

## Safety Interlock Developed For the M1A1 Driver's Hatch

Dear Sir:

PM Abrams has designed and approved a system to prevent the turret from turning when the driver's hatch is opened. This modification will prevent many of the accidents that we have seen in the past. It has been applied to all M1A2 tanks, and we are beginning to apply it to M1A1 tanks. Training for this modification on the M1A1 is being done by an interactive CD produced by the TACOM New Equipment Training Group. M1A2 Training is done by a TV tape which was distributed to each unit with M1A2 tanks, along with a lesson plan.

Each M1A1 armor battalion commander and cavalry squadron commander will be mailed a copy of the interactive CD to train crews on how to use the Driver's Hatch Interlock. More copies can be ordered by contacting USA-TACOM, ATTN: SFAE-GCSS-W-AB-LF (Mr. Tom Werth), Warren, MI 48397-5000 or email wertht@tacom.army.mil.

Copies will also be sent to the Army National Guard distance learning library, TRADOC distance learning library, Ft. Knox Master Gunner School and Ft. Knox DTDD.

Installation of this modification will result in crew protection while still allowing for an override in the event of an emergency.

TOM WERTH  
Abrams Net Mgr  
DSN 786-8201

## Army National Guard Has Light Cav Troops, Too

Dear Sir:

Although *ARMOR* magazine is generally supportive of the Total Army concept, I wanted to point out several omissions in the November-December 1998 issue. In the article, "Airborne Ground Cavalry," CPT Stephens writes that, "there are only three other [than the 82nd Airborne's A/1-17th CAV] separate light cavalry troops in the United States Army, not including those troops which are part of the 2nd Armored Cavalry Regiment at Fort Polk, Louisiana. These troops are located at Fort Wainwright, Alaska; Fort Drum, New York; and Schofield Barracks, Hawaii." Obviously, CPT Stephens does not consider the Army National Guard's six light cavalry troops (one from the 29th Infantry Division and five from enhanced readiness brigades) to be part of the U.S. Army. In fact, if the 2nd ACR's troops are excluded, the Army National Guard has 6 of 10 light cavalry troops in the total force structure. By allowing such ignorant comments to be included in your magazine, *ARMOR* only helps to perpetuate parochial attitudes.

An even more common example of ignoring the Army National Guard's contributions to the total force was found in LTC Stanton's article, "An NTC For the Next Century," when the author refers to the "10-division (and shrink-

ing) over-committed Army..." Funny, when I checked the 1998-1999 *GREEN BOOK*, the U.S. Army had 18 MTOE divisions (10 active/8 Guard). This reference to a "10-division army" is often repeated in your magazine and other professional journals. Nothing irks Guardsmen more than to be treated like "unpersons" in units that don't exist according to some narrow-minded bigots. I'm sure *ARMOR* would not tolerate derogatory racial or ethnic statements in its articles, but I fail to see why it permits recurrent pernicious slights of fellow soldiers in its pages. This only contributes to undermining the Total Army.

ROBERT A. FORCYZK  
MAJ, MI, MD-ARNG  
G-2 (Opns)  
29th Infantry Division (Light)

*(To quote from Jimmy Buffett: "Mea culpa, mea culpa, mea maxima culpa . . ." I believe ARMOR's record speaks for itself in regard to its coverage and treatment of both the National Guard and Reserve, but we can always do better. - Ed.)*

## Seeking Alternatives to "Scouting in a Winnebago"

Dear Sir:

Skimming through the Jan-Feb edition of *ARMOR*, I noted a letter by COL (Ret.) Chris Cardine on scout vehicles, and noted that it would provide thoughtful reading. Chris has been a contributor of ideas to the Armor Force for many years. Unfortunately, his letter is terribly off mark. So, as the Chief of Armor's agent for Armor Force modernization, I offer our readership the following informed comments:

The Armor Center has been part of the TRADOC System Manager Bradley's team in the development of the M2A3/M3A3 BFV. Armor Center combat developers have participated at every level and event. The Armor Center's Directorate of Doctrine Development and the School are working to incorporate the M3A3's improved capabilities into doctrine and our POIs. The M3A3 will provide our division and armored cavalry scouts with an improved platform and sensors for mission accomplishment. Unfortunately, as MG (Ret.) Tom Tait so often notes, it still is "scouting in a Winnebago."

