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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGDA (M) (23 Dec 69) FOR OT UT 694004

30 December 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 5th Battalion, 2d Artillery, Period Ending 31 October 1969 (U)

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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

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The Adjutant General

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    5th Battalion, 2d Artillery
Commandant of the Marine Corps
AVFB-FAG-C 2 November 1969

SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

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1. (C) Section I, Operations: Significant Activities
   a. Administration/Personnel:

      (1) During the reporting period personnel replacements were received in sufficient numbers to fulfill operational requirements. No critical shortage existed during this period. However, during the last three weeks of the reporting period the enlisted strength of the battalion dropped from 98% to 94% of the authorized figure. During this three week period only 19 replacements were received, while there were 43 losses. Since many replacements do not possess an MOS authorized within the battalion or the attached batteries, the battalion OJT program continues to be vitally important.

      (2) A potential personnel problem area is the high percentage of category III and IV enlisted replacements received by the battalion. During the month of September the battalion received a total of 72 enlisted men, 54 (75%) of whom were category III or IV. Of the 25 replacements of MOS 16F received during the same period, 16 (61.6%) were classified as category IV and seven (26.9%) as category III. Only three replacements (11.5%) were of category II and none were of category I. In a war which lends itself to small unit tactics, such as Vietnam, men of high mental capacity are needed to fill positions as combat leaders. These men must be relied upon to advise supported commanders, maintain expensive equipment, and react to critical combat situations.

      (3) During the reporting period the following awards were presented to assigned and attached personnel:
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

AWARDS

Distinguished Service Cross
Silver Star
Legion of Merit
Soldier's Medal
Bronze Star (Valor)
Bronze Star (Achievement)
Bronze Star (Meritorious Service)
Air Medal
Army Commendation Medal (Valor)
Army Commendation Medal (Meritorious Service)
Purple Heart

(4) The following awards were presented to the 5th Bn (AW)(SP) 2d Arty or attached elements, as indicated:

<table>
<thead>
<tr>
<th>AWARD</th>
<th>ORGANIZATION</th>
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<tr>
<td>Meritorious Unit Commendation</td>
<td>Btry D, 5th Bn (AW)(SP) 2d Arty</td>
</tr>
<tr>
<td>Vietnamese Cross of Gallantry w/Palm</td>
<td>5th Bn (AW)(SP) 2d Arty and attached units</td>
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<tr>
<td>Vietnamese Cross of Gallantry w/Palm</td>
<td>Btry C, 5th Bn (AW)(SP) 2d Arty</td>
</tr>
<tr>
<td>Civil Action Honor Medal First Class</td>
<td>Btry C, 5th Bn (AW)(SP) 2d Arty</td>
</tr>
</tbody>
</table>

(5) The Battalion Headquarters was engaged in normal operations during the reporting period with increased effort directed toward strengthening the perimeter defense of the headquarters compound.

(6) There were three administrative moves of battery headquarters during the reporting period. (See b (2) below.)
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

(7) Battalion personnel statistics as of 31 October 1969.

(a) Current Strength:

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<th>Battalion</th>
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(b) Gains and Losses 1 August - 31 October 1969:

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<th>Battalion</th>
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<tr>
<td>Btry D (MG) 71st Arty</td>
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(c) Casualties 1 August - 31 October 1969:

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<td>Killed in Action</td>
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<tr>
<td>Wounded in Action</td>
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<tr>
<td>Missing in Action</td>
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</tr>
<tr>
<td>Non-Battle Deaths</td>
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(d) R & R Experience:

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<th>Location</th>
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SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

Current organizational structure of the 5th Battalion (AW)(SP) 2d Artillery and attached units is at Inclos:

b. Operations:

(1) General: This reporting period was characterized by the repositioning of automatic weapons and searchlight assets consistent with the changing operational situation. The redeployment of certain maneuver elements within the III and IV Corps Tactical Zones necessitated the relocation of three of the M42A1 batteries, as described in (2) below.

(2) Unit Attachments and Missions:

(a) During this reporting period, the battalion remained assigned to United States Army Vietnam and attached to II Field Force Vietnam, with operational control of the battalion's assets exercised by II Field Force Vietnam Artillery.

(b) Battery A remained OPCON to the 1st Infantry Division. Due to the limited facilities available at Phu Loi, the battery headquarters was forced to relocate to Lai Khe upon occupation of Phu Loi by elements of the 82d Airborne Division. The move to Lai Khe commenced on 2 September and was completed on 7 September. Upon arrival at Lai Khe the battery initiated an extensive renovation program of the battery headquarters area. This renovation program is still in effect with considerable progress having already been made.

(c) Battery B remained OPCON to the 25th Infantry Division with the battery headquarters at Cu Chi.

(d) Battery C remained OPCON to the 9th Infantry Division until the redeployment of the division on 31 August. At that time one platoon (eight M42A1's) was placed under the operational control of the 3d Brigade, 9th Infantry Division (the remaining element of the division) for deployment in Long An Province, while the other platoon was placed in General Support of II Field Force Vietnam Artillery. The battery headquarters was relocated to Camp Price (IT 042115) with the move from Dong Tam commencing on 24 August and terminating on 31 August. Upon arrival at Camp Price the battery immediately set up an intensive program to rotate tracks through the battery headquarters for a complete technical inspection and extensive maintenance.

(e) Battery D remained in General Support of II Field Force Vietnam Artillery.
2 November 1969

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Artillery, with elements deployed as follows: Four sections (eight M2A1's) OPCON to 23d Artillery Group; one section OPCON to the Royal Thai Army Volunteer Force (RTAVF); one section OPCON to the Australian Task Force (ATF); and two sections supporting missions for II Field Force Vietnam Artillery. Due to a realignment of supported forces, Battery D Headquarters was relocated from Bearcat to FSPB Concord (YT 034174). The move began on 10 October and was completed on 11 October. Upon occupation of the new area extensive rebuilding of bunkers, living quarters, and firing positions was initiated.

Battery D (MG) 71st Artillery remained in General Support of II Field Force Vietnam Artillery and attached to 5th Battalion (AV)(SP) 2d Artillery with firing elements further OPCON as follows: One section (four M551's) OPCON to the 25th Infantry Division; one section OPCON to 6th Battalion, 27th Artillery; one section OPCON to 2d Battalion, 35th Artillery; one section OPCON to 2d Battalion, 32d Artillery; one half-section OPCON to the RTAVF; and one and one half sections supporting missions for II Field Force Vietnam Artillery. The battery Headquarters remained collocated with Headquarters, 5th Battalion (AV)(SP) 2d Artillery.

