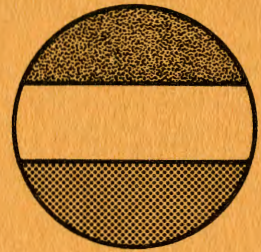


TAMA/TASO



**TRAINING
MATERIEL
CATALOG**

***TRAINING AIDS MANAGEMENT AGENCY
TRAINING AIDS SERVICES OFFICE***

FORT EUSTIS, VIRGINIA 23604

PREFACE

This catalog is published by the Training Aids Management Agency (TAMA) to describe some of the simulative training aids developed by FORSCOM/TRADOC Training Aids Services Offices (TASO). All devices, unless otherwise noted, are ready for production. Many of the devices are suitable for local fabrication but others are more complex and should be produced only by selected TASO on a regional basis. To assure availability of devices to all FORSCOM/TRADOC users, new procedures have been established to centralize TASO production activities. This will enable the TAMA/TASO system to meet total requirements regardless of local area support capabilities.

This catalog describes each device in sufficient detail to allow commanders to assess potential training value. Projected requirements should be compiled and forwarded to HQ FORSCOM or HQ TRADOC, as appropriate, to permit consolidation of total requirements, prioritization of those requirements, and identification of funds for production by TASO. Detailed guidance concerning submission of requirements will be forthcoming through command channels. Costs reflect best estimates for material at publication date. Ultimate production costs will vary with material prices, total device requirements, and production techniques.

5 December 1974

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OPPOSING FORCE SIMULATION

FORWARD

These simulative training devices have been developed to enhance the conduct of field training by more realistically depicting opposing forces. In addition to introducing uniformity into the portrayal of the opposing force, these devices assist in recognition training by allowing troops to handle and identify full scale, high quality replicas of actual foreign nation weapons and equipment.

All of the plastic weapons were cast from molds of actual weapons. Additional items will be developed and introduced as requirements arise. While the weapons described herein are inert and used for recognition only, noisemakers and laser engagement devices are being developed for later incorporation into the plastic weapons. The canvas mock-ups simulate foreign nation armored vehicles and are intended for use by opposing forces to introduce recognition training into a simulated tactical environment. Other type vehicles can be developed if the requirement exists. These mock-ups are full sized and contain sufficient detail to permit troops to identify them by recognizing the salient characteristics of each vehicle. The Disposable Overgarment is presently being field evaluated by FORSCOM units to determine durability and troop acceptability. The garment, if proven acceptable, will be procured through commercial sources and issued to field units through TASO in unit packages. If tests prove the garment unacceptable, an alternative garment will be developed. To provide a meaningful basis for cost analysis and basis of issue, addressees should identify their requirements for opposing force garments in terms of total numbers and annual frequency of use.

If a need is perceived for items of simulated foreign nation material not listed in this catalog, those needs should be stated.

Estimated cost to field a fully equipped platoon size unit and a company size unit respectively would be \$265.50 and \$1062. Equipment for a company size unit would include 100 Disposable Overgarments, 100 sets of Accouterments, 100 Plastic Soviet Helmet Covers, 80 AK-47, 8 RPK Squad Machine Guns, 8 RPG-7, and 4 pistols with belt and holster and 20 POMZ-2 Soviet Mines. Equipment for a platoon size unit would be one-fourth the amount shown for a company size unit. The company size unit is intended to oppose a battalion--the platoon size unit would oppose a company.

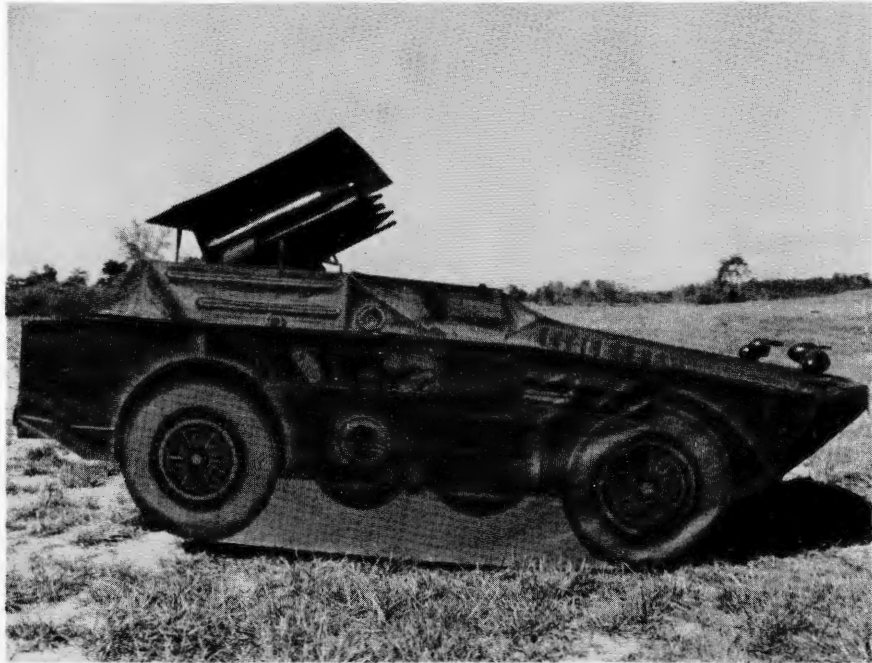
T-62 TANK, CANVAS MOCK-UP



Description: A full-scale, three-dimensional mock-up of a Soviet T-62 tank using a skeletal structure of metal tubing covered with canvas that has been painted to highlight distinguishing features. The mock-up is mounted on an M151 jeep and is used to teach armored vehicle recognition and to add realism to tactical training employing opposing forces.

Unit Cost: Materials - \$200.

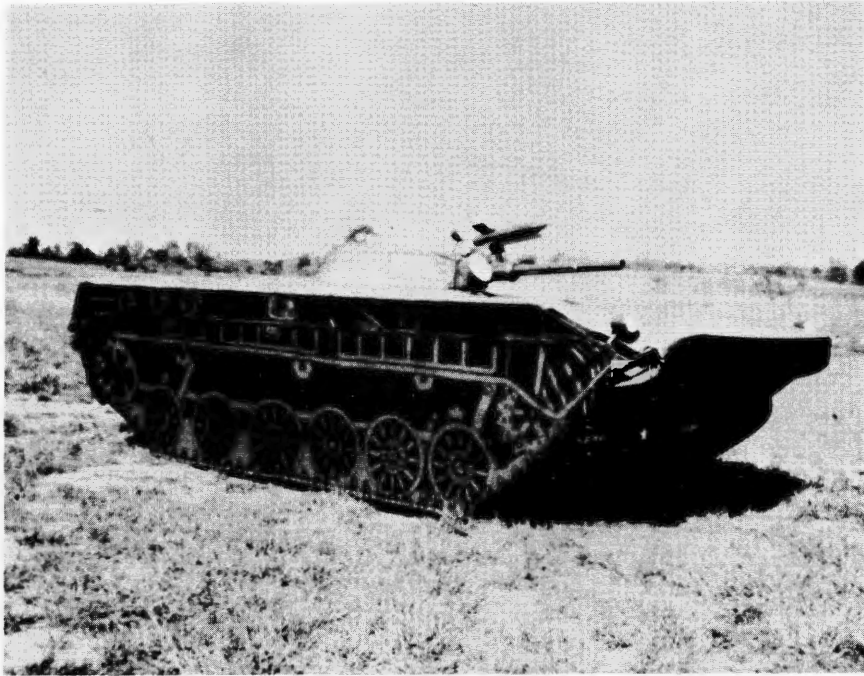
BRDM ANTITANK VEHICLE, CANVAS MOCK-UP



Description: A full-scale, three-dimensional mock-up of a Soviet BRDM-2 antitank guided missile vehicle using a skeletal structure of metal tubing covered with canvas that has been painted to highlight distinguishing features. The mock-up features a launching platform with simulated SAGGER missiles that can be raised or lowered depending on configuration desired. Mounted on an M151 jeep, it is used to teach armored vehicle recognition and to add realism to tactical training employing opposing forces.

Unit Cost: Materials - \$200.

BMP-2 INFANTRY COMBAT VEHICLE, CANVAS MOCK-UP



Description: A full-scale, three-dimensional mock-up of a Soviet BMP-2 using a skeletal structure of metal tubing covered with canvas and painted to highlight distinguishing features. The mock-up is designed to be mounted on a 5/4-ton truck and is used to teach armored vehicle recognition and to add realism to tactical training employing opposing forces.

Unit Cost: Material - \$200.

DISPOSABLE OVERGARMENT



Description: A disposable, shirt-type overgarment made from a synthetic fiber-base material to portray the uniform of opposing forces during tactical field training. The garment is water resistant, of low flammability, and durable enough for three or four days field use. Disposable overgarments are intended for issue in unit packages with booklets of different self-adhesive accouterments to permit portrayal of a variety of forces.

Unit Cost: Estimated unit cost - \$1.25.

PLASTIC SOVIET HELMET COVER



Description: A reusable, plastic helmet cover which is worn over the US Army helmet and is designed to simulate a Soviet helmet. It is intended to be issued and used with the Disposable Overgarment to add realism to tactical training employing opposing forces.

Unit Cost: Materials - Approximately \$1.20.

SOVIET AK-47 PERSONAL WEAPON



Description: A full-scale, three-dimensional plastic weapon designed to simulate the Soviet AK-47, which can be used to support tactical training employing opposing forces.

Unit Cost: Material - \$6.

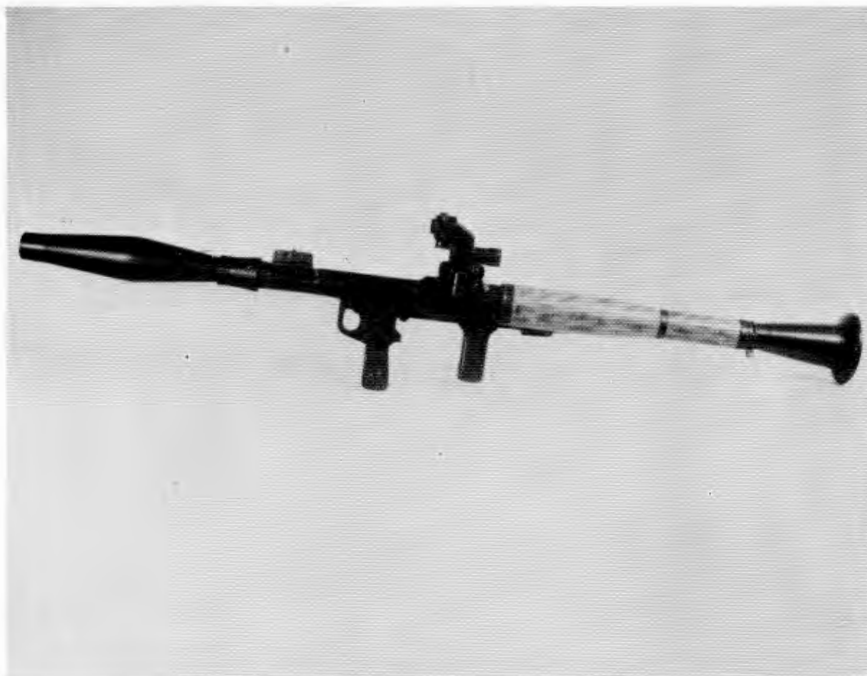
SOVIET RPK SQUAD MACHINE GUN



Description: A full-scale, three-dimensional plastic weapon designed to simulate--in both appearance and weight--the Soviet RPK Light Machine Gun, which can be used to support tactical training employing opposing forces.

Unit Cost: Material - \$16.

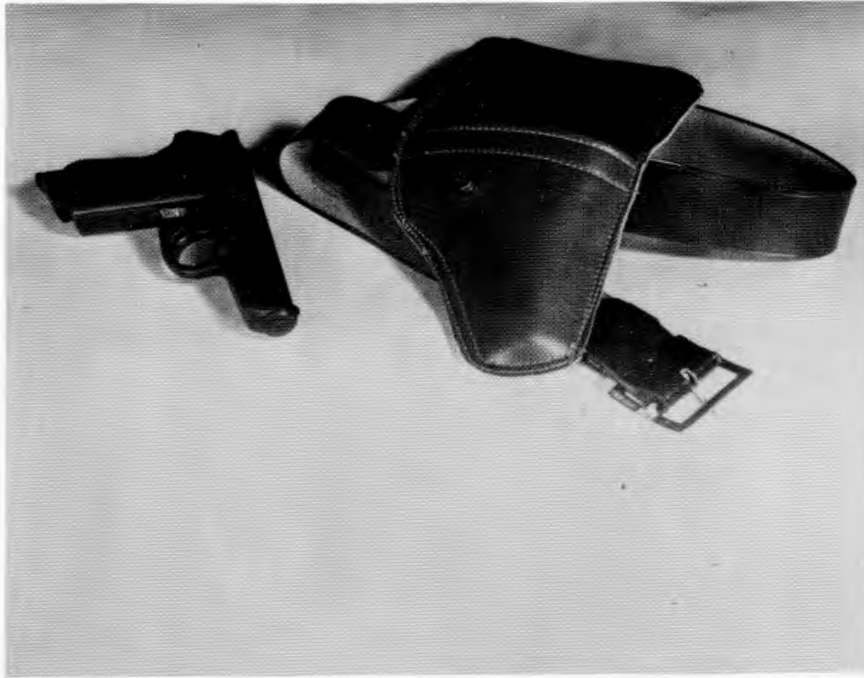
PLASTIC RPG-7 ROCKET LAUNCHER



Description: A full-scale, three-dimensional plastic weapon designed to simulate the Soviet RPG-7 Antitank Rocket Launcher, which can be used to support tactical training employing opposing forces.

Unit Cost: Material - \$16.

PLASTIC CZECHOSLOVAKIAN PM-50 PISTOL



Description: A full-scale, three-dimensional plastic weapon designed to simulate the Czechoslovakian Model PM-50, 9mm Pistol which can be used to support tactical training employing opposing forces.

Unit Cost: Material - \$6.50 (belt and holster included).

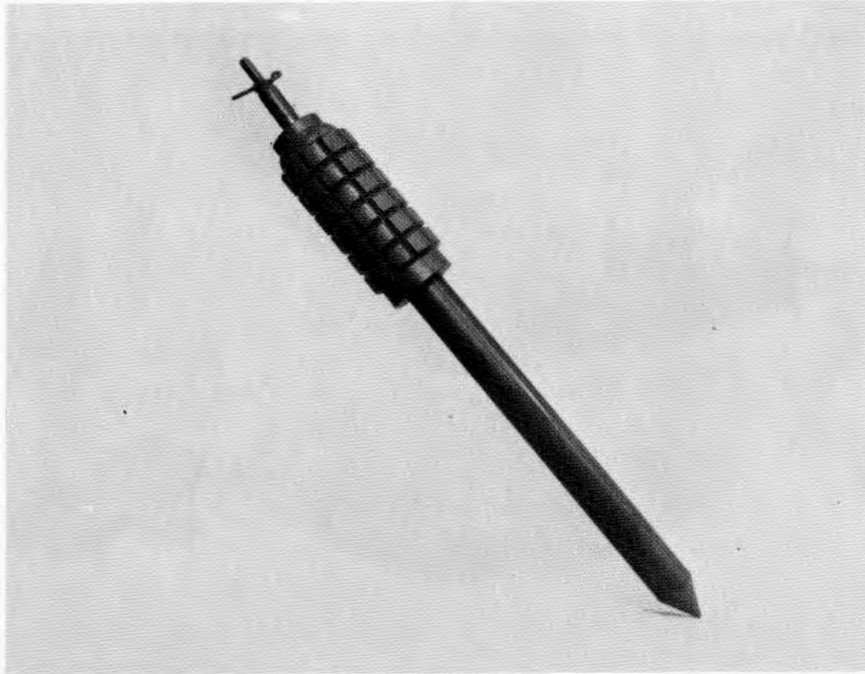
SUITCASE SAGGER MISSILE



Description: A full-scale, three-dimensional plastic model of a Soviet Suitcase SAGGER Missile which can be used to support tactical training employing opposing forces.

Unit Cost: Material - \$27.

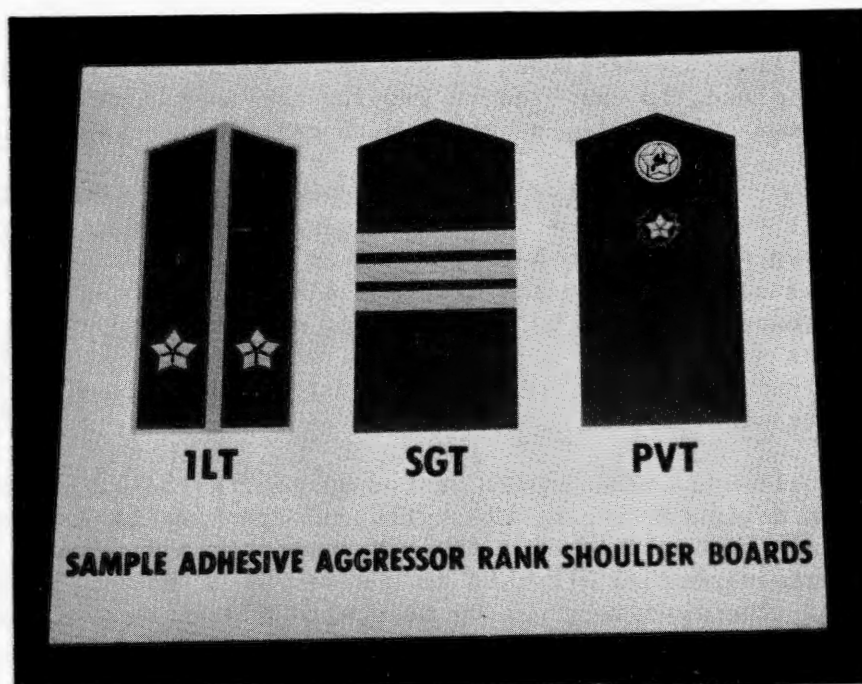
POMZ-2 SOVIET ANTIPERSONNEL MINE



Description: An inert plastic and wooden mock-up of the POMZ-2 Soviet Antipersonnel Mine. The same size as the original, it is designed to aid in recognition training and lend realism to opposing force simulation. Later models will incorporate a smoke and/or noise-making device.

Unit Cost: Materials - \$2.

ADHESIVE ACCOUTERMENTS



Description: Low-cost rank insignia, silk screened on flexible adhesive backed material, designed to simulate various ranks found in opposing force units. Intended for use on opposing force overgarments, they can be varied to permit portrayal of a variety of forces such as patrol, command group or artillery unit.

Unit Cost: \$0.15 per sheet of three sets.

LASER SIMULATION

FORWARD

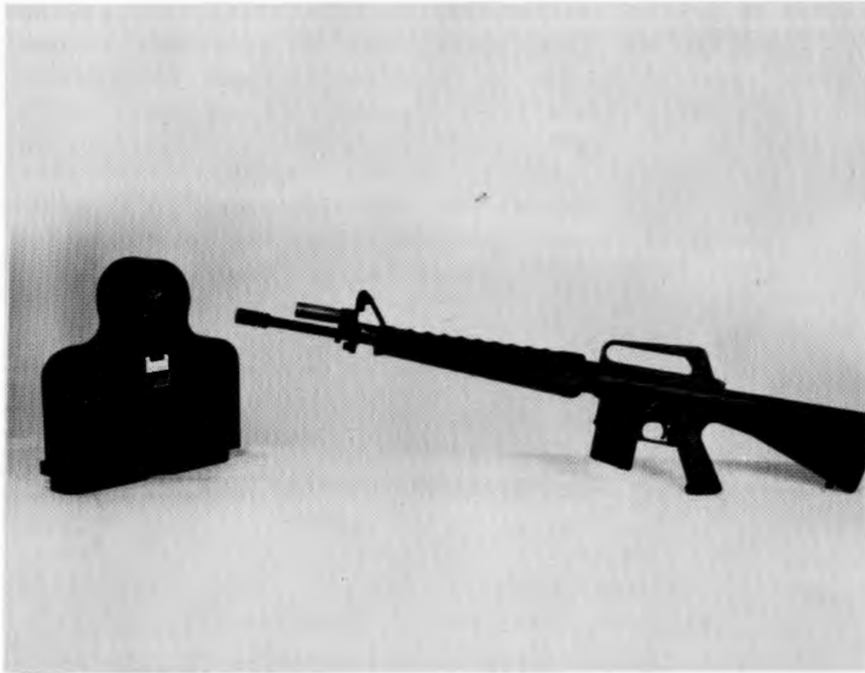
Laser technology is being applied to training to reduce the expenditure of ammunition for training and permit more weapons training to enhance marksmanship and tank/antitank gunnery.

The Multiple Integrated Laser Engagement System (MILES) is presently being developed by the US Army Materiel Command and, when fielded, is expected to provide the most realistic tactical engagement simulation possible with existing technology.

The laser devices described in this catalog are intended to support the conduct of rifle marksmanship and other weapons training prior to the introduction of MILES. The use of laser devices should reduce the need for live-fire ranges and permit year-round day/night indoor training on mini-ranges. Laser devices are intended to supplement, not replace, training ammunition and should be integrated into the overall marksmanship/gunnery programs.

The following pages depict prototype configurations of the laser system designed for the M16 rifle and armor/antiarmor weapons. Each system consists of a laser transmitter and a laser receiver. The transmitter is attached to the weapon or mounted in a dummy round. The receivers can be used with a variety of targets based on user requirements. The photos show some typical applications--many others can be used. Laser receivers can be easily attached to silhouette targets, tank mock-ups, scale targets, or actual equipment, and can be connected so as to activate a variety of response systems such as a buzzer, light flash, digital counter, or smoke grenade. Various applications of the laser system should be considered when identifying requirements.

RIFLE LASER MARKSMANSHIP SYSTEM



Description: A laser transmitter designed for use with the M16 rifle equipped with a blank firing adapter. The laser, which is low-cost and eye-safe, aids in teaching marksmanship, proper conduct of fire, and provides for realistic tactical engagement simulation. The laser receiver is being designed for use with a variety of target systems such as known distance ranges, field training exercises, and realistic two-sided combat simulation.

Unit Cost: Material - \$70.

TANK IN-BORE LASER SYSTEM



Description: Dummy 90mm and 105mm tank rounds with a built-in, eye-safe laser transmitter designed for use with M48 and M60 tanks, respectively. The device aids gunner marksmanship training and crew conduct of fire training with positive hit/kill indication. The laser receiver can be used with a variety of target systems, ranging from simple indoor tank silhouettes to real-range, full-scale tank mock-ups.

Unit Cost: Materials - \$70.

REALTRAIN

FORWARD

REALTRAIN is a training technique for enhancing the effectiveness of tactical training by permitting real-time casualty assessment against forces which expose themselves to the opposition. The concept employs telescopes mounted on various weapons systems and numbers placed on various targets such as men and vehicles. The Squad Combat Operations Exercise (Simulation) (SCOPES) has been renamed REALTRAIN I. It has already been introduced to the field and the supporting devices are shown in the catalog for information only. In REALTRAIN I, when a soldier or gunner reads his opponent's number through a telescope and reports it to a controller, the victim is "killed" and removed from tactical play. In REALTRAIN II and III, the telescope is used primarily by the controller to confirm sight picture and kill.

REALTRAIN II and III are the tank and antitank equivalents of REALTRAIN I and are presently undergoing development by the US Army Infantry and Armor Schools and the Army Research Institute. As with REALTRAIN I, REALTRAIN II and III will be funded by the US Army Materiel Command and introduced to the field by TRADOC TRADER, using a Basis of Issue Plan and delivery priorities established by TRADOC. The devices are shown in this catalog only to orient and familiarize addressees with the systems. Addressees should not identify requirements for these devices.

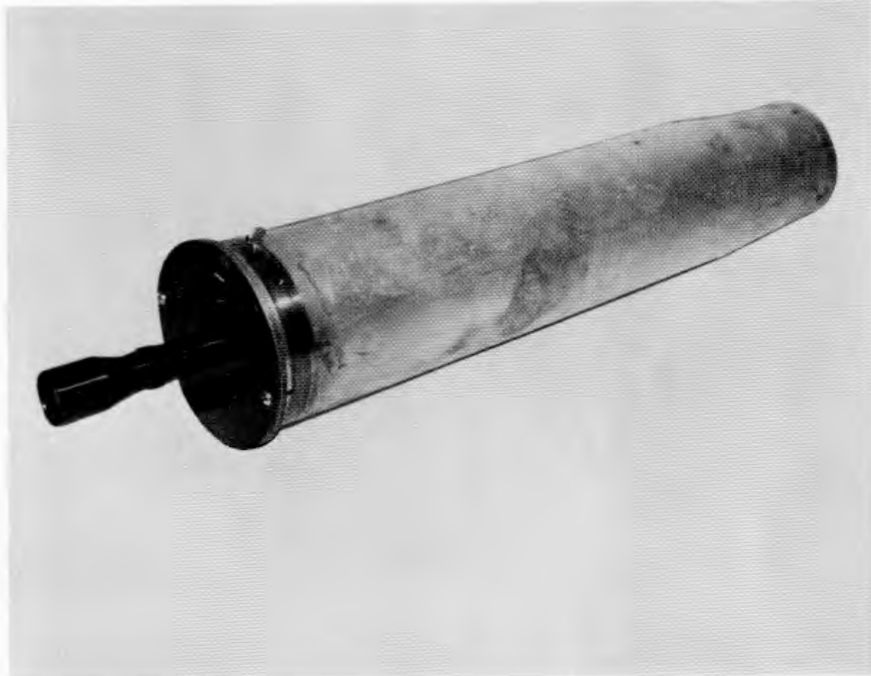
SQUAD COMBAT OPERATIONS EXERCISE (SIMULATION) (SCOPES)



Description: A realistic method of conducting two-sided field exercises based on the premise that a soldier's performance in combat is in direct correlation to the quality of his training. Each soldier has four two-digit number patches affixed to his helmet's camouflage cover and a 6X telescope mounted on his rifle. Casualties are assessed through identification of the numbers worn on the helmet. The numbers are readable by the unaided eye to approximately 40 meters and can be read at ranges out to 200 meters with the use of the 6X scope.

Unit Cost: Approximately \$10 per soldier.

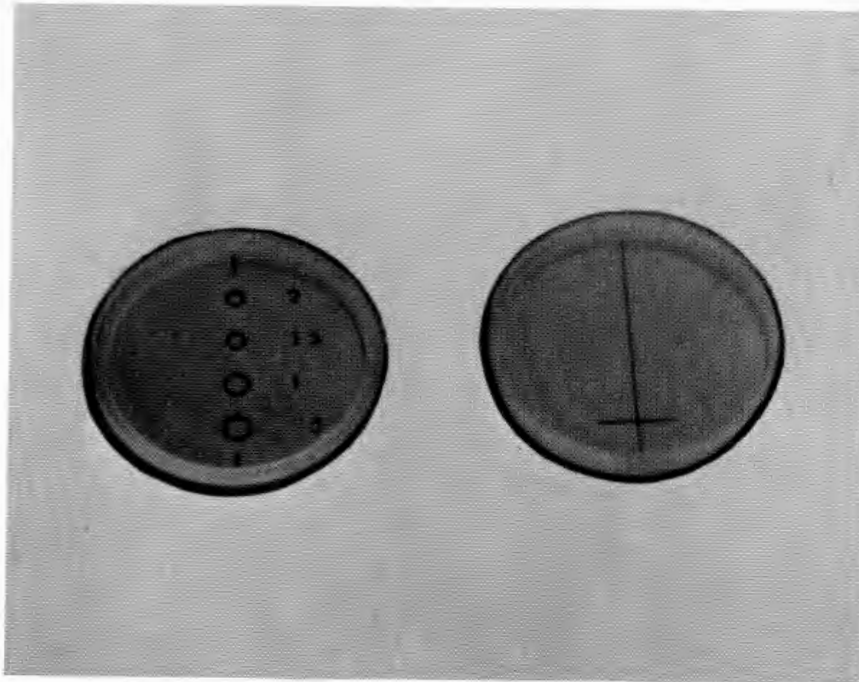
M60A1 TANK MAIN GUN TELESCOPE MOUNT



Description: An expended 105mm shell casing with the base cut away and modified for an insert that holds a 10X, commercially procured telescope. This is mounted in the breech of the main gun and boresighted with the gunner's sights. Use of this device allows a controller to check the accuracy of the gunner's target acquisition techniques in opposing force simulation or other tactical training exercises.

Unit Cost: Material - \$0.70 (telescopes will be procured centrally and issued for use with the TASO-fabricated mount).

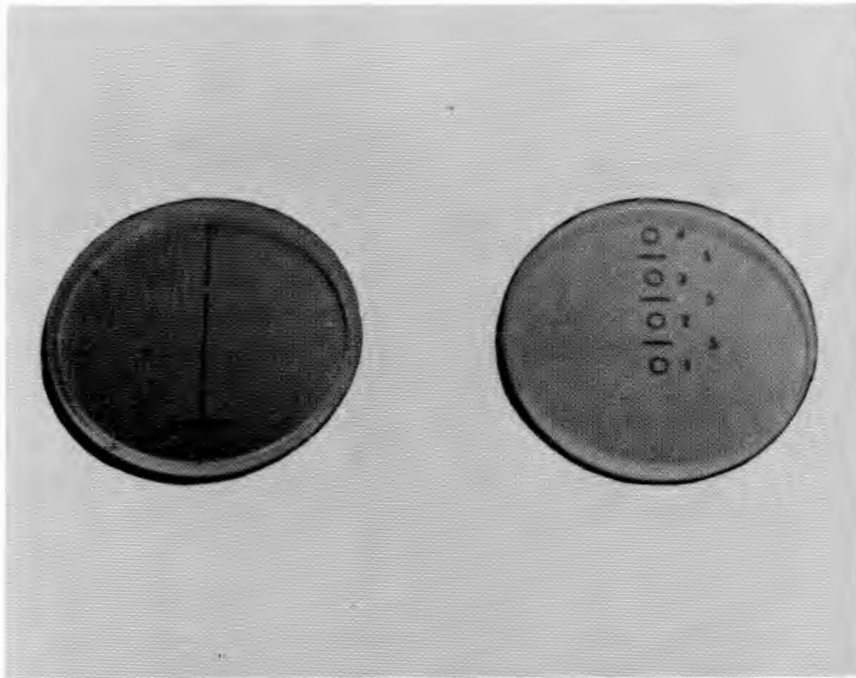
CONTROLLER SIGHTING DISCS FOR M72A2 LAW



Description: Two plastic discs cut to fit in the tube of the LAW. The sighting system is printed on the discs and boresighted with the gunner's sights. This allows the controller to determine directly and accurately if the gunner is using correct sighting and alignment procedures with the weapon in two-sided tactical training exercises. Both gunner and controller must estimate range to target.

Unit Cost: Material - Approximately \$1.12.

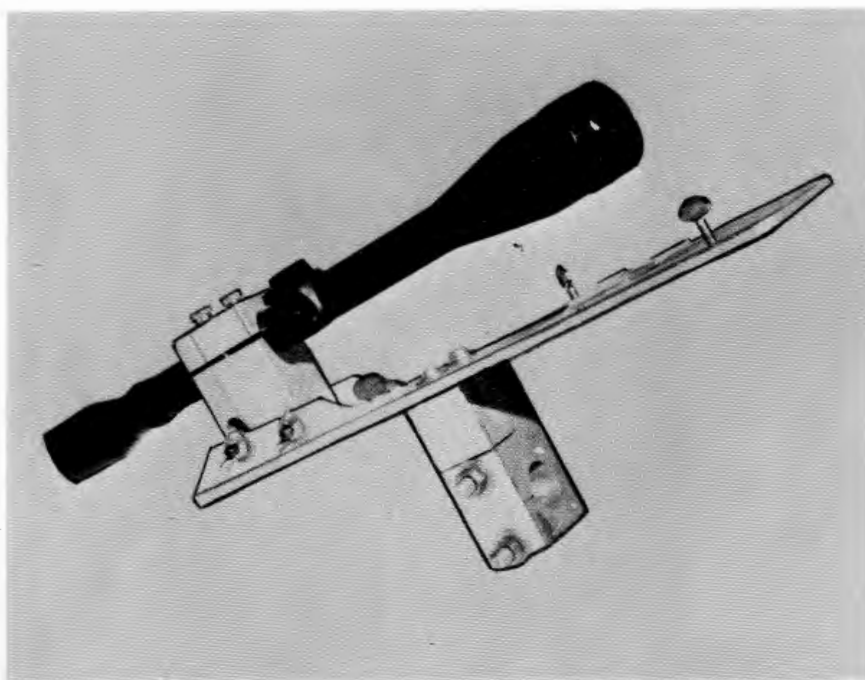
CONTROLLER SIGHTING DISCS FOR M67 90mm RECOILLESS RIFLE



Description: Two plastic discs cut to fit in the tube of the 90mm Recoilless Rifle. The sighting system is printed on the discs and boresighted with the gunner's sights. This allows the controller to determine directly and accurately if the gunner is using correct sighting and alignment procedures with this weapon in two-sided tactical training exercises. Both gunner and controller must estimate range to target.

Unit Cost: Material - Approximately \$1.12.

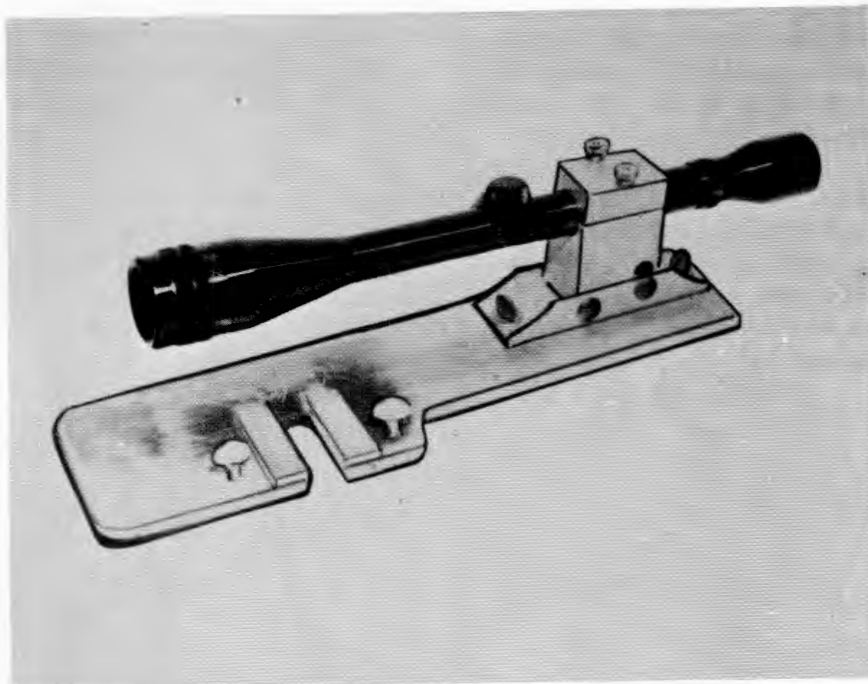
106mm RECOILLESS RIFLE TELESCOPE MOUNT



Description: An aluminum mount for a 10-power, commercial telescope. It has elevation and deflection adjustment capability, thus allowing it to be boresighted with the gunner's sights. Use of this device allows a controller to check the accuracy of the gunner's target acquisition techniques in opposing force simulation or other tactical training exercises.

Unit Cost: Materials - \$9 (telescopes will be procured centrally and issued for use with the TASO-fabricated mount).

TOW TELESCOPE MOUNT



Description: An aluminum mount for a 10X, commercial telescope. It has elevation and deflection adjustment capability, thus allowing it to be boresighted with the gunner's sights. Use of this device allows a controller to check the accuracy of the gunner's target acquisition techniques in opposing force simulation or other tactical training exercises.

Unit Cost: Material - \$5 (telescopes will be procured centrally and issued for use with the TASO-fabricated mount).

ARMOR/ANTIARMOR DEVICES

FORWARD

The armor-related devices described herein have been developed to satisfy specifically identified training shortfalls of armor units. Only those devices ready for production are included in the catalog. Other armor-related devices are under development and will be introduced to the field via supplemental pages to this catalog as developments are completed. The TASO has information concerning other devices under development or can secure it from TAMA.

Most of the devices in this section are more complex than those described in the previous sections and, therefore, will be produced, at least partially, on a regional basis. As soon as total requirements are compiled, regional production centers will be identified and method and times of distribution will be announced to all requestors.

DRAGON TRAINER WITH TVT



Description: A Dragon Trainer with a daylight tracker similar in appearance and overall weight to the Army's medium antitank weapon. The model for the daylight tracker is built around a 6X commercial rifle telescope to which stadia lines have been added. A mount to hold a television camera has been added which will bring the target, as viewed through the tracker, into the center of a 9-inch television receiver.

Unit Cost: Material - \$51.

COMPETITIVE RECOGNITION TRAINER



Description: A device consisting of student response stations and an instructor console which may be used in conjunction with any armor or aircraft recognition program. When a slide, film clip, or TV sequence is presented, the students compete against each other to recognize, identify as friend or foe, and react by pressing a fire or hold button. A digital counter credits only the student who is first to make a correct selection.

Unit Cost: Material - \$700.

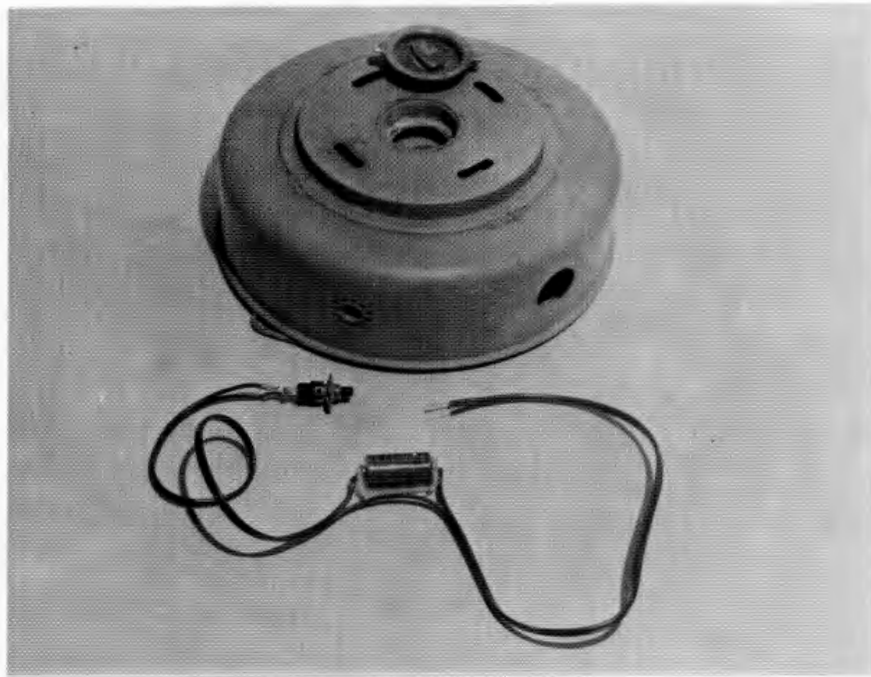
CONDUCT OF FIRE TRAINER



Description: A semiportable tank conduct of fire trainer approximately 5' long, 30" wide and 30" deep featuring three-dimensional stationary and variable speed moving targets in a simulated tactical setting. The Conduct of Fire Trainer provides for acquisition, initial engagement, and burst-on-target training against model tanks which provide positive hit/kill response.

Unit Cost: Material - \$900.

M20 PRACTICE MINE DETONATOR



Description: A low-cost mine detonator used with the M20 Practice Mine and a smoke grenade to add realism to tank training by providing an instant hit/kill response. When a tank or other vehicle encounters the mine, the detonator triggers a smoke grenade to signify that the vehicle is out of action.

Unit Cost: Materials - \$1.35.

