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Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

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Infantry is the nerve of an army. (*Francis Bacon: Essays, xxix, 1625.*)



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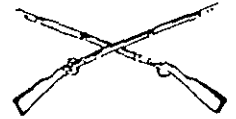
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Commandant's NOTE



Major General Edwin H. Burba, Jr.
Chief of Infantry

Over the past three years, the Infantry School has probably spent more time on antiarmor weapons than on any other type of weapon system. Replacing the Dragon has been our first priority, because it allows the Infantry to conduct its roles on the battlefield whether it is light infantry or heavy. An Infantry unit that does not have an efficient and effective manportable dismounted system cannot perform tasks such as reconnaissance, counterreconnaissance, breaching, clearing, fixing, suppressing, securing, ambushing, fighting in restricted terrain and built-up areas, and conducting close overwatch to assist tank and Bradley attacks when they encounter heavy resistance.

Our search for a medium system goes far beyond merely finding a replacement for the Dragon, a program currently in technology demonstration. The Marines are improving the Dragon warhead, which we may adopt as an interim system, and tests are ongoing with the French MILAN and Swedish BILL antiarmor systems. The MILAN does offer excellent penetration and performance but it weighs 82 pounds, which means it is not really manportable—certainly not by a single man. Two men can carry it, but three would be needed to carry extra rounds.

What we really need is a new and improved family of Infantry Antiarmor Weapon Systems (IAAWS). This family would include mobile, all-weather, day and night, heavy, medium, and light antiarmor systems that would improve our ability to extend target

acquisition and effective engagement beyond the current limits.

As for a heavy weapon, even as we put TOW II in the field, we knew it was going to be obsolete very quickly. So, as we went through the AAWS-M (antiarmor weapon system, medium) analysis, we also looked at a heavy system. Thus far, we have gotten approval for two TOW product improvement programs that will keep us in the ball game for at least the remainder of this century.

Other technologies may even take the TOW further than that. That is important to us because we as Infantrymen will have to decide whether we want to keep a heavy system on our Bradleys. If we do and we change the technology, the Army must be prepared to pick up expensive vehicle integration costs. We are looking in detail at various options now. Meanwhile, even though the clock's ticking on it, we have to muster up every bit of capability we have to get as much longevity as we possibly can out of the TOW.

We have not ignored Echo Company. We are working hard now with a hypervelocity missile that will not only penetrate a tank but may even knock it over, given the missile's kinetic energy. We are also looking at a fiber optics guided missile (FOG-M), an over-the-horizon system, to mix with the hypervelocity missile in the Echo Companies. (We are thinking of two hypervelocity missile platoon and one FOG-M platoon.)

We also need a lightweight system to replace the LAW that has the ability to kill such lightly armored vehicles as BMPs, BRDMs, and BTRs. We need to be able to bust bunkers. The AT4, a European missile system, weighs 15 pounds and has good penetration for its weight. We are buying the AT4 in large quantities, and it will be issued to our Infantry units in Fiscal Year 1987. The 82d Airborne Division and the Rangers will be getting it first because they have critical deployment requirements.

Meanwhile, we have the Shoulder-Launched Multipurpose Assault Weapon (SMAW) bunker buster. The Marines have gotten good use out of it and are enthusiastic about the system. What we have been looking for all along, however, is a multipurpose weapon that will combine a light antitank killer and a light vehicle killer with a bunker buster. That is a difficult problem to solve because the physics of defeating rolled homogeneous armor and that of defeating reinforced concrete are at opposite ends of the spectrum.

The introduction of the IAAWS should not generate any new MOSs for the employment or maintenance of the weapon systems. The use of 11H crewmen where long-range antitank (LRAT) systems make up only one platoon out of an antiarmor company will help in cross-leveling assets within the company. To achieve simplicity of operation, maintenance, and training, the particular piece of equipment (weapon, acquisition device, vehicle) and its logistical support system will not exceed the capabilities of the current 11B, 11H, 27E, 35H, and 45K MOSs. In other words, we will not need soldiers with exceptional psychomotor skills to operate the systems.

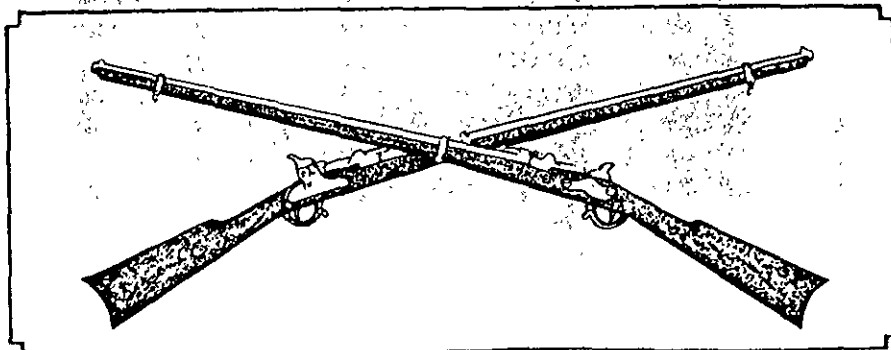
Complete training subsystems will be developed specifically to support all phases of individual and collective training. Even assuming there will be no increase in training-base POI hours, training bases

will still require an increase in instructors and other training resources.

New equipment training (NET) requirements for user testing and system fielding will be considered during developmental testing and completed at the conclusion of operational testing. The training devices needed to support system training will be developed by the materiel developer, and extension training will be developed as required. Our units will be responsible for training enough personnel to make sure their IAAWS will be adequately manned.

The maintenance concept must remain consistent with our current support organizations, concepts of operation, and repair level policies. We must also make the greatest possible use of our existing TOE tools, TMDE, and other support equipment. The vehicle chassis we select for use in our heavy and light forces will have much in common with the other vehicles in our force structure. Although the range and quantity of our repair parts and other supply requirements will be consistent with our current support capabilities, we do estimate that the extended range of the new systems will increase their number of engagements during a battle. Based on improved hit probability, we have to examine our ammunition expenditure rates to forecast the effect on our logistics support system. For example, does a more accurate system require less ammunition?

To sum up, antiarmor fires from heavy, medium, and light systems are critical to the effectiveness of the combined arms team. Without modern antiarmor weapons, the full operational capabilities of our tanks, attack helicopters, and infantry units will never be realized. New antiarmor systems using leap-ahead technology will ensure that our Army continues as an effective fighting force on the modern battlefield. We are now well on track in translating these technologies into reality.



INFANTRY LETTERS



VIETNAM EXPERIENCES

Congratulations on the publication of "Infantry in Action: A Foot A Day in Company A," by Brigadier General (Retired) Frank H. Linnell (March-April 1986, p. 32).

It is an excellent account of how the 196th Brigade moved into an enemy dominated area, assessed the situation, determined what needed to be done to gain dominance and then did it, outwitting, outfighting, and outgutting the Viet Cong in the process.

I hope that more Vietnam veterans of all ranks will write about their experiences. Such essays are not only educational but also may help to dispel the belief fostered by the news media, self-appointed military experts, and other uninformed individuals that the U.S. lost the war on the field of battle.

I do have one criticism of the article. I believe the author has been unduly modest in depicting his own role in his unit's actions. Frank Linnell, as a young commander in the 6th Division fighting the Japanese in the Southwest Pacific, was known to accompany combat patrols even though he had no obligation to do so. Therefore, I am sure he took a much more active part in his unit's actions than he has implied, and that on occasion he risked *his* feet along with everyone else's.

DAVID W. GRAY
MG (Retired)
Golden Beach, Florida

LIGHTWEIGHT?

Your magazine is *must* reading for me. But I did note an error regarding the MK19 40mm grenade machinegun in the INFANTRY News section of the May-June 1986 issue (pp. 10-11).

The weapon is lightweight if you hap-

pen to be a powerlifter; at 76 pounds, the gun is a handful for a two-man crew. The MK21 MOD 4 gunmount itself weighs 21 pounds; with a basic load of 800 rounds in 50-round ready cans at 52 pounds each, the total weight comes to 929 pounds!

The HMMWV came along at just the right time for this weapon system. Its increased payload capacity and stability as a gun platform makes the venerable M151 jeep pale in comparison.

The MK19 40mm grenade launcher in combination with the HMMWV will be the mainstay of the military police on tomorrow's battlefield, but lightweight it is not!

MICHAEL C. REILLY
CPT, Military Police
Fort McClellan, Alabama

EDITOR'S NOTE: The weight given in the news item for the grenade gun was 7.6 pounds, an obvious error (but one not so obvious to our proofreaders). Its actual weight, according to the Armament Research and Development Center, is 75.6 pounds.

40mm GRENADE MACHINEGUN

I wish to correct some glaring errors concerning the 40mm grenade machinegun item in your May-June 1986 issue (pp. 10-11).

A 40mm dual-purpose round is nothing new, or impressive. Similar rounds were developed for the M79/203 family of grenade launchers. While it is quite true that a 40mm shaped charge round can penetrate light armor, its pitiful "behind armor" effect is nowhere near enough to guarantee destruction, other than by lucky hits into critical areas.

But that is a minor point. It is the 1,500-meter range claim that is preposterous. FM 101-5-1, Operational Terms

and Graphics, defines "effective range" as that range at which an average soldier has a 50 percent probability of hitting a target with a small arms weapon. It defines "maximum effective range" as the distance at which a weapon can be expected to fire accurately to achieve the desired results.

I readily concede that this weapon can lob a projectile out to 2,200 meters and might even hold a tight pattern out to 1,500 meters, where it might be effective against soft targets. But it is inconceivable that it could hit an armored point target at anything near this range except by sheer luck.

Just look at the photograph in the article and ask yourself, "How is the gunner aiming? Walking in three- to five-round bursts at 1,500 meters and hitting?" Who are we kidding. Where are the witnesses to such marksmanship?

CHESTER A. KOJRO
CPT, Armor
Fort Knox, Kentucky

82d DIVISION IN ITALY

The article by James Huston, "82d Division in Italy" (INFANTRY, July-August 1985, p. 29) demands a rebuttal.

One would be hard-pressed to find three generals more knowledgeable of military strategy than Patton, Ridgway, and Gavin. On 12 August 1943 in the final days of the Sicilian campaign these three, along with the commander of the 52nd Troop Carrier Group, discussed the feasibility of a parachute drop across the Strait of Messina to block the enemy's withdrawal. They decided not to proceed (it was much too great a risk), and instead General Patton conducted a successful amphibious end run and arrived in Messina even before the British on 16 August 1943.

Mr. Huston disagrees with this deci-

sion twice in the final paragraphs of his article, concluding that the discarded option might have made a "really decisive contribution to the destruction of forces instead of simply in the capture of real estate."

At the time, however, the 82d was at less than two-thirds strength. The author would have made expendable what was at that time the only U.S. airborne division assembled at the very beginning of the Allied Forces shift from a defensive to offensive game plan.

At that time, each of us as an 82d Division paratrooper was armed with little more than an M1 rifle with a limited amount of ammunition, a trench knife, and a couple of grenades. To execute the proposed operation would probably have resulted in Arnhem II!

The author goes on to state, "Instead, the 82d assembled and flew back to Tunisia, there to prepare to fight under less favorable conditions at Salerno the German forces that had escaped from Sicily." Not so! The intended next mission of the 82d was not the Salerno beachhead. The intent was to penetrate deeper, such as to Naples or even Rome.

The author totally overlooks one of the great values of an airborne division. Being off the line preparing for an operation immobilizes much enemy strength simply because the enemy has to be prepared to defend many areas simultaneously — in this instance, any part of the Italian peninsula.

MARVIN W. BAYER
CPL (Ret.), Infantry
St. Mary's, Ohio

VALUES

If I may respond to Corporal Douglas N. Bernhard's letter (May-June 1986, p. 4) concerning my article "On Being A Lieutenant" (November-December 1985, p. 20), I understand and agree with his premise that traditional values of honesty, loyalty, dedication, and so on, are what leadership at any level is all about. I point out, however, that the focus of the article was on techniques of leading at platoon level. While the two cannot be divorced entirely, techniques

differ from ethics and values in the sense that the one is concerned with approach and method while the other focuses on fundamental motivating influences and value systems.

Other authors with more wisdom and ability have, I believe, developed a thorough sensitivity and appreciation in this army for the overriding importance of selfless and moral leadership. Our challenge is to reflect those values without fear or expectation of reward, for no other reason than that it is the right thing to do.

Corporal Bernhard is correct in assuming that I place my faith and my career in respect for my fellows and my men, in hard work, and in a positive attitude. There may be other, surer ways to the top (whatever or wherever that is), but then, it seems to work for me.

R. D. HOOKER, JR.
CPT, Infantry
Fort Rucker, Alabama

ON READING

You did all concerned a service when you published "Professional Reading Program," by Captain Harold E. Raugh, Jr. (INFANTRY, March-April 1986, p. 12). Many such lists have been compiled, but Captain Raugh may have a unique approach in starting it within his own territory of Company B, 5th Battalion, 21st Infantry. He shows a lot of scholarship in making the tough choices for the list, and he has the writing ability to present a convincing essay. (I hope his bosses make his efforts rewarding, but I'm sure he knows they may not.)

I hope the program can eventually include some of the fiction works that are based on our military experience, because those too can be instructive on a personal level. (I will restrain myself from sending a boxful of suggestions.)

On the other hand, I want to submit for his consideration a suggestion on a source book that I think is indispensable for a project such as this, and it may be that he has it on hand. The book is *A Guide to the Sources of United States*

Military History, edited by Robin Higgam (now editor of *Military Affairs*, in addition to other duties), Hamden, Connecticut, 1975. (There are also two supplements to the book.) Each category, chronological or thematic, has an essay on sources and then a bibliography of the books mentioned. Even though the book was published in 1975 and costs a cool \$35 now, it's worth the money. And so are the supplements.

ROLFE HILLMAN
COL, Infantry (Retired)
Falls Church, Virginia

MARSHALL STYLE

During the 1985 Year of the Leader, many articles were published on leadership, but nowhere have I seen anyone address the subject more succinctly than George C. Marshall did as a major in 1920. His observations on what constituted the success of the outstanding figures in the American Expeditionary Forces in World War I are as applicable today as they were then.

To be a highly successful leader in war (Marshall noted in a letter to General John S. Mallory), four things are essential, assuming you have good common sense, have studied your profession, and are physically strong.

When conditions are difficult, the command is depressed, and everyone seems critical and pessimistic, you must be especially cheerful and optimistic.

When evening comes and all are exhausted, hungry and possibly dispirited, particularly in unfavorable weather at the end of a march or in battle, you must put aside any thought of personal fatigue and display marked energy in looking after the comfort of your organization, inspecting your lines, and preparing for tomorrow.

Make a point of extreme loyalty, in thought and deed, to your chiefs personally; and in your efforts to carry out their plans or policies, the less you approve the more energy you must direct to their accomplishment.

The more alarming and disquieting the reports received or the conditions viewed in battle, the more determined must be

LETTERS

your attitude. Never ask for the relief of your unit, and never hesitate to attack.

Marshall was certain in his belief that the average man who scrupulously followed this course of action was bound to succeed. He continued to say that few seemed equal to it during the war but believed that was due to their failure to realize the importance of so governing their course.

Marshall's analysis of the essence of military leadership is certainly applicable to today's leaders from fire team to the highest echelons of the Army. He succinctly identifies such important tenets of military professionalism as setting the example, caring for the soldiers entrusted to one's command, total dedication, and unyielding loyalty. Although written 65 years ago by an officer whom many revere as America's foremost soldier of the 20th Century, these words serve as a standard of success for the modern infantryman.

COLE C. KINGSEED

MAJ, Infantry
Wahiawa, Hawaii

TRAIN TO WIN

After participating in a National Training Center (NTC) rotation, with its specially trained OPFOR, I believe we have duped ourselves for too long about the opposing forces, aggressors, or "enemy" in our local FTXs. We have not given our OPFORs the ability to exercise their freedom of action as defined by mission-type orders. In fact, generally we have espoused the belief that because of our ability to make and execute decisions rapidly at all levels and because of "their" great inflexibility, we will thoroughly whip "them" every time. As a result, our FTX OPFORs have cooperated with us, been where they were supposed to be, done what we expected them to do.

But are our potential enemies as inflexible as we have made them out to be? While their technology and sophistication may not be as advanced as ours, they can still think and react. Infantrymen everywhere generally have the same vulnerabilities, the same fears, the

same reactions as a round cracks close by, and they also have the same goal—to win.

We have fostered the "inflexibility" idea through our FTXs where the aggressors are predictably located on all objectives, make little use of patrols, LPs, and OPs, and are normally not found in unexpected places. They seldom use aggressive tactics such as hugging techniques. We use our OPFORs to meet the specific training goals of our particular exercise at the expense of realism in training.

This approach has value during the grooming stages of small units and the training of their leaders, but mature units need to be challenged—not only by the terrain and the weather but by an aggressive, thinking, uncompromising OPFOR. To exercise against anything less creates false impressions, false ideas, and a false sense of well being. It's no wonder that when units get to the NTC, they suffer from "culture shock" as they meet a trained aggressor who moves quickly, who is excellent at using the available cover and concealment and, above all, who uses his God-given ability to try to out-think and outwit his opponent to win.

We need to exercise against a non-cooperative OPFOR in competitive scenarios during our FTXs. This does not mean that each post or unit needs a specially trained OPFOR unit such as the one at the NTC. But the aggressor units in our training exercises should have the freedom to think and react in accordance with sound tactical doctrine, safety, logic, and the exercise director's mission-type orders. This would provide a framework to exercise tactically against a unit that is trying to score a tactical success over another unit. Since none of us likes to lose, the competition would make us all better.

Competitive scenarios would provide the best opportunity to develop the synchronization of all combined arms forces against "real world" intelligence information. A premium would be placed upon collecting and verifying intelligence, which is the key to successful NTC rotations. If the enemy can be located, the full brunt of the combined

arms available in a particular exercise can be synchronized to defeat him (or at least the opportunity is there). If intelligence is poor, however, for any number of reasons, one must "gouge" for the enemy. Although this may be undesirable, it is realistic. Through this process, the real value of adequate and timely intelligence will be apparent to all.

Such non-cooperative OPFOR exercises are possible at all levels. Two squads, for example, could be given a similar mission within the same area. Each would know the other was there *somewhere*. The mission of both could be to clear the area, and one squad would be directly pitted against the other. Soldiers relish opportunities to show they are better than the other guy, and we need to give them such opportunities.

By employing OPFOR units that are also trying to win, we all stand a better chance of learning to win ourselves in the long run. To do anything less short-changes our soldiers, our leaders, and ultimately our Army.

EDWARD G. DEVOS, JR.

LTC, Infantry
Fort Drum, New York

34th INFANTRY, 1950

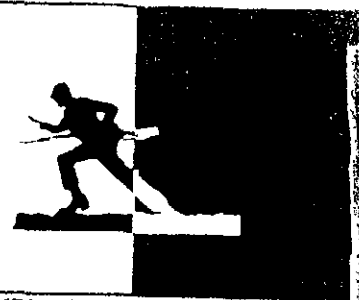
I have been working on a research project covering the combat actions of the 34th Infantry Regiment, 24th Infantry Division, for July and August 1950.

The true story of the regiment is a unique one and its publication will be beneficial in many respects. In order for me to relate an adequate story, however, I need the input of everyone possible who can provide it. So far, I have received meaningful data and personal narratives from about 35 former members of the regiment for that two-month period in 1950.

Anyone who may have pertinent information may contact me at Box 167, Winchester, Indiana 47394; telephone (317) 584-1280.

LACY C. BARNETT
MAJ, USA, Retired

INFANTRY NEWS



THE PRESIDENT of the U.S. Army Infantry Board has submitted the following items:

M16 Rifle Gowen South. In November 1980, the U.S. Army Training and Doctrine Command (TRADOC) and the U.S. Army Forces Command (FORSCOM) worked with the Idaho National Guard at Gowen Field, Boise, Idaho, to evaluate training device-based tank gunnery strategies involving simulation, substitution, and miniaturization. This limited initial test indicated that device-based training with less expenditure of ammunition was as effective as the traditional programs.

The concept of that testing has inspired the initiation at Fort Benning of a series of tests that apply the same philosophy to gunner proficiency training for other weapon systems. These Fort Benning tests are called "Gowen South," alluding to the test at Gowen Field. The M16 rifle Gowen South concept evaluation program (CEP) is one such test.

Phase I of the proposed three-phased testing program was conducted by the Infantry Board between 12 March and 15 May 1986. The purpose was to assess the effectiveness and resource requirements of the basic rifle marksmanship (BRM) training programs that incorporate the use of single training devices in selected periods of BRM instruction when compared with the current BRM program of instruction (POI).

Six rifle marksmanship training devices were used in this phase — the Interactive Video Disc Trainer (IVD); the 25-meter Zoned Feedback Device (LASER); the Location of Miss and Hit (LOMAH); the Multipurpose Arcade Combat Simulator (MACS); the Multiple Integrated Laser Engagement System (MILES); and the Weaponeer I.

The performance data used to assess the relative effectiveness of the current BRM POI and the various device-based POIs were generated and collected during selected periods of instruction and

measured by the demonstrated performances of test soldiers in subsequent periods. Human factors, safety, and limited RAM (reliability, availability, and maintainability) and logistical data were collected throughout the tests.

The test results will be used by the Infantry School to develop and refine training strategies and to initiate actions for developing and obtaining appropriate training devices.

TOW Gowen South. The current TOW gunner training POI uses the M70 guided missile training device. This device, issued initially in 1970, is becoming increasingly expensive to maintain and does not indicate a soldier's live-fire performance. To take advantage of the current and projected technology for gunnery training devices, the Infantry School analyzed the requirements for the tripod-mounted TOW missile system and developed a series of proposed device-based training strategies that may satisfy these requirements.

In May and early June 1986 the Infantry Board conducted a CEP test of TOW Gowen South to provide information on five selected alternative device-based training programs and the current M70-based program for the tripod-mounted TOW. The alternative training devices included MILES; the Bradley Gunnery and Missile Target System (BGMTS); the Precision Gunnery System (PGS); the Precision Gunnery Training System (PGTS); and the Simulator for Antitank Tactical Training (SWATT).

The tests on these devices were conducted in two phases. Phase I examined basic TOW gunnery training, and Phase II examined advanced TOW gunnery training. The test soldiers were infantrymen (MOS 11B) and cavalry scouts (MOS 19D) from units based at Fort Benning. These 60 soldiers, with no prior TOW training, were organized into six groups. Each group trained either with one of the five device-based POIs or with

the M70 POI.

Upon completion of their training, each soldier completed the Qualification Firing Table prescribed for the M70.

During Phase II, 42 trained TOW crews (MOS 11H) were organized and assigned to POI groups as in Phase I and were trained in advanced techniques requiring them to perform progressively more difficult tracking exercises. At the conclusion of Phase II training, 60 soldiers were selected to fire live (inert warhead) TOW practice missiles.

Qualification scores and live fire hit and miss data were collected from each POI, and logistical requirements, human factors, and safety data were collected throughout the tests. Test results will be used by the Infantry School to develop training strategies and to identify devices for further evaluation.

Drop Zone Assembly Aid System (DZAAS). During the period 7 April through 8 June 1986, the Infantry Board conducted an operational test of the DZAAS to assess its operational effectiveness and suitability as an electronic orienting signal to facilitate the rapid assembly of personnel and rapid location and identification of specific equipment loads on the DZ after an airdrop. (See INFANTRY, January-February 1985, p. 11.)

Current drop zone (DZ) assembly aids such as VS-17 panels, helmet markings, strobe lights, and chemical lights provide only limited assistance.

The DZAAS consists of a five-pound transmitter measuring 5x6x8 inches, that is capable of transmitting on any of 20 preselected radio frequencies, and a one-pound receiver measuring 3x5x1.3 inches. The transmitter is powered by standard 24-volt lithium battery, which is expected to last for two hours of continuous operation, and is furnished with two omnidirectional antennas. One of these antennas telescopes to a height of 100 inches and is used for personnel assembly; the other, a 15-inch-long flexi

ble rubber antenna, is used with equipment loads.

During airborne operations, the transmitter is carried by a designated soldier to the assembly point and turned on manually; or it can be placed on an equipment load and activated automatically as the load exits the aircraft.

The receiver, powered by a nine-volt battery, can be set to receive any one of the transmitter's 28 frequency signals. The system should provide a transmitter-to-receiver link out to at least 1,500 meters. During use, the receiver is worn on the soldier's left wrist. When the soldier's left arm is pointing toward the transmitter, a small light on the receiver illuminates indicating the direction to the transmitter. The soldier moves in the direction his arm is pointing until he finds the transmitter.

The range capability and battery life of the DZAAS and its compatibility with individual chemical protective clothing and cold weather parka and mittens were tested at Fort Benning. Infantry Board jumpers (door bundle chasers) tested the system's ability to find and identify equipment loads.

Data on platoon assembly times were collected during a series of mass tactical jumps conducted by companies of the 82d Airborne Division at Fort Bragg and by a Ranger company conducting airborne operations at Fort McClellan, Alabama. Within each company, one platoon used the current assembly procedures and the DZAAS while the remaining platoons used the current procedures and current aids (panels, lights) to assemble on the DZ.

Throughout the tests, human factors, reliability, operator maintenance data, and test soldier comments and observations were recorded. Test results will be used by the Infantry School to aid in decisions concerning further development of the system.

Robotic Ranger. The U.S. Army Tank-Automotive Command, Missile Command, Ballistic Research Laboratory, and a civilian contractor have worked to fabricate a full-scale model of a tele-operated robotic vehicle called the Robotic Ranger. (See also INFANTRY, July-August 1984, p. 4.)

Designed within the concept of a low-

cost, tele-operated, disposable round of ammunition to employ various weapons or surveillance packages at locations beyond operator line of sight, the Robotic Ranger has a diamond configuration chassis, which permits pitch articulation and four individually powered wheels.

The prototype vehicle is 77 inches long by 53 inches wide, weighs 416 pounds, and is powered by two 12-volt lead acid batteries. It is connected to a control console by a disposable fiber-optic link and can carry a payload of about 70 pounds (M60 machinegun, AT4s, or special surveillance equipment, for example).

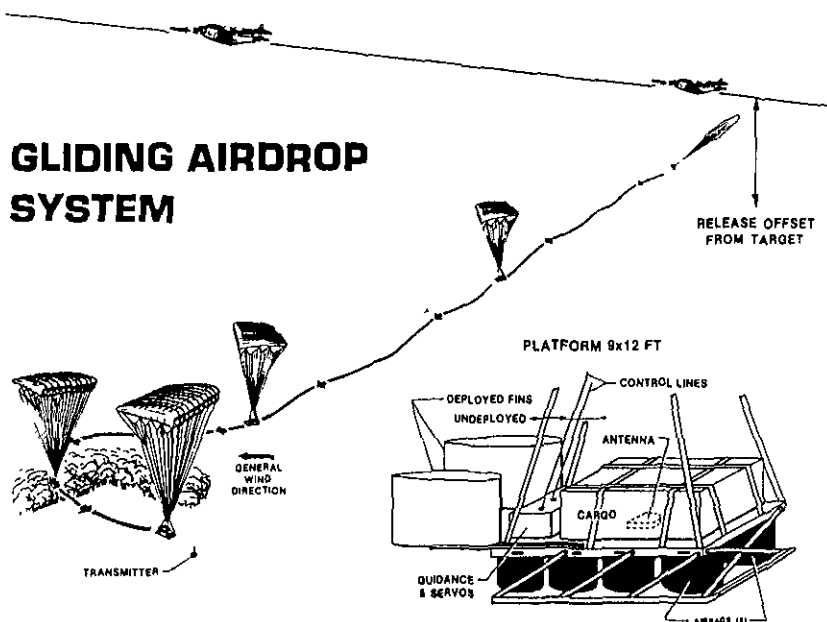
AN AIRDROP SYSTEM is needed that will allow the clandestine resupply of personnel (such as Special Forces) beyond the forward line of troops while maintaining low vulnerability for the airdrop aircraft.