Battery I (SLT) 29th Artillery remained attached to 5th Battalion (AV)(SP) 2d Artillery and further OPCON as follows: First and Third Platoons OPCON to the 1st and 25th Infantry Divisions respectively. The Second Platoon remained in General Support of II Field Force Vietnam Artillery with elements OPCON to the 3d Brigade, 82d Airborne Division; the 1st Cavalry Division; Capital Military Assistance Command (CMAC); 7th Battalion, 8th Artillery; 2d Battalion, 32d Artillery; 6th Battalion, 27th Artillery; the RTAVF; 3d Brigade, 9th Infantry Division; and the ATF. The battery Headquarters remained collocated with Headquarters, 5th Battalion (AV)(SP) 2d Artillery.

Current deployment and individual unit missions of 5th Battalion (AV)(SP) 2d Artillery (to include attached batteries) are listed at Inclosure 2.

Automatic weapons and searchlight deployments are portrayed graphically at Inclosure 3.

Efforts to enhance the employment of automatic weapons and searchlight assets: During the reporting period members of the battalion staff completed a comprehensive paper dealing with the employment of automatic weapons and searchlights in Vietnam. This paper outlines in detail
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the principles which commanders must follow in order to successfully employ automatic weapons and searchlights. It also emphasizes the need for maintenance and other logistical support. A copy of this paper, entitled "Employment of Automatic Weapons (AW) and Searchlights in Vietnam", is found at Inclosure 4.

(5) Evaluation of Motorized Big Lights: During the reporting period the battalion was assigned the task of evaluating two Motorized Big Lights (MBL). These lights employ xenon tubes in a rectangular head assembly mounted on a 42 foot expanding tower. Powered by a 30 KW generator, the light has both visible light and infrared capabilities. One MBL was deployed to FSPB St. Barbara (XT 276680) on 10 October and the second was deployed to Song Be (YU 143072) on 14 October. The second light was redeployed to FSPB Hunsley (XT 596270) on 30 October. The plan for evaluation of these lights calls for evaluation at several locations. This will allow for evaluation in varying terrain and will give the best overall evaluation of the MBL.

(6) Significant Combat Operations:

(a) 5 August 1969, Nui Ba Den - At approximately 050700H August 1969, Dusters 241 and 242 of B/5/2 Arty, along with two 155-mm SP howitzers, were dispatched from Tay Ninh in support of B/A/23 Inf on a search and destroy mission in the vicinity of Nui Ba Den Mountain. Upon reaching the base of the mountain (grid XT 304590), the Dusters, the howitzers, and the infantry fired at bunkers and enemy troops in the open in grid XT 2958. The Dusters expended 610 rounds of 40-mm ammunition between 0940H and 1515H. The AW Commander's estimate was six VC/NVA KIA credited to the Dusters.

(b) 7 August 1969, Nui Ba Den - At 070700H August 1969, Dusters 231 and 232 of B/5/2 Arty, departed Tay Ninh in support of the 4/23 Inf on a search and destroy mission in the vicinity of Nui Ba Den Mountain. Upon reaching grid XT 297553, the Dusters expended a total of 954 rounds of 40-mm ammunition at suspected movement in grid XT 291571 and grid XT 287567. During the firing two secondary explosions were observed. The AW Commander's estimate was two VC/NVA KIA credited to the Dusters.

(c) 8 August 1969, Song Be - At approximately 082358H August 1969, a Quad crew from D/71 Arty and a searchlight crew from I/29 Arty, both positioned on the perimeter, observed an unknown size VC/NVA sapper force crossing the runway at Song Be Airfield. The VC/NVA force was immediately engaged by the Quad. The VC/NVA soldiers returned fire with small arms
and automatic weapons as they withdrew. An infantry sweep conducted at first light by elements of the 1st Cavalry Division revealed several blood trails in the area fired on by the Quad. Although no body count could be established, the base commander credited the Quad with thwarting the attack.

(d) 11 August 1969, FSPB St. Barbara - At 10245H August 1969, FSPB St. Barbara was brought under a rocket and mortar attack, with a coordinated ground attack being conducted by an unknown size sapper force. The attacks by fire, consisting of an unknown number of 107-mm rockets, 82-mm mortars, RPG's and 60-mm mortars, were launched from several directions, flashes being observed at azimuths of 1200 mils, 3700 mils, 4400 mils, 4800 mils, 4900 mils and 6400 mils. Meanwhile, sappers, by the use of satchel charges, Bangalore torpedoes, and fragmentation grenades, breached the west and south sides of the perimeter. Upon observing the rocket and mortar flashes, the four Quad crews from D/71 Arty, positioned on the four corners of the perimeter, immediately returned fire. A searchlight vehicle and a Quad, collocated on the southwest corner of the perimeter, received direct hits during the initial volley of mortar rounds. The searchlight was destroyed and its occupant killed, while the Quad was lightly damaged. Two of the crewmen of this Quad were also wounded early in the attack. Upon observing the impacts on the southwest corner of the perimeter, the Quad Section Leader moved from his position on the southeast corner of the perimeter to the Quad and searchlight position that was under attack. Enroute to that position, he was wounded by a fragmentation grenade thrown by a VC/NVA who had breached the perimeter between the Quads. At approximately the same time, another VC/NVA, having breached the western perimeter, threw a fragmentation grenade into a D/71 Arty bunker, causing extensive damage to an AN/GRC-106 radio. This attacker was killed on the berm near the damaged Quad. The attack ceased at approximately 0545H. During the engagement the Quads fired 14,500 rounds of caliber .50 ammunition, 1050 rounds of M60 machine gun ammunition, and an unknown number of M79 rounds. In addition to the one enemy KIA near the damaged Quad, three additional VC/NVA bodies were found outside the south side of the perimeter, between two Quad positions. While credit for the four VC/NVA KIA could not be positively determined, the infantry commander commended the Quad crews for their outstanding fire support in the face of the devastating enemy fire.

