

range driving techniques are enforced.

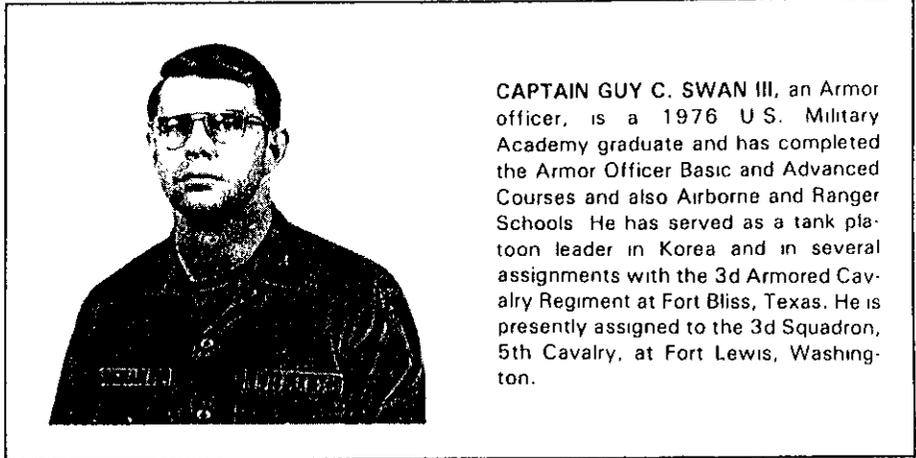
Because the team's organic M578 light recovery vehicle cannot recover tanks, the commander should plan to use operating tanks to recover disabled ones. Armor units do this fairly routinely, and the operator's manual prescribes the procedures for doing it safely.

## CONCLUSION

Many of the things mentioned here may be old hat to experienced mechanized infantry officers. But for those officers who have had little or no mechanized infantry experience,

this advice may help to stimulate their thinking on the complexities of combined arms operations in general and

on tank-mechanized infantry operations at the company team level in particular.



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# TOW Training

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The goal of our TOW training is to develop a TOW gunner who can hit tank targets, stationary or moving, in a tactical situation at ranges out to 3,000 meters. The best way to train a TOW gunner, of course, is to let him fire TOW missiles at heavily armored tank-like targets. Obviously, this is impractical. As an alternative, the Army has developed several training devices for use in training TOW gunners to hit targets without actually firing missiles. But these devices do not allow for tactical training, especially of tactical leaders. In fact, the training devices have numerous deficiencies.

The M-70 trainer, for instance, is the main training device for the TOW. It allows a gunner to track a moving target board, usually

mounted on a quarter-ton truck, and it scores him with a hit or a miss. But this tracking is normally done over ideal terrain with no obstacles such as trees, brush, power lines, or bodies of water between the gunner and his target. The target moves laterally to the firer on a smooth surface at a steady speed, providing the best exposure and tracking conditions. Obviously, no unit tactical training is possible with this device.

The Sony TV Trainer (TVT) provides a video tape recording of a gunner's performance as he tracks a target for a specific length of time. A detailed critique can be made when the tape is played back, but no hit or miss can be registered, and no immediate feedback can be given to the gunner. Again, this trainer cannot be

used for tactical training.

Although dry tracking may be good for individual practice, it provides no way for anyone else to evaluate a firer's ability to hit a target. One version of dry firing is available in Realtrain; a sighting device affixed to the launch tube allows an evaluator to track the target as the gunner does. This system does provide some realistic field training, but its evaluation is highly subjective. The quality of the results all too often depends on the evaluator's qualifications and judgment.

Laser instrumented training, on the other hand, offers a commander a good way to train his TOW crews tactically in a force-on-force exercise. It does something that no other TOW training aid can do: it rewards good

tactics and penalizes poor tactics. A TOW crew can now "kill" or "be killed" as a result of its own tactical prowess.

The most up-to-date laser instrumented system is the Multiple Integrated Laser Engagement System (MILES), which is being used at the National Training Center, among other locations. With it a commander can design his own training, and this is certainly the most effective way to do it. Any commander who gets a chance to use MILES should take it.

But MILES is not yet widely available. Meanwhile, there is an older system in use at Fort Hood that units at other locations can also use, under certain conditions, to train their TOW gunners. It is called the Weapons Engagement Scoring System (WESS).

Developed in the early 1970s, the WESS consists of an eye-safe laser, a laser detector assembly, a processing and control unit, a crew indicator panel, and a power supply. The laser itself is attached to the launching tube where it can be boresighted with the optical sight. The control unit is wired to the trigger mechanism. When the gunner fires, the control unit activates the laser, and this sends an infrared message containing the unit's identification number, the mode of fire, and the weapon type to the control unit.

If the attacking gunner has kept his sight on his target and if his target has not taken evasive action, a complete message is received and processed, and the control unit records a kill by lighting an orange strobe light and

disarming the laser. If, on the other hand, the attacking gunner has "lost" his target, or if the target vehicle has taken effective evasive action, the complete signal will not be received, and the control unit will not record a kill.

While WESS was designed for testing with late 1960s technology, its principles of operation are basically the same as those of MILES.

For more information on the

WESS and on how it can be made available, major commands may write to the Commander, TRADOC Combined Arms Test Activity, ATTN: ATCAT-OP, Fort Hood, Texas 76544, or call AUTOVON 737-9113/9994.

Instrumented training provides a solution for many of the problems of TOW training. It offers no tricks or games. But it does offer a solid proven way to improve TOW training.



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