

THE BRADLEY MASTER GUNNER

UNITED STATES ARMY INFANTRY SCHOOL 1ST BATTALION, 29TH
INFANTRY REGIMENT, FORT BENNING GEORGIA



NEWSLETTER

A NEWS LETTER FOR THE REST OF US!

EDITION 03-03

3RD QUARTER FY 2003

PURPOSE

The Master Gunner Newsletter is designed to ensure master gunners assigned at all levels are informed of current changes in the Bradley community. It is used to supplement new information pertaining to mechanized Infantry, Scout, FIST (Fire Support Team), ADA, Marine Corps, and Engineer business; it also contains older established information that may have been overlooked, never received, or just plain forgotten.

The Master Gunner Newsletter is available online at the Infantry Master Gunner Homepage, each Active Component Master Gunner (battalion/squadron, brigade/regiment, and division/corps levels) and National Guard and Reserve Component Master Gunners at battalion/squadron level and above should download and disseminate the Newsletter quarterly. It is essential that Reserve Component and National Guard senior Master Gunners ensure that copies of this newsletter are disseminated to their subordinate units. Copies can be viewed and/or downloaded, at the Master Gunner website.

GENERAL

The instructors at the Master Gunner Branch (MGB) usually write the articles included in the Newsletter; however, we have broadened the scope to all of the schools and components located at the Collins Training Center to include the Mechanized Leaders Course (MLC), Bradley Transition Course (BTC), Stryker/Bradley Proponency Office (S/BPO), New Equipment Transition Team (NETT) conduct of fire trainer branch (COFT) as well as the Bradley Master gunner Course (MG) if you would like to post information or a story on our newsletter please forward it to us by utilizing the "mail from the field for master gunner branch" link on our website. The main experience base lies with Master Gunners who are in the field on deployments and combat theaters. The success of this newsletter depends on a two-way flow of information. Any ideas, suggestions, or articles should be sent to the following address:

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B.CO. 1/29 INFANTRY (M)
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GENERAL cont.

Keep us updated! The only way for us to know who you are, and what information you need is to keep us up to date on who you are so, drop us an e-mail: “mastergunneroperations@benning.army.mil” and give us the information. Additionally, if you haven’t heard from us for a while drop us a line and reestablish communications.

Feedback is a necessity! This paper is not for us the instructor it is for you the MG in the field. We desperately want feedback from the field because, it not only helps us the instructor, but also the students that attend the course. This reduces the same mistakes being made over and over again. Remember, it might not seem like a big deal to you, but it might be very important to someone else.

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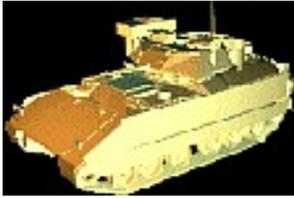
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TECH TIPS 1

With

SSG David Therrell

Bradley Transition Course Instructor

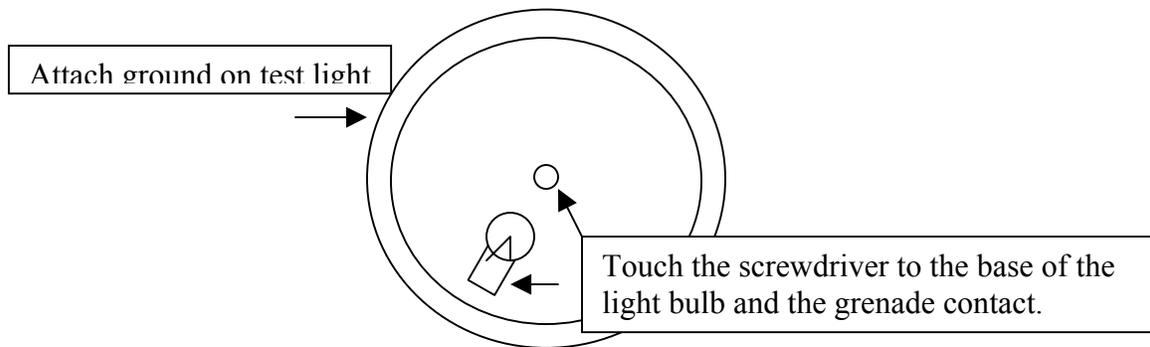
SSG Therrell is the Bradley Transition Course Master Gunner. This edition SSG Therrell gives us the lowdown on some prep to fire checks for the M257 Smoke Grenade Launchers.

