

# Training in a Low Budget Environment

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*"The bodies of men, munition, and money may justly be called the sinews of war."*

— Sir Walter Raleigh

**Introduction.** Money has been a critical component both of armies and of the art of war since before the hoplites of Alexander's days. He may lack the glory of the field commander, but the comptroller in today's modern military establishments wields a mighty weapon on the field of battle, and more importantly, in the training that precedes war. This article will offer some insights and tips into training in the context of a low budget environment. Even with a constrained budget, it is possible to train effectively if the leaders know how to squeeze every bit of training value from each dollar.

Recently, our brigade combat team returned from a highly successful rotation at the National Training Center. We purchased our successes at the NTC during the six months of intensive train-up that preceded the rotation. The challenges we faced were severe, since the brigade suffered approximately a 30 percent budget cut from the previous training year. What follows are some of the lessons we learned about training for a Combat Training Center (CTC) rotation with limited resources.

What is a successful rotation? Although such a claim must be largely subjective, we believe our training at the NTC in December 1994 was successful from several aspects. We maintained a good record in the vital areas of safety and accountability throughout the rotation. We experienced solid improvement from mission to mission. At the same time, our initial training level was high in the opinion of the observer-controllers (OCs). We beat or drew against the OPFOR most of the time. Finally, we demonstrated strengths in the key areas of tactical decision making processes (TDMP), live fire, company/team tactical movements, casualty evacuation (CASEVAC), planning and execution of the brigade deep battle, and soldier/crew preparation. Of

course, we were not perfect by a large measure. As might be expected, the professionals at the NTC dissected us on the field of battle and showed us many areas that needed improvement. Still, both the trainers and the brigade's leaders and soldiers agreed that the brigade arrived prepared to train and departed ready for war...despite a tight budget.

As we thought about that preparation, we distilled several key themes in our train-up that led directly to our successes in the desert. Among those themes are:

- Starting with a clear assessment and commander's guidance
- Use of simulations
- Use of a graduated plan of field training
- Gunnery innovations
- Integration of all battlefield operating systems (BOSSs)
- Emphasis on leader training
- Focus on the basics
- Use of money-saving training techniques

**Clear assessment and commander's guidance.** The brigade combat team (BCT) had one enormous advantage going into the train-up period: the BCT had just completed an NTC rotation in January 1994. Since most of the key leaders for the second rotation were still with their units — indeed, quite a few were still in the same job position — we had a lot of collective experience that we could draw on. More importantly, the commanders had a clear vision of our areas that needed improvement from the first rotation.

While the January rotation was a successful one, the brigade combat team left Fort Irwin with a solid plan for improving performance. Specifically, we wanted to improve on intelligence preparation of the battlefield (IPB); wargaming; reconnaissance, surveillance, and security (RSS) planning and execution; company/team operations orders (OPORDs); preparation for combat; direct fire planning; and integration of indirect fires.

As we approached the train-up period, which began in earnest in August, 1994, the commanders at each level established clear, simple intents for training. Further, commanders at each level were careful to assimilate and expand upon the higher commander's intent. Hence, as we began the train-up, the leaders and soldiers were guided by solid commander's intent statements that were nested and enforced at each level.

The other factor that served the BCT well was the decision to task-organize early. The teams of officers, NCOs, and soldiers that would prevail in the cold December desert began to form and develop both written and unwritten SOPs in late July. Of course, complete task organization is a challenging and elusive goal, but the commanders made the necessary sacrifices in the interest of team-building, with the result that the rotational units enjoyed four months of association in garrison and in the field prior to deployment.

**Simulations.** One of the most obvious ways to save money in today's training environment is through the use of simulations. Modern technology permits leader, collective, and individual training with simulations to an unprecedented degree. But no machinery, however artfully designed, replaces good planning or imaginative training management. Hence, the key to the effective use of simulations is thorough planning, and a broad vision for exploiting all the potential of computer-based and terrain-board simulations.