The Armor Center recognized in the mid-1980s that the Bradley did not provide scouts the capability for successful mission accomplishment. The Center, with cooperation from other TRADOC schools, instituted doctrine, leader development, training improvements, and materiel changes in order to overcome deficiencies. When the BFVs in battalion scout platoons were replaced by HMMWVs, scouts penetrated deeper at the NTC and accomplished more missions — size does make a difference, but scout survival only marginally improved. NTC results showed, over and over again, that when scouts were successful, the task force chances of mission success dra-

matically improved. Reconnaissance and surveillance capabilities were judged to be the most serious mounted close-combat deficiency.

From the mid-1980s onward, the Armor Center conducted various concept studies with the S&T community and searched for a definitive strategy. This was part of a broader effort that included such issues as retaining tanks in the division cavalry squadron, reconnaissance squadrons in light divisions, and a brigade reconnaissance troop. Desert Storm after-action results further substantiated the need for a new scout system and provided further momentum. A series of meetings with British and German counterparts were conducted as part of the Armor Combat Development Exchange Program (ACDEP), but produced no new solutions. Nevertheless, a Future Scout Mission Needs Statement was prepared, approved by HQ TRADOC and DA, but not forwarded to the JROC. An acquisition plan was required.

A 1996 TRADOC Integrated Concept Team crystallized efforts by drafting and presenting a broad set of requirements and a plan of action. More than three years ago Armor senior leaders set a new course to equip future scouts with a platform that is optimized for reconnaissance and surveillance, rather than further modify the BFV. That same summer, an ACDEP exchange revealed a unique opportunity to pursue a collaborative scout program with the U.K. This last point, in conjunction with an innovative new acquisition streamlining approach from DA, provided the impetus to launch a new program. Incidentally, prior to the signing of a Memorandum of Intent between the two countries, an independent analysis showed that simply putting a mast with a sensor on a BFV did not result in increased scout mission performance. The Future Scout MNS was subsequently adjusted and approved by the JROC. A U.S. and U.K. Combat Development team then jointly crafted a Combined Operational Requirement Document for the first phase of the program.

Unfolding doctrinal changes also provided Senior Army leaders with rationale for the FSCS. Obtaining and sustaining information dominance in knowledge-based warfare is an essential component of Force XXI operations. The TF and Division Army War Fighting Exercises showed that the ground scout's role becomes more critical in satisfying CCIR in a timely manner, even with the addition of UAVs and other aerial sensor platforms. Army After Next and other studies highlight the need for rapid inter- and intra-theater air deployment. So we are seeking a medium-weight C130-deployable system, optimized for mounted reconnaissance and surveillance in Force XXI and beyond.

The FSCS/TRACER program is a collaborative venture with the U.K. that is the Army's first Fast Track acquisition program. It seeks the latest in technologies by not locking in designs early. Both nations bring a tremendous suite of knowledge and experience to this effort. The concept article on FSCS in the Jan-Feb *ARMOR* edition by Asher Sharoni

and Lawrence Bacon is a thoughtful work that I recommend to readers. It embodies many of the components we are seeking.

But what about the near term for the battalion scout platoon? Senior Armor leaders also recognized that the complete inadequacy of sensors within the battalion scout platoon could not wait for FSCS in 2007. The Long Range Advanced Scout Surveillance System (LRAS3) will fill this void and provide M1114-equipped battalion scouts with a greater sensor capability than the M3A3. This will enable greater standoff detection, survivability, and far target location accuracy for the HMMWV-mounted scout. LRAS3 will be rolled over to ARNG scout platoons with the fielding of FSCS. See *ARMOR Magazine's* November-December 1998 issue for a detailed discussion of LRAS3. A mast-mounted sensor on a HMMWV was rejected as an interim solution due to affordability. LRAS3 provides a solid and affordable capability to our battalion scouts in the near term.

We have also been examining for the last year a variant of Land Warrior for dismounted operations by our scouts. This could provide exciting capabilities, but must wait due to affordability concerns and the re-baselining of the Land Warrior program.

The Chief of Armor is executing a scout strategy that is the product of extensive research, analysis, and debate. To suggest that he or the Armor Center do not take our responsibility seriously is ludicrous. The FSCS will provide the mounted scout the right tool to get his job accomplished in the 21st century.

JOHN F. KALB  
COL, Armor  
Director, Force Development  
USAARMC

### Simulation in Training: The Other Side of the Story

Dear Sir:

COL Guy Swan's article, "Computer Simulation Fallacy: Assuming Troops Are Well Trained," in the Jul-Aug 98 issue was a well-written, thought-provoking piece that is of interest to those of us who consider ourselves professionals within the simulation industry. We are very cognizant of the continuing need for training in the dirt, for which it is unlikely there will ever be a suitable surrogate. However, for a number of reasons (operating and ammo costs, availability of time, environmental issues, etc.), live training time has become increasingly precious. I believe the real question raised by COL Swan's article is, "When will our computer simulations better replicate and prepare our soldiers for the limited *live* training that still exists?"