M257 SMOKE GRENADE LAUNCHER PREPARE TO FIRE TASKS

1. The first step in firing the M257 Smoke Grenade Launcher (SGL) is to check its power capabilities. It should have 28vdc at trigger push, verified using a multi-meter. A field expedient method to check for a power supply is as follows:
 - a. Check to ensure the launcher has a power cable plugged to it. While some launchers have covers on the launcher base, where it is bolted to the vehicle making this impossible, others have open bases. If you are not able to check the power cable, you can use a grounded test light. Turn on Master and Turret Power, place the alligator clip of the test light on a sufficient ground, (the outside edge of the launcher tube is normally sufficient) and hold the tip of the tester to the grenade contact tip (inside the tube). While holding the tester tip on the contact, have a helper arm the trigger, then push and hold the SGL trigger on the weapon control box. The test light should come on.
 - b. Another option is to take a standard vehicle internal light bulb, test to make sure it works prior to taking it out, (such as a tail light bulb or dome light bulb), a 12" or longer screwdriver and a helper. Place the tip of the screwdriver on the launcher contact inside the tube, holding the base contact of the light bulb to the inside edge of the launcher tube (see diagram); ensuring the tip of the screwdriver remains in contact with the grenade contact. Where the light bulb contact is touching the tube, ensure there is not any paint or lubricant on the surface, base metal. Touch the screwdriver to the grenade contact and the side of the base of the light bulb. Tell your helper to push and hold the SGL trigger, at which point the light should come on, faintly glowing. Ensure you do not hold the light bulb

TECH TIPS 1(CONT.)

- by the glass for too long, as it will get hot. If the light does or does not come on, continue testing all tubes on the launcher, retesting any tubes that fail.
2. After verifying power to the launcher, have the crew of the vehicle perform cleaning maintenance on the contacts, prior to loading the launcher tubes. With all power off, the crew uses a long all-purpose brush (toothbrush) and conductive oil, such as 3-in-1 oil, and cleans and coats the contacts. This ensures better conductivity to the female contact on the grenade. If all these tests have passed and all maintenance has been done to standard, the grenades should be loaded in accordance with task **071-034-0035 Load the M257 Smoke Grenade Launcher on a BFV.**



If you have any questions, feel free to contact me through the Master Gunner Branch web site.

**Hope this helps,
SSG Therrell**

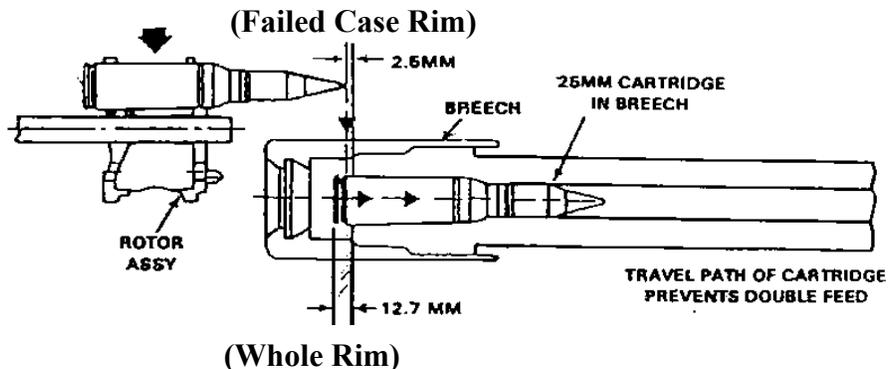


TECH TIPS 2

With

SSG Melton, Primary Instructor for Organization Maintenance on the 25-mm; SSG Sillman, Primary Instructor for Ammo Capabilities and Ballistics; and Jeffrey Darbig, Medium Caliber Ammunition Project Manager at TACOM-ARDEC.

This is a continuation story from last quarter based on new information and evidence found in the past three months. During the first week of April, the Master Gunner Branch had an in depth briefing with folks from TACOM-ARDEC, PM Bradley, DOT, TSM-S/B and S/BPO in reference to the nose cap and double feed issue for 25-mm sabot ammunition. This briefing was broken into two parts, the first part discussed Double Feeds with the 25-mm chain gun and the second part was specifically about nose caps being cracked and potentially causing gun jams. First, let us discuss the anti-double feed features of the 25-mm. As we all learned during Master Gunner School the M242 has two design features to ensure that a double feed is impossible in the 25mm chain gun. **The first** is the positive round control provided by the positive T-slot extractors which make it impossible to leave an unfired round or a fired case in the chamber without either massive failure of the cartridge rim or the breakage of both extractors during normal operation of the gun. Either situation is highly improbable because the motor does not have sufficient power to fail the case rim, and a dual simultaneous extractor failure is consider extremely unlikely. However, in the unlikely situation that a case is left in the chamber, **a second** anti-double feed feature ensures that the incoming round is positively prevented from feeding across into the ram position. Here, during firing, the rotor aligns the incoming cartridge with the chamber by a counterclockwise movement where it is then rammed straight forward. However, as shown in the cross-section of the gun, the nose of the incoming cartridge is ahead of the base of the cartridge in the chamber. Thus, it cannot be fed across into line with the chamber; rather, it will stall the gun in a partially fed condition and eliminate the possibility of hitting the primer of the previous round.



