Antiaircraft JOURNAL

JULY-AUGUST, 1953

HONOR ROLL

Original Honor Roll

88th AAA Airborne Bn
Lt. Col. R. B. Barry, Jr.

228th AAA Group
Col. T. H. Pope

107th AAA AW Bn (M)
Lt. Col. E. R. McIver

305th AAA Group
Col. J. S. Mayer, N. Y.

Separate Commands

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Col. D. J. Bailey

Hq Western AAA Command
Brig. Gen. E. J. McGaw

Hqs. Far East AAA Spec. Sch.
Lt. Col. W. H. Nicolson

Officer Candidate School
Col. K. R. Kenerick

AAA Repl Training Center
Col. E. W. Heathcote

Dept. of Gen. Subs.
AAA & GM School
Lt. Col. R. M. Page, Jr.

Electronics Dept.
AAA & GM School
Col. P. W. Shunk

Non-Resident Ins. Dept.
AAA & GM School
Col. T. H. Watkins

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Brig. Gen. R. W. Chrichlow

35th AAA Brigade
Brig. Gen. T. V. Stayton

44th AAA Brigade
Col. C. G. Dunn

45th AAA Brigade
Col. F. F. Miter

47th AAA Brigade
Col. G. C. Gibbs

56th AAA Brigade
Brig. Gen. H. F. Meyers

105th AAA Brigade
Brig. Gen. A. H. Doud, N. Y.

107th AAA Brigade
Brig. Gen. J. W. Squire, Va.

111th AAA Brigade
Brig. Gen. Chas. G. Sage, N. Mex.

112th AAA Brigade
Brig. Gen. J. W. Cook, Calif.

261st AAA Brigade
Brig. Gen. J. B. Moore, Del.

Groups

1st Composite Group
Col. T. H. Leary

4th AAA Group
Col. L. A. Bonifay

5th AAA Group
Col. H. G. Haskell

6th AAA Group
Col. A. A. Adams

8th AAA Group
Col. O. H. Kyster, Jr.

10th AAA Group
Col. J. C. Bane

11th AAA Group
Col. F. H. Shepardson

13th AAA Group
Col. W. C. Mahoney

26th AAA Group
Col. E. R. Hempstead

29th AAA Group
Col. P. L. Wall, Fla.

30th AAA Group
Col. W. H. Murray

65th AAA Group
Col. B. E. Cordell

68th AAA Group
Col. W. B. Hawthorne

142d AAA Group
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Col. C. M. Woodbury, N. Mex.

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Lt. Col. J. H. Pindell, Wash.

207th AAA Group
Lt. Col. R. G. Irish, N. Y.

211th AAA Group
Col. D. MacDuff, Mass.

214th AAA Group
Col. J. G. Johnson, Ga.

218th AAA Group
Col. V. P. Lupinacci, Pa.

220th AAA Group
Col. R. H. Hopkins, Mass.

224th AAA Group
Col. E. W. Thompson, Va.

233rd AAA Group
Col. W. T. Stone, Calif.

243rd AAA Group
Col. P. E. Donnelly, R. I.

260th AAA Group
Col. G. V. Selwyn, D. C.

302nd AAA Group
Col. J. M. Welch, Ohio

313th AAA Group
Col. A. F. Hoehle, Pa.

326th AAA Group
Col. M. D. Meyers, Pa.

374th AAA Group
Col. T. F. Mullaney, Jr., Illinois

515th AAA Group
Col. F. G. Rowell, N. Mex.

Battalions

1st AAA Training Bn
Col. J. H. Doyle

2nd AAA AW Bn
Lt. Col. R. F. Meconi

2nd AAA Training Bn
Capt. R. L. Strube

3rd AAA AW Bn
Maj. M. H. Snow

3rd AAA Tng. Bn.
Lt. Col. A. S. Naylor

4th AAA AW Bn
Lt. Col. E. O'Connor, Jr.

4th AAA Training Bn
Maj. K. L. Boullon

7th AAA AW Bn
Lt. Col. H. E. Michelet

8th AAA AW Bn
Lt. Col. W. A. Stricklen

8th AAA Training Bn
Maj. Leland Smith

9th AAA Training Bn
Maj. W. E. Osburn

10th AAA AW Bn
Lt. Col. Samuel May

10th AAA Training Bn
Maj. W. A. McQueenery

11th AAA AW Bn
Lt. Col. J. E. Wales

11th AAA Training Bn
Lt. Col. J. S. Bedford

12th AAA Gun Bn
Lt. Col. P. R. Cibotti, Jr.

12th AAA Training Bn
Lt. Col. G. C. Barber

14th AAA Gun Bn
Maj. H. C. Lorck

15th AAA AW Bn (SP)
Lt. Col. J. Y. Brightman

18th AAA Gun Bn
Maj. G. W. Seabrook, III

20th AAA Gun Bn
Lt. Col. C. F. Ottenger

21st AAA AW Bn (SP)
Lt. Col. R. E. Deems

32nd AAA AW Bn
Lt. Col. E. F. Moody

34th AAA Gun Bn
Lt. Col. H. B. Reubel

36th AAA Gun Bn
Maj. L. D. Pazy

37th AAA Gun Bn
Lt. Col. B. H. Johnson

38th AAA Gun Bn
Maj. C. D. Arnold

39th AAA AW Bn (M)
Lt. Col. F. D. Pryor

41st AAA Gun Bn
Lt. Col. C. F. Chirico

48th AAA AW Bn
Lt. Col. D. W. Malone

49th AAA Gun Bn
Maj L. O. Laffite

50th AAA AW Bn
Lt. Col. J. O. Hodgson

53rd AAA Gun Bn
Lt. Col. J. H. McCann, Jr.

56th AAA Gun Bn
Lt. Col. M. A. Selsor, Jr.

60th AAA AW Bn
Lt. Col. Wm. D. Ward

63rd AAA Gun Bn
Lt. Col. C. F. Coffey

64th AAA Gun Bn.
Lt. Col. D. B. Nye

65th AAA Gun Bn
Lt. Col. H. E. Eaton

66th AAA Gun Bn
Lt. Col. J. C. Wilkerson

70th AAA Gun Bn

71st AAA Gun Bn
Lt. Col. B. R. Brown

73rd AAA AW Bn
Lt. Col. C. C. Jeffries

74th AAA Gun Bn
Lt. Col. R. S. Reilly

76th AAA AW Bn
Lt. Col. S. R. Kelley

77th AAA Gun Bn
Lt. Col. W. P. Wright, Jr.

79th AAA Gun Bn
Lt. Col. W. A. Brinkerhoff

80th AAA Airborne Bn
Lt. Col. J. Evans

82nd AAA AW Bn
Lt. Col. H. K. Clark

83rd AAA Gun Bn
Lt. Col. A. P. Dahl

95th AAA Gun Bn
Lt. Col. P. E. Pique

96th AAA Gun Bn
Lt. Col. R. E. Hood

97th AAA Gun Bn
Lt. Col. W. F. Corcoran

102nd AAA Gun Bn
Maj. E. R. Welte, N. Y.

120th AAA Gun Bn
Lt. Col. H. C. Gray, N. Mex.

123rd AAA Gun Bn
Lt. Col. I. E. Dominguez, P. R.

126th AAA AW Bn
Lt. Col. R. C. Carrea

127th AAA AW Bn (SP)
Lt. Col. H. G. White, N. Y.

133rd AAA AW Bn
Lt. Col. E. J. Modjeske, Illinois

137th AAA AW Bn
Maj. F. R. Nairn

140th AAA AW Bn
Lt. Col. L. H. Ripley

144th AAA AW Bn
Lt. Col. R. T. Dunn

145th AAA AW Bn
Lt. Col. E. D. Light

150th AAA Gun Bn
Lt. Col. P. B. Platt

168th AAA Gun Bn
Lt. Col. R. C. George

243rd AAA AW Bn
Lt. Col. E. E. McMillan

271st AAA AW Bn
Lt. Col. L. C. Saylor

340th AAA Gun Bn
Lt. Col. R. T. Bard, D. C.

387th AAA Gun Bn
Lt. Col. R. Wetherall

443rd AAA AW Bn (SP)
Lt. Col. T. F. Gordon

450th AAA AW Bn
Lt. Col. G. W. Shivers

459th AAA AW Bn
Lt. Col. W. F. Shaver

464th AAA AW Bn
Maj. W. J. Munroe, Ala.

495th AAA AW Bn
Lt. Col. G. E. Miller

501st AAA Gun Bn
Lt. Col. J. C. Parker

502nd AAA Gun Bn
Lt. Col. P. J. Maline

505th AAA Gun Bn
Lt. Col. M. E. Chotas

506th AAA Gun Bn
Lt. Col. J. H. Valliere

507th AAA AW Bn
Lt. Col. J. A. Laing

513th AAA Gun Bn
Lt. Col. H. McLauchlin, Jr.

518th AAA Gun Bn
Lt. Col. G. Kushner

519th AAA Gun Bn
Lt. Col. A. E. Holt

526th AAA Gun Bn
Lt. Col. W. T. Lind

531st AAA AW Bn
Col. P. J. Gundlach

550th AAA Gun Bn
Lt. Col. N. E. Cole

552d AAA Gun Bn
Lt. Col. J. Strickland

554th AAA Gun Bn
Lt. Col. F. J. Lagasse

678th AAA AW Bn
Maj. J. B. Crayton, Jr., S. C.

697th AAA AW Bn
Maj. W. C. Thompson, N. Mex.

698th AAA Gun Bn
Lt. Col. F. Monico, Illinois

(Continued on Inside Back Cover)

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DIVISIONAL ORGANIC ANTIAIRCRAFT

By the Commanders in the

3d AAA AW BATTALION (SP)

Sum & Substance*

As has been stated on many occasions the art of mobile warfare ensconces many elements. It isn't limited to Armor alone. There are Self-propelled Artillery units, Mounted Infantry units, Armored Engineers, etc. For an appraisal of the Antiaircraft Artillery, ARMOR has turned to the 3d Antiaircraft Artillery Automaitic Weapons Battalion (self-propelled) stationed in Korea. As the name implies the primary mission of this type of Antiaircraft unit is to provide antiaircraft defense against high speed enemy aircraft. However, the static conditions in Korea have taxed the American ingenuity once again. The Battalion Commander and Company Commanders of the 3d Battalion speak out on direct support of Infantry units with their antiaircraft weapons. It is well to note the emphasis they place on preventive maintenance which is covered elsewhere in these pages by the Commanding General of The Armored Center. The maintenance is stressed even though we are in a relatively static position in Korea.—THE EDITOR.

The writer of the following has eighteen years of commissioned service in Antiaircraft Artillery. During World War II he served as a gunnery officer on an Army transport in the Pacific, later with an AA unit in Europe. Subsequent to the war he organized the 74th Constabulary Squadron. After a tour of duty as a National Guard Instructor he was assigned to Korea and has commanded the 3d AAA AW Battalion (SP) since May 1952.

When I took command of the 3d AAA AW Battalion (SP), I realized that once again I was confronted with the same thing that has proved to be one of my major problems throughout eighteen years of Army experience, all of which has been as an officer in some type of antiaircraft work. This same problem, I encountered in the tropical heat of Panama, severe winters of Europe, and the salt air of the Pacific while I was gunnery officer on a USAT. I knew that here in Korea I would again direct twenty-five per cent of my attention to the problem of *maintenance*.

Our big job here has been to give direct and close support to the Infantry in their ground movements. This necessitated a lot of moving around to different positions on the MLR so that we could fire. It is logical that if the engines that move a self-propelled weapon cannot get the weapon where it is needed, the weapon is useless. The actual firing of an AAA weapon is simple compared to the complications of keeping not only the weapon, but its means of mobility, in operating condition.

There are two big obstacles that we have faced: timely supply of spare parts, and obtaining personnel sufficiently trained in their MOS jobs. The supply problem can be accredited to the distance that parts must come from the factories to the front. In most cases it's not *specific* items we need but *more* of everything. There was one exception to this that I remember very clearly. From July of 1952 to January of 1953 we needed a battery charger. This is a simple piece of machinery that you can find in every garage and gas station in the states, but something that six thousand miles of transportation kept us from having. At times we were almost to the point of being unoperational. In a self-propelled outfit where about 127 vehicles are operated, requiring 400 storage batteries, a battery charger is a critical item. During that period it was practically impossible to get new batteries. At the present time we need simple items such as fan belts for our 2½ ton trucks, but the battery shortage was perhaps the most critical shortage of any item we have had.

All Photos U. S. Army

Lt. Col. Moomaw

Concerning the trained personnel problem, rotation has been the prime headache. We get new men, most of them fresh from basic training, and by the time they become efficient in their jobs, they go home on rotation. This is true with officers as well as enlisted men. If we could get officers and men who *know* their MOS jobs, our problem of staying ready to shoot would be very much simplified.

With the stable MLR we've had so far, the tactical employment of the battalion has been pretty well cut and

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tried. Our primary mission is to defend the division against enemy aircraft, but our secondary mission, to support the ground movements of the Infantry, has constituted all of the shooting.

Each of our tracks has direct communications with the Artillery liaison officer at the Infantry battalion. Our fire is requested by the Artillery forward observer, with the Infantry through the liaison officer, and adjusted by the forward observer. This direct dealing with the Infantry cuts down on the delay that would be caused if all fire missions had to go through our battalion operations. Those doughboys love to see our weapons roll up to a cut-a-way or revetment on the MLR . . . and they love the sound of our 40mms and 50 calibers going over their heads. A few 40s on a bunker or machine gun emplacement will drive the enemy out, then we can mow them down with our quad fifties.

My relations with the Infantry have been very pleasant. They have always been ready to feed and supply the squads that are attached to them. They have been very obliging with their gasoline and POL. In turn, we give them the kind of close support that they want, the kind that no other type outfit can give and they appreciate it!

The supply of food and clothing in Korea has been superior. There has not been one time since I took command of the battalion that we were wanting for essential items of Quartermaster issue. They have done a marvelous job.

As a result of excellent Engineer support, my men are protected on the MLR by sandbagged bunkers. Accessible roads to most sectors of the line reduce the problem of getting their supplies to them.

I believe that the Army in Korea today has reached an almost desired peak in military discipline and training. I know we have here in the 3d AAA AW Bn. I feel confident that if the enemy makes an offensive push employing his tactical aircraft we will be ready for him. We have a sizable stockpile of ammunition, and we're ready to use it where it's needed, be it in support of the Infantry on the ground, or against Red MIGs.

LT. COL. OTHA MOOMAW

✧ ✧ ✧

The writer of the following served as an enlisted man during World War II. He was wounded in 1944 in Northern France. Receiving his commission at Utah State University in 1949, he presently commands A Battery, of the 3rd AAA AW Battalion (SP) in Korea.

I was lucky when I took over A Battery. It was functioning beautifully, and it can be most reassuring to know you are stepping into a well-ordered spot. As a platoon commander an officer learns his two weapons, the 40mm cannon and .50 caliber machine gun. He becomes familiar with the M16, M19 and M39. As a battery executive he knows tactics, supply and communications and then too, he picks up a fair share of paper work. However, he doesn't know what a headache is until he attempts to put all these together and run a battery in the field.

Lt. Giertsen

Take maintenance. In this so-called stale-war, where movement is no longer the order of the day, maintenance would seem no longer a problem. It isn't so. It isn't so because a commander of a self-propelled unit cannot—save at the risk of disaster—afford to neglect his vehicles. He has to depend on his vehicles to get his weapons to where they are needed. Further, he must rely on his vehicles to remove his weapons and crews to safety when they are endangered. He must bear in mind that the war could change overnight from a static situation to a very fluid one. With a fast moving war suddenly on, he would hardly have time to look to his maintenance. He would have to utilize all available time pursuing his defensive or offensive role. Although the role his battery will play is usually delegated him by the infantry commander, in the final analysis, it is *his* battery. Its success will be measured by the manner in which he keeps it supplied, trained and supervised. Bearing in mind that his weapons have been mounted on movable platforms for a purpose, and that without that mobility they lose a great part of their efficiency and potential, he cannot help but feel that that mobility is something to be safeguarded at any expense short of actual neglect of his weapons when not engaged in his mission.

Aside from mobility, there is yet another factor which makes you aware of the necessity for constant, exacting maintenance. With the four batteries of the battalion supporting an entire division plus assigned units such as the Division Artillery, Light Aviation Section (in the AAA role), each battery is called upon to extend itself over an almost unbelievable amount of territory. Supplies and ammunition must be transported by either the M39 (armored utility vehicle) or by jeep, and vehicles must rely on roads. In one situation the bumpy, dusty road which leads from one extreme of the battery's zone of responsibility to the other, it is about *seven miles*. From the Battery Command Post to either end of the battery line it is over four miles of the most rutted, winding, hilly roads that ever caused a battery commander nightmares.

Each day creates new employment for the vehicles. There are chow runs, supplies to be delivered, ammunition to be restocked, gasoline and oil to be replenished. There are mail runs, inspection trips, and trips for a score of incidental reasons. Seldom a day goes by when some vehicle is not moved back for checks, adjustments or tactical reasons.

For all of its stagnant characteristics, the Korean fighting offers the self-propelled battery commander real tactical challenges. It is a slow-grinding school of hard knocks in which he learns his maintenance at the expense of many headaches. He discovers, for instance, that when an M19 simply cannot generate the power required to negotiate a certain hill in low-low, and when no amount of turning the air blue with colorful English has served to get it up there, there is but one thing left to do—back it up in reverse.

More than one B.C. has become a road construction engineer on short no-

tice. If the situation calls for a track to fire on some specific target, and the only position from which that fire may be delivered is inaccessible, does he chuck the whole thing with a "nice try, old chap"? Hardly—He finds himself a tank-dozer and makes a road to the position. It is a happy commander who sees his track negotiate a difficult, makeshift road without throwing a track or becoming "high-centered" (the vehicle's belly lifted on a high spot while the treads grind helplessly in the air).

The gasoline and oil consumption is another major headache for the self-propelled battery commander. With an M19 getting perhaps one mile per gallon over the stubborn terrain, and an M16 squeezing to get two to three, he isn't exactly wallowing in spare gasoline. He must learn—and practice religiously—fuel conservation. However, he finds the necessary gas, and gets his tracks where they can deliver the fire the infantry wants. Somehow he manages to keep all his vehicles running, and somehow—despite the headaches and heartburn the job causes him—he knows he wouldn't trade jobs with anyone else!

1st Lt. Rolf Giertsen

✧ ✧ ✧

The writer of the following served as an enlisted man in Europe during World War II, participating in campaigns from Africa to and including the Battle of the Bulge. Receiving his commission from Officers Candidate School in 1949 he presently commands B Battery of the 3rd AAA AW Battalion (SP) in Korea.

Tactically speaking, the problems of the Automatic Weapons Self-Propelled Battery Commander in the ground role are the same which cause the Infantry Commander to pull his hair. What affects the one necessarily affects the other, for their jobs are one and the same: to insure that the infantry gets to its objective, executes its mission, and returns, with a minimum of effort, time and casualties.

The battery commander's mission, to support the infantry with his fire, is simple in theory. In practice, however, it is quite a different matter. To begin with, there is the small but necessary business of deciding how to support the foot soldier. There is the matter of what type of fire would be best, and from

Capt. Mattas

where that fire can best be delivered. The latter point in turn gives rise to other problems: Will the terrain offer adequate protection to the gunners and their weapon? Is it readily accessible? Can it be resupplied quickly? Can it be resupplied in quantity? Can it be resupplied under fire? Is there an adequate route of withdrawal in case the position becomes untenable? These questions the battery commander must ask himself before he is ready to commit his men and equipment. They are, of course, questions which the infantry commander must also ask himself. However, the AW Self-Propelled commander, in considering his final decision, must think not only in terms of his men, but in terms of those whom he is to support. The decision he finally reaches may well put his hair on end. I know one B.C. who sent one of his M-16s into position in a bare, flat field in the Kumwha area, nearly 300 yards ahead of the closest infantry. It was a difficult decision to reach, but which had to be made if the infantrymen were to receive the support they needed. The half-track stayed out for three days, protected only by a handful of infantry during the night. It was pasted by mortars, artillery and small arms fire, but in turn cleaned house with a respectable number of Chinese citizens, and returned with a full crew. It's just one of those cases where the job is remembered by another grey hair on the B.C.'s head.

It is also a case which should forcibly bring to the attention of all potential AW (SP) battery commanders a most important lesson; a lesson which, if not learned from observation, may one day be learned at the expense of lives and equipment—*his own men's lives and his equipment!* Yet the lesson is simple. It can be summed up in only four words: *Train your squad leaders.*

In Korea—where the distance between two tracks is often measured in thousands of yards; where a single weapon may find itself atop a bare hill, cut off and forced to fight with the infantry as the enemy calls the shots—there will be times when the success or failure of a mission will hinge upon the judgment of the squad leader in charge of the track; when the lives of uncounted infantrymen—to say nothing of the track's crew—may depend on the actions of a single noncommissioned officer, alone for the first time, without means of communicating with his superiors, and with less hope of relief. If you have trained him as you should, chances are he'll live to have you pin a medal on him. If you have not—you can blame *yourself* not him, for the men that died.

I say that your squad leader is the key man in your organization. He is the man who can tell you that the left gun barrel on his M-19 is worn. He knows that the second gear on his M-16 is going bad, that his track can't be moved into its alternate position except in reverse and that kicking the left front tire twice will start the motor. But it isn't enough that he knows how to make decisions—he must *get used* to making decisions. In the close-support-of-the-infantry concept as played in Korea, the M-19 or M-16 is no longer a component of a large, smoothly coordinated team—it *is* the team. In the fast moving ground situation the squad leader is no longer a minor commander dedicated to a subordinate role. In that moment when troops are moving and clashing scant yards before his weapons, when artillery and mortars have severed his communications, his line-of-sight radio is useless and he is handed a fire mission—he is *the* commander. What he does with the terrifying power of his quad-fifties or his twin forty millimeter guns, may well spell victory or defeat for the people whom he has been told to support. There is the real test of the battery commander. By the actions of the leader of one track he will know what kind of job he, the B.C., has done.

There are many ways in which the self-propelled automatic weapons can assist the infantry. One frequently employed trick is to "walk" a patrol home.

Often, when a patrol turns back, it discovers that a force has followed it or has laid an ambush along the route it must take. In such cases, the patrol leader may call for a "walk home." The supporting weapons will then place their fires either in front or behind or even literally box in the patrol with their fires. In this manner the AA units will continue to follow the men, maintaining the same relative position until the patrol is out of danger. Another use for the AAA AW weapons is to fire against bunkers and crew-served weapons. The M-19 with its twin 40s, capable of delivering 220 rounds per minute, is particularly suited for those pin-point targets where shocking power is needed. The M-16, on the other hand, is particularly good against exposed troops or lightly armored vehicles. Because of its rapid traverse and elevation, the quad-mount atop the M-16 is capable of shifting fire with incredible speed. Amazingly enough, however, it is for its tremendous volume of dispersal of fire, rather than for its maneuverability, that the quad-mount is liked in Korea. Anyone with the slightest conception of a beaten zone can appreciate the job of area sweeping *four* such zones. In one 40-day period of routine activity along a relatively quiet front, recently, our quads and forties were credited with the following: five machine gun nests, twenty-five bunkers damaged, one propaganda unit silenced, eighteen enemy killed and forty wounded. It was like high-powered sniping.

The skeptics who once laughed at the thought of close support of the infantry by AAA AW Self-Propelled Weapons might feel just the least bit foolish at seeing those very weapons performing their near-miracles of fire-support from positions tankers in their five-inch hulls might hestitate to take. The crews in their scantily protected tubs slug it out with the enemy, giving double everything they take. Personally, I would like to see more and heavier armor on those tracks for the protection of the men, I would like to see a longer burning tracer —say one that went to 7200 instead of the 3500-4200 yards we now get. There are a lot of things I would like to see, but I like very much what I see now.

CAPT. JOHN A. MATTAS

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The writer of the following received his commission from Virginia Polytechnic Institute in 1939. During World War II he served in Europe, participating in the invasion of Normandy. He presently commands C Battery of the 3rd AAA AW Battalion (SP) in Korea.

No single fact—save perhaps the terrifying spectacle of its firepower—strikes an observer so forcibly when first witnessing the weapons of the AAA AW Self-Propelled battery in action as does the sudden realization that these vehicles, so capable of destruction, are themselves so susceptible to being completely destroyed.

For weapons which may be called upon to deliver direct fire from positions in full view of the enemy, neither the M-16 half-track, nor the M-19 full-track are adequately armored. Their sides, and the "tubs" in which the guns are set, are of a mere ¼ to ½ inch armor plating, and have no overhead protection at all.

The truth is that up to now they have been considered only as mobile, gun-bearing platforms, with little thought given to how the men who serve them will be protected from enemy ground fire. Both the M-16 and the M-19 were designed for AAA defense against fast flying aircraft. Their thin skins were considered adequate against bomb fragments which they are. They were *not* designed for the close

A composite United Nations Automatic weapons crew load up to fire against the enemy line in support of the Infantry.

support role which they are presently playing in Korea. Obviously, then, though their armament may be magnificently suited for that close support role, their armor is certainly not. Certain measures and field innovations have been found necessary for their protection and that of their crews. These for the most part have been born right in the field, mothered by experience and fathered by the aggressive spirit of the crews and their commanders.

The first and most inevitable, of course, was digging in. Whenever time and terrain permit, the vehicles are backed into a revetment—preferably on high, commanding ground—with only the gun tub visible above ground. From such a position both the M-19 with its quad forty millimeter guns, and the M-16 with its fifty caliber quadruple gun mount, can deliver fire around a full 360 degrees. In cases where enemy mortar and artillery fire is likely to be heavy, the position is covered with logs and earth, converting it into a huge bunker which remains open to the rear, but permits only the guns to be exposed to the enemy's line of fire. Such bunkers have proven capable of withstanding virtually any amount of anything the enemy may fire. Should it become necessary to employ a wider field of fire or should the enemy threaten from the air, there is always an alternate position which has no overhead obstruction. Thus, the crew is ready for any situation which may arise.

For tracks operating in the open, additional protection may be in the form of the broader, heavier shields which are hinged to the sides of the M-55 gunmount. These can be made quickly and easily with available facilities in the battalion motor pool. The protection, both physical and psychological, which they give the gunners is beyond evaluation.

Each crewman is also afforded some measure of protection from fragments by the helmet and armor vest he wears. The vest might well be considered part of the vehicle's armament, for every man is required and trained to wear it in any area forward of battalion headquarters.

Thus, with such simple precautions, it is possible for field commanders to overcome the lack of armor which once made the M-19 and M-16 "rolling coffins." Today, the number of casualties caused by enemy return fire, either direct or indirect, can be said to be truly small. Damage to the vehicles is negligible, and is almost invariably caused when the vehicle is caught in the open.

Turning from armor to armament, most automatic weapons battery commanders feel that the guns are perfectly suited for the concept of close support of the infantry. The quadruple fifties, with their tremendous "spraying" effect, can blanket large areas inflicting heavy casualties on masses of troops. The rule which says they should be used in ranges from 50 to 1000 yards is not generally broken, but it is sometimes badly bent. Their range may be anywhere from 25 to 4000 yards. The job may be repelling an attack at close quarters or delivering harassing fire into an enemy staging area. They'll do both jobs—and do them well. Normally, one tracer in five is used, and most fire adjustment is done by tracer.

Capt. Magill

The forties are perfect for direct fire where "punch" is required. Ammunition supply is adequate for both weapons. Each vehicle constantly maintains a basic load. One thing most battery commanders in this battalion would like to have is a longer tracer. The present 3500 yard tracer burnout point is all right, and at this relatively high altitude the Mk 2 tracers, finding less resistance, will generally cover 4000 to 4200 yards before burning out. However, having had an opportunity to fire the British Mk 27 tracer, with its 7200 yard burnout point, most of the battery officers agree that it is just what we need. The added yardage could well boost the weapon's efficiency anywhere from 35 to 50 percent, by allowing the gunners longer observation.

Normal targets for these forties are bunkers, crew-served weapons and concentrations. One battery, on Kelly Hill last September, played a cat and mouse game with a group of Chinese. It was noticed that each time planes started a run the Chinese would disappear into a trench and run across a ridge, under cover, and onto Cavite Hill. When the planes had completed their mission, they would simply run into the trench and across to Kelly again, where they were ready to meet our advancing troops. The last time they tried it, we pounded the trench to pieces with HE shells. When they tried to get up Kelly again, they had to expose themselves and we simply blew them to pieces. More than fifteen of them were knocked sprawling down the hill.

This is not unusual. It is what the infantry expects us to do—and we oblige them as often as we can. The result of it is that the doughboys have to rely heavily upon us and they respect the capabilities of the AAA automatic weapons battery in the close support role. It is a support to which they are entitled, and which we intend to give them as often, as accurately and as speedily as we can.

CAPT. WALTER B. MAGILL

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The writer of the following served as a commissioned bombardier navigator in the Air Force during World War II. He instructed American and Chinese cadets at Carlsbad, New Mexico. Transferring to the Antiaircraft Artillery after the war, he presently commands D Battery of the 3rd AAA AW Battalion (SP) in Korea.

Dog Battery, as part of the 3d AAA AW (SP) Battalion, has a lot of history to uphold. Since the invasion of Southern France, it has been a part of the 3d Division almost continuously. The battalion landed on Beaches Red and Yellow, giving its parent organization antiaircraft protection. Together, the two 3ds made history in World War II.

Now, a new conflict finds it supporting the Rock of the Marne once again. But this time, the support is of a different nature—radically different. Since

our landing at Wonson, in November 1950, we have come to learn the meaning of "surface mission" and "close support of the infantry." Those words were merely half-tried theories before Korea came along.

Initially we had come prepared for air defense role. A scarcity of enemy aircraft plus an over-abundance of enemy infantry soon changed the mission, and with it, many former concepts, plans and procedures of operation.

One of the first things we had to learn was the degree of adaptability of our antiaircraft weapons, the dual forty millimeter guns and quadruple fifty caliber machine guns, to the then almost untested close support role. In the initial stages of the war, at Chin Hung-Ni and Huksuri; in support of Task Force Dog, whose mission it was to relieve the pressure on the Marines at the Chosin Reservoir along the withdrawal route and around Pusan, the guns proved their worth.

But the guns were not the only ones on trial. The vehicles which bear the guns were put to difficult tests. Many said the vehicles would not bear up under the constant movement; that parts would fail; that their armor was too light to permit them to slug it out against ground forces. But where the machine is hard put, the knowledge and determination of the man behind it must find its way into the picture. Thus, gunners became armorers, drivers became mechanics, and mechanics became inventors, and the machines kept going.

Today the ground support concept is safe. Ways have been found to give the doughboys better, quicker and closer support. Additional uses have been found for the guns. Selection of targets has been brought nearer to perfection. All in all, constant examination of experience and its application to practice has seen a drastic curtailment of friendly casualties, while those of the enemy soar. But the problems are not over.