Our brigade used both the JANUS computer-based simulation and a terrain-board system known as Fire Command Plus. JANUS is a computer model used in both combat developments and training. A professional OPFOR plans and executes the enemy operation, and after the battle, the simulation can replay the battle for instruction, focusing on the critical aspects of the fight. The BCT used JANUS at brigade, task force, and company level to develop and train brigade deep battle procedures (especially RSS), as well as

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our close battle operations. We were able to refine our TDMP, reporting procedures, and fire planning (both direct and indirect). We also improved our knowledge of the terrain we were going to fight on by using digitized NTC terrain.

Fire Command Plus is a wargaming system that employs micro-armor maneuvering across a terrain board that (in our case) portrayed the National Training Center. Again, a dedicated, professional OPFOR provides an uncooperative and free-thinking enemy. The BCT used Fire Command Plus to train from company/team through brigade level in TDMP, maneuver and BOS integration. We used lessons learned to develop and train brigade and battalion SOPs. Finally, we employed Fire Command Plus as the simulation tool for a five-day logistical exercise (LOGEX) that helped us to train on all aspects of combat service support (CSS).

Simulations did not adequately address all of our training objectives. One of our lessons learned during the rotation was that our combat vehicle crews needed more training on terrain driving and the use of terrain in combat. We could have benefited from the use of SIMNET, a training simulation that uses a network of computer-simulated combat vehicle stations to train crews. Our use of simulations, however, did allow us to get more out of our field training dollars.

**Graduated field training.** Simulations can accomplish only a portion of the training required to prepare a unit for a CTC rotation (or for war). Field training is still essential in order to allow the leaders and soldiers to maneuver under real conditions. Unfortunately, field training is among the most expensive training a unit can conduct, so leaders will almost always face budget constraints when planning it. Our brigade was funded and resourced with the time to conduct only two major field training exercises, each approximately two weeks long.

Instead of allowing our maneuver platoons to simply charge out to the maneuver area in order to learn how to maneuver, the brigade ensured that leaders were proficient in basic tactical and maneuver skills prior to conducting lane training. We accomplished this by developing a ten-day training plan based on the crawl, walk, run approach that ensured the platoon leaders and company commanders would use the

scarce maneuver time and resources to optimal advantage.

We started with our commanders instructing the platoon leaders on fundamental individual and collective tasks derived from the MTP and field manuals. Initial training consisted of classroom instruction on topics such as troop leading procedures according to our current doctrine, and tactics, techniques and procedures (TTPs). Seminars often transitioned into a sharing of TTPs that worked well at Fort Hood and the NTC. These classes culminated with the platoon leaders and tank commanders receiving an order and then conducting a movement to contact on a terrain board, evaluated by the battalion executive officer and S3 Air. We derived this training model from the Armor Officer Basic and Advanced Courses.

Platoon leaders practiced movement techniques on a parade field. Combat vehicle crews practiced basic crew and platoon drills by walking across the field, simulating various vehicle maneuvers, and communicating with backpacked radios. The company commanders evaluated the maneuvers, ensuring each unit performed to standard. After demonstrating proficiency on the parade field, the platoons moved out to the maneuver area to conduct dismounted platoon training. We conducted tank platoon dismounted training at a centralized location using a series of dismounted lanes. The company commanders issued their platoons an order on the ground on which they would conduct their mission. The commanders then evaluated them on both offensive and defensive missions.

Mounted field training began in August. The intent during the development of our train-up plan was to resource and execute platoon situational training exercises (STXs), or "platoon lanes." Unfortunately, we soon discovered that we did not have adequate time and money to conduct platoon, company/team, and task force lanes, and we decided to resource the last two. As a result, we missed the opportunity to focus our training on platoon-, squad- and crew-level field training. Our decision was correct, but failure to provide field training at the lowest level resulted in a noticeable lack of field craft at the soldier/crew/squad/platoon level. Specifically, our platoons had to struggle to catch up on battle drills and tactical movement techniques. Our assembly area procedures

and tactical road marching suffered as well from our inability to train the basics at the lowest level. If we were to do it all again, we would resource mounted platoon-level battle drill training at the expense of a few days of training at the higher levels.