TECH TIPS 2 (CONT.)

This was documented during the Fort Riley malfunction investigation where a **Ford M793 tested this safety feature (Figure #2)**. The M793 cartridge **did stall the weapon**. The Ford M793 used in the testing best represents the current M792 ammunition due to its steel body and screw in steel nose. Current testing and investigation details depict that the **second anti-double feed feature** applies to M792 (HEI-T) and Ford M793 (TP-T) ammunition types only.



Figure #2 – Attempt to double feed a M793.

In order for the **second anti-double feed feature** to work the incoming cartridge must be at least **213.50mm** long. Any round under this length will not contact the chambered cartridge case and will allow the incoming round to be positioned directly behind it. This could give the incoming round the opportunity to initiate the chambered round's primer during the ram cycle. All M792 & M793 are built to an overall maximum height of **219mm** and all M919, M910 and M791 are built to an overall of **223mm**. The main difference between these rounds is that the M792 and M793 are constructed primarily from steel where the M919, M910 and M791 utilize a sub-projectile surrounded by either a plastic or aluminum sabot in order to achieve the correct 25-mm diameter and they are topped off with a plastic nose cap in order to fulfill the overall length requirement, protect the projectile, and to protect the soldier from being punctured by the windscreen during handling.

The overall length of the sabot ammunition does provide overlap with the chambered cartridge case, but only by a nonstructural protective nose cap and a weak windscreen (on two of the rounds). A cutaway model of the five "in production" sabot rounds (ATK M791 & M910 and GD M791, M910, & M919) displays the configuration of each round (**Figure #3**). The two lines in the figure are the Maximum round height that the M242 can feed (**226.26mm**) and the Minimum overlap height between the incoming and chambered cartridges (**213.56mm**).

TECH TIPS 2 (CONT.)

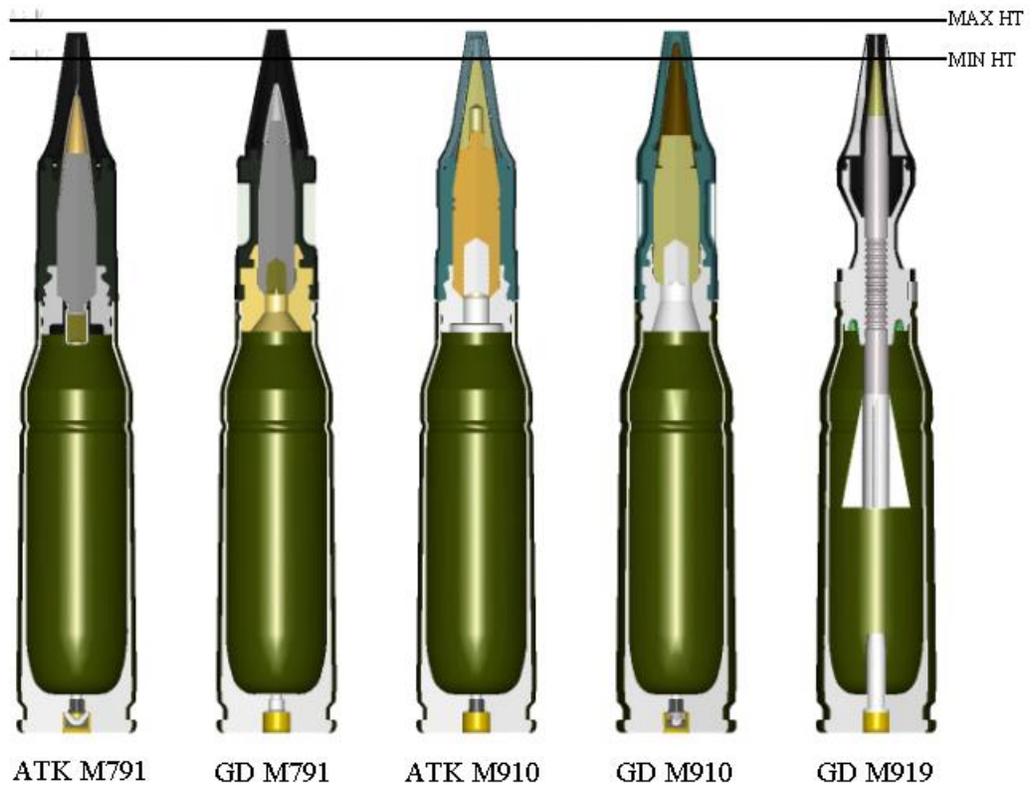


Figure #3 – Cutaway of the five “in production” 25mm sabot ammunition with max round height the gun can cycle and the minimum critical height for overlap