The problems of today are no longer peculiar to the concept; they are peculiar to the sort of war we face in Korea today. They are, for the most part, problems of supply, administration, and training.

Fuel is one of these. In the rugged Korean terrain of steep mountains and eternally hilly countryside, an M19, with its twin 120hp Cadillac engines, does well to travel one mile on one gallon of high grade gasoline per engine. If an M16 can go 2.5 to 3 miles to each gallon it is doing well.

While on the subject of vehicles, let me say that a lack of experienced mechanics, not spart parts, more often causes vehicles to be deadlines. There are schools, in and out of Korea, to which a man may be sent for mechanical training. However, there are few experienced men who can help the novice make the difficult transition

Lt. O'Rourke

from book learning to practical application. This problem has been partially combatted by holding frequent maintenance classes for drivers in the battalion motor pool. In these classes, first echelon work is stressed, with an eye towards *preventing* breakdowns. But *why* such a shortage of trained men? The answer is simple and can be given in one word: *Rotation*. It is the same problem whether with drivers, mechanics, armorers or gunners. It takes so many months to train a man to do his job well. Then he is ready to lead. When he has learned to lead, he is ready to teach. Unfortunately—for the commander, at least—by that time he is also ready to rotate home. The outfit must settle for another rookie, and the process is ready to start again.

No, I am *not* against rotation. Nobody who has to serve in Korea is against rotation. I don't know *what* the answer is—and I don't believe, that at the present time anyone else does, either.

One partial remedy, born of experience, has been to have a short-timer "little brother" a new man through the job. For example, a man who is destined to become a driver of an M19 will probably first serve an apprenticeship in the assistant driver's spot.

The same situation exists with officers. Battery grade officers with antiaircraft automatic weapons experience are hard to come by. Many gun-trained officers in key positions within the battalion have had to learn the automatic weapons and tactics as they went along.

Recently there has been a marked increase of school-trained AAA AW (Self-Propelled) officers, most of them recent graduates of the school at Fort Bliss. They come fresh, with new ideas, and are a most welcome sight. These are some of the problems which will probably be encountered by officers coming to command platoons, batteries or battalions of Automatic Weapons in (SP) in Korea.

Are they worth the trouble? Well, ask the guy who gives us the missions. Ask the infantryman. I think his answer will be a big, loud "Yes—they're worth it!"

Personally I think they are, too.

1st Lt. John Michael O'Rourke

LATE REPORT TO AA JOURNAL

When Lt. Col. Moomaw departed in June I took command of the 3rd AAA AW Battalion (SP). I am a Chemical officer on detail with the Artillery. My AAA experience includes a course at the School at Fort Bliss and a few months with the 90th, 716th, and this battalion.

Major Basil D. Spaulding, Jr., is S3 and Capt. Donald E. Werner, Exec. Recent arrivals include Captain Oliver H. Conrad, CO, Battery A, and 2d Lt. Larry A. Price, BMO.

Recent promotions: To Captain: John M. O'Rourke, Clarence R. Ellis, William H. Parmenter. To 1st Lt.: Robert H. Slosberg, Frank E. Aldridge,* Sidney S. Baskin,* Carl Kruse,* Donald C. McFarlane.*

The Third participated actively in the defense of OP Harry. Three batteries are now on the line with the division.

Marvin H. Snow, Major, Arty.

*AAA OCS graduate.

Far East Antiaircraft Artillery Specialist School

By COLONEL FREDERICK E. DAY

ANTIAIRCRAFT ARTILLERY has had to improve continuously to keep pace with the modern combat aeroplane. Each improvement has complicated the equipment. This has made it more difficult to acquire the necessary degree of skill to adjust, operate, and maintain this equipment. The technique of preparing and conducting the fire of Antiaircraft Artillery units has grown in complexity.

Training the many specialists required is beyond the capability of the tactical unit, particularly when that unit is maintaining an alert status in its defensive position.

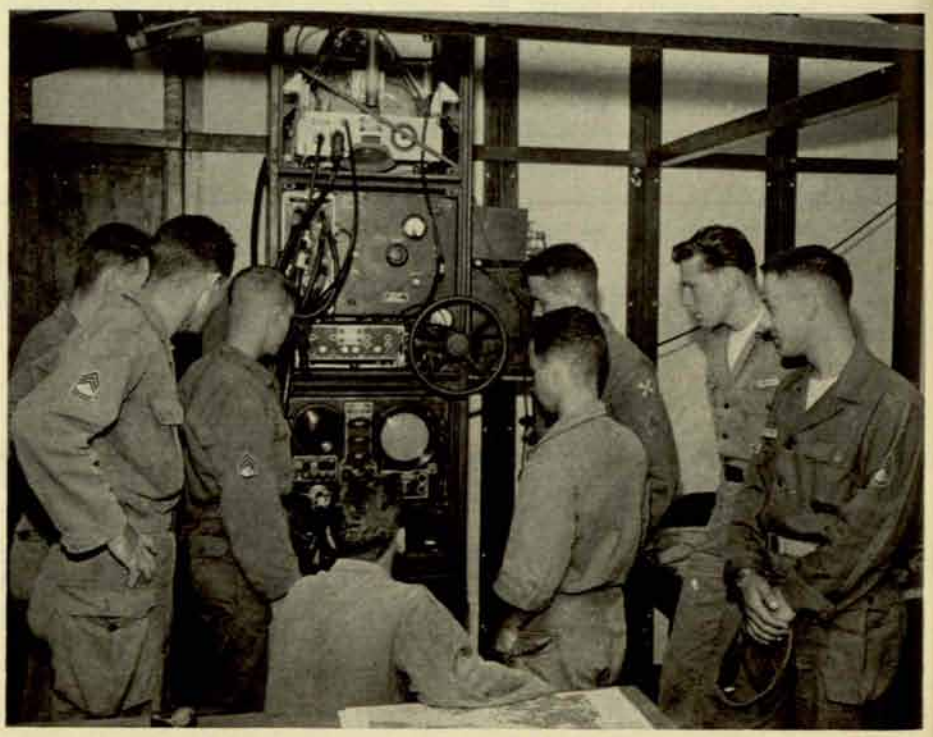
The Far East Antiaircraft Artillery Specialist School was activated 10 June 1952. Its mission is to train battery grade officers in AAA and to train those enlisted specialists required by the AAA units of the Far East Command.

Even the best of personnel management cannot prevent assigning officers with no previous AAA experience to duty with an AAA unit. Some of these officers have had field artillery experience and while the weapons are somewhat similar the technique employed is considerably different. Armor or Infantry officers are occasionally assigned to duty with an AAA unit. Quite frequently officers from the services get their year of combat duty with the AAA. Then there is the headquarters battery commander or the staff officer who suddenly finds himself commanding a firing battery. All of these officers require school training. The Battery Officers Course at FEAAASS gives them six weeks of training to qualify them for duty as firing battery commanders. To assure the proper flexibility in assignment the officer must be qualified for duty with both guns and automatic weapons. The course covers methods of instruction, communications, surface gunnery, acquisition radars, antiaircraft gunnery and fire control, and matériel for light, medium, and heavy weapons.

Unless engaged in actual combat, an AAA officer spends about 75% of his time in training his unit wherein the basic principles encompassed in the course on methods of instruction at FEAAASS are employed. This particular subject is universally dreaded by the student. It exposes him to individual criticism and usually deflates his ego. Effective instruction entails hours of preparation for a relatively short presentation. The type of enlisted man who can handle an AAA assignment is not satisfied with a training lecture read from a field manual; consequently, the importance of high caliber instruction is emphasized. As a practical conclusion, each student officer presents a 20-minute lecture to his classmates and instructors. Captain John W. Scott, who has had instructor experience at Fort Bliss and over a year of duty in Korea, is the head of the department which conducts this portion of the course. He is a Shakespearean actor and a thorough pedagogue. Student officers return to their unit much better qualified to carry on their duties as creators of an effective fighting force than when they reported to the School.

COMMUNICATIONS are important in the effectiveness of AAA. Enemy planes will do their utmost to arrive at their target undetected. An AAA unit which permits the uninhibited passage of this enemy formation has not justified its keep. One which shoots down friendly planes is to be criticized even more. The installation, maintenance, and operation of AAA communication facilities require the services of highly skilled specialists if these pitfalls are to be avoided. Captain Wayne G. Barker, who heads the Communication Department, was born to the Artillery in 1922 as the son of Lt. Wayne L. Barker, now Colonel. His father transferred to

Colonel Day, 1927 graduate of USMA, took postgraduate work at the University of California and Illinois Institute of Technology. He has also attended the Army schools up to and including the C & GS College and served as an instructor at West Point and four other Army Schools. With all this scholastic activity, Colonel Day also found time in WW II to serve with the AAA in Europe.



Target Acquisition Radar Class

the Transportation Corps in 1949 and the son now wears the Signal Corps insignia. Father and son were on duty simultaneously at Inchon in Korea. The School is fortunate in having received the latest types of radios and switchboards to be issued, even ahead of their receipt by the troops in FEC. They are being taught to the officers and the communication personnel.

Surface gunnery for AAA has paid big dividends. No field commander denies the effectiveness of either light or heavy AAA when employed in either direct or indirect ground fire. Attacks have been stopped, areas of the battlefield have been isolated, point targets have been destroyed or neutralized, and corridors have been maintained by the AAA.

Long range radar location of hostile aircraft is essential. Students at the FEAAASS become familiar with target acquisition radars, the radar equipment which gives to AAA units this vital information. Major John B. Bond's department teaches this course as well as the other courses on the fire control radars and directors. Major Bond graduated from the Military Academy in 1943. He also has a master of science degree in electrical engineering from Johns Hopkins University. He completed eleven months in Korea before coming to FEAAASS.

The major portion of the Battery Officers Course is devoted to antiaircraft artillery gunnery, fire control, and matériel. Captain Scott is head of the Heavy and Medium Antiaircraft Artillery Department. Major Bond is head of the Target Acquisition and Fire Control Department. Major Robert M. McCauley, who is head of the Light Antiaircraft Artillery Department, is also a Korean veteran of twelve months service with the organic AW of the 7th Battalion. He has been an instructor at both Fort Sill and Fort Bliss.

Enlisted specialists are trained at Fort Bliss and sent overseas, but they don't reach the Far East Command AAA units fast enough to replace the losses. Many of them have such good records that they are diverted to other key assignments in spite of their specialty MOS.

CAREFULLY selected individuals are withdrawn from the replacement pipeline and sent to FEAAASS for training as radar operators, radio operators, radio mechanics, radar and fire control mechanics, light artillery mechanics, heavy artillery mechanics, or artillery meteorologists. They are then assigned to those AAA units most in need of their particular specialty. Quotas are also available to the units so that they may send personnel of their own selection to FEAAASS for training as specialists.

FEAAASS also conducts courses for gun platoon sergeants, range platoon sergeants, light AAA platoon sergeants, and communication chiefs. The short tour in Korea means a very heavy turnover in these key noncommissioned officer specialists. After attaining a little over half enough points for rotation to the ZI, these men are permitted to transfer to Japan where their families may join them for the completion of their foreign service tour. Automatic weapons predominate in Korea, whereas guns predominate in Japan. This means that many competent light AAA platoon sergeants have to be retrained at FEAAASS as gun platoon sergeants.

FEAAASS is assigned to the 40th AAA Brigade. The Brigade Commander is also the Antiaircraft Officer for USAFFE. Members of the staff and faculty of FEAAASS accompany him on his visits of inspection and thus keep in touch with current AAA problems. Instructors from FEAAASS are assigned as members of Brigade teams for the inspections of Brigade units. Members of FEAAASS visit the AAA ranges at Katakai to observe the firing and later review and comment on the target practice reports.

These visits to the field enable FEAAASS to observe deficiencies in training or maintenance and to modify the instruction to correct them. The inspection teams often recommend to the unit commander that he send certain of his assigned specialists to FEAAASS for training. After the completion of their course at FEAAASS these specialists are inspected at their unit to determine that their on-the-job performance is satisfactory.

The 40th AAA Brigade has established an on-the-job training program for its graduates from FEAAASS. Specific daily tasks are performed under competent supervision for a period of four weeks. A report is rendered covering the proficiency of the graduate. This assures that the man is utilized in the position for which he was trained and it enables the school to correct any deficiencies in the curriculum which are disclosed. Since the graduate is under especially close observation by his commander he has a splendid opportunity to demonstrate his qualifications for advancement and further schooling.

Katakai Firing Range

By MAJOR JOHN L. SHORTALL, JR. and 1st LT. LELAND V. HAMLIN

KATAKAI is the largest, and one of the oldest firing ranges for AAA in Japan. Located on the eastern shore of the Chiba peninsula, it lies some sixty miles from the Capital City of Tokyo, and since July of 1951 has been operated and maintained by the 138th AAA Group under the command of Colonel Wm. L. McNamee.

The broad and gently sloping sand beach, known to the Japanese as Kujuku-ri, or ninety-nine miles of beach, provided an area large enough to fire several units at once, a deciding factor in the selection of this site due to the dense population of Japan where large uninhabited areas are practically nonexistent. Also, by firing over the ocean,

Entrance to Camp Katakai

a field of fire commensurate with the requirements for AA firing can be attained. Accordingly, a surveying team laid out the site presently occupied by the range and the 753rd AAA Gun Bn (120mm) commenced the first service practice in April of 1948.

The greatest single difficulty encountered by units first firing at Katakai Firing Range stems from the fact that along the Kujuku-ri coast line are some of the richest fishing grounds in Japan, and although there is some manufacturing of textiles, fishing is the main occupation of the many inhabitants of this area. Undaunted by the firing on the beach, boats of all sizes and descriptions were continually interrupting the firing by entering the danger area. A compromise agreement was then negotiated with the local fishing association whereby firing would only be conducted five days a week and then only in the afternoons, leaving the weekends and mornings for fishing. This alleviated the situation to some extent but boats were still occasionally blundering into the field of fire. Finally, as a result of numerous complaints, the fishing association constructed a radio transmitter and equipped several of the larger boats with receivers. A direct line from the range to the transmitter was laid to facilitate communications, so that when a boat enters the danger area, a call can be made and the boat notified that it is in the danger zone. Today, a representative of the fishing association is present at the range during firing hours and interruptions are fewer. Occasionally, however, from one to a dozen boats may wish to cross through the field of fire. If so, they gather on either side, in close to shore, and wait until the flag in the range tower is lowered before proceeding across. The cooperation and consideration extended by both the fishermen and the firing range is apparent to even the casual observer.

Prior to the establishment of additional AA ranges on Northern Honshu and Kyushu, all AA units in Japan fired at Katakai. At present the Battalions of the 138th AAA Group utilize Katakai, each of the battalions firing three service practices yearly. Frequent visitors too are divisional self-propelled AW Battalions stationed in Japan, Air Force Ground Defense Units, and AW units of the Marine Corps. Activities other than AA firing include the use of Katakai by the Tokyo Ordnance Depot for test firing of all types of weapons, the manufacture of smoke by the 394th Chemical Smoke Generator Company, the firing of practice ammunition with bazooka, and firing from amphibious vehicles. Katakai is a beehive of activity all year round.

ALTHOUGH Katakai has had over a full battalion on the line at one time, the present procedure is to have at the range not more than two batteries, either or both of which may be gun or automatic weapons. When two gun batteries occupy the range, the time the range is open is divided between them, or they fire alternate courses. If a gun battery and an automatic weapons battery are on the range simultaneously, the guns have priority, and the automatic weapons fire when the guns cannot. This arrangement does not cause great difficulty for AW units due to the peculiar weather Katakai experiences. A great many days are cloudy and overcast. There are times too, when the guns cannot fire even on sunny days, due to a haze in the air which makes tracking the target a virtual impossibility. Perhaps the most disheartening occurrence, especially to those new to Katakai, is the rain clouds which appear seemingly from nowhere, drench the area and vanish in a matter of minutes.

Major Raymond Welch, the Range Commander, has continuously striven during the last two and a half years, to make a visiting unit's stay at Katakai as pleasant and comfortable as possible. When a unit arrives at the range the men are housed in squad tents over frames with wooden floors, and a large comfortable BOQ is available to officers. One of the two large mess halls, complete with four-man tables and chairs, is assigned and a large reefer made available for storage of rations. Latrines are conveniently located in the camp area, and the twenty-four head shower unit is open daily from 4:00 to 8:00 P.M. In addition, Katakai boasts a well stocked Post Exchange, a classroom capable of seating 125 with films shown nightly, a day room, and a dispensary with an enlisted medic on duty at all times. It is worthy of note that most of the buildings, the tent frames, and also quarters and a mess hall for the permanently assigned personnel were constructed by Major Welch, largely from scrap material and with a force of eighteen Japanese laborers.

In July of 1951, the 31st and 36th RCAT Detachments were permanently stationed at Katakai and have provided excellent target support to visiting units. Both units have received numerous commendations as a result of their operations. For the last two years, these sister detachments have been commanded respectively by 1st Lt. Leland V. Hamlin and 1st Lt. Robert L. Wittnebel. Also, an additional RCAT detachment, the 63rd, was activated in March 1953 and is undergoing training at Katakai. Stationed permanently at the range are the records section, a meteorology section, a crew for the surveillance radar, and an

Ordnance maintenance team.

In the near future, it is expected that Katakai will become a self-sustaining organization operating under a TD. This has been largely brought about by Brigadier General James G. Devine, commanding 40th AAA Brigade, whose personal interest and efforts have contributed greatly to the growth of the range.

AAA HOUSING IN JAPAN

By LT. COL. DAVID B. NYE

Artillery

Enlisted Men's Club

IN December of 1950 the situation in Korea became critical with the movement of the Chinese "Volunteers" southward across the Yalu River. The subsequent reverses suffered by the United Nations' Forces gave rise to fears that those forces would be thrust off the Korean Peninsula and that enemy operations might also be initiated against the Japanese home islands. As a result AAA gun batteries in Japan were ordered to occupy previously procured tactical sites and to assume a state of readiness for combat.

The majority of gun batteries in Japan had been previously stationed, quartered and emplaced on air bases. The barracks, messes and other facilities, both administrative and recreational, which had been available on the air bases could no longer be used effectively because the travel time between air bases and tactical sites and the alert status could not be reconciled.

The bitter winter of 1950-1951 with its almost constant snow, sleet and rain created a housing problem which demanded urgent action. The following account of the action taken, while dealing specifically with the 64th AAA Gun Battalion (120mm), is generally applicable to all gun battalions in Japan. Of course, where higher headquarters are referred to, the actions of those headquarters are applicable to all battalions.

Initially, it was every battery for itself and men slept in radar and director vans and in trucks to keep warm. As soon as the organization and preparation of the tactical sites were considered adequate, action was started to improve living conditions. M-1942 squad tents were soon procured, erected and equipped with M-1941 tent stoves. Winterization kits for the squad tents were obtained and men were soon comfortable as far as eating, sleeping and dressing were concerned. Field messes were established in tents also. The lack of bathing facilities combined with the bitter cold presented another serious problem. A partial and temporary solution was found by shuttling personnel to the air base for showers, but this was not very satisfactory, since it either interferred with the pass policy or required extremely close control of personnel who were part of alert crews. Also, personnel received an opportunity to bathe only every fourth or fifth day. A much better solution was achieved when portable, field-army type shower units were obtained and these, with the aid of two 1500-gallon water tankers per battery, provided minimum standard bathing facilities.

In January of 1951 Brigadier General James G. Devine assumed command of the 40th AAA Brigade and of all AAA units in Japan. After observing the living conditions of the troops under his command, General Devine immediately initiated action to obtain funds for minimum housing requirements and announced the concept of the "Package Plan." The "Package Plan" outlined minimum housing requirements for each type of gun and AW battalion based on T/O&E's in effect as of March 1951. A considerable time lag in implementation of the "Plan" was inevitable since engineering procedures had to be accomplished and funds had to be obtained from the Department of the Army. A

Package Plan Barracks

Lieutenant Colonel Nye commanded the 64th AAA Gun Battalion until he recently completed his tour in the Far East.

further complication was presented by the fact that battalions defending air bases were based thereon for post engineer support. Thus interservice agreements and cross-servicing of funds were necessary.

WHILE facilities for headquarters and headquarters batteries were outlined in the "Plan," they were not needed in most battalions since facilities for battalion command and staff activities were provided on the objective being defended. Such facilities were made available to the 64th; therefore attention is given henceforth toward the development of gun battery areas. The "Plan" for 120mm gun batteries provided 20 x 48 foot theater of operations type buildings for the following purposes:

10 Barracks
1 BOQ
1 Mess Hall (20′ x 96′)
1 Orderly-supply room
1 Day and classroom
1 Latrine

Also included in the "Plan" were electrical power and a complete water supply system for each battery position.

As the winter wore on the continuation of the high alert status precluded an adequate system of passes or the satisfactory utilization of recreational facilities on nearby service installations. How to provide the essential administrative buildings and adequate recreational facilities became the $64.00 question. "Operation Scrounge" was initiated and the jackpot was found in the Engineer salvage yard in Yokohama where a considerable residue of salvage material was on hand as a result of the "roll-up operation" in the Pacific area.

The Army Engineers shipped salvage material of all shapes and descriptions to the AAA battalions. In this salvage material were parts of prefabs of every type, both wood and metal, assorted lumber and timbers and pipe of all sizes.

Gun batteries immediately began to build and the speed with which buildings went up would have done credit to the famed Seabees. Batteries built day rooms and classrooms, the latter being used also as theaters where 16mm movies were shown each night. Two gun batteries built enlisted men's clubs complete with dance floor, band stand, booths and a soft-drink bar. Essential administrative buildings consisted of orderly rooms, supply rooms, and mess halls. Batteries with portable, field-type shower units also built shower buildings.

As the realization grew that the battery positions would probably be occupied indefinitely, additional facilities became desirable and were built. Generally, all batteries now have buildings, shacks or sheds for the motor pool, armory, communication center and shop, artillery mechanics, machine gun section, range platoon and facilities for a Japanese barber. Wherever practicable, several of these activities were grouped and placed in one building.

IN July of 1952, contracts were let for the completion of the "Package Plan," less those buildings already built by troop labor and deemed adequate. Before really cold weather arrived troops were out of their winterized tents and into barracks. Each battery was provided with adequate latrine facilities and a complete water system.

Each battery has now become a little community unto itself and is still developing. As I write this two more enlisted clubs are nearing completion and hobby shops are being planned. Those battery-built buildings which were retained, are being improved and brought to the same or higher standards than the "Package Plan" buildings.

RADAR BOMB SCORING BY AAA UNITS

By MAJOR D. L. DUCEY and CAPT. A. C. MILLER

REALISTIC training and training tests have always been a problem for military units. Sometimes many devious methods must be used to attain the desired results. In this article we tell you how cooperation between services solved a problem for both the U. S. Air Force and the U. S. Army AAA.

Air Force bomber units require training exercises to maintain their bombing proficiency and also to provide a means of determining the effectiveness of aircraft crews. Part of this training can be accomplished on bombing ranges; however, realistic simulated missions on large area targets, using Radar Bomb sighting devices, require special consideration and special scoring techniques. The targets for these practice missions are available almost anywhere—any large city will suffice. However, since actual bombs cannot be dropped on these "targets" a means of computing the theoretical results must be used to determine the bombing accuracy.

The Far East Air Force Bomber Command was faced with the problem of devising a means of testing their bomber crews in the use of Radar Bomb sighting methods. The requirement for such a testing procedure was first to have a means of communication with the aircraft and, secondly when "bombs away" was given from the aircraft, to determine accurately the location of the aircraft. With the known location of the aircraft at "bombs away," plotters and computers could compare this with known data as to where the aircraft should have been and thereby establish the bombing error.

In searching for a solution to the second problem, Bomber Command contacted units of the 40th AAA Brigade in Japan, commanded by Brigadier General James G. Devine. They asked if there was any possiblity that antiaircraft artillery radars and fire control equipment could provide the information they required for this bomb scoring procedure.

As a result, a system has been established in which AAA Gun battery SCR 584 radars and M9 and M10 directors provide the information necessary for radar bomb scoring. At the same time, it provides valuable realistic training for all antiaircraft units in the area.

When a practice bombing mission is scheduled, Bomber Command contacts Headquarters 138th AAA Group, commanded by Colonel W. L. McNamee, and one AAA gun battery is selected to score the mission. Shortly before the exercise is to begin, mobile VHF radio equipment, a plotting board and the necessary Air Force umpire personnel proceed to the AAA position.

THE AAA battery commander is briefed on the direction and altitude of approach of the bombing aircraft, and as the aircraft makes its bomb run, it is tracked by the battery radar. At the instant "bombs away" is indicated, the radar range operator reads slant range at the radar and the computer operator reads the azimuth of the aircraft from the Af dial of the computer (computer in Tracker Test or Present Position).

This information is relayed to the Air Force plotters who plot the location of the aircraft and then compare it with their computed data and determine where actual bombs would have hit the target.

These tracking and scoring missions provide realistic training and interesting tests for the AAA units.

The Development of Heavy Antiaircraft Artillery

PART 4

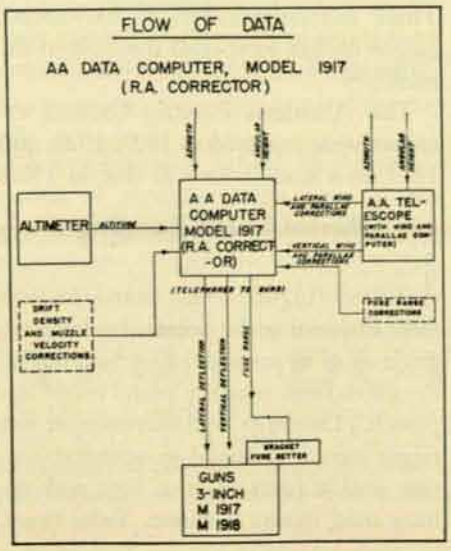
By COLONEL WILLIAM J. WUEST

WORLD WAR I saw the birth of air power. It also saw the beginning of "3-D" but not as we know it in Hollywood today. The 3-D of that day meant three-dimensional firing; something new had been added to the old artillery problem, firing at a rapidly moving target capable of movement in three dimensions simultaneously.

It was soon evident to all who had eyes to see that the airplane was a weapon that had great potentialities. An adequate defense against it must be provided. The matériel and equipment developed during the war had to be greatly improved if adequate defense was to become a reality.

Following its reorganization in 1920, the Army was ready to begin its peacetime training and development program. The Coast Artillery, charged with antiaircraft defense, immediately began consideration of the problems. The first problem to be solved was that of developing methods and means for conducting target practice with aerial targets. In November 1922, the first antiaircraft gun target practice was conducted with an aerial target towed by an airplane.

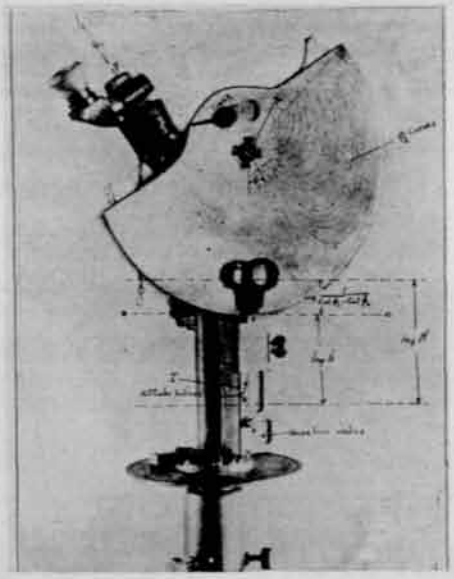
The practice was held at Fort Monroe, Virginia, by Battery B, 61st Artillery Battalion (Antiaircraft), commanded by Captain Aaron Bradshaw, Jr. The target was a white sleeve 14 feet long, 3 feet in diameter, towed by a seaplane with a towline 2,500 feet long. The course flown was over the water from Fort Wool to Back River Light about 1,000 yards offshore. The sky was overcast with shifting clouds intermittently obscuring the target. The plane was on its second course before the battery personnel were able to see the target, and it was on its fourth course before the observers and gun pointers could be put on the target well enough to track it. The 3-inch mobile antiaircraft guns (M1918) were used in the firing.



The shots fired on the fourth and fifth courses were more or less erratic. The gun pointer fired when he was reasonably certain that he was on the target. One of the principal objects of the firing was to determine whether or not it could be delivered with safety to the towing plane. Accordingly an officer was stationed at each gun, who personally verified that the line of fire was safe before the gun pointer fired. The firing on courses 6, 7, and 8 was fairly accurate. The rate of fire was very slow, as the target was continually being obscured by clouds. A total of 22 shots were fired. Lieutenant W. K. Patterson, U. S. Navy, of the Naval Air Station, Hampton Roads, was the pilot of the towing airplane.

IN this practice the battery used the AA Data Computer, M1917, better known as the R. A. Corrector, and described in our Part 3 installment in the

Colonel Wuest, author of *History of Heavy AA Fire Control and Matériel*, published by the Book Shop, Fort Bliss, Texas, enlisted in the Army as a private in 1929, gained his reserve commission the same year, and was integrated in the RA in 1946. He is now Chief of Staff of the Ryukyus Command on Okinawa.



January-February, 1953 JOURNAL. It was the last and the best of the World War I antiaircraft computers, and was our standard in the early twenties. With it the battery had to use both the altimeter and the AA telescope to furnish data and corrections as indicated on the Flow of Data Chart.

The altimeter was the instrument used to determine altitude, the basis of the position finding system. It consisted of two instruments each of which was called an altimeter instrument. Operating together, they were designed as a simple triangulating device which computed the altitude of a triangle. They were designated B′ and B″ instruments and were placed in position at each end of a horizontal base line of known length. The B′ instruments accomplished a graphical computation of altitude and carried a curve desk on which were plotted curves of values of the angles as read from the B″ instrument.

By 1924, practically all antiaircraft batteries were annually conducting target practices with towed aerial targets. As a corollary to target practice, methods of determining and evaluating performance of matériel by spotting a shell burst were developed. New matériel was developed by Ordnance, the Signal Corps, and the Corps of Engineers. Some of the outstanding post-war developments were: (1) increased muzzle velocity for guns, (2) increased rate of fire for guns, (3) increased mobility, (4) improved ballistic qualities of projectiles, (5) mechanical fuzes for gun projectiles, (6) improved sound locators and searchlights with coordinated action provided for between the two.

Highly perfected directors became available for computing firing data for guns. Electrical data transmission systems were developed for application of data to the guns. Methods of firing, which at the close of World War I, contemplated duck shooting with batteries of 10 guns, each spraying shrapnel throughout the heavens, progressed to the stage where four guns, using high explosive shells, delivered fire far more effectively.