(e) 17 August 1969, FSPB St. Barbara - At 170315H August 1969, FSPB St. Barbara came under an RPG and mortar attack while a coordinated ground attack was initiated by an unknown size sapper force. The attacks by fire, consisting of from 40 to 50 rounds of mixed mortar and RPG fire,
were launched from four different locations, flashes being observed at azimuths of 4700 mils, 4800 mils, 5000 mils and 5600 mils. Meanwhile, sappers had breached the north side of the perimeter. Upon observing the mortar and RPG flashes, the four Quad crews from D/71 Arty, positioned on the four corners of the perimeter, immediately returned fire on the flashes, suppressing the mortar and RPG fire. While sappers penetrated the north side of the perimeter, three VC/NVA soldiers fired RPG's and small arms directly at Quad D44 on the southwest corner of the perimeter. The Quad returned caliber .50 fire killing the three VC/NVA. During the engagement, which lasted until 0515H, the four Quads fired 13,200 rounds of caliber .50 ammunition and 4300 rounds of M60 machine gun ammunition. Enemy losses during the engagement were 19 VC/NVA KIA, seven of whom were credited to Quad D44. Two Quad crewmen sustained minor wounds during the attack. The Quad crews recovered the following: One assault rifle, one satchel charge, and several hand grenades. An infantry sweep conducted at first light approximately fifty meters in front of the Quad position resulted in the discovery of the following: Two satchel charges, 104 assorted grenades, one bangalore torpedo, one bag of rice, five first aid kits, six RPG's, and one RPG-2 launcher.

(f) 19 August 1969, FSPB St. Barbara - At 190100H August 1969, by use of infrared light, the searchlight crew of 1/29 Arty, located on the northwest corner of the perimeter, detected five VC/NVA attempting to penetrate the perimeter wire. The searchlight crew switched to white light, illuminating the VC/NVA. The enemy was engaged with M60 and M16 fire by guards on the northern perimeter. Results of the engagement were two VC/NVA KIA with the searchlight crew being credited with preventing further penetration by the enemy.

(g) 19 August 1969, Song Be - At approximately 190200H August 1969, Song Be Base Camp received a ground probe from a VC/NVA force consisting of approximately eight VC/NVA. The VC/NVA were observed by the Quad and searchlight crews of D/71 Arty and 1/29 Arty, respectively. The crewmen of both vehicles immediately took the enemy under fire with M60 and M79 fire. The VC/NVA returned fire with small arms and automatic weapons while withdrawing under the intense fire. During the engagement three explosions, resulting in minor damage, were observed in the vicinity of the ammunition storage area. First light observations revealed that a board had been placed across the outer barbed wire in an attempt to breach the perimeter.

(h) 25 August 1969, Nui Ba Den (Rock Crusher) - At 252335H August 1969, movement was observed on the southwest side of Nui Ba Den Mountain.
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Searchlight #342 of 1/29 Arty flashed white light on grid XT 268564,
illuminating 10 to 12 VC/NVA. The enemy troops immediately began firing
small arms into the friendly positions. Dusters 211 and 212 of B/5/2
Arty, along with APC's of 2/34 Armor, returned fire at the enemy troops.
The Dusters expended 200 rounds of 40-mm ammunition and 265 rounds of
M60 machine gun ammunition. On 29 August 1969 a sweep of the area
was conducted by the 2/34 Armor. The sweep resulted in the discovery of four
VC/NVA KIA, two of whom were credited to the Dusters (official).

(i) 30 August 1969, Dau Tieng Bridge - At 000000H August 1969,
Dusters 141 and 142 of A/5/2 Arty, while securing the Dau Tieng Bridge,
received sniper fire from an enemy position in a woodline along the river:
at a range of approximately 300 meters. Duster 141 returned fire with
the M60 machine gun, expending 75 rounds. A sweep of the area conducted
at 0500H resulted in the discovery of one VC/NVA KIA. Duster 141 was
credited with the kill by the officer in charge of the bridge site.

(j) 3 September 1969, Nui Ba Den (Rock Crusher) - At 031545H Sep-
tember 1969, movement was observed on the side of Nui Ba Den Mountain at
coordinates XT 288565. Elements of 2/34 Armor and Duster 212 of B/5/2
Arty engaged the enemy. The Duster expended 130 rounds of 40-mm and
20 rounds of M60 machine gun ammunition. A sweep of the area resulted in
the discovery of 27 VC/NVA KIA, four of whom were credited to Duster
212 by the commander of the armor elements (official).

(k) 5 September 1969, FSPB Thunder III - At approximately 000000H
September 1969, FSPB Thunder III was brought under attack by a sapper
force, the estimated strength of which was 100 men. By the use of RPG's,
satchel charges, and grenades, a portion of the force breached the peri-
meter. During the attack, Dusters 121 and 122 of A/5/2 Arty fired a
total of 180 rounds of 40-mm ammunition and several hundred rounds of M60
machine gun ammunition. The VC/NVA force suffered 15 killed inside the
perimeter and at least 10 killed outside the perimeter. A/5/2 Arty suffered
no casualties or damage, however, one U. S. infantryman was KIA. AW Com-
mander's estimate was 10 VC/NVA killed by the Dusters.

(l) 5 September 1969, Duster Compound - At 050115H September 1969,
Duster Compound sustained a light RPG attack. Three RPG's, fired from
approximately 100 meters off the southern perimeter, impacted inside the
compound. Guards in a tower in the vicinity of the enemy position
observed flashes from the RPG launchers. With the aid of a stelar light
scope they were then able to detect three person's. The guards imme-
diately engaged the enemy with small arms and hit them at approximately.
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0205H a radar sighting indicated that five to eight personnel were moving southeast at a range of 1570 meters on an azimuth of 2535 mils from the compound. Clearance was requested to engage the target with M42A1 fire, but was denied due to the proximity of a friendly ambush position. At first light, elements of 5/2 Artv sweep the area of the suspected enemy launch position. Found on the sweep were footprints and general signs of activity at the suspected launch position. Footprints, as well as a rubber sandal, were found leading away from the site. Guards who had seen the earlier activity from the tower confirmed that the area which showed signs of previous activity was the same area from which movement and flashes were detected. Inspection of both the launch site and the impact areas indicated that the primary targets were the 155-mm SP howitzers of A/2/35 Artv located in the compound. The RPG attack against Duster Compound coincided with rocket attacks against Bien Hoa Air Base and Bien Hoa Army Base and were probably designed to suppress the counter-rocket fire of the howitzers. Detection of the launch site was difficult due to extremely poor visibility. Only those guards manning posts equipped with starlight scopes were able to observe the enemy personnel. Results of the attack were no friendly casualties and light damage to a one quarter ton truck.

