillery group (DAG) and do it quickly, if the attack is well-coordinated. Instructions to maneuver forces to bypass certain

sized elements might be given the caveat, "except artillery units, which should be engaged if we can maintain the momentum of the attack."

Freedom of Maneuver. Having said all of this, counterfire is still the heart of attacking opposing artillery. The FSCOORD must work to push the intelligence system as the Div Arty or Field Artillery brigade TOC identifies trends in the counterfire fight. He must be an advocate of the aphorism "counterfire isn't a Field Artillery superiority duel but the gaining and maintaining of freedom of maneuver for the division."

The benefits gained from the careful application of critical combat power, such as aviation and electronic warfare (EW), against artillery targets can pay greater dividends than saving this power for tanks. The tanks well may not come at all if their supporting artillery is in disarray. The FSE must constantly be representing the FSCOORD in the staff dialogue that provides key recommendations to the commander.

Counter-ADA. An often overlooked portion of counterfire is the counter-air defense artillery (counter-ADA) effort. If counterfire is indeed meant to gain and maintain freedom of maneuver, then counter-ADA fires demand a scope greater than the focus of suppression of enemy air defense (SEAD) fires.

The division commander's ability to apply the combat power of aviation assets, both close air support (CAS) and attack helicopters, is so important that ADA targets must be killed as they're found. In fact, we frequently designated them higher priority targets than cannons and rockets.

For our exercise, this paid dividends beyond our expectations. One benefit was we could direct air assets at concentrations of artillery with more freedom. Thus, the lesson is that counter-ADA fires can facilitate the overall counterfire effort.

Targeting

We have been working the targeting issue for some time. The cooperative effort among the G2, FSE and G3 planners has refined the techniques of *FM 6-20-10 Tactics, Techniques and Procedures for the Targeting Process* (draft, June 1989), which has been effective for us. As a matter of fact, the physical layout of our division main command post facility was driven largely to ensure rapid dialogue between the G2 collection and the FSE lead targeting efforts. The G2 targeting and EW sections work in the FSE van, further enhancing that integration.

The careful development of high-payoff targets that both support and articulate the commander's intent comes from a mature planning process. This effort often becomes the articulation of the division's deep operations. It's also the basis for requests to corps for allocation of additional collection assets and the nomination of targets for battlefield air interdiction (BAI) and other corps attack means.

Time-Space Analysis. We were successful in the high-payoff target process through careful analysis of the terrain. Then we selected engagement areas along the likely avenues of approach. These became the orienting points around which other efforts evolved. The areas selected (choke points and other areas of limited maneuver) facilitated fire support system attacks.

Each engagement area became a targeted area of interest that the G2 collector worked into his collection scheme, based upon trigger times determined by the FSE. With this time-space analysis, we could task, coordinate and bring to bear attack systems on targets that weren't always under direct observation.

Engagement areas also provided a general orientation for other planners. The Aviation Brigade and the air liaison officer (ALO) could determine flight routes and tentative flight times, further refining the trigger times. Airspace could then be deconflicted early, particularly with corps air defense systems. The Div Arty TOC could plan positioning to achieve required volumes of fire at these key points, particularly suppressive fires to support aviation.

Most importantly, with this information, the staff could be proactive and present a coordinated effort to the commander whenever a particular target or attack system required his decision. With this detailed planning and advanced coordination, the time saved during execution paid great dividends.

Priority-Target Dialogue. Of course, detailed target planning invites a situation where there are too many targets against which limited assets are being directed. Even with a clear set of priorities, this can be problematic. Field Artillery assets rapidly can be torn between counterfire, SEAD and counter-ADA fires on the one hand and the attack of other high-payoff targets on the other—not to mention assisting the fires of the brigade with priority of effort.

A continuing dialogue between the Div Arty S3 and the senior assistant FSCOORD is a *must* to keep this situation from becoming untenable. As the commander's vision of the battle evolves, the FSE must keep the Div Arty TOC updated so positioning and coordination for movements are expedited. Even more importantly, brigade FSEs must continue to talk with both the Div Arty and the Division.

The Big Picture. Everyone is busy, but brigades often need to push information as well as respond quickly to requests. One might say this all goes without saying. However, we, as artillerymen, must not "stay in our business" at the expense of missing the larger picture.

One critical lesson learned is that we have a tendency—at least those of us with the National Training Center (NTC), Fort Irwin, California, as our major training parameter—to see the brigade battle as the only entity rather than as part of the larger division effort the Div Arty must fight. Even DS artillery is based upon habitual association, not "etched in concrete" permanency. We had some relearning to do in this area, particularly in terms of which SOPs and directives were priority.