The Infantry Board conducted a CEP test of the device from 19 May through 17 June 1986 to assess its ability to employ infantry weapons and reconnaissance systems. Four operators used the Robotic Ranger in a series of surveillance missions over predetermined routes, in an armed sentry role (antipersonnel and antiarmor), and to emplace simulated explosives at a bunker position.

Test results will be used by the Infantry School in making decisions concerning further development of robotic devices.

air gliding parachute, an airborne homing and guidance unit, and a transmitter-controller. The canopy will have a glide ratio of about three feet forward to each foot of descent. It will be deployed from altitudes up to 25,000 feet above

GLIDING AIRDROP SYSTEM



The 500-pound Gliding Decelerator Container Airdrop System will permit accurate clandestine delivery of cargo in support of special operations and unconventional warfare forces. High altitude, offset delivery made possible by the system will decrease the risk to cargo aircraft engaged in insertion or resupply. The system will complement existing personnel delivery systems with similar performance capabilities.

The proposed system consists of a ram-

ground level and at aircraft speeds of 130 to 150 knots.

The airborne homing and guidance unit will steer the system in response to radio homing signals from the transmitter. Each transmitter controller can control up to four bundles per mission. A manual mode will allow the operator to steer one bundle at a time to a controlled landing while the remaining units continue to home automatically on the transmitter. The transmitter also has a control that

will enable the operator to flare a canopy for a softer landing.

The unit can be remotely controlled by an airborne paratrooper, a person on the ground, or automatically by a transmitter controller device on the ground.

OFFICERS AND SENIOR noncommissioned officers graduating from the *Infantry Officer Advanced Course (IOAC)* or the *Advanced Noncommissioned Officer Course (ANCOC)* will be better fit to fight when they leave Fort Benning, and they will have new DA official photos in hand. This is a result of two separate initiatives sparked by Major General Edwin H. Burba, Chief of Infantry and Commandant of the Infantry School.

The first of these initiatives is a vastly improved physical fitness program that is based on the Master Physical Fitness Concept. Although PT has never been a stranger to the Infantry School, student feedback in the past has indicated that physical fitness training in IOAC and ANCOC lacked variety and imagination.

The foundation of the improved physical fitness program is diversity. Conditioning sessions may consist of any or all of the following: platoon circuit training, organized athletics, partner-resisted exercises, and ability-group running. Each session begins and ends with a stretching and cool-down period.

Platoon circuit training can range from log drills or weight training to an occasional trip to the confidence or obstacle course. Circuit training is designed to develop strength, speed, agility, and endurance.

Organized athletics feature intramural contests from squad to company level in flag football, basketball, soccer, volleyball, or softball. The emphasis is on unit cohesion, teamwork, and esprit de corps.

Partner-resisted exercise is a technique whereby one soldier exercises while his partner provides resistance. This formula has proved effective for increasing push-up and sit-up ability, thus leading to higher APFT scores.

The ability-group run allows all participants to increase their speed and endurance without hindering the better runners or demoralizing marginal ones. By



screening the two-mile run times from the diagnostic APFT, the Infantry School cadre divides the students into fast, medium, and slow running groups.

A crucial element in the Infantry School's program is the recognition of excellence. To facilitate such recognition, the APFT scoring scale has been modified to allow calculation of points beyond the maximum score. This enables the School to recognize the student with the highest score on the final APFT and also the student who has improved his score most since the diagnostic test. All students who score 300 points or higher are also recognized.

The second of the commandant's initiatives is a requirement for each student in these classes to submit a new DA official photograph before graduation. These photographs are taken at Fort Benning and reviewed by both the students and the cadre chain of command to ensure that the final product portrays the soldiers as accurately as possible. (The photograph is, of course, an important part of each soldier's Official Military Personnel File since it is reviewed by DA selection boards for promotions and future assignment consideration.

(This item was prepared by Captain Dan MacGlashing, S-1, 1st Battalion, The School Brigade, USAIS.)

THE AIRBORNE SCHOOL'S physical fitness requirements are de-

scribed in the article "Preparing for Airborne Training," by Captain Danny L. Greene in *INFANTRY*'s July-August 1986 issue (page 13).

In addition to meeting these requirements, students must also be prepared to take a verification Army Physical Fitness Test on the first day of ground training. Those who fail that test will not continue in the course.

THE FOLLOWING NEWS ITEMS were submitted by the Directorate of Combat Developments:

New Computer System for TOE and BOIP Development. Tables of Organization and Equipment (TOEs) and Basis of Issue Plans (BOIPs) will be developed using a new computer system. The new system will link the branch schools' organizational development agencies to the organization master files at Fort Leavenworth, Kansas, thus reducing the turnaround time for TOE and BOIP actions.

The heart of the new system will be an INTEL 310 microcomputer using the XENIX operating system and TRADOC-developed software.

This new system standardizes the organizational ADP and offers marked improvements in speed, capacity, and flexibility over the current system. With the planned software improvements, TOE and BOIP personnel will be able to develop documents the same way letters are typed, edited, and corrected on word processors. The expanded capacity will allow the sorting and cross-checking of documents in the data base, eliminating time-consuming manual procedures. The end result for the infantryman will be a more accurate, responsive, and flexible organizational system to meet the challenges of our modern Army.

M113A3. Production of the new M113A3 APC will begin in February 1987. The A3 is a product of extensive research and development designed to improve both the performance and the survivability of the M113 family of vehicles. (See *INFANTRY*, September-October 1985, p. 8.)

The modifications to the M113A2 squad carrier consist of three primary components. A RISE power pack improves dash speed, overall mobility, and reliability while reducing weight through

the elimination of the control differential and the transfer gear case. Spall liners have been added to the top, sides, and rear of the crew compartment to reduce the effects of shaped charge warhead detonation and collateral damage resulting from secondary spall.

Armored external fuel tanks mounted above the rear fenders eliminate the hazard of fuel fires within the crew compartment. The fuel tanks are interchangeable from side to side, easily replaced in the field, and provide redundant fuel supply in case one of the tanks is ruptured.

Other modifications include the adoption of a four-battery, 200-amp charging system; a shock-mounted driver's seat; a collapsible driver's foot rest; and a steering yoke that replaces the differential control laterals. Finally, the M113A3 will be produced with mounting provisions capable of accepting a bolt-on, upgraded armor package currently under development.

The first unit is scheduled to receive the new vehicle in June 1987.

Infantry Mortars. The 60mm Lightweight Company Mortar System M224 is scheduled to replace the M19 81mm mortar in the light infantry, airborne, Ranger, and air assault companies. Systems are currently in depot and being issued to those units. The distribution of mortars to units not yet activated will be synchronized with the activation or conversion schedule. The basis of issue is two per rifle company.

The new smoke, illumination, and practice rounds are scheduled to be type-classified during the third quarter of Fiscal Year 1987. The high-explosive round was type-classified with the weapon system. The new ammunition will be issued as the old is depleted.

THE NATIONAL INFANTRY Museum has provided the following items:

The World War II amphibious "Duck" that was recently purchased with nonappropriated funds donated by the Fort Benning Officers' Wives Club is now on display next to the bandstand on the Museum grounds. It has been restored by workers of the Directorate of Logistics' Shop Two at Fort Benning.

Other major pieces going on immedi-

ate display are the restored regimental colors of the 2d Regiment, U.S. Colored Troops, used during the Civil War, and a 34-star U.S. flag that was picked up on the battlefield at Gettysburg just after the battle there. It, too, has just been restored. These two large flags will be displayed on the Museum's first floor in the Hall of Flags in handsome wooden cases made by the Directorate of Logistics' Furniture Shop.

The Museum is fortunate to have the workmanship of the Fort Benning labor force available for specialized work on its major acquisitions. In many cases, the expertise would not be available anywhere else in the area and if it were, it would not always be affordable. The caliber of work and pride of workmanship are outstanding.

An impressive display recently installed in honor of the 210th birthday of the nation and the 211th birthday of the infantry is the 50-star flag that flew at Yorktown on the 200th anniversary of the victory there. It hangs suspended from the ceiling and reaches nearly 25 feet down the three-storied curving stairwell with spotlights illuminating it. It is a magnificent sight.

A major exhibit planned for October will incorporate articles that belonged to Brigadier General John T. Corley and loaned to the museum by his family. The exhibit will be centered on the battle of Aachen in World War II, in which General Corley (then a lieutenant colonel) participated. A painting of General Corley and a Frommer, Model 1937, 7.65mm German pistol, which was given to him by German Colonel Gerhard Wilck at the surrender of Aachen on 21 October 1944, will be shown.

The Museum brochure has been translated into Spanish to accommodate the many Spanish-speaking visitors whose numbers have multiplied with the coming of the School of the Americas to Fort Benning. The Museum makes its auditorium and other facilities available to the School for its graduations, orientations, and social functions.

The Seventh Armored Division Association again provided a wreath on Memorial Day for its monument located on the Museum's grounds. The wreath-laying ceremony was conducted by Com-

pany B, 2d Battalion, 69th Armor and was attended by Seventh Armored Division Association representatives from this area, and by Museum staff members and visitors.

A 199th Infantry Brigade reunion group visited the Museum and presented a plaque in honor of Brigadier General William Ross Bond for the Bond Gallery on the Museum's third floor. General Bond was killed in action in Vietnam on 1 April 1970 while commanding the brigade. Funds given to the Museum from his estate were used to purchase furnishings for the gallery area. On display, too, is the flag that covered the coffin at General Bond's burial.

The Museum is pleased to recognize other donations to its collection:

- During Major General Aubrey Newman's recent visit to Fort Benning, he presented the Museum with his 1983 Doughboy Award and an autographed copy of the "FOLLOW ME" Army in Action lithograph poster for which he was the model.

- A German World War II Nazi flag was presented on behalf of the 3d Infantry Division, 15th Regiment, "C" Company Society of the U.S. Army.

- Toy figures and pieces made by German POWs of World War II for the donor have been received.

- Items donated by Major General C.M. Mount (Retired) include uniforms, books, photographs, and U.S. Military Academy memorabilia.

- An autographed copy of his new book, *The 24th Infantry at Fort Benning*, was given by Dr. L. Albert Scipio II.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905-5273, AUTOVON 835-2958 or commercial (404) 545-2958.

FORUM & FEATURES



Values for Infantry Leaders

BRIGADIER GENERAL BERNARD LOEFFKE

Values are important to all armies, regardless of ideology, because all armies must have a set of values on which to base their moral strength. Without values, soldiers lack the rallying point that becomes so essential in times of stress.

Our Army's theme of values concentrates on **CARING, CANDOR, COURAGE, AND COMPETENCE**, and even our competitors have these same values to one degree or another. These are, in fact, basic for the attainment of a proficient fighting force.

Since the Chief of Staff of the Army has recommended that we personalize the Army's theme of values, I have taken these four values and sprinkled them with personal experiences from a 28-year career.

To them, I have added another quality—**HUMOR**—because without a sense of humor, Infantry leaders will find it most difficult to survive the stressful situations they are going to encounter.

In the end, there is no greater pride than to lead *American fighting men*. I believe these values help us focus on the ones our soldiers expect us to have.

CARING

Simply said, troops will respond to a leader who cares. When a new com-

mander comes in, the first thing the soldiers think of is the adage, "We don't care what you know until we know that you care." I still remember my initial encounter with my First Sergeant, during which he asked me to review a statement by an NCO to newly commissioned lieutenants. It went this way, "Sir, we won't mind the heat as long as you sweat with us. We won't mind the cold as long as you freeze with us."

Caring means sharing the same trials as those we lead, and we shouldn't expect congratulations from troops on our leadership techniques. At best, we might be rewarded with humor.

Let me share a letter from one of the soldiers who served in our battalion in Vietnam. His name was Private First Class Jenkins. We had replaced each other in what we called a foxhole exchange program—a private or corporal would exchange positions with the battalion commander for a day and night. At the end of one of these exchanges the soldier left me a letter. It read, "Sir, I respect what you are doing, and the men know that you have their welfare in mind, since you are willing to share with us the hardships and dangers. However, I still don't like the Army. I still don't like being in Vietnam, and my favorite prayer goes this way: 'O Lord, distribute the

bullets as you do the pay. Let the officers get most of them.' Respectfully yours, Citizen Jenkins."

CANDOR

Our word is only as good as our past record of being honest. Some of us have experienced the stress of battle; all of us have experienced the stress of daily living. There is always the temptation to take short cuts. As a young lieutenant, I was impressed by a colonel's statement of honesty when one of my friends asked him, "What does a lieutenant or captain do if he finds that the colonel is lying?" This veteran commander of some 28 years of service answered quickly, "Don't worry about *me* lying. Just worry that *you* never lie. If the lieutenants and captains tell the truth, the colonels and generals cannot lie, since the truth will be known sooner or later."

Candor in combat can also mean the difference between life and death. If an officer says he is at one location and he is really at another, disaster may ensue. The only officer I ever relieved during my 28 years of service was a courageous captain who, during a time of stress, transmitted a false report. Because his troops were tired, he chose to stop three miles short of his planned location but reported that the unit was at that location.

That night his unit was attacked, and we wasted *precious minutes* in reshooting the artillery to his correct position. The delay caused a number of his soldiers to be wounded or killed.

COURAGE

Courage is a value that can be taught. Every day as a cadet at West Point, I walked through the archway of the gymnasium and read the words of General Douglas MacArthur that were inscribed there: "On the fields of friendly strife are sown the seeds that on other days on other fields will bear the fruits of victory." The inscription simply means that we need to have soldiers experience tough, realistic peacetime training so that combat will appear easy in comparison.

A lesson I have never forgotten was my first boxing experience at West Point. In those days we were required to box against classmates we did not know. The rounds were one minute in length. We had a one-minute rest period and then went again for one minute, for a total of two minutes fighting.

My first bout was against a man who had had some Golden Gloves experience. During the first round I made the acquaintance of the canvas on several occasions. The second round was much the same.

As I was being led from the ring I told my tactical officer, a young captain, "That fight wasn't fair. My opponent was much more experienced than I. This was my first boxing experience, and I am told he is even heavier than I am." The captain looked at me and said, "Mister, you didn't learn your lesson." I murmured to myself, "Yes, I did. I was insane to get into the ring." Aloud, I politely asked, "What is the lesson, Sir?" The answer came back, "In combat you don't get to choose your enemy."

This statement has been a constant reminder to me that if our troops are to be successful in combat we have to give them the toughest, most realistic training we can in peacetime. Those who wish us ill are more numerous, have more guns and tanks, and are very professional. We have to be prepared to fight the best.

COMPETENCE

In our business, incompetence means

the loss of lives. The difference between a mediocre officer and an outstanding officer is determined by what the officer does with his free time. Failure to become as competent as possible in our profession will haunt us in the form of the lives of the soldiers we might lose in battle because of our shortcomings. I live with the memory of the 34 letters I wrote to parents whose sons were killed in the battalion I commanded.

Early in my career I realized that to be an effective infantry commander I should learn how to fly. So much that is done in combat deals with aviation, and the side benefits are many. For example, an aviator learns to speak through a radio, and the radio and telephone procedures we use are most important in creating confidence in those who listen to us for leadership. An aviator is also an expert in weather and navigation procedures—two more items that are necessary in combat. (In a 1985 survey of NCOs, the question was asked, "What do you expect most of an officer?" The answer? "Don't get us lost.")

The ability to become quickly oriented in the air is critical. As commanders, we will often fly in helicopters. From the air we will direct the battle; coordinate artillery and air strikes by both fast movers and helicopters; and constantly give directions. Only an experienced officer can orchestrate these numerous events.

HUMOR

Leaders must keep a sense of humor. With it we can defuse many sensitive situations, increase morale, and feel good. Most of us are in the Army because we want to be. If we are not enjoying it, we should make room for those others who want to serve.

We should look at the humor in situations and share it. As a young lieutenant, I was asked to interpret for the then Chief of Staff of XVIII Airborne Corps, Brigadier General Richard Stilwell when he spoke to some Brazilian War College officers. My name had come out on a roster as being fluent in Portuguese. In truth, I had not opened a Portuguese book in four years. Unfortunately, I was the only officer identified who could speak Portuguese at all, so I was given the mission.

When I reported to the General the day

before and requested a copy of his speech, he said he was not planning to use notes, that he would speak extemporaneously. The only thing he said to me was, "If I speak for five minutes, you interpret for five minutes. If I make a joke, you make sure you interpret it correctly." I went home to my BOQ and slept very poorly that night, because I wasn't sure what he was going to say, and I wasn't sure of my own capability with the Portuguese language.

The day of reckoning came. General Stilwell would speak for a time and then turn to me for the interpretation. I bravely interpreted as well as I could. The Brazilian officers immediately realized my situation and were diplomatic enough to overlook my many mistakes. Then the real crisis arrived—General Stilwell made a joke. I didn't understand the punch line in English, much less interpret it into Portuguese. In desperation, I told the Brazilians my dilemma, "Dear friends, the general has just told a joke. I don't understand it, but please laugh." The Brazilians not only helped, they went overboard and roared with laughter. General Stilwell turned to me and said, "Boy, they really did like that joke."

From that episode, I learned that the best antidote for a stressful situation is a good laugh. We should be happy that we are in the Army—there are many who can't be.

The basic role of an infantry leader is to keep hope alive. We do this in battle by being in better physical condition than our troops. We do it by being as competent as we can possibly be. Because we are in the most honorable of professions, we must be proud. We are American soldiers.



Brigadier General Bernard Loeffke, when he wrote this article, was Chief of Staff of the XVIII Airborne Corps and Fort Bragg. He served three tours in Southeast Asia. He has also served as Defense Attache to the People's Republic of China and as Army Attache to the U S Embassy in Moscow.

More on Infantry

COLONEL HUBA WASS de CZEGE

AUTHOR'S NOTE: Last year, INFANTRY published my article "Three Kinds of Infantry" (July-August 1985, pp. 11-13). Subsequently, a letter to the editor appeared in the magazine (March-April 1986, p. 7) by Captain Jack E. Mundstock from Fort Bragg, disagreeing with what I had said. This present article is my response to Captain Mundstock's letter.

Along the broad spectrum of infantry functions, there are three specific areas. Infantry support to rapidly advancing tanks is one extreme, and light infantry operations in mountainous terrain is the other. In the middle ground are the traditional infantry missions that require heavy firepower, position defense, and assault of fortified positions.

Our traditional approach has been to improve our infantry's performance on their middle ground missions. Having served in mechanized, "straight leg," and airborne infantry units of the recent past, like Captain Mundstock, I can say the three weren't all that different. They were designed for the middle ground primarily, with the mechanized infantry being more useful in support of tanks while the others were better in difficult terrain.

With the arrival of the Bradley infantry fighting vehicle and the new light infantry organizations, however, we have a new situation. The Bradley infantry is designed to support the M1 tank, and Bradley infantry is significantly different from M113 infantry — or so my friends who command Bradley outfits are telling me. Although they cannot put as many soldiers on the ground

for dismounted operations, they can more than make up for this with high speed mobility and heavy firepower.

The new light infantry is also significantly different from the previous H-series infantry. It is truly better for mobile operations at night and in extremely difficult terrain. It cannot dig in and hold ground or assault hostile positions as well as what I call "regular" infantry. It cannot carry heavy weapons, pioneer tools, mines, and sandbags as easily. But it is much better at infiltration tactics and is much more mobile in mountainous terrain.

Clearly, when required to do so, both Bradley and light infantry can dig in and hold a fixed position or assault an enemy strongpoint. But by organization, equipment, and training emphasis, neither is best for that role.

VOID IN THE MIDDLE

Having made our infantry types most effective near the ends of the spectrum, when we convert all active duty infantry to the J-series TOEs, we will have a void in the middle. That was the main point I tried to make in my earlier article.

If the functions at the ends of the spectrum are important, then we need to recognize that the skills required by Bradley and light infantry will be quite different. Not having commanded a Bradley unit (but having commanded an M113-equipped mechanized infantry battalion), I can only imagine the initial culture shock of NCOs who are new to the Bradley. I do know that light infantry tactics require a considerable "mind-set adjustment" for NCOs — even those

who have an airborne background. With the 11M MOS we have already recognized the significant differences between Bradley and other infantry. Since all mechanized infantry units eventually are to be equipped with the Bradley, the current mechanized 11B will become extinct.

I submit that the light infantryman needs attitudes and skills as significantly different from those of the H-series regular infantryman as those of the M113-equipped infantryman are from the Bradley-equipped infantryman. Since we are converting all regular infantry to light infantry, all non-mechanized 11Bs will become light infantrymen. Some may be air assault and some may be airborne, but all will be some variant of light infantry. It is a purely academic exercise, therefore, to speculate whether we would need a separate MOS for "regular" infantry.

Every criticism of both Bradley infantry and light infantry boils down to a perception of their difficulty in carrying out the middle ground traditional infantry chores — the "regular" infantry domain. Just as the missions of supporting the rapid advance of the tank and fighting in different terrain are important, so are the missions of digging in quickly and effectively, converting a village or town into a fortress, or taking those kinds of positions away from the enemy.

The current M113-equipped units are best for those tasks, because they can carry the weapons and equipment required for those missions. We should not give up this important capability. Moreover, we should make our mechanized infantrymen better at those tasks by fo-

cusing their training in those areas and developing the equipment they need either to go to ground quickly or to root the enemy out of the ground quickly. That requires heavy firepower, a great deal of ammunition to sustain fire, and special skills and attitudes. As a mechanized infantry battalion commander, I made a practice of making sure each company has an opportunity to dig itself in *completely* every quarter, because the habits and skills associated with that activity are highly perishable.

SPECIALIZATION

As I matured in the profession and as an infantryman, I came to recognize that the entire range of tactical infantry functions are important and useful in the larger tactical scheme of divisions and corps. I also recognize that to do them well, we must develop specialized organizations and the people to man them.

It is because of specialization that most armor and artillery NCOs appear impressively proficient compared to the average infantry NCO. That is not to say that infantry NCOs are any less professional or talented, but their craft is much more complex and more difficult to master and would be a great deal easier if they specialized.

For the future, we have chosen to have (basically and functionally) two kinds of infantry (with one possible exception I will mention shortly). The light infantry variants of Ranger, air assault, and airborne are still fundamentally "light" infantry. The motorized infantry of the 9th Division is a "light" variant of the regular infantry. It is more air transportable than M113-mounted infantry, and it has equal or greater firepower. But being lighter in weight, it may not be able to carry all of the equipment and tools regular infantry requires to build fortifications. In fact, the designers of the motorized infantry recognize this and have opted for mobile, cavalry-like tactics, relying on long-range antiarmor systems to keep the enemy at arm's length from the infantry. Such a force may be useful, but it does not replace regular infantry.

Some military analysts have written

about the utility of organizing the U.S. Army into permanent brigades. The best argument goes like this:

- Our current force structure lacks the maneuverability and flexibility of World War II formations in which divisions were packaged as permanent combined arms formations, which were grouped by field armies under corps for tactical missions. During the course of a campaign, divisions could be moved between the corps readily because the corps had no logistical function. Divisions were plugged into field army logistics.

- Today's corps performs all of the functions of a World War II field army and in terms of combat power is probably superior to it.

- Today's division operates over the terrain of a World War II corps and is as powerful. But unlike a World War II corps, it has a division support command (DISCOM) to which all of its brigades are tied, and it is basically a homogeneous force. Often an armored division finds itself in terrain that needs more "regular" or "light" infantry. Likewise, a light infantry division often needs armored and mechanized infantry in portions of its sector.

- We often find a corps trying to generate a reserve, being tempted to pull reserve brigades but stymied by logistics arrangements. The World War II field army merely tapped a corps headquarters to give up its committed divisions to flanking corps and to draw its reserve division and other available reserve divisions into a potent new reserve corps. If our divisions were more like World War II corps and brigade structures, then corps operations would be easier to handle.

- A brigade level force today can wield the combat power of a World War II division, and this is the level at which the primary combined arms ought to be brought together into a permanent team.

- Some say that brigade packages are easier to deploy within joint contingency plans than "brigade slices." This may or may not be true.

If we organized the Army along brigade lines, then I would see infantry organized along the following lines: There would be three kinds of light

infantry brigades each capable of functioning in any corps, under any kind of division. They might be capable of conducting both airborne and air assault operations and there might be fewer of them in our force structure than currently envisioned.

A regular infantry brigade would be composed of three motorized battalions with ample antitank systems and an organic engineer platoon. It would also have a combined arms battalion of tanks and "armored" infantry. An armored brigade would be made up of three combined arms battalions composed of tanks and "armored" infantry in infantry fighting vehicles.

The "regular" infantry would be of two types. Those deployed in Europe would be oriented on the M113A1, the M113A2, or a similar heavy transport with artillery shrapnel protection. Those in the continental United States would be of the "expeditionary" variety, mounted on lighter vehicles but otherwise identical in organization and function. The tanks in the "expeditionary" brigades might be replaced with additional ground antitank systems and attack helicopters, but the infantry soldiers' training and functions would be the same.

The armor brigades, equipped primarily with M1s and M2s, would be the ground striking force.

In addition, I can see two basic types of cavalry regiments. Heavy cavalry regiments would be similar to those we now have. Light cavalry regiments would be developed around light attack vehicles such as those in the 9th Division.

Aviation would also be reorganized as follows:

- Air cavalry regiment organizations would be specially designed for corps screening missions, rear area protection, and flank security. Air attack brigades would be totally air-transportable, deep-strike formations. These would counterattack in the defense or exploit armored breakthroughs in the attack. For employment, they could be attached to a division. (It is conceivable to have two armored and two air attack brigades under a division.)

- Combat assault brigades composed of mostly lift and escort helicopters, at corps level, would be either attached to



Soldiers from the 25th Infantry Division during Team Spirit 86 in Korea.

divisions that were made up entirely of light brigades or detached as necessary. They would have primarily general support or direct support missions within divisions. But being corps assets, they could be moved and regrouped as necessary.

- Heavy lift brigades composed of heavy lift helicopters would be assigned to a corps to support its combat and logistical lift requirements. They could quickly reposition light infantry brigades and their supporting artillery. They could also support the rapid advance of armored brigades and air attack brigades by moving field artillery and supplies forward.

Artillery organizations would also have to undergo transformation, and robotics could do much to reduce the

number of soldiers required in battery and support roles.