(m) 5 September 1969, Nui Ba Den (Rock Crusher) - At 052345H September 1969, while harassment and interdiction missions were being fired by Dusters 211 and 212 of B/5/2 Artv, guards in a tower detected movement approximately 500 meters off the perimeter at coordinates XT 266568. The area was illuminated by 4.2 inch mortars of D/2/34 Armor while Duster 211 engaged the enemy with 10 rounds of 40-mm fire. A sweep of the area, conducted the following morning by D/2/34, resulted in the discovery of one VC/NVA KIA, credited to Duster 211 by the Commanding Officer, 2/34 Armor.

(n) 6 September 1969, Nui Ba Den - At approximately 061530H September 1969, Dusters 231 and 232 of B/5/2 Artv, while conducting a search and destroy mission with A/4/23 Inf and an ARVN Ranger Company, received small arms fire from an estimated VC/NVA company in the vicinity of XT 2957. The Dusters immediately returned fire into the enemy position, expending 712 rounds of 40-mm ammunition. One secondary explosion was observed during the engagement. Results of the attack, besides the secondary explosion, were one U. S. soldier KIA (from 4/23 Inf) and one U. S. soldier WIA (from B/5/2 Artv). A sweep of the area was not conducted. AW Commander's estimate was five VC/NVA KIA credited to the Dusters.

(o) 13 September 1969, Nui Ba Den - At 130830H September 1969,
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Dusters 231 and 232 of B/5/2 Arty, along with one 8-inch howitzer from
B/2/32 Arty, departed Tay Ninh in support of A/4/23 Inf on a search and
destroy mission in the vicinity of Nui Ba Den Mountain. At 104CH, while
the Dusters, the howitzer, and the infantry elements were in the vicinity
of coordinates XT 298561, the force received three 60-mm mortar rounds
and small arms sniper fire from the area of coordinates XT 295566. At
121411, the force received two more 60-mm mortar rounds from the same loca-
tion. At 1415H, the force again received two 60-mm mortar rounds. On all
three occasions, the Dusters immediately returned fire, expending a total
of 1010 rounds of 40-mm ammunition. There was negative damage or casual-
ties to the friendly elements. AW Commander's estimate was five VC/NVA
KIA.

(p) 17 September 1969, Dau Tieng Bridge - At 170230H September 1969,
Duster 141 of A/5/2 Arty, while securing the Dau Tieng Bridge, received
a mission to fire on a personnel radar target. The Duster fired 105
rounds of 40-mm ammunition. A subsequent sweep of the area resulted in
the discovery of one VC/NVA KIA. Duster 141 was credited with the kill
by the officer in charge of the bridge site (official).

(q) 17 September 1969, FSPB St. Barbara - At approximately 172357H
September 1969, FSPB St. Barbara received 15 to 20 rounds of 82-mm mor-
tar fire. Dusters 211 and 212 of D/5/2 Arty were in position on the
perimeter at the time of the attack. Crewmen of Duster 212 observed
mortar flashes and immediately engaged the launch positions, expending
190 rounds of 40-mm ammunition and silencing the mortars. During the
engagement the Duster crewmen observed two secondary explosions.

(r) 25 September 1969, Long Binh - Nui Dat Convoy - At approxi-
mately 251130H September 1969, while escorting a U. S. convoy, crewmen
on Quad D64 of D/71 Arty observed an ARVN convoy, approximately 200 meters
to their front, come under an ambush attack (coordinates YS 198848). Quad
D11 of D/71 Arty, along with two V-100 armored cars from the trailing
U. S. convoy, was dispatched forward to support the ambushed convoy. Once
Quad D11 was in position, it began receiving small arms, automatic weap-
ons, and RPG fire from the treelines along both sides of the road. The
Quad returned fire expending 4,100 caliber .50 rounds, 400 M60 machine
gun rounds, 36 M79 rounds, and an unknown number of M16 rounds. Contact
was broken at 1445H. AW Commander's estimate was 60 VC/NVA KIA credited
to Quad D11.

(s) 1 October 1969, Xuan Loc (Husky Compound) - At approximately
012000H October 1969, Husky Compound sustained a ground probe. Quads
D51 and D52 of D/71 Arty were providing perimeter security when the com-
 pound began receiving small arms and automatic weapons fire. Both Quads
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery
for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

returned fire expending a total of 5700 rounds of caliber .50 ammunition.
A subsequent sweep of the area by an ARVN unit resulted in the discovery of numerous blood trails. The squad leader of D51 observed the ARVN unit recover the bodies of two VC/NVA immediately in front of his position. D51 was credited with two VC/NVA KIA (AW Commander's estimate).

(t) 3 October 1969, FSPB Thunder I - At 031430H October 1969 Dusters 231 and 232 of A/5/2 Arty were providing security for an engineer section at coordinates XT 718385. A lone Vietnamese approached the Dusters from a nearby treeline and stated that he wanted to surrender to the Duster crewmen. He had in his possession North Vietnamese money and an identification card of unknown origin. After his surrender the man was evacuated to 3d Bde, 1st Inf Div Hq.

(u) 6 October 1969, Nui Ba Den - At 060430H October 1969, crewmen of searchlight 341 of I/29 Arty, who were providing perimeter security at the time, observed movement on the side of Nui Ba Den Mountain near their perimeter position. Dusters 211 and 212 of B/5/2 Arty, also providing perimeter security, were alerted. The Dusters fired 220 rounds of 40-mm ammunition while the searchlight crew fired 200 rounds of M60 machine gun ammunition at the suspected enemy location. The crewmen of searchlight 341 were credited with four VC/NVA KIA, confirmed by the Commanding Officer of D/2/34 Armor (official).

(v) 6 October 1969, Nui Ba Den - At 060830H October 1969, Dusters 211 and 212 of B/5/2 Arty were providing fire support from the perimeter for a sweep being conducted by A/4/23 Inf on the side of Nui Ba Den Mountain. The infantry elements observed movement (coordinates XT 265567) at a suspected ambush site and marked the area with smoke. The Dusters engaged the enemy positions, expending 604 rounds of 40-mm ammunition. A subsequent sweep of the area resulted in the discovery of two VC/NVA KIA credited to the Dusters by the Commanding Officer of A/4/23 Inf (official).

(w) 9 October 1969, FSPB Grey - At 091310H October 1969, Dusters 241 and 242 of D/5/2 Arty were escorting a Royal Thai Army Volunteer Force 24-ton truck from Bearcat to FSPB Grey. The truck was ambushed at YS 186938, sustaining a direct hit by one RPG. The section chief of the Dusters engaged the enemy with 40-mm fire, expending approximately 200 rounds. Two VC/NVA were KIA, credited to the Dusters.