Disturbing, however, is COL (ARNG, Ret.) Robert Fairchild's letter, "Excessive Simulation Breeds Training With Little Basis in Reality" in the Nov-Dec 98 issue.

COL Fairchild's letter starts with a somewhat mean-spirited generalization attacking the

simulation community: "The simulations industry has been a gold mine for retired soldiers now in the private sector. They have seduced policy-makers, who should know better, into believing that armor and mech units can be trained on the cheap, and that no one need any longer scrape their knuckles disconnecting final drives in the dark."

It's unfortunate that COL Fairchild holds these views. He has it wrong. Professionals in the simulation (or defense) industry, many of us ex-soldiers, care deeply about our responsibilities to the Army in today's challenging climate. Many of us feel we still wear the uniform under the suit and believe that any company marketing a training product (simulation or otherwise) that doesn't significantly enhance readiness won't be in business very long.

My personal simulation experience started in 1985 while commanding 2-64 Armor in Schweinfurt, Germany. Well experienced in tank gunnery, I was skeptical of the ability of the newly fielded M1 Conduct of Fire Trainer (COFT) to assist in preparing our crews for Tank Table VIII. To find out, my gunner and I put in many late hours on the COFT to assess its value. And, WHOA, was it good! The ability to watch, coach, mentor and assess TC-gunner teams in the relative comfort of the COFT provided an ability to TRAIN that was never achievable at midnight in the "back 40" while sitting on the roof of one of our tanks in a driving cold rain and 35° weather during a dry-run TCPC exercise. Fact: Being cold, wet, or otherwise uncomfortable never improved gunnery training — it DETRACTED from it.

We quickly transitioned from COFT skeptics to COFT zealots, encouraging our battalion's crews to achieve high levels of proficiency on the COFT while their leaders watched, coached, and reinforced their own skills. The battalion proved just how good our belief in the COFT really was during our next trip to Grafenwoehr.

Quality simulation translates directly to improved performance in the field where "live" simulation takes over. To this day, I doubt many really understand the dramatic improvements in tank gunnery standards (Ph, Pk, opening times, etc.) that were/are attributable to the COFT or today's second generation Advanced Gunnery Training System (AGTS). I believe the same will soon be true of collective training simulations, both at the joint level and within the individual services.

As one who frequently visits Army posts, I detect a far greater threat to readiness than an overabundance of simulation — I detect a lack of resources, to include a dearth of quality training time — simulation or otherwise. How many hours per month do TCs and gunners spend in their AGTSs? What is a battalion's average Reticle Aim level? How frequently are units firing Table VIII (can't be too many, as I rarely hear a main gun round pop, even at Ft. Hood). How many days do company commanders have in the field with their units? Even road march skills, once one of the best visual indicators of a well trained and

disciplined unit, are being eroded by loading tanks on HETS to move from the motor pool to a local maneuver area or range.

Our challenge within the simulation community is to make the simulations we are building capable of maintaining high levels of proficiency and *mitigating* lost time in the field. It's a challenge we in industry take very seriously.

I believe the tempo and topics of discussions in *ARMOR* and other professional journals relating to the pros and cons of simulations cannot be generalized. Let's not forget the basics — tasks, conditions and standards. Simulations are improving dramatically. The frustration being voiced by many is really being directed at the inability of legacy (mostly constructive) simulations to keep pace with today's spiral development process. JANUS, CBS, SIMNET, etc., are all showing their age and are not able to easily link with or fully stress our emerging C4I systems. The patience of those responsible for training in the field with a mix of old and new hardware is wearing thin. The generation of emerging virtual and constructive simulations, such as the Close Combat Tactical Trainer (CCTT), Warfighter's Simulation 2000 (WARSIM), Joint Simulation System (JSIMS), etc., will resolve many of these deficiencies.

This is a challenging time for both combat and training developers. The fielding of new simulation systems is taking longer than we would like, due both to budgetary issues and technical requirements to develop flexible architectures responsive to dynamic hardware and software changes. In summary, training systems lag behind hardware systems — this is nothing new. This time, however, as revolutionary new information systems are being fielded, the training systems lag is more apparent and is having a more noticeable impact.

I assure you, the pledge of simulation "professionals," both in Government and industry, is to provide robust, modern simulation tools that will better prepare soldiers for live training or war. WARSIM, CCTT, JSIMS, and other tools, once fielded, will offer dramatic improvements over the legacy systems now in use.

Keep the faith! But please, don't ever question our support of the force!