Our company/team lanes included some of the most effective training we conducted. Consisting of a series of STXs, the lane training included movement to contact (MTC), deliberate attack (DATK), defense in sector (DIS), counterreconnaissance screening, and a counterattack (CATK). The companies rotated from one lane to the next according to a schedule that approximated the difficult pace of NTC operations. Our non-rotational armor battalion was a full partner in the train-up. They provided a professional, challenging OPFOR against our rotational company teams, as well as a full OC package down to platoon level. Fully equipped with MILES, the training companies and the OPFOR clashed in hard-fought battles that quickly improved our company/teams' readiness over the course of a few days.

We had to manage our funds very carefully, because we conducted the lane training near the end of the fiscal year. Facing serious budget challenges, the BCT considered several strategies for conducting task force lanes. We chose a plan that provided each battalion task force about one week of training, opposed throughout by the non-rotational armor battalion. We considered the lanes to be a graduation exercise for the platoons and companies, and we employed all of the battlefield operating systems during the training. For example, during the defensive lane, engineers dug fighting positions to standard, and both engineer and field artillery participated in offensive operations.

Each battalion task force conducted a defense and two attacks (one day, one night). As with the company lanes, the task force lanes included a complete package of OCs and a system of thorough after-action reviews (AARs) at each level of command. The BCT battle staff conducted numerous orders drills throughout both exercises and produced orders that we subsequently used and evaluated, enhancing their ability to plan and execute both close and deep operations.

**Gunnery innovations.** Following our force-on-force training, the BCT con-

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ducted a gunnery density. The two rotational battalions performed a gunnery density through Table XII and a combined arms live fire exercise (CALFEX), while the non-rotational battalion performed gunnery through Table VIII. Again, the BCT commander faced challenging budget constraints. Normally, each battalion would be resourced to conduct platoon gunnery up through Table XII (platoon qualification), followed by a CALFEX at company/team level. In our case, however, there was sufficient time, range availability, and money for either a Table XII or a CALFEX. Hence, the commanders had to decide which level of training was more important.

Again, the principle of basing training on accurate assessment came into play. The infantry battalion commander deduced that his Bradley platoons required the focus of platoon qualification to integrate mounted and dismounted operations. The armor battalion commander, however, opted for a CALFEX, because most of his platoons had completed a Table XII during the leaders' tenure. Both strategies paid off well, because the commanders and staffs developed combined arms, multi-echelon approaches to the live fire exercises.

The infantry battalion's Table XII featured a robust dismounted portion to complement the mounted gunnery and maneuver. The qualification run included a helicopter movement and a long foot patrol. The day live fire included an antiarmor ambush, several mounted engagements, trench line clearing, and a defense against counter-attack. The night phase of the Table XII comprised a dismounted, non-illuminated, unsupported night attack on an enemy hasty defense, followed by rapid reinforcement by the mounted element during consolidation. The emphasis throughout was upon fire planning and integration of mounted and dismounted operations.

The armor battalion conducted a CALFEX in lieu of a Table XII. The CALFEX focused on company team maneuver and fire support. Each company team was evaluated on assembly area procedures and tactical decision-making. The team then maneuvered through a live-fire breach conducted by the engineers and then onto the actual CALFEX range. Along with tank and Bradley platoon fire and maneuver, each company team practiced employment of fire support from mortars, artil-

lery, and close air support. The tank battalion task force proved the efficacy of their train-up when they successfully killed every target during the night live fire defense at the NTC!

The success of the brigade's combat vehicle crews was underpinned by thorough preparation of the leaders prior to gunnery. The leaders practiced fire planning and engagement area development on the gunnery ranges. During crew practice and qualification, the crews that were waiting to fire completed comprehensive concurrent training on casualty evacuation, storing and arming antitank mines, preparing sector sketches, and other critical tasks.