(x) 22 October 1969, XT 395247 - At approximately 221145H October 1969, the Battery Commander and three other personnel from B/5/2 Arty, while enroute from Tay Ninh to FSPB Houston (XT 436073) in a OH-1D
aircraft from the 173d Assault Helicopter Company, observed movement near a treeline 7½ kilometers west of Go Da Ha (X:\ 3952;7). Descending from an altitude of 2000 feet to 20 feet to conduct a visual reconnaissance, the aircraft sustained seven hits but was able to fly to Lai Khe for repairs. The door gunners returned fire with M60 machine guns but the results of the fire are unknown. There were no friendly casualties.

c. Logistics/Maintenance:

(1) Maintenance Problems: With the continuous flow of replacement M42A1 Dusters within the closed loop program, the battalion has virtually eliminated the overmileage and overage track problem. However, the maintenance problem presented by the high mileage traveled by the combat vehicles of the battalion still exists. This is particularly true of the 2½ ton trucks from the machine gun battery. These vehicles are not only high mileage vehicles, but are also overweight. These facts combine to produce serious maintenance problems with those Quads used for escort. The following steps have been taken to alleviate the maintenance problems:

(a) A systematic motor-stables program has been initiated.

(b) Greater emphasis has been placed on the proper requisitioning of repair parts.

(c) A program has been initiated to insure the systematic rotation of high mileage vehicles.

(2) Repair Parts Supply: The supply system continued to show slight improvement during the reporting period. More importantly, the batteries have placed continuous emphasis on the proper requisitioning of repair parts. These facts combine to insure the shortest possible down time for deadlined vehicles.

(3) Summary of Overall Maintenance Posture:

(a) Close surveillance of unit maintenance activities through the battalion OMSI program continued through the reporting period. Detailed inspections were conducted of both the maintenance and maintenance management programs of all batteries.

(b) The maintenance sections of the battalion are all very close to full TOE strength. However, several assigned PLL clerks were not fully
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

qualified to perform the duties required by the MOS. These clerks were enrolled in a USARV PLL school and have also been assisted by frequent visits by members of the battalion maintenance section.

(c) In summary, except for the AN/MSS-3 searchlights and the Quads, the overall maintenance posture of the battalion continues to show improvement. When replacement AN/MSS-3 searchlights are received the maintenance posture of the searchlight battery will be greatly improved. Indications are that 5 ton trucks (recently approved for the machine gun battery MTOE) will be issued in the near future. If so, the problem outlined in c(1) above, will be lessened if not completely eliminated.

(4) Total mileage traveled for the months of July, August, and September for each battery.

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AVFB-FAG-C

2 November 1969

SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

2. (C) Section 2: Lessons Learned: Commander's Observations, Evaluations and Recommendations

   a. Personnel: None

   b. Operations:

      (1) Employment of 23" Xenon Searchlight with Snipers

         (a) OBSERVATION: The 25th Infantry Division has incorporated the use of 23" xenon searchlights into its sniper program with considerable success.

         (b) EVALUATION: A method of employing the 23" xenon searchlights is to switch on the white light for a period of time, turn it off, and then scan the same area with infrared light. The VC/NVA, fearing the white light, attempt to hide while it is on and often leave the area immediately after the white light is turned off. By use of a starlight scope the sniper is better equipped to detect the target when employing infrared light.
CONFIDENTIAL

AVFB-PAC-C

2 November 1969

SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

(c) RECOMMENDATION: That units supported by xenon searchlights consider employing searchlights and snipers (equipped with a starlight scope) as teams. Special consideration should be given to fire support bases that are adjacent to known or suspected routes of enemy approach.

(2) Need For Periodic Registration of 40-mm Guns

(a) OBSERVATION: Results of a registration mission recently conducted by a Duster crew from this battalion indicated the necessity of periodic registration of 40-mm guns.

(b) EVALUATION: Using an aerial observer to adjust fire, a Duster crew fired a registration mission at a quadrant which should have given a range of 5,600 meters. However, the rounds impacted at 6,000 meters. Several factors could account for the 400 meter difference between computed point of impact and actual point of impact. First, the average age of the ammunition used in the 40-mm guns is 25 years. This excessive age increases the probability of erratic burning of the propelling charge. Also, the higher than normal temperature experienced in Vietnam results in ammunition being stored at higher temperatures than was anticipated at the time of manufacture.

(c) RECOMMENDATION: In order to insure accurate indirect fire each M42A1 should be fired periodically for registration missions. This will insure that the most accurate data available is used in the plotting of the gun and target.

(3) Use of RPG Screen At Quad .50 Positions

(a) OBSERVATION: While firing a contact mission with a Quad caliber .50 machine gun, a crewman was injured by a piece of fragment from the RPG screen protecting the Quad.

(b) EVALUATION: The practice at most Quad positions has been to place RPG screens (link fence) in front of Quads approximately 10 feet in front of the muzzles. The purpose of the screen is to detonate RPG's fired at the weapon. In addition to the possibility of injury to personnel when rounds strike the screen, there is also the problem of ricocheting rounds when firing through the screen. Evaluation of missions fired through the screens indicate a significant percentage of rounds deflected by the screen. The deflection varied from a few mils to several hundred mils and would have been considered a hazard if friendly troops had been in the area.
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

(c) RECOMMENDATION: When Quads are used on perimeters, very careful consideration should be given to the above facts before RPG screen is emplaced in front of the weapons. If it is then decided to use RPG screen, the screen should be at least 20 feet in front of the muzzles. Such placement will lessen the possibility of injury to crewmen from screen fragments.

(l) Use of Dusters to Suppress 82-mm Mortar Fire

(a) OBSERVATION: A tactic of enemy 82-mm mortar crews is to set up their tubes at near maximum range (3,400 meters). This is beyond the effective range of the Quad as well as the organic infantry weapons normally found at fire support bases.

(b) EVALUATION: During the first portion of the reporting period enemy mortar crews continued to fire at FSPB St. Barbara (XT 276680) from areas that were beyond the maximum effective range of the Quads located on the perimeter. On 17 September two Dusters were deployed to FSPB St. Barbara for the purpose of silencing the enemy mortar positions. When the crewmen of one Duster saw mortar flashes they immediately returned fire. The mortar fire ceased and, as a result of the 40-mm fire, two secondary explosions occurred in the vicinity of the mortar flashes. The 40-mm fire of Dusters would also be more effective than the fire of Quads in wooded areas in which mortars are emplaced. The bursting of 40-mm rounds would tend to topple small trees which provide concealment for the mortars.