COLIN L. MCARTHUR  
COL, Armor (Ret.)  
Orlando, Fla.

### The Problem with BEAMHIT? It Isn't Authorized, He Says!

Dear Sir:

First, let me salute the officers and NCOs of C-3-81 AR for their initiative in not only using an untried training device but also for developing Marksmanship Programs of Instruction (POI) to go with it.

*Continued on Page 49*

## LETTERS (Continued from Page 4)

Regrettably, that's about as far as I can go. BEAMHIT is not an authorized training device, nor was it procured under provisions of the Federal Acquisition Regulation. No unit is authorized to procure training devices with unit or operating funds, even, as in the case with BEAMHIT, if it is available through GSA catalog ...

At a minimum, they violated long-standing guidance in such matters from HQ DA. All training aids, devices, simulators and simulations (TADSS) or procured either by the system Program Manager or by DA DCSOPS using Training Mission Area (TMA) funds. In either case, the authorization document is an approved Operational Requirement Document (ORD).

As slow and often unresponsive as our system is, it is what we have to use. The Army is now procuring the Engagement Skills Trainer (EST) for Army-wide distribution to units and to Training Centers. This device is as far advanced from BEAMHIT as the space shuttle is from a WWI biplane. Better, it is fully supported logistically by Army funding. How will C-3-81 repair their BEAMHIT?

Finally, in developing the POI used with BEAMHIT, did USAARMC staff the POI with the proponent for all small arms training — Fort Benning or with HQ TRADOC? I believe the answer is "No." Standardized training is necessary if the Army is to execute its doctrine correctly. If every OSUT unit develops its own, locally unique POI, chaos is sure to follow.

RICHARD M. POTTER  
Chief, Combat Arms Team  
U.S. Army Training Support Center  
Fort Eustis, VA 23604-5166

### An Entrepreneurial Spirit Would Renew Army Culture

Dear Sir:

I noted with interest the letter from CPT Coglianesi concerning the beliefs and proposals of MAJ Vandergriff. This brings back the question of long standing as to what our leaders at the top are up to after all the turmoil of down-sizing and seemingly endless operations such as Bosnia, *et al.* I don't pretend to know what the present culture is in the Army today, so can only surmise. I do agree that a new culture is needed if the Army is going to handle its future tasks effectively, and that future may not be far off. When I write on the matter of "a new culture," I am trying to establish that what has been going on in the Army since 1992 has got to change. To use the old phrase, it has been "go along to get along." This is dreadful!

I have believed for some time that what is needed is to provide an appropriate entrepreneurial spirit, with emphasis at the battalion and lower levels — for a start. This has never been done to my knowledge, as the bureaucratic mode has prevailed for such a long, long time. It has been exacerbated during the drawdown as junior officers quickly learned

that doing anything other than obeying orders stringently meant an ultimate boot out of the Army. Perhaps this atmosphere has abated somewhat, but I doubt that any real change in senior level attitudes has materialized. Seniors have advanced by playing ball (not kicking it out of bounds), and as this worked for them, their subordinates must do likewise. An entrepreneurial spirit means seizing the initiative when the opportunity arises — or is created — and the encouragement and support are there, and doing the different that is better. Challenging the present means some conflict typically ensues, but this can be a positive development if done right.

There are obvious problems with this environment. First, relatively inexperienced junior officers will surely make mistakes that in the recent past have been fatal to careers. Second, seniors must accept the responsibility for these mistakes and keep on encouraging continued effort, simultaneously helping to develop these aspiring junior officers. In this connection, seniors must be prepared to assume certain risks that far too much in the past have adversely affected their careers. Third, for seniors to be willing to stake their reputations on subordinates' learning experiences, they must be so encouraged by their superiors. From the Chief of Staff's office on down. Mutual trust and respect must prevail.

Right now, trust of those at the top hardly is robust. There are a number of reasons for this that require much more extensive treatment than available in this message. Fundamentally, junior officers do not believe that seniors are leveling with them on a variety of critical issues. Subordinates can quickly tell when a superior is lying.

Trust is so basic that it must be resolved before anything else of lasting benefit can be attempted.

COL GEORGE G. EDDY  
Austin, Texas

### Computer Simulation: Part of Annual Training Strategy

Dear Sir:

It is refreshing to see continuing debate on how simulations fit in today's training strategy. COL Guy Swan III's letter, "Computer Simulation Fallacy: Assuming Troops Are Well Trained," addresses the issue of simulations as it relates to maneuver training and troop training readiness. I agree that nothing can replace live training on a realistic battlefield like the CTCs provide. However, we should remember that all but war is simulations.