Brigades would have organic artillery to provide close support and countermortar fires. (A good case can be made for having a battalion's indirect support systems manned by artillerymen.) Corps artillery should all be long range, and its functions should be to reinforce division artillery fires, to provide counterbattery fires, and to conduct deep interdiction fire missions.

Divisions would become like World War II corps with appropriate division troops but no logistics functions. The current DISCOM functions would either go down to the brigades or back to the COSCOM (corps support command).

Like the old corps artillery, the division would have a DIVARTY (division

artillery) of about three battalions of long-range tube artillery. MLRS (multiple-launch rocket system) battalions could be attached from corps artillery. All tube artillery would be either in DIVARTYs or BRIGARTYs (brigade artilleries). There would also be air defense, signal, engineer, CEWI (communication, electronic warfare, intelligence), cavalry, military police, and aviation troops appropriate to the division.

All divisions would be capable of handling any configuration of brigades and regiments from two to five in number. Division troops based in the continental United States would be equipped for easy transportability; some would be airborne and more light forces oriented. The commanders of these divisions might command three like brigades or a mix of two to four of several different kinds.

During wartime, brigades would be assigned to corps for extended periods and COSCOMs would be specifically tailored to support war plans. Some COSCOM units might be stationed on division posts to provide peacetime support.

Divisions and corps would be given primary and alternate missions for contingency planning. Brigades might be assigned to different divisions based on contingencies and war plans.

Obviously, I am not looking at the implementation of any such organization in the immediate future, and I realize that these ideas don't coincide completely with Army 21 concepts. But for several years, during my tenure at Fort Leavenworth both as a doctrine writer and as director of the School of Advanced Military Studies, I have looked at our ability to wage war with our current organizations from top to bottom. Therefore, although my conclusions may be controversial, I do not think they are trivial.



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Physical Fitness Program

LIEUTENANT COLONEL ROBERT J. HOFFMAN

Since 1983, the Army's Soldier Physical Fitness School at Fort Benjamin Harrison, Indiana, has been working to improve the Army's overall physical fitness program. This involved revising FM 21-20 and reexamining the standards applied to the Army Physical Readiness Test (APRT), which many considered too easy. As part of the renewed emphasis on the word "fitness," the test has been retitled the Army Physical Fitness Test (APFT). The new test, which will include generally tougher standards, will take effect 1 October 1986.

In revising FM 21-20, the Fitness School reviewed available civilian research and literature and evaluated its applicability to the Army. One finding showed that while there was fairly good consensus about what the principles of fitness were, there was some disagreement, even among the experts, with regard to their variables. The School's staff, therefore, established guidelines for these principles on the basis of the needs of the Army and the time available for physical training.

In the past, the Army's physical fitness program was based almost entirely upon running, with little information in the manual about strength or flexibility training. The principle change in FM 21-20, accordingly, is based upon an attempt to give equal emphasis to all aspects of physical fitness—flexibility, muscular strength, muscular endurance, cardio-respiratory endurance, and body composition. (Because body composition is covered by AR 600-9, it is addressed in FM 21-20 only in the context that the training in the other four components, along with proper nutritional habits, will

contribute toward attaining the desired ratio of body fat-to-lean muscle mass.)

Flexibility seemed to be the most neglected of the components in the past. Warming up was normally done using Conditioning Drill 1, 2, or 3. In reality, however, the word "conditioning" was a misnomer in that these exercises did little to condition the body. They were actually dynamic stretching exercises and may have been injurious when used to begin an exercise session. In fact, the Surgeon General has accumulated data over the years that documents the dangers of certain conditioning drills. Thus, those that were considered potentially injurious have been eliminated and the remaining exercises are now termed *calisthenics*.

WARM-UP

Another area of concern centered on how to begin a warm-up. Some experts recommended beginning with static stretching while others said there should be some activity to warm the muscles before static stretching. The Fitness School chose the latter method.

The first activity in a warm-up period should be just strenuous enough to elevate the heart rate, raise the temperature of the muscles, and perhaps cause a little sweating. Marching from a company area to a PT field, or jogging in place for one minute, should suffice.

Static stretching means using slow, smooth movements to stretch the muscles instead of using jerky, bouncy movements. Stretching should be done to the point of mild discomfort, but it should never hurt. Flexibility varies from one

person to another and should never become a contest. Once the muscles to be used in the day's activities have been stretched, calisthenics may be performed to warm up further. The entire sequence can be completed in five to seven minutes.

The new manual presents static stretches and calisthenics in a menu-type format, allowing a commander to pick the exercises most appropriate to his unit's needs and planned activities. These are not all inclusive, but some exercises are listed for all major muscle groups.

As for muscular strength and endurance, information about these subjects was woefully lacking in the old manual. Chapter 3 in the revised manual discusses the principles of strength training (see Figure 1) and identifies the major muscle groups. Exercise programs are presented in which partner-resisted exercises, free weights, and exercise machines are used.

Partner-resisted exercise (PRE) is a form of strength training in which a person performs an exercise against a partner's resistance. With the scarcity of equipment in the Army, PRE is an excellent way of developing the necessary muscular strength and endurance. As a bonus, it can be taken to the field.

In discussing the principles of strength training, Chapter 3 defines repetitions, sets, and workloads. As a general rule, muscular *strength* is best developed using relatively heavy resistance and relatively few repetitions. On the other hand, muscular *endurance* is improved by more repetitions with less resistance. It appears that an acceptable mixture of strength and endurance will result from

doing 8 to 12 repetitions with enough resistance to cause momentary muscle failure. (Resistance can be stated as a percentage of the weight that can be lifted in one maximal effort. Momentary muscle failure occurs when it becomes impossible to perform another correct repetition through the range of motion required for the exercise.)

For any number of reasons, cardio-respiratory endurance training has been the cornerstone of most fitness programs. The running boom has been evident throughout our society for the past 10 to 15 years. Running is something that can be done almost anywhere, it requires little or no equipment, and people seem to understand the basics pretty easily. The revised FM explains how long, how hard, and how often cardio-respiratory training must be conducted to achieve a training effect. In addition, the manual discusses alternate aerobic activities such as road marching, swimming, biking, walking, and cross-country skiing.

To answer the question of how often, how hard, and how long exercises must be done, and of what type they should be, the Fitness School teaches the use of the acronym FITT—frequency, intensity, time, and type.

Frequency. To achieve a training effect, each component must be done at least three times a week. This supports the principle of regularity. But if three

times a week is good, is seven times a week better? Probably not. Trainers must also adhere to the principle of recovery. Research indicates that muscle groups must be allowed at least 48 hours to recover from a bout of hard exercise. The School therefore advocates a hard day/recovery day concept, whereby the same muscle groups are exercised at high intensity every other day. An example might be to run at Target Heart Rate (THR) for 30 minutes on Monday, Wednesday, and Friday, with shorter, slower runs on Tuesday and Thursday. Within this structure, strength training might be done on Tuesday, Thursday, and Saturday, with Sunday a day of complete rest. Weight-lifting enthusiasts might incorporate this concept by training the upper body on Monday, Wednesday, and Friday, and the lower body on Tuesday, Thursday, and Saturday. There are many possible combinations.

Intensity. For cardio-respiratory exercise, the School teaches how to calculate and use THR (see Figure 2) to measure the intensity of exercise. For muscular strength and endurance training, intensity means resistance; for flexibility, it means stretching to the point of mild discomfort, not pain. But because it is difficult, if not impossible, to achieve the proper intensity for everyone during group physical training, the Fitness School recommends two methods to offset this problem—

ability-group running and exercise in sets.

For ability-group running, soldiers are divided into groups of as near the same ability as possible. (The soldiers' times on their most recent two-mile run can be used, for example.) For a company, three to six groups should be enough, depending on the number of leaders available and the range of ability. Each group would then run at a pace fast enough to attain THR. This would ensure that more soldiers receive the greatest possible training benefit from the run.

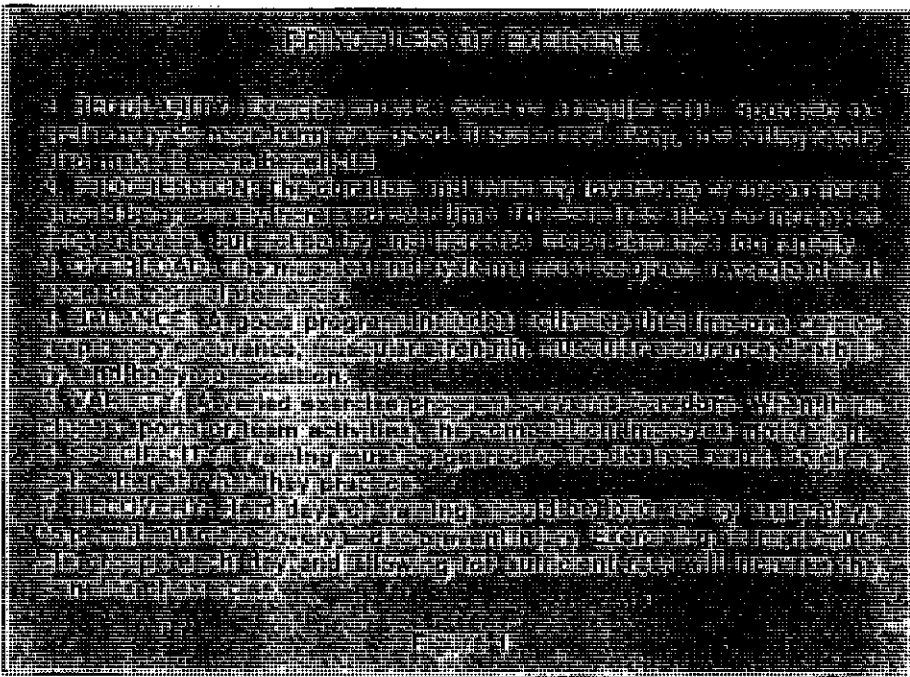
Much the same procedure can be followed for push-ups and sit-ups. A specific number of repetitions of each of these exercises will not result in uniform training for all of the soldiers in a company. Exercise in sets can produce good results if the concept is properly applied. There are two methods that may be used.

In the first, each soldier establishes the maximum number of push-ups and sit-ups he can do. The company commander then chooses a percentage of those numbers—usually 50 or 75 percent—for a workout. Each soldier then does three sets of that number of repetitions with a predetermined rest period between sets. As a result, everyone does *relatively* the same amount of work.

Another method is the use of timed sets. For example, everyone would do as many push-ups as possible in one minute, rest for 30 seconds, and repeat this two more times. Those who could not do push-ups for the entire minute could use their knees, or just lower themselves, but keep exercising for the specified time. These two methods help individualize training, thereby producing better training effects.

Time. With regard to cardio-respiratory endurance, THR must be maintained for at least 20 minutes. For muscular strength and endurance training, "time" translates to number of repetitions; for flexibility training, it refers to how long a stretch is held.

Type of activity. For each component of fitness, there are several different activities. Those included in FM 21-20 are intended to produce the desired training effects and to give the program variety, but commanders should not feel limited to these activities. As long as an activity



is safe and produces a training effect, it has a place in the program, and if soldiers enjoy it, this is all the more reason for including it.

An often neglected part of an exercise session is the cool-down. The key is to prevent the pooling of blood in the lower extremities and help to return it to the heart. Walking and stretching are good exercises for the cool-down. Soldiers should walk until their heart and breathing rates have slowed to near pre-exercise levels, while stretching may reduce stiffness and soreness the next day. Four to six minutes should be enough for the cool-down period.

In addition to these various aspects of physical training, there are also special programs to meet special needs. In the past, little effort has been made to differentiate between unfit and unmotivated soldiers. In fact, "remedial" PT squads have often included soldiers who were overweight, over 40, or on profiles. But each of these groups has different needs and should not be summarily lumped together for physical training. Many overweight soldiers, for example, can do quite well on the APFT. What they need is counseling on diet and nutrition, not necessarily extra push-ups. Other soldiers may do quite well on the two-mile run but have trouble with push-ups. They may respond best to running for five minutes less and devoting those five

minutes to additional, supervised push-up improvement drills.

The Fitness School contends that these special programs should be conducted at the same time as regular PT, with careful attention to their development. Addressing these various needs requires careful management. But the soldiers will recognize that their special needs are being considered, and their motivation should improve because of it. Master Fitness Trainers (MFTs) are well qualified to develop these special programs, and FM 21-20 contains information on them.

The School also found that, in the past, planning for physical training had been generally neglected. Planning for PT, however, is just as important as planning for field training, and each session should be planned so that it contributes to the combat readiness of the unit. Master Fitness Trainers can also help commanders develop short-, medium-, and long-range fitness plans for their units.

A typical company physical training session might look like this: Led by the MFT, the company starts out with five minutes of static stretching, with emphasis on the muscle groups that will be used in that day's conditioning period. The company does eight partner-resisted exercises (16 minutes) and then breaks down into ability groups for a 30-minute run at target heart rate. Those who have failed push-ups and sit-ups on the APFT

run for only 25 minutes and use the other five minutes to work on push-ups or sit-ups, supervised by the MFT. Soldiers with profiles exercise within their stated limits. Those who cannot run can swim or ride a stationary bike for 30 minutes at target heart rate.

This exercise period is conducted in running shoes and is considered a "hard day." The next day is a recovery day, when there will be a company run with drills for improving push-ups and sit-ups.

APFT

The overall tougher standards on the new APFT were based on a number of obvious deficiencies in the old standards. For one thing, a two-mile run is the one event in which an estimate of the energy cost can be made—for each speed, the amount of oxygen required per minute for unit of body weight can be estimated. (This is called VO₂.) Under the old standards, the VO₂ required of men in the 17 to 25 age group at the 60-point level was less than that required of the average 40-year-old man. We certainly expect our youngest and theoretically fittest soldiers to be in better condition than the average 40-year-old. (Even the new standards require a fitness level no higher than that of the average college-age male, but the School did not want to move too fast on this issue.)

Another deficiency in the test was the age groupings. When APFT scores were examined on an age basis, it appeared that we were unfairly asking 25-year-old soldiers to compete against the same standards as 17-year-old soldiers. Close inspection indicated that more homogenous groupings would result from dividing the population at five-year intervals. The new age groupings are 17-21, 22-26, 27-31, 32-36, 37-41, 42-46, 47-51, and 52+.

Along with the realignment of age groups, standards were developed for soldiers 40 years of age and older. Previously, the extremely low pass/fail standards may have been telling the older soldiers that fitness was no longer important. In fact, however, a high level of fitness may be even more important to our command sergeants major and battalion and brigade commanders than to

TARGET HEART RATE

To calculate your THR, you must know your Resting Heart Rate (RHR). RHR is best determined by adding your pulse for a full minute immediately upon waking in the morning. You can also estimate it by taking your pulse for one full minute after sitting quietly for at least five minutes.

You must also decide on the level of intensity you want on your workout on the basis of your level of conditioning:

- 60% Unfit
- 70% Fairly Fit
- 80% Very Fit
- 90% Exceptionally Fit

Obviously, the higher the percentage, the more intense the workout. Therefore, the more fit you are, the higher percentage you should choose for a workout. A very fit person may do workouts at 80% on hard days and 60% on recovery days.

Once you know your RHR and have chosen a level of intensity, you can calculate THR as follows:

- Step 1: 220 - Age = Maximum Heart Rate (MHR)
- Step 2: MHR - RHR = Heart Rate Reserve (HRR)
- Step 3: Desired Intensity (%) x HRR + RHR = THR

A very fit person may do workouts at 80% on hard days and 60% on recovery days.

Figure 2

ILLUMINATED



NIGHT ATTACK

CAPTAIN ROBERT G. FIX

A night attack presents some unique challenges for the infantry in terms of command and control, movement to and maneuver on the objective, and the integration of fire support assets. Night attack training raises some real questions for an infantry company commander (light, air assault, or airborne): Should the attack be supported or nonsupported, illuminated or nonilluminated? Will the scheme of maneuver use so-called conventional tactics (wire, release points), or will daylight tactics be used (overwatch force, maneuver force)? How many night vision goggles are available to the company? Will its ammunition allocations provide the artillery and mortar illumination necessary? Is high-explosive ammunition available to fire a coordinated mission?

Presented with these challenges, a battalion of the 101st Airborne Division (Air Assault) had an opportunity to examine the night attack exercising three different techniques on the same objective.

This opportunity grew out of an external evaluation of the 3d Battalion, 187th Infantry, in which the battalion had carried out extensive night operations while conducting missions within a mid-intensity scenario. During the after-action review, it was noted that the company tactics employed on two separate nonilluminated night attacks had been a mixture of day-

CAPTAIN FRANK H. RICE

light and limited visibility tactics. The key leaders said that although daylight tactics, according to doctrine, are employed during an illuminated attack, they are often substituted for tactics that should be used during a traditional nonilluminated night attack.

This raised the issue of whether traditional night tactics might be too cumbersome and outdated. Further discussion brought out an interesting tactical dilemma: If an attack that begins nonilluminated is illuminated at some time during the attack, a company might be caught in the middle of executing night tactics where daylight tactics would be more appropriate. Although we arrived at no "approved solution," this did give us an opportunity to look more closely at three different ways of conducting such attacks—a nonilluminated night attack, a night attack by infiltration, and an illuminated and supported night attack.

The traditional nonilluminated night attack, as history shows, is one of the most difficult missions for any infantry unit to plan and execute. More stringent control measures must be used, and wire is the primary means of communication. Companies systematically use a point of departure (PD) when crossing the line of departure (LD) at night, then deploy on line using a series of release points. A probable line of deploy-

ment (PLD) helps the company maintain its attack formation as it closes upon the objective.

Unfortunately, this method of attack is somewhat restrictive, because it often leads to a frontal assault in order to bring the full strength of the unit's firepower against the enemy. Also, if the PLD is not perpendicular to the direction of attack, it is difficult to keep the unit on line and oriented on the objective. In short, this tactic often sacrifices maneuver and flexibility for increased control.

Infiltration is a more innovative maneuver to use in conjunction with a night attack. If the enemy has widely separated defensive positions, a commander may choose to bypass the strength of the defensive positions and infiltrate his units to a position from which they can conduct combat operations in the enemy's rear area. Ideally, the objective would be unoccupied key terrain that would compromise the enemy's defensive positions and force his withdrawal.

Such favorable conditions are rare, however. More realistically, a night attack conducted by infiltrating the enemy's forward trace would take the form of a raid. Each sub-element (support, assault, and security) would infiltrate to its respective position, conduct the assault, and then hold the key terrain until relieved, or until it exfiltrated. Operations of this sort are possible at company and battalion level, but they require an extremely high level of training. After all, an infiltration is a highly complex operation—the sub-elements leave friendly forward lines from several departure points, then move along multiple lanes at different times to link up at a single rendezvous point, all during hours of limited visibility. By any standard, this is a tall tactical order.

A night operation that incorporates infiltration to respective support and attack positions requires soldiers of the highest caliber. And few infantry units have the personnel stability they need to sustain the proficiency necessary for this maneuver.

PRACTICAL SOLUTION

A more practical solution for coping with the problems of control during limited visibility operations is to plan for the use of illumination. Although current doctrine supports this idea, it is unclear as to the best time to employ illumination and what tactics should be used once an attack has started.

Current doctrine (FM 7-10) states that "a night attack that initially begins nonilluminated should have illumination planned, regardless." Additionally, the illumination should not be used until the assault begins or until the attack is detected. The current manuals also tell a company commander conducting a nonilluminated attack that if he is detected before crossing his final control point, he should initiate illumination and continue as if it were a daylight attack.

But there is a radical difference between traditional night tactics and daylight tactics, and to succeed in using daylight tactics at night under fire (even with illumination) would be difficult. There are just too many variables.

A unit needs to have a specific time, place, or set of circumstances for initiating illumination, and every soldier should know and understand it. Knowing in advance that illumina-

tion will be used would give both commanders and soldiers more freedom. Under illumination, leaders could then concentrate their efforts on their maneuvering elements using the control measures associated with daylight tactics instead of wasting time and energy trying to use nighttime tactics. The commander would also have more flexibility because he would no longer be locked into release points and PLDs, which make for a set-piece maneuver. Instead, the use of an assault position in which an overwatch element could deploy into its attack formation would be ideal.

As far as the soldiers are concerned, their self-confidence would be increased by the knowledge that illumination would help them place and control direct fires—a real danger *without* illumination.

We concluded that illumination should prove to be the best method to use in a night attack. And our battalion's training exercise confirmed this conclusion.

CONDUCT OF EXERCISE

This is how we conducted our exercise:

The battalion deployed to the field, and while most of the battalion conducted squad external evaluations, Company A conducted the three variations on the night attack. On the first night, the company conducted a nonilluminated attack and encountered the same problems normally associated with a "traditional" night attack. Surprisingly, though, the use of wire for communications was not a problem. In fact, because of planning and several rehearsals, the use of wire was a rather simple and successful addition. Wire was used effectively down to the platoon level while maintaining communications with battalion. The only real problem was the limited amount of wire and number of switchboards authorized by the TOE.

The company used release points successfully and, in short order, deployed on line in the direction of the objective. Because of terrain limitations, however, no recognizable PLD was available, and the unit encountered its first problems as it moved forward to attack. Control of the formation quickly diminished as rugged terrain and darkness hindered the company's movement.

As the enemy initiated contact, the control of maneuvering soldiers and of direct fires deteriorated. Once the objective had been seized, consolidation and reorganization took on a new meaning as soldiers tried to regain contact with their elements.

They performed as well as could be expected on unfamiliar terrain, with no illumination, against stiff resistance, and with enemy obstacles to breach. Nonetheless, in actual battle, heavy casualties probably would have been incurred from the lack of control and from friendly fires.

On the second night, the company executed an infiltration into the objective area. The overwatch element used one lane, and the maneuver element moved along another, leaving from separate departure points at different times. The commander simplified the infiltration by not dividing the separate elements into smaller sub-elements. Consequently, no linkups were required in the objective area. This sacrificed stealth for the sake of control, yet adhered to the principles of the maneuver tech-

nique. Because the maneuver element was smaller (two platoons instead of three), soldiers and direct fires were easy to control once the attack began.

Finally, on the third night, the company executed an illuminated and supported night attack. In preparation for this last variation, maneuver space was selected to provide an objective area adjacent to an artillery impact area. Firing points were carefully selected for the 81mm mortar platoon and a battery of 105mm howitzers. These positions enabled the indirect fire support elements to make the most of their illumination capabilities within safety constraints.

Once this was accomplished, fire support planning was conducted by the battalion fire support officer, the company commander, and the company fire support officer. Plans were made for supporting fires along the route, on the objective, in blocking positions, and just forward of the limit of advance. Since illumination rounds were in short supply, the unit was instructed to be as frugal with them as possible. Consequently, a lateral spread of only two rounds was planned, but this proved to be more than adequate—ideal, in fact.

The company crossed the LD and moved in column to its assault position just at EENT (end of evening nautical twilight) and as preparatory fires began to hammer the objective. The support element split off and assumed its overwatch position as the maneuver element cleared the assault position and swung wide to attack the enemy's flank. As the assault element neared the enemy's triple-strand concertina wire and booby traps, preparatory fires were lifted and direct fires begun. As the support element opened fire, the illumination was initiated and the company aggressively breached the obstacles and maneuvered across the objective.

The illumination greatly improved the control of the maneuver force and the supporting fires, because it allowed the soldiers to conduct fire and movement freely and also allowed

the support element to acquire targets safely until their fires were lifted and shifted. Additionally, the unit was able to consolidate and reorganize quickly because it was not as intermingled as during the nonilluminated attack. By and large, illumination closed the gap between utter confusion and a well-controlled night operation.

The battalion's leaders and soldiers learned a great deal from this opportunity, because we were able to exercise three different versions of the night attack. The tasks and standards remained the same, but the conditions varied. The results also varied. Unequivocally, the illuminated and supported night attack conducted with daylight tactics proved the most successful. That is not to say this is the approved solution, but it does point out the need for leaders to continue examining different techniques and ideas.

The battalion found a better way to incorporate illumination into its night operations, and the 101st Airborne Division now has a training vehicle for other companies and battalions to use in executing their own illuminated and supported night attacks. The end result will be an improvement in the division's proficiency during hours of limited visibility.



Captain Robert G. Fix was the project officer for the illuminated night attack by the 3d Battalion, 187th Infantry, in which he commanded Company C. A 1981 graduate of the United States Military Academy, he also served as platoon leader and executive officer with the 1st Battalion, 503d Infantry at Fort Campbell.



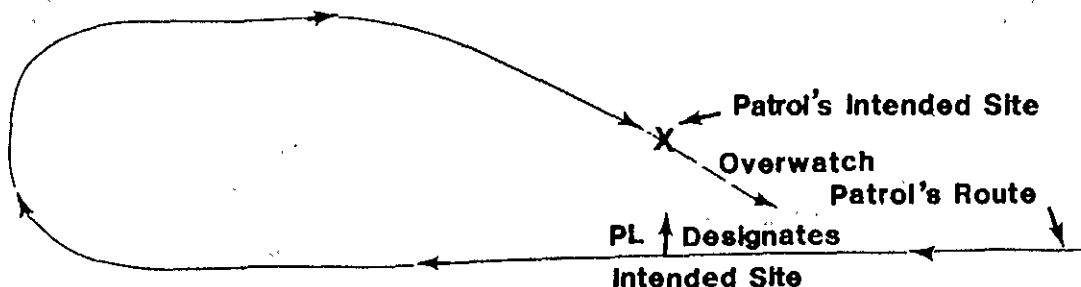
Captain Frank H. Rice is commander of Company A, 3d Battalion, 187th Infantry. Previously he served as a rifle platoon leader, company executive officer, and adjutant with the 1st Battalion, 35th Infantry, 25th Infantry Division. He recently completed the Infantry Officer Advanced Course.

SWAP SHOP



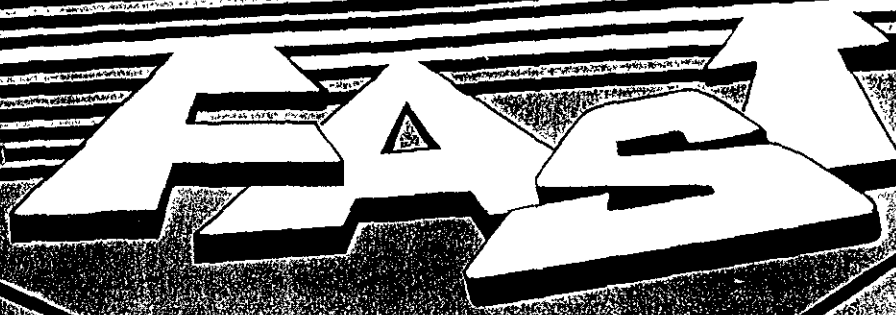
Patrol sites should be occupied only during periods of limited visibility. The patrol leader designates the patrol site (ORP, OP, patrol base) as the patrol passes it. The patrol continues moving on the same azimuth, passing the site and not moving through it. About 100 to 200 meters past the site, depending on the terrain, the patrol makes a loop and enters the site from a different direction without crossing its route.

The patrol establishes a perimeter with the patrol leader designating each man's position (this should be preplanned and rehearsed). A grenadier and a squad automatic weapon gunner should be the first into the site, and they should establish an overwatch on the patrol's original route. The patrol is then prepared to ambush a pursuing force or to evacuate the site as the situation requires.