(c) RECOMMENDATION: That units employing Dusters should give consideration to using them on perimeters which receive frequent 82-mm mortar attacks. If visibility is limited for the Duster crewmen, a tower could be constructed from which an observer could direct the 40-mm fire.

c. Training: None
d. Intelligence: None
e. Logistics: Replacement Searchlights

(1) OBSERVATION: The lack of replacement searchlights, AN/MSS-3, hampers the ability of the unit to fulfill its operational requirements.

(2) EVALUATION: The great majority of searchlights, AN/MSS-3, that are turned in as unserviceable are unserviceable as a result of the vehicle
SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery
for the Period Ending 31 October 1969, RCS GSFOR-65 (R2) (U)

(½ ton truck) being not economically repairable. Very few lights are
unserviceable when turned in with the vehicle, but current policy dictates
that the entire set (vehicle and light) be turned in when either becomes
unserviceable. Therefore, the battalion is forced to turn in serviceable
lights when the vehicles on which they are mounted become unserviceable.
Since there is a shortage of AN/MSS-3's for issue, the battalion's fleet
of searchlights steadily decreases in number. Since April the battalion's
authorized fleet of 36 searchlights has been reduced to 27. There have
been no replacement searchlights received during this six month period.
This headquarters has requested the establishment of a closed loop rebuild
program but this request has been denied by USAV. (See ORLL, this head-
quarters, dated 4 August 1969.)

(3) RECOMMENDATION: That only the ½ ton truck be turned in when it
becomes unserviceable. A replacement vehicle should then be issued and
the light transferred from the old to the new vehicle.

f. Organization: None

g. Other: None

WILLIAM E. COOPER JR.

LTG, ADA
Commanding

1. Battalion Organizational Structure
2. Unit Deployment and Missions
3. Automatic Weapons and Searchlight Positions Distribution
4. Employment of Automatic Weapons (AW) and Searchlights in Vietnam

Incl 2 wd HQ, DA
DISTRIBUTION:
2-USARPAC
3-USARV
3-II FORGEV Arty
1-Bn File

TO: Commanding Officer, II Field Force Vietnam, ATTN: AVFBC-RE, APO 96266

The quarterly report of the 5th Battalion (AW)(SP), 2d Artillery adequately reflects operations and lessons learned during the reporting period.

FOR THE COMMANDER:

EDWIN S. OLSMITH JR.
Major, FA
Adjutant
AVFBC-RE-H (2 Nov 69) 2nd Ind

SUBJECT: Operational Report of the 5th Battalion (AW)(SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

DA, HQ II FFORCEV, APO San Francisco 96266 24 NOV 1969

THRU: Commanding General, US Army Vietnam, ATTN: AVHGC(DST), APO 96375

Commander-In-Chief, US Army Pacific, ATTN: GPOP-DT, APO 96558

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

This headquarters has reviewed and concur with the Operational Report - Lessons Learned of the 5th Battalion, 2d Artillery for the period ending 31 October 1969.

FOR THE COMMANDER:

[Signature]

E.G. MACDONALD
LT, AGC
Asst AG
AVHGC-DST (2 Nov 69) 3d Ind

SUBJECT: Operational Report of the 5th Battalion (AW) (SP) 2d Artillery for the Period Ending 31 October 1969, RCS CSFOR-65 (R2) (U)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375, 8 DEC 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1969 from Headquarters, 5th Battalion (AW) (SP) 2d Artillery.

2. Reference item concerning "Logistics: Replacement Searchlights", section II, page 17, paragraph 2f; nonconcur. Electronics Command has indicated that sufficient AN/MSS-3s should be available in late January 1970 to replace all unit shortages. Direct issue of 1 Ton vehicles to the 5th/2d Artillery cannot be made since the unit is not authorized the vehicle as a separate item. 1st Logistical Command can only requisition the complete item (AN/MSS-3) from CONUS based on TOE authorizations.

FOR THE COMMANDER:

[Signature]
L. D. MURRAY
CPT, AGC
Assistant Adjutant General

Cy furn:
5th/2d Arty
II FFV

2/
GPOP-DT (2 Nov 69) 4th Ind
SUBJECT: Operational Report of HQ, 5th Battalion (AW)(SP), 2d Artillery
for Period Ending 31 October 1969, RCS CSFOR-65 (R1)
HQ, US Army, Pacific, APO San Francisco 96558 12 DEC 69
TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. P. SHORT
CPT, AGC
Ass AG
**KEY TO INCLOSURE 3**  
5TH BATTALION (AW)(3P) 2D ARTILLERY  
SUMMARY OF POSITIONS OCCUPIED  
DURING THE PERIOD 1 AUGUST - 31 OCTOBER 1969

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* Indicates positions not occupied on 31 October 1969

Appendix 1 to Incl 3
FOR OFFICIAL USE ONLY

DEPARTMENT OF THE ARMY

Headquarters, 5th Battalion (AW)(SP) 2d Artillery
APO San Francisco 96266

AVFB-PAG-GO 17 October 1969

SUBJECT: Employment of Automatic Weapons (AW) and Searchlights in Vietnam

Commanding General
II FFORCE Artillery
APO San Francisco 96266

1. General.

a. Lessons learned in combat operations throughout the III Corps Tactical Zone during the previous three years have provided a firm basis for the effective employment of the twin 40-mm M42A1, the caliber .50 quadruple machine gun M-55, and the 23-inch xenon jeep-mounted searchlight AH/HESS-3. Salient points and pertinent guidelines are summarized herein to assist commanders in the employment of automatic weapons and searchlights in combat operations.

b. The mission of the 5th Battalion (AW)(SP), 2d Artillery is to provide automatic weapons and searchlight support to elements of II Field Force Vietnam. Automatic weapons are employed exclusively in the ground support role and have no air defense mission.

c. Employment has been characterized by wide dispersion of tactical elements in support of every major unit in the II FFORCE TAOR. The battalion normally occupies approximately 40 tactical positions on a continuous basis.

d. Inclosure 1 provides characteristics and capabilities to assist in planning automatic weapons employment. Inclosure 2 shows the organizational chart of the battalion.

2. Employment and Missions of Automatic Weapons

a. When properly employed, automatic weapons have been extremely effective against enemy ground forces. Mobility, quick reaction, and a devastating volume of accurate direct fire have been a genuine deterrent to enemy attack and highly effective in destroying fixed enemy forces. However, when improperly employed, automatic weapons have been rendered ineffective, provided little fire support, and incurred a serious rate of maintenance deadlines. For example, extended reconnaissance in force operations in heavy jungle terrain cause excessive wear on hard to replace M42A1 engines, transmissions, and suspension parts. The age and system peculiarity of the M42A1 and M-55 automatic weapons systems dictate close attention to proven employment considerations.