**BOS integration.** One of the keys to success in both training strategies was the integration of combined arms capabilities. Our combat engineers conducted both obstacle construction and breaching, including several live-fire breaches. They also dug several trench lines in support of our infantry. The fire supporters conducted numerous indirect fire missions in support of the maneuver, including close air support, on both the Table XII and the CALFEX. In each exercise, as with our lane training, the BCT leaders insisted upon multi-echelon, combined arms training and the full integration of all BOSs.

Another major key to the BCT's success at the NTC was the concept of logistical support. After receiving the brigade commander's intent, the FSB commander, in close coordination with the brigade XO, developed a plan to ensure that the CSS system was fully synchronized with the BCT's scheme of maneuver prior to and during the NTC rotation. The plan was to ensure that the CSS system was tested and validated prior to the NTC rotation. Our senior logistical operators conducted a logistics reconnaissance (log recon) at NTC in August. The purpose was to plan the draw and turn-in operations, as well as the concept of support for field maneuver. CSS operators briefed their concept of support to the maneuver battalions shortly after returning from the log recon and then tested it during the lane training. This concept of support was validated during the forward support battalion's LOGEX. The LOGEX was a five-day exercise that included all CSS operators and planners and used a combination of CSS classes and our simulation center terrain boards to practice specific logistical procedures for three missions:

movement to contact, deliberate attack, and defense in sector. All BCT CSS operators participated in the LOGEX, and one of the most important results was the team-building among the major players from the FSB and the maneuver battalions. For example, when the players arrayed the maneuver battalions and FSB assets on the terrain board, it became apparent to all that the battlefield clutter arrayed before them demanded detailed, collective terrain management from all staff sections in the BCT. We also identified the management of engineer barrier material as a shortfall during the LOGEX, and we developed an SOP on the management of the forward supply point that was coordinated with all players from the LOGEX.

One of the BCT's conspicuous strengths during the rotation was casualty evacuation — a difficult collective skill to develop. Our success was made possible by a constant emphasis on the task. At no point in our train-up did we permit ourselves to "hand-wave" casualty evacuation. The BCT's command sergeants major closely supervised CASEVAC during each battle and evaluated our aid stations each field problem. By the time our units completed task force lanes, CASEVAC was a natural part of our tactical rhythm. Further, we refined our techniques through a series of three health services seminars led by the brigade S1, the chief of the division medical operations center, and the commander of the FSB's medical company, during which our company first sergeants, XOs, and medical personnel developed better and faster ways of recovering and treating casualties.

The fire support BOS was another area of obvious success at the NTC. Throughout our train-up, maneuver and fire support leaders planned, trained, and operated together. We integrated the O&I Battalion commander and staff early in our training. The fire supporters ensured a continuous emphasis upon the "maneuver-shooter" concept — i.e., maneuver leaders calling for and adjusting indirect fires. They also performed comprehensive fire support rehearsals prior to each operation, and they included the maneuver battalion commanders and S3s to ensure understanding of the plan.

The combat engineers were also energetic in their integration of mobility, countermobility, and survivability training into the BCT plan. Again, our lead-

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ers resisted the temptation of “hand-waving” the difficult art of obstacle construction and breaching. Instead, every operation during company/team and task force lanes integrated this key BOS into the mission.

### **2AD Training Model**

- **Plan the training**
- **Teach leaders doctrine, tactics, techniques**
- **Recon training site**
- **Issue the OPORD**
- **Rehearse the plan**
- **Conduct the training**
- **After action review**
- **Retrain**

Building an effective combined arms team remains a difficult art, and we experienced some training deficiencies in BOS integration. Among our areas for improvement were our training with the chemical company, communications, employment of air defense artillery, integration of the military police, and some aspects of our CSS. Our interface with the chemical company and the transition from a battle position to a decon link-up needed work. Our communications problems involved our Maneuver Control System (MCS) and tactical fax capabilities. We experienced some degradation in command and control, because we had not thoroughly trained on those systems. Our MPs performed well at the NTC, but during the train-up, they were frequently distracted by garrison duties and unable to fully participate with the BCT. The CSS challenge was to enforce a break with day-to-day garrison operations and instead transition fully to field conditions for combat service support. Finally, we were unable to train with our air defense artillery, because they were deployed on a real-world mission during train-up.