(Submitted by Sergeant First Class Gordon L. Rottman, Company G (Ranger), 143d Infantry, Texas Army National Guard, Houston.)

THE FIELD ORDER



MAJOR JAMES A. DUNN, JR.

All of us, at one time or another, have pondered over an immense operations order or plan (OPORD, OPLAN). Whether it was writing one in an officer advanced course or the Command and General Staff Course or reading some volume published by higher headquarters, we had to marvel at the amount of information such an order contained.

Our Army has a specific format for these OPORDs and OPLANs, and it is indeed the mark of a skilled staff officer (commissioned or noncommissioned) when he can prepare one "by the book." Remembering what comes first (is it annex-appendix-tab or annex-tab-enclosure?) and recalling how to number the pages (I-N-1-A-1) takes a special knack—most of us have to have an example nearby to be sure we have it right.

Although these monstrosities are useful when time is plentiful, a "field order"—written in a tent or the dimly lit interior of an M577 extension and reproduced on a mimeograph, "jelly roll," or diazo machine—is an entirely different matter.

One problem with this type of order is the time available for preparing it. All ARTEPs and staff manuals prescribe how much time an echelon of command can spend in preparing its order. Any staff operator, from the division G-3 to the tank battalion's operations sergeant major, can tell you his echelon has one-third of the total remaining planning time to prepare and issue its order. Thus, if the mission execution time is 30 hours away, the brigade may use 10 hours of that time. The battalion then may use a little less than seven hours of the remaining 20 to produce its OPORD, with similar time breaks for the company, platoon, and even squad. This one-third, two-thirds rule is known throughout the Army as the standard by which the preparation of orders is measured. This standard is not tough enough, though, and in most cases leaders at company level and below end up with less time than they need to plan adequately for their operations.

In the 3d Brigade, 4th Infantry Division, operations over the past 18 months or so have indicated that a tougher standard of one-fifth, four-fifths is in order. This tougher standard is aimed primarily at the brigade and the battalion or task force levels. And our experience during a REFORGER

deployment, a rotation to the National Training Center (NTC), a three-week off-post deployment to a maneuver site, and numerous local Fort Carson exercises indicates that it can be met at those levels and at some lower levels as well.

If the brigade meets this tougher standard, a battalion's planning time is increased by at least 21 percent. This extra time benefits the task force elements even if they follow the old standard. But if the battalion can also conform to the one-fifth, four-fifths rule, the company commanders are the major benefactors, as their planning time increases almost 45 percent (see table). This rule may be too stringent to be used at the company level, but if the higher echelons follow it, a company still gains considerable planning time.

	1/3-2/3 RULE		1/5-4/5 RULE	
	Time Available	Time Used	Time Available	Time Used
Bde	100	33	100	20
Bn/TF	66	22	80	16
Co	45	15	64	12-13
Plt	30		51	

But how does a brigade or battalion staff officer go about reducing the total time he needs to prepare orders? The four major methods discussed below permit this to happen. One involves the quality of the desired product and how to make the most of the resulting order. The second method makes it possible to display much useful information rapidly and concisely. The third method involves producing, reproducing, and issuing the order, and the fourth suggests some improved coordination procedures.

In most planners, there is an ingrained desire to produce the "A+ plan," the "school solution," or the "perfect plan." A highly detailed staff estimate, a carefully selected course of action, a thorough analysis of enemy avenues and actions, and a totally comprehensive wargaming resolution will usually result in such a plan. Unfortunately, performing these tasks completely and by the book just eats up too much time! The "perfect plan" can be written, but if a staff produces one con-

sistently, that plan may be available for issue only to the enemy who overruns the unit's tactical operations center.

General George S. Patton, Jr., is credited with saying, "A good plan today is better than a perfect plan tomorrow," and it is to this idea that this first methodology is directed. An "A + plan" delivered late, not fully coordinated, and inadequately executed will often fail. On the other hand, a good, solid, tactically correct "B plan" that is issued early enough to allow for complete coordination and capable execution has a greater chance of succeeding.

The crunch usually comes at the company commander level; it is he who eventually controls troop movements, executes cross-attachments, and directs the firepower that kills the enemy. No matter how talented he may be, he will do *better* if he has more time. And the more lead time he has the better the outcome will tend to be.

The one component that can assure the successful implementation of a good plan are the "Commander's Intent" paragraphs. These paragraphs are as important as all the concept statements, fire support plans, and specific instructions combined. In this brigade, we habitually include our higher echelon commander's intent as part of the "Friendly Forces (Higher)" of our paragraph 1 (Situation). By providing "higher's" intent along with a clear-cut statement of the brigade commander's intent, we have found that our subordinate leaders have a much clearer concept of the overall picture and of how their battalion or task force's actions fit into the total scheme.

When subordinate commanders also follow this procedure, the result is squad leaders and tank commanders who can carry out their commander's intent even though they may not be able to communicate with an officer-leader. (The informed NCO has always been a strong point of our Army; with this methodology he can be even moreso.)

Our experience at the NTC and other major deployments has indicated that successful operations can be conducted with clear useful graphics, an execution matrix, and the commander's intent alone! Although this is certainly not the goal of operations personnel, it does point out the importance of this sub-paragraph. At any level, a clear understanding of the boss's desires often outweighs the mass of specific and coordinating instructions that normally accompany an order.

Another way of getting a field order out fast involves modifying the way information is presented to subordinate units. A traditional brigade order includes a long list of annexes to support the basic order, with intelligence, fire support, Army aviation and others having their own individual annexes or appendixes. The current manuals describe what should and should not be included in these enclosures and clearly defines the acceptable format. Thus, a "school solution" fire support annex will always include a sub-paragraph on naval gunfire even if the unit is maneuvering at Fort Irwin—with a nicely worded "None" or "Not Available" next to it. These formats, strictly used, make the order correct, but long, ungainly, and difficult to digest.

The concept of the mission or execution matrix, as described in Chapter 4 of FM 71-2J, The Tank and Mechanized Infantry Battalion/Task Force, was a beginning, and most units have

developed a matrix of their own for offensive operations. From there, it was only a small step to the combat team matrices this brigade has developed.

These matrices do a number of important things. First, they combine like systems or related systems into a single annex or matrix. Thus, for example, one single matrix includes the information normally contained in the fire support annex, the Army aviation annex, and the close air support paragraph. This information is put on a single page, if possible, to permit commanders and staffs to see it all at one glance. Because the matrix makes the important data easy to find and eliminates some of the "None/Not Available" comments, it is much more functional and useful. No longer will a tired, bleary-eyed staff officer miss his assets on page 6 of a 10-page annex.

Several of the matrices developed for use in this brigade are shown here, but as examples only—other units can modify them to meet their own specific needs.

Air Defense

The air defense matrix provides battalion-level air defense elements with all the information they need to perform their mission and to pass orders to their subordinate elements (see Figure 1). The units to which ADA assets are assigned are shown across the top of the matrix, while the actual assets and information data are along the left side.

The first section lists the ADA weapons that are present in the brigade and the elements that are task organized to units. The unit designation and the number of operational systems

	BDE CONTROL	1-8 M	2-34 AR	4-40 AR
STINGER	NONE	1/A/C (DS)	4/A/C (DS)	2/A/C (DS)
VULCAN	NONE	3/A (DS) 3	NONE	3/B (DS) 4
CHAPARRAL	3/C (GS) 4	EN 873187 1	EN 982188 1	EN 901100 1
ADJ SECTOR	RIGHT (NORTH) A/4-61	LEFT (SOUTH) B/8-61	FORWARD () NONE	REAR (RESERVE) B/4-61
FAAR	CURRENT: EN 665185 EN 704111	PROJECTED: EN 884192 EN 863175	PROJECTED: NONE	
ADW/WCS	YELLOW/HOLD UNTIL UPGRADED BY III CORPS OR CADC IN SECTOR			
ACO	LLTRI EN 605888 - 777931 994186 - UNTIL 241830 WPN FREE-ZONE VIC CITY OF TRINIDAD			
CLV ATP	STINGER: EN 776915	VULCAN: EN 776915	CHAPARRAL: NONE	
SPECIAL INSTRUCTIONS	1. VULCAN RADARS WILL NOT OPERATE UNTIL H-4 HRS 2. ENEMY AIR EXPECTED TO BE MI-24, Su-17, Su-25 3. LINKUP POINT FOR VULCANS EN 863100, 231900Z.			

Figure 1. ADA Matrix. (Prepared by Lieutenant Willie Merrick, brigade Air Defense liaison officer.)

appear beneath the appropriate task force. The support relationship (DS, GS) is also shown as well as the grid coordinates of any brigade general support system located within a task force sector, with the number of weapons positioned there located by grid.

	TF 2-34	TF 1-10	TF 1-8	BDE
Task Organization	1/C/4 EN (DS) 1/C/299 EN EQUIP/C/4 EN AVLB/C/4 EN	2/C/4 EN (DS) 2/C/299 EN EQUIP/C/299 EN (-) AVLB/C/4 EN	3/C/4 EN (DS) 3/C/299 EN AVLB/C/4 EN 2 CEV/C/4 EN	C/4 EN (-) C/299 EN (-)
Priority of Engr Effort	S, C-M, H	S, C-M, H	S, C-M, H on order M, C-M, S	S, C-M, H
Priority of Engr Support	1	2	3 on order 1	NONE
Planned FASCAM	1	2	0	1
Engr Equipment	2 Dozers 2 Loaders 1 Backhoe	1 Dozer 1 Loader 1 Backhoe	1 Dozer (299) 1 Loader (299)	NONE
Class IV & V (Appendix 1) WTC MFR EMFB	Bde Tpts 16 4	10 10	5 5 8	NONE
Directed Obst (Appendix 2)	3001 3002	NONE	NONE	NONE
TF Engr	Cdr, C/4 EN	Cdr, C/299 EN	Plt Ldr, 3/C/4 EN	N/A
S - Survivability C-M - Countermobility H - Mobility	WTC - Wire, triple standard concertina (100m) MFR - Mine field row (100m) EMFB - Explosive minefield breach (150m)			

Figure 2. Engineer Matrix. (Prepared by Captain Bob Stockbower, brigade engineer.)

Adjacent ADA units are listed in the second section followed by current and projected forward area alerting radar (FAAR) locations. The air defense warning and weapons control status, with any restrictions or modifications, is then described, and airspace control orders are listed next. These might include low-level transit routes, minimum risk routes, high density airspace control zones, or weapons free zones with appropriate location data. Class V ammunition transfer points are then listed, if they are known.

This matrix can be further expanded, or used in conjunction with an overlay, if necessary. Specific instructions may be included to describe non-standard data or to assist units in their missions. This section might also be used to describe on-order missions.

Engineer

The engineer matrix provides a rapid way of organizing the critical information necessary for directing the engineer activities performed in support of brigade combat team operations. The matrix reduces or eliminates the need for preparing the traditional narrative engineer annex.

In the basic engineer matrix (see Figure 2), the task forces and elements under brigade control are listed across one axis and on the other are the specific elements of information needed to define engineer-related mission requirements. The items included in the matrix are tailored to the specific mission requirements of the basic order. The determination of these is a critical step that must be performed by the brigade engineer in conjunction with the combat team staff.

In the sample matrix, the essential items were determined to be the engineer task organization, priority of engineer effort, priority of engineer support, number of planned FASCAMs (family of scatterable mines), engineer equipment, engineer-related Class IV and V requirements, directed engineer obstacles, and task force engineer command and control. For those items that require more specific coordinating instructions, appendixes to the basic engineer matrix can be prepared to provide the necessary details. These are also prepared in matrix form.

The engineer task organization includes the specific allocation of engineer platoons, combat engineer vehicles (CEVs),

and armored vehicular launched bridges (AVLBs); and the priority of engineer effort in the performance of the basic engineer missions of mobility, survivability, and countermobility are delineated for each task force. It is not unusual for the priority of engineer effort to differ among the various task force engineer support elements. The priority of engineer support for each task force is annotated by consecutive numbers, with 1 indicating the highest priority.

The brigade engineer matrix can be modified to suit specific mission requirements, including hasty and deliberate river crossing operations. These brigade level matrices also form the basis for preparing detailed execution matrices by the task force engineers.

NBC

The NBC matrix (see Figure 3) is designed to provide essential information on chemical or nuclear support in a convenient, quick-reference format. Units are arrayed across the top, with informational data displayed on the left side.

Mission-oriented protective posture (MOPP) is the first item listed. Since MOPP is not a fixed or rigid system, flexibility is the key to providing maximum protection with the lowest risk possible for a given mission. Flexibility allows the subor-

Figure 3. NBC Matrix. (Prepared by Captain Greg Schlechta, brigade NBC officer.)

dinate commanders to adjust the amount of MOPP protection required in their particular situation and still maintain combat effectiveness. Directed MOPP levels are prescribed in the matrix. Subordinate commanders may exceed these levels without approval but must request any lower level or any reduction in MOPP.

Operational exposure guidance (OEG), described next, is determined on the basis of the unit's previous exposure and the risk that the commander is prepared to take. OEG may differ between task forces. Decontamination assets are discussed next with unit designation, location, and command relationship shown.

Smoke assets are listed in a similar manner with command relationships described and the number of operational generators and gallons of fog oil on hand. Any NBC reconnaissance missions tasked by brigade are also listed with

line with a particular NAI to clarify the information actually desired. Possible and actual taskings are indicated by NAI so that units may identify their tasked requirements and on-order requirements. This matrix permits battalion intelligence personnel to prepare their reconnaissance and surveillance plans.

This matrix and a decision support template are prepared at the same time as the OPORD so they will be available to the units when the order is issued. Although the matrix is not complete at this point—changing enemy situations may require NAIs to be retasked or modified—it is a point of reference from which changes can be made. These new NAIs are usually transmitted by FM radio.

The NAI tasking matrix, when used with the enemy situation paragraph and the decision support template, has become an effective replacement for the intelligence annex to an operations order by translating the commander's PIR/IR into specific intelligence requirements tied to a piece of terrain where activities are expected to occur.

Fires

The fires matrix replaces several annexes and appendixes. It addresses subjects from the traditional fire support annex—specifically, artillery organization for combat, priority of fires, close air support allocation, and a modified controlled supply rate (CSR). In addition, it includes information usually shown in a separate Army aviation annex. This data is displayed in a matrix whose design is unique (see Figure 5).

Informational data is depicted down the left side of the matrix. Along the top are shown phase lines or graphic control measures from the operations overlay. The use of phase lines permits all data on fires to be depicted phase by phase for the entire operation. This unique feature makes it easier to show changes in priorities of fire, allocations of ammunition, and all other features. Phase lines are shown from right to left or left to right to correspond with control features of the operation. Therefore, the basic matrix can be read from either direction, depending on the mission.

The information categories down the left side of the brigade's matrix includes such items as the commander's attack criteria, priority of fires, allocation of close air support, Army attack aviation, FASCAM, and special instructions.

The fires matrix is the most complex of all the matrices that accompany the order. But being able to display the mass of information contained in this one matrix on *one* page makes it a remarkably useful tool.

Through the use of these matrices, and the one-fifth, four-fifths rule, an operations order can be composed more rapidly than traditional methods permit. But the time saved will translate into more time for subordinate leaders only if the composed order is then rapidly produced, reproduced, and issued to units. A number of techniques can be used to decrease the time it takes for the composed order to be turned into an order in the hands of subordinate units.

A combination operations overlay and a simplified five-paragraph operation order, for instance, can be reproduced simultaneously. A standard operations graphic, produced on an acetate master, is the basis for the basic order. Written alongside the graphics are the essential paragraphs of the

	PL COW	PL HOG	PL PIG	PL SOW
CDR ATK CRITERIA	FORCES IN CONTACT FA <input checked="" type="checkbox"/> C3 <input checked="" type="checkbox"/> SEAD <input checked="" type="checkbox"/>	<input type="checkbox"/>		RECON <input type="checkbox"/> FA <input type="checkbox"/> SEAD <input checked="" type="checkbox"/> C3 <input checked="" type="checkbox"/>
PRI OF FIRE	TF 1/8		TF 2-34 & TF 4-40	
ALLOC OF CAS	2/1 TF 1/8 2/1 BDE CONTROL	1/0 TF 4-40	2/1 TF 2-34	2/1 TF 2-34
ARMY ATK AVN	A/4 AVN (DS) TO 3d BDE	A/4 AVN (DS) TO TF 2-34 ATK TO ECHELON		A/4 AVN (DS) TO 3d BDE ZONE RECON
# OF FASCAM	BDE CDR EXEC AUTHORITY 5 FASCAM AVAIL	TF 2-34-2		TF 2-34-2
FFF PRI TGTS	TF 1/8-1 TF 1/8-1	TF 2-34-4 TF 4-40-2		
# OF BN 3's	TF 1/8-10	TF 2-34 TF 4-40	23 7	TF 2-34 10 TF 4-40 5
MIN OF SMOKE	NONE	TF 2-34 TF 4-40	21 16	
MIN OF ILLUM	NONE	TF 2-34 TF 4-40	25 12	
<input type="checkbox"/> SUPPRESS <input checked="" type="checkbox"/> NEUTRALIZE <input checked="" type="checkbox"/> DESTROY				
SPECIAL INSTRUCTIONS 1) 3-29 FA DS TO 3d BDE, 1-29 FA GSR TO 3-29 FA 2) TF FIRE SUPPORT MATRIX/PLAN TO BDE FSE NLT 030800 WAR 3) 3d BDE CFL PL SOW INITIALLY, PL'S & CFL				

Figure 5. Fires Matrix. (Prepared by Captain Terry Sharp, brigade fire support officer.)

operations order, abbreviated where possible. The subparagraphs are reduced to the essential information and written on the margin of the graphics. Spartan language, heavily abbreviated, is used to describe task organization, friendly forces (including the high headquarters commander's intent), enemy forces, and the mission. Under "Execution," the commander's intent is augmented by an execution matrix or by simple unit instructions. Any coordinating instructions not included in matrices are shown next. The service support matrix is then referenced followed by command and signal information.

This acetate overlay is then reproduced using field techniques. The fastest and best method uses a diazo reproduction machine (NSN 3610-01-061-0621 or LIN84904, R84689), which uses an ammonia process with light sensitive paper technology to produce a paper copy of the acetate original. Numerous copies can be made from the acetate master. A backup method of reproduction involves the veteran "jelly roll," which can produce multiple copies, but more slowly than the diazo process. A third method, much slower but adequate for limited copies to units, is merely copying the graphics, abbreviated order, and execution matrix on other acetate "drops."

Pre-printed matrices are simultaneously filled out by staff officers and NCOs. Their matrices may be hand printed on precut mimeograph stencils and reproduced on a hand crank or electric mimeo machine, or pre-printed matrices may be layered with carbon paper and reproduced by hand four or five copies at a time. Staff members reproduce their own matrices independently from the overlays, thus reducing the total time required to produce the entire order.

The overlay, with order and graphics included, is then collocated with individual matrices and intelligence and logistics overlays and combined into a packet for subordinate units and the appropriate staff members. Total production time is thus reduced significantly from that of traditional methods.

The final step of this sequence is the actual issuing of the now fully produced order. A completed order that sits in the

TOC for two hours awaiting the arrival of unit liaison officers defeats the entire purpose. Two simple options ensure that the "fast field order" can now be delivered quickly. If helicopters are available (probably only at brigade level) and the enemy situation will permit it, orders may be flown forward to unit command groups, TOCs, or TACs by a "battle captain" who can explain the order.

A more reliable, though less timely, method is to rely on unit liaison officers and NCOs (LNOs). These LNOs are called to the TOC when the orders group convenes so that they will be there before the order is complete. LNOs are briefed on the order by the battle captains or staff officers and questioned in an informal "briefback" before it is released. Questions are cleared up, and the LNOs then return to their units to deliver and explain the order.

It is easy to see how a "good plan" prepared according to the one-fifth, four-fifths rule can be more effectively coordinated. But no plan can succeed if the efforts of every element are not coordinated, or if the subordinate units are not given the time they need to properly execute the plan.

If the plan follows the rule described above, however, unit staffs will have additional time to coordinate their efforts. Whether at brigade or battalion level, staffs with more coordination time generally produce better products. A staff officer can begin his coordination, of course, before the order is begun by his headquarters with some general guidance—"We think we are going to . . ." and "One plan puts you here while the other places you over there." But this type of coordination frequently causes more problems than it solves when people misunderstand.

If the "good plan" is produced quickly, it then permits the staff to focus cleanly on final coordination and enables them to nail down the details. This also permits the staff to discover potentially serious problems early enough to correct them instead of trying to just work around them. Aggressive staff members will hunt down their subordinate counterparts and make use of the valuable time this tougher time standard has made available to them.

Since the OPORD is a living document, it usually requires change or modification as more combat information becomes available. Intelligence data, in particular, can cause a plan to be modified or even changed completely before its final execution.

The "fast-good order" is easier to modify, for several reasons. Because there has been no attempt to make the order "perfect," the writers and staff members tend to accept modifications to it with less resistance. On the other hand, planners who have sunk lots of time and professional "face" into a product tend to be overpowered by the specific details of their plan.

The quicker plan also gives brigade and battalion level staff officers and NCOs the time and opportunity for face-to-face coordination with their subordinate counterparts or with combat support or service support leaders. This enables them to focus on potential trouble areas and identify them early. Their on-the-spot influence may solve a problem, or at least elevate it to the level where it can be solved more expeditiously. Although the upcoming battle cannot be won through the coord-

ination efforts of these staff members only, their presence, influence, and problem-solving abilities may prevent defeat.

An extremely useful tool for staffs to use in this quest is the "War Stoppers" list. After the order has been issued and staff officers and NCOs are effecting their coordination, the executive officer and assistant S-3, with the commander and the S-3 if they are not forward, sit down and study the plan. They look at all the coordination that must be done and select key items that will severely affect the mission if they are not completed—that is, "war-stoppers." These critical items are then listed on a board where they can be seen easily.

The format of this board is up to the individual, but it is useful to group the issues by functional areas—artillery, close air support, engineer, air defense artillery, and logistics. The XO and the battle captain then decide where they will expend their personal efforts in resolving these issues. The XO may elect to include the command sergeant major or other members of the staff to pursue specific coordination issues. When the commander and the S-3 return, if they do, they may also add their concerted efforts in these areas.

As each war stopper is resolved, this is annotated on the list so that the battle captain will know the status and be able to double check during his tour of duty in the TOC. Before the commander, the XO, and the S-3 retire to rest, they go over the war stoppers list one last time. Any additions are made and the battle captain is advised on what coordination measures must be taken. If the status of any of these significant items should change, the battle captain is directed to inform the command group immediately.

The importance placed on this list helps to ensure that key coordination items will not be overlooked or forgotten in the usual TOC's intense environment. The additional coordination time made available by the faster planning process and the systematic approach to critical coordination tasks permit brigade and battalion staffs to make the most of their staff efforts. The writers of the order must understand that coordination issues must be initiated by the time the order is written but not necessarily completely resolved. It is a bit uncomfortable the first time the members of an orders group work in this manner, but the additional time they are given to complete detailed coordination items pays impressive dividends.

The "fast field order" is not a complete solution to all the problems of writing and producing good orders in the field. But neither is it a half-hearted staff officer's excuse for not being able to produce orders "by the book." It is a methodology that will permit commanders and their staffs to produce effective orders in a timely manner, thereby giving their subordinates time to do the same thing.

Following the techniques described here in itself will not guarantee success, but when followed consistently these techniques will increase the opportunity for success at all command levels.

Major James A. Dunn, Jr., an armor officer, was S-3 of the 3d Brigade, 4th Infantry Division when these procedures were developed. He previously served as S-3 of an armor brigade and an armor battalion and as an assistant professor of geography at the U.S. Military Academy and is now assigned to a defense attache office. He has had several other articles published in various military journals.

Infantry In Action



CROSSING THE MEURTHE

E. A. REITAN

AUTHOR'S NOTE: On 15 August 1944 the United States Seventh Army landed in southern France, moved quickly westward to take Marseilles, and then swept north up the Rhone Valley, reaching the Vosges Mountains by mid-October. At this point the attack stalled; German resistance stiffened, supply problems became acute, and the rugged terrain proved hard going for battle weary troops.

I was briefly part of this story. I joined Company F, 2d Battalion, 7th Infantry Regiment, 3d Infantry Division as a replacement rifleman on the Anzio beachhead. I got my baptism of fire during the Anzio breakout, enjoyed our triumphant entry into Rome, stood guard at Mussolini's headquarters on the Piazza Venezia, participated in six weeks of strenuous train-

ing for the landing in southern France, and landed with the first wave at Cavalaire.

Although the landing did not compare in casualties with Salerno or Normandy, the 7th Infantry had 58 men killed including 11 from Company F. I got mine the next day when I was wounded in the knee and sent back to a hospital in Naples. Thus I missed out on the fabled "Champagne Campaign." In October the doctors decided, in view of the great shortage of riflemen, that I was sufficiently recovered to return to combat. I rejoined my unit in mid-November, just as the Seventh Army was preparing for its push toward Strasbourg and the Rhine.

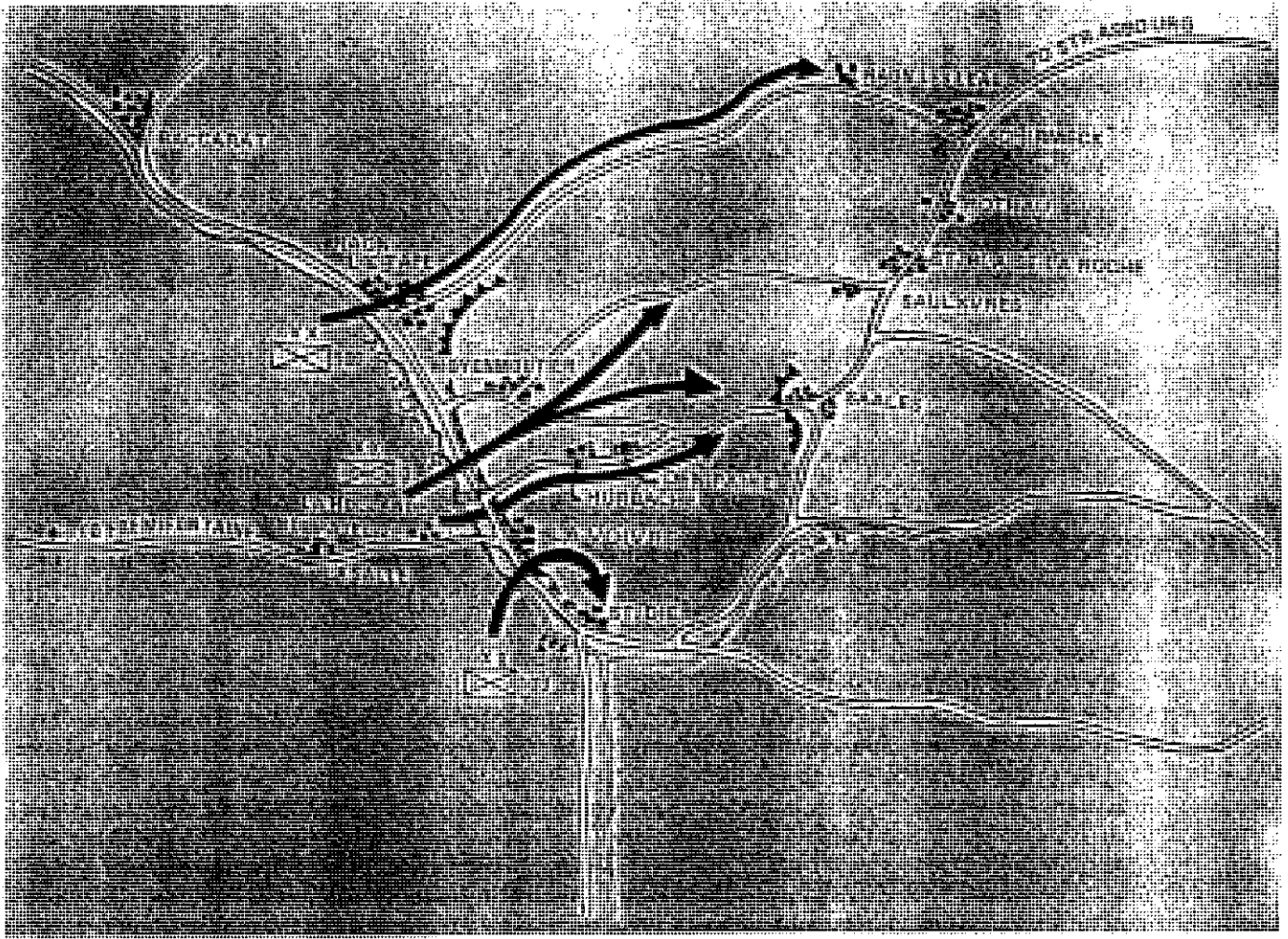
The Army's immediate objective was to break through the "Winter Line" that the Germans had spent several months preparing in the Vosges Mountains (see Map 1). The 3d Division's assignment was to cross the Meurthe River above St. Die and then cut through the mountains to Saales, where it would be on the main road to Strasbourg. To the north, the 100th Division would attack from Raon L'Etape, while to the south the 103d Division would take St. Die itself.

