

What is needed is a unit SOP that will shorten radio instructions and at the same time allow the commander to give orders clearly and precisely in the heat of battle.

To accomplish this, the 8th Infantry Division uses the "Brevmat," or brevity matrix, a portion of which is shown in Figure 2. Using the coordinates on this matrix, the commander can communicate clearly and briefly. For example, if he says to his first platoon, "Brevmat C6, A," he means "Move out now to checkpoint

A." A response of "Brevmat B3, A, Drop 200, Right 100," tells the commander that the platoon is not exactly on checkpoint A but that it is 200 meters south and 100 meters east of that point. Although its use may take some practice, this matrix can be very useful in improving radio communications.

Using these three techniques — a flag SOP, checkpoints, and Brevmat — a mechanized infantry company commander can avoid the confusion I encountered on my first movement to

contact. He can really be in command and in control of his unit.



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# Improving M901 ITV Training

**MAJOR V. PAUL BAERMAN**

*I visit many of our infantry units each year and am always impressed with their training innovations. Practically every unit has shown me some new method or tool they have developed that enables them to offer better training in a particular area or on a specific weapon system.*

*One such training innovation is the*

*subject of the following article. It was developed and is being used quite successfully by the 2d Brigade, 3d Armored Division.*

*Unfortunately, many of these training innovations remain the "property" of the units that develop them, and other units never hear of or see them. Accordingly, I urge our in-*

*fantry units to use INFANTRY Magazine to tell us about their new training developments so that we can all benefit from their experiences. From these exchanges, too, we can all become better infantrymen. (Major General Sam Wetzel, Chief of Infantry)*

It will still be a number of years before units in the field get the Bradley Infantry Fighting Vehicle (BIFV) in large numbers. This means that the M901 Improved TOW Vehicle (ITV) will be with us for a while longer and that training ITV crews will continue to be important.

Presently, ITV crews have to rely primarily on the M-70 TOW tracker system in their TOW training, and difficulties with that system often

cause training to suffer. In an effort to overcome some of these difficulties, the 2d Brigade, 3d Armored Division has devised a system for training its ITV crews that allows them to use the numerous subcaliber ranges and equipment normally used for tank training.

The system consists of a "home-made" bracket, a wiring harness, and the Brewster device (M181), which is available from Training and Audio-

Visual Support Centers (TASCs). The bracket is used to mount either a standard M16 rifle or an M55 laser (also available from TASCs); it mounts on the ITVs turret above the sight, while the Brewster attaches to the bracket and adjusts for deflection and elevation. When the system is used with an M16, a TASC-issued solenoid is used to fire the rifle remotely. The system is powered by a standard military 24-volt electrical system.

To mount the system, the crewmen mount the TOW sight, close the cover above the sight, then mount the Brewster-bracket combination and boresight the weapon or laser at the desired scaled range. They can zero the system at a scaled range (60 meters, for example) by simply adjusting the Brewster for elevation and deflection based on the strike of the M16 round or the laser beam. The system is designed for a 1/35th scale range (see FM 17-12-7), so 60 meters would approximate 2,000 meters.

To fire the system, the gunner acquires a target, presses the trigger, and says, "Fire." The ITV squad leader allows the gunner to track the target for the required amount of time, then fires the rifle or laser by closing the circuit on the wiring harness. If the gunner is on target at the end of the set time period, he will see a visual target effect; that is, the target will turn over to indicate an M16 hit or there will be a red flash to show a laser hit.

This training system offers many advantages:

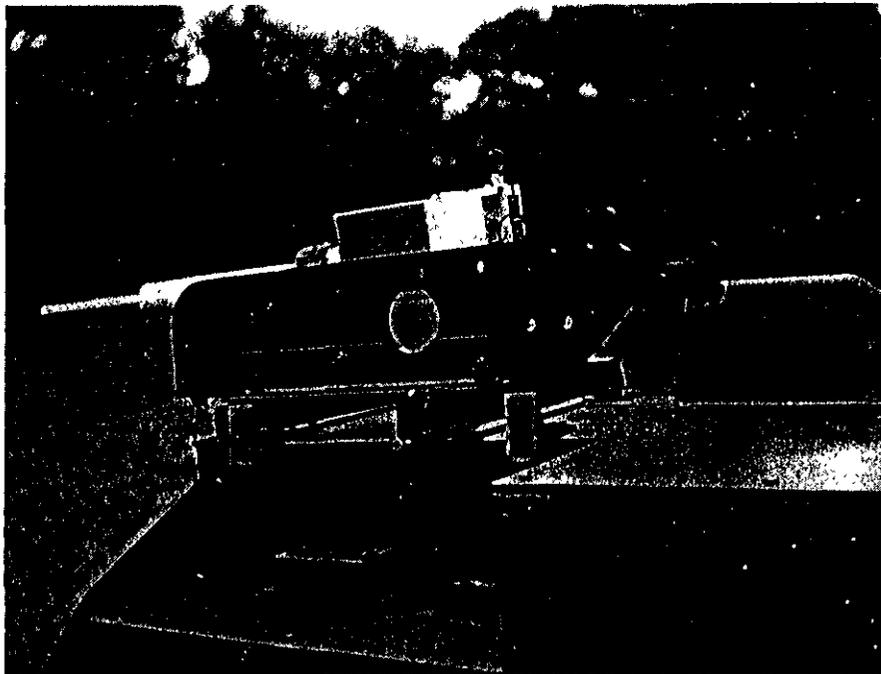
- It is simple and inexpensive. (The bracket can be built by unit welders, and the Brewster device is already available.)

- It is sturdy and easy to mount, operate, and maintain.

- It makes extensive use of the subcaliber ranges and scaled targets that have been developed for tank gunnery.

- It can be fired either indoors or out, depending on the type of weapon used with it. (With an M16 rifle, the system requires no more room than a standard rifle range or a tank subcaliber range, and with a laser it requires even less room.)

- No target jeep, crew, or infrared source is required as with the M70 trainer.



- Since the entire system is bolted on, it has no effect on the operationally ready (OR) rate of the TOW itself.

- With a mixed array of friendly and enemy targets in the system, the gunner can also be tested on armored vehicle recognition.

The most important advantage offered by this system is that it provides highly realistic training, because the TOW gunner actually sees and tracks a three-dimensional target (scale model) in his sights rather than the two-dimensional M70 target board. Because of the nature of the system, gunners can also engage multiple targets and targets that make evasive or tactical maneuvers, something that is not really possible with the M70 trainer. Night training with the system is no problem, either, because the scale model targets are easily discernible. Another key advantage is the shooting gallery effect, which the gunners enjoy. They like to see the visual target effect and tend to keep

tracking until they do.

In addition, the laser can be fixed on its continuous mode against a "snake board" in the motor pool to check a gunner's tracking skill throughout a missile's time of flight and to provide him instant feedback.

This ITV subcaliber device could easily be modified for use with the Bradley Infantry Fighting Vehicle (BIFV) as well.

Plans for making the mounting bracket are available from Headquarters, 2d Brigade, 3d Armored Division, ATTN: AETFOB-SC, APO New York 09091.



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