**Emphasis on leader training.** Army training doctrine emphasizes the importance of leader training. The 2nd Armored Division employs a training methodology that focuses on this critical step in unit training. As an example of this approach, BCT platoon, company, and task force leaders conducted extensive tactical exercises without troops (TEWTs), learning the steps of building an engagement area.

BCT leaders also benefited from the after-action reviews from the previous

rotation. The brigade commander required all battalion commanders to write synopses of their take-home packages. Commanders collectively reviewed the video tapes of each mission from the earlier rotation. As the brigade senior leaders progressed from tape to tape, the brigade command team developed a common agreement on how to fight each brigade mission and what each unit would bring to the fight. At the end of each session, the leaders distilled that understanding into written command guidance. Thus, throughout the train-up, the brigade command team developed a common vision of the purpose, method, and end state for each type of mission. It is this implicit, shared understanding of the commander’s intent that energized our decentralized operations on the fast-paced battlefield at Fort Irwin.

The BCT’s officers and NCOs also pursued an ambitious OPD/NCOPD program during the months before deployment. We used those sessions to focus on the complexities of some of our more difficult operations, such as passages of lines, and the draw/turn-in weeks. The professional development classes served as forums for the instruction of the new members of the team, and the pooling of the insights and ideas of the more experienced leaders.

We were also fortunate in having the opportunity to participate in FORSCOM’s Leader Training Program (LTP) at Fort Irwin. The operations group at NTC have developed LTP into a rigorous week-long exercise that provides leaders the opportunity to view the Fort Irwin terrain, receive instruction on doctrine and TTPs. The BCT conducted two orders drills, one of which was then followed with a JANUS simulation of the planned operation, followed by a complete AAR. One of the most valuable aspects of the program was that the OCs provided specific feedback to the BCT’s battle staffs and commanders, which helped to establish good communications and rapport among OCs and the training units. Our brigade was the pilot unit for the revised program, and we were permitted to take 34 of our leaders to participate. Since then, the program has been expanded to twice that number. The LTP experience helped the brigade’s commanders and battle staffs acquaint themselves with the rigorous pace of NTC tactical decision making.

Finally, we must mention a more intangible part of leader preparation: learning attitude. From the start of our train-up, the entire chain of command cultivated an attitude of learning throughout all levels. We conducted after-action reviews with complete candor, and commanders led by example in avoiding defensive attitudes and showing an enthusiasm for learning. This is an important skill to develop, because CTCs are all about learning. Regardless of a unit’s entry training level, we must ultimately judge its success in terms of how that unit improved. Such improvement depends on the training unit’s ability to assimilate lessons learned and, to a large degree, on the rapport established between the observer-controllers and the training unit. In our case, our leaders and soldiers deployed to NTC ready to learn and improve.

**The basics.** As noted at the beginning of this article, our brigade combat team anchored training on the basics. In our case, the basics included uniform and safety discipline, MILES gunnery, knowledge of OPFOR weapons and tactics, and maintenance. One of our innovations in our train-up was our NTC Individual Skills Test. The test included only those soldier and leader tasks that the commander deemed especially critical. Specifically, the testing stations included rules of engagement (ROE), MILES skills, risk assessment, OPFOR knowledge, BCT “ground rules” (i.e., brigade SOPs on uniform and discipline) and a station on the NTC scenario. We provided the test (with all answers) to the companies in enough time to allow company commanders to train their soldiers. The actual test took two days and featured well rehearsed, streamlined, mostly hands-on testing of the critical skills in a manner similar to the Expert Infantryman Badge test. Every officer, NCO, and soldier in the tested units had to pass the test prior to deployment, and the test was stratified into senior leader (SFC and above), junior leader (SGT, SSG), and soldier tasks.