Nestled in the valley of the Meurthe, St. Die was a tough obstacle similar to St. Lo in Normandy. The most likely strategy was to outflank it, and for this reason the Germans had built extensive fortifications north of the city along the river. The Meurthe is not a large river but it flows rapidly down the valley, and in November it was swollen by autumn rains. The riverbanks were soft and muddy. Just north of St. Die at LaVoivre, however, there were two good sites for the Bailey bridges that would be needed to move the Division's armor and other heavy equipment across the river.

The Division decided that the most dangerous part of the coming operation would be the actual crossing of the swift-

flowing Meurthe. The German fortifications were weakly manned, and once our infantry got across the river they could be taken by assault. The land west of the river, though, was bowl-shaped: a flat plain surrounded by mountains, over which the Germans had excellent observation, and in the days before the attack, the Germans used this advantage to shell the Division's crossing area. A daylight attack would certainly come under heavy artillery fire, especially at the vulnerable time when the troops were crossing the river. For this reason the Division decided to cross the river at night, attacking at dawn after heavy artillery preparation. Company F had had a brief respite from combat, the time being used for training, repairing equipment, and practicing night maneuvers and river crossings. The date for the crossing of the Meurthe was set as 21 November.

LaVoivre and the bridge sites were assigned to the 2d Battalion commanded by Lieutenant Colonel Clayton Thobro, one of the most respected battlefield commanders in the division. LaVoivre was a village of about twenty houses, one and one-half miles north of St. Die, which had been converted by the



Map 1

Germans into a strongpoint. It was situated on rising ground about 1,000 yards from the river. The plain between the river and the town had been mined, and the rising ground in front of the village was blocked by felled trees, barbed wire, and trenches. The hills and woods behind the town provided ideal locations for the German artillery units, who were zeroed in on the riverbanks where we were likely to cross.

The houses of LaVoivre had been converted into fortifications, with buildings connected either by breaches in the walls or by underground tunnels. Because the buildings were sited on a slope, their basement walls were open on the side facing the river, from which connections were made with trenches. Isolated houses on each end of town had been reinforced by sand-bagged windows. If LaVoivre had been adequately manned, it would have been a tough nut to crack. Fortunately, Division intelligence had learned that LaVoivre was defended only by approximately 60 men. There was no German armor that might counterattack.

When the attack began, the 7th Infantry was bivouacked at Fremifontaine, about 15 miles from the crossing point. At 2300 on a chilly, damp evening, the 2d Battalion left Fremifontaine by truck but encountered a traffic jam when a battalion of tanks from the 14th Armored Division wandered into 3d Division

territory. The delay was short, but the tanks chewed up most of our telephone wire.

We left the trucks at LaSalle, about a mile from the river, going the rest of the distance by foot. We were under strict orders to maintain complete silence, an order we scrupulously obeyed, since no one wanted to draw enemy fire. Our 1st Battalion moved into position on our left about the same time. The 3d Battalion was in reserve, ready to move through the assault battalions when the initial objectives were achieved.

Earlier in the evening, Company F's third platoon had gone ahead, crossed the river in wooden boats, and established a perimeter on the east side of the river, and the combat engineers installed two footbridges downstream from the planned Bailey bridge sites. These were standard floating bridges with a three-foot gangway and attached cables for hand guides. One was 84 feet long and the other 96 feet. Fortunately, the Germans were unaware of the bridge building, and their random artillery fire during the night was apparently routine harassing fire.

At 0345, Company F, commanded by First Lieutenant Earl Swanson, led the battalion across the footbridges (see Map 2). (I still remember the blackened faces of the engineers as we crossed the bridge.) We spread out quietly on ground that

I recall as hard, damp, and cold. There was no thought of digging in, which would have made noise. Company E, under Lieutenant James Powell, followed and took its place to the right of Company F. Lieutenant Leonard Hanney's Company G remained in reserve back by the river in a line of trees. It was in a column of platoons parallel to the river with orders to make a large loop to the south end of the town. Sections of Company H, the battalion's heavy weapons company, were attached to the three rifle companies. The 1st Battalion crossed on footbridges to our left, and farther north two battalions of the 30th Infantry also crossed.

Once in place, we lay for two hours in the silent darkness. All was quiet until about 0600 when the German artillery routinely shelled the riverbanks and hit several men in Company G; I do not recall that any of the wounded cried out.

An important part of the plan was a massive artillery barrage to precede our infantry attack. The firepower devoted to this rather modest operation was indeed awesome. The official history of the Seventh Army summarizes it this way:

H-Hour was preceded by 30 minutes of the most intense artillery preparation fired for the 3d Division since the breakout at Anzio. This was followed by 30 minutes of counter-battery and deepening fires on enemy positions. The initial preparation was fired on the enemy's main line of resistance, from which infantry elements were but 200 yards away . . . Over 6,500 rounds were fired by 3d Infantry Division Artillery alone, in addition to that fired by corps and group. In support of the VI Corps assault across the Meurthe 64 sorties were flown by the XII Tactical Air Corps prior to noon.

Our Regimental Cannon Company also provided indirect fire while direct fire was provided by antitank guns, tanks and tank destroyers from hull-down positions, and antiaircraft guns. The Division's Reconnaissance Troop manned six .50 caliber machineguns and the 7th Infantry's Battle Patrol

manned 20, all of which were mounted along the riverbank to provide overhead direct fire support for the advancing infantry.

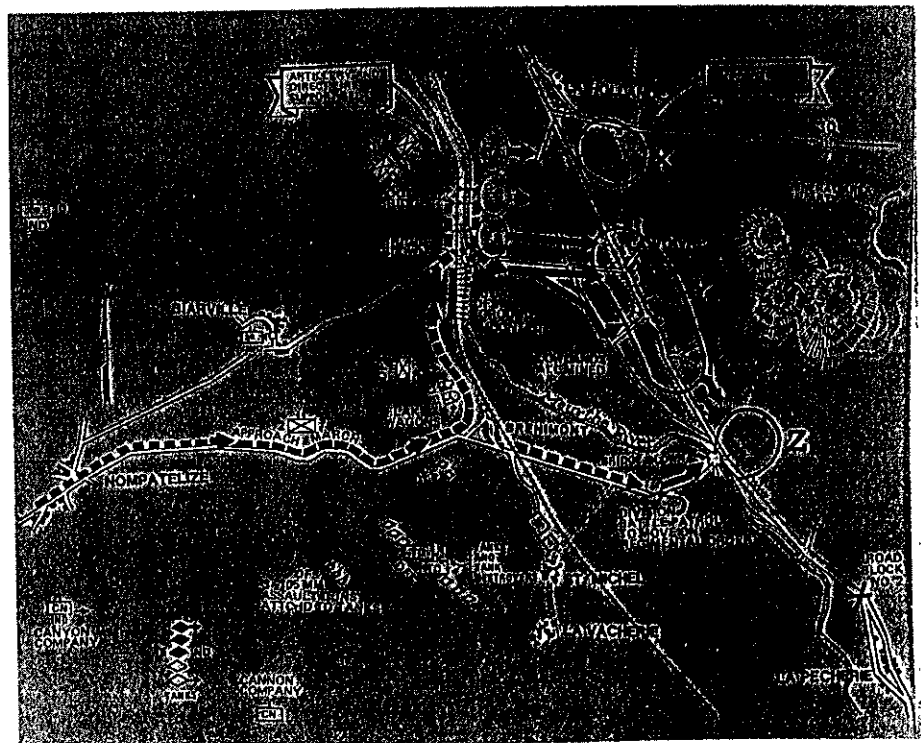
At 0617 the barrage began. It alerted the Germans, who assumed that the river was being crossed at that time. They placed mortar fire on the riverbanks and plain and we could do nothing but lie there and take it. Seven men in the company were hit. One mortar shell landed about three feet behind my right foot. It seemed like the ground dropped out from under me and I fell back on my stomach with a thud. I can still see that smoking black hole.

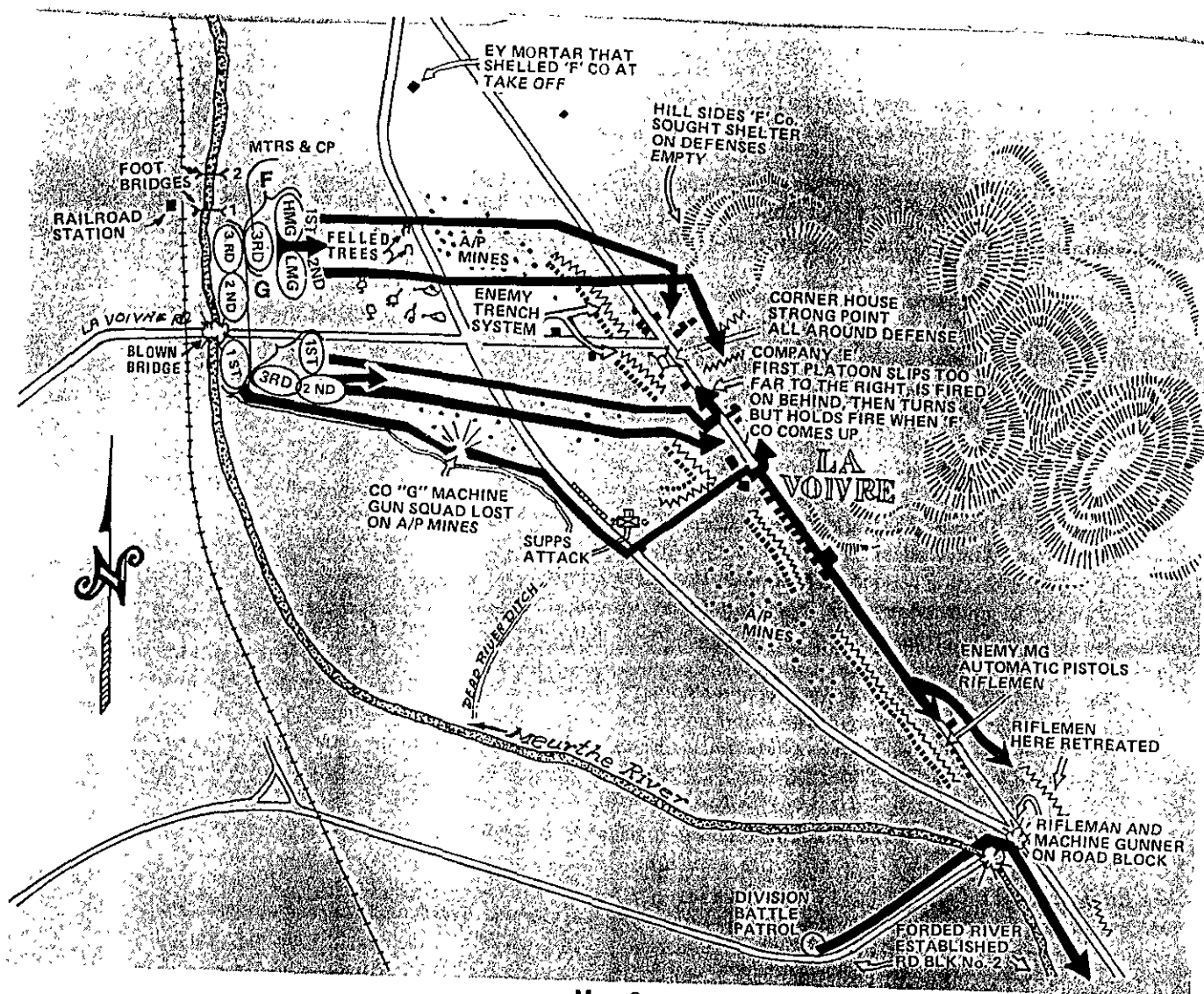
Despite the shelling, we held our places and maintained silence. Nobody panicked. Besides, there was no place to go.

The battalion jumped off at 0645 (see Map 3). By that time LaVoivre was burning and a cloud of smoke from it rose in the pale November dawn. Our artillery was still firing overhead and the direct fire weapons poured fire on the town. One report attributed the German's failure to occupy their trenches to the volume of direct fire support. In the meantime, dive bombers attacked the German artillery positions in the rear, thus preventing German counterfire while the advance was in progress. I still have a vivid memory of a dive bomber swooping down on the town and dropping its bomb, which at that distance looked to me about the size of a jelly bean.

Our advance was delayed about half an hour by felled trees, and this gave the Germans time to get out of their cellars and pour machinegun fire on us. Most of it came from a fortified house on the north end of town. We needed another half-hour to reach the wire and the trenches, which fortunately were unmanned. The company then took shelter on the hillside north of town while Lieutenant Swanson directed the First Platoon to attack the house; he later estimated it contained 10 men with a heavy machinegun and other automatic weapons. The Second Platoon (where I was) swung around in back of the town

Map 2





Map 3

and then began working its way down the street, clearing houses.

In the meantime, on our right, Company E did not encounter the obstacles that slowed our advance, and its soldiers attacked the town in quick rushes, reaching the wire and trenches in about 15 minutes. The leader of Company E's First Platoon was new to combat, and many of his men were new replacements. The platoon was supposed to link up with Company F, which was still working its way through the felled trees and receiving fire from the fortified house at the north end of town.

Company E did not receive any fire from this house until its First Platoon veered southward to the main part of town. Then the Germans in the house opened up on them. The platoon scattered for cover until Lieutenant Powell, the company commander, got it organized and firing back. The platoon stopped firing when they saw our First Platoon attack the house. The rest of Company E stayed busy clearing houses and taking prisoners.

Company G attacked by looping to the right, its purpose being to take the road that led southward to St. Die. It ran into a minefield and lost an entire machinegun squad from Company H, plus several of its own soldiers. But then it ad-

vanced rapidly and reached the south end of town about 0730 and probably took most of the prisoners the battalion claimed that morning.

A secondary objective of the battalion's attack was the site of a blown bridge south of town. Here the Germans had a roadblock composed of a squad of men with a machinegun and automatic pistols. The Division's Battle Patrol forded the river at this point about 0830 and attacked the roadblock with support from Company G. Eight or ten prisoners were taken, and other German defenders fled into the hills. German artillery and mortar fire fell on the road, however, and cost Company G an estimated 16 casualties. The bridge site was secured about 1045 and the engineers immediately began installing a Bailey bridge for the armor to cross and continue the Division's advance. By that time, too, other engineers were already building another bridge at the site near the footbridges.

By 1100 the battle was over. The 1st Battalion took the village of Hurbache and the 3d Battalion was committed, crossing on the footbridges and taking Denipaire (see Map 1). We were sent back to catch our breath and reorganize. The 7th Infantry Regiment had 167 casualties that day, including 31 killed and 136 wounded. The 2d Battalion had 11 killed (three from Company F) and 57 wounded. It captured 45 prisoners.

When we dug in for the night, I opened my pack to take out my blanket. I found it was full of holes. My first reaction was: "Somebody took my blanket and gave me this moth-eaten one." Then I looked again and saw that a piece of shrapnel had passed completely through the pack and blanket about two inches above my back. Obviously, this was from the mortar shell that had blown me off the ground in the early morning shelling.

What can we learn about infantry combat in World War II from this account of the crossing of the Meurthe? An official report prepared by the Seventh Army historical team, which I have used to flesh out my own recollections, shows the extensive planning and coordination that was necessary to launch an attack by one battalion on one small village, an attack completed in less than four hours. Most of the men who planned and led the operation were ordinary Americans with minimal training who had learned how to do it mainly through experience. Common soldiers like me had little knowledge of what was happening, but we did our duty anyway. The 7th Infantry relied on heavy supporting fire to destroy the enemy's willingness to resist and then sent in rifle companies to occupy the ground, mop up any remaining resistance, and take prisoners. The Germans in LaVoivre put up a respectable fight and then surrendered or fled. By the time the riflemen got into the town, most of the enemy were gone or were ready to surrender. As a rifleman, that's the way I liked it!

Crossing a river at night was unusual and required careful planning, good leadership, and well-disciplined troops. In this respect, the 7th Infantry performed well. The risk in the plan was premature discovery, for when the two battalions had crossed the river and taken up their jump-off positions, they were vulnerable to German artillery and mortar fire. In the darkness, they could neither attack the town nor retreat across the river. The gamble paid off, but the 2d Battalion paid a price, the least of which was my ruined blanket. We were fortunate the price was not higher.

The crossing of the Meurthe established a method of crossing rivers at night that was used successfully by the 3d Division on several occasions during the Colmar Pocket operation. Clearly, the Division was capable of organizing and carrying out a sophisticated and risky operation.

At LaVoivre, as is inevitable in a citizen army, leadership determined what happened. The rifle companies were greatly understrength, and the constant turnover of riflemen meant lack of battle experience and inevitable confusion. The company commanders were proven leaders, and with companies

at half strength or less they exercised considerable personal control over the action. Sometimes the lack of experience may have been an asset.

What about the riflemen? In 1947, S.L.A. Marshall's *Men Against Fire* astonished a nation whose view of World War II had been shaped by wartime newsreels, movies, and morale building articles, plus the tales of personal daring and danger told by returning veterans. The theme of Marshall's book was the lack of aggressiveness on the part of U.S. ground troops which he demonstrated by showing the unwillingness of riflemen to fire their rifles.

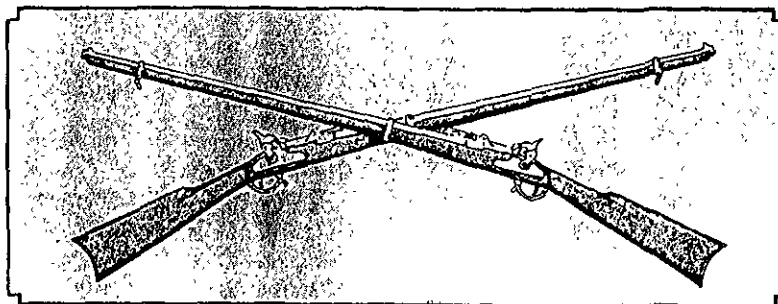
After surveying numerous battles in the European Theatre and in the Pacific, Marshall found that in any battle no more than 25 percent of the riflemen fired their rifles, and much of the time the figure was closer to 15 percent. I know I did not fire my rifle at LaVoivre, and I am confident that most members of the Second Platoon did not, although other platoons did. Coming around the back of the town, firing by the Second Platoon was more likely to injure friend than foe.

The crossing of the Meurthe showed that the riflemen would fire their rifles where there was a target and when their officers or NCOs showed the way. There are enough deadly missiles flying around a battlefield anyway without adding unnecessarily to the congestion. The purpose of infantry is to advance on the enemy and occupy ground. When this purpose is carried out, the riflemen are fighting the war, whether they fire their rifles or not.

In retrospect, the crossing of the Meurthe River, although it had some special features, was the kind of small unit action that took place constantly in combat and would be repeated over and over until Hitler's *Reich* was no more. All along the great front that stretched from the North Sea to the Alps, other battalions were doing approximately the same thing. Although it is important to understand war in its broadest context, if there is any lesson for the modern U.S. Army in this account of the crossing of the Meurthe, it is that war eventually comes down to small unit actions. It is at that level that doctrine, training, leadership, weapons, and morale prove their worth.



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TRAINING NOTES



Counterreconnaissance

MAJOR DAVID J. OZOLEK

The Soviets' doctrine calls for extensive reconnaissance operations at every level of command. Their tactical philosophy of top-down, centrally controlled planning requires that each commander have accurate, detailed knowledge of the enemy's dispositions and capabilities. Since their success depends upon having all elements of their well-ordered tactical machine work according to a precise, relatively inflexible timetable, surprises can mean disaster. If a unit's critical operational timetable is disrupted, Soviet shortcomings in command and control do not allow for speedy reaction to unanticipated threats.

The dependence on extensive and successful reconnaissance is an important Soviet vulnerability that the U.S. Army must train to exploit. But many of our heavy task forces that conduct exercises at the National Training Center against the NTC's experienced and relentless Soviet-style opposing force (OPFOR) have not been able to prevent the OPFOR reconnaissance effort from gathering the information necessary for successful OPFOR operations. The key to denying the OPFOR (or a Soviet) commander that information is an aggressive counterreconnaissance plan that focuses all available assets on destroying the OPFOR's reconnaissance effort before it can be used effectively. (See also Major Ozolek's "Reconnaissance Planning: A Neglected Art," INFAN-

TRY, March-April 1986, pp. 27-31.)

Counterreconnaissance must be more than merely an item on an S-2's checklist or reliance on such routine, passive measures as camouflage and the use of hide positions. It must be an offensive attitude that is instilled in every squad, crew, and section member — a comprehensive effort painstakingly planned and executed through every phase of the operation. Even the best tactical plan is jeopardized if the enemy, through his reconnaissance efforts, can determine the plan's concept and its strengths and weaknesses.

DEFAULT

Although the best defense against enemy reconnaissance is a good offense, the NTC's OPFOR has routinely won the reconnaissance battle through default. Because the U.S. forces do not habitually implement an aggressive patrolling plan of their own, the OPFOR has had both the uncontested freedom to operate and the luxury of uncommitted forces with which to conduct extensive reconnaissance. They are therefore able to gain the psychological initiative early in the training cycle by making it appear that OPFOR patrols are operating everywhere.

This aggressive OPFOR presence

causes many of our task force commanders to react defensively and pull their infantry assets in to protect their force. By doing so, they reduce their own offensive patrolling capability and limit the effectiveness of their subsequent operations. This is exactly the reaction the OPFOR commander hopes for, because it decreases the pressure on his infantry to provide security and allows him to maintain the initiative in the operations that follow.

The U.S. commander, instead of pulling his infantry in, should strike back at the OPFOR early and hard. Raids, spoiling attacks, and reconnaissance by fire against OPFOR security or main force elements will get the OPFOR commander's attention and make him seriously consider pulling *his own* infantry in to protect *his* force. No combat element, whether Soviet, OPFOR, or U.S., has unlimited infantry assets. Every time a commander can make the opposition commit a portion of its infantry force to defensive rather than offensive activities, he stretches those assets a little thinner and degrades the enemy's overall effectiveness. Usually, such attempts turn out to be high-payoff activities, and even an element as small as an aggressive squad-sized patrol—using the advantage of darkness, surprise, and audacity—can intimidate an entire enemy company.

Commanders must think of their

combat infantry as an offensive, not a defensive, force. To have enough infantry to conduct an offensive patrolling operation, the commander must free his infantrymen from routine security tasks that other elements of the command can handle. A common example of this problem is the misuse of infantry to secure tank platoons at night. Local security, including the manning of dismounted observation posts and close-in security patrolling, is an important battle drill that every tank platoon must be able to execute without additional infantry support.

In one such drill, for example, a platoon of four tanks during conditions of reduced security and limited visibility has one tank on full alert at all times. Two tanks have their crews resting, with the exception of one man alert and searching the area with the vehicle's night-vision devices. The fourth crew, dismounted and with small arms, patrols the local area.

A dismounted infantry patrol is more likely to be heard before it is seen, especially from inside a tank, and a counterreconnaissance patrol operating in the area of the tanks can interdict enemy probes before they can get close enough to use their night antitank weapons. The surveillance and security missions are rotated among the platoon's crews throughout the night to make sure all members of the platoon get some rest.

GAPS

Once freed from the requirement to provide local security for other combat or combat-support elements, the infantry can be used to control the gaps between battle positions. One of the high-priority tasks assigned OPFOR reconnaissance patrols is to find these gaps for use later as infiltration routes for deep patrols and as bypass routes for penetrating combat elements once the attack begins. Controlling these gaps is a task-force level responsibility, for which the S-2 has primary staff responsibility. The gaps can be controlled by a combination of stationary ambush patrols on likely infiltration routes and mounted patrols that can cover large areas. Of-

ten, just the activity of heavy counterreconnaissance patrolling can discourage individual OPFOR reconnaissance patrols or can deceive them as to the true locations of the battle positions.

In a typical maneuver defense, battle positions deep in a task force's sector will be identified and perhaps prepared, but they may not be occupied until the battle begins. These positions are usually on key terrain features that will play an important role as the defensive scheme of maneuver is implemented. One of the OPFOR's favorite tactics is to have infiltrating elements occupy these positions before the attack begins, thus denying them to the maneuvering defender as the battle progresses and disrupting the continuity of the defensive concept. To prevent this, subsequent battle positions should be occupied at all times by small infantry elements that can detect and engage OPFOR infiltrators. During periods of limited visibility, the mounted counterreconnaissance patrols should periodically check these security posts to make sure they have not been silently eliminated.

But the best way to deny OPFOR reconnaissance elements information about the gaps between the battle positions, or about the deployment of forces deep in the defensive sector, is to interdict and kill those patrols before they reach the FLOT (forward line of own troops). Many units rely on their scout platoon to provide a security screen forward. But the scouts are usually too few, too lightly armed, and spread too thin to effectively stop the relentless OPFOR patrolling effort.

In defensive missions, particularly during periods of reduced visibility, it is wise to reinforce the scouts with additional tanks and infantry. Most units with a defensive mission retain a small combined arms reserve, typically positioned behind the primary combat units. Perhaps a better initial location for the reserve is forward with the scouts to provide the firepower and manpower necessary to conduct an effective screen. The elimination of the screening force is a high-priority task for the tanks and BMPs that are organic to a Soviet reconnaissance company, and the additional combat power the reserve can

provide is often the edge the scouts need to survive against a determined attack by the enemy's reconnaissance company.