In 1926 firing tests were initiated at Aberdeen Proving Ground, Maryland by Coast Artillery and Ordnance personnel. The Chief of Coast Artillery and the Chief of Ordnance arranged War Department authority to send the 61st Coast Artillery (AA) from Fort Monroe, Va., to Aberdeen Proving Ground, Md., about 1 September 1926 to carry out an extended program of antiaircraft fire against towed aerial targets for the purpose of giving the field test to new matériel. Since the war many new designs had been developed and the manufacture of new matériel had been accomplished.

The 61st Coast Artillery (AA) arrived at Aberdeen with 25 officers and 296 enlisted men. The antiaircraft exercises covered a period of nine weeks, with day and night firings being conducted. The matériel tested included the 3-inch AA gun, M1917, one model of a 105mm AA gun, and four AA computers; AA data computer M1917; director T-1, Frankfort Arsenal, an Ordnance Department development; director T-2 (Vickers); and director T-3 (Vickers). Two types of electrical data transmission systems were tested. A new type fuze setter was provided for the test to replace the bracket fuze setter M1916. Three different models of stereoscopic height finders were used throughout the exercises.

The Aberdeen Proving Ground exercises were repeated in 1927, 1928, and 1929 on a similar basis to that of 1926.

Aerial Sound Ranging

UP to August 1925, sound locators were disposed at the points of a large triangle so as to present a base line in any direction from which a plane might approach. Direction and elevation of the target were telephoned to a central plotting station from the two base end stations used in any instance. From there, predicted azimuths and elevations were furnished the searchlights. This method was slow and erratic. In August 1925 it was abandoned and the single-station method was adopted.

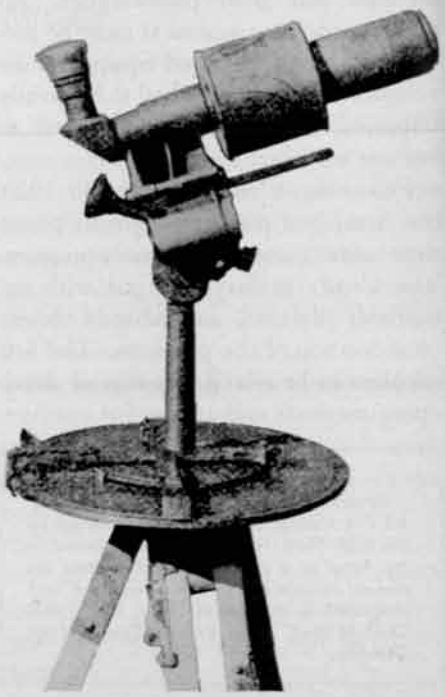
In the single-station method, one sound locator was paired with a searchlight. Azimuth and angular height were measured and the altitude estimated as high, medium, or low (low was 1,000 to 2,000 yards; medium 2,000 to 3,000; high 3,000 to 4,000).

Research was conducted during the spring of 1926 to determine the factors, such as wind and density for which corrections should be made in the azimuths and elevations as read at the sound locator before applying them to the searchlight. The possibility of directing gun fire by the sound locator as an emergency method was under consideration at this time.

Infrared Ray Research

THE problem of locating an airplane with greater accuracy than that obtainable by sound locators received considerable study for several years prior to the first Aberdeen exercises. Captain William Sackville (now a retired colonel) took a leading part in various experiments made with apparatus designed to provide an accurate determination of the position of the target by means of infrared rays.

The 1928 Aberdeen exercises report recorded that work was continued on this development. Two lines of attack



were followed in the solution of the problem. The first depended upon the radiation emanating from the airplane motor exhaust. The second supplied a source of radiation which, when reflected from the surface of the airplane, caused a deflection in the measuring instrument. Two 60-inch Sperry AA searchlights were used as a source of infrared. It was at first intended to shield these lights by means of screens preventing the passage of visible light but transparent to the infrared rays. Such large shields were not obtainable and the receiving apparatus was shielded instead. Previous tests had shown that the first method had many disadvantages and the 1928 tests were confined mainly to the second method.

The receiving unit consisted of a gold-plated parabolic mirror mounted so that it could be traversed and elevated. The sensitive element was a thalofide cell placed at the focus of the mirror and reflected into the cell whose electrical resistance was thereby changed. By properly connecting the cell in a circuit containing an amplifier, these changes in resistance were made to give indications on a galvanometer. With this apparatus, several tests were made on moving airplanes at altitudes from 6,000 to 9,000 feet, with encouraging results.

The principal difficulty encountered was that the searchlight beam itself was a source of infrared radiation which tended to cause the zero point of the galvanometer scale to be more or less indefinite. This fact, however, did not prevent tracking the airplane.

Although research in infrared ray radiation continued, no piece of equipment became standard. The development of radar early in WW II provided a means not only of accurately determining the location of the target but of determining its range and altitude at the same time.

Not all officers of the Coast Artillery Corps welcomed antiaircraft artillery, as a part of Coast Artillery, with open arms. The problem of delivering accurate fire upon a fast moving target was a weighty one indeed. Some thought the problem insurmountable; others saw the vision of what could be done with good fire control and matériel.

Lt. Col. O. T. Spiller, CAC, (now Brigadier General, Retired) writing in the Journal of the United States Artillery of October 1919, had this to say:

"A great many artillery officers look upon antiaircraft gunnery as so much guess work. The average artilleryman wants to hit and if he doesn't see immediate results he thinks the gunnery is at fault. His 'common sense' requires us to bring down an airplane as one brings down a partridge with a gun. Common sense is the fruit of ancestral experience and antiaircraft gunnery has existed only since the war. It is common sense which is wrong in refusing to see our difficulties, it is common sense which must be reformed. Antiaircraft gunnery may seem like a game, but is a game in which luck is peculiarly favorable to the good player. We will still have hope if the ammunition experts keep sufficiently apace with the aeronautical sharks so that airplanes of tomorrow will not travel faster than our projectiles. It must be remembered that for Antiaircraft Artillery all of the fire control methods have been devised, and the matériel has been designed and manufactured during the stress of war which was already demanding the maximum of the thinkers' efforts besides the maximum of the factories' outputs. Before 1914 there had not been sufficient advancement in aeronautics to justify any nation to make preparations against attacks from the air.

"If in the future we are found lacking in such preparations can we offer any such excuse? We have been amply forewarned, are we going to be forearmed?"

As mentioned before, the determination of altitude is the basis of the position finding system. In 1925 the stereoscopic height finder replaced the altimeter. The principle of operation is to measure the slant range to the target by means of the stereoscopic vision of the eyes, aided by increasing the interpupillary distance by lengthening the distance between the two points from which the observer views the object. By pointing the instrument at the target the angular height is obtained. Solving this triangle by optical and mechanical means within the instrument, converted slant range to altitude.

Until 1939, when the height finder M1 was adopted, all previous models were test models. In the 1926 Aberdeen firings a Model T2 was used. Later, the model T9 was most generally encountered in the service.

The height finder was used to transmit slant range or altitude to the director. The instrument was selfcontained and was 13½ feet in length. Tracking telescopes and conveniently located handwheels were provided for keeping the height finder on the target, thus simplifying the duties of the stereoscopic observer. An internal target system in the height finder permitted adjustment for changes in the optical alinement of the instrument arising mainly from changes in temperature. A data transmitter, mounted directly below the measuring scale, connected to the data transmission or cable system of the battery, provided for the electrical transmission to the director of either observed range or altitude. Target designation receivers for the reception of the observed angular height and azimuth of the target from the director were provided to insure, that both director and height finder were trained on the same target.

The range or altitude measuring scale of the height finder was graduated from 550 to 50,000 yards, but the height transmitter was graduated only from zero to 10,000 yards. The height finder employed either 12-power or 24-power magnification as desired, and was provided with filters to improve the visibility of the target under varying degrees of haze, glare, and camouflage. The instrument could be elevated from zero to 90 degrees.

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A HISTORY OF ROCKETS AND MISSILES

By 2nd LIEUTENANT MORTON L. KASMAN

CIVILIZATION has passed through the various stages of the Bow and Arrow, Horseless Carriage, and conventional aircraft eras. Now we are conquering another barrier and leaping into the Age of the Rocket and Guided Missile.

Crowding the pages of newspapers and magazines are the many stories concerning possible uses of rockets and guided missiles. These stories have run the gamut, from fantastic modern weapons to unbelievable adventures on the moon. You may begin to wonder, these flights of fantasy, these Buck Rogers illusions, where were they developed and from what strange pipe dreams will the next fable come?

Oddly enough many of the concepts pertaining to rockets and guided missiles are far from new. In the history of various peoples we find the art of rocket making to be an ancient one. Let us begin 30 centuries before the birth of Christ.

3000 B.C.

Historians upon studying the culture of the ancient Chinese have come to the belief that the Chinese used rockets with black powder propellant as early as the year 3000 B.C. These highly and hotly debated rockets were used as fireworks at festivals and celebrations; to compare them with rockets of today would be analogous to David's sling and the Atomic Artillery presently developed.

The 13th Century

The first record of the use of the rocket in a military sense occurred about the year 1232 A.D. The Chinese while defending the city of Pein-King attached rockets to arrows, firing them in a manner similar to the common 4th of July skyrocket. The use of the rocket began a new phase of warfare as it was known in those times. These so-called "Arrows of Flying Fire," used as a propellant, black powder, which not only increased the range of the weapons but also introduced the incendiary effect in warfare.

Over the Caravan Routes

News of this weapon soon reached Europe and in 1249 Roger Bacon, an Englishman, published a treatise describing its use. Many Europeans realized the possible advantages of weapons of this type and the concept of rockets was quickly adopted. There are numerous references to the use of the rocket in histories of the 13th and 14th centuries.

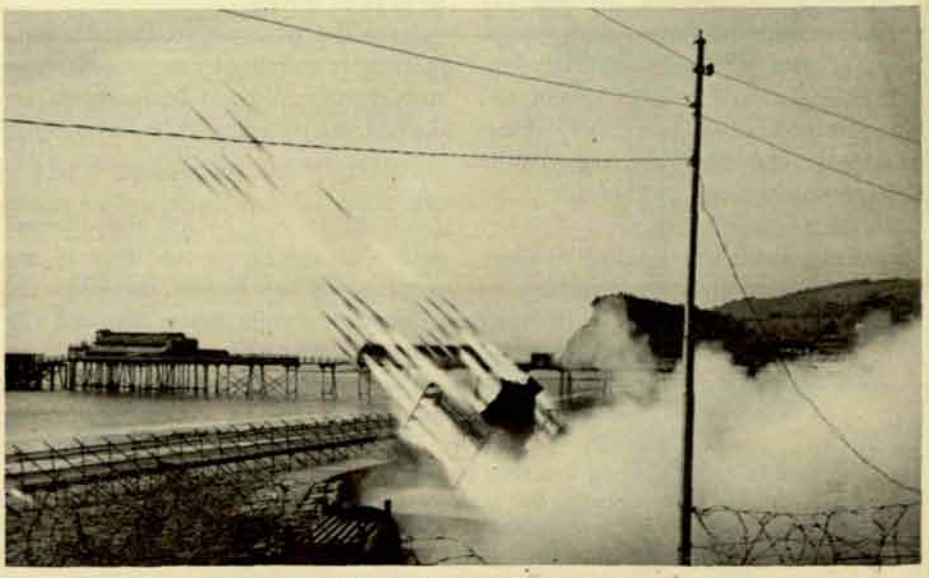
The Human Rocket

In the early part of the 15th century a Chinese inventor named Wan-Hoo attempted the first human rocket flight. He attached 47 large rockets to a chair, secured two kites to its sides and strapped himself in. Forty-seven coolies lighted the rockets at the same time—Wan-Hoo disappeared in a cloud of flame and smoke. Nothing has been seen or heard of him since, and so the first attempt at human rocket flight must be called a failure.

The 18th Century

AFTER three centuries of comparative quiet in the field of rocketry, a prince of Mysore, India, included in his armies a Rocket Corps of 1200 men which was used with great success against the British. This success led

Lieutenant Kasman, Fort Sill OCS graduate, 1952, is now S2, 1st Guided Missile Brigade.



Coast Defense Rocket Gun, England

Rocket-firing M4 Tanks on the German front

to a reemphasis on the use of rockets as a weapon of war.

William Congreve, an Englishman, started a study on the artillery rocket. The rockets produced by Congreve proved so successful that they greatly influenced the outcome of the Napoleonic Wars and the War of 1812. During the British attack on Fort McHenry the use of rockets proved unsuccessful, but inspired Francis Scott Key to write the "Star Spangled Banner," with the line "the rockets' red glare, the bombs bursting in air."

Congreve developed quite a number of rockets of various types and sizes. The most popular of these, the 32 pounder, was a 4-inch pipe, 3½ feet long, with a conical warhead. The warhead contained a load of either shot or gunpowder which was fused for time or impact burst. These rockets used a guide stick approximately 15 feet long for aerodynamic stability and could be fired from tubes or wooden racks. The rockets attained a maximum range of 2,200 yards when launched at an elevation of from 55 to 60 degrees.

Rocket Development in U. S.

In 1846, William Hale developed the first stickless rocket. This was done by placing three curved vanes in the base of the rocket in the path of the exhaust blast, which caused the rocket to rotate like an artillery shell. Hale developed his rockets in two sizes—6 and 12 pounds, with the missiles reaching a maximum range of 2,200 yards. In December of 1846, a rocket battery was formed at Fort Monroe, Virginia; by 1847, ten more batteries had been activated. Some of these units were used during the Mexican War, but the development of the rifled artillery piece created greater accuracy in cannon and interest in rockets greatly decreased.

During World War I, rockets played a very minor role, on flares used for battlefield illumination and as an anti-aircraft weapon used against German observation balloons.

The most prominent name in the contemporary field of rocketry is that of Dr. R. H. Goddard of Clark University. Goddard was the first man in the field of rocketry to set down the laws governing rocket propulsion in mathematical form. He conducted many tests with powder rockets, and, in March of 1926, fired the first successful liquid fuel rocket which used liquid oxygen and gasoline. Goddard later devoted his energies to the problem of aerodynamic stability of the rocket in flight. During World War II, he made many important contributions in the field of reaction motors. At the end of the war, he had planned to resume his research on high altitude rockets, but death prevented this for the "Father of Modern Rocketry."

International Interest in Rocketry

With the publication of Goddard's work on propulsion and stablization of rockets, many inquiries on the subject were received from interested individuals in Europe. One in particular, Herman Oberth, a German Scientist, was expressing much interest in the possibility of a high altitude rocket. In the latter part of the 1920's Oberth published a study called "The Rocket into Interplanetary Space."

There was formed in Germany about this time a group called the German Rocket Society which took over Oberth's rocket and equipment. This group conducted experiments with this rocket and other liquid fuel rockets and reached the following conclusions:

- The motor should be oval shaped for best performance.
- Gasoline or alcohol should be used as the fuel and liquid oxygen as an oxidizing agent.

The German Army established a research and development program in the use of rockets as a weapon of war in 1933. This program was later named the Peenmunde Project, and acted as a research center and clearing house for information and work being done in connection with guided missiles. Peenmunde was responsible for the development and use of the V-1 (Buzz Bomb), V-2, gravity bombs and air to surface jet propelled missiles by the Germans during World War II. Work had begun on a multi-step missile with a maximum range of 3000 miles, which was to be used against continental United States when the war ended.

United States Interest the Field

The United States reentered the field of guided missiles in search of a method to combat the Japanese Kamikaze attacks in the South Pacific during WW II. This project had a rapid development which produced a missile for use early in 1945; the Armed Forces formed Guided Missile Units during the same year. With the end of the war in Europe the United States gained access to various missiles developed by the Germans, during WW II. These missiles were of invaluable use as part of the research and development phase of the early Guided Missile Projects in the United States. Through their use, much needed information was gathered on rocket and missile performance at speeds greater than sound, as well as information relative to the upper airs and atmospheres surrounding the earth.

The Armed Forces in their experimentation continue to produce missiles which perform a multitude of assignments. All these greatly increase this country's military potential as well as serving to test the possible future uses of the rocket concept.

Fire Control of the Towed 40mm AA Gun in the Surface Role

By 1st LIEUTENANT JOHN F. IRWIN

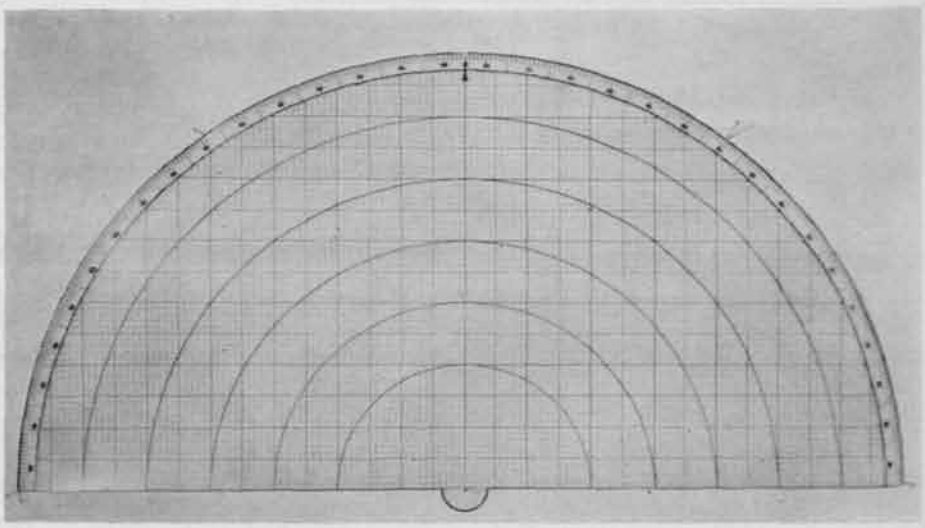
WITH the increased use of the towed 40mm AA gun in surface firing there arises the necessity of establishing some sort of fire control system that fits the capabilities of the weapon and is simple enough so that it may be used by the individual gun section. The system presented in this article is taken from the present target grid system used by the field artillery with modifications made in the construction and use of the target grid and the range deflection fan. This system is designed as a field expedient in that it can be made by the using arm in a relatively short time out of material that is normally available.

The target grid used in the adjustment of surface fire with the 40mm AA gun is similar to that used by the field artillery only in the method of gridding. It is made out of academy vellum which enables the user to plot the target and bursts in pencil. All lines and numbers are inked on the smooth side and coated with shellac. It is semicircular in nature. From the origin and perpendicular to the base of the semicircle, a radius (capped with an arrow and representing in scale the maximum effective range of the gun) is drawn to the summit of the semicircle. This point is labeled "0" mils. The semicircle is now divided into two equal quadrants. The perimeter of the semicircle is a ⅜" border which is graduated into 10 mil increments from zero to 1600 mils on either side of the summit. Each fifty mil point, labeled "50," is marked by a 3/16" bold line. The hundred mil points, unlabeled, are marked by ⅜" bold lines. For this example a RF of 1:25000 was used which makes it mandatory that the grid be used with a 1:25000 firing chart or map. With lines parallel and perpendicular to the baseline, the semicircle is gridded, using red ink, into 100 yard squares. Heavy red and black lines are used to indicate the 500 and 1000 yard squares respectively. The radius of the grid depends upon the maximum effective range of the weapon. For this example it was decided that 6500 yards would be used based on the burnout time of the tracer assembly, M3AI, used in 40mm ammunition.

The range deflection fan is made from a piece of clear X-ray film in a circular sector shape 600 mils wide and with a radius ½" longer than that of the target grid. Clear X-ray film is used because ink on the film becomes indelible. However, plain acetate can be used. Each edge of the range deflection fan is divided into 50 yard increments using black ink for the right side and red ink for the left. Across the top of the fan starting from the left side and moving in a clockwise direction, the fan is graduated, using red ink, into 10 mil increments and labeled progressively every 100 mils, *i.e.*, 100, 200, 300, etc. From the right edge of the fan and moving in a counterclockwise direction, the fan is graduated, using black ink, into 10 mil increments and labeled progressively every 100 mils.

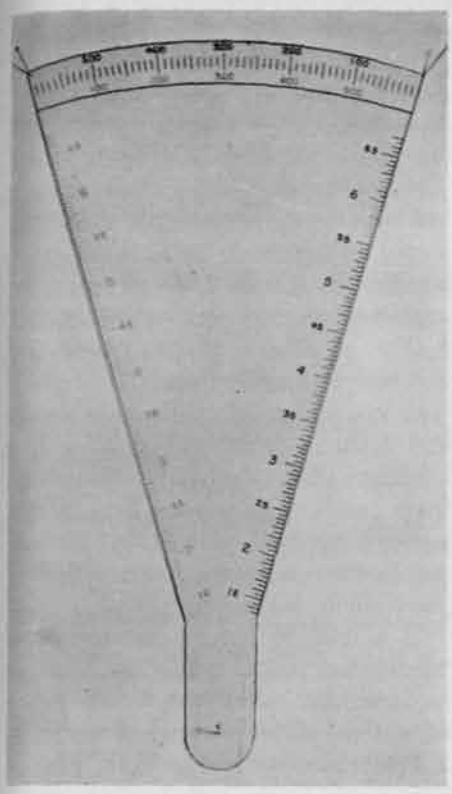
This system is designed so that it may be used with the towed 40mm gun deployed in either the AA role or direct support of ground troops. As there are no indicators of azimuth and elevation in mils on the towed 40mm AA gun it becomes necessary to devise some method by which azimuths and elevations may be set on the weapon.

FIRST let us consider the azimuth problem. In the firing of the towed 40mm AA gun in the surface role, azimuth is set on the weapon in terms of a deflection from a specific aiming stake. It was determined that one revolution of the azimuth hand crank traversed the gun 305 mils. A simple means of determining deflections is provided by taking a No. 10 tin can, cutting off all but 1.35" of the side, graduating the circumference of the 1.35" side, and mounting the base of tin can on the hand operating sleeve. To graduate the No. 10 can, the following procedure is used. A strip



The Target Grid

Lieutenant Irwin, USMA graduate, class 1950, served with Far East AAA School operated by the 40th AAA Brigade, where he designed the system described to fit conditions in Korea. Irwin is now a student at Fort Sill.



The Range Deflection Fan

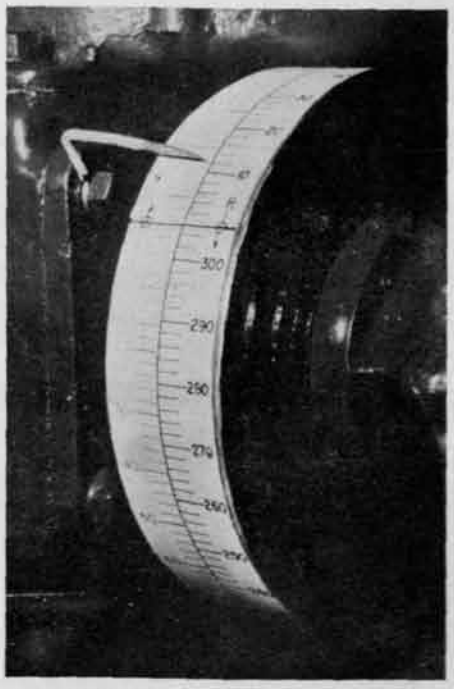
of paper is cut 1.35″ wide and with a length equal to the circumference of the can. The strip is then divided in length by a single black center line. At the midpoint of the strip another black line is drawn across the strip and perpendicular to the center line. This new line represents the point of zero deflection. The strip is now oriented so that line dividing it in length is pointing towards the observer. In a downward direction from the zero deflection line, along the left side of the center line (with all markings in red), are placed tick marks representing the linear amount of 2 mil increments. Each 2 mil increment, unlabeled, is marked by a ⅛″ line. Each 10 mil increment is marked by a 5/16″ line and labeled progressively to 300 mils, *i.e.*, 10, 20, 30, etc. Since the strip represents 305 mils, the 304th mil division will be ½ of a division above the zero deflection line. On the right side of the strip (with all markings in black) the same procedure is used with the exception that from the zero deflection line, the right side is graduated and labeled progressively in an upward direction. In this case the 304th mil will be ½ of a division below the zero deflection line. It will be noted that the 2 mil increment lines on the left and right sides of the line will be one mil out of phase. On the left side of an on the zero deflection line is placed a red zero ("0") pierced by an arrow pointing upwards. At the base of the arrow is the letter "L." The arrow and letter "L" indicate the direction that the hand traversing crank must be rotated to traverse the gun to the left. On the right side of and on the zero deflection line is placed a black zero ("0") pierced by an arrow pointing downwards. At the base of the arrow is the letter "R." The color code on the azimuth indicator is designed to correspond with color code on the range deflection fan.

To mount the tin can, the hand operating sleeve is removed and the two set pins holding the ring gear in the sleeve extracted. The center of the tin can base is then cut out to the exact size of the outer diameter of the ring gear teeth. Two holes are then drilled in the base of the tin can to coincide with the set pin holes. The can is mounted by aligning the holes in the can with the set pin holes on the hand operating sleeve and reinserting the set pins. Mounted on the traversing mechanism gear box and directly under the top rearmost bolt on the right coverplate, and extending over to the scale, is a movable index. This index is made from a piece of a wire coat hanger bent to extend over the azimuth scales. When a gun is boresighted on an aiming stake, the hand operating sleeve is disengaged so that the zero deflection line on the azimuth indicator is moved as close as possible to the index. The sleeve is then reengaged and the index bent to final alignment with the zero deflection line.

Elevation is set on the gun by use of a gunner's quadrant. However, an elevation indicator similar to that used for the traversing mechanism may be used if so desired to act as a ready reference during firing.

Prior to the emplacement of the gun, a primary aiming stake is placed at the azimuth to the base point by use of a compass. This stake is temporary and will be replaced when a base point registration has been completed. The gun is then emplaced and boresighted on the stake. The movable azimuth index on the traversing mechanism gear box and azimuth indicator are then positioned at zero mils. The gun is then traversed 300 mils to the right and left of primary aiming stake where additional aiming stakes are emplaced. The position of the gun, the base point, and azimuth indices representing the aiming stakes are then drawn on a firing chart of the area. The observer azimuth index for the primary field of fire is next drawn to the nearest hundred mils. In use, the target grid and range deflection fan are pinned together at the vertex.

FIRE requests, sensings and corrections are identical to those used in the field artillery. However, the type of fire is considered to be, for all practical purposes, of the area type. The gun section leader acts as the FDC in that with his firing chart, grid, range deflection fan, and GFT he computes all firing data. Before accurate fire may be delivered, it is necessary that a registration on the base point be conducted. The observer calls in his fire request, giving his identification, observer-target azimuth, target location, target identification and control. As soon as the gun section leader (FDC) receives the OT azimuth, the vertices of the target grid and range deflection fan are placed over the gun's position and the target grid oriented by use of the observer azimuth index. The vertical grid lines now represent the observer's line of sight. The base point's location is next plotted in pencil on the target grid. The range deflection fan is then rotated until the pencil mark representing the base point appears at one of the edges of the fan. If the left



Deflection Scale and Index

or red side of the fan is used, deflection is measured across the top of the fan using the red scale to the point of intersection of the scale and an aiming stake index. Deflection is then set on the gun by traversing in the appropriate direction from the same aiming stake whose index was used on the map. The firing elevation is determined by noting the range on the side of the range deflection fan and converting it to a QE by use of the GFT. The angle of site is added to the firing table elevation and the total, which is quadrant elevation, is applied to the gun.

As soon as the observer senses the first round he attempts to bring the burst to the OT line and then establish a 400 yard range bracket. This bracket is then successively split until a hundred yard bracket is established and is in turn split at which time fire for effect commences. All corrections are given in yards and are plotted by the section leader in the direction indicated by the observer. Although it is realized that the 40mm projectile has a relatively small lethal radius, for all practical purposes, considering the accuracy of the firing chart, grid, fan, the probable range error of the weapon, and the fact that targets normally would be of the area type, the splitting of a hundred yard range bracket is sufficient and dispersion will assist in covering the area. As soon as it is noted by the observer that the center of impact is on or very near the target, "end of mission" is given. At the gun position the primary aiming stake is then repositioned at the base point firing azimuth of the gun. The same correction is applied to the additional aiming stakes. It is felt that moving the aiming stakes is simpler for the gun section to understand and do instead of changing the indices on the chart. The adjusted elevation is applied to the GFT by placing the manufacturer's hairline over the map range to the Base Point and then constructing a gage line over the elevation used. A regular fire mission is conducted in a manner similar to that previously explained. Each mission may be given a concentration number and plotted on the firing chart. Computations for angles of site may be made by the section leader from existing map information or by the observer assuming that the gun has already been registered on the base point.

The question may arise "what will the unit do on an all-around defense?" The assumption is initially made that in AA deployment there is an all-around coverage. If a gun has to fire 180 degrees out from its primary field of fire, it can adapt itself quite easily by selecting another base point and installing more aiming stakes.

It is realized that a better and more efficient fire control system can be made in an ordnance shop with a wide choice of material. This system is designed as a field expedient and as such, can be constructed by the unit.

HOW TO WRITE AN ARTICLE

By LIEUTENANT CARL M. GUELZO

Transportation Corps

CAN you speak English? Have you ever written a letter home? Are you able to read? If the answers to all these questions are "Yes," you are in possession of the basic skills required in writing for publication. Too simple? Not at all. Writing, just as public speaking, marksmanship, cooking, or roller skating, is essentially a skill that can be developed through practice from rather modest fundamentals.

In some respects, although not all, Army writers are more fortunate than their civilian brethren. The military author is a professional person, writing on professional problems, for a professional audience. The Army writer also need not support himself by his writing, therefore he can be honest and straightforward in his presentation without casting a weather eye on the word count as an index of his economic standing. Service journals pay liberally for good articles, in contrast to the periodicals of other professions which compensate the writer with a few free copies and glory.

Style, technique, and smoothness of expression are not so important as long as you are clear and readable. Your readers, of course, will chuckle at grammatical errors that slip by the editors, but far more critical notice will be taken of what you say than how you say it. Before you write be sure you have something to say.

Your article will succeed or fail, depending largely upon the intrinsic worth of your ideas or suggestions. Your topics will deal with problems faced by other military men in the performance of their duties; new methods of applying existing principles; new or improved procedures, new ideas in training, operations, tactics, administration, and a host of other facets of military life; or even revealing criticisms of current policies and procedures. Your readers appreciate informative and well organized factual statements, together with sound interpretation. They soon tire of a string of opinionated generalities without specific facts to point them up. After all, it takes research and concentration to write a good article. Accuracy and honesty are essential to good writing. Brevity helps.

Gripes, personal complaints, and ill-considered attacks on existing policies have no place in a military article and,

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even if printed, will only bring down the wrath of your readers.

In spite of the Voorhees case, an honest criticism of some phase of military life based on a firm foundation of demonstrable fact and research will be accepted. The first article I ever had printed passed the censors even though it was a fairly bitter attack on certain personnel procurement policies—and brought a response that indicated action was being taken to correct the deficiencies noted. No writer could expect a fairer deal. Service journals take care of clearing papers submitted to them so that individual writers need have no qualms about official attitudes towards their work with regard to either security or propriety.