Inclosure 4
b. Missions effectively performed by automatic weapons.

(1) Perimeter security.
   (a) Base Camps.
   (b) Fire support patrol bases (FSPB) and night defensive positions (NDFP).

(2) Route/road security.
   (a) Convoy escort (M-55 is particularly well-suited).
   (b) Road outposting.
   (c) Engineer security (construction and mine sweep operations).

(3) Ready reaction force/mobile reserve.

(4) Direct support of infantry.

(5) Blocking forces.

(6) Direct fire support
   (a) Preparatory and covering fires.
   (b) Reconnaissance by fire.
   (c) Interdiction fire.
   (d) Flat trajectory, pin point fire at designated targets.

(7) Indirect fire support.
   (a) Interdiction fire (area).
   (b) On call (observed or unobserved).

c. Missions ineffectively performed by automatic weapons.

(1) Reconnaissance in force in heavy jungle.

(2) Road runner operations where tracked vehicles are used to detonate mines.

(3) Escort of tracked vehicles cross-country by M-55.

(4) Extensive escort of convoys over hard surfaced roads by M-42A1.
SUBJECT: Employment of Automatic Weapons (AW) and Searchlights in Vietnam

(5) Extensive screening and reconnaissance.

d. Special missions.

(1) Helilift (M-55 mount only)

(2) Riverine


a. Furt-i-"ster security (detection and identification using infra-red and/or visible light).

b. Harassment and interdiction with visible light.

c. Battlefield illumination (area and pinpoint).

d. Beacon guide for friendly patrols and aircraft.


a. The M-55 mounted on its 2½-ton truck prime mover is restricted to existing road networks. Where mobility and cross-country movement is a consideration the M-42A1 should be employed.

b. Where fields of fire and observation are limited (e.g., 100-200 meters), the M-55 can provide a heavy volume of close-in penetrating fire.

c. Although both weapons are capable of indirect area fire, the M-42A1 is preferred because of its speed, accuracy, and increased range. Additional accuracy of M-42A1 indirect fire may be obtained by use of fire data from collocated US artillery units, with their sophisticated fire direction centers.

d. In static locations where fire power is required and mobility is secondary, the M-55 should be employed. Where access to a tactical location by land means is limited, the M-55 can be effectively employed by air lifting into position. Consideration must be given to immediate extraction in retrograde.

e. The caliber .50 projectile has more penetrating ability than the point detonating 40-mm round, thus is generally preferred where fields of fire contain heavy brush and vegetation.

f. Munition for both weapons may ricochet up to maximum ranges. Point detonating (PD) self-destruct (SD) ammunition for 40-mm, though designed to self-destruct at 3,500 meters, occasionally ricochets up to a maximum range of 9,000 meters. This fact must be carefully considered prior to employment of Dusters in areas of heavy troop concentrations.
5. Maintenance.

a. In order to maintain the highest possible level of combat readiness, constant detailed maintenance is imperative for automatic weapons and searchlights. This is particularly true of the M-42A1's, most of which are at least 17 years old. As with any track laying vehicle, the M-42A1 requires a considerable amount of preventative maintenance. Ideally, four of the 16 Dusters assigned to a Duster battery should be allowed to stand-down for maintenance at any given time. At least two of the 24 assigned M-55's should also be allowed to stand-down for maintenance. Of the 12 searchlights assigned to each of the three searchlight platoons, one should also be allowed to stand-down for maintenance.

b. Repair parts for automatic weapons and searchlight equipment are available only in limited quantities. Direct support of system peculiar items is accomplished on an area basis through non-divisional agencies. System common items are maintained through supported unit direct support agencies, whether divisional or non-divisional. A critical factor is the response and cooperation of all agencies effecting timely repair of tactical equipment.

c. Inherent in automatic weapons readiness is vehicle and gun exercise. Automatic weapons should be fired at least weekly and vehicles should be exercised at least 10 miles per week.

6. Logistical Support: Normally automatic weapons and searchlights are placed under the operational control of the maneuver commander. The maneuver commander then assumes responsibility for the common logistical support of the force. All required items other than those items which are peculiar to the M-42A1, the M-55, and the searchlight.

7. Selection and Occupation of Position.

a. Each AW and searchlight position must be selected to allow maximum fields of fire and observation. Mutual support between two or more Dusters, Quads, or searchlights should be achieved wherever possible. Once the position is selected, each of the following must be worked out in detail:

(1) Primary and alternate means of communication to supported unit.

(2) Rules of engagement including:

(a) Authority to return hostile fire. (Maximum possible freedom to fire is necessary for effective employment).

(b) Location of friendly forces, villages, listening posts and observation posts on an up-to-the-minute basis.

(3) Detailed range cards with emphasis on range and direction to obstacles and likely targets.
SUBJECT: Employment of Automatic Weapons (AW) and Searchlights in Vietnam

(4) Fields of fire.

b. Field fortifications are needed to obscure AW and searchlight silhouettes and to protect mounts and crews from RPG and small arms fire. Infantry security, cleared enemy area of cover and concealment, and protective devices (claymores, trip flares, berms) must be used to keep RPG and recoilless rifle gunners out of effective range. The thin frontal armor and open turret of both the M-42A1 and the M-55 make them extremely vulnerable to rocket, grenade, and small arms attack.

8. Lessons Learned.

a. Specific employment of automatic weapons and searchlights will vary depending on terrain and mission. However, a few lessons learned have provided firm guidelines in certain situations.

b. Automatic weapons must always be employed in multiples of two. Two weapons are considered to be the smallest fire unit capable of working as an effective tactical force to maintain basic mutual support, command integrity, and provide for vehicle recovery.

c. In rectangular perimeters, automatic weapons and searchlights are most effective when deployed at the corners of the perimeter.

d. Searchlights employed in conjunction with automatic weapons in FSPB's and IHP's considerably enhance the defense posture. Searchlights can provide accurate direction for automatic weapons by laying their azimuth indicators parallel with the automatic weapons. Other night vision/detection devices used jointly with the automatic weapons defense also enhance the effectiveness of target engagements.

e. When used with infantry elements, M-42A1's should always be protected by infantry security elements and, due to their flat trajectory, should be employed to the flanks and/or high ground.

f. The M-55 may be used to support infantry elements, but only in special situations where secure overlooking terrain is available for the M-55 to occupy. In this instance the M-55 can bring effective fire power to bear on pin point targets.


a. Searchlights are used primarily in the infrared mode for detection without disclosure of the position. However, infrared detection is limited by terrain and weather conditions. Upon detecting and determining definite targets, the searchlight may be switched instantly to its visible light mode for target illumination and engagement.

b. Infrared reflections are encountered from even small obstacles in the searchlight's line of vision. Therefore, clear fields of vision are necessary for effective searchlight employment. In some positions, fields of vision are enhanced by emplacing the searchlight above surrounding obstacles.
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c. Visible light may be reflected from clouds to enhance the vision of friendly patrols and friendly nearby positions utilizing starlight scopes.

d. The searchlight section (two lights) is the smallest element which should be allowed to operate for extended periods away from the battery.