It can be concluded that the windscreen and nose cap on SABOT ammunitions are not strong enough to stall the gun. The nose cap (at contact) will be knocked off allowing the incoming cartridge to be fed behind the chambered cartridge. If the nose cap falls off during upload or during the cartridges cycle through the feeder assembly, the wind screen (at contact) will fold at it's tip (**Figure #4-5**) allowing the round to be fed behind the chambered cartridge. The ability to initiate the primer of the chambered round was also tested with a very limited number of rounds; 5-6 trials per round configuration. The ATK M910 was the only round that initiated the primer of the chambered round. This is due to a solid aluminum windscreen that provides enough strength to function as a firing pin. The other sabot rounds have hollow windscreens and were not able to initiate the primer of the chambered round, however, they cannot be eliminated as a possible initiator due to the small amount of rounds tested.

TECH TIPS 2 (CONT.)



Figure #4 – GD M910 that is double fed with a bent windscreen



Figure #5 – GD M919 with a bent windscreen



Figure #6 – ATK M910 that is double fed with a protective nose cap that was knocked to the side during placement

The ability to double feed a round and potentially initiate the primer of a previously chambered round **is not possible during normal cycle** (firing) of the 25-mm chain gun based on the **first anti-double feed feature, the Positive T-slot Extractors**. It is **very unlikely** that a round **can be double fed during remedial action of a 25-mm malfunction** however the **risk** of a double feed is **specifically introduced when the Straight Drive Shaft is lowered** and crews attempt to clear a malfunction **by moving the feeder and receiver independently**. Again, the round is still positively controlled by the Positive T-Slot extractors until it has been placed in the **ejection chute**. It is this point that a round could possibly fall back in front of the bolt, forward of the T-Slot Extractors. Now the round can be chambered **without** being controlled or **forward** of the T-Slot Extractors by rotating the Straight Drive Shaft as if you were attempting to clear a malfunction. Then as a crew uses their hand crank to rotate the feeder assembly back to SEAR, they place a new round on the face of the bolt positively controlled by the T-Slot extractors and behind the chambered round. Again, the previously mentioned scenario is very difficult to create, however the possibility does exist.

TECH TIPS 2 (CONT.)

The Nose Cap issue is tied too Double Feed prevention but not as a direct result or cause. What is happening to the nose cap is cracking (**Figure #7**) caused by the plastic sabot swelling and contracting resulting from temperature change during storage. Currently there are only two “confirmed” reports of weapons failure due to nose caps coming off causing a 25-mm gun jam. The first was from the Armament Tech Facility while using the M791 APDS-T and the 2nd was from the Kuwait National Guard while using the M910 TPDS-T. The conclusion was that it is possible for 25-mm sabot ammunition to cause a gun jam if the nose cap comes off while entering the Breech Assembly. (**Figure #8**). Nose caps can sometimes prevent the 25-mm from cycling through **FEED** resulting in a malfunction that cannot be reduced with normal misfire procedures alone. The Master Gunner or crewmember needs to physically separate the Feeder Assembly from the Receiver Assembly and inspect the Breech, Barrel, and Receiver Assembly(s). Current recommended actions in the event of a nose cap jam is to follow hot gun procedures by waiting 30 minutes before separating the weapon system. Identifying a nose cap jam is more difficult than correcting one. However, if the 25-mm gun malfunctions while the BPI is in the RAM position (just before fire) chances are you have a nose cap jam.



Figure #7 Cracked Nose Caps- (Picture from Mech. Leader Gunnery Ft. Benning, Ga (ATK M910 TPDS-T Nose cap) Apr 2003



Figure #8 Nose Cap Jam- (Picture received from Kuwaiti NG- (ATK M910 TPDS-T Nose cap) Jan 2003

TECH TIPS 2 (CONT.)