Probably the most important skill to develop in order to build lethal units at NTC is MILES gunnery. The BCT’s officers and NCOs emphasized MILES skills throughout the train-up period. We took advantage of special MILES “train the trainer” certification classes conducted by the post’s MILES contractor. The contractor — a skilled

trainer and an expert in all aspects of MILES equipment — conducted both classroom instruction and a rigorous hands-on certification with selected NCOs from each battalion. He debunked many of the MILES myths that accompany unfamiliarity with the system, and he trained our sergeants in the finer points of zeroing the laser systems. Additionally, the contractor attended most of our field training during company and task force lanes, personally verifying each combat vehicle system and coaching our NCOs along the way. After receiving instruction, our crews were then evaluated on their ability to use MILES by conducting a MILES gunnery skills test (MGST). The MGST, which we developed in a manner similar to tank and Bradley gunnery skills tests, consisted of five stations: inspection of the MILES kit, vehicle installation, boresighting, zeroing, and troubleshooting the system.

**TTPs on saving money.** There are some techniques that units facing similar budget constraints can follow. To begin with, it is imperative to base all training on assessments so as not to waste resources. The leaders must be flexible enough to allow subordinate units to vary their training to meet each unit's unique needs.

All training should be structured to allow the different echelons of command to train simultaneously, and each BOS to participate fully. The division commander improved the effectiveness of our training by insisting on complete synchronization of unit training plans. For example, he rescheduled a field artillery live fire in order to make it concurrent and integrated with the maneuver battalions' live fire exercises. We ensured our gunnery plan transcended the standard gunnery tables and instead enhanced the advanced gunnery tables into full combined arms training events. While the companies maneuvered in the field, the battle staffs conducted orders drills and battle tracking. The key to success is teamwork, and teamwork requires practice. It is not a natural skill!

We tried to structure the training events so that we trained only the critical skills. In our case, we reduced movement distances, for example, in order to preserve time, fuel, and repair parts for the important combat tasks. We ensured the use of diagnostics to reduce the number of replaced major components. To save costs, the BCT

employed heavy equipment transporters (HETs) to hold down operating costs.

Finally, leaders at all levels must be flexible — willing to monitor costs and adjust training plans accordingly. Depending on resourcing constraints, equipment failures, and fluctuating turn-in credits for repair parts, it can be nearly impossible to foresee the actual costs of each training event. Therefore, the leaders must be prepared to alter the training plan on short notice — even during execution.

**Conclusion.** Good leaders are preoccupied with training, because history has taught us that the best way to care for soldiers is to train them for war. Nevertheless, we can anticipate that at no time will leaders be free from budgetary constraints on training. Developing innovative ways to train effectively with few resources is a vital tool for all leaders. In this article, we have offered some of the training tips we developed during a challenging train-up for the National Training Center. Maximum efficiency begins with an incisive assessment, a clear vision from the commander, and a comprehensive but flexible training plan. It is imperative to exploit available resources by choosing what to train and what not to train. Rather than trying to “do more with less,” our commanders made the tough choices and trained fewer tasks to the proper standard.

An artful combination of simulation, force-on-force training, and gunnery can overcome the budget challenge. Insistence on combined arms, multi-echelon training, combined with a focus on leader development can help to squeeze every bit of training value from each dollar. Finally, it is essential that a unit's preparations for a CTC rotation or for war are grounded in training the basics of moving, shooting, and communicating.

The payoff for resource-efficient training goes beyond having a successful rotation. Good training results in units and soldiers that believe in themselves and their ability to win in war. Although there are realistic limitations on our ability to “do more with less,” there are also endless opportunities to innovate and overcome the challenges. In the end, a low-budget training environment brings to light the adage that the will to win is not as important as the will to *prepare* to win.

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