SUPPOSE, then, you still feel you have something that should be brought to the notice of other military men. How do you go about setting your ideas down on paper? First of all, prepare yourself for an extended session of mental effort. No small part of an author's success is his ability to sit in one place without interruptions for coffee, food, a pleasant chat, or even sleep until the article is finished. Much of your writing will be done during off-duty hours and will require a concentrated effort when you get down to business.

Write down your main ideas; trusting to memory for a good idea or an especially apt turn of a phrase is fatal. The filler material you will use to round out and amplify your main propositions will come as you work.

Writing articles is known to the English-teaching profession as expository writing. You are expounding on an idea; but if you do not express yourself clearly and definitely, you run the risk of not being understood, or worse, of being misunderstood. Since writing is basically a skill, the best way to learn is by doing.

You may recall the sheer labor that went into the composition of English themes in school. Dead, mechanical writing of that nature is as bad as hack work. Articles come from within yourself—they express your own ideas—and are supported by facts gleaned from research or personal experience. A misplaced comma, or a split infinitive matters little when you are giving the article a freshness and originality of your own.

Fancy, overstuffed verbiage should be left to anyone else. Write for the military reader as though you were actually talking with him—clearly, simply, briefly, and concisely. Pretend, as you write, that you are carrying on a conversation. Your normal manner of speaking will give naturalness to your writing; it's the easy, uncomplicated flow of ideas and arguments that will, in the long run, sell not only your article but the ideas as well. Remember, you will receive a check for your work, not a grade.

As you marshal your facts in support of your arguments, the organizational pattern of your article will begin to take shape. It's very simple:

I. Introduction
II. Presentation
III. Summary and conclusion

Your first draft will follow this general plan of organization, but don't try for perfection at first. Typewrite preferably, write if you can do so legibly, but always with the expectation that extensive revisions will be made. In fact, your finished manuscript may bear little resemblance to the first draft. I have turned out many a first draft on the backs of old special orders, extra copies of shipping documents, and anything else that offered a clean surface on at least one side of the page. If you do any quantity of writing, canary second sheets, substance 14, are probably the most satisfactory for all but the final draft.

As you have observed on frequent occasions, all articles begin with a title which describes or calls attention to the subject of your article. Leaf through the pages of any of the service journals. Some titles are precisely descriptive, some only hint at the subject of the article, and some are cleverly amusing; but all attract attention.

IN introducing your article, be honest. Take your readers into your confidence and let them know early in the paper what you are talking about; but regardless of the topic, here is where you acquire readers.

The first phrase or sentence will determine how much attention your ideas will get initially. The title will cause a reader to pause; the opening sentence of your first paragraph will either bring the reader to an abrupt halt for a close perusal, or will cause him to continue turning pages. Suppose you have an idea about improving service practice. You could start off with something like this: "Since service practice is necessary and important, it should be improved." But something like this is more apt to attract attention: "I know how to improve service practice; are you interested?" Of course, battery officers are interested and will read what you have to say. If anything is wrong with your ideas, you can expect to hear about it; but the important thing is that you are being read.

Or suppose you have something new on the tactical employment of self-propelled AAA. You could start with: "Proper tactical employment of SP AAA is necessary," if you wanted to wait until all the other articles in the issue had been read. If you want to reach out and grab your reader the first time around, you start this way: "Infantrymen love your guns, but as the AAA platoon leader you are still the expert in employing your weapons." Your introduction, in brief, should present the main theme of your paper and at the same time entice your reader into the body of the article.

Words, arguments, facts, tabulations, charts, photographs—all are legitimate weapons in presenting your ideas or suggestions to your readers and persuading them that what you have to sell is worth buying. If you are not interesting, if what you have to say is of little worth, if your presentation is muddled, remember that no one is compelled to read your work. Your ideas are the most important element of your presentation. Editors can dress up shabby grammar and sagging sentence structure (although grammatical accuracy and a lucid style of presentation are appreciated), but faulty reasoning and false facts are unforgivable and generally unprintable.

Suppose, however, that you are long on hot ideas but somewhat short in the language facility department. By all means collaborate if you feel that is the best way of providing your ideas with a hearing—but on a co-author basis. I have always felt that ghost-writing was a little dishonest. If you don't feel quite able to present your ideas adequately, at least give your partner the credit due him, and a co-authored article indicates clearly a divided responsibility. Your

papers may provide you with a considerable reputation in military circles and sometimes not in the way you expect. On the strength of a ghost-written piece you may be given an assignment on the basis of your supposed ability, not as a tactician, but as a writer. If only as a matter of intellectual, personal, and professional honesty, never lay claim to being something that you are not, even in such a relatively small matter as English composition.

AT the conclusion of your article, briefly summarize your main argument to indicate how you support and how you arrive at your final conclusions. You need not use the "And so we leave the dreamy, exotic land of . . ." approach of the travelogue, but you can put a definite, decisive period to your discussion.

So now you have a first draft completed. You probably feel somewhat exhausted mentally but quite proud of your creative effort. Congratulations! The vast multitude of those who aspire to write never even get this far. Look your work over briefly to pick up any glaring errors and then put it in a desk drawer or foot locker and forget it. In about a week, take the manuscript out again and go back to work. After a mental rest of this kind, you will be able to make the revisions you might have forgotten in the glow of accomplishment that accompanies completion of the first draft.

Now you will beef up your grammar and punctuation, clarify your presentation, tighten your sentence structure; delete, add, change, revise, correct, and any other of a multitude of actions you will take in order to improve your paper. Your first draft will be pretty much of a mess after you are through with it, and a second draft is indicated. On the second draft, perhaps only minor corrections need be made before the manuscript goes in for typing in final form; but if extensive changes are made here, a third draft may be required or as many more as are necessary in polishing your work.

When you are completely satisfied that you have a workmanlike paper, you should give some thought to the finished manuscript as it will be submitted to an editor. Unless you have an unusually clear hand, a manuscript should be typed, preferably on a machine with elite type, double-spaced, on only one side of the paper. Paper should be the 8½" x 11" size of regular commercial paper, and a good grade of bond. A bond paper is now available with a specially treated surface that enables you to make invisible erasures with an ordinary pencil eraser; but it is expensive, and regular bond paper is just as satisfactory if you are careful about erasing. Some editors prefer manuscripts to be submitted in duplicate.

At least a one-inch margin should be maintained on all sides of each page, and each page should be numbered. On the first page, a suggested arrangement is to type your full name and mailing address in the upper left hand corner, with the approximate word count (secure the average number of words in a line of type by a sampling of any ten lines of the manuscript, and multiply by the total number of lines in the article) in the upper right hand corner. The upper right hand corner is also the place to indicate any restrictions on the sale of the article.

Commercial writers of some reputation often reserve certain subsidiary rights to themselves. They may offer for sale only magazine publication rights and reserve book, movie, serial, or other secondary publication rights. The beginner is best advised to reserve nothing. In omitting a statement with regard to the conditions of sale, you are indicating that you are offering for sale all rights to your article at prevailing rates.

About a third down from the top of the page, type in capital letters the title of your article. Two spaces below the last line of the title, centered in the middle of the page, type the word "by;" and two spaces down from this and again centered, type your name, pen name, or other designation by which you wish the author of the paper known. Several spaces further down begin the body of the manuscript. Illustrative material such as charts, tables, graphs, and photos, should be separate from the body of the text and inserted on individual sheets of paper at appropriate places in the arrangement of the manuscript. Pages may be numbered either at the top or bottom.

When you have completed the final manuscript, look it over carefully for errors. Minor typographical errors may be corrected in pen and ink; major changes in wording will require a retyping of the manuscript. Give a little thought, too, to a brief letter of explanation to the editor and, if required, a short sketch of your background and present assignment. Find yourself a piece of stiff cardboard of the same size as your typing paper and use it to back up the manuscript when sending it through the mails. In this manner, the papers arrive smooth and unwrinkled.

IN submitting the manuscript, always use two envelopes: One to send it and one to receive it back. A magazine requires that each author send a stamped self-addressed envelope with his manuscript if he expects to get it back.

So trot over to the post office, ascertain the exact postage required, and slip into the envelope your manuscript (fastened with a paper clip if you must, but never a staple), the cardboard backing (a manila file folder is an excellent substitute), the stamped return envelope, and the accompanying letter of transmittal. You probably feel pretty proud of yourself and justifiably so: you have done some creative thinking. But the assumption that will cause you the least mental agony is that which expects the manuscript to be returned.

Most authors have read in numbed amazement not one but many rejection slips from editors. Service journals are usually kinder than civilian magazines; instead of the formal printed rejection slip, the military magazines will normally send along a brief note explaining that the paper is not suitable, or something like that. I have received letters of rejection that ran a full two pages and which soothed the disappointment considerably, but I have always felt that I received a fair shake from the editor.

Rejection does not necessarily mean your article was without merit. You may have turned out the best, most professional finished piece of work in existence; but if the editor does not feel it suitable for his magazine, he simply will not take it. You may have to send the same article to two or three editors before you find someone who will accept it. But never feel that your article is unsatisfactory. I have in my files an article that has been commented upon

favorably by no less than three different service periodicals; but, since it does not meet the editorial policy of any of them, it was never accepted.

An article is accepted primarily for two reasons: The editor judges it to be 1) suitable and timely and 2) interesting to his readers. Do not, however, throw your article away even after several unsuccessful tries. It is still yours.

If, on the other hand, your paper is accepted, you have the joy and immense personal and professional satisfaction of seeing your work in print. You have contributed to your own professional advancement and improvement, and to that of your readers as well. The author's check may come in very handy, too.

THE NEW ARMY BUDGET FOR FY 1954

By LT. COL. CHESTER E. GLASSEN and LT. COL. JAMES B. VIA

Plans Branch, Army Budget Division

THE Army has a new budget for fiscal year 1954. Whereas the Truman-Army budget, submitted to the Congress in January, added up to $12.1 billion (for new authorization), the new administration's revised Army budget totaled $13.7 billion. Is the Army really getting more money for the next fiscal year? Are the objectives the same?

Right after taking office President Eisenhower caused the whole Federal budget to be restudied and analyzed. All of the Army programs were critically eyed and reevaluated, in light of the need to cut back on expenditures. Finally in May, the Army reported to the Congress a revised budget of $13.671 billion, an increase of nearly $1.6 billion over the January estimate.

Changes That Were Made

This increase was not the result of an underestimating of dollar requirements in January, but rather reflected a change in guidance. In fact, the original budget was reduced about $1 billion and then $2.5 billion was added. The reductions were made possible in part by lowering the strength of the Army so that the fiscal year would end with a strength of 1,423,000 instead of 1,540,000. Reductions were also effected in maintenance and operations, procurement and production, research and development, and the Army reserve components.

The major reason for adding funds to the budget was that for the first time the Army was authorized to include funds in advance for the support of the war in Korea. In FY 1952 and FY 1953 the costs of the war in Korea had been met by diverting funds from other activities and by making up the deficiencies through supplemental appropriations. The irony in the present situation is that while we are now closer to a truce than in any year in the past, this is the first year in which funds are to be provided for the support of Korean hostilities in the basic budget.

Besides including the funds for Korean combat operations, the Army budget also includes the funds necessary for the support of the other United Nations forces, including an increased number of divisions of the Republic of Korea Army. The revised budget will maintain the active Army at the present level of 20 divisions, 18 regiments and regimental combat teams, as well as more than 100 antiaircraft battalions and more than 150 other combat battalions. These units will be manned within the reduced strength. If hostilities in Korea terminate prior to the end of the fiscal year, the Army strength may be subject to further reduction.

Personnel Turnover A Problem

After war broke out in 1950 the Army strength went from approximately 600,000 to one and a half million within one year. This created a hump due to the 2-year term for inductees, which in turn results in a large personnel turnover in every odd numbered year. For example, during Fiscal Year 1953 nearly 750,000 men were released and an equal number had to be brought in and trained. This biennial cycle produces disturbing fluctuations in the training loads and places a heavy strain on the entire supply system.

Couple this with the personnel requirements arising out of current rotation policies and there really is a bind. FY 1954 being an even number year, the problem will be somewhat eased. However, fiscal year 1955 will find another big turnover in process.

The Big Problem

One of the major aims of the new administration is to overhaul financial affairs so as to bring the amount of spending in line with income. For this reason the budget was the first target attacked. The dilemma with which this country is now faced is the need to maintain a strong national security program over a long period of time, without bankruptcy and without destroying the basic concepts of a free economy. Since the military services are being entrusted with nearly two-thirds of each tax dollar, it is their programs which must receive close scrutiny if any appreciable savings are to be achieved.

When the Communists invaded South Korea in 1950, the U. S. met the challenge and two principal objectives were established. The first was to join with the United Nations in resisting the aggression in Korea, and the second was to expand our active forces so as to meet a possible world conflict. Large sums of money were appropriated to the Army and the other Services. The initial Army budget for FY 1950

THE BUDGET SCOREBOARD

Army Appropriations	FY 1953	Budget Estimates 1954 (Truman)	Revised Estimates 1954 (Eisenhower)	Approved by the House	Approved by the Senate
			(In thousands of dollars)		
Military Personnel	$4,410,000	$4,729,437	$4,776,173	$4,708,859	$4,713,859
Maintenance and Operations	4,950,400	3,999,504	4,720,000	4,329,594	4,355,750
Procurement and Production	2,736,000	2,471,779	3,395,266	3,224,633	3,224,633
Research and Development	440,000	475,000	370,000	345,000	345,000
Army Reserve Components	246,300	346,991	323,276	304,629	304,629
All Others	4,800	86,880	86,285	69,285	69,285
TOTALS	$12,787,500	$12,109,591	$13,671,000	$12,982,000	$13,013,156

amounted to a little more than $4 billion. Within 10 months an additional $15 billion was made available.

Obviously, the national economy could not swallow such large chunks of new money in one bite. Readjustments had to be made and industries converted from peacetime production to that required for the partial mobilization. World War II experience was not found to be reliable either with respect to rates of combat consumption or with respect to the capability of industry to expand. Walking the narrow plank between minimum requirements and overproduction demanded the very highest skill in decision making. In the area of ammunition that skill, as we all know, was recently questioned.

The three-year period which has elapsed since Korea erupted has not been sufficient time to solve all of the problems. At the end of the fiscal year 1953 the Army had over $17 billion in prior years' funds available for expenditure during the months ahead. Of course, it is normal to have some carry-over of funds each year, but the size of this carry-over is indicative of the difficulties encountered in making a sensible transition from a purely peacetime economy to one which has the ability to expand rapidly to meet the needs of a World War. Supplying military requirements involves research, development, testing, locating capable producers, amassing resources at the proper places and at the right times, and a whole chain of complicated and costly actions.

The estimated unexpended balance for the Navy, at the end of FY 1953, was about the same as that of the Army, but the Air Force balance totaled nearly $28.5 billion. If the Army's revised FY 1954 budget is added to its unexpended balance the total comes to more than $30 billion. Similarly, the Air Force total availability would be something over $40 billion. This is a lot of the taxpayer's money, but balances of this size are needed to provide the steam behind long-range procurement programs.

The big effort from February to May of this year was to develop a better solution in the matter of high military spending. The revised budget is a first step pending further studies of the big problem. Revising the fiscal year 1954 budget has been one of concern to both the executive and legislative branches of the Government.

Congressional Action

THE Congress found the Army's revised budget reasonably acceptable. Traditionally, the House of Representatives is the first to take action on money bills. Following a detailed review by its Appropriations Committee, the House passed a Bill on June 27 which reduced the Army budget by $689 million. Nearly $200 million of this cut, however, was related to the use of foreign credits, that is, authorizing the direct acceptance of services from certain foreign governments without charge to Army appropriations. This cut, therefore, does not affect programs and is essentially a bookkeeping transaction.

The remaining $500 million House reduction was spread across several appropriations. In the area of Military Personnel, reductions were made on the basis that food and clothing prices would be lower at the time of actual purchase than was estimated. Packing and crating of household goods was nicked a substantial $10 million, a cut of 34 per cent from last year's amount.

In the appropriation Maintenance and Operations, the House leveled a general reduction of $45 million as well as a cut in some of the funds requested for repair parts. A relatively small reduction in civilian personnel employment was also directed. The matter of prices used in the estimate was again attacked and some dollars withdrawn on this basis.

One Hundred Seventy ($170) million dollars was taken out of the more than $3 billion in the Procurement and Production appropriation. This was largely due to the opinion that some items of equipment scheduled for purchase during the fiscal year would not in fact be out of the research and development stage.

The House did not believe that the strength of the Army Reserve Components would build up as fast as programmed in the budget. Accordingly, nearly $20 million was taken out for this reason. Research and Development also suffered a $25 million cut.

The Army requested the Senate Appropriations Committee to restore approximately $200 million of the amount cut by the House. The areas concerned were those related to the food and clothing prices, packing and crating of household goods, repair parts, and other miscellaneous activities. The Senate Committee, however, went along with a restoration of only $31.2 million, revising the total of the FY 1954 budget to $13,013,156,000. Although this article is going to the publisher prior to final action on the budget, it is certain that the amount finally approved will be approximately $13 billion.

Appropriation bills contain more than the authorization for dollar amounts;

they also include certain general provisions which spell out Congressional desires on specific subjects. For example, in both the House and Senate bills the operation of Commissaries was again in issue. The Senate Appropriations Committee failed to find any justification for Government-operated sales commissaries at posts which are in or near metropolitan areas. It was felt that even where Commissaries were justified they could be operated by private enterprises. The Defense Department strongly opposed this provision, pointing out that commissary benefits have always been taken into consideration when establishing military pay rates.

Another matter of direct interest to both officers and civilians eating at regular Service messes is the provision establishing $2.25 as the minimum daily rate. Both the House and the Senate provided for exceptions, with the latter group defining the exceptions to exclude meals served in combat areas, on maneuvers, or troop movements, catastrophe feeding, and when officers are subsisted in messes with enlisted personnel.

Other items covered in these general provisions were allowances for the education of dependents in overseas areas, limitation on shipment of household goods, limitation on off-duty education of officers, as well as other subjects of particular concern to the Congress.

The Congress faces its most difficult task when it must make decisions on the Defense Budget, since their decisions not only affect the security of the United States but that of the rest of the world as well. This year the task was complicated by a late start and the Congress worked at a furious pace in an attempt to meet the 30 June deadline. They found this impossible to do and had to enact a Joint Resolution for the month of July permitting the Government to meet its bill during the interim period.

The Hoover Commission in one of its reports pointed out that the budget and appropriations process was the heart of management and control of the affairs of the Federal Government. As a part of this process there must be included the control exercised over expenditures. During FY 1954 Army operations will be more directly affected by the efforts of the new administration to control expenditures; the expenditure ceiling given the Army (tentatively $16.5 billion) for the present fiscal year is perhaps of even greater significance than the amount approved for the new budget.

"BED CHECK CHARLIE" NIGHT RAIDS

From Our Confidential Reporter in Korea

You asked for the low-down; here it is. The Chinese harassing raids have been quite a problem, mostly because they keep a lot of people up and because it is very annoying to all of us to have them slip in and ever get away without catching a good lacing from the ack ack. The AAA hasn't missed out on it either. The searchlights are beginning to pick them up and the AW's are firing when we get a clearance, illuminated or not. The ack ack shot down one not long ago and gave two more a good pasting. They have a very salutary effect on the red pilots, as evinced by the little real bomb damage done except in one raid. In fact, right now the enemy planes are steering clear of defended areas.

Normally these raids have been made by four enemy planes and by never more than seven. The Inchon raid, for example, was made by three or four light aircraft, identified as single engine monoplanes, and probably Russian observation or trainer types.

They fly between 500 and 1,500 feet altitude, take advantage of valleys masked from radar, and also follow the river valleys. It is unusual for them to fly at any time except when the moon is out. Their low altitude with the advantage of moonlight on the rivers, or reflected from the rice paddies, gives them sufficient light for navigation. They are further aided by the lights of Seoul, Inchon and the air bases. When they are detected of course blackout conditions prevail, but this does not necessarily act to their disadvantage because it makes their visual detection more difficult, and if they are not illuminated by our searchlights they are relatively safe from our AW fire.

The tactics of approach used by these planes follow two definite patterns. On occasion they follow in with flights of our own aircraft, B26's or amphibious craft which are relatively slow, therefore being reasonably safe due to the doubt generated in the minds of personnel in the TADC that they also may be friendly. If they are detected, they can "hit the deck" and be reasonably certain of evading interception. The practice of flying low in the valleys and along waterways has also been quite successful insofar as avoiding radar detection is concerned. This practice is extremely well suited to the terrain conditions here, where it is difficult to site radar to take care of all dead areas and to cope with the problem of clutter. They also come in very low, cut their motors, glide in and then drop their laundry. The first warning in such cases is the explosion.

It is very difficult to get warning of their approach. The small radar reflecting surface of the enemy planes, together with their low level and well screened approach reduces radar effectiveness. Visual OP's have not yet solved for their weakness either.

We take our share of kidding over here, too, but are able to counter Air Force kidding with friendly remarks that their planes are too modern to cope with conventional types of training planes. Probably the Navy, with its F4U's, has helped to prove our point. In the past few nights they have shot down four of these hecklers (YAK-18's).

The AAA here work under the operational control of the Fifth Air Force and with splendid relations, improving rapidly.

Whenever it becomes necessary to do so the night effectiveness of AAA can be improved materially by establishing Gun defended areas (GDA's) and restricting friendly aircraft to fly in well defined corridors. The friendly plane night traffic is now terrific. However, such restrictions are not likely until the enemy planes succeed in doing more damage.

ASSIGNMENT AS AIDE-DE-CAMP

By 1st LIEUTENANT JOSEPH W. LEMIEUX

Aide-de-Camp 56th AAA Brigade

PRIOR to my departure from Okinawa in October 1951, G1 of Rycom reported me to the Department of the Army for reassignment to the Zone of Interior. Eight days later, Captain Ray, G1 Officers' Section Rycom, called me and asked: "Who do you know in the Pentagon?" and continued to inform me that my orders gave me a directed MOS of 2030, Aide-de-Camp, and assigned me to the 56th AAA Brigade at Camp Edwards, Massachusetts.

I was overjoyed since I knew that Brigadier General Harry F. Meyers was the Commanding General. I had served with General Meyers as First Sergeant of Headquarters Battery, 74th AAA Brigade from September 1943 to its deactivation in September 1945. Then again as an Administrative Assistant with the Office of the Senior Ground Instructor, Virginia National Guard, from July 1946 to his departure for Pakistan in March 1948.

While en route back from Okinawa, the thought assailed me that I did not have the vaguest idea of the duties of an Aide-de-Camp. I had been exposed to those duties in World War II in the 74th Brigade from seeing the Aide in operation, but when my knowledge of those duties was boiled down, it consisted of the one fact that the Aide normally accompanied the General on trips and checked to see that he was made comfortable.

One thing in my favor was that I was familiar with most of General Meyers' habits and knew how he liked to operate. Both families also knew each other quite well.

Immediately upon my return to the States and prior to my reporting for duty, I scoured all the sources I could think of for a book or pamphlet which I could use as a guide in my duties. Nothing dealt with that subject as such. The description of the duties of an Aide-de-Camp in TM 12-406, Feb 46, gives only a general outline and is a good indication of the broad scope of duties you may be called upon to perform. The first sentence of this guide reads: "Performs specific duties prescribed and assigned by the Commanding General, and assists in every manner possible as a personal aide." I obtained a copy of the *Officer's Guide,* Emily Post and other related books dealing with proper military and social life.

Reporting in for duty, I found Lieutenant Donald Harkins assigned as the other Aide. He had been on that duty about two months and had the groundwork laid. With his experience, my apprentice period was much easier than I expected.

There is no ironclad rule or "bible" which can be written on the duties of an Aide. Your official duties normally will be based on your individual background, the branch you are serving in and the desires of the General Officer. Social activities naturally will be governed by the geographical location of your unit and whether the General requires your presence at all social gatherings or only those where an Aide is a "must."

I have talked to numerous other Aides on their duties and the sum of it is: Get to know the individual's personal and military habits as quickly and thoroughly as you can; keep yourself versed on all phases of the current military and social activities; try to keep ½ jump ahead of the "Old Man" (you usually wind up 2 jumps behind him); and above all, pray that you wind up with someone understanding.

It is necessary to keep yourself versed on all phases of military activities since you are normally the individual accompanying the General. You may be asked the answers to problems ranging from waivers for promotion to when a particular battery last fired for record and the score obtained. Naturally, you cannot remember such a multitude of information, but you should know where the information is and the person to contact. You should keep abreast of regulations and latest developments so that you have a general, if not a technical, knowledge of all activities. Remember the points the General is particularly interested in and get yourself well versed in them.

Always keep notebook and pencil with you, whether it is an official or social function. You may be 10,000 feet up in an airplane when the General will say: "Remind me to do 'so and so' when we get back." "When we get back" may be a week and several other "remind me" items later, having no bearing on the present trip. It is much more pleasant to look at your notes than to be embarrassed when the General reminds you of the items.

You, as an Aide, are in a position where you can make many friends or enemies. Your scope is broadened due to the many things you see and hear in your capacity. You can pass on to the proper individuals information which pertains to their line of work. Do not misunderstand me and assume that I mean to pass on information which properly should go through Command Channels. I mean items such as when the General mentions a better way of doing things, or improvements that could be made in a particular situation. Do not "lay the law down" unless you have been directed to do so.

Above all, do not "pull the Old Man's rank" to get things for yourself. Be sure that the individual you approach knows whether you are speaking as the "Aide" or as an individual.

You are not exempt from other duties because you are an Aide. Lt. Harkins, whom I mentioned above, was at various times during his tenure as Aide, S2, Staff CBR Officer and Public Information Officer. I have been Assistant S3 and Battery CBR Officer. My present additional duties are Public Information Officer (which encompasses all AA units stationed in the First Army area in the AA defense of that sector) and Staff CBR Officer. You are very likely to fill in on any position of the staff when your unit is below strength.

Remember that some day you may be serving under the individuals you come in contact with and that you are also in a position which is a responsible one. You must remain loyal to your superior, but it is not necessary to be a "spy" to fulfill your mission.

Message from the Chief of the Career Management Division, Department of the Army

By MAJOR GENERAL J. C. FRY, USA

I HAVE recently been given the responsibility as Chief of the Career Management Division and appreciate the opportunity you have offered to use your magazine as a medium for contacting Antiaircraft Artillery officers Army-wide. I believe this will be helpful to the Artillery Branch in implementing assignment policies and of value of all Antiaircraft Artillery officers by giving them a knowledge of our responsibilities and our procedures.

During the greater part of the last four years, I have served in Europe and in Korea. In these assignments I have frequently heard combat officers remark that the chiefs of the technical and administrative services evidenced greater concern and exercised greater consideration for their officers than did the Career Management Division for the combat officers. Without attempting to explain or refute such testimony and without intended implication of those who have gone before me, I want to assure all officers that this office represents the head of the military fraternity to which they belong. We are intensely interested in the welfare and the progressive, advantageous assignment of each individual officer, and within the limits imposed by military requirements our policy is to comply as accurately as possible with the requests of individual officers.

It has frequently been evident that a substantial number of combat arms officers fail to appreciate the fact that the Career Management Division is the appropriate agency for them to address requests and recommendations. The Signal or other technical officer knows that such a letter to his Chief will receive a quick and considerate answer. The combat arms officer will receive equally expeditious consideration from communications to the Chief of his Branch, Career Management Division, or merely to the Chief, Career Management Division. I especially solicit comments and recommendations for general officers and senior field officers who have noted what appeared to be ill-considered and improper assignments.

Major General J. C. Fry

General Fry comes to his new assignment from Korea, where he has commanded the 2d Infantry Division for the past year.

USMA graduate, Class of 1922, he served with armored regiments early in World War II and as the Assistant Division Commander, 88th Division, in the Mediterranean theater in 1945.

He served in Austria from 1949 to 1951 as the Deputy High Commissioner and as the Tactical Commander, US Forces in Austria.

For our next issue General Fry has promised us an article on the *Military Schooling of the Army Officer*.

THIS is not intended to be a lengthy and detailed explanation of the Department of the Army career program. However, I feel it will be helpful if I mention the fact that our primary mission during this era of quasi-peace is as always, to fit officers to the essential jobs necessary to keep the elements that make up the Army in a high state of combat readiness. Our Career Management goal is to rotate officers through different assignments to give them on-the-job practical training. In this latter mission our objective is to develop to the utmost the inherent abilities, aptitudes, skills and accumulated knowledge so that the maximum number of officers may eventually reach their ultimate potential to their betterment and for the good of our Army and Nation.

When conflicts between our Career Management Program and the combat requirements of the Army occur, Career Management assignments must of necessity be interrupted. As a matter of fact, the basic concept of Career Management was that the program was intended to apply solely to the peacetime development of officers, and this fact needs more thorough recognition. In addition, there are a multitude of conflicts that arise concerning the assignment of officers even though we endeavor to resolve all problems by the application of orderly and carefully developed policies designed to give equitable treatment to everyone. There are no mysteries or secrets about such policies and it shall be my aim to eventually publish detailed information concerning methods of selecting officers for overseas assignment, procedures for selecting officers to attend military schools, and in general to answer the questions that are uppermost in officers' minds. I would like to assure all officers that I realize fully that each assignment is of intense importance to the individual selected to perform the special duty requirement. There are good assignments and there are others that offer fewer professional advantages. All must be filled, as your readers will realize.

I hope that in each future issue of your magazine you will permit the Career Management Division to use your periodical to further acquaint officers with our methods of operation, and to supply other information of broad interest.

Artillery Branch of Career Management Division

By COLONEL NORMAN E. HARTMAN

WHAT is my OEI? Will I be selected for Leavenworth? When do I go overseas? These are the questions we hear.

No other single office in the Army has as much direct influence on every Artillery officer's personal future as does the Artillery Branch of Career Management Division. Yet we find that there is widespread misunderstanding of "Career Management"—its functions and its present limitations. This article is presented as one step toward clarification of our career management operations, particularly for Artillery officers with AAA background.

The Career Management Division is part of The Adjutant General's Office in Headquarters, Department of the Army, at the Pentagon. The Chief of the Career Management Division is Major General James C. Fry. The personnel policies under which CMD operates originate in the office of the Army G1. Career Management Division's primary mission is to so control the assignments and schooling of Infantry, Artillery, and Armor officers as to provide varied, progressive experience over a period of years which will qualify these officers for larger responsibilities. Understandably, the accomplishment of this mission has been made more difficult by the requirements of the Korean conflict.

Under the Chief, CMD, there are four branches: the Infantry, Artillery, and Armor Branches, and a Special Assignments Branch. Generally speaking, the first three are responsible for branch material assignments, selections for PCS attendance at schools, and other branch material personnel actions, and the last handles branch immaterial assignments.