When it becomes clear that the enemy's attack has begun in earnest, the reserve can withdraw before it becomes decisively engaged, return to an effective reserve position, and be prepared to conduct its counterattack or reinforcement mission. No combat effectiveness is lost by such initial positioning forward, and much security is gained.

Once successfully established, the screen must be held. In the event the OPFOR succeeds in destroying the scouts, the scout platoon must be replaced immediately by another combat element. There is risk of further losses every time additional elements are sent forward on such missions, but this risk is far outweighed by the losses that will inevitably occur later because the OPFOR was allowed to conduct a thorough and unopposed reconnaissance.

DECEPTION

Another benefit of reinforcing the screen line is the deception it can sometimes provide. The OPFOR and the Soviets both know the composition of a scout platoon and its likely missions. But when their reconnaissance locates combat elements such as tanks and combat infantry well forward, the OPFOR (or Soviet) regimental commander and his staff must determine what the defending commander's intent is for that force and must prepare several contingency plans to meet it. These additional planning requirements can easily overload a rigid and inflexible command and control system and can significantly detract from the detailed planning a regimental command group must conduct in order to carry out its primary plan.

The task force commander and his S-2 must always work on the assumption that some enemy infiltrators will successfully penetrate even the heavies' screen. Effective counterreconnaissance, therefore, must have different but overlapping security systems to provide mutual support and depth of effort. For example, particular attention

must be paid to the critical security sector extending from the rear of the screen to the forward trace of the main defensive positions. Any traffic behind the scouts but forward of the defensive positions should be assumed to be successful infiltrators until it is positively identified as friendly. A good way to make this identification is to have a mounted ready-reaction patrol available in each battle position to intercept and identify any unknown elements.

Another example of necessary redundancy is in the positioning of a unit's ground surveillance radars (GSR) in depth. At least one set should work forward with the screen to ensure maximum range. A back-up set should be located either in a critical battle position or at a forward task force command observation post to monitor both the scouts and any traffic behind them. An additional benefit of such a deployment is that in the event the forward GSR malfunctions, the back-up set can change its sector of scan to that of the forward set or can even be physically moved forward to replace it. Too often, units place all their GSR equipment on a line, and once their radar screen is penetrated they have no deep or overlapping surveillance capability.

Although an effective screen may stop enemy infiltration efforts, there is no way it can completely stop enemy observation, particularly from long-range positions. The daylight spot reports from the reconnaissance company are among the most valuable sources of early information available to an OPFOR regimental S-2. The OPFOR reconnaissance company uses binoculars and telescopic sights to observe defensive preparations from several kilometers away, simultaneously using hard-to-detect motorcycle scouts to investigate enemy dust signatures.

Once again, the best way to degrade this effort is for counterreconnaissance patrols to move forward of the screen to find the OPFOR reconnaissance company, eliminate independently operating sections, and suppress larger elements with long-range direct or indirect fire. When possible, combat elements should be used to conduct a coordinated assault either to destroy the OPFOR recon-

naissance company entirely or, at the least, to drive it from its favorable positions. A Soviet or OPFOR reconnaissance company that is fighting for its life in a close-in battle is not an effective long-range reconnaissance force.

If the OPFOR reconnaissance company cannot be eliminated or driven back, it must be blinded or deceived. Defensive preparations must be based on the assumption that the enemy can directly observe the forward units. Smoke generators in front of defending elements can provide large volumes of effective concealment for long periods; they can also generate smoke in areas where no actual preparations are being made, making the OPFOR assume that something worth hiding is actually going on there.

Another effective deception measure

If the OPFOR reconnaissance company cannot be eliminated or driven back, it must be blinded or deceived.

is to use a few small vehicles such as uncommitted quarter-ton trucks pulling lengths of chain to create extensive dust signatures. This tactic can convince OPFOR scouts that significant preparations are being made at those locations, and might cause the OPFOR S-2 to commit a portion of his limited reconnaissance assets to investigate the sightings, which will divert them from being used on potentially more productive missions.

Barriers, especially antitank ditches, are particularly difficult to protect from enemy long-range observation. Accordingly, during daylight hours priority should be given to placing obstacles deep in the defensive sector. Barriers are often the key to defensive success, but they can be rendered ineffective when located or breached by OPFOR reconnaissance elements. If the surprise value of an obstacle is important, it must be constructed out of sight of the reconnaissance company.

Forward obstacles should be con-

structed at night, for two reasons. First, the preparations are harder to observe accurately. Second, it is an accepted fact that once constructed, obstacles must be patrolled constantly to make sure they are not breached by infiltrators. If the forward barriers are being constructed at night, therefore, they are automatically manned by the soldiers building them. Again, OPFOR reconnaissance patrols are often frightened off by heavy activity and may move to another location where they are less likely to be detected.

Sometimes, however, an obstacle is more effective if the enemy knows about it, especially if its purpose is to channel the attackers into an engagement area. If this is the case, such an obstacle can be constructed in full view of the enemy. OPFOR doctrine prefers to bypass obstacles rapidly instead of taking time to breach them under fire. Often, a weak obstacle that could easily be defeated by a hasty breaching effort can be more effective if the enemy knows it is there and plans in advance to bypass it. In either case, however, the point cannot be over-stressed that, once built, all obstacles must be constantly patrolled.

In sum, the techniques of counterreconnaissance are limited only by the extent of the aggressive spirit of a unit. An effective counterreconnaissance plan must have four vital characteristics:

- It must be offensive. A unit must hunt, not merely trap, enemy reconnaissance elements.

- It must be relentless. Counterreconnaissance is not merely a limited-visibility operation, but a constant process in which every enemy scout, once located, is pursued until killed or captured.

- It must be redundant in the same sense that all assets are used to overlap, achieve mutual support, back up, and complement each other in a well-directed plan. A unit must proceed on the assumption that the enemy can penetrate any one of its security systems and must constantly be on the prowl to detect and destroy infiltrators.

- It must be imaginative. If the enemy cannot be destroyed, he must be blinded. If he cannot be blinded, he must be

deceived. In short, he must be outwitted at every turn.

The failure of his reconnaissance effort can be a fatal blow to the plans of an OPFOR or Soviet commander. Instead of being able to make the most of the shock value of the mass and firepower of his regiment by directing a well-orchestrated and violent attack against known enemy weaknesses, he will be forced to resort to a more hesitant, difficult-to-control approach march forma-

tion that can be defeated in detail by an alert and aggressive defender.

But stripping away the attacker's eyes is not an easy task — it requires detailed planning, tenacity, and audacity. It is not just a side show to be considered only when the "important" preparations have been completed. The U.S. commander who fails to assign his counterreconnaissance effort a priority commensurate with its importance to his survival will most certainly be defeated.



Major David J. Ozolek, shown here in the uniform of the opposing forces regiment at the National Training Center, served as S-3 of the regiment and also as S-3 observer-controller of the NTC's operations group. He is now Public Information Officer at Supreme Headquarters Allied Powers, Europe.

Echo Company

CAPTAIN GLEN L. BURCH
CAPTAIN CHRISTOPHER B. VALENTINE

The primary mission of the antiarmor company (Company E, or Echo Company) in a mechanized infantry battalion is to provide effective antiarmor fire in support of the battalion's mission. The satisfactory accomplishment of this mission is a direct result of effective organization and well-planned, realistic training.

In the 3d Battalion (Mechanized), 19th Infantry, all of the battalion's M901 (ITV) assets, except for those in the scout platoon, are assigned to Company E. This centralization facilitates training and maintenance management and adds to the unit's cohesiveness.

The company is organized into three platoons and a headquarters element. The first platoon has eight ITVs divided into four sections. The other two platoons have six ITVs each with three sections per platoon. The company headquarters element follows the MTOE except for the addition of a slot labelled "master gunner." The master gunner is the most technically proficient 11H PMOS in the company, and he is responsible for all facets of ITV turret maintenance and ITV-specific training. He advises the

company on training issues and also coordinates the necessary maintenance functions peculiar to the M901's turret. Needless to say, the master gunner plays a major role in effective ITV training and maintenance.

Although Echo Company can be organized in several different configurations, the platoons should always operate as single entities. Usually under the direct control of the Echo Company commander, the platoons must be prepared to operate almost anywhere on the battlefield whether in general support of a task force or in direct support of a company team.

The platoon sergeant of an ITV platoon has many responsibilities. He must coordinate with a supported element or the company headquarters for resupply. He should coordinate closely with the company executive officer (XO) on all logistical matters to take full advantage of all available assets.

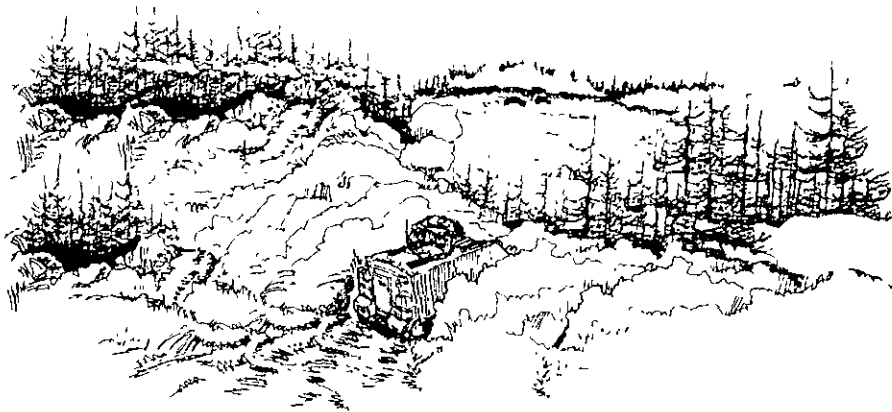
The platoon sergeant is also, by necessity, the most knowledgeable person in the platoon on the technical aspects of the ITV. He should work closely with the company's master gunner in regard to turret problems as well as the resupply

of such TOW-related items as TOW and nightsight batteries and coolant cartridges.

The platoon leader is in charge of all aspects of his platoon's activities. He sees that all logistical needs are met and makes all tactical decisions above section level. He assigns all engagement areas and battle positions and determines the engagement and disengagement criteria for his element. In short, the platoon leader is the direct link between the platoon and the company commander and is responsible for everything his platoon does or fails to do.

To be effective, each platoon must have well-trained sections that can operate with a high degree of independence with little or no visual contact between the vehicles. Since these sections are the backbone of Echo Company, most training should be geared to the section level.

At the same time, the platoons must be trained to operate as independently as possible. A strong, solid SOP (Standing Operating Procedure) will enable the platoons to react to and execute most missions with only a radio message from the commander to trigger an action. Because



of the extended distances between platoons, it is imperative that each be able to operate independently and sometimes without a face-to-face meeting with the company commander.

The individual crews, sections, and platoons can be trained in offensive operations by extracting and modifying (through experience) the tasks, conditions and standards from ARTEP 71-2 and various other texts. Offensive training is intended to teach movement techniques, overwatch drills, and reaction to both indirect and direct fire.

Whenever possible, offensive training should be conducted in conjunction with task force operations, real or simulated. Training should be conducted in maneuver on the flanks; overwatch of a company team (concurrent with overwatching other ITVs); actions on contact, specifically the movement of the ITVs to positions from which they can engage the enemy at the greatest possible range; and the actions of the ITVs at the objective (consolidation and reorganization). Direct and indirect fire should be integrated into this training to evaluate reaction drills; this is also a perfect opportunity to introduce NBC training into the program.

For training in defensive operations, we developed three basic drills, the first involving one crew taking on three OPFOR targets; the second, one section operating against an OPFOR tank platoon; and the third, an ITV platoon of three sections operating against an OPFOR motorized rifle company. Each drill called for the use of MILES equipment for added realism, and in each a task, condition, and standard was given to the participants, together with nine or ten additional sub-tasks.

Once the basics have been taught, success depends upon the proper employment of each ITV system. Based on one of this unit's successful NTC rotations, there are some basic principles that govern ITV employment in both the offense and the defense.

The first principle of the offense is to employ a platoon on each flank of a task force. This technique immediately gives wide dispersion to the commander's long range antiarmor fires, thus making it difficult for the enemy to suppress those fires. Additionally, these platoons become the task force's flank guard.

The second principle is to employ these platoons far forward so that once contact is made, the TOW becomes a 3,000-meter sniper weapon. This is extremely valuable if a surprise contact is made.

The third principle is for these platoons to stay far to the flanks and move in section bounds. They should try to keep 300 meters between vehicles. Often the platoon will be able to slip behind enemy positions because of the OPFOR's preoccupation with the movement of the company teams. During this type of movement, the ITVs must overwatch each other as well as the lead company team. During all of these operations, the platoon leader gives the antiarmor company commander specific spot reports. The company commander then puts all critical enemy sightings and TOW engagements out over the battalion command net.

(It should be noted that by using these principles, this unit destroyed eight or more enemy vehicles in each of its three force-on-force offensive missions at the NTC. Also, during the live fire movement to contact, TOW gunners were credited with 93 confirmed hits on enemy vehicles.)

The principles of the defense are somewhat similar, with dispersion by fire the most important. The antiarmor assets should be dispersed to prevent all systems from being suppressed at any one time. The ITVs should be employed so that each engagement area is covered by interlocking TOW fires. Although the dismounted M220A1 system is easy to conceal and has a high survivability rate, some TOWs must stay mounted. This adds to the commander's flexibility, and this mounted force can often serve as a task force counterattack-by-fire element.

Local security is a problem that must be carefully looked at. Each gun crew must provide its own local security, and this must be a top priority for each crew.

Once again the platoon leaders make all reports to the antiarmor commander who controls all TOW fires in the defense. Aggressive spot reporting again will provide valuable information to the task force commander.

Company E must be prepared to fight in one of three basic configurations: as a pure company with its own sector and specific mission on the battlefield; as a company team with a tank or rifle platoon attached; or with its platoons spread out across the task force sector in general support. In this third configuration, the company may also have its platoons in direct support of company teams. This would be the most arduous one, for it stretches the logistical capability of the company headquarters and makes it difficult to coordinate the task force's heavy antiarmor fire across the sector.

But if the ITV sections and, to a larger extent, the ITV platoons have been well trained, the company will operate effectively in any configuration and will accomplish any assigned mission.

Captain Glenn L. Burch served as commander of Company E, 3d Battalion, 19th Infantry at Fort Stewart. A 1979 graduate of Canisius University, he has also served as a rifle and scout platoon leader, a combat support company commander, and a battalion motor officer. He recently completed the Armor Officer Advanced Course and is assigned to the NTC.

Captain Christopher B. Valentine served as the executive officer of Company E, 3d Battalion, 19th Infantry. A 1982 graduate of the United States Military Academy, he has also served as a rifle and antitank platoon leader in the battalion. He recently completed the Infantry Officer Advanced Course.

Remote Communications Platform

CAPTAIN MARK R. HAYZLETT

Although light infantry division units must be able to maneuver over all types of terrain, they still have to maintain elaborate communications systems. Because of the rapid changes in MTOE, mission, and C³I technology, the platform for tactical operations center (TOC) radios is critical to the efficiency of a light unit's operations. The only vehicle the battalion S-3 has is a HMMWV (high-mobility multipurpose wheeled vehicle) with a three-quarter-ton trailer. Any additional vehicles would probably be more of a burden, while a rucksack is not appropriate for the job either. The best way to do more with less, then, is to redesign the TOC at battalion level using a remote communications platform (RCP), such as the one I designed and used in Korea in 1983.

An RCP is simply a modified trailer on which radios and various TOC equipment can be mounted. Instead of being inside a vehicle, the TOC is built around the RCP trailer. A common three-quarter-ton trailer can be modified at unit level to function as an RCP without seriously affecting its utility as a trailer. The accompanying illustration shows exactly how to set up an RCP using the wiring schematic from page 2-43 or TM 11-5820-401-12.

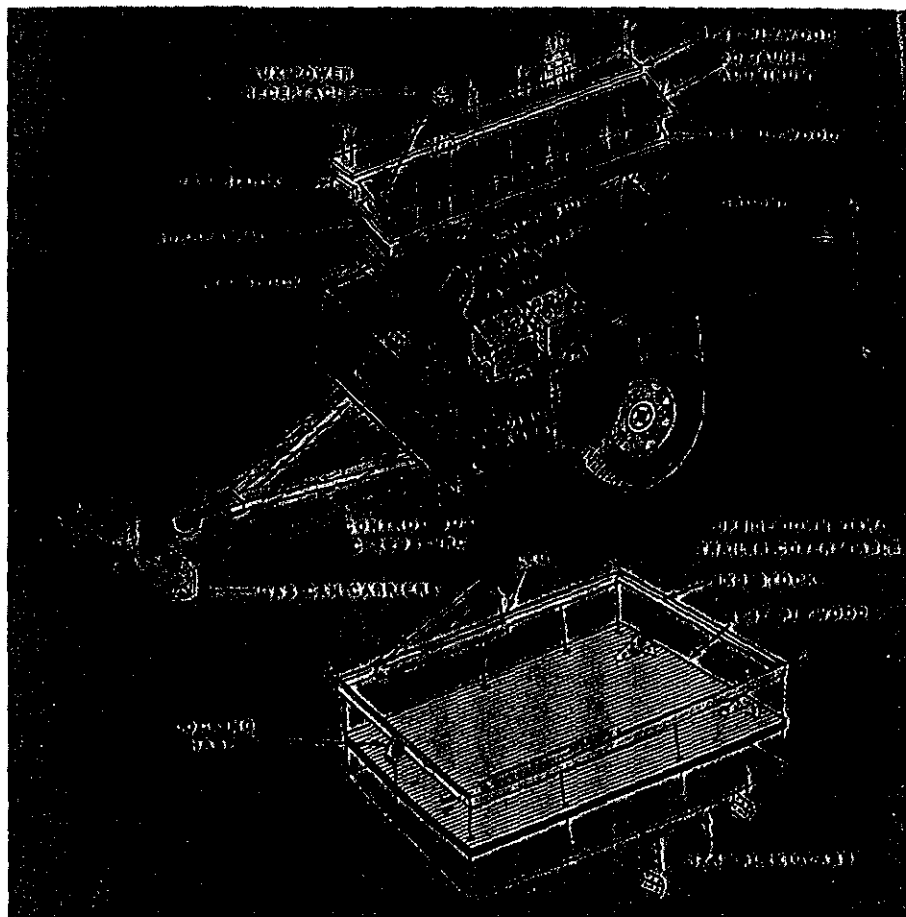
The radio equipment is mounted on a cambered shelf along one side of the trailer. An auxiliary power receptacle is mounted on the shelf, and the floor is drilled to accommodate a dual-battery tray. Finally, a lid is assembled from half-inch plywood and one-by-two-inch stock, hinged at the top of the tailgate and fitted with a sheet of quarter-inch plexiglass on the table top side. Further modifications could include a shelf for the

radio operator that folds out from the forward wall with a junction box and a head-phone jack.

The load inside the trailer should consist of the 4.2-kilowatt generator, two 12-volt tank or truck batteries, antennas, and a footlocker with radio accessories and paperwork. Once the lid is latched over the trailer, tentage and camouflage can be strapped on top with ropes or sling webbing. Diesel fuel cans may be mounted in carriers bolted to the front wall of the trailer for generator operation.

The concept of RCP operations is simple, efficient, and flexible for any battalion mission. The batteries provide silent operation for limited visibility or urban operations for an estimated 36 hours of normal use (without wearing down prime mover batteries). They can be recharged during other power modes with the 4.2-kilowatt generator or when slaved to any 24-volt vehicle system using the NATO receptacle and a regulated circuit in it.

An S-3 equipped with an RCP may choose to move the TOC with his



HMMWV alone, with the RCP towed by another vehicle, or with it sling loaded under a UH-1 or UH-60 helicopter. Although the airmobile capability has not been tested, it could enable a unit to establish complete command, control, communications, and intelligence facilities rapidly in terrain that might be inaccessible to other vehicles without tying up a helicopter the whole time.

An RCP can be placed in operation in the hastiest circumstances by propping the lid open with a stick so the radios can be adjusted. Further preparations could include setting up a tent with the RCP trailer and operators in the vestibule, leaving the map table and the charts in the main tent area. Routine TOC activities could be carried out with less traf-

fic, more security, and more room for planners to do their jobs. Set-up and tear-down would take less time also, since all the equipment would be easy to reach and simple to operate.

The prototype of my design was built by Specialist-4 DeGrace of Troop D, 4th Squadron, 7th Cavalry in Korea in 1983. All he needed was a few sketches, some basic supplies, some hand tools, some advice from the communications shop, and a weekend. We used a quarter-ton trailer, because that is what we had available. Our unit used the RCP to mount two RT-524s with cipher equipment, but the shelf can be drilled for as many variations of installation kits as required. Battalion operations would probably need the larger three-quarter-ton trailer instead.

The most significant advantage to using the RCP is the flexibility for equipping the TOC for a wide variety of missions without sacrificing its performance in any mode. The RCP concept of building the TOC around a trailer, rather than within a vehicle, is a means of getting the job done better with less in an austere, light infantry environment.



Captain Mark R. Hayzlett is Assistant S-3 of an attack helicopter battalion in the Arizona Army National Guard. Before attending flight training, he served as a light infantry rifle air scout platoon leader with the 9th Infantry Division.

Mortar Ballistic Computer

SERGEANT FIRST CLASS JOHN E. FOLEY

Muleskinners looked upon the truck with fear and loathing; old soldiers said the M1 Garand would never replace the M1903 Springfield; and some others thought helicopters were nothing more than a passing fad. I expect a similar reaction to the new M23 mortar ballistic computer (MBC).

The world is changing, and so is the infantry. With new weapons and tactics being introduced every year, the mortarman has long needed a device to improve his fire control capabilities. The challenge of the future for the mortarman is to be faster and more accurate than ever before, and for longer periods of time. His guns may be spaced 100 meters or more apart to ensure their survivability, but he will still have to maintain control of them and continue to provide timely and accurate fires. The mortar ballistic computer will allow him to do this and more.

The MBC will replace the graphic fir-

ing fan (GFF) and the M16 plotting board, as the primary means of fire control for infantry mortars. While the old manual procedures are accurate, that accuracy and also the speed of the computations are dependent upon the skill of the operator and the condition of the equipment. In addition, the GFF and the M16 plotting board are bulky to carry and require a large amount of light if they are to be used effectively.

STANDARD ISSUE

The M23 will be the standard U.S. Army issue mortar ballistic computer and will be used for all mortar fire direction center procedures. It is in an aluminum casing (OD green), weighs seven pounds (with battery), is ten inches long, seven inches wide, and two inches thick. The battery is a military standard BA-5588U (lithium) model.

The keyboard is made up of 48 separate keys, organized by color — blue keys for initialization, orange for fire missions, white for entering numbers and letters, yellow for review of data, and green for action. The logical sequence of the keyboard and the programming of the computer will automatically select the proper key if the operator makes a mistake or gets out of sequence. These features make the MBC fast and easy to learn, use, and operate. The keyboard itself has a positive feel to it — an operator can even use it wearing gloves with liners.

The most important function for the MBC will be to compute firing data for all standard U.S. mortars. It is also programmed for all currently available ammunition. The operator simply selects the caliber of mortar he wants to use — 60mm, 81mm, or 107mm — and the type of ammunition (including the M720 60mm or the M329A2 107mm

high explosive round) and the MBC will provide the firing data for it. There is no fumbling with computer chips or difficult programming.

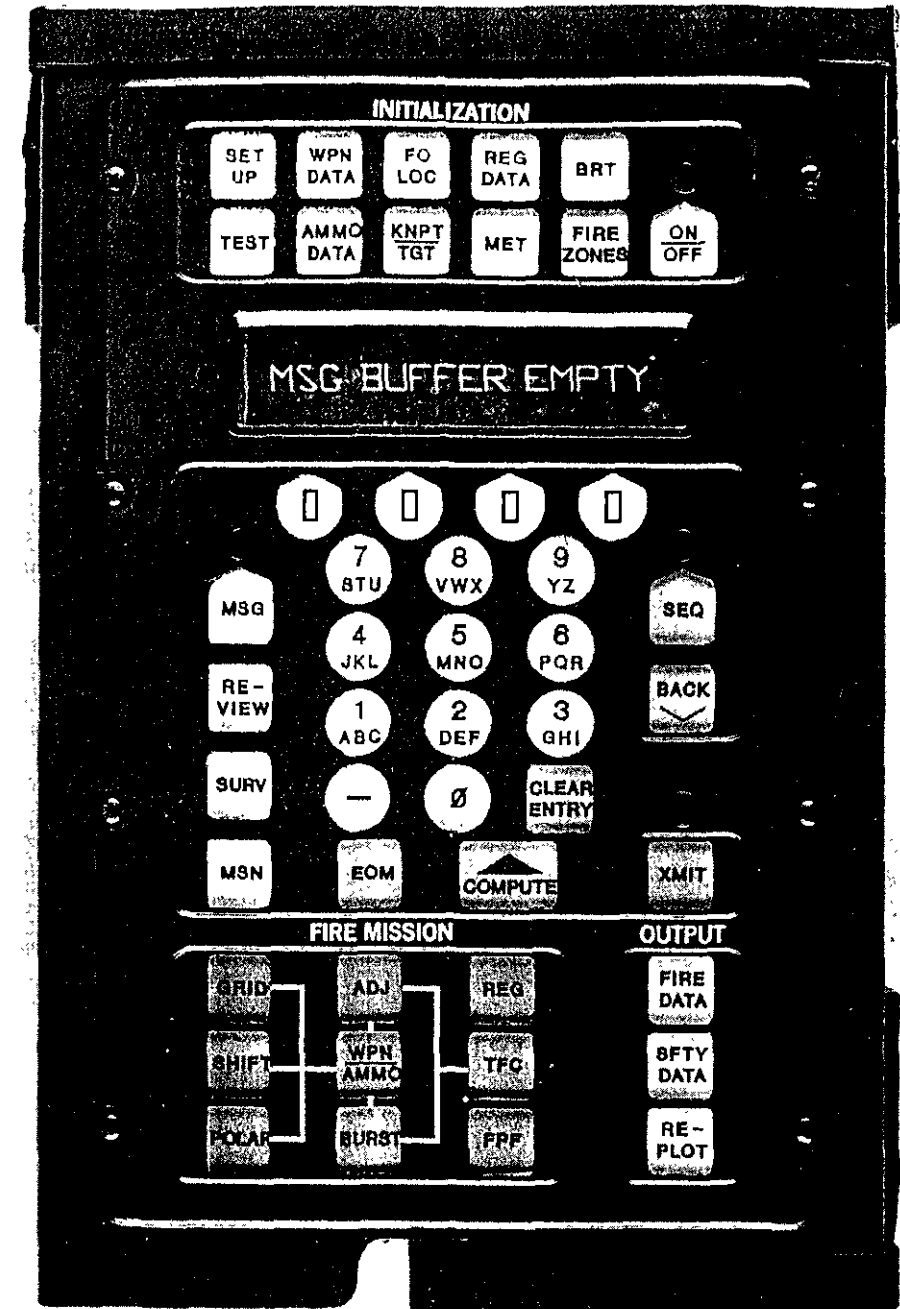
An additional advantage is that the computer takes all correction factors such as drift, range, deflection, and MET (meteorological) corrections and applies them automatically to the firing data. No longer is it necessary to determine chart and then command data — the computer will give the operator command data every time. This makes working a surveyed chart and using MET corrections for mortars a better idea. And no longer will the operator have to spend time determining and applying this data to obtain maximum accuracy; the MBC will do it all.

