

## Software Review

# The Combat Vehicle Identification TIS Training Package: A Thermal Identification Trainer That's On Target!

While thermal sighting systems have increased our ability to acquire and kill targets on today's battlefield, these systems have also presented us with a unique training challenge. How do we train our soldiers to positively identify combat vehicles using thermal sights?

Now, there is a solution, the Combat Vehicle Identification TIS Training Package, developed by E-OIR Measurements Inc. and the United States Army Communications-Electronics Command, Night Vision and Electronic Sensors Directorate. This superb thermal software-based identification trainer teaches a soldier to understand the basic principles of thermal signatures and how to recognize the signatures of fielded U.S., NATO, and former Soviet Union armored and wheeled vehicles. It is ideal for use at the company level, and is easily integrated into a unit's gunnery program. Ultimately, it will help reduce the risk of fratricide on the next battlefield.

In my opinion, this a company commander's and master gunner's dream come true. The software presents 30 vehicles, both wheeled and tracked, including the T-80, BMP-1, M1A1, and HMMWV, to name a few. All of these vehicles can be viewed in both daylight and thermal modes, from ranges of 500 to 3000 meters, and from three different aspects (frontal, right front, and left rear). As we all know, thermal identification of vehicles is difficult, and oftentimes cannot be successful because of range, camouflage, and climatic conditions. However, teaching our soldiers to understand thermal signatures and thermal cues improves the chances of positive identification on the next battlefield. This program provides the closest representation of thermalized targets that I have seen. Undoubtedly, using an actual vehicle with TIS is better, but this is the next best thing.

As I began to use the system, I was quickly humbled. My vehicle identification skills were immediately put to the test. This was not just some neat computer game; this was a serious training tool. My learning curve was steep. After a few hours, I was able to identify, or at least classify, target vehicles at 2000 and even 3000 meters. Those "green hazy images" started to make sense, and my thermal identification skills steadily improved. It didn't take me long to determine that this was a training tool that could benefit all armored soldiers.

The Combat Vehicle Identification Training package is a DOS-based program that re-

quires a 386 or higher CPU, super VGA display, and at least four megabytes of RAM. Additionally, the user has the flexibility to choose from three different installation options. The first is the complete package, and requires 34 megabytes of hard disk space. The second bypasses the Signature Understanding Module and requires only 17 megabytes. The third option installs the Signature Understanding Module as a stand-alone package and requires only 11 megabytes of hard disk space. However, to fully utilize the strengths of the program, I recommend installing the entire package if space permits.

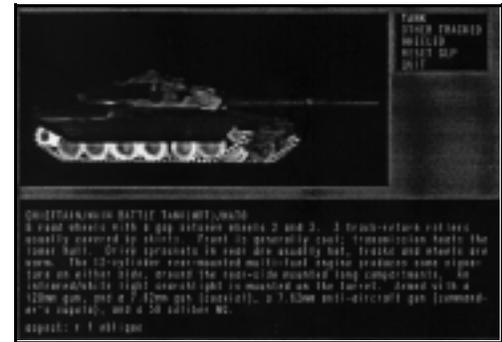
The training is separated into six modules. After gaining familiarity with the program, and based on a soldier's particular training needs, he is able to directly access a module without having to progress sequentially through all of the training. The following is a synopsis of the training modules:

**Sensor Description** - This module gives the user a brief explanation about the TIS and allows for practicing thermal focusing skills.

**Signature Understanding** - This module provides the fundamentals of thermal signatures. The computer displays vehicles at close ranges, from the front, right front, and left rear, as viewed through the TIS. This allows the soldier to better understand the common thermal cues that allow him to positively identify a vehicle. At the bottom of the screen, a dialogue box displays additional information about the vehicle, such as distinct thermal and visual cues and vehicle armament.

**The Training Module** - This module is the core of the training package and probably the most valuable. The soldier can compare and contrast up to three different vehicles at once. These vehicles appear at various ranges and from three different aspects, both in daylight and in thermal mode. For instance, an M1, a Leopard 2, and a Chieftain can all be viewed together from a frontal aspect at 500 meters. Additionally, a dialogue box again appears at the bottom of the screen and displays pertinent characteristics of each vehicle.

**Self Testing** - This module allows users to test themselves. Targets appear at different ranges, and from different aspects. The user must select the target classification, either tracked or wheeled, the aspect from which the vehicle is being viewed, and vehicle nomenclature. The observer is allowed 15 seconds to respond. A correct



answer allows the observer to continue, but an incorrect answer is identified with a beep, and his wrong choice is identified alongside the correct answer. The dialogue box again appears to allow for a more detailed comparison.

**Test Generation** - This module enables the user or instructor to choose the test desired. Users can pick from several test variations, including randomly generated tests, or they can develop their own test. For instance, a master gunner could generate a specific test that would focus on a specific training objective, such as only tanks at ranges of 1500 meters or greater.

**Scored Testing** - This module provides a formal test and records and reports the user's results. No feedback is given during this test, and there are no computer-imposed time constraints. Upon completion of the test, a formal report is printed that displays the correct response adjacent to the user's response. A summary breaks down the results and scores the test according to target classification, target identification, and target aspect.

The Combat Vehicle Identification TIS Training Package is an outstanding thermal identification trainer. It answers our need for thermal signature identification training, is user-friendly, and most importantly, is ours for the asking. To receive a copy of this software, provide a written request on unit letterhead with your intended use for the software to:

Director, NVESD  
10221 Burbeck Road, Suite 430  
ATTN: VISPD-O'Kane  
Ft. Belvoir, VA 22060-8060

You may also FAX your request to: (703) 704-1753, ATTN: B. O'Kane. Distribution is limited to DOD components and DOD contractors.

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*Captain Robert S. Hughes is a 1986 Graduate of Fordham University ROTC. He has served as platoon leader and XO, D Trip, 2-10 Cav, Ft. Knox, Ky.; Senior Class Advisor, AOB 14-91, Ft. Knox, Ky.; and Commander, A Co, 1-37 Armor, FRG. He is currently Armor Advisor to 2-163d Cav, Montana Army National Guard.*