Colonel Norman E. Hartman has served since 1950 as Chief of the AAA Section, Artillery Branch, CMD. He retires on July 31st after more than 35 years service. Colonel D. D. Martin has been named as his successor and is expected to report at once. Colonel and Mrs. Hartman will continue to reside in their home at 15 West Spring St., Alexandria, Va.

The decision as to whether an Artillery officer receives a branch material or branch immaterial assignment is resolved between the Artillery Branch and Special Assignments Branch, or if necessary, the Chief, CMD, makes the decision. Warrant Officer assignments are monitored by the Branch which has primary interest according to the Warrant Officer's MOS. Artillery Branch monitors Warrant Officers of MOS 0632, 1121, 1184, 1185, 2743, 2745, and 8219. General Officers are not assigned by Career Management Division.

The Chief of the Artillery Branch is Colonel Ernest C. Norman. The writer is Chief of the AAA Section. Key assistants are: Lt. Colonels Kenneth L. Yarnall, Thomas H. Rousseau, Jr., and William Degyansky, Captain Clyde D. Boden, and Miss Edith Hanson.

The Artillery Branch is organized into five sections: Administrative, Career Guidance, Overseas Assignments, Zone of the Interior (ZI) Assignments, and Personnel Actions. In each of the operating sections there is an officer with antiaircraft background. The following records are maintained by the Administrative Section for each Artillery officer on active duty:

- Photostat copies of efficiency reports.
- Career Summary (D/A AGO Form 300).
- Statement of Service.
- Preference Card (D/A AGO Form 483).
- D/A AGO Form 66.
- Artillery Branch 201 file.

THE Career Summaries and Statements of Service are graphical summaries of an officer's efficiency record made up from extracts from his efficiency reports. These are maintained for Regular Army officers only. The Branch 201 file contains all other papers which may be of use in determining assignments. It is for the use of Artillery Branch, CMD personnel only. Any officer who visits CMD may review the remainder of his own file. In fact, if he desires, he may designate in writing any other officer to review his records for him.

An officer's "TAGO" file, which consists of the originals of his efficiency reports and his official 201 file, is maintained by the Personnel Information Branch, Personnel Division of TAGO. This file is used by promotion boards and also by CMD for certain personnel actions. An officer may also review this file if he wishes and if he makes an appointment at least three or four hours in advance.

The Career Guidance Section of the Artillery Branch selects or nominates officers for attendance at all service school courses of longer than five months' duration plus the sixteen week Associate Command and General Staff Officer Course. Generally, quotas for courses of less than five months are controlled by Continental Army Commanders. Except for the Arty Fire Control Systems, Guided Missiles, and Associate C&GS courses, the limited capacities of the service schools have precluded the attendance of EAD officers, although many EAD officers have been selected for attendance at the Battery Officer and Advanced Artillery Courses. The Associate C&GS Course has been designed primarily to provide schooling for EAD officers at the C&GS level. All RA officers now attend the Battery Officer Course and the Advanced Course, but selections for the C&GSC and other like courses are highly competitive. These competitive selections are based on very careful study of each officer's entire record. An officer's Overall Efficiency Index is one factor considered but is very definitely not the only factor. Each RA officer is competitively considered for attendance at these courses each year that he is eligible. No application is required from the officer in order to be considered. Those officers selected usually have had well rounded careers with fine records in both command and staff assignments. D/A Pamphlet 20-21, "The Army School Catalog," dated

June 1952, contains detailed information about every Army School and should be familiar to all officers.

The Career Guidance Section also nominates RA officers for US Air Force and US Navy Schools and for foreign schools. These selections are also competitive. However, if an officer desires attendance at one of these schools he should so state on his annual Preference Card. Officers must apply for civil schooling, under the provisions of SR 350-230-52. This schooling is usually postgraduate and is now limited to RA officers. The schooling is for two, sometimes three years, and must be followed by a three-year assignment in which the officer utilizes his civil school background. Since this means that the officer will not be available for service schooling for a period of at least five years, it is desirable, but not mandatory, that applicants for civil schooling have completed the Advanced Course.

An officer's OEI will be disclosed only to the officer himself in person or to his authorized representative, not by mail. The OEI was adopted by the Army in 1951 to lessen the effect of widely fluctuating efficiency report scores on an officer. This index is an average of the most recent efficiency ratings rendered on a particular officer. Only regular efficiency reports are used in calculating the OEI. Academic, letter, or abbreviated reports, although an important part of an officer's efficiency report file, are not used in computation of the OEI. The OEI is a moving average score which covers only the efficiency reports for the most recent five years. It uses the Army Standard Rating system with scores ranging from a low of 51 to a high of 150. It carries no implication about the number of officers who can be considered competent or incompetent.

THE Overseas Assignment Section is concerned primarily with assigning officers to overseas stations as required by monthly requisitions received some five months in advance from each overseas major command. These requisitions state requirements by grade and MOS. The first tool used by the Overseas Section is the Overseas Vulnerability Roster. This roster is in two parts. The first part lists all Artillery officers now in the ZI who last returned from overseas prior to 1 June 1949, arranged within each grade in accordance with the number of months each officer has served overseas, the officer with the least months heading the list. The second part contains the list of those Artillery officers now in the ZI who returned from overseas after 1 June 1949, arranged within each grade in accordance with date of last return from overseas assignment, the man who returned earliest heading the list. Starting at the top of the first part of this roster the Overseas Section tentatively makes selections to fill the requisition. Obviously, officers cannot be sent overseas exactly in the order of their vulnerability. First, an officer must satisfy the MOS requirement. Second, an officer in a stabilized tour cannot be reassigned. And, third, care must be taken not to entirely deplete a unit in the ZI. Final selection is determined from a careful study of each individual's file, primarily his Form 66. An individual's preference for overseas assignment is considered but, because of the combat rotation plan now in effect in Korea, it is frequently impracticable to assign an officer to the theater he desires. Overseas orders are usually published about three months prior to the port reporting date. These orders specify the Theater and the MOS against which the officer is being shipped. However, the overseas theater commander will determine the officer's assignment and this final assignment is sometimes different from that indicated by the MOS specified in the orders. To assist the Theater G1 in determining the overseas assignment, photostat copies of each field grade officer's Form 66 are air-mailed to the Theater as soon as the officer is placed on overseas orders.

The ZI Assignments Section has the mission of assigning all Artillery officers to ZI vacancies, except for the branch immaterial positions controlled by SA Branch. Its largest customers for Artillery officers with AAA background are the Army AA Command, the AA&GM Center, Civilian Components (ROTC, National Guard, and USAR requirements), Continental Army Headquarters, and the Third Army AA Training Center. For ZI requirements requisitions are submitted monthly three months in advance. At present, except for newly commissioned USMA, OCS, and ROTC lieutenants, the primary sources of replacements to fill these requisitions are officers returning from overseas and, to a smaller extent, graduates of PCS courses at service schools. Assignments for these overseas returnees are not determined until the officer is officially forecast for return by the overseas command. CMD in no way influences the date of return of an officer.

Here, as in the Overseas Section, the ZI Section determines assignments from a careful study of each individual's records in conjunction with a study of the requisitioned grades and MOS's. If the requirements of the service permit, assignments are made which will broaden the officer's career pattern. Because the Artillery at present is short in lieutenant colonels, majors, and captains, this cannot always be done. Furthermore, the use of the "directed and the recommended MOS" has been suspended. After publication of the D/A assignment order CMD has no control over the officer's specific duty assignment since the lower echelon commander is authorized to utilize his personnel as he desires.

The fourth section of the Artillery Branch, Personnel Actions, recommends actions on such important matters as renewals of categories, reliefs from active duty, resignations, transfers and details, requests for airborne or aviation training, procurement of officers, and elimination of officers for cause.

Generally RA Artillery officers are receiving cross training by means of "integrated" courses: The Artillery Officer Advanced Course and the Artillery Battery Officer Course are both "integrated" courses. That is, students at these two courses receive instruction in both Field Artillery and Antiaircraft Artillery. To further cross train the graduates of these two courses D/A policy requires that the graduates allotted to branch material positions after graduation be cross assigned. That is, a captain with a FA background may be assigned to an AAA Battalion of the Army Antiaircraft Command, or a major experienced in AAA may be assigned to a FA Battalion. These two courses, followed by cross assignment, are the primary means of cross training RA Artillery officers.

Primarily for the purpose of cross training long-term civilian component officers there have been established two Artillery Transition Courses, an eight week AAA course at Fort Bliss and a

ten week FA course at Fort Sill. These courses begin monthly with a quota of forty officers for each course. Officers are cross assigned, with attendance at these courses on TDY en route to their new assignment. Artillery Branch of CMD has received a few informal complaints from officers who have been cross assigned but generally it appears that most of the officers are accepting the challenge which the new type assignment presents.

Of interest too, relative to the integration of the Artillery, is a recent directive issued by the Chief, CMD, effective 1 August 1953, that the Artillery Branch of CMD will be completely integrated. All selections for schools and assignments will be based on records as Artillery officers and the MOS for which each officer has been trained without regard to whether he was formerly FA or AAA.

EVERY RA officer should visit CMD and review his records. Such visits are generally the only way in which an officer can determine how he has been rated. It is surprising how many officers are unaware of the nature of efficiency reports which have been made on them. Frequently a visitor will state that he is very sorry he had not looked at his records long ago.

Besides visiting CMD, every officer also may write a personal letter direct to CMD for information. Letters may be addressed to an individual officer by name or to "Chief, Artillery Branch, CMD, TAGO, Washington 25, D. C." Regardless of how addressed, these letters receive careful consideration and prompt reply by personnel assigned to CMD. The great majority of letters received inquire about one of two matters. One is, "What is my next assignment?" The other is, "Will I be selected for higher level schooling?" Each of these questions can be answered only generally. Unfortunately, CMD can rarely furnish specific advance information as to future assignments, since as soon as assignments are definitely determined orders are published. Orders are issued approximately three months in advance, which is normally sufficient time for personal planning.

Many letters are received which inquire about matters for which CMD has no responsibility. In such cases we either obtain the information or refer the letter to the proper office for reply. The following points will clarify some of the more frequent mistaken assumptions. CMD plays no part in the selection of officers for promotion nor in the development of promotion policies. That is entirely a G1 function. CMD does not act on requests for voiding or changing efficiency reports. That is a function of the Personnel Information Branch, Personnel Division of TAGO. CMD does not determine when dependents will join officers at their overseas stations. That date is determined by the Theater Commander. CMD does not select officers for TDY courses of instruction (except in the case of the Associate C&GSC or in conjunction with a PCS). Quotas for TDY courses are allotted to Continental Army Commanders.

Let me stress that visits and worthwhile letters to our office are very much encouraged. We consider it one of our primary responsibilities to discuss with and advise Artillery officers concerning their future careers. Wherever possible we try to satisfy personal desires, when it can at the same time satisfy service requirements.

30th AAA Group Evaluation Tests

By 2nd LIEUTENANT A. H. TUFFT

518th AAOD

IN the AAA Defense of San Francisco the 30th AAA Group conducts tracking missions in which the defense is controlled from the AAOC as though the missions were actual strikes. In order to get the maximum interest and training value from these missions Colonel Walter H. Murray, Group Commander, saw the need to measure the efficiency of each individual battery. We needed to develop an indicator to measure and compare the operational efficiency of each battery.

Such an indicator needs to meet the practical requirements. First, the indicator must be convenient and practical in terms of time and ease of data collection. Second, the system must yield a fair comparison of all batteries regardless of the type of equipment employed (such as the M33 or SCR 584 type radars). Finally, the indicator must be reliable. It must accurately represent true performance data regardless of extenuating circumstances such as different types of equipment and personal opinion of the rater.

We started out with a tentative formula and have changed it many times as we learned from experience. It was soon apparent that radar coverage and clutter factors were so different in each unit as to make the method of scoring unfair. As a result the S3 section of the 30th AAA Group initiated a study to determine handicap factors to compensate for the coverage and clutter differences. However, these handicap factors were soon eliminated. It was discovered, for example, that a large handicap factor added to an average score frequently raised the score to more than 100%. Whereas, the leading battery with a small handicap factor received a score of less than 100% and could not possibly win the 30th AAA Group trophy awarded to the battery in the defense having the highest target acquisition per-

centage each month. At this time the average score for the defense was approximately 40%.

In the search for a better method of evaluation, a measure was developed that did meet the requirements. Essentially it combined three aspects of battery effectiveness, namely: promptness of radar pickup, readiness to simulate engagement, and degree of readiness of the guns into a single rating system. This system is a convenient and practical one in that all the necessary data are collected during tracking missions and the calculations are quite simple. Shown below is the formula as it would apply to M33 or SCR 584 type equipment.

$$\% \text{ Score} = \frac{\dfrac{\text{(Range of initial pickup in thousands of yards)}}{\text{Range Factor}} + \dfrac{\text{(Fuze range at engagement)}}{30} + \dfrac{\text{(Guns in action)}}{4}}{3}$$

The formula is applicable to all type fire control equipment in that the only factor that may differ is the range factor. The range factor for the SCR 584 modified for 90,000 yards range is 70. The range factor for the M33 with maximum range of 125,000 yards is 120. In the event of an SCR 584 that has not been modified for 90,000 yards, a ratio may be set up to determine the actual range factor to be used.

A study of the above formula and the results it yielded was made by Dr. Frank H. Palmer and Pvt. Thomas Myers (Ph.D. in Psychology) of the Army Field Forces Human Research Unit No. 2, Fort Ord, California. After a careful mathematical analysis of the results they have concurred in both the formula and the range factors used. Dr. Palmer is still an enthusiastic AAA officer. His last active duty was on the staff of the 2nd AAA Group at Fort Niagara, New York.

It is important to note that the researchers indicated that the contribution of any one of the three efficiency aspects to the overall ratings is dependent not only upon the actual scores obtained, but also upon the differences between scores.

In the San Francisco Defense it was found that the "guns in action" portion of the equation added little to the ranking of the batteries, whereas the radar acquisition and fire simulation scores contributed heavily and almost equally.

In order to compute the actual scores, a standard "After Action Report Form" was used which is shown in part below. With the information noted on the above report, we have shown two examples of how the scores would be computed using this formula.

Battery	Battalion	Range Initial Plot (thousands of yds)	Slant Range Radar Pickup (thousand yds)	Target Within Gun Range?	Fuze Range "Commence Fire"	Fuze Range "Cease Fire"	Average Fuze Range	Rounds Expended	Number Guns In Action	Remarks
A	1	140	120	Yes	30	30	25	80	4	Target Destroyed
B	3	137	60	Yes	28	30	27	60	3	Gun 1 out—Breechblock

Example 1. ("A" battery, 1st Battalion using M33 type radar)

$$\% \text{ Score} = \frac{\dfrac{120}{120} + \dfrac{30}{30} + \dfrac{4}{4}}{3} = 100\%$$

Example 2. ("B" battery 3rd Battalion using SCR 584 type radar)

$$\% \text{ Score} = \frac{\dfrac{60}{70} + \dfrac{28}{30} + \dfrac{3}{4}}{3} = 84.7\%$$

In addition to computing percentage scores of the defense, this system can be used to show the degree of maintenance, training and morale of the units in the defense, and by checking these weekly scores, a Defense Commander can quickly evaluate and correct the deficiencies of his batteries.

By using this system of evaluation, the average score in the defense has doubled during the past eight months, and the degree of maintenance is such that in a recent month only 0.01% of the equipment in the defense was nonoperational for a period of 24 hours or more. The equipment that was nonoperational, in almost every case, was due to fair wear and tear. By publishing and distributing the weekly and monthly averages the group has created a keen competition among all batteries in the defense.

BATTERY D, 18th AAA GUN BATTALION

By 1st LT. ROBERT H. ELLIOTT, JR.

Commanding

THE site occupied by "Dog" battery is situated in an area about ten miles from downtown Detroit. It is surrounded by small truck farms. When the site was first occupied the one-eighth mile of public road leading to the site from the main road was a rutted trail leading to a sea of mud. Lacking any development or drainage system in the area, a heavy rain resulted in an expanse of near paralyzing muck, occupied by floorless squad tents and 90mm guns. As an example, one battery occupied this site for a short period and was unable to move any equipment, since all trucks bogged down while sitting in the motor pool area. In this situation, the problems of moving and maintaining heavy

Lieutenant Elliott graduated at The Citadel in 1950 and entered active duty in February 1952. He has been in the 18th AAA Gun Bn since it was activated.

equipment were enormously increased. Equipment bogged down in towing, and for a time remained on roadside, off site, due to ground conditions. Guns settled in the mud when emplaced and during rains were constantly splattered with mud.

The lack of permanent buildings of any type left the unit with a mess hall of three squad tents, where in wet weather muddy-footed cooks prepared meals for the unit, and where K.P.'s wiped thick coats of dust from tables and equipment in dry weather. Latrines consisted entirely of the Chick Sale two holer variety with screen covered windows to offer year-round ventilation. Showers were taken at various schools, government installations, firehouses, and YMCA buildings up to eight miles from the site. Equipment available to the unit offered nothing in the way of training aids or classroom facilties. Classes were taught in the open when possible or in the cramped conditions afforded by a squad tent during inclement weather.

These conditions, however, were only a part of the problems faced by commanders and men. The tactical requirements of Antitaircraft sites call for twenty-four hour defense. After a regular duty day, men were often alerted to their stations to find their boots and clothes wet. This round-the-clock defense setup likewise dictated a pass policy which forced men to remain on site for days at a time without a pass. The already serious morale problem was aggravated by a lack of athletic and recreational facilities on site. Briefly stated, this is a picture of "D" battery of not too long ago.

Slowly the picture began to change. Several problems were solved by government contracts. To enable the movement of heavy equipment within the area, a hard gravel surfaced road and hardstands for emplacement of guns were constructed. Two permanent buildings were erected to house a mess hall and a latrine. Fortunately, the level of the land to the west is generally lower and allowed successful drainage by a system of ditches along the main road. Later squad tent living quarters were exchanged for Jamesway huts which afforded greater warmth in winter and a floor instead of bare earth. With these improvements in facilities, bare personal necessities were now available.

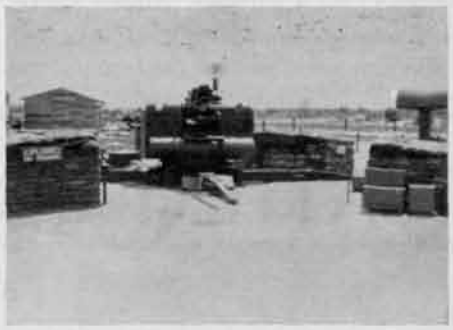
At this time, a long range program for site improvement and training was initiated. A few simple ideas were used by the command to improve all-round conditions. It was felt that the men would take pride in their unit and its equipment if everything was placed in first class shape. This led to the slogan within the battery, *"it only costs a little more to go first class."* First, greater pains were taken to construct items that were needed within the unit and to make them the best available. Officers and NCO's worked directly in the interests of the men, by showing them how to accomplish the job, and by obtaining the equipment for them to use. This meant going out on our own and getting lumber, paint, and building materials from any possible source. It is a common thing to see an officer and a group of men bringing in to the site trucks loaded with every imaginable kind of material and equipment. This "scrounged" material was used in making "Dog" battery the finest site in the area. There was never time to quit; new improvements were always planned prior to the completion of ones already initiated. Suggestions submitted by the men were often put into effect, thus giving them more personal interest.

Battery D Site. Note the main junction box and cable system.

The mess hall interior was painted, using an attractive combination of colors to brighten the bare structure left by the contractors. Pictures were framed and hung to present a more homelike atmosphere; specially constructed lamp shades were hung. The Army Antiaircraft Command shoulder patch, the battalion's distinctive insignia and cross cannons were painted on the front wall of the mess hall to distinguish the unit and its command. The latrine interior was painted to protect the walls and ceiling, to simplify cleaning, and to provide more attractive conditions for the men. Walks in the area were improved as to appearance and all weather service. Other morale features have been the construction of a baseball diamond, clothing racks in the living quarters, and various improvements in the battery day room.

For better security a sturdy fence was installed surrounding the site. The fence was made with crossties uniformly spaced and painted. It is well wired, with both horizontal and vertical strands. Floodlights were placed in the gun park for illumination and a guard tower was situated in a position enabling one guard to view the entire gun park and save long duty hours for others.

A great deal of effort was applied toward the maintenance and protection of equipment and the comfort of operators. Equipment housed from the weather is easier to maintain and will receive better care. A generator building is now under construction to house the two generating units of the battery and the M55 machine gun mount. The space utilized by the M55 will eventually be taken over by a motor generator unit to operate the M33 Fire Control System. This project has been a long one, since the size of the structure has necessitated "scrounging" a large quantity of lumber and other building materials. The cable protection system of the battery has been completely rebuilt. It consists of a series of troughs blocked off the ground. These troughs have flat one by eight board covers to protect the cables from the rain and small cross strips spaced at intervals along the bottom upon which the cables rest. Air can circulate within the system thereby eliminating moisture condensation. In winter, this entire system will be covered with sandbags for weather protection. The main junction box and the smaller junction boxes are covered by small shelters which match the cable covers



A portion of the gun park showing a Security floodlight

in design and protect them from the elements. These shelters also contain racks which hold EE-8 telephones used in battery hot loop communication. A gun tent has been set up with tool boards for the various gun sections, machine gun section, and gun mechanic. This board provides a convenient means for display of the tools and for easy inspection. A rack has also been constructed within the tent to hold pioneer tools. This is the last tent of any type standing on the site. It will be struck as soon as a building similar to our present generator shed can be constructed. A small but very important building in the battery is the paint and grease shed containing shelving for the storage of paint and grease and a small collapsible desk top used for making out hand receipts for issuance of paint and supplies. To provide for easier maintenance of telephone communications, battery's field-wire telephone lines are installed on poles using crossarms and insulators similar to those used by commercial telephone companies. This system gives a neat appearance in place of systems which usually resemble huge spider webs. Other necessities constructed with a thought toward eye appeal were neat painted supports for gun bogies, a fuel revetment, and a steel pipe garbage rack.

Training is a requirement at any Army installation. With this in mind we have planned improvements which would lend themselves to easier teaching and increased learning. A major item in this program was the construction of an outdoor classroom. This consists of bleachers, a podium, demonstration table, and an easel for blackboard or training aids. This classroom also provides facilities of an outdoor movie theater for showing movies out of doors in warm weather.

To provide better training facilities for the communication section and the Range Platoon, a building 30 x 36 feet was constructed. In the large communication room, built-in cabinets house all spare parts and equipment leaving adequate room for the entire section to assemble for classes or to perform maintenance. Finishing touches are now being added to the CP, which also provides adequate space for training and work.

To implement the physical training program, an area was set aside for calisthenics and equipped with an instructor's stand for better group control. Horizontal bars were added for individual exercises.

To improve accuracy in night orientation and to improve training in night operation procedures, backsighting lights have been provided for the guns. These lights are connected to extensions and housed in cabinets on the floodlight posts.

As the reader has probably noted already, there are those items which provide "eyewash." Neat and uniform signs are found throughout the area. Picket fences have been built along the road at the entrance to the site to provide visitors with good first and last impressions. Another structure of this type is a latticework area around the garbage rack in the rear of the mess hall. These small but important pieces of "eyewash" add to appearance, thus aiding the morale of the troops.

Ideas are at present being formulated to provide new buildings and additions to existing structures. To obtain a top notch oufit there must be a driving influence, careful planning, and the feeling that everything must be the best obtainable. Remember "it only costs a little more to go first class."

Armed Forces Day in the 601st AAA Battalion (Gun)

By CAPTAIN RALPH L. HOPKINS

THE morning of 16 May dawned bright and clear and found Baker Battery of the 601st AAA Gun Battalion putting the finishing touches on the biggest "spit and polish" job it had done in many a moon. A new archway sign graced the entrance to the position, the windows in the prefabs were polished, tires had a fresh coat of tire black, the buildings themselves had been wiped down and the latrine, mess hall and barracks were spotless and glistening. The equipment had received more inside and outside maintenance than was even required by the manual. Cable wickets had received a fresh coat of white paint, parking lot markers and flagpole were freshly whitewashed. The personnel of the battery were dressed in their Sunday best uniforms and were ready and waiting when the first civilians started to arrive.

All of this was the result of an announcement two weeks earlier by Lt. Col. James O. Murphy, Commanding Officer of the 601st AAA Gun Battalion, that the batteries of the 601st would hold open house on Armed Forces Day and the offer of a day off for the battery which produced the best results. This announcement was made in the interest of public relations between the batteries and the neighborhoods around their outlying defense positions, and it proved to be an excellent "get acquainted" idea.

Preparations for the open house at Baker Battery began about a week and a half ahead of the big day and immediately several problems arose. First, how to advertise and how to get the civilians interested in coming out to sub-suburban Washington to look at one little gun position when the city itself and the surrounding Air Force bases were putting on huge and gala shows to attract the crowds on the same day. This problem was met in several unique ways. Personal invitations were carried by the sharpest of the battery's soldiers to the pastors and priests of the local churches, many of whom noted the occasion in their church notices to their congregations. More of these invitations were sent, or carried, to Masonic Lodges, Elks Lodges and Lions Clubs. The principal of a nearby high school was contacted and assisted the unit tremendously by

Captain Hopkins, with varied service in the Coast Artillery, Submarine Mine Depot, and the Infantry, commanded Battery B, 601st AAA Battalion (Gun) on Armed Forces Day. He is now battalion G2.

having his art class make fifty silk-screen posters advertising the occasion, and having his reproduction unit run off two thousand handbills giving time and place of the open house and listing items that would be open to inspection during the day as well as mentioning a softball game scheduled for the afternoon. Through the cooperation of the principals concerned, one of these handbills went home with each student, not only from the high school, but also with each of the students from a nearby grammar school and a parochial school.

The posters were placed in the windows of the local merchants' shops and in the windows of private vehicles owned by battery personnel. An ice cream man who has been more or less adopted by the battery had a professional sign painter put signs on both sides of his ice cream wagon to advertise for the battery. In addition to all this a small item about the open house was published by each of the local newspapers.

With the publicity problem solved the battery moved into actual preparation for receiving visitors. A county fair setup was arranged whereby the visitors were to be met and greeted at the gate, asked to sign the battery guest register and were directed to the parking lot. At the parking lot the visitors would be picked up by a guide and escorted to the radar where a short talk was to be given explaining what the radar does in civilian language; from there to the communication section where they were to be given a short explanation of commo duties; then to one of the guns that would be running a present position check so the visitors could look through the tube and see the plane being tracked with no one at the gun controls (this really impressed the visiting civilians more than anything else did); from there to another gun with the battery's best crew going through gunner's hop. This completed the tour of the equipment and the guests were then to be led through the newly completed mess hall and one or two of the completed prefab barracks and the dayroom. This would leave them at the end of the battery street closest to the ball diamond where picnic tables would be set up and where the ball game would be played after lunch.

ONE of the major deficiences of a county fair setup is that the speaker at each station quite humanly gets tired of saying the same thing over and over again and his voice wears out until he loses interest in what he's saying and consequently loses the attention and interests of his listeners. There were not sufficient men in the battery who were good speakers to provide alternates at the several stations and this presented problem number two. The Battery PX steward owned a tape recorder and offered its use to the Battery Commander and the idea was welcomed wholeheartedly. A sergeant with a good speaking voice was chosen for each of the stations

and given a script which he studied until he could give it in a natural tone of voice and put it on tape. In the meantime several men were sent out in various directions to try to borrow more tape or wire recorders. They met with no success and since the one tape recorder could only be used at one station at a time, and all the stations had to function simultaneously, it looked as though the idea was going to fall through, until someone suggested cutting records. Immediately, the scissors came out and the explanations at each station were cut to one minute's duration and a detail was sent to the Glen Echo amusement park to cut records at a cost of 25¢ each to the Battery Commander. In the meantime, record players were borrowed from the Battalion Commander, the Battery Commander, the Radar Officer and some from the battery EM and set up at the various stations.

A final briefing of the men the night before Armed Forces Day straightened out all the kinks in the plans. Everyone was cautioned to be pleasant and friendly to the visitors, to avoid bad language, and to avoid talking about anything of a classified nature, the latter gone into very thoroughly at that time.

Came D Day and H Hour—and two small boys came hesitantly up to the gate. They were escorted all around the County Fair and then took over the ping-pong table for the rest of the morning. At 0930 it clouded up and rained and the day began to look like a washout. At about 1030 hours the sun came through again and with it came the people. They came in cars and baby carriages, they came on scooters, bicycles and on horseback. They were the priest, the parson, the group commander, the battalion commander, the grocer, the farmer, the milkman, the barber; they were Mr. and Mrs. Jones and all the little Joneses; they were the boy scouts, the girl scouts, the cub scouts with their pack leaders and den mothers; they were the school teachers with their classes and the Sunday school teachers with their classes; they were a couple of girls in shorts who ended up umpiring the softball game. In short, they were the whole neighborhood, the people we wanted most to know; and they were friendly. They didn't come to complain about our being there, about the cost of our equipment in terms of their taxes, or about our explosives endangering their neighborhood. They came because they wanted to see what we were doing, how we live and how we act. They wanted to get to know us and they did. The men of the battery carried the infants, small boys rode the guns, the little girls were delighted with the new litter of kittens, the ladies were amazed by the mess hall and the men intrigued by the equipment. And when evening rolled around they weren't visitors any more, they were neighbors and when they left, they left invitations to supper, to the church fair, to the school dance, to their homes, to their churches; but most of all they left with the men that feeling of "belonging" to the community.

It helps a lot when you can walk through town and say "Hi Jack" to the grocer and you know you are going to get a smile and a greeting in return.

IT was just a little thing, really, no grandiose parade, no fleet of airplanes or parachute drops, no flowery speeches —just a hundred soldiers whose duties have become a little more pleasant and only about three hundred civilians who know their soldiers a little better and believe a little more in their Army because they visited Battery B on Armed Forces Day.

Reports from the other batteries in

(Continued on page 41)

THE LONG WATCH*

IT is the guns you notice first as you approach the Site—the long barrels of the 90's slanting toward the sky. And it seems strange that they should be there on the outskirts of Brooklyn with the parachute jump of Coney Island and the roller coasters looming not far away.

Then as you draw closer you see the big olive-drab trailers, the neatly sandbagged revetments, the rows of Jamesway huts and tents and, over all, the radar antennas, turning, turning again, searching from horizon to horizon. Finally, there is the guard, a carbine slung on his shoulder, pacing the perimeter of the area, a few feet from the civilians passing on the sidewalk, the romping children, the traffic's ebb and flow.

All this seems out of place in a neighborhood that could be the outskirts of any city; the area where the close-packed rows of houses begin to thin out making room for vacant lots and trees . . . an area where people's back yards are full of their hobbies.