Crew-members should be informed that if a nose cap falls off of the round **DO NOT** try and put it back on. However, at the same time **do not attempt to remove all cracked nose-caps** from 25-mm ammunition (**Figure #9**). Some would think by removing all cracked nose caps the risk of a nose cap jam would be mitigated, however, it may increase the likelihood that the solid windscreen would act as a firing pin and initiate the primer of an already chambered round in the event of a double-feed. The incident at Ft. Riley shows us that however unlikely this may be, it is still possible.



Figure #9 Two 30 Round belts of ammunition with cracked nose caps removed (ATK M910 TPDS-T Nose cap)

At the current time there are no easy modifications that could be performed to the current 25-mm sabot ammunition family that would support the **second anti-double feed feature or the nose cap-cracking problem**. TACOM-ARDEC is currently exploring solutions to this issue; these solutions could find their way into the M910E1, a future Sabot ammunition ballistically matched to M919, currently in the design phase. Until then, we here at the school-house will incorporate this **Double Feed Awareness** into our 25-mm class and **Nose Cap Cracking Awareness** into our Ammunition Capabilities Class. However the risk to mitigate the above event falls directly on the Master Gunners and leadership in the field. A standard procedure, which should be practiced IAW, **TECHNICAL SAFETY OF USE MESSAGE (SOUM), TACOM CONTROL NO. SOUM-02-003, 25MM DOUBLE FEED HAZARD**, is that all crewmembers be informed that weapon malfunctions or stoppages that cannot be corrected by pushing the misfire button (IAW the steps outlined in the technical manuals) must be cleared by removing the feeder Assembly and physically inspecting the system for unfired ammunition. This was our recommended action in our 2nd QTR newsletter and reinforced by the SOUM referenced above. It is the Commanders discretion to identify whether vehicle crews or Master Gunners will clear malfunctions.



To Honor a Fallen Comrade

This month the entire branch gives respect to one of our fellow master gunners who passed away as a result of combat operations in Iraq.
Army Staff Sgt. Terry Hemingway, 39, Willingboro, N.J.

SSG Terry Hemingway entered active federal service on the 10th of April 1984 from Constantinople, New Jersey. Throughout his career SSG Hemingway served in numerous infantry assignments at Fort Irwin, CA, the Panama Canal Zone, Berlin Germany, the Republic of Korea, and Fort Benning, GA. SSG Hemingway's military education includes the Primary Leadership Developmental Course, Basic Instructor Training, Airborne School, the Basic Non-Commissioned Officers Course, and Bradley Master Gunner Course.

Sgt. Hemingway and photos of his children



His awards and decorations include the Purple Heart, Combat Infantryman's Badge, Expert Infantryman's Badge, Airborne wings, Army Commendation Medal w/1OLC, Army Achievement Medal w/1OLC, and the Good Conduct Medal (5th award). SSG Hemingway reported to 1st Battalion, 15th Infantry Regiment, 3rd Brigade Combat Team, 3rd Infantry Division (Mechanized) in June of 2002, attended Bradley Master Gunner School and was assigned as a Bradley Commander in C Company, 1st of the 15th. He deployed with Task Force 2-69 Armor in January of 2003 and served in the combat zone with that unit until the time of his passing. SSG Hemmingway is survived by his wife Darlene and their children Danisha, Terry, and Venetia.

SSG Hemmingway graduated from Master Gunner Course class 500-02. He will truly be missed and our deepest sympathy goes out to his fellow soldiers, friends, and family.

The Master Gunner Community



STORIES FROM THE FIELD

This is a new addition to our newsletter as we have received a story from a MG in the field. Hope you enjoy reading about some lessons learned from a MG on point for the nation. We look forward to hearing from many more of you!

SSG Harden

Gunnery In Kosovo

***With SSG Michael Brosch
C Company Master Gunner, 2-2 IN,
Camp Montieth, Kosovo***

Greetings, from Camp Monteith, Kosovo. My name is SSG Michael M. Brosch (A.K.A Warrior MG) with Charlie Company, 2nd Battalion, 2nd Infantry, hailing from Vilseck, Germany. I would like to share with the BFV Master Gunner community some lessons learned here while conducting various things from small arms gunnery to Bradley Tables. The purpose of this article is to inform Master Gunnery about the resources and challenges faced on a deployment as a Company Master Gunner in Kosovo.