Intelligence. While the G2 and the brigades have an ongoing dialogue, the G2 and the Div Arty TOC must have a special dialogue. In fact, this might even be better between the Div Arty and the tactical control and analysis element (TCAE) of the divisional Military Intelligence (MI) battalion. The Div Arty fights the division commander's battle, a reality the division's intelligence community must be sensitive to.

Our detailed listing of targets and priorities helps this dialogue greatly, particularly since the intelligence

community is key in developing the targeting plan. Targets designated "Immediate" and "As Acquired" were sent directly from the TCAE to the Div Arty TOC when analysis was accurate enough to permit attack. This saved considerable time, made artillery more responsive and facilitated the pursuit of the commander's intent.

Light Infantry. The Division had a brigade of light infantry attached, an opportunity that taught us a number of excellent lessons. A major benefit to the artillery and targeting effort, this brigade provided excellent observation and target acquisition at considerable depth, both as a dismounted force and through air insertion. Numerous artillery and ADA targets, including at least one DAG, were successfully attacked only because of its excellent observation capabilities.

Div Arty Operations

The Division's top-down fire planning became a combination of allocating firing units with carefully selected "on order" missions and designating both priority engagement areas and high-payoff targets that reflected the Division Commander's intent. We built fire plans in TACFIRE without final targets or units designated.

At least three plans were always awaiting completion. This shortened the time required to complete the fire plans once an engagement area was designated. Brigade FSEs could organize their plans and coordinate for additional fires, and the Div Arty TOC could plan a response to planned changes and critical areas before the event.

Field Artillery Brigade

Perhaps the most significant benefit for the Div Arty was working with a Field Artillery brigade, something unusual for us. The ability to perform TACFIRE mutual support (MSU), split responsibilities for the artillery effort and have the span of control possible with two discrete headquarters were capabilities about which we could only speculate previously.

In Div Arty operations, we learned one critical counterfire lesson. Even if a Field Artillery brigade has the counterfire mission and is augmented by the division's target acquisition battery's counterfire processing section, the Div Arty TOC must be involved. At the least, the TOC must analyze opposing artillery trends and plan future positioning of artillery.

Positioning

Our artillery was positioned in "bands of response." From the Division's decision support template and targeting plan, we analyzed critical events in terms of range or volume of fire. Terrain analysis determined areas viable for artillery positioning, and then we coordinated initially with the respective brigade FSEs.

This was the first time we had computer products such as "Terra-base" readily available to aid in this analysis. From this data base and the on-order missions determined by the FSE, the Div Arty TOC could maneuver artillery and keep it responsive in sufficient quantity to support the battle.

Something that can become transparent is the Startex situation. In our scenario, combat began several days before Startex. This meant certain bits of intelligence were known to the enemy, such as the locations of most friendly artillery.

We failed to react to this and program the survivability moves required at Startex. We immediately suffered major losses from an enemy air strike that had been programmed before Startex—a major tactical lesson learned.

AFSTs

Deploying AFSTs and OH58Ds is another important consideration. This system was assigned to the Division less than six months before the exercise. Pilots and observers were still undergoing certification training and our SOPs were strictly hypothetical.

The night capability of the AFST provided considerable surveillance and target acquisition capabilities. We had the AFST observe a key NAI, follow the target into a TAI while reporting critical activity and then attack the target as directed, providing "eyes on target." It was abundantly clear that night operations should be the norm for this excellent system.

In the Division, the AFSTs respond to the fire support mission, providing battlefield information as a matter of course. There's a temptation to use them as scouts. But in our experience, they aren't effective as scouts.

The AFST is designed to observe, acquire and attack targets, and that translates to an observation post (OP) model with a relatively stable position, even with the mobility of the OH58D. We also gained valuable insight into our SOPs, which was important as we later employed AFSTs in support of an NTC rotation.

Conclusion

Warfighter is a tremendous training opportunity for division-level decision making and staff coordination. You can approach this level of training on a return of forces to Germany (REFORGER), but not on the same scale in terms of equipment and personnel. For a heavy division, such operations are always very expensive.

A Div Arty fights the division's fight, not its own brigade fight. TACFIRE is a division system, not a brigade one. The need to balance the brigade focus of the NTC with the reality that brigades fight as integral parts of divisions is vital if we are to maintain a true war-fighting perspective. The BCTP Warfighter exercises teach such balance and build organizations that can and will outlive their individual members.

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Major Virgildee Daniel is the Senior Assistant Fire Support Coordinator for the 5th Infantry Division. Just before his assignment, he was the Executive Officer for the 2d Battalion, 21st Field Artillery, also in the 5th Division. Major Daniel commanded B Battery, 6th Battalion, 10th Field Artillery, 72d Field Artillery Group, West Germany, and A Battery, 2d Battalion, 8th Field Artillery, 7th Infantry Division (Light) Artillery, Fort Ord, California.