The MBC also has a digital mode and interfaces with the FIST digital message device and the TACFIRE artillery system. The advantages of this system, in addition to reduced transmission time and reduced probability of detection by radio direction finders, are speed and a printed readout. An operator can easily and quickly read a message instead of trying to hear a voice transmission in a busy fire direction center where any part of it could be garbled or lost.

One man, working alone and putting all the information into the computer manually, can have firing data going to the guns in less than 30 seconds from the time he receives the call for fire from a forward observer. The operator can make subsequent adjustments and have the data going to the guns in 10 seconds or less, depending upon his skill.

In the digital mode, it is possible to get firing data in 15 seconds or less; that is, within 15 seconds from the time the operator receives the call for fire, he has fire commands going to the guns.

What about converged or open sheafs? At any time, the operator can select "converged" as a sheaf adjustment. The computer will provide a firing solution for six guns off of one mortar location, so even if the guns are spread out (up to 1,000 meters from the base gun), the operator can have firing data for a converged sheaf as fast as for a parallel sheaf, and faster and more accurately than he can get the data manually. The



computer will also take into account the spacing (direction and distance) between guns and, in the firing data, will give a separate charge and elevation to each gun to compensate for range differences.

Programming the computer initially to perform all these actions is fast, too. A trained operator will need just one minute, 45 seconds to program the computer with four to six guns and two or three forward observer locations

The size of the area the computer can handle is also impressive. The operator enters the grid coordinates of the lower

lefthand corner of his map sheet, and the computer will allow him to position his mortars anywhere within an area of 100 by 100 kilometers. This works out to a firing chart that covers 10,000 square kilometers, as opposed to the 25 square kilometers that an M16 plotting board can cover. Then the operator can maneuver and reposition his mortars without having to redo the initial set-up data.

With all this space to maneuver in, what exactly can be done with it? The computer has the following storage capacities and capabilities:

TRAINING NOTES

- Three concurrent fire missions.
- Three digital messages.
- Three mortar platoon locations (base gun positions).
- Six individual firing position solutions.
- Eighteen individual weapon locations — six per platoon location.
- Three safety zone diagrams.
- Fifty known points or targets.
- One no-fire line.
- Ten no-fire areas with eight points (corners) per area.
- Three final protective fire (FPF) lines.
- Twelve forward observer locations.
- Sixteen registration points.

When a fire mission is computed, the MBC will provide a deflection for each gun — up to six guns per FFE (fire for effect) — and the following information: elevation, fuze setting (if needed), charge, and time of flight. The MBC will also provide the following safety data, based upon the impact of the round from the base gun: range to target, azimuth to target, maximum ordinate, and a 10-digit grid to impact (where the round will land). Illumination safety data will provide the grid to burst, and a grid to impact, should the fuze fail.

The lithium battery is good for about 72 hours of continuous display. Because the MBC will not be on continuously (it has a built-in shut-down that can be programmed for up to 60 seconds), if no switch is pushed the MBC will automatically go to a standby mode to conserve power while retaining all data. When in standby, it will flash a light every six seconds to let the operator know the computer is in that mode.

An additional power source is an internal keep-alive battery that will provide power to keep stored data for up to 20 hours, so stored data will not be lost when batteries are changed. Vehicles can also be used to power the MBC. Two power cables are provided with it — one can hook the MBC up to the battery of any vehicle, bypassing its own internal battery; the other can hook onto the radio mount of a tactical vehicle and tap power from there to run the MBC.

The entire Army, including National Guard and U.S. Army Reserve units,

are scheduled to have the MBC by the end of Fiscal Year 1987. The organization and basis of issue will be two MBCs per firing section. Under Division 86, this means that a six-gun mortar platoon, with two firing sections (three guns per section) will have four MBCs per platoon. Because they can be programmed for safety diagrams and are reliable and accurate, they can be used without manual back-ups, even in training situations.

Infantry Mortar Platoon Course students will be trained in the use of the MBC, receiving two weeks (80 hours) of instruction on it. And to help units learn to take advantage of the MBC, a new equipment training team (NETT) will visit each division and separate brigade and also give 80 hours of instruction.

MANUAL PROCEDURES

This does not mean that manual procedures will be abandoned. In fact, before a soldier can use or be trained on the use of the MBC, he must master the manual procedures and pass the usual tests on them. He must be qualified at least to MOS 11C skill level 3 before he can be accepted for instruction by a NET team.

The computer is a tool to be used; it is not a toy or crutch to replace training. It offers more challenges to a mortar platoon's FDC section because the personnel of that section must now be faster and sharper than ever before to take full advantage of the MBC's speed and capabilities. At the same time, though, it can be practiced more because it does not require much space or light. In the dayroom, on a bus or truck, during concurrent training at the range — these are all times when an FDC section can practice and improve its skills on the MBC.

At the same time, though, the skills needed to operate the manual equipment must also be maintained. Obviously, if an operator's MBC is lost or destroyed for whatever reason, he must continue the mission. This means staying proficient with the M16 plotting board. (Each FDC section will continue to be

equipped with two M16 boards for use in emergencies.)

At the Infantry School, I had an opportunity to control live fires for both the 81mm and the 107mm mortars using the prototypes of the MBC, and the results were excellent. The computer proved faster and more accurate than either the M16 plotting board or the graphic firing fan. The MBC is also more compact to carry and easier to use during inclement weather than either of the manual methods. Having only one procedure for all three types of mortars also simplifies and speeds the computation of firing data.

The MBC will also calculate the differences in firing from ground-mounted and carrier-mounted mortars; and with the 107mm mortar, when the deflection limits are exceeded or when a charge greater than 32 is attempted when the elevation is at 1065, the computer will not compute data but will flash a warning to the operator. The computer will also tell the operator when he is violating safety fans or no-fire zones or lines, which makes it very safe for use in training.

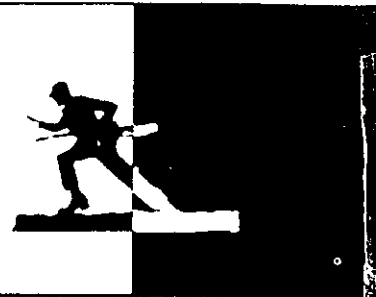
There will be fewer mortar platoons in the future, but those platoons will be equipped with more guns than before. With one platoon of mortars per battalion, a mortar platoon will have to be even more responsive and accurate. Timely and accurate mortar fires can be the difference between success and defeat and, at a more personal level, between life and death on the battlefield.

Our challenge is clear—use the mortar ballistic computer to give us the edge in speed and accuracy so that, with fewer guns and more responsibility, we can fight and win, today, tomorrow, or whenever we are called upon to let our guns speak!



Sergeant First Class John E. Foley wrote this article while serving as a mortar instructor in the Infantry School. Since that time, he has served with the 5th Infantry Division and is now assigned to the 3d Battalion, 2d Infantry, Schofield Barracks, Hawaii.

ENLISTED CAREER NOTES



CORRECTION ON HAAP

The item on eligibility for the Homebase/Advanced Assignment Program (HAAP) that appeared in *INFANTRY*'s May-June 1986 issue, p. 45, needs to be corrected.

The fourth paragraph of that item should read as follows:

A specialist-4 who is on a promotion list, in receipt of assignment instructions, and promoted to sergeant before departing from his losing duty station will be given a HAAP assignment. He should initiate a DA Form 2635 preference statement about 10 months before his scheduled DEROS (date eligible to return from overseas). A specialist-4 who is on a promotion list to sergeant, but who is not promoted until after he arrives in the short-tour area, is *not* eligible for a HAAP assignment.

CMF 11 RESTRUCTURING AND POSITION UPGRADES

CMF 11 (Infantry) is being restructured, and the positions in heavy mortar platoons are being upgraded. These changes are expected to improve the combat readiness and tactical proficiency of infantry units, and they will have a considerable effect upon infantry senior NCOs.

The restructuring of CMF 11 will allow soldiers in each MOS (11B, 11C, 11H, and 11M) to progress to the rank of master sergeant instead of to sergeant first class. At the rank of sergeant major, the MOS will be 11Z rather than 11B. This will allow master sergeant positions and senior infantry NCOs to be identified by MOS on the basis of job requirements and individual experience. All four CMF 11 MOSs clearly lead to the rank of sergeant major.

To help make sure First Sergeants have experience with the modern weapon sys-

tems, organizations, and tactics of their companies, First Sergeant positions will be coded MOS-specific: The First Sergeants of infantry companies will be 11Bs, of antiarmor companies 11Hs, and of Bradley companies 11Ms. And, to provide TOE First Sergeant opportunities for 11Cs, they will be First Sergeants of the headquarters companies of mechanized infantry battalions.

The position upgrades in heavy mortar platoons complement the other U.S. Army Infantry Center initiatives to improve these platoons. The platoon sergeant position will be upgraded to master sergeant, a decision based upon the increased responsibility that comes with two sections (to be employed separately) and with the increased firepower provided by the 120mm mortar. In addition, the section sergeant will be upgraded to sergeant first class, and one chief computer in each FDC section to staff sergeant. In a cavalry troop mortar section, the section leader and squad leader positions will be upgraded to sergeant first class and staff sergeant, respectively.

Enough TDA positions will also be recoded to better align the authorization structure for each CMF 11 MOS. The mix of 11B, 11C, 11H, and 11M in TDA positions will improve the promotion opportunities in each MOS and eliminate the present 11C bottleneck, which resulted in no 11C sergeant first class selections by the past two promotion boards.

These changes are to take effect early in Fiscal Year 1987.

OPERATIONS AND INTELLIGENCE COURSE

The Army's Operations and Intelligence Course, conducted at the Sergeants Major Academy, Fort Bliss, Texas, is a newly accredited noncommissioned officer course. The ten-week course is designed to teach the students everything

they will need to know to be operations and intelligence sergeants.

These soldiers serve as principal staff NCOs on all matters concerning operations, plans, organization, training, and military intelligence. They maintain the current operations and intelligence estimate of the situation in coordination with other staff personnel and prepare, coordinate, and publish operations plans and orders.

Normally, operations and intelligence NCOs have experience in combat arm specialties, but the Army does not have a formal MOS for them. Training these NCOs can put an extra burden on the units, and it can take eight months to a year for them to be fully proficient. With the new course, these NCOs can be ready to go to work as soon as they report to their units.

The first seven and one-half weeks of the course cover 381 academic hours of lectures, conferences, and structured class discussions. The subjects covered include AirLand Battle doctrine, security management, Soviet doctrine, military briefing and writing, intelligence actions, and air-ground operations.

The course also covers 32 hours of instruction in the Joint Interoperability Tactical Command and Control System (JINTACCS), which is the way all the U.S. armed services will communicate in the future. The students must pass a test and become JINTACCS qualified and certified, and this enables them to instruct their subordinates in the system.

During the last two and one-half weeks of the course, the students get a chance to practice what they have learned in the classroom through a one-day (eight-hour) field training exercise (FTX). They also participate in a realistic, seven-day command post exercise (CPX) that in effect puts them in tactical operations centers at brigade level, in two mechanized infantry battalions, and in one armor battalion. By rotating through the different

areas, the students can become familiar with tactical facilities.

Before the students can graduate, they must have passed six graded examinations, a physical fitness test, a written decision paper, and an oral decision briefing.

The students are nominated for the course by their major commands on the basis of space allocations, and nominations are open to all MOSs. Soldiers must be in the ranks of SFC/PSG or above, have secret clearances, be Advanced NCO Course graduates, and be currently in or going to operations and intelligence jobs. They also must have demonstrated good communications skills.

In 1987 the Academy plans to offer four classes in this new course with 150 students per class.

QUALITATIVE MANAGEMENT

The Army's Qualitative Management Program (QMP) was created to improve the quality of the enlisted force. It does this by denying reenlistment to soldiers who do not measure up to Army standards. It also prevents promotion stagnation by removing unproductive soldiers.

The QMP has two parts—qualitative retention and qualitative screening—and each operates independently.

Qualitative retention, commonly known as the "up or out" policy, sets time limits called reenlistment ineligibility points. These points are the maximum number of years of active federal service that a soldier of a specific rank may have and still stay in the Army.

Soldiers cannot reenlist or extend beyond the reenlistment ineligibility points for their ranks. For example, a sergeant cannot serve longer than 13 years.

The general court martial convening authority or the first general officer in a chain of command can, under certain circumstances, grant a waiver of a reenlistment ineligibility point. Waivers allow commanders to keep certain soldiers the Army needs. An example would be an outstanding mechanic who is a good soldier but who would not be a good motor sergeant.

The qualitative screening part of the program is most commonly associated

with the term QMP. Under this sub-program, centralized Department of the Army boards review soldiers' records to determine whether they have the potential for continued service. If they do not, the board selects them for DA bars to reenlistment.

Sergeants with more than 11 years of active federal service, and all staff sergeants through sergeants major (with less than 28 years of service), are eligible for selection for DA bars under qualitative screening. And once a bar is imposed, it can be removed only by the HQDA Reenlistment Appeals Board.

Soldiers and commanders can appeal these bars, but if they do not, the soldiers' careers will end at the expiration of their terms of service. The Army therefore encourages commanders and administrative personnel to help soldiers prepare and submit QMP appeals.

Soldiers who have questions about their eligibility to reenlist or extend should contact their unit reenlistment personnel or their commanders.

OVERSEAS ASSIGNMENT

Soldiers often wonder when they can expect to receive overseas reassignment instructions. According to MILPERCEN several factors determine whose turn it is to be sent overseas.

One of the primary factors is how long a soldier has been assigned in the United States. The date returned from overseas (DROS) identifies those who have been here the longest and so are due to rotate overseas.

A soldier who has an additional skill identifier or skill qualification identifier, however, may rotate at a different rate from his peers, depending on the Army's needs and on the number of other soldiers who have those skills.

Soldiers who volunteer or reenlist for overseas arcs are placed on assignment instructions before soldiers who do not volunteer. A large number of volunteers for overseas assignments can delay rotation for nonvolunteers.

Soldiers already overseas who extend their tours also affect those still in the U.S. The longer some soldiers stay over-

seas, the longer their peers could remain in the U.S.

If a soldier's MOS is in the Space-Imbalanced MOS Program, which means that 55 percent or more of the authorizations are overseas, he can expect to rotate more often—perhaps even every 12 months.

Soldiers in understrength MOSs can expect to rotate more often than those in overstrength MOSs.

Changes in authorizations, activation and deactivation of units, strength of a certain MOS, and promotion rates all contribute to personnel turbulence.

MILPERCEN career branches can tell soldiers about how long they can expect to remain in the U.S., but that also changes from month to month.

ARMY DIVERS NEEDED

Any soldier who really wants a challenge should consider trying to become one of the 77 divers in the U.S. Army Diving Detachment.

According to AR 611-75, to qualify a soldier must:

- Have a GT score of 110 or higher.
- Have a GM score of 100 or higher.
- Receive an Army Physical Fitness Test score of at least 240 (10 higher than that required for Ranger training).
- Pass a Class B flight physical.
- Be a male between 18 and 30 years of age.
- Be between the ranks of PV2 and SP4. (Specialists-4s must not have more than a year's time in grade.)

Soldiers who meet these qualifications and pass a pre-screening sequence of tests attend the Navy Dive School in Panama City, Florida.

The training and testing are rough, physical fitness is strenuous, and attrition rates are high. But those who make it earn their titles as second class divers.

ANCOC AND MSG PROMOTIONS

Beginning in 1988, graduation from the Army's Advanced Noncommissioned Officer Course (ANCOC) will become a prerequisite for promotion to the rank of master sergeant.

Effective with the calendar year 1987 master sergeant selection board, scheduled to convene next summer, sergeants first class with a date of rank of 1 April 1981 or later must have graduated from the course to be considered for promotion.

Soldiers selected by this board will not actually be promoted until some time in 1988.

Soldiers who complete ANCOC through the Army Correspondence Course Program (ACCP) before 1 October 1986 can be awarded nonresident credit. After that, however, credit will be given only for the resident course. Sergeants first class with a date of rank of 31 March 1981 or earlier will not have to meet this requirement because, at that time, constructive credit sometimes was awarded for the advanced course.

This change to the Active Army promotion system originated from the recent Noncommissioned Officer Professional Development Study. That study revealed that NCO Education System (NCOES) courses are neither progressive nor sequential, that most of the courses are developed independently of the others, and that ACCP versions of the NCOES courses are unreliable. The study group therefore recommended establishing a clear philosophy of "train, promote, and utilize" and a long-range goal of an NCOES that would be mandatory, sequential, progressive, and linked to promotion.

As a further change, all ACCP NCOES courses soon will be renamed (with the new name yet to be selected). Although credit no longer will be given for these courses after 1 October 1986, soldiers who complete the correspondence course after this date will receive certificates reflecting the new title.

To make sure soldiers are not penalized under the policy change, MILPERCEN will identify all sergeants first class with a date of rank later than 31 March 1981 who have not attended the advanced course and schedule them for attendance on a priority basis. Soldiers in this category who have not received a class date should contact their local military personnel officer, who, in turn, will arrange a class date through the MILPERCEN career branch.

Soldiers who were previously "eliminated" from the advanced course may request re-entry under the new policy, provided their dismissal occurred at least one year before the submission of the request. Previously, under AR 350-1, soldiers who were removed from the course were ineligible to retake it. Now that the course is mandatory, however, MILPERCEN did not want to ban soldiers permanently from the promotion because of something in their past.

Requests should be made through command channels to Commander, MILPERCEN, ATTN: DAPC-EPT-FN, 2461 Eisenhower Avenue, Alexandria, VA 22331. Immediate commanders will

recommend approval or disapproval and must specify their reasons. Lieutenant colonels, colonels, and generals in the soldier's chain of command may disapprove requests without forwarding them to the center.

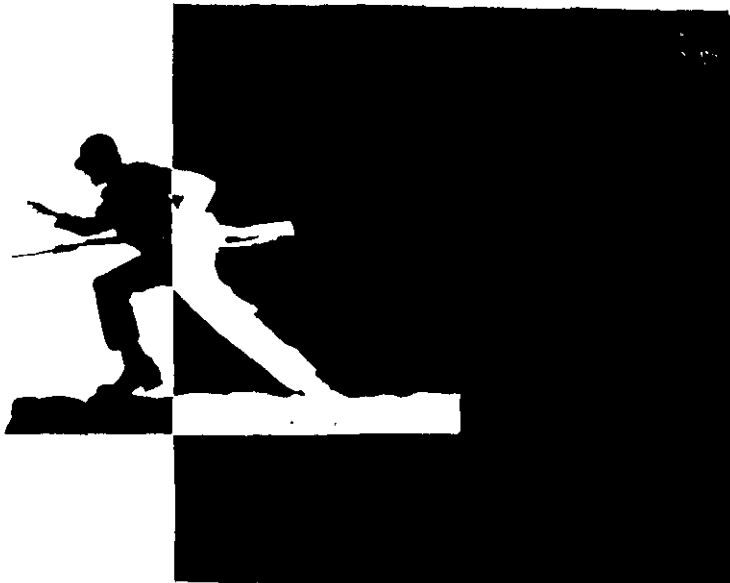
RC CMF 18 TRAINING

The Army Reserve Personnel Center (ARPERCEN) is looking for Individual Ready Reserve (IRR) Special Forces qualified enlisted soldiers to apply to participate in Career Management Field (CMF) 18.

Opportunities for advancement and professional development have been greatly expanded. IRR soldiers can train with Reserve SF units in the United States or overseas. They can attend advanced Special Forces schools such as Survival, Evasion, Resistance, Escape (SERE) or Scuba. They can also apply for reassignment to Special Forces Individual Mobilization Augmentee (IMA) positions.

Additionally, CMF 18 Reservists currently qualify for a bonus when they reenlist in the IRR.

For more information or career guidance, IRR soldiers may contact SFC Thomason at the Enlisted Personnel Management Directorate, ARPERCEN. Call tollfree (800) 325-4750, or write Commander, ARPERCEN, ATTN: DARP-EPAIN/SF, 9700 Page Blvd., St. Louis, MO 63132-5200.



OFFICERS CAREER NOTES



GETTING PROMOTED

Being selected for promotion by a Department of the Army centralized officer promotion board is only half the mission. Being sequenced properly on the promotion list is the other half, and an officer can help see that his name is properly sequenced.

The Officer Master File (OMF) contains several key data elements that determine seniority on the Active Duty List (ADL) and promotion lists. If any one of these data elements is inaccurate, sequencing may also be inaccurate and promotion may be delayed.

An officer should pay particular attention, during his birth month and promotion officer record brief (ORB) audits, to his dates of rank (DOR), active federal commissioned service (AFCS), and entry on active duty (EADC). These data, along with the following six rules, are the principles that govern seniority:

Current date of rank. For the first lieutenant and chief warrant officer-2, this date, computed at his local personnel office, is determined by the rules in AR 624-100. For an officer in the rank of captain and above, the Officer Promotion Section assigns DOR, and the earlier his promotion, the more seniority he has over those promoted later.

Previous date of rank. If an officer's previous DOR is earlier than that of others who share his current date of rank, then he is considered senior to them.

Active federal commissioned service. This amounts to the total number of months (first three digits) and days (fourth and fifth digits) of active federal service as a commissioned officer or warrant officer in any service. It is computed at the beginning of each fiscal year to reflect the total number of months and days served as of the end of the next fiscal year. Unless an officer has had active duty for training credit, previous

warrant officer service, or an interservice transfer, his active federal commissioned service should account for all time served from his current entry on active duty (to include travel time if he is a Reserve officer) through the end of the current fiscal year. If he shares the same current and previous dates of rank with other officers on the promotion list, he is senior to others if he has more active federal commissioned service to his credit.

Date of original appointment. This is the date an officer took his oath of office and accepted his commission as an officer. He can verify the date of appointment by referring to the certificate (Department of the Army Form 71) he signed at his commissioning ceremony. The date of original appointment should be the date on which he signed that form. If he has equal dates of rank and active federal commissioned service with other officers on a promotion list, he will be senior if he took his oath of office on an earlier date.

Date of birth. This item is simply an officer's birthday expressed in a six-digit fashion. If he is older than other officers on the promotion list with whom he shares identical dates of rank, active federal commissioned service, and dates of original appointment, then he will be sequenced above those officers by virtue of age.

Alphabetically by last name. This means that last names are sequenced from "Aa" to "Zz" when all other sequencing factors fail to break a tie.

The fifth and sixth of these sequencing factors do not apply to officers who received their commissions from the United States Military Academy, because all who graduate from West Point on the main USMA graduation date are sequenced in order of their final class standing.

SIGNING OER FORMS

Under AR 623-105, a rated officer must verify the accuracy of parts of his Officer Evaluation Report (OER). These parts are the administrative data in Part I; the designated rating officials, Part II; and the Army Physical Fitness Test and height and weight entries in Part IV.

If an officer signs blank copies of DA Form 67-8, it is like signing blank checks, and it may be difficult to correct the data later. In such situations, the rated officer must prove that the error should be corrected, and such an appeal requires extra effort to establish how or why he signed the OER in Part II d but was unaware of the error.

Since OERs often need to be retyped, there is nothing wrong with rated officers signing a few extra DA Forms 67-8, but all the administrative data in parts I and II and items 3 and 12 in Part IV a must be entered on the forms and verified by the rated officer before he signs it.

CSC SELECTION BOARD

A Department of the Army selection board is scheduled to convene on 1 October to consider eligible officers for selection to attend resident command and staff college (CSC) courses in academic year 1987-88.

To be eligible for consideration, an officer must:

- Hold the rank of lieutenant colonel, major, or promotable captain as of the board's convening date. Officers selected for promotion by the 1986 majors selection board will be considered by the CSC board.

- Have completed fewer than 14 years of active federal commissioned service as of 30 September 1986.

- Be a graduate or have credit for completion of an officer advanced course;

or be a graduate of the Combined Arms and Services Staff School (CAS³), or an enrollee in or a graduate of Phase I CAS³. Officers who have completed the nonresident Command and General Staff College program are eligible for selection to attend a resident course.

- Have not attended or declined to attend a resident command and staff college or an equated foreign college.

Reserve Component officers on extended active duty who are otherwise eligible will remain eligible for CSC consideration as long as they will not reach their mandatory release from active duty dates or retire before 1 October.

Evaluation reports must arrive at the Evaluation Report Branch at MILPERCEN (DAPC-MSE-R) by 1 October. Only originals will be accepted.

Officers who are eligible for consideration should review their records to make sure they are correct and up to date. Each officer's record should contain a photo and a current record of physical examination. The selection board will review photographs in hard copy.

Officers can get free copies of their Official Military Personnel Files (OMPFs) and Officer Record Briefs (ORBs) by writing to Commander, MILPERCEN, ATTN: DAPC-MSR-S, 200 Stovall Street, Alexandria, VA 22332-0400. Social security number and current mailing address must be included.

MILPERCEN has established a special processing unit to handle OMPF updates for eligible officers. Updates should be sent to the above address with the addition of the following on the attention line: (Special Processing Unit, CSC Board).

Eligible officers may write letters to the board in their own behalf addressing them to President, 1986 Command and Staff College Selection Board, ATTN: DAPC-MSB, 200 Stovall Street, Alexandria, VA 22332-0400. Letters must arrive by 1 October and must include complete social security numbers.

Letters to the board president should not be used to update the OMPF. Letters and authorized enclosures become

part of the board record and are *not* added to the OMPF.

Additional information is available from Major Berriman, AUTOVON 221-8100, commercial (703) 325-8100.

TRANSITION BOARD

An OPMS implementation transition board, convened to review the qualifications of commissioned officers currently designated in two branches or two functional areas, was completed in May 1986.

Officers in the ranks of captain through lieutenant colonel (Year Groups 1966-1978 only) were affected. All colonels, promotable lieutenant colonels, and officers in Year Groups 1965 and earlier will be automatically "grandfathered" with their present designations unless they want to be redesignated.

The options the board considered included officers who would be "grandfathered," be "single-tracked" in one of their current branches or functional areas; retain one of their current branches or functional areas; or retain one of their functional areas and add a branch.

Officers whose files were reviewed were notified and allowed to accept the recommendation or submit a reclama requesting another option.

OAC QUALIFICATION FOR RCs

Reserve Component officers entering an officer advanced course (OAC) must now complete at least four weeks of the course in residence. This change was effective in October 1985 for the enrollees.

TRADOC has therefore reduced the USAR School OAC from a six-phase (three-year) course to four phases (two years). Phase I, based on the OAC common core, is conducted through both the correspondence and the USAR School inactive duty training modes. The remaining phases are branch specific, with Phases II and IV mandatory Active

Duty Training (ADT), and Phase III conducted through correspondence alone.

The ADT phases, for the most part, are conducted by USAR School personnel at a TRADOC service school site. A few are conducted by the proponent school.