There are two primary ranges we've used while here in Kosovo, Falcon 3 and Falcon 4. Falcon 3 (small arms range) is located approximately 6 KM from Camp Monteith near the town of Pasjane. It is approximately 100m wide and one can achieve out to 800m shots from the firing line. This range will facilitate firing all small arms to include M9, M16, M203, SAW, and M240B. I have personally used this range numerous times to conduct M16 zero and qualification (day and night fire) and M9 qualification. There are a few positions on the range that can facilitate infantry lifters, however, if you can't use these pits based off your range scenario, one can obtain a waiver from the 7th ATC Safety Office to dig additional pits on the range. In following the 8 step-training model, I recommend a recon prior to occupation. This gives the OIC and RSO an idea of where they need to make their firing line and placement of targets. Falcon 3 is a versatile range used to fire ALT C qualification, reflexive fire, discriminatory fire and squad live fires. If a squad live fire is conducted on this range, coordinate with your battalion S-4 to

STORIES FROM THE FIELD (CONT.)

request tents, latrines, electricity and sandbags. Brown and Root Services provides just about anything needed for the range. This includes building mock houses for MOUT training and bunkers. (Note: each time sandbags were requested, a minimum of 1,500 was needed). Falcon 3 has low ground on both sides of the range facilitating the movement of dismount squads. Firing is limited on the right side of the range in the low ground due to the position of the right range limit. This can be overcome with a little Master Gunner ingenuity. Bottom line: this is a great range with ample maneuverability for the dismounted infantry. Finally, always conduct a thorough range recon and use your imagination to create realistic training for the soldiers.

Falcon 4 is the other range significantly used here in Kosovo. This is the only range that supports the firing of BFV's both stationary and moving. Units in the past used this range for BSSE, as it will support the maneuvering of both BFV's and dismounts. Falcon 4 is approximately 5KM wide x 6KM long. The troop to task issue with running Falcon 4 is a nightmare. With 6 gates to man (minimum of two guards with FM communication and a vehicle at each gate) it becomes next to impossible to run this range with just one company. Remember that mission requirements in sector will probably draw manpower while the crews are firing. Due to some excellent advanced coordination, our battalion requested Brown and Root Services to hire contract guards. These guards covered the gates throughout gunnery. This enabled good throughput, as there is no mandatory shut down time for ranges in Kosovo. We used this range to fire BT's II to VII. Falcon 4 has two BP's for defensive engagements, and a primary and alternate road to use for maneuver boxes. I recommend only using the primary road due to the condition of the range. The secondary road is in the low ground, while the primary is in the high ground. The primary road is also semi-paved and has two concrete turning pads. This road will only support the use of two maneuver boxes due to the position of target pits and range fans. There are 3 infantry pits on this range, 11 vehicle pits and no mover. Additional pits are not currently available however, 7th ATC is planning an upgrade to the range. The upgrade will improve on, 1 or 2 movers, 4-6 additional infantry pits, 4-5 more vehicle pits and possibly adding 1 or 2 more range roads for use as maneuver boxes. Also on hand, but not installed is a FLIR 2 system. There is a permanent tower on this range with electricity, heaters, and 4 antennae for your radios. The range is also equipped with a concrete ammo pad with guard shack. Another problem with this range, especially in the spring to fall months, is that it is active farmland. Many hours are spent attempting to keep the farmers off of their land during the planting and harvest months.

Another issue with shooting any Bradley Table here in Kosovo is that each company only has 6 Bradley's. We all know that you can expect 25-50% of platoons BFV's to be deadlined for maintenance issues while conducting

STORIES FROM THE FIELD (CONT.)

gunnery at home station. The same applies here, in excess. Thanks to our superb mechanics who worked around the clock, we had 4 operational BFV's by the end of BT VII. Order parts for the 25mm you know you're going to need in advance. The supply system works much faster here than at home station. I cannot stress enough about having a "good" set of MG tools on hand to perform emergency surgery.

The biggest problem we encountered using this range was recording the engagements to provide the crews with a quality AAR. TASC issued a tank thermal sight for use; however, we quickly learned this would not suffice. First, the zoom capability is not sufficient for evaluating kill standards at 1900 meters. Second, the sight had no way of recording to a VCR. A quick fix was to hold (by hand) a digital video camera, hooked up to the VCR and record each engagement. This required the use of two camera operators, one to hold the camera, reposition the tank sight in between engagements, and one to operate the VCR. Although Master Gunnery are very talented, this problem had to be solved. Our next step was to use a digital camera during day engagements alone without the tank sight. This provided a day AAR with video, and a night AAR with only audio. By the time BT VII rolled around, I made a run to TASC to sign out the Thru Sight Video (there are only two sets of TSV in country). A Bradley was set up with Thru Sight Video and placed between the two battle positions. BCE's were placed in this "spotting" Bradley to evaluate the crews, and to provide feedback to the tower. This worked very well and is recommended until a better recording system for the tower is available.