(1) When a single light is employed (except on a tower) it does not provide 6400 mil coverage, therefore it is recommended that light sections (two lights) be employed as one element.

(2) Under normal operations a searchlight should be operated for a period of 24 hours, it should then be shut down allowing the light blower system to cool to below 130°F. This takes approximately 15 minutes. Then the vehicle should be shut down for another 15 minutes to allow the engine to cool, giving the operator an opportunity to check the vehicle and engine compartment. If lights are employed in pairs, this shut down period can be staggered insuring that one light is always operating.

(3) When determining location of the searchlights, consideration should be given to integrating them with other 23-inch xenon lights when available.

10. Principles Governing the Use of Visible Light For Battlefield Illumination

a. Battlefield illumination in support of friendly forces will be provided wherever and whenever needed, in the intensity of illumination required and throughout the period of time required.

b. Once illumination is provided to supported troops, it should be provided without interruption until the need for illumination is satisfied.

c. Battlefield illumination will be planned and coordinated with the use of infrared equipment in such a way that:

(1) No damage will be caused to the infrared equipment by exposure to direct intense visible light.

(2) Battlefield illumination will be avoided or reduced to an absolute minimum when infrared operations are going on.

(3) The most suitable means - visible or infrared light - will be used according to the situation.

(4) A rapid change from infrared to visible or vice versa can be performed.

d. Reflected illumination is available when the beam is directed against low lying clouds (150 to 500 meters). The area beneath this point of reflection
subject: Employment of Automatic Weapons (AW) and Searchlights in Vietnam

receives a higher intensity of illumination than can be obtained from diffusion alone. If the conditions exist for reflected illumination, it enhances the capabilities of starlight scopes within the area.

c. With the addition of a pink filter the 23-inch jeep mounted searchlight is provided with a more effective source of infrared light for detection of enemy movement.

(1) Characteristics:

(a) The pink filter lens fits over the light source and allows an improved, higher frequency infrared light to be emitted.

(b) The lens provides a greater intensity of infrared light to the area than does the old infrared shield. This is true at all ranges.

(c) The pink filter lens emits a red glow, however this glow is only visible for approximately 60 meters from the searchlight.

(2) Tactical deployment:

(a) The pink filter should be used in conjunction with the starlight scopes of ambush patrols. The light should be directed to scan the ambush patrol's field of fire. Thus, the infrared light plus the moonlight greatly increase the effectiveness of the ambush patrol's starlight scopes, enabling them to detect enemy movement much more effectively.

(b) When possible, supported units should make starlight scopes available to searchlight crews. Starlight scopes used in conjunction with pink light provide magnification of elements on the battlefield and optimum available illumination.

11. Additional assistance. For additional special employment techniques or assistance, commanders are encouraged to contact this headquarters by calling 928-5623.

WILLIAM E. COOPER JR.
LTC, ADA
Commanding
1. Each firing battery is composed of two platoons, four sections per platoon, two M-42A1's per section. (Total: 16 M-42A1's)

2. Each M-42A1 is armed with two 40-mm guns and one M-60 machine gun.

3. Rate of fire: Maximum, 240 rds/min; sustained 100 rds/min.

4. Effective range: 3500 meters (point detonating self-destruct ammunition), 9000 meters (point detonating non-self-destruct ammunition).

5. Ammunition:
   a. Type: 40-mm, HE-T, or HEI-T, LD, Mk 11, w/Fuze, PD, Mk 27. 40-mm, HEI-T, non LD, Mk 11 w/Fuze, PD, Mk 27.
   b. Basic load: 480 rounds on carriage (480 more rounds may be towed).

6. Vehicle:
   a. Full tracked, gasoline driven, air cooled engine.
   b. 140 gal. fuel gives an operating range of from 35 to 100 miles depending on terrain conditions.
   c. Speed: Up to 45 mph on improved roads, 25 mph in cross-country operations.

7. Weight: 25 tons (airlift by C-124 or C-141).


M-55

1. The M-55 battery is composed of six sections, four squads per section, one M-55 per squad. (Total: 24 M-55’s)

2. Each M-55 has four caliber .50 machine guns on the mount with one M-60 mounted on the prime mover.

3. Rate of fire: Maximum, 2000 rds/min; sustained 800 rds/min.

4. Effective range: Point targets, 1830 meters; area targets 6750 meters.

5. Ammunition:
   a. Type: .50 Cal.
   b. Basic load: 10,000 rounds on the prime mover, 10,000 towed.

6. Prime mover: 2½ ton or 5 ton truck w/armor kit.

Inclosure 1 to Inc 4
7. Weight:
   a. Mount only: 3,200 lbs.
   b. Mount, basic load, crew: 8,000 lbs. (Carried by one CH-47.)
   c. M-55 complete (2-1/2-ton truck w/armor kit, mount, basic load, crew w/equipment): 26,204 lbs. (Carried internally by C-124, C-130, C-141.)


AN/PSN-3

1. Each searchlight battery consists of three platoons with 12 lights per platoon. (Total: 36 searchlights.)

2. Maximum range:
   a. White light: 8,000 meters*
   b. Infrared: 800 meters*


4. Weight: 1.5 tons complete (carried by CH-47).


*Effective range of searchlights, in either mode of operation, is dependent on atmospheric conditions as well as terrain features. When considering employment of searchlights, effective range must be determined on an individual analysis of the particular area of operation and prevailing weather.
**Operational Report - Lessons Learned, HQ, 5th Battalion, 2d Artillery**

Experiences of unit engaged in counterinsurgency operations, 1 Aug 69 to 31 Oct 69.

CO, 5th Battalion, 2d Artillery

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