Phase I is included in the February 1986 edition of DA Pamphlet 351-20, Army Correspondence Course Program Catalog, along with some of the branch specific Phase IIIs. The remaining Phase IIIs will appear in the next catalog. Although it is a decision for the service school, generally the phases are not prerequisites for each other, and they can be taken out of sequence.

Students who were actively enrolled in either USAR School or correspondence OAC during Fiscal Year 1985 can either convert to the new four-phase course or complete the course through correspondence. ("Actively enrolled" is defined as either completion of an OAC phase during FY 85, or officially enrolled in correspondence OAC as of 30 September 1985).

Under the new four-phase strategy, enrollment has been terminated for non-participating correspondence or USAR School students who were previously enrolled in an OAC.

Correspondence students who are uncertain of their status should contact the Institute for Professional Development, U.S. Army Training Support Center, Newport News, VA 23628-0001, or the appropriate TRADOC branch school.

Another requirement of the new plan is that OAC be completed within three years of promotion to captain. Those officers seeking consideration for battalion command must complete the branch OAC for the type of battalion they are to command.

TRADOC service schools have been instructed to remove all pure correspondence OACs from the ACCP catalog.

An RC officer who is branch transferred will attend the OAC for his new branch. An officer who branch transfers after qualifying in an OAC should complete the three branch-specific phases for his new branch.

BOOK REVIEWS



Once again we are pleased to bring you information about certain recently published books that we think are worthy of your attention:

• **CENTRAL AMERICA: THE REAL STAKES**, by Lester D. Langley (Crown, 1985. 288 Pages. \$15.95). The author, a professor of diplomatic history at the University of Georgia who has written extensively on Latin American affairs, draws heavily on his personal experiences while traveling throughout Central America and the Caribbean areas to tell us that "Central America must be a nation" and that without this the region's "23 million will continue to endure state governments incapable of meeting their needs."

He does not see this coming about peacefully. But he feels strongly—and this is the central theme of his book—that the place of the United States "in this future conflict should be outside Central America ... to shield the Central Americans from other meddlers, like the Cubans or Soviets." In short, Langley believes the Central Americans must be left to solve their own problems, which they can and will if given a chance, because "there really is no American solution to Central America's problems."

• **A HISTORY OF BLITZKRIEG**, by Bryan Perrett (Stein and Day, 1983. 296 Pages. \$17.95). Although parts of this book have been overtaken by more recent developments, it still provides considerable food for thought and should be read by all infantrymen. The author has a number of other military-oriented books to his credit and here discusses the development of the blitzkrieg concept and its successes and limitations.

He includes an interesting chapter on the development and use of assault guns and tank destroyers during World War II. At the end he concludes that properly constituted and supported conventional forces that know and understand the tenets of the blitzkrieg technique can con-

tain and defeat it. He feels, too, that so long as NATO's conventional forces are not reduced below a minimum level, those forces should be able to contain larger Soviet armies that have been armed and trained for a blitzkrieg advance.

• **MILITARY INCOMPETENCE: WHY THE AMERICAN MILITARY DOESN'T WIN**, by Richard A. Gabriel (Hill and Wang, 1985. 208 Pages. \$16.95). The author has been attacking the U.S. military officer corps for years and does not add much to his previous arguments in this book. His main thesis is a simple one, and this is how it appears in this book: "The American military has failed to meet the test of battle because its structure is so deformed that it cannot produce officers—planners and leaders—who are well versed in the arts of war." He goes on to say that "by any historical standard, the failure of the American military to fight well and win must be laid at the feet of the officer corps which leads it."

Gabriel's solution is always the same—the value structure of the military services must change; the military services must adopt and strictly enforce a code of ethics; there must be more assignment stability; there must be a smaller officer corps, the members of which must be required to serve at least 30 years; the promotion of officers should be linked to age; the officer education system must be changed; and the Joint Chiefs of Staff must be abolished.

• **THE RISE AND FALL OF AN AMERICAN ARMY: U.S. GROUND FORCES IN VIETNAM, 1965-1973**, by Shelby L. Stanton (Presidio Press, 1985. 411 Pages. \$22.50). If you want to know how the U.S. Army and the U.S. Marine Corps fought the ground war in Vietnam, this is the book you'll need. Drawing heavily on the material he gathered for his authoritative and well-received *Vietnam Order of Battle*, the author tells how the Army and Ma-

rine Corps raised their combat units, deployed them to Vietnam, and employed them in the battle zone. What Stanton does best is to portray how difficult a time the ground combat units had throughout the war years, and how difficult their own country's military and civilian leaders made it for them. To Stanton, "the United States soldiers and Marines in Vietnam fought through some of the most difficult terrain in the world, and some of the toughest encounters in American military history. However, they fought without benefit of the country's larger military machine programmed for their support in case of war The magnificent courage and fighting spirit of the thousands of riflemen, aircraft and armored crewmen, cannoneers, engineers, signalmen, and service personnel could not overcome the fatal handicap of faulty campaign strategy, incomplete wartime preparation, and the tardy, superficial attempts at Vietnamization. An entire American army was sacrificed on the battlefield of Vietnam." Fortunately for the readers, Stanton includes a fine set of maps and a detailed listing of his sources.

This is one of those books every U.S. infantryman should own. And unlike Gabriel, Stanton does not fault the entire officer corps.

• **TO THE HALLS OF THE MONTEZUMAS: THE MEXICAN WAR IN THE AMERICAN IMAGINATION**, by Robert W. Johannsen (Oxford University Press, 1985. 363 Pages. \$25.00). This is not a military history of our war with Mexico in the mid-19th century. Rather, it is a history of how the American people looked at the war and the effects that war had on the country as a whole and on the individuals who fought in it. The author, a professor of history at the University of Illinois, Urbana-Champaign, has excellent chapters on the American soldier of the era, both regular and volunteer ("bad feelings between the volunteers and the regulars

persisted throughout the war'), patriotism; heroism—and brutality; and the reactions of the soldiers to the foreign environment in which they found themselves.

This is a valuable historical work that goes to the heart of this war far better than works of pure military history manage to do.

- **SOVIET LAND POWER**, by Mark L. Urban (Hippocrene Books, 1985. 128 Pages. \$19.95). The author has truly done his homework and here gives one of the better analyses of Soviet land power, including detailed information on its organization, deployment, command, and efficiency. Although the book is now almost two years old, little of its content requires modification today.

The author, an acknowledged expert on Soviet military affairs, offers his thoughts on how the huge Soviet land machine might be employed in the future. He does find faults—some major—in the Soviet land machine, but he concludes that a war against the Soviet Union "would be an unspeakable catastrophe."

- **BARON VON STEUBEN'S REVOLUTIONARY WAR DRILL MANUAL**. A Facsimile Reprint of the 1794 Edition. (Dover Publications, 1985. 156 Pages, Softbound. \$4.95). This interesting little publication is a reprint of the "new edition" of von Steuben's *Regulations for the Order and Discipline of the Troops of the United States*, which were approved by Congress on 29 March 1779. For this facsimile reprint, which also includes as an appendix the 1792 United States Militia Act, the publisher has prepared a new publisher's note and converted the original foldout plates to either single- or double-page plates.

The manual itself was known as the Army's "blue book" and remained the official U.S. military guide until 1812. Have things changed much? Here is a portion of von Steuben's instructions to captains: "A captain cannot be too careful of the company the state has committed to his charge. He must pay the greatest attention to the health of his men, their discipline, arms, accoutrements, ammunition, clothes and necessaries. His first object should be, to gain the

love of his men, by treating them with every possible kindness and humanity, enquiring into their complaints, and when well founded, seeing them redressed. He should know every man of his company by name and character."

This is a book that anyone interested in the history of our Army should have in his personal library.

Finally, here are the titles of more uniform books we have recently received from the Osprey Publishing Company:

- **RESISTANCE WARFARE**, text by Carlos Caballero Jurado, color plates by Paul Hannon. Men-at-Arms Series 169, 1985. 48 Pages. \$7.95, Softbound.

- **AMERICAN CIVIL WAR ARMIES: CONFEDERATE ARTILLERY, CAVALRY AND INFANTRY**, text by Philip Katcher, color plates by Ron Volstad. Men-at-Arms Series 170, 1986. 48 Pages. \$7.95, Softbound.

- **SALADIN AND THE SARACENS**, text by David Nicolle, color plates by Angus McBride. Men-at-Arms Series 171, 1986. 48 Pages. \$7.95, Softbound.

- **THE KOREAN WAR, 1950-53**, text by Nigel Thomas and Peter Abbott, color plates by Mike Chappell. Men-at-Arms Series 174, 1986. 48 Pages. \$7.95, Softbound.

- **THE ANCIENT GREEKS**, text by Nick Sekunda, color plates by Angus McBride, Elite Series 7, 1986. 64 Pages, Softbound.

- **ISRAELI DEFENSE FORCES SINCE 1973**, text by Sam Katz, color plates by Ron Volstad, Elite Series 8, 1986. 64 Pages, Softbound.

And here are a number of our longer reviews:

BURMA: THE LONGEST WAR, 1941-45. By Louis Allen (St. Martin's Press, 1984. 686 Pages. \$29.95). Reviewed by Doctor Edward J. Drea, United States Army Military History Institute.

During World War II, a young British Army intelligence officer named Louis Allen served in India and Burma as a Japanese linguist. Ever since, he has maintained a keen interest in Southeast Asia and has written accounts of British and Japanese military operations in that region.

This book represents the culmination of more than 40 years of study of the theater of war that most Americans associate with "Vinegar Joe" Stilwell and Merrill's Marauders. The American oversight is unfortunate on several counts. First, victory in Burma was an Allied effort, primarily commanded by the British and fought by Indian Army units. Second, the view ignores such command personalities as Lieutenant General Sir William Slim, Brigadier Orde Wingate, and Admiral Lord Louis Mountbatten, not to mention their opponents such as Lieutenant Generals Miyazaki Shigesaburo and Mutaguchi Renya. Finally, this parochial approach overlooks the significant tactical innovations that shaped the campaign in Burma in 1944 and 1945.

Allen's extensive use of Japanese-language materials complements his command of British and Indian accounts, but relatively few American, and provides an almost eerie balance to a savage war that men fought, in most cases, without quarter. Nor does Allen slight the Burmese, whose country was twice fought over, but not fought for, by the combatants. He covers the Chinese effort only briefly, for his main emphasis, quite naturally and correctly, centers on the efforts of British Empire forces to turn defeat into victory.

Although the author deals with grand strategy briefly and well, his attention is on the officers and men of the opposing forces who bore the brunt of the battle against both enemy forces and the natural environment. Seldom have so many men been forced to fight in such an unhealthy and debilitating place for so long as did those Allied and Japanese soldiers consigned to the contest in Burma. Allen best narrates the reactions and adjustments of combat soldiers to the appalling battleground conditions.

Another of Allen's great strengths is his ability to infuse personalities—from army commanders to privates—with individual character and vitality. In this terrible war, he always manages to retain the human qualities that underscore why men fought and died for trackless jungle wastes. His balanced treatment presents the Japanese as recognizable human beings, cruel and savage to their

opponents but subject to the same emotions as their Allied counterparts.

The evolution of airheads and the use of air transport were the highlights of the tactical evolution that took place during the campaign. Wingate's columns and Merrill's Marauders employed such tactics with success, but the concept grew from the seeds planted by the so-called "admin-boxes" in which aerial resupply of encircled units became a standard, not a desperate, tactic to counter the Japanese "hook and block" maneuvers.

One area of weakness in the book is Allen's understanding of the role of ULTRA and signals intelligence during the Imphal-Kohima operations. Although the British Government still controls ULTRA materials from the Burma theater, sufficient references to Japanese units in Burma do appear in American ULTRA documents to lead one to conclude that the full story of intelligence, command, and operations in Burma is a topic still awaiting an author.

In sum, this is a very good book about a very unpleasant war that receives scant attention in the United States. If a reader is willing to give the book a chance, he will find rewards there that will make the effort worthwhile.

THE TEAM: AUSTRALIAN ARMY ADVISERS IN VIETNAM, 1962-1972. By Ian McNeill (Hippocrene Books, 1984. 534 Pages. \$40.00). Reviewed by Colonel James B. Motley, United States Army Retired.

Ian McNeill served as an infantry officer in Vietnam with the Australian Army Training Team Vietnam (AATTV) from 1965 to 1966. When he retired from active service in 1982 he was appointed as a senior research officer, combat operations, in the Australian Official History Unit. This book, therefore, was written as part of McNeill's official activities and is based on official records supported by personal interviews conducted by the author.

The AATTV, operational for a little more than 10 years, was both an elite and a unique unit. Its members were specially selected, and it reached a total strength of 200 before its withdrawal in December

1972. For its size, the Team was one of the most highly decorated units in Australian Army history. Working individually and in small groups, the Team's members operated with the South Vietnamese Army, the South Vietnamese territorial forces, and the U.S. Army's Special Forces detachments, and also in programs sponsored by the U.S. Central Intelligence Agency.

Given the renewed interest in the Vietnam War, the book is both timely and informative. Extensive chapter endnotes provide valuable source data for the serious researcher, while the appendixes contain detailed information on those events that directly involved Australia or the Australians in Vietnam.

For many Americans, the book will rekindle memories, both good and bad. It not only relates stories of heroism and sacrifice, but also tells of the bonds of friendship that developed between U.S. and Australian advisers and of the clashes between them regarding the different approaches to counterinsurgency operations and how these differences were exacerbated under the stress of battle.

This is a highly recommended book that is well worth its cost for the professional military man and for the military historian.

LEADERSHIP ON THE FUTURE BATTLEFIELD. Edited by James G. Hunt and John D. Blair (Pergamon Press, 1985. 349 Pages. \$30.00). Reviewed by Colonel George G. Eddy, United States Army Retired.

This book, prepared by two members of the faculty of Texas Tech University, draws together the comments of 21 participants who took part in a 1983 leadership symposium on the implications of AirLand Battle 2000 and ARMY 21. The symposium, with participants from both academia and the Army, was supported by the Army's Institute for Behavioral and Social Sciences. It focuses on four key themes: a systems-wide perspective, an examination of the fundamental assumptions about the future battlefield environment, an organizational design, and the development of leaders at the top and bottom levels of the Army who have the capacity to deal on the spur of the mo-

ment with the high intensity stress, chaos, and lethality of the anticipated complex and extended battlefield.

The participants concurred that the future battlefield will so violently disrupt communications and control that an extreme and unprecedented stress over prolonged periods of combat will engulf all units. Consequently, they contend, units will be so dispersed over large areas and so frequently isolated that their commanders must be able to function extensively on their own rapid interpretations and judgments. Increasingly, senior commanders will have to rely on their juniors to make good decisions under the worst possible conditions, decisions not verified or reinforced by their superiors.

The implications for the selection and training of senior and subordinate leaders—officers and noncommissioned officers—and their units, and how these units function in peacetime circumstances, are vast indeed. The requirement to cast these new perspectives and leadership roles in the context of the "new" realism is considered most urgent.

Since the current Army structure and methods are not suited to this vision of the future, the editors are convinced that major realignments from top to bottom of attitudes, habits, organizational designs, and operations, strategic as well as tactical, will be imperative. Clearly, in their view, the Army must shift from a basically mechanistic organizational alignment and from the operation methods embodied in it to a more fluid, dynamic, and organic setup. As they view the future and review the research on leadership and current leadership practices and beliefs, the editors conclude with a proposed research approach they believe will facilitate such a transformation. I believe they have something worthy of attention.

Even if the scenarios inherent in AirLand Battle 2000 do not occur essentially as envisioned, it should be clear to all reasonably informed and serious thinkers about the Army and its leadership needs that there must be greater emphasis on more flexibility and latitude for decision making at the lowest command levels. Obviously, this involves a far greater tolerance for risk at the senior levels than presently exists. It also in-

cludes a much more thorough and sensible screening and selection, and a subsequent nurturing, of those for leadership positions.

KENNEDY IN VIETNAM. By William J. Rust (Charles Scribner's Sons, 1985. 252 Pages. \$15.95). Reviewed by Doctor Joe P. Dunn, Converse College.

Despite the crucial importance of the Kennedy years in the evolution of the American commitment in Vietnam, few books have concentrated on the policy and decision makers during those years. Although several good surveys have treated the period, few have focused intensively on the Kennedy administration's actions since David Halberstam's 1969 classic *The Best and the Brightest*.

William Rust's fine book is the result of research undertaken for a proposed multi-volume Vietnam history by the book division of the *U.S. News and World Report*. When the book division was abolished, Rust, its managing editor, used the amassed material to put together this volume. He draws upon many recently declassified documents from White House, State Department, CIA, Pentagon, and Kennedy Library files, and augments them with extensive interviews with more than 20 key participants.

While the book breaks little new

ground, it adds considerable detail and perspective to earlier accounts. The interviews are a particularly valuable source, but the volume's most important contributions are its depiction of the controversy and division within the Kennedy administration and its treatment of the U.S. involvement in the coup against Diem. It clearly establishes how the U.S. attempt to distance itself from the plotting, in which we were actually quite involved, contributed to the deaths of the Ngo brothers.

This solidly researched and exceptionally well written book is a significant contribution to the vast and still growing library on the Vietnam war.

ELITE FIGHTING UNITS. By David Ashel (Arco, 1984. 209 Pages. \$19.95). Reviewed by Leroy Thompson, Mapleville, Missouri.

This book purports to be a history of the world's elite military units in existence from World War II to the present. It is, at best, episodic and superficial in its coverage of most units.

The large amount of space devoted to Israeli parachute units, frogmen, Golanis, and anti-terrorist units constitutes the best coverage available in English on Israel's competent and experienced special mission forces. But this relatively comprehensive coverage results in

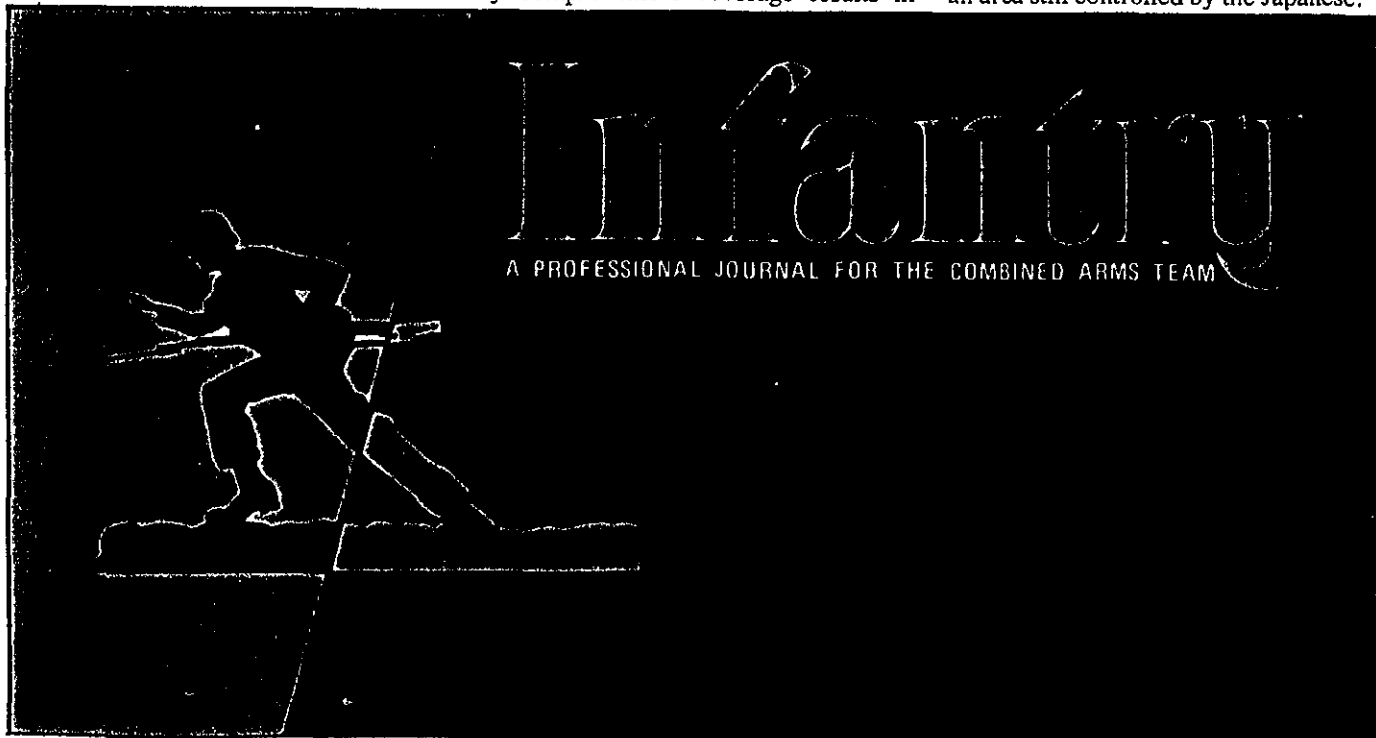
superficial coverage of many of the world's other elite units. Contributing to the book's failings is the shallow level of research carried out on those sections not devoted to Israel.

On the positive side—along with the information on the Israeli units—are the numerous photographs, many of which are in color. Unfortunately, because of its weaknesses, it is not a solid reference book, but it can be used with caution by any reader interested in finding out more about the world's elite units.

DELIVERANCE AT LOS BANOS. By Anthony Arthur (St. Martin's Press, 1985. 287 Pages. \$16.95). Reviewed by Captain F. R. Hayse, United States Army.

On 4 February 1945, a top secret message from General Douglas MacArthur's headquarters instructed the 11th Airborne Division commander in the Philippines, Major General Joseph Swing, to prepare plans immediately to use part of the division to liberate an estimated 2,200 civilian men, women, and children from a Japanese prison camp in the town of Los Banos.

General Swing had never heard of Los Banos, but his map showed him it was some 40 miles below Manila on the southern shore of Lake Laguna de Bay, an area still controlled by the Japanese.



From The Editor

READING LIST

The Infantry School recently published its Recommended Reading List for Faculty and Students, Number 86-1. It contains a selection of varied publications, a knowledge of which will help any Infantryman develop his own professional reading program. The list is not a definitive one, and supplements will be issued from time to time.

We have copies of the list that we will be happy to send free of charge to any of our readers who would like one. Requests should be addressed to the Editor, INFANTRY Magazine, P.O. Box 2005, Fort Benning, GA 31905-0605; our telephone numbers are AUTOVON 835-2350 or 784-4951, or commercial (404) 545-2350, 544-4951, and 687-2841.

WRITING FOR PUBLICATION

We urge all of our readers, and Infantrymen everywhere, to consider writing articles for publication in INFANTRY.

In 1985, we received 162 manuscripts and gave each one a thorough going-over.

We would like to see even more manuscripts. If you have an idea you think might be developed into an article, please call us about it, or drop us a note. If you want one of our Writer's Guides, we will be happy to send you one free of charge. And if we can help you in any way with an article — even one you plan to submit to another service school journal — please let us know.

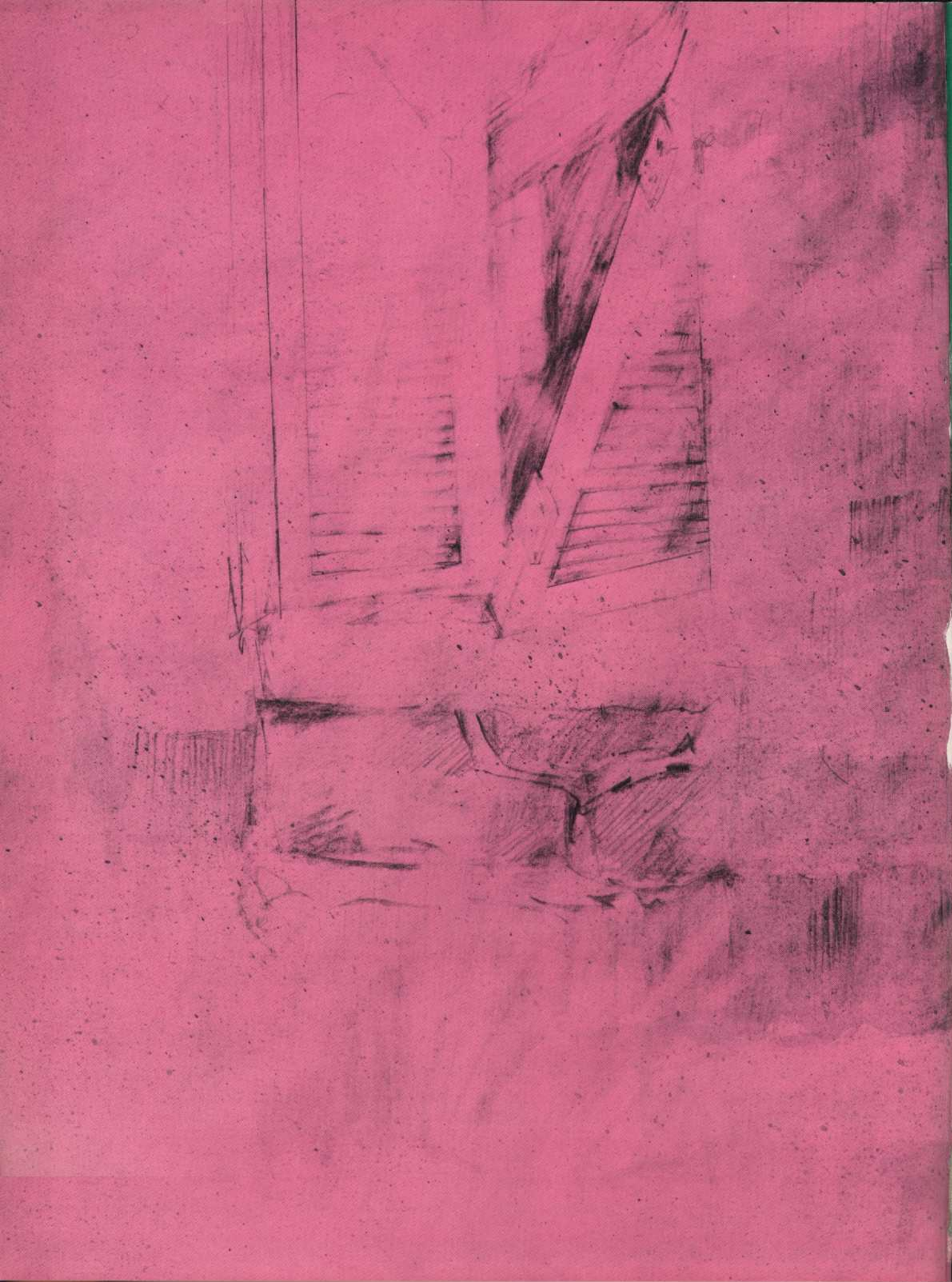
Finally, if you should visit Fort Benning for any reason, look us up. We are in Building 1827 (the "Re-up" building near the Burger King) and would be pleased to show you our operation.

COMING UP IN INFANTRY

"The COHORT Light Infantry Battalion," by Captain Harold E. Raugh, Jr.

"COHORT Company Reception," by Lieutenant Michael C. Cloy

"The Soviet BTR-80," by Captain George T. Norris.



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