We learned another lesson regarding early tables. We all know that it takes 16 rounds of HE, and 19 rounds of AP to reach the feeder without top loading. Starting off on BT VI A, the scenario consisted of two truck targets. Naturally with only 2 HE engagements, the crews were issued 16 rounds of TP-T. Having many inexperienced crews, I didn't want them to load rounds from the top of the feeder, or manipulate the rounds by pulling them in order for the round to load into the feeder. Keep in mind this is the first time firing 25mm so I had no spent casings. I attempted to correct this problem by giving the crews some M791 dummy rounds I brought to the range for concurrent training and instructed the crews to load 4 of these rounds at the end of the TP-T. These dummy rounds were the ones with the black plastic nose cap. Well, here is what happened. The first crew fired all TP-T and had to conduct misfire procedures. The first dummy round locked in the breech and the firing pin fell, of course there was no recoil to engage the mechanical safety interlock system. So now we have a black plastic nose cap dummy round just sitting in the hot breech. This caused swelling of the round and partial melting of the plastic. Needless to say, the entire gun (barrel, feeder and receiver) had to be pulled in order to not only find out what the

STORIES FROM THE FIELD (CONT.)

problem was, but to fix the problem. So, if you're one of those guys who just stood around during that portion of MG school, have fun.

Last but not least, I'll share with you a malfunction I've never seen in my 11 years as a mechanized soldier. A crew had fired a PC and truck engagement and reported a feeder malfunction. After trying to talk the crew through correcting the malfunction, they were told to download and clear the weapon systems and call the tower if they needed assistance. We instructed the crew to bring the feeder to the tower to show the BN MG (SSG Raymond Zumwalt) and me. At first glance it seemed as though they simply had not cleared the feeder. Upon closer inspection, I saw that the **TP-T rounds in the lower feed sprocket and feeder assembly rotor still had the links attached.**



This seemed odd, as the link strippers were intact and in no way damaged. With the links still attached to the rounds, neither the feeder assembly rotor nor the lower feed sprocket would turn. We split, cut, pulled and chiseled the links until they finally broke free from between the round and the rotors. Anyone having input as to what may have caused this malfunction, please feel free to drop the Master Gunner Branch Chief a line and share your knowledge.

I hope, that what I have shared here will assist anyone who ventures this way in the future. **It is indeed challenging to run gunnery in Kosovo but to ensure success, thoroughly recon your ranges, order your parts in advance, and inspect your guns as soon as you get on the ground.** And in closing, **“Master Gunnery lead the way!”**

SSG MICHAEL BROSCH
“Warrior” Master Gunner”



TADSS

WITH

SSG Matt Ostergaard

A3 Master Gunner Instructor / Writer

SSG Ostergaard is an experienced A3 Battalion Master Gunner. He was recently assigned from 2-8 IN FT. Hood TX and in this issue gives us the low-down on the A3's answer to Thru-Sight Video.

TEAC® INTEGRATED DEBRIEFING STATION (TIDS)

The TEAC® Integrated Debriefing Station is available for battalions to provide your crews with valuable data for your crew and platoon gunnery AAR's. Commonly referred to as "TEACS" it is basically the same system UDLP used during your NET (post 2-8 IN). To date, this is the only TSV for the A3 platforms that proves to be functional. Major improvements with the TEAC® combined with A3 technology include simultaneous recording of the commander and gunner sights with crisp, clear video, symbology, and audio during the engagement process.



M2/M3A3 vehicles are outfitted with a Vehicle Interface Kit (VIK), and a Recorder Kit. Each of these components is contained in separate transit cases. The VIK attaches to the vehicle to provide a mounting platform for the recorder with electrical interfaces. The Recording Kit can record up to two tapes simultaneously and are played back on the Four Channel Debriefing Station (referred to here as the AAR station). The AAR station is contained in two containers, one containing the TV monitor and VCR and the other containing four playback recorders, synchronizer, and quad splitter. Eight Vehicle Interface Kits, four Recorder Kits, and two Debrief Stations are planned for each battalion. Worst case scenario, this will allow the battalion master gunner to split these

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systems in half in order for two companies on two different ranges for use on the lower tables prior to BT VIII. The total weight for a Vehicle Interface Kit, Recorder Kit, and an AAR device is 433 pounds (360 of that for the AAR device alone). The AAR station will take up little more than half the amount of floor space of a cargo HMMWV.