Recently, CTC newsletters have addressed the fact that units are not at entry level when they arrive at the CTCs. There is no doubt in my mind that simulation-based training, integrated into a training strategy, properly utilized, and professionally observed and controlled, have a place in training the maneuver forces of tomorrow's Army. Simulations are an efficient way of achieving the level of readi-

ness required to execute training at the CTCs in these days of dwindling resources. Once again I reiterate, to be effective, simulations must be integrated into a training strategy, properly utilized, and professionally observed and controlled.

The first questions to address is: "Have our current training strategies correctly integrated simulations into the Army's overall training strategy (i.e., AR 350-1 and AR 350-2)?" I contend that the Army strategy needs clarification on the WHO, WHAT, WHEN, WHERE and WHY units will use simulation training.

The second question is: "Are simulations systems properly utilized?" First, commanders must understand that unit performance based on a constructive or virtual simulation cannot be construed as an assessment of the unit's actual tactical abilities in either a live simulated training environment or war. I believe we need to identify the tasks that can be trained, partially trained and not trained utilizing simulations. After gathering those tasks which simulations can train (i.e., battle tracking, situational awareness, synchronization, etc.), scenarios/operations orders can be developed to train, sustain and/or even test those skills. The scenarios/operations orders can be compiled into standard flowcharts/matrices that can be used to meet the training needs of each individual unit (i.e., like matrix used to facilitate UCOFT).

The third question is: "Are all levels of constructive and virtual simulations professionally observed and controlled?" Years ago, the Army proved the principle that observed and controlled training is required to obtain a quality result. However, many units conduct simulation training with no or unqualified observers and controllers. I believe this is another issue to be addressed in AR 350-1 and AR 350-2.

COL Swan addresses constructive simulations such as Brigade/Battalion Battle Simulation (BBS), JANUS and WARSIM 2000 noting that these simulations do not properly address all Battlefield Operating Systems (BOS). Simulations are only limited by the imagination. For example, a Field Artillery (FA) Battalion could integrate their organic tactical equipment (i.e. IFSAS) and operate the digital system. Air Defense Artillery (ADA) could integrate their tactical early warning system (FAADC3I). Intelligence officers could link to higher ASAS Warrior systems. Combat Service Support (CSS) capabilities are there (especially in BBS), but we too often leave this key BOS idle, because it is too time and personnel consuming. BOSs can be worked with small workarounds utilizing constructive simulations.

Where constructive and virtual simulation training fit into the annual training strategy to achieve the level of readiness required by our active and reserve unit is an issue. Virtual and constructive simulations should be implemented into the overall training strategy of the Army as discussed previously.

**Bottom Line.....**we must realize that virtual and constructive simulations are here to stay.

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## LETTERS (Cont.)

Leaders must understand simulations. Commanders especially must understand what simulations will and will not do and then implement simulations into their overall training strategy.

COL (RET.) J.W. THURMAN  
Director, Fort Knox Senior Observer  
Controller Team (SOCT)

### The National D-Day Museum To Open in New Orleans

Dear Sir:

On the 56th Anniversary of the Normandy invasion, June 6, 2000, the National D-Day Museum will open its doors in downtown New Orleans. The Museum will be the first of its kind to tell the story of the United States amphibious operations around the globe in World War II.

Located in the Warehouse Arts District of New Orleans, the 67,000-square-foot museum will house the St.-Lô Collection from La Musée de la Libération de St.-Lô in Normandy, France — a rich collection of artifacts from Utah and Omaha Beaches — including German vehicles, sentry boxes, and a wide array of weapons and equipment used by both sides during this conflict, as well as privately owned artifacts donated by veterans.

A 16,000-square-foot gallery will be divided into four state-of-the-art interactive historical and educational exhibits that will include oral and written histories from veterans worldwide, military equipment, photographs, and never-before-seen film footage.

"This museum is the only one of its kind in this country. It will celebrate the famous Normandy D-Day invasion, but it will also portray all the other WWII D-Day invasions fought by the Navy, Marines, Army, Army Air Force, and Coast Guard in every invasion of the war,"

said Dr. Gordon Mueller, elected chairman of The National D-Day Museum.

Please pass this information on to your readers. For more information, they can contact: (504) 525-1544.

BRIDGET VOIGT  
The National D-Day Museum  
New Orleans, La.

### **ARMOR Magazine 1998 Index**

The *ARMOR* Magazine 1998 index is now available. You can request a copy by email at [armormag@ftknox2-emh3.army.mil](mailto:armormag@ftknox2-emh3.army.mil) or by contacting Mary Hager at DSN 464-2249/2610; commercial (502) 624-2249/2610.