The full official designation of the Site is "Charlie" Battery, 737 AAA Gun Battalion. And just as its neighborhood suggests so many others familiar to us all, so too is this particular Site similar to many other such sites which have unobtrusively sprung up—little military islands in the midst of civilian life—in parks and vacant lots, in cornfields, among the neat, white rows of housing developments around the perimeters of our big cities and vital defense areas.

All most people know about these Sites is that the soldiers came one day with their trucks and trailers and set up the radars and guns and tents. They don't know about the cold winter nights in the tents, or the mud, and probably few of the thousands who pass these Sites every day realize that if on some dread day the strange planes should come, it is these soldiers and these radars and guns which represent the inner line of defense of their homes, their city.

It is a grim commentary on the times, perhaps, that the guns should have to be there and the men. Yet there is reassurance in it, too. For antiaircraft has come a long way since World War II. It can do things which were scarcely dreamed in those days of propeller-driven planes and the bare beginnings of guided missiles.

It was shortly after the war the Western Electric and the Bell Laboratories were asked by Army Ordnance and the Air Force to go to work on the development of a fire control radar system which would "take into account future targets and new techniques." In other words, a system that would be capable of directing the guns swiftly and surely at the high flying, supersonic jet planes and missiles of today.

Wanted was a system which would do most of the thinking for itself. For there just isn't time for the human brain to compute all the factors involved in intercepting today's targets with artillery shells.

Wanted, too, was a combined acquisition and fire control system which could pick up targets at far greater ranges than formerly; that could instantaneously give a battery commander all the information he needed in regard to the selection of targets and could feed this information over to highly accurate tracking radars which control the aiming of the guns.

Further, this equipment must be compact enough to

*Reprinted from March-April 1953 issue of *WE*, Western Electric Co., Inc.

Off come the gun covers and the men take their stations, live ammunition ready "just in case." Usual cause of alerts: one of "our" planes which is temporarily unidentified.

The telephone plays a part in the alert, too. The corporal at this gun position is awaiting orders from the battery commander while the gun crew gets ready for "action."

Rumors to the contrary, platoon sergeant Arthur DiGennaro does *not* have eyes on the back of his head; it is true, however, that he keeps platoon "on the ball." For evidence, see below.

Alert! A flash over the telephone from battalion headquarters, and the men come pounding from the huts "on the double." In split seconds they will man radars and guns.

be assembled in a special trailer, rugged enough to withstand travel over all sorts of terrain and simple enough to be operated by men with little technical background.

THE answer to these problems is something which W.E. has been making for some time now called "M-33." And it is M-33 (and in some cases its trial-model predecessor T-33), which forms the heart of the antiaircraft sites that we see today.

All that M-33 can do cannot be told for security reasons. But apparently it meets the above requirements very well indeed. In some respects, M-33 with its piercing radar eyes, the swift mechanical brain of its computer, comes close to the popular concept of "push-button" warfare. But only up to a point. Like other amazing modern weapons it can only function at maximum efficiency, and can only seek out the targets and unerringly destroy them, if the men who control it are highly trained—such as the men of "Charlie" Battery who watch and wait and practice.

It was some months ago that the soldiers first came and set up the Site on this raw, rutted patch of earth on Brooklyn's shoreline. Since that time they have been leading a life as far removed from the civilian life which ebbs and flows around them as if they were on some far outpost.

At first the life there was very nearly as crude. Tents banked with straw provided the only shelter from the cold winds off the sea. The water supply, a hose line from a fire hydrant nearby. But even that was better than at some sites where it had to be hauled in by truck.

"We have it good now, though," the soldiers say. For this winter a wooden building for the mess hall and a latrine with hot showers have been added. The truck trips to the "Y" for hot baths and shaves are a thing of the past. Moreover they live in Jamesway huts which are snug in winter, cool in summer.

But despite these added "luxuries," the life is pretty much the same—a matter of watching and waiting, and learning. Of being ready at any hour of the day or night for what may come.

Not that there isn't plenty to do from reveille at six all through the day and sometimes far into the night. There is "O and S" for one thing—practice at orientation and synchronization of radar and guns. Then, too, there are practice "tracking missions," sometimes by day, sometimes by night, with the guns manned and the radar men working inside the trailer, the glow from the plotting boards throwing a ghostly light over their faces. There will be others in the communications tent, manning the telephone switchboard and radio. For telephone and in an emergency the short wave radio are of utmost importance, tying "Charlie" Battery in with Battalion headquarters by means of the "I" (intelligence) line and

Three AA soldiers enjoy after-duty game of cards in their Jamesway hut living quarters. Huts, which have replaced tents, are snug in winter and easy to cool in the summer.

Good food and plenty of it mean a lot in a soldier's life, and the mess sergeants and cooks at this Site see that it is both plentiful and good. This is the lineup for evening chow.

The days are long and sometimes tedious at locations such as this gun battery site. Life is a seemingly endless succession of tracking missions, of drill with dummy ammunition, of watching and waiting and searching the empty sky. But at day's end there is time for fun and relaxation and for the good-natured horseplay you'll always find whenever a group of healthy young men get together—such as this high spirited scene among the men of "Charlie" Battery after they wash up for chow.

through Battalion with the whole national defense setup including Civilian Defense.

"Be sure and mention the civilian ground observers," the soldiers say. "They are as important to us as we are to them and they're doing a wonderful job. For real national defense these days you need civilians as well as soldiers."

LIFE on the Site, like military life anywhere, can get pretty dull at times. Day after day goes by with only the tracking and "firing" missions, the handling of dummy ammunition, the monotony of cleaning guns, "policing" the area.

But there is plenty of good food and that to a soldier makes up for a lot. And there is time for fun and relaxation, too. There is television during off-duty hours in the comfortable day room off the mess hall and movies in the evening. There are inter-Battalion basketball games at the "Y" and, as the season progresses, softball games, too.

And, of course, for a man with a free evening or a pass, the civilian world begins just across the street, with New York not too far away.

Sometimes the daily routine is relieved by trips to the target range at Montauk Point, Long Island, where they have a chance to show what they can do with live ammunition. And sometimes there is the temporary excitement of a real alert. This means that a plane, either military or civilian, has strayed from its approved course and for a time is "unidentified." The word is flashed to the battery from Battalion, and the men come pounding from their huts to the guns and radars and begin tracking the "target" with live ammunition and fuses ready—just in case.

The excitement doesn't last very long as a rule. The erring pilot is informed of his mistake by radio in no uncertain terms and he loses no time in either landing or getting back on course. But until he does, he is followed relentlessly by the radar beams and the swinging barrels of the guns.

After such a flurry the gun crews and radar men go back to the routine of being ready for the day they and all of us hope never comes. If it does they have confidence in themselves and in their equipment. Indeed, these soldiers who man the equipment have paid M-33 the finest compliment of all. "This stuff," they say, "really works."

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Cadet Karl R. Grice, Jr., being presented the Medal by Major General Devine at Virginia Polytechnic Institute.

Cadet Robert B. Peterson receiving the Medal at Michigan State College.

Cadet H. F. Rothschild receiving the Medal at The Citadel.

Cadet Harold E. Adams receiving the Medal from his Mother at Hampton Institute.

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LEADERS COURSE, FORT BLISS, TEXAS

By *LIEUTENANT H. C. CARVILL*

THE Leaders Course at Fort Bliss is composed of two entire Batteries devoted to the training of outstanding soldiers for NCO responsibilities. Established in September 1950, in the Sixth Training Battalion by Col. Earl W. Heathcote, AAA RTC Commander, Leaders Course has since graduated a total of 3,258 men, who have taken their places in AAA units around the world.

Commandant of the Course, which is now conducting its 132nd class, is Lt. Col. Samuel Durschnitt, 6th Battalion CO.

The scope and objectives of the unit, as stated in Army Training Program No. 22-40, are as follows: "The program is designed to outline leadership training for men who show indications of ability to become non-commissioned officers of the higher grade, or promise of ultimately becoming commissioned officers. The objectives of the AAA Leaders Course are to select potential leaders early in their military careers, and to develop their capacity for leadership by example, by instruction, and by guidance in the performance of duties which involve the leading of troops."

The big demand for good AAA non-commissioned officers is the result of the Korean conflict where the NCO has to know infantry tactics as well as his AAA technique. Using mobile AAA units in exposed forward areas places tremendous responsibilities upon the squad and section leaders. Automatic weapons of AAA have proven devastatingly effective against the "human wave" tactics of the enemy, proving the value of these units in the line and raising the demand for qualified and capable AAA non-commissioned officers.

Over two-thirds of the graduates of the Leaders Course have received their training at Fort Bliss. Other graduates have included personnel from Fort Bliss training batteries, men awaiting orders to attend OCS, soldiers from national guard units, as well as men from posts within the continental AAA command and reservists.

Leaders training in the assault on enemy dug-in position.

A typical Leaders Course class might include a first sergeant from a national guard unit, gun and radar section leaders and potential leaders from units assigned within the ZI, Korean returnees assigned to basic batteries, and future officers. The greater percentage of the graduates, however, are picked from the ranks of outstanding basic trainees.

The course consists of eight weeks of training, with the first five weeks devoted to classroom and field work in the five instruction sections of the school, and the last three spent in practical application within the training batteries of the RTC. In the latter phase of training the students are assigned to batteries and act as NCO's in the units.

The greatest emphasis in this course is placed on practical work in all subjects and in all situations. The students take over command responsibilities within the two student units, from battery commander down to assistant squad leaders. This is accomplished under the supervision of the General Subjects (Tactical) section.

The five sections of instruction devoted to the training of basic leadership principles are: the Leadership Section, the Methods of Instruction Section, General Subjects (Tactical) section, Combat Section, and AAA Section.

The Leadership Section, under Lt. James B. Tilley, teaches the principles, techniques, and objectives of army leadership. These subjects include administration of military justice and courts-martial, supply economy and cost consciousness, psychological aspects of leadership, personal adjustment, objectives of a leader, leadership and health, role of the Army leader, and combat leadership. A total of 28 hours are taught in this section with every effort made for student discussion and practical application in leadership problems.

THE Methods of Instruction Section, headed by Lt. H. C. Carvill, acquaints the student with the proper teaching technique and fundamentals. Included in the MOI classes presented to the student are military training; principles of learning; the conference, demonstra-

Lieutenant Carvill is a graduate of the Infantry School and has served with the Infantry in Korea. He is now Chief of the Method of Instruction Section of the Leaders Course at Fort Bliss.

tion, and lecture methods; use of training aids; reference material, lesson plans, and class management; methods of testing; and effective speech. Each man or class receives a total of 20 hours of instruction in the MOI Section; practical work consists of two 40 minute presentations in which each student applies the techniques of instruction, and prepares and presents the subjects assigned to him to his fellow classmen. Most of the student classes are spent on weapons subjects.

Each man is graded by the members of his class and an instructor of the MOI Section. A critique is held by the grader at the conclusion of each student presentation, bringing out the strong and weak points of the instruction.

Physical training, the school of the soldier, and the daily inspections of men and barracks are under the supervision of the General Subjects (Tactical) Section, under Lt. Julius A. Schallenmuller. The Tactical Section teaches military courtesy, dismounted drill, voice and command, physical training, and customs of the service. This section has the responsibility of supervision of the student organization, which includes inspection of barracks, personal inspection, and grading the students at all times. Each man is graded as he is assigned to the various positions of leadership in the student organization. Highlight of each week is the parade and review held each Friday afternoon under the direction of the Tactical Section, but commanded entirely by students. Graduating classes are awarded their diplomas at the weekly parade.

The job of instructing the future leader in the fundamentals of infantry tactical operations is entrusted to the Combat Section, under the command of Lt. Kenneth P. Biedermann. Scouting and patrolling and squad tactics, and the leaders reaction test are given in order to give the men the necessary knowledge to lead men in any battlefield situation. This section is devoted almost entirely to instruction in small unit tactics. Each man is placed in a position of leadership and given problems to solve in the field.

The final section of the course, under the command of Lt. George N. Wessel, is the Antiaircraft Artillery Section. Here the students are taught the employment and functioning of the AAA weapons. Instruction on the 90mm and 40mm guns and on the 50 caliber machine gun is given to insure that each graduate has a precise and detailed knowledge of the weapons he will use. Each man is taught the various duties of the section leader with problems and discussions held to stimulate leadership.

The policy of the Leaders Course is to instruct by demonstration, practice, and applicatory exercises whenever possible in lieu of lectures.

Grades on students are turned in by each section leader and are derived from practical work and demonstrations of the men. Battery Commanders who have the men assigned in their second phase also send in evaluation sheets of the men which are averaged in the grade. The grading system is based on 1000 points, the average being around 600.

ONE of the important incentives for the students who apply themselves is the American Spirit Honor Medal, which is awarded to the trainee who graduates at the top of his class. The highest point value of any student to date is that of Pvt. Edward C. Roberts, III, of Ann Arbor, Michigan, who made a total of 854.8 points.

Every opportunity is taken to have the Leaders Course students instruct each other. During the instruction, as well as off-duty hours, the students are required to take the lead in everything they do. The instructors and cadre are provided mainly to guide the students by example and by supervision.

The two batteries function mainly for the purpose of supply, mess, housing, administration, and discipline of students while in the organization. Lt. James C. Nicholson, commander of C Battery, is an armor officer who has recently joined the organization. He was previously assigned to the NCO academy in Munich.

D Battery, commanded by Lt. Calvin D. Wilson, has recently won Best Mess and outstanding Battery in RTC awards. The outstanding Battery award was for supply, mess, administration and area.

Capt. Charley G. Raineault has recently been assigned as executive officer of Leaders Course. Other members of the staff include Lt. Robert G. Mangum, S3 officer, and Lt. Sam H. Biddle, Adjutant. Lt. Mangum has the job of supervision of all classes, lesson plans, inspection of classrooms, interview of new students, and interviewing students while in the course of instruction.

A very small percentage of students who enter the course fail to complete it. Not more than five per cent of men entering are boarded for academic deficiencies, or from disciplinary action.

The numerous letters of appreciation from commanding officers throughout the world attest that the course has been enormously successful. This type of training is perhaps one of the army's best programs for the procurement of qualified NCO's in the short time available for training from induction to overseas assignment.

In summing up the objectives of the Leaders Course, Col. Durschnitt says, "We are making every effort to develop leaders characterized by competence, enthusiasm, and pride in their job."

Armed Forces Day in the 601st AAA Battalion (Gun)

(Continued from page 34)

the battalion were generally along the same line. At Dog Battery a mimeographed sheet was furnished each visitor showing the location of the various exhibits and permitting the visitor to spend his time as desired. At intervals an example of the rapidity of manning the equipment was given by having an exercise "battle stations."

At Charlie Battery a crack drill platoon put on a close order drill exhibition. And at Able Battery the many items of supply were exhibited.

The open house has paid good dividends already in better public relations, and has dispelled the myth that these sights cannot be a credit to a community, much less an attraction. Open house at 601st AAA Gun Battalion has let our neighbors know that this battalion is deeply concerned with the appearance of its sites and the beauty of this community. We have gone far in earning the approval of our neighbors.

Fort Bliss News

Colonel Bender Now President of Board 4

AFF Board No. 4 is now directly under the Office of the Chief of Army Field Forces, where Major General Paul W. Rutledge directs and supervises the research and development activities. Colonel Arthur H. Bender is now President of the Board. This change puts Board No. 4 on the same basis as all the other Boards.

Colonel John H. Kochevar is expected to report for duty soon as Board executive. Lieutenant Colonel A. A. Kopesak will resume his job as head of the Surface-to-Air Group.

A contingent is leaving Board No. 4 for the Advanced Artillery Course at Fort Sill soon. Included are Major Wm. C. Linton, Captains J. T. Blandford, S. E. Salter, Richard L. Ruble and F. A. Dodd, and Lieutenant D. E. Etzold. The Board's Secretary, Lieutenant Colonel Charles W. Casey, is bound for C & GS College, Fort Leavenworth.

Lieutenant Colonel Wm. F. LaHatte has left the Guided Missile Service Test Section for duty in the Pentagon. Captain Hampton Godfrey and WO R. B. Schmitcke have orders for the Far East Command, and Captain Charles Mugford is joining the Arctic Test Branch at Big Delta, Alaska. Captain O. T. Duggan is back in civilian clothes.

Board No. 4 Marine Corps Liaison Officer, Lieutenant Colonel R. D. Opp is bound for Washington, D. C. Major C. R. LaPlant is scheduled as his replacement.

New additions to the Board personnel are Captains Eugene P. Pfauth and John A. Sadler and Lieutenants L. B. Aull and H. T. Heckman. All are joining the Guided Missile Service Test Section.

1st GM Brigade

Seven new field grade officers have joined the 1st Guided Missile Brigade. They include: Colonel Iver Peterson, Lt. Col. Donald K. Stevens, and Majors James D. Benner, Sam L. Davies, Charles W. Hope, Donald E. Simon, and Charles A. Wilson, Jr.

Losses from the Brigade include Colonel Oren Swain, Lt. Cols. John Pigeon and T. D. Caulfield, and Majors Harold Jacobs and George Chapman.

AAA RTC

In the Antiaircraft Artillery Replacement Training Center, Lt. Col. Elmer E. Twining is now Deputy Commander and Lt. Col. Valentine T. Terribile, Executive Officer. The new S4 is Lt. Col. Calvin B. Leek.

New battalion commanders include: Lt. Col. George C. Barber for the 12th Battalion; Lt. Col. Joseph S. Bedford for the 11th; Major William A. McQueeney for the 10th; Major Leland Smith for the 8th; Major Raymond L. Cordes for the 7th; and Major Charles E. Hogan for the 2d Battalion.

Other new assignments are: Major Rheuben W. Minton as Personnel Officer, RTC; Major John R. Nuwer as Assistant S3, RTC; Major Walter K. Sims, Assistant S4, RTC; Major Charles J. Tranter, executive officer, 1st Group; and Major Rufus J. Cleghorn, S3 officer, 2d Group.

Major Ernst W. Karsten has just joined the Chaplain Section, RTC.

AA & GM Branch, TAS

In the Department of Electronics, Colonel Arthur Kramer has been named Deputy Director. Lt. Col. James G. Healy is the new Senior Instructor in the Fire Control Equipment Section, and three other officers, Majors Donald L. Eiler, James B. Clift, and James W. Abramoski are newly assigned to the Section.

A new arrival in the Gunnery Department is Lt. Col. Nelson J. Burge, Instructor in the Light AA Section.

Lt. Col. William Harold Bach and Major Walter Scott Hanson have new assignments in the Department of Guided Missiles. Col. Bach is now Chief of the Operations and Security Section and Major Hanson's new duty is that of Chief of SSM Subsection, Tactics and Gunnery Section.

Three arrivals and three departures mark the shift of personnel in the Department of Nonresident Instruction. Joining the staff recently were Lt. Col. John K. Frei, Major Roger L. Steltzner and Major George A. Sense. Departures were Lt. Col. W. Craig Boyce, Jr., Major George H. Garnhart and Major James W. Grant.

Lt. Col. Thomas H. Barfield is Exec., G3 Section, AAA & GM Center.

Major General Meyer Addresses Final Bliss OCS Class

Commencement exercises for Class 14, Antiaircraft Artillery Officers Candidate School, Friday, July 17, marked the closing of the Fort Bliss OCS. The school had been in operation since November, 1951.

Since its organization approximately 1,175 second lieutenants were commissioned as Reserve Army Officers.

Major General G. Ralph Meyer, Retired, of El Paso, gave the commencement address in Theater No. 1.

Preceding the graduation, a parade was held in honor of the graduating class. After the new officers were sworn in, they were honored with a commandant's reception at the Fort Bliss Officers Club.

Colonel Kenerick OCS Director

Colonel Kenneth R. Kenerick served as director of OCS. He succeeded Colonel Robert H. Kreuger who directed the organization from its beginning, November 19, 1951, until August, 1952, when he left to become Commander of Camp Drake in Japan.

Of the original staff of the school, only two members remained to assist in its closing. They were Lt. Col. George J. Bayerle, Jr., assistant director, and Maj. Asa P. Gray, the senior tactical officer of the final OCS class.

Still To Train Here

The closing of the OCS school does not mean that the Antiaircraft Artillery will not receive any more OCS-trained officers.

Forty percent of the Artillery candidates will be earmarked for Antiaircraft before they go to Fort Sill, Oklahoma. Upon being commissioned, following completion of the 22-week course, at the Oklahoma installation, the men selected for Antiaircraft will come to Fort Bliss for an eight-week course indoctrinating them into AA techniques.

6th Group In New Quarters

The 6th AAA Group has moved into new quarters and is now occupying three of the recently completed barracks in the permanent troop housing project at Fort Bliss. It is supporting the ROTC Summer Camp.

Colonel A. A. Adams is Group commander.

ROTC Camp

The Antiaircraft Artillery ROTC Camp opened officially on June 22, with Maj. Gen. S. R. Mickelsen, Commanding General of Fort Bliss and ROTC Camp Commander, welcoming the Cadets. Col. E. R. Crowell, Deputy Camp Commander, oriented the ROTC students on their summer training. A total of 1,460 Cadets are in attendance at the Camp.

ROTC Camp Officers

Field-grade officers for the ROTC Camp, with their prior assignments and present Camp duties, are as follows:

Col. E. R. Crowell, PMS&T, Texas Western College, Deputy Camp Commander.

Col. M. A. Hatch, PMS&T, University of Illinois, Camp Executive.

Col. Shelly P. Myers, PMS&T, Texas A&M College, Director of Training.

Lt. Col. F. W. Bowman, PMS&T, Northwest College of Louisiana, Sr. Instructor, Automatic Weapons.

Lt. Col. J. B. Clark, Asst. PMS&T, Virginia Polytechnic Institute, Sr. Instructor, Guns.

Lt. Col. B. J. Greenberg, Asst. PMS&T, University of Delaware, Instructor, Automatic Weapons.

Lt. Col. N. M. Locke, Asst. PMS&T, University of Oklahoma, Asst. Director of Training (FA).

Lt. Col. R. F. Moore, Asst. PMS&T, Fordham University, Asst. Director of Training.

Lt. Col. R. Watson, Asst. PMS&T, University of Cincinnati, Commandant of Troops.

Maj. Edward O. Crouch, G3 Section, AAA & GM Center, Fort Bliss, Executive Director of Training.

Maj. J. W. Davis, Asst. PMS&T, Texas A&M College, Instructor, Automatic Weapons.

Maj. G. Ford, Asst. PMS&T, Texas Western College, Instructor, Automatic Weapons.

Maj. J. P. Guinn, Asst. PMS&T, Texas Western College, Instructor, Guns.

Maj. Howard L. Karnes, Asst. PMS&T, Michigan State College, Adjutant.

Maj. D. E. Kjeldsen, Asst. PMS&T, Washington University, Instructor, Guns.

Maj. J. H. Lichty, Asst. PMS&T, University of Cincinnati, Instructor, Automatic Weapons.

Maj. W. L. Linton, Asst. PMS&T, Florida A&M College, Hqs Commandant.

Maj. S. R. Marconi, Asst. PMS&T, University of Illinois, Asst. Director of Training (AW).

Maj. P. R. Melcher, Asst. PMS&T, St. John's Military Academy, Instructor, Guns.

Maj. L. C. Miller, Asst. PMS&T, University of Illinois, Instructor, Guns.

Maj. V. R. Moss, Asst. PMS&T, University of California, Asst. Director of Training (FA).

Maj. H. M. Wendle, Asst. PMS&T, University of Maine, Instructor, Automatic Weapons.

Judge Thomason Honored

More than 1,000 civilian and military spectators saw Federal District Judge R. E. Thomason of El Paso, Texas, receive, on Armed Forces Day, the highest award which can be presented by the Army to a civilian in peacetime. Presentation of the award was the high point of a formal Retreat Ceremony concluding the public Armed Forces Day program at Fort Bliss.

The Department of the Army's Certificate of Appreciation for "Patriotic Civilian Service" and the accompanying lapel pin were presented to Judge Thomason by Lt. Gen. John E. Dahlquist, Commanding General of Fourth Army.

For 17 years a member of the House of Representatives in Congress, Judge Thomason had a wide influence and distinguished reputation among the lawmakers in the nation's capital. In the Army he is remembered as the sponsor of "The Thomason Act"—which called many young Reserve officers to a year of active duty with the result that numbers of them became Regular Army officers. He was appointed Federal District Judge at El Paso upon his retirement from Congressional duties some five years ago.

Students Fire on Incoming Targets

Incoming courses flown by the OQ 19 towing a horizontal flag target are being fired upon by students with the Light AAA Section of the Department of Gunnery and Matériel. The OQ 19 is flown at a height of 800 feet or more, and less than 500 feet of tow cable is used. This gives an interesting change from the usual crossing course utilized in range firing.

Legion Of Merit To Bliss Officer

Transferring 127,000 prisoners of war from Pusan to Koje-do Island was one of the notable achievements which earned Colonel Roy K. Kauffman of Fort Bliss the Army's Legion of Merit award for his Korean service.

Colonel Kauffman, G3 of the AA & GM Center, received the decoration at a dismounted review on Noel Field, May 23.

Major General S. R. Mickelsen, Fort Bliss Commander, made the presentation of the high award.

Additional Awards

1st Oak Leaf Cluster to the Bronze Star: Major Victor A. Franklin, Capt. Edward W. Nicholls, Capt. Paul C. Kirchner. The Bronze Star Medal: M/Sgt. Peter P. Lee.

Administration and Classroom

Contract has been let for construction of the new administration and classroom building for the Antiaircraft and Guided Missiles Branch of The Artillery School at this post. Probable starting date of construction is July 15 and approximate completion date is September 15, 1954.

The new School building is to be of concrete frame, masonry panel construction with concrete floor and roof slabs, except that the auditorium will have steel trusses and a steel roof deck. It will be air-conditioned with an air-washer type evaporative cooling system will be steam heated.

The administrative wing of the building is to be in T-shape, three stories high, with a penthouse. The auditorium wing will have one floor with balcony and each of the three rectangular classroom wings will be two stories in height. All wings are to have a full basement.

Connecting corridors between the administrative and classroom wings will also be two stories high with basement.

The School building will occupy practically all the area between the post theater and Howze Stadium and will face to the west on Sheridan Road.

TECHNIQUE FOR ADJUTANTS

BY MAJOR ARTHUR M. CHESTER

Cloth, $2.50 Paper, $1.00

Bliss Has Airborne and Firing Demonstrations

Several thousand El Paso civilian and military spectators witnessed on 28 May a near-perfect exhibition of the Army and Air Force defense team in action at Fort Bliss.

The demonstration was sponsored by the Antiaircraft and Guided Missiles Branch of The Artillery School. Participating units included the 88th Airborne Antiaircraft Battalion of the 11th Airborne Division, Fort Campbell, Ky.; the 366th Fighter Bomber Wing from the West Coast; the 463rd Troop Carrier Wing from Memphis, Tenn.; the 1st Tow Target Squadron from Biggs Air Force Base; and the 59th and 90th Antiaircraft Artillery Battalions and School personnel from Fort Bliss.

Spectators included the general public, a Chamber of Commerce group, and military personnel from Fort Bliss and Biggs Field.

Special guests for the demonstration were high-ranking Allied officers from Mexico, Canada and Norway, along with a trio of U. S. Airborne officers, headed by Brig. Gen. D. E. Beach, commander of the 11th Airborne Division Artillery.

The air drop of men and matériel at Dona Ana Dry Lake opened the day's demonstrations.

Pathfinders jumped first to prepare the drop zone for the paratroopers who made the jump simultaneously with a monorail drop of their light equipment.

Buoyed by two 100 foot canopies, a quad .50 caliber machine gun drops safely.

Paratroopers of the 88th Airborne AAA Bn.

Short minutes later, the 88th troopers' heavy equipment and matériel, including 40-millimeter guns, quadruple .50 caliber machine guns, jeeps and trucks, floated to earth beneath huge canopies.

Because of the high elevation of the drop zone, the heavier equipment required three instead of the usual two 100-foot-diameter parachutes for safe landing.

The jump of paratroopers, the drop of their equipment, and the swift setting up of an antiaircraft defense in a simulated enemy territory went forward in a fast-paced and almost flawless exhibition of split-second timing and teamwork.

The airborne demonstration was climaxed with the landing of an "assault transport" with supporting troops from the 59th AAA Battalion.

For the instruction of artillery students, the Tactics Department of The Artillery School gave a demonstration of air support and antiaircraft support of Infantry in an attack. The demonstration, following the air drop, was held on the Dona Ana Range No. 47.

Planes of the 366th Fighter Bomber Wing roared in to do dive bombing, strafing, rocket and napalm bombing, after which the antiaircraft artillery went into action. Following the bombing and artillery barrage, Infantry troops, armed with their usual assault weapons including flame throwers, moved to the attack under continuing artillery cover.

Third demonstration of the day was at Hueco Range No. 2 where automatic weapons were fired at radio-controlled targets. The weapons included towed 40-millimeter guns, self-propelled twin 40-millimeter cannon and self-propelled quadruple .50 caliber machine guns.

Concluding event of the day was the demonstration at Hueco Range No. 3 where the Army's new "Skysweeper" and medium and heavy antiaircraft weapons were fired at radio-controlled targets and at targets furnished by the 1st Tow Target Squadron.

Paratroopers of the 88th Airborne Battalion gave Fort Bliss troops, in a series of static displays on May 27, a closeup view of the equipment and technique to be employed the following day in the airborne drop of men and matériel at Dona Ana Dry Lake.

The displays explained aerial delivery containers, the mission of the Pathfinders, the rigging and dropping of heavy equipment, and the gear of the paratrooper. In the latter exhibit, the Blissmen saw paratroopers wearing the standard main parachute and reserve 'chute and were shown exactly what the parachute looks like and what makes it open as the jumper steps out of the plane. They were also shown what action a paratrooper can take if his 'chute fails to open.

CHANGE OF ADDRESS

Moving? Please send us your change of address. Use the inclosed postage-paid card. Just mark it "Change of Address"—and print your name and new address on it.

UNIT ACTIVITIES

32nd AAA BRIGADE

By First Lieutenant Jack D. Peavy

The 32nd AAA Brigade under the Command of Colonel M. W. May, Jr., is stationed in the network of air defense in Suffolk, England with the Air Force Strategic Air Command. The antiaircraft units of the Brigade are aided in the accomplishment of this mission by assigned chemical smoke generator companies, whose mission is to conceal strategic areas from an enemy.

The position of the Brigade in England is unique in being stationed in the United Kingdom in time of peace. The married officers and non-commissioned officers living off the bases have become members of the communities in which they live, taking an interest in their local social and civic activities and being extremely successful in the role of ambassadors of good will from the United States. Along military lines, equal progress has been achieved in dealings with the Royal Air Force and the British Army. This is especially true of the British AA Command.

Upon becoming operational, the battalions of the Brigade, with their weapons situated on the air bases, set up in tents. Squad tents were utilized as living quarters for 40mm gun crew members and the pyramidal tent was "home" to the cannoneers comprising the crew of the M55 Quad Machine Gun mounts. Through the unparalleled ingenuity of the American soldier, these quarters, situated in the immediate vicinity of the weapons which the crews served, blossomed with such conveniences as electricity, hot and cold running water, shower facilities, and day rooms where the cannoneers might read or write letters when their time was not occupied by alert duties or training. Many of these tents were paneled with a plywood material, at no expense to the government, which presented a very neat appearance, and aided in keeping the tents warm in winter and cool in summer.

These accommodations have now been replaced by prefabricated buildings, 20 x 48 feet in size. Again the American soldier's ability at improvisation came forth, making these prefabricated buildings comparable in comfort and practicability to the quarters occupied by troops in any other command.

Although the Brigade maintains stringent alert requirements, it still finds time to fulfill the basic needs of the military man's education. Parades, reviews and ceremonies are not forgotten under the press of alert operations. Training, including service practice, is carried out. The firing being accomplished at the ranges of the Royal Artillery. These ranges are located on the North Sea and provide an excellent locale for the Battery Commander to accomplish training as a battery. At the unit's home station, with the battery deployed tactically, this is a difficult and often impossible task when the unit or portions of it must be on alert. Firing batteries are rotated to the Training Area periodically so each may have the opportunity of battery training. This movement stimulates the interest, morale and *esprit de corps* of the command.

Another facility for the training of the officers and men of the 32nd AAA Brigade is the 32nd AAA Brigade School Detachment (Provisional). This school detachment, commanded by Major George Sylvester, undertakes the teaching of such subjects as: Automatic Weapons Course for Officers, Automatic Weapons Course for Enlisted Men, Non-Commissioned Officers' Academy, Aircraft Recognition School, Medical Field Training, Chemical-Biological-Radiological Course, Typing School, Chemical Smoke Generator Mechanics' Course and Officers' Command Course. These courses vary in duration from one week to one month. Of particular importance is the Aircraft Recognition School, under the direction of Captain Marvin D. Yarborough. In view of the Brigade's mission in air defense, it is of obvious importance that the men on the guns promptly and correctly identify aircraft. In the event of hostilities, the man's ability to recognize aircraft may very well be the deciding factor as to whether an allied life is lost needlessly through the shooting down of friendly aircraft, or whether an enemy bomber or fighter accomplishes its mission without effective antiaircraft defense on the part of the friendly defense forces.

The major units of the 32nd AAA Brigade are: the 4th AAA AW Battalion under the command of Lt. Col. Edwin O'Connor, Jr., the 39th AAA AW Battalion under the command of Lt. Col. Peter J. Lacey, the 60th AAA AW Battalion under the command of Lt. Col. William D. Ward, the 92nd AAA AW Battalion under the command of Lt. Col. Benjamin McCaffrey, Jr., and the 6th Chemical Smoke Generator Battalion under the command of Lt. Col. Samuel E. Baker.

Colonel Baltzer left his post recently as Chief, Liaison Group, 32nd AAA Brigade, to undertake new duties as a student at the Army War College.

Lt. Colonel Peter J. Lacey, Jr., has also departed for duty as Assistant PMS&T at Utah State Agricultural College, of which he is an alumnus.

U.S. Army photo

32nd AAA Brigade firing at the Stiffkey Anglo-American AA Firing Range, Norfolk, England.

Lt. Colonel Lacey was replaced as Battalion Commander of the 39th AAA AW Battalion by Lt. Colonel Frank D. Pryor, formerly S3 of the 32nd AAA Brigade.

The news highlight from the 32nd AAA Brigade is the development of a new sight for the M55, Multiple Ma-

chine Gun. The new sight is a product of the ingenuity and ability of M/Sgt. George W. Davis, of the 39th AAA AW Battalion.

M/Sgt. Davis, with the aid of a British auto mechanic, constructed the first model of the new sight from a tractor bearing, an exhaust pipe, an angle iron and odd scraps.

The principle behind the new "Davis sight" is similar to that of the famed Stiffkey Stick, presently in operation with virtually all British Light AA units.

Simplicity, ease of operation and a relatively small training problem are keynoted in the Davis sight.

In recent firing test held at Stiffkey AA Firing Range, located on the North Sea, the Davis sight showed up well. In test firing against RCATs two targets were brought down with an expenditure of only 150 rounds of ammunition.

Two improved models of the sight have since been produced by the Mains Ordnance Depot in Germany, incorporating into the original sight, the suggested improvements of Ordnance experts there.

The Davis sight has been forwarded to the Army Field Forces Board at Fort Bliss, Texas, for testing.

GUNNERS EXAMINATION, 34th AAA BRIGADE

By Capt. Hugh S. Fite, 27th AAA AW Battalion, President, Examination Board

The 34th AAA Brigade has established a Brigade Gunners Examination Board to prepare the gunners examinations outlined in FM 44-19 and to supervise the administration of the initial examinations to units of the 34th AAA Brigade with a program to be completed not later than 30 June 1953. The examinations had to (1) set realistic standards for the knowledge required of enlisted antiaircraft artillerymen and (2) be physically capable of administration to units of the 34th AAA Brigade in the time available.

In order for the Board to meet the deadline of 30 June 1953, some method of screening the men recommended by the Battery Commanders had to be established. The Board decided that the most practical solution to the problem was a written test. Although FM 44-19 specifically states that no written test will be administered, due to the time element and the number of men, some type of written examination was considered mandatory.

A study of the types of units assigned to the 34th AAA Brigade revealed that six sets of questions would be required. The Board decided to use the multiple choice answer type of examination, using four possible solutions to each question. A sufficient number of sets of questions would be mimeographed to test one battalion at a time. Each person tested would be given an answer sheet. By the use of this method the sets of questions could be used as many times as necessary.

For those who passed the written test a practical test was made up for each type of unit.

Prior to testing the entire Brigade, the Board tested a battery of medium AA and a battery of light AA. Initially it was the intention of the Board to administer the written test and have officers in each battalion administer the practical test according to standards set up by the Board. The results of the preliminary testing of the two batteries showed that there would possibly be a wide variation throughout the Brigade if each battalion administered the practical test. The Board therefore decided that for the sake of uniformity throughout the Brigade it would administer both the written and the practical phases of the examination.

The method of administering both the written and practical phases of the gunners examination as tested in the two batteries proved to be the solution to the problem. After some defects that showed up when the preliminary tests were corrected the examinations were standardized and the Brigade-wide examinations were started on 4 May 1953. According to the present schedule the Second Class Gunners Examination is due to be completed on 11 June 1953.

Examinations will be held twice each year for each of the three classes of gunners: Second Class, First Class, and Expert. To the enlisted man who makes a satisfactory rating in both phases of the examination pertaining to any class of gunnery, the Commanding General, 34th AAA Brigade, will issue a Certificate of Proficiency in that class, and the battalion commander will issue the necessary orders awarding the enlisted man the respective classification. This should give the men an incentive to improve their proficiency in AAA.

The Second Class Gunners examination for a gun battery included a total of 111 questions covering the gun, power plant, gunnery, communications, transportation, map reading, and ammunition.

Here are some of the questions:

(7) The breechblock is held open by the:
- a. breech operating lever.
- b. operating crank.
- c. extractors.
- d. cross-heads.

(8) What part of the breech and firing mechanism holds the percussion assembly in the cocked position?
- a. breech operating lever.
- b. sear.
- c. breech closing spring.
- d. extractor plunger.

(12) The correct gas pressure for the recoil mechanism is:
- a. 750 psi
- b. 1000 psi
- c. 1250 psi
- d. 1500 psi

(16) The purpose of the counter-recoil buffer is to:
- a. cushion the return of the gun into battery.
- b. slow the recoil of the gun.
- c. prevent damage to the counter-poise cylinder.
- d. control the recoil of the gun.

(24) For how many days, after the gun is fired, must the bore be cleaned:

a. one
b. two
c. three
d. four

(49) Before starting the power plant, the operator should:
a. check the oil level.
b. close the circuit breaker.
c. turn up the rheostat.
d. crank the engine by hand to distribute oil to the bearings.

(53) The maximum average slant range of the 90mm Gun as limited by a maximum fuze setting of 30 seconds is:
a. 7500 yds.
b. 12500 yds.
c. 19560 yds.
d. about 11 miles.

(81) A properly spliced wire is covered with:
a. rubber tape
b. friction tape
c. masking tape
d. friction tape and rubber tape

(102) Which of the following is *not* 50 cal ammunition?
a. Ball
b. Armor piercing
c. High explosive
d. Incendiary

TI & E IN THE 34th AAA BRIGADE

By Major Theodore Wyckoff

Brigadier General Robert W. Crichlow is a brigade commander who believes in Troop Information and Education. He believes in the *personal touch*. The results are apparent in the high morale and efficiency prevailing throughout the Brigade.

Troops in Germany, like troops in Korea—like troops everywhere—have to be kept informed. Here in Germany the life of the soldier is not easy. He spends a large part of his time in the field under strain to be combat ready. His free time is restricted; he is lonely and he wants to go home. Why does he have to be here?, he asks. It is his commander's responsibility to tell him why.

Men should develop a deep faith in their commanders and a profound loyalty to them. They develop this faith and loyalty largely by personal contact, largely by listening to their commanders and by observing them in action. They appreciate when a commander takes a few minutes to talk to them and tell them what the score is—as the soldiers say here—*"Wass ist los."*

Major Wyckoff addresses 34th AAA Brigade TI&E Conference.

Further, young men in the United States Army should have and develop an abiding faith in our country—its history, its heritage, and its form of government—its principles, standards, and ideals. This faith in America and this love for America is one of the desired products of the TI & E program—one of its most important.

Recently the 34th Brigade held a two day TI & E Conference for all its TI & E officers and NCO's in Garmisch, the US Army Europe Recreation Area in the Bavarian Alps.

Keynoting the conference was General Crichlow's message to all commanders within the Brigade:

"I strongly encourage all commanders to give their personal attention to establishing and maintaining a strong and effective TI & E program to the end that antiaircraft soldiers may develop that belief in ideals, that will to win, and that unswerving loyalty which are so essential to victory in battle."

In the GI slang, General Crichlow is simply working to cut out the bull and make this program the *commander's program*.

40th AAA BRIGADE NOTES

Since 1 January 1953, Brigadier General James G. Devine has acted in the dual capacity of Commanding General, 40th AAA Brigade, and Antiaircraft Artillery Officer on the staff of the Commanding General, United States Army Forces, Far East. Needless to say, the workload of the brigade staff has increased considerably.

New faces have appeared quite frequently recently. Among the newcomers to bridgade are Captain Kenneth Frankenfield, former S4, 31st AAA Brigade, now assigned as assistant S4, 40th AAA; Lieutenant Colonel Bruce H. Johnson, former Battalion Commander, 15th AAA AW Battalion, who replaces Major Ralph E. Duncan as Commanding Officer, 37th AAA Gun Battalion; Major Robert H. McCauley, former S3, 15th AAA AW Battalion, who has assumed the position of Chief of the Light AAA Department, FEAAASS; Major Herbert Tenwinkel, previously the Executive Officer, 21st AAA AW Battalion, now Executive Officer, 37th AAA Gun Battalion; Major Arthur G. Malone, former S3, 933d AAA AW Battalion, presently assigned as S3, 32d AAA AW Battalion.

Other recent arrivals include Lieutenant Colonel James A. Laing, former G4, Army AA Command, who is taking

over the command of the 507th AAA AW Battalion; Major Phillip Lanasa, former executive officer, 145th AAA AW Battalion of the 45th Division, now assigned as Commanding Officer, 327th AAA Operations Detachment; Lieutenant Colonel Harold O. Johnson, former Commanding Officer, 9th AAA Gun Battalion, who takes over as Brigade S3; Captain Cornelius Wakefield, former Air Officer, G3 Section, Headquarters, 40th Infantry Division, who has been assigned as assistant S3 on brigade staff.

Coincident with extending welcome to the newcomers, we are preparing to say "Sayonara" to a large group of officers. Our loss is the Zone of Interior's gain in the following: Colonel Wm. L. McNamee, Commanding Officer, 138th AAA Group; Lieut. Col. George W. Kenna, brigade S3; Lieut. Col. David B. Nye, Commanding Officer, 97th AAA Gun Bn.; Lieutenant James R. Master, S2, 64th AAA Gun Bn.; Captain Grant K. Lower, Commo Officer, 753d AAA Gun Bn.; Captain Raymond H. Lamothe, C Battery, 753d AAA Gun Bn.; Lieutenant Hollister W. Borden, D Battery, 753d AAA Gun Bn.; Major Ralph E. Duncan, Commanding Officer, 37th AAA Gun Battalion; Lieut. Col. James M. Carson, Commanding Officer, 507th AAA AW Bn.; Lieutenant Richard W. Noyes, Operations Officer, 162d AAA Operations Detachment; Major Alec T. Fedosi, 97th AAA Gun Bn.; Captain Richard C. Beaudry, S4, 32d AAA AW Bn.; Lieutenant William M. Frisbie, D Battery, 32d AAA AW Bn.

Although the primary mission of antiaircraft artillerymen here in Japan is to provide AAA defense of certain vital installations, another very important mission has been taken on voluntarily by many of the AAA units. It appears that the rugged, combat ready artilleryman just can't withstand the sight of small Japanese orphan children living under conditions which they believe to be inferior to what the children deserve. Accordingly, they have taken upon themselves to provide, wherever possible, those things which will improve the lot of these unfortunate tykes. A typical example is the project undertaken by the men of the Northern Provisional Group.

During the fall of 1952 Chaplain (Major) William P. Golder and the Enlisted Mens Character Guidance Council "adopted" the Shichinohe Orphanage. They decided to dress the children from the "skin out" in warm winter clothing. After this detail was taken care of, the men of the 753d, "B" Battery 507th AAA AW Battalion and "C" Battery of the 32d AAA AW Battalion saw the need for a new dining room-study hall area and by contributing time, labor, and materials constructed a new wing on the home. To improve the sanitary standards, an electric pump was purchased and installed. Still not content, the officers and men, at the end of April, contributed $456.20 to expand and improve the cooking facilities. Chaplain Golder claims that this money is sufficient to complete this detail and permit them to initiate a continuing program to take care of the needs of the orphanage as they come up. Work such as this contributes to the establishment of good will and friendly relationships between the Japanese and our Armed Forces.

45th AAA BRIGADE

Lt. Col. Robert H. Johnston, Brigade S3, is on orders to USAEUR. He will depart this headquarters on or about 14 August 1953.

Capt. Donald H. Ryan is the Brigade Adjutant. He was formerly with the 8th AAA AW Bn. (Smbl), Camp Lucas, Mich. Capt. Ryan returned from Korea in August of 1952.

Major Norman C. Jensen, Brigade Radar Officer, was recently awarded the Bronze Star Medal for meritorious service as the 8th Army Artillery Radar Officer. The award was presented by Colonel Frank F. Miter, Brigade Commander.

53d AAA BRIGADE

Swarthmore, Pa.

Colonel Kenneth I. Curtis assumed command of the 53d AAA Brigade on 1 July, replacing Colonel Arthur C. Peterson who has been reassigned to Hq. ASA, 8600th AAU, Washington, D. C.

A system of intra-brigade awards has been established with presentations to begin on 30 September. Awards will be made in the following categories: (1) Best battalion, (2) Best gun battery; operational readiness, (3) Best battery; transportation, (4) Best battery; site, (5) Best battery; mess, (6) Best battery; administration and supply.

Awards will be of two types, quarterly and annual; quarterly awards being guidon type flags, and annual awards, silver cups. All awards were donated by public-spirited organizations of Philadelphia and Pittsburgh.

56th AAA BRIGADE

Brig. Gen. Harry F. Meyers, Comdg.

Lieutenant General Withers A. Burress, Commanding General, First Army, his deputy, Major General Edmund B. Sebree, and Brigadier General John B. Murphy, Chief of Staff, visited Fort Totten on 24 June and were given a briefing on the Brigade mission by Lt. Col. Paul A. Harmon, Brigade S3.

Brigadier General Harry F. Meyers was guest speaker at the AFF Commanders Preventive Maintenance Course at the Ordnance School, Aberdeen Proving Grounds, Maryland, on 19 May.

Lieutenant General John T. Lewis, Army Antiaircraft Commander, inspected the New York defenses on 5 June.

Brigadier General Frederick L. Hayden, Commanding General, Eastern Army Antiaircraft Command, inspected defenses of this unit during the period 25 May to 3 June.

Colonel K. J. Woodbury, Brigade Executive, attended the Army Field Forces Commanders Preventive Maintenance Course at Aberdeen during the week of 18 May and the Special Weapons and Guided Missiles orientation course at Fort Bliss during the week of 8 June.

Captain Adam C. Hart, recent graduate in the Guided Missiles course at Fort Bliss, has assumed the duties of the Brigade Guided Missiles Officer.

Captain Leonard Starin has been assigned as Hq Btry Commander.

Captain Clarence A. Klaver, Signal Corps, was assigned as Brigade Signal Officer upon his return from Europe.

M/Sgt. Thomas W. Conley, S4 Section, was retired on 30 June as a Chief Warrant Officer after more than 30 years of honorable service.

EASTERN ARMY ANTIAIRCRAFT COMMAND

Three riflemen and two pistoleers from the Eastern Army Antiaircraft Command are members of the Army Antiaircraft Command team participating in the All-Army rifle and pistol tryouts at Fort Benning, Georgia.

The riflemen are 1st Lt. Daniel L. Thomas, 701st AAA Gun Battalion,

Broughton, Pa.; WOJG William A. Ralston, Headquarters, 35th AAA Brigade, Fort Meade, Maryland; and Private Bobby Dailey, Battery D, 34th AAA Gun Battalion, Fort Totten, New York.

Pistolmen are Captain William Walter, Battery A, 701st AAA Gun Battalion, Broughton, Pa.; and CWO Michel Tuffner, Battery D, 506th AAA Gun Battalion, Philadelphia, Pa.

The rifle team is scheduled to compete in the Southeastern Regional Highpower Rifle Championships at Camp LeJeune, North Carolina, beginning July 26th.

The Pistol squad will participate in the Southwestern Regional Pistol Championships which begin July 29th at Fort Bliss, Texas.

Both the rifle and pistol squads are slated to proceed to Camp Perry, Ohio, early in August to begin preparation for the National Championships which will be held August 20th to 25th.

WESTERN ARMY ANTIAIRCRAFT COMMAND

By Lt. Col. Wiley F. Shaver, Jr., G1

Brigadier General Edward J. McGaw assumed command of WESTARAACOM in March. His key staff officers include:

Deputy Commander: Colonel Pierre B. Denson.

G1: Lt. Col. Wiley F. Shaver, Jr.

G2 and PIO: Major Robert H. Lockyer, who recently returned from the C & GS College.

G3: Colonel Robert W. Hain, who leaves soon to attend the Army War College at Carlisle Barracks, Pennsylvania.

G4: Lt. Col. Edmund H. Carpenter, who formerly served with the Arctic Test Branch in Alaska.

Air Defense Officers: Colonel Daniel A. Ranney, Hamilton AFB; Lt. Col. Bernard J. Drew, Hamilton AFB; Lt. Col. Chas. W. Stewart, McChord AFB.

G3 Section: Colonel Fred H. Meinert, Exec.; Lt. Col. Thos. D. Caulfield, Opns.; Lt. Col. Chas. G. Young, Plans.

Asst. G4: Lt. Col. Lee B. Bolton.

Colonel Walter A. Rude, formerly Chief of Staff, has been reassigned to duty as Professor of Military Science and Tactics at the University of Washington, Seattle.

Lieutenant Colonel Thomas D. Caulfield came to the G3 section in June from duty with the 38th AAA Brigade, Fort Bliss, Tex.

Major Thomas A. Duke, until recently in attendance at the Command and General Staff College, Fort Leavenworth, Kan., has been assigned to G3 and will report in July.

Major Max R. McCarthy, Assistant G3, has been designated to attend the Command and General Staff College, Fort Leavenworth, Kan.

Major Harry B. Plowman, Assistant G3, will attend the Artillery Officers Advanced Course at Fort Sill, Okla., starting in September.

Major Leonard H. Sims, Jr., former G2, left the Command for an assignment with EUCOM in May. He was replaced by Major Robert H. Lockyer.

Major John A. Walder, former S4 of the 4th AAA Group, USARAL, was assigned to G4 in June.

Captain August M. Fons, Jr., arrived at Headquarters WESTARAACOM in June from Headquarters AFFE.

Captain Samuel D. Miller was designated Crypto Officer upon his arrival from Fort Richie, Md., in April. He was promoted to captain on 22 April.

Captain Francis J. Morgen, who has been Personnel Officer of Headquarters WESTARAACOM for well over two years, was ordered to EUCOM early in June.

CWO Harry G. Marshall, who served for over two years as Administrative Assistant, G3, left for EUCOM in May. His former position is now held by CWO Charles W. Davis, who came to the Command from Headquarters, Iceland Defense Force.

CWO Robert M. Mosholder, former Supply Officer G4, left for EUCOM in June.

Major Thomas A. Gandy, Jr., recently returned from the Far East, was assigned to the G2 Section early in July.

22nd AAA GROUP

Chicago, Illinois

The 22nd AAA Group moved from Fort Custer, Michigan to Fort Sheridan, Illinois, in March of 1952, where the Group assumed command of the northern defense of Chicago. The 23rd AAA Group was reactivated 13 May 1952 for the southern defense; however, both groups were combined as the 22nd AAA Group on 14 January 1953. On the 28th of February 1953, Headquarters 22nd AAA Group moved from Fort Sheridan to its present location, the Museum of Science and Industry, formerly occupied by Headquarters 45th AAA Brigade.

The Group is commanded by Colonel John Alfrey from Baker, Oregon. Colonel Alfrey graduated from the USMA in 1935. He served recently as PMS & T at the University of Kansas.

The Executive Officer of the Group is Major David C. Miss, who recently returned from the C & GS College, at Fort Leavenworth, Kansas.

Major George Henry, from Dartmouth, Massachusetts, who has been with the 22nd AAA Group since 20 July 52 is the S3.

The Group has gone through the phases of being operational and very close to garrison at the same time as far as responsibilities were concerned. The men have lived in squad tents and cooked on field ranges for months within view of the Palmolive Building. The Jamesway huts were very welcome, although they are only to be used until the prefabricated buildings are completed. The sites have latrines with showers and modern electric equipment in the mess halls. A great change has been effected within the last few months.

A constant supervised training program helps maintain artillery proficiency. This training program is rounded out by maintaining two batteries at a time on the firing range at Camp Haven, Wisconsin. Each battalion assigned will fire at the range three times during the ensuing year.

Morale is high and great pride shows for unit achievement. This fact is especially true when competitive spirit is displayed for the best unit awards. The people of Chicago are displaying a good deal more interest in the welfare of our men. Organizations such as the Chicago State Teachers College produced plays for the benefit of the Chicago area artillery personnel. On 16 May, 1953, approximately a dozen sites opened their gates to the public and good will was established with the hundreds of people who took advantage of the offer. Guided tours county fair style let them see the displays which gave them an idea of why we are here. Several of the local business men in the Chicago area were kind enough to donate refreshments to be served to the public. The Boy Scouts of various Chicago units such as the St.

Paul Troop visited the batteries on site quite frequently, thus giving them an idea of how we live. As future leaders of the community this will give them a clearer insight toward our trend in public relations as well as how their money will be used.

29th AAA GROUP SOUTHERN AIR DEFENSE AREA

Col. Percy L. Wall, Commanding

We have had the local political and POW tensions and a few air alerts, but not the PO 2 raids, as they have further North.

Lieutenant Colonel John M. Rossnagel, from Maine, is now our Executive Officer. Major Godfrey V. Gaborsky, from New York, is the Adjutant. Major William S. Wall, South Carolina, is the Operations Officer. Captain George B. Erdman, Pennsylvania, is the S2, and Captain James J. McCartney, Pennsylvania, is the S4.

97th ANTIAIRCRAFT ARTILLERY GROUP

APO 331

Col. Eugene H. Walter, Commanding Officer of the 97th AAA Group on Okinawa since December, 1951, was recently reassigned to the Combat Advisory Group, Ft. Monroe, Va.

He has been succeded by Lt. Col. David Y. Nanney, who was formerly Commander of the 76th AAA AW Battalion in Korea.

Lt. Col. Harry E. Eaton has assumed command of the 65th AAA Gun Battalion, replacing Lt. Col. Harry C. Brown. Lt. Col. Eaton recently completed a tour as Commander of the 50th AAA AW Battalion in Korea.

Lt. Col. Marvin B. Douglas, recently of Ft. Bliss, has replaced Lt. Col. William F. Kuhn as Commander of the 85th AAA Gun Battalion. Lt. Col. Kuhn was reassigned as instructor with the New Hampshire National Guard.

Lt. Col. Maurice J. Palizza, former executive officer of the 97th AAA Group, has recently departed this Command for Stewart Air Force Base, N. Y.

BETTER HOUSING

The squad tent has a lot of merit under some conditions. However, it was something less to the 97th AAA Group batteries on Okinawa during their wind and rain lashing typhoons.

The uncomfortable living conditions of the AAA troops had long been noted by Maj. Gen. David A. D. Ogden, commanding general, Ryukyus Command. Earlier as an engineer officer he had developed an idea for a prefabricated building which would offer both comfort and mobility since it could be dismantled, moved, and reassembled. The first such barracks was built recently by the Ryukyus Command post engineers as an experiment.

The experiment proved a success, and as a result, the dreary squad tent is disappearing from the Okinawan scene. In its place are neat little green and white buildings, leak-proof, typhoon-resistant and comfortable.

The new barracks cost about the same as the squad tent whose canvas must be replaced frequently. They are being built by the men of the 97th themselves at a central fabricating plant at Group headquarters in Nupunja, Okinawa. Sidewalls and roof are both constructed of prefabricated panels which can be bolted together. Two men, properly trained, can fabricate one building in two days. As a further economy measure, the "Ogden House" as the men have dubbed it, can be built largely from salvaged material.

Although the barracks are being built during off-duty time, the work is going ahead at a rapid pace. Perhaps before the present season of the "big blow" is over, all the men who man the antiaircraft guns will be snug and dry in their "Ogden Houses."

50th AAA BN (AW) (SP)

Lt. Col. John A. Hodgson, Commanding

Training in Korea, particularly when an Automatic Weapons Self-Propelled Battalion is in a semi-static position in defense of critical installations, becomes a problem due to a high rate of personnel turnover caused by rotation. The many separate squad sites that fit into the tactical plan and also bad roads that wreak havoc on transportation present a constant maintenance problem. The necessity for maintaining minimum crews at their position 24 hours a day coupled with requirements of a 24 hour air and security guard clearly indicates that most training must be conducted by the individual squad leader.

At the direction of the Battalion Commander a survey of effectiveness of training was made by the Battalion S3, Major John W. Mielke. This survey developed that training at the squad level was unsatisfactory due to the inexperience of squad leaders plus lack of suitable training aids, as well as training literature.

Known rotation losses for the period 1 January to 1 May, 1953 represented about 70% of the total personnel that had been assigned prior to 1 January 1953. However, filler personnel from the Zone of Interior were received to fill the vacancies left by these more seasoned troops. Even at or near full T/O & E strength, the efficiency of the unit was slowly decreasing. This decrease was caused by the loss of a large number of key NCO's.

The need for a better training program was readily apparent, and on 1 March, 1953, it was decided to set up a program based on the principle of centralized instruction, which would be comprehensive and sufficiently broad in scope to cover the "Must Know" subjects for all enlisted crew men in the Battalion.

On 26 March a section training program of one week's duration was put into effect to run for eight consecutive weeks. One section from each Battery was called out of action and drawn into the battalion headquarters area for six days. Classes were scheduled from 0800-1200, 1300-1700 and 1900-2100 hours Monday through Friday with Saturdays class schedule being 0800-1200 and 1300-1530 hours. At the close of the course an examination was given, followed by a critique and graduation ceremonies.

The subject material covered in this course was: Nomenclature, Operation and Functioning of the Caliber .50 Machine Gun, M45C Turret, Twin 40mm Gun M19, M4 Turret; Half-Track vehicles; Full-Track vehicles; sighting systems and AW Gunnery using both the ring type sights as well as computing sights; action drill on both the M16 and M19; AAA Fire Control conditions, states of readiness; and ammunition handling, classification and storage.

Instructor personnel were drawn from officers of the battalion. All instruction was conducted using Fort Bliss lesson plans, where applicable, to include training aids that were available, plus additional training aids that the instructors had made up by enlisted men in the battalion.

The section training program was completed on 23 May and the battalion then went into intensive training on range procedure, as the battalion was due to go on the Light AAA range for a record service practice during the month of June.

Plans are now under way for the following courses of centralized instruction to be presented at battalion level during the period 6 July through 6 September, 1953. These plans include the following: (a) A 48 hour Motor Maintenance and Drivers School for driver personnel. This course will be repeated eight times. (b) A phase II section training program, 44 hours in duration, to include First Aid, Map Reading, Aircraft Recognition, AW in close support of infantry, maintenance of the M16 and M19 weapons, Physical Training and Character Guidance, which will run for eight periods.

During the period 25 June to 5 July three short courses will be conducted. The subjects of these courses are: (a) Communications, which includes 7 hours instruction, to be repeated twice for all communication personnel in the batteries, (b) CBR Warfare refresher course of 5 hours duration; instruction to be repeated three times which will afford the battalion a man in each squad that has been brought up to date on CBR Warfare. The one remaining school to be conducted is a 24 hour land mine warfare school for officers and selected NCO's.

The battalion is now conducting a record service practice on a light AAA range, and we can see good results from the earlier training program.

The Battalion Staff and Battery Commanders of the 50th AAA Bn (AW) (SP) include the following:

Executive—Major Harry C. Eisenhart
S1—Captain W. K. Richardson
S2—2nd Lt. Elmer L. Neto
S3—Major John W. Mielke
S4—WOJG William V. Stevens
Assist. S3—1st Lt. R. R. Hawkins, Jr.
Motor—Captain John H. Allen, Jr.
Chaplain—1st Lt. L. H. Campbell
Comm.—2nd Lt. Joseph C. Gaughan
Personnel—WOJG John W. Wise
Hq Btry CO—1st Lt. E. P. Mullin
Btry A CO—Capt. Ralph C. Williams
Btry B CO—1st Lt. James A. Stewart
Btry C CO—Capt. Maynard J. Short
Btry D CO—Capt. C. C. Clarke

Lieut. Paul J. Reioux, Btry A, 92nd AAA AW Bn., orients USAF noncoms

92nd AAA AW BN REPORTS FROM ENGLAND

By Lt. John M. Cragin

Some citizen-soldiers have a psychological aversion to military service because "it is a non-productive period spent in an organization the primary purpose of which is to destroy." Not so with troops of the 32nd AAA Brigade. These men can point with pride to a period of considerable accomplishment.

Typical of these accomplishments is the construction program of the 92nd AAA AW Battalion stationed at Brize Norton AFB, Oxon, England. During the winter months, December, January and February, the Battalion built 47 wooden barracks and 18 quonset-type buildings, not to mention some 100-odd maintenance huts. Completed in March was a steel maintenance building 100′ x 40′, for their Motor Pool. The 92nd occupies only buildings of its own construction.

92nd AAA AW Bn Headquarters Area

Perhaps the most gratifying thing about this troop-labor project is the fact that it was accomplished by artillery troops who were concurrently training and maintaining a state of combat readiness.

When, in February, 1951, the 39th AAA AW Battalion landed at Southampton the US Army had returned to England for the first time since the war. This event heralded a period of productive cooperation on at least four stages.

Between the US and British Armies a great deal of mutual respect and good will developed as a result of the assistance tendered us in the use of ranges, facilities, and training aids.

Between our Army and the RAF a very effective air defense team has grown up.

Another important stage of cooperation has been that between the USAF and the US Army. We are dependent upon the Air Force for logistical support.

A great deal of experience in combined chemical smoke and automatic weapons defense has been gained.

At the same time our officers, men, and their families have also built up a lot of British good will in their private social intercourse.

THE 52nd AAA AW BATTALION TESTS SKYSWEEPER

By 2d Lt. Donald G. Chaney

Recognizing the definite need for thorough test and examination of new equipment under field conditions before it is actually placed in the hands of using units, the Army has the 52nd AAA Battalion (Light 75mm) conducting an extensive Troop Test on the Skysweeper at Camp Roberts, California.

This weapon represents the latest advance in the never-ending search for Antiaircraft Artillery weapons to cope with modern, high-speed enemy aircraft operating tactically in forward areas.

The Skysweeper is the first successful Antiaircraft Artillery weapon utilizing an on-carriage, integrated fire control system composed of a gun laying radar, computer and associated fire control equipment. Each firing section is completely self-contained and capable of engaging high-speed enemy targets flying at low and medium altitudes.

The battalion will conduct the troop testing program to determine the adequacy of the matériel and T/O&E as now established. It is our mission to determine how the matériel will perform when placed with troops under average field conditions.

We are trying to answer a number of questions: Can the Skysweeper be put into the hands of light AAA battalions? How adequate is the school training for Skysweeper personnel? Does the T/O&E, as established, give to the using units the necessary equipment and personnel so that their mission may be effectively accomplished? Can the 40mm battalion be successfully converted to the Skysweeper or would it be preferable to organize new units for this purpose? Is the tactical doctrine, as established, practical when put to actual test? Can the Skysweeper be moved tactically over long distances without causing undue maintenance problems?

These and many other questions we hope to be able to answer in the next few months.

Lieut. Col. Franklin A. Werner commands the 52nd AAA Battalion. Key staff officers include: Majors John M. Rutledge, Executive, and Wm. P. McKinney, Jr., S3; Captains Harry N. Roller, Electronics, and James H. Whisenant, S2; Lieutenants George F. McGarrity, Motor O, and Percy E. Roberts, Adjutant.

This battalion has been provided with the prescribed personnel and equipment as listed in the T/O&E. In addition, the 52d has been given supplementary officers and men who will function as a test team carefully observing and recording the results of each portion of the training cycle. Lt. Col. Ruben W. Mundy, representing the AA and GM Branch, TAS, is responsible for the training program. Lt. Col. Raymond E. Isenson, representing Army Field Forces Board Four, is responsible for the test results concerning matériel. Major Donald Millar, AA and GM Branch, TAS, is supervising the tactical phases of our operations.

The Troop Test will be divided into three separate sub-tests. The first phase will consist of a normal training cycle designed to teach our gun crews to efficiently employ the weapon in its various modes of operation. Upon completion of the basic training cycle, we will move into the field to test the tactical mobility of the Skysweeper. The last part of the test will consist of service practice and intensive maneuvers under closely simulated combat conditions.

Thus far the preliminaries and the tests have been very interesting. The battalion is on its toes with a high state of morale and enthusiasm.

[Lieut. Chaney graduated at the University of California in June, 1952, and was commissioned from the ROTC there. Since then he has graduated from the ABOC at Fort Bliss and gained his RA commission. Ed.]

5th Section, Btry B, 52nd AAA Battalion, AW.

601st AAA GUN BATTALION (90mm)

During the months of May and June, construction on the batteries' on-site positions has been heavily emphasized. All batteries, with the exception of "D" Battery, have moved into their mess halls and have either commercial water or well water now available at their positions. This makes a great improvement over the kitchen tents and the daily water runs. Construction of the maintenance building, already begun at several sites, will complete the building plan. The beautification program has been in full swing with glass and shrubbery planting being done at all positions. Concrete sidewalks are being laid and the ammunition bunkers at the gun ring are completed with the exception of "A" Battery. The batteries of this battalion all have the cable system from the generators to the guns installed completely outside the gun ring.

On Armed Forces Day, May 17, all the batteries held "Open House" for the friends and neighbors of the battery personnel. After the success of this venture, it was decided that every week

thereafter one battery would open their position to any visitors and guests who might be interested. On the afternoon of June 21st, "A" Battery held the first "Open House" with displays of barracks and equipment ready for inspection. The American Legion Post No. 241 at Sunnybrook, Maryland was invited and a large group attended. On June 28th, "B" Battery played host to the Gateway Lions Club.

During the past month, this battalion, along with the 75th AAA Gun Battalion, performed tests for the AAA Command in the problem of decentralized control of firing units and the suitability of TO&E Radios, the AN/TPS 1D radar and many other items. The results of the tests have not been released as yet but excellent training was obtained by the battalion.

The last week in June concluded the Advanced Individual Training Program for the 601st. This program completes the last eight weeks of basic training for many of the new men in the battalion.

Two decorations were awarded to men in this command. Sgt. Kilpatrick of "B" Battery was awarded the Bronze Star and Corporal Jeffers of "A" Battery was given a Commendation Ribbon with Medal Pendant. Both were awarded for meritorious service in Korea.

Plans are also under way for the lettered batteries to make the journey up to Bethany Beach, Delaware for target practice in the near future.

Lt. Col. James O. Murphy, who has been Battalion Commander since reactivation of the 601st on 1 January 1953, departs in August for a new assignment in Europe.

740th AAA GUN BN ACTIVATED

On 14 May 1953 the 718th AAA Gun Bn, a California National Guard Unit, was relieved from active Federal service at the Presidio of San Francisco, California. The battalion had completed the Army Training Program at Fort Bliss, Texas, and subsequently had been a part of the AA defense of the San Francisco Bay Area.

The 740th AAA Gun Battalion was reactivated on 14 April 1953 to replace the outgoing National Guard battalion. The battalion served in Europe in WW II. It is authorized streamers for the campaigns of England 1944, for Normandy, and for Northern France, was twice cited in Orders of the Day of the Belgian Army for action in the defense of Antwerp and of Antwerp Harbor, and was awarded the Belgian Fourragere.

The 740th AAA Gun Battalion is commanded by Lt. Col. James C. Parker.

Brigadier General Edward J. McGaw, CG, WAAC, awards PFC Johnny A. Butcher, Btry C, 740th AAA Bn, the Soldier's Medal for rescuing two civilians from drowning.

2nd ARMY ORC CAMP

Fort Miles, Delaware, and Dewey Beach were the scenes of active AAA training by the Second Army ORC during the period July 4 to 18.

Colonel Armand F. Hoehle, commanding the 313th AAA Group, Pittsburgh, Pa., was the brigade commander.

Colonel John M. Welch commanded the 302nd AAA Group, Cincinnati, Ohio, including:

199th AAA AW BN, Major L. R. Laughner commanding, Cleveland, Ohio.

453rd AAA AW BN, Lt. Col. H. W. Rogers commanding, Columbus, Ohio.

482nd AAA AW BN, Major R. Sarisfield commanding, Rossmoyne, Ohio.

301st AAA Operations Det, Major Geo. Tollini commanding, Cincinnati, Ohio.

Colonel Martin D. Meyers commanded the 326th AAA Group, Philadelphia, including:

486th AAA AW BN, Major C. C. Edwards commanding, Richmond, Va.

463rd AAA AW BN, Major S. C. Dunn commanding, Springfield, Delco, Penna.

387th AAA AW BN, Lt. Col. Robert Wetherall commanding, New Castle, Dela.

457th AAA AW BN, Lt. Col. John S. V. B. Shriver commanding, Baltimore, Md.

304th AAA Operations Det, Major S. J. Steinberg commanding, Havertown, Penna.

The beach weather was delightful and also perfect for their best AAA firing in several years.

260th AAA GROUP DCNG

The 260th AAA Group under command of Col. Geo. V. Selwyn was active in camp at Bethany Beach from July 4 to 18.

Major General Wm. H. Abendroth, Commander of the DC Guard, was camp commander.

Lt. Col. Robert T. Bard, CO, 340th AAA Gun Battalion, commanded the major firing unit in camp. And the 90mm AAA firing is the main event.

The 260th, Major Abram L. Green, CO, and the 380th under Lt. Col. Andrew G. Conlyn did not go in full strength; however, they had active contingents.

BOOK REVIEWS

DE TASSIGNY'S STORY

THE HISTORY OF THE FRENCH FIRST ARMY. Marshal de Lattre de Tassigny. The Macmillan Company, 1952. 532 Pages; Illustrated; Maps; Index; $9.50.

In many ways this will be a curious book to the American reader because of its intensely personal tone. It is an extension of General de Lattre's personality just as his Army was, and both reveal a man of genius—and of a thousand contradictions.

The task he accomplished with the French First Army might well have crushed a lesser man. He had as a nucleus veteran colonial units which he assembled and trained in North Africa, and a tough, battle-hardened corps from Italy. Nearly all of these troops had been trained in the traditions of the regular service and were led by men who were products of that service. This was the army Marshal de Lattre led into Southern France with conspicuous success.

To it he had to add over a hundred thousand veterans of the Resistance, young men who had learned soldiering in a different school of war and who were not accustomed to the more formal discipline of the conventional military unit. The integration had to be accomplished while some units of the army were actively fighting the enemy. Yet it was accomplished—not without friction —and the army continued to fight magnificently.

Add to this a cumbersome logistical setup, partly through French channels and partly through American channels, and the constant and often conflicting pressures which the Allied command and de Gaulle's government exerted on de Lattre, and you have a troop commander's nightmare.

But de Lattre guided his conduct on two primary loyalties—to his men and to France. For them he fought magnificently, against the Germans, and sometimes against his superiors. He was determined to help bring about the resurgence of French arms and he fought bitterly any move that might curb the effective fighting power of his army, for it and it alone represented the organized armed might of France. He did not always win his fight, but neither Sixth Army Group nor SHAEF were permitted any doubt of his point of view.

Marshal de Lattre had a deep and abiding affection for his men, an affection that illuminates every page of this book. To him, every man was important and he spared neither himself nor his commanders to see that no man was lost needlessly. This book, in fact, is a memorial to them.

Aside from the insight that he has given us into his own character, Marshal de Lattre has written an account that will serve historians well. It is an enormously detailed report on the organization, training and combat operations of the French First Army from the time of its organization for the landings in Southern France to final victory. It is very evidently the result of complete notes de Lattre must have made on the ground, augmented by exhaustive personnel research.—O.C.S.

DEVELOPMENT OF THE GUIDED MISSILE. By Kenneth W. Gatland. Philosophical Library, New York. 133 pages. $3.75.

The English author presents valuable information. His coverage of the development of guided missiles in Germany during World War II provides a necessary background. He also attempts to provide a projection into the future, including space ships and interplanetary rockets.

The military reader will find this publication an interesting and speculative treatise on guided missiles. The book is a concise review of guided missile information which is available to the general public.—I. A. P.

NORTH FROM MALAYA. By Wm. O. Douglas. Doubleday. 352 pp. $3.95.

Justice Douglas, in this briefing on conditions or conspiracies from Malaya to Korea, counsels his fellow Americans to rely on a sense of justice more than any material weapon to overcome communism in Asia.

In journeyings he has often proved to be far more than a mere globe-trotter between Supreme Court terms. This book, even more than his earlier ones, is news. Its timeliness, its topic, its vision and its views embrace the biggest problem in the world today. It offers a long-range, over-all plan rather than any pat, spot solution for strategy against Communist invasion and ideas.

Justice Douglas can expect dissents from some of his opinions, particularly about Korea, although he agrees with the 1950 decision to defend that country. He commends the Burmese for warding off communism by setting up a welfare state. He fears for the future of Indo-China. He contends that France, despite valor in fighting against Red encroachment in that area, will feed the flames unless it promises real independence to Viet Nam.

This book about Malaya, Burma, Indo-China, the Philippines, Formosa and Korea really is addressed to Americans, especially the well-intentioned but uninformed.

Justice Douglas holds that our lack of understanding of Communist revolutionary tactics in Asia is weakest of all, as is our understanding of the aspirations and situations of the people of Asia. He doubts that force of arms can drive Communist methods and ideas out of Asia. But he is convinced that a democratic counterrevolution can do it if the United States "helps Asia acquire the strength to win her own independence and to maintain and enjoy it" over any form of tyranny.

The difficulties, in his opinion, are not insurmountable. The first need, he says, is that we be faithful to our own traditions of democracy and rights if we are to champion the weak and oppressed in Asia. As a reporter, political philosopher and jurist, he writes: "The tradition of due process of law gives spiritual strength to the forces opposing communism in Asia. In fact, it sums up the basic conflict between the free world and communism."—R. W. K.

BOOKS RECEIVED

STRATEGIC PLANNING FOR COALITION WARFARE 1941-1942. U.S. Army in World War II. Supt. of Public Documents. 454 pages. $3.25.

MALENKOV: Stalin's Successor. By Martin Ebon. McGraw-Hill. 284 pages. $3.75.

THE RIVER AND THE GAUNTLET. By S. L. A. Marshall. Wm. Morrow & Co. 385 pages. $5.00.

News and Comment

Lieutenant General Schuyler

Major General Cortlandt Van R. Schuyler was recently promoted to the grade of lieutenant general and assigned as Chief of Staff to General Gruenther in SHAPE. Thus when General Gruenther recently relieved General Ridgway, General Schuyler took over General Gruenther's former assignment.

The job was not new to him. When Generals Eisenhower and Gruenther were organizing SHAPE Headquarters in 1951 General Schuyler was secured to serve as Special Assistant to General Gruenther. He served in that capacity at SHAPE until January this year when he was transferred to take command of the 28th Infantry Division in Germany.

USMA graduate, class of 1922, General Schuyler served with Antiaircraft Artillery until 1944, when he was named United States representative to the Allied Commission for Roumania. In 1947 he returned to Washington to serve as the Chief of the Plans and Policy Group, Army General Staff.

Brigadier General Robert J. Wood, whose orders to USAFFE were announced in last issue, has been reassigned to the Office of the Secretary of Defense with station in Paris.

Retirements

The following Antiaircraft Artillery Colonels retire on 31 July, each with more than 30 years honorable service and five years in grade:

Amoroso, Arnold D., PMS&T, Georgia Institute of Technology, Atlanta.

Anderson, George B., IG Section, Fourth Army.

Armstrong, Marvil G., Exec., Mil. Assistance Div., Hq, EUCOM, Germany.

Betts, Thomas J., Intelligence duty in London.

Chaplin, Robert T., Senior Army Instructor, ORC, Boston, Mass.

DeCamp, John T., Asst. IG, Hq, Sixth Army, Presidio of San Francisco.

Featherston, John H., Senior Army instructor, ORC, Columbia, S. C.

Frank, Karl C., PMS&T, Utah State College, Logan, Utah.

Goff, John L., Post Inspector General, Fort Lewis, Wash.

Hafer, Joseph B., PMS&T, University of Delaware, Newark.

Harrington, John H., Chief, Nevada Military District, Reno.

Harris, Charles S., Editor, ANTIAIRCRAFT JOURNAL.

Harry, John, Senior Army Instructor, ORC, Hartford, Conn.

Hartman, Norman E., Chief, AA Sec., Arty Br., CMD, D/A, Wash., D. C.

Heilfron, Milton, Senior Army Instructor, ORC, Presidio of San Francisco.

Holder, William G., Review Board Council, Wash., D. C.

Kahle, John F., Senior Army Instructor, N.G., Washington, D. C.

Kohn, Joseph P., PMS&T, Hillsborough High Schools, Tampa, Florida.

LaFrenz, William F., Dpy C/S, Calif. Mil. Dist., Presidio of San Francisco.

McLean, Donald, Info Section, OCAFF, Fort Monroe, Virginia.

Merritt, Wilmer B., G2, Hq Second Army, Fort Meade, Maryland.

Pamplin, Douglas G., OCAFF w/Sta M.I.T., Cambridge, Mass.

Phillips, Wilmer S., Chief, N. H. Mil. District, Manchester, N. H.

Sturman, J. Foxhall, Jr., Senior Army Instructor, NG, Boston, Mass.

General Jackson Retires

The Third Infantry Regiment, service units at Fort Lesley J. McNair and the U. S. Army Band turned out in colorful review on 26 June honoring the Fort McNair Commander, Colonel Harold R. Jackson, incident to his retirement and promotion to his wartime rank of Brigadier General.

A 1917 graduate of the U. S. Military Academy, General Jackson served with Antiaircraft Artillery in the United States and in Europe during World War II. He has served as post commander at Fort McNair for the past two years.

General and Mrs. Jackson are making an eight-month tour of Great Britain, Europe and French Morocco following retirement.

Colonel Joe D. Moss, World War II commander of the 112th AAA Group during the France and Germany campaigns, succeeds General Jackson as Post Commander at Fort Lesley J. McNair. His last assignment was as the Chief of the Procurement and Distribution Division G1, Department of the Army General Staff.

Colonel and Mrs. Moss will reside at Quarters 10, Fort McNair.

Merger

No progress has yet been made on the JOURNAL merger. Meanwhile, we continue to publish the ANTIAIRCRAFT JOURNAL on regular schedule and with our present editorial staff.

To the Editor

Inclosed is a roster of officers of the 44th AAA Brigade (Provisional) and subscriptions to the ANTIAIRCRAFT JOURNAL to permit the Brigade to start out on the Honor Roll of the JOURNAL, as a matter of course. We will continue to push for subscriptions and articles as we did when the 10th AAA Group was top headquarters for non-divisional AAA in Korea.

Colonel Charles G. Dunn commands the Brigade; Lt. Col. C. E. Dunlap, Jr., is the Executive; Major John B. Grogan, S1 and I am S2; Capt. Thos. A. Payne, S3 and Major Donald G. Seward, S4. Colonel John C. Bane now commands the 10th AAA Group and Lt. Col.

Recent Assignments

COLONELS

Abbey, Walter, to USA Forces, Far East, Yokohama.
Baya, George E., to OCLL, Washington, DC.
Buynoski, Adam S., to USA Forces, Far East, Yokohama.
Dutton, Shelley E., to USA Forces, Europe, Bremerhaven.
George, William C., to USA Forces, Far East, Yokohama.
Harrison, Joseph L., to USA Forces, Far East, Yokohama.
Logan, W. Bruce, to USA Forces, Europe, Bremerhaven.
Moses, DeMaurice, to USA Forces, Far East, Yokohama.
Norvell, James E., to USA Forces, Far East, Yokohama.
Patterson, Charles G., to Tactical Command, USA Forces, Austria.
Schaefer, Arthur F., to AAA RTC, Ft. Bliss, Tex.
Shaver, Maurice P., to 2nd AAA Group, Youngstown, N.Y.
Solomon, Maddrey A., to USA Forces, Europe, Bremerhaven.
Tubbs, Harry S., to USA Caribbean, Ft Amador, CZ.

LIEUTENANT COLONELS

Arnold, Samuel M., to 466th AAA AW BN, March AFB, Calif.
Ballagh, Robert S., to USA Forces, Far East, Yokohama.
Ballentine, John F., USA Forces, Far East, Yokohama.
Barry, Robert B., Jr., to USA Forces, Far East, Yokohama.
Bellamy, Paul E., USA Forces, Far East, Yokohama.
Boyce, Wilbur C., Jr., to USA Forces, Far East, Yokohama.
Butler, James L., USA Forces, Far East, Yokohama.
Carr, John R., to USA Forces, Europe, Bremerhaven.
Caulder, Bruce B., to USA Forces, Far East, Yokohama.
Debes, Dale A., to USA Forces, Far East, Yokohama.
Dueker, Fred E., to USA Forces, Far East, Yokohama.
Durgin, Chesley F., to USA Forces, Far East, Yokohama.
Edmunds, James M., to USA Forces, Far East, Yokohama.
Herman, Dean A., to 1st GM Gp, Ft Bliss, Tex.
Hill, William W., Jr., to 1st GM Group, Fort Bliss, Texas.
Johnston, Robert H., to USA Forces, Europe, Bremerhaven.
Kreager, Raymond F., to USA Forces, Far East, Yokohama.
Koshner, G., to 518th AAA Gun BN, Camp Hanford, Wash.
McGinn, Floy W., to USA Caribbean, Ft. Amador, CZ.
MacDonald, Vincent A., 71st AAA Gun Bn., Fort Belvoir, Va.
Manguso, Antonino H., to 1st GM Group, Fort Bliss, Texas.
Miccio, Louis, to AA & GM Br, TAS, Ft Bliss, Texas.
Newcomer, Francis K., Jr., to USA Forces, Far East, Yokohama.
Oswalt, John W., to USA Forces, Far East, Yokohama.
Parker, James C., to Stu Det, Univ. of Virginia, Charlottesville, Va.
Philbrick, Kenneth R., to USA Forces, Far East, Yokohama.
Pringle, Herman E., to USA Forces, Far East, Yokohama.
Reubel, Harry B., to Hampton Institute, Hampton, Virginia.
Ringgold, Charles L., to USA Forces, Far East, Yokohama.
Schooley, Carl T., to 1st GM Group, Fort Bliss, Texas.
Shookus, Anthony H., to USA Forces, Europe, Bremerhaven.
Thorkelson, William L., to USA Forces, Far East, Yokohama.
Williams, James W., to USA Forces, Far East, Yokohama.
Williams, William J., to USA Forces, Far East, Yokohama.

MAJORS

Anderson, John C., to USA Forces, Far East, Yokohama.
Aschenbeck, Arnold H., to USA Forces, Europe, Bremerhaven.
Aurand, Paul B., to USA Forces, Far East, Yokohama.
Bahme, Nathan, to USA Forces, Europe, Bremerhaven.
Bielefeld, Henry E., to TAS, Fort Sill, Okla.
Brown, William N., to 71st AAA Gun Bn., Ft. Belvoir, Va.
Burger, Paul S., to USA Forces, Far East, Yokohama.
Campbell, Thomas E., to USA Forces, Far East, Yokohama.
Carpenter, Delbert O., to USA Forces, Far East, Yokohama.
Coggans, Emory L., Jr., to 516th AAA Gun Bn., Detroit, Mich.
Davies, Edward H., to USA Forces, Europe, Bremerhaven.
Evans, David J., to USA Forces, Europe, Bremerhaven.
Frantz, Karl L., to USA Forces, Far East, Yokohama.
Fobes, Ramon D., to USA Forces, Far East, Yokohama.
Gandy, Thomas A., to Hq WESTARAACOM, Hamilton AFB, Calif.
Garofalo, William H., to 3rd AAA Group, Norfolk, Va.
Gray, Asa P., Jr., to USA Forces, Far East, Yokohama.
Hagemeier, Paul E., to USA Forces, Far East, Yokohama.
Holbrook, John S., to USA Forces, Far East, Yokohama.
Jacobs, Harold J., to USA Forces, Far East, Yokohama.
Jensen, Norman C., to Stu Det, TAS, Ft Bliss, Tex.
Keene, Lawrence E., to USA Forces, Europe, Bremerhaven.
Keys, Edward M., to USA Forces, Europe, Bremerhaven.
McCarthy, Paul N., to USA Forces, Far East, Yokohama.
McCartney, Robert W., to USA Forces, Far East, Yokohama.
McGiven, Paul L., to OCAFF, Fort Monroe, Va.
Mastellar, Bruce G., USA Forces, Far East, Yokohama.
Nagelmann, Bernard K., to USA Forces, Europe, Bremerhaven.
Sanguinetti, John H., to USA Forces, Europe, Bremerhaven.
Sharpe, John H., to USA Forces, Far East, Yokohama.
Sheehan, James T., to USA Forces, Far East, Yokohama.
Skeltstaltis, Walter, Jr., 66th AAA Gun Bn, Ft Hamilton, NY.
Smith, Temple C., to USA Forces, Far East, Yokohama.
Steckel, Chester J., to USA Forces, Far East, Yokohama.
Tedick, Eugene, to USA Forces, Far East, Yokohama.
Trafford, George H., to USA Forces, Far East, Yokohama.
Waugh, Edgar S., to USA Forces, Far East, Yokohama.
Winton, George P., to AFF Bd No. 1, Ft. Bragg, N.C.
Young, Blaine E., to USA Forces, Europe, Bremerhaven.

Alan B. White, the 41st Provisional Group.

In addition to the AAA defense mission, the Brigade is occupied in conducting training for ROKA personnel. A part of this is carried out by integrating the personnel directly into our battalions.

Colonel Dunn also serves as the AAA advisor to the Fifth Air Force.

James M. Bushnell
Major, Arty, PIO

To the Editor

Gentlemen:

Before winning my Army Wings I was a platoon leader with the 768th AAA Gun Bn., both in Chicago and Fort Bliss, Texas. Being a normal human being and not averse to seeing my name in print, I would like former associates to know I haven't completely laid down on the job over here.

I joined the 45th Infantry Division in October of 1952 as an Army Aviator with the 189th FA Bn., and have been flying regularly for them. I am about to rotate to KMAG within the next few days, and will spend about five months as an advisor to the ROKA aviation program.

Let's promote Army Aviation as TO&E for AAA!

1st Lt. Joseph Levinson
45th Inf Div Air Section

(Lieutenant Levinson has been awarded a bronze star medal and three air medals for his service in Korea.—Ed.)

To the Editor

I am forwarding eight subscriptions, which should make us 100% for the Honor Roll. Most of our junior officers subscribed while in OCS.

The major part of our work now would not be recognized by old AA officers, and the new ones are amazed to find themselves becoming Field Artillerymen with "half inch howitzers." We are concentrating more and more on indirect fire in support of infantry. The motto which has been adopted for our insignia is based on this mission —when the CCF at Chorwon referred to our massed quad .50 fire as "Running Water."

Harris A. McCormack
Captain, 145th AAA AW Bn
45th Division

Honor Roll—*Continued*

701st AAA Gun Bn
Lt. Col. F. F. Quist
705th AAA Gun Bn
Lt. Col. F. O. Roever
708th AAA Gun Bn
Lt. Col. P. L. Getsinger
710th AAA Gun Bn.
Capt. T. P. Chisman
712th AAA Gun Bn
Lt. Col. R. W. Harnett
716th AAA Gun Bn
Lt. Col. J. R. Stewart, N. Mex.
717th AAA Gun Bn
Lt. Col. E. D. Pelzer, N. Mex.
720th AAA Gun Bn.
Lt. Col. G. A. Duke, Calif.
724th AAA Gun Bn
Lt. Col. E. H. Hahn
725th AAA AW Bn
Maj. J. C. Maultsby
726th AAA Gun Bn
Lt. Col. C. F. Arnold, N. Mex.

737th AAA Gun Bn
Lt. Col. B. W. Perry
764th AAA Gun Bn
Lt. Col. E. D. Winstead
768th AAA Gun Bn.
Lt. Col. T. H. Kuyper
773rd AAA Gun Bn
Lt. Col. G. F. Slavin
804th AAA AW Bn (M)
Maj. S. N. Caudill, N. Mex.
865th AAA AW Bn
Lt. Col. R. B. Rounds
867th AAA AW Bn
Lt. Col. W. R. Parr
903rd AAA AW Bn
Lt. Col. F. J. Petrilli
933rd AAA AW Bn
Lt. Col. R. M. Huston
950th AAA AW Bn
Lt. Col. J. P. Wallis, Ga.
951st AAA Gun Bn
Lt. Col. W. G. Babbitt

30th AAA Lt. Btry
Capt. W. A. Brant

Operations Detachments

34th AAA Opns. Det.
Maj. J. Swerdya
131st AAA Opns. Det.
Maj. W. C. Fore, S. C.
142nd AAA Opns. Det.
Maj. B. D. Boyett, Ala.
177th AAA Opns. Det.
Capt. J. J. Niehoff
181st AAA Opns. Det.
Maj. R. H. Moser
286th AAA Opns. Det.
Capt. H. J. Tarves
302nd AAA Opns. Det.
Maj. N. L. Funke
327th AAA Opns. Det.
Maj. Philip Lanasa
500th AAA Opns. Det.
Maj. C. O. May, Jr.

501st AAA Opns. Det.
Maj. D. I. Grant
502nd AAA Opns. Det.
Capt. J. R. Myers
506th AAA Opns. Det.
Maj. G. M. McKelvy
508th AAA Opns. Det.
Capt. G. J. Lahey
509th AAA Opns. Det.
Maj. J. P. Bodkin
510th AAA Opns. Det.

511th AAA Opns. Det.
Maj. G. J. Burke
515th AAA Opns. Det.
Lt. R. J. Hunter
517th AAA Opns. Det.
Lt. R. A. Durkins
525th AAA Opns. Det.
Lt. George McGee, Jr.

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2. To qualify or to requalify for a listing on the JOURNAL Honor Roll, units submit the names of subscribers and a roster of officers assigned to the unit on date of application.

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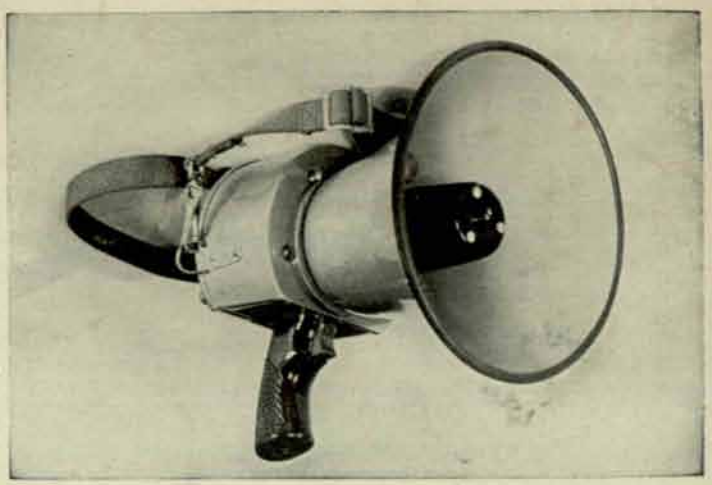

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