The Vehicle Interface Kit is comprised of the bracket, with a permanently attached Shock Mount tray that absorbs vehicle shock and vibration. The Video Interface Assembly conditions video signals to the SLD and the TEAC® recorder. This box is permanently mounted to the side of the bracket. Electrical power is provided to both the recorder and the interface box from the MRE heater. At the

Commander's Tactical Display, enter the power management screen. Page down to display the MRE Heater circuit breaker. Place the cursor over the "ON" button and select by depressing the cursor control. This will provide power to the MRE Heater, TEAC® Recorder, and Video Interface Assembly.



The Recorder Kit is comprised of the 2-deck recorder, controller, and interface cable. It features a time code circuit card similar to the old mechanical tape counter on VCR's to synchronize the recording decks. The Recorder snaps onto the shock mount plate on the bracket assembly and uses Hi-8mm tapes. The hand held controller provides control of each of the decks, individually or simultaneously. For more in depth functionality of the controller, refer to the TM listed at the end of this article.

The TIDS cases provided for the after action review can be stacked on top of each other to display the monitor at eye level. The bottom case in the set-up below contains the playback decks used to play the recorded video from the vehicle. Since only one monitor is provided per AAR station, the quad splitter can provide up to four separate images displayed at one time. Any one-quadrant can be displayed individually as a full screen image. An external TV can also be used as a modification to the AAR set-up.

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Your kits will arrive with TM 9-6920-917-10. The material in this technical manual is written for the entire TSV with the exception of the AAR system, which is discussed in a TEAC® provided manual. The A3 Master Gunner Course provides four hours of instruction with hands-on performance measures with the new M2A3 TSV or “TEACS”.

If you have any further inquiries feel free to post your questions on the website. I'll answer them ASAP!

**Thanks,
SSG Ostergaard**





MASTER GUNNER GRADUATES

HERE ARE YOUR RECENTLY GRADUATED J3's!

Class 1-03

RANK	L/NAME	F/NAME	UNIT	STATION
GySgt	Bach	Chris	3AABN	CAMP PENDELTON, CA
SSG	Christensen	Jason	C CO., 1-163	MISSOULA, MT
SFC	Covington	Stephen	2ND 409TH REGT	ATHENS, GA
SSG	Freeman	Jarroun	A CO., 1-1 CAV	BUDIGEN, GE
SSG	Haerter	Frederick	B CO., 1-163 IN	GREAT FALLS, MT
SSG	Jensen	Rocky	A CO., 1-1 CAV	BUDIGEN, GE
SSG	Jones	Timothy	B CO., 1-1 CAV	BUDIGEN, GE
SSG	Kentzel	Ronald	B CO., 1-163 IN	GREAT FALLS
SSG	Lewis	Donyail	C CO., 1-41	FT RILEY, KS
SSgt	Lukus	Alfred	LAV CO ITB	CAMP PENDELTON, CA
SSG	Reid	Jamal	G CO., 2/11 ACR	FT IRWIN, CA
SSG	Salmeron	Albert	C CO., 1-41	FT RILEY, KS
SSG	Schmelia	Robert	C CO., 4-3 ADA	FT RILEY, KS
SSG	Sides	Brian	C CO., 1-1 CAV	BUDIGEN, GE
SFC	Westrip	Charles	HHC 1-121 IN	WINDER, GA
SSG	Williams	Donald	C CO., 1-1 CAV	BUDIGEN, GE
SSG	Wyatt	Jomo	A CO., 1-121 IN	LAWRENCEVILLE, GA
SSG	Zimmerman	James	C CO., 1-163	MISSOULA, MT



THE FINAL SAY

With

**SFC Kenneth Killingsworth
BFV Master Gunner Branch Chief,
Senior Instructor/Writer**

SFC Killingsworth, the Master Gunner Branch Chief, speaks out on some important information.

This quarter has been very busy for us as I am sure it has for you. The newsletter is very large this quarter however we felt it was important information that needed to get out to all of you. Would like to personally thank SSG Brosch for taking the time to write a story and support our Newsletter. SSG Brosch is doing a fantastic job as a MG out in the field and his deeds are earning him recognition in the MG community. Any and all stories are welcome from around the globe on any topic.

On another note, I would like to ask all of you to start documenting any ammunition deficiencies you may come in contact with during gunneries. As you read in the Nose Cap story there are only two known cases and I believe there have been more that have not been documented. Drop us a line, with the specific incident that occurred (and pictures if possible) using the mail from the field link or forward the information to your MSC or MACOM Master Gunners, as most of them are in contact with me regularly.

We continue to have small classes however attendance is still currently high enough to conduct courses. Believe this will change once units start redeploying from the desert so send all the candidates you can now, as slots may not be available later. As always if you need any help or assistance with scheduling folks for class or a technical question don't hesitate to contact us.

Take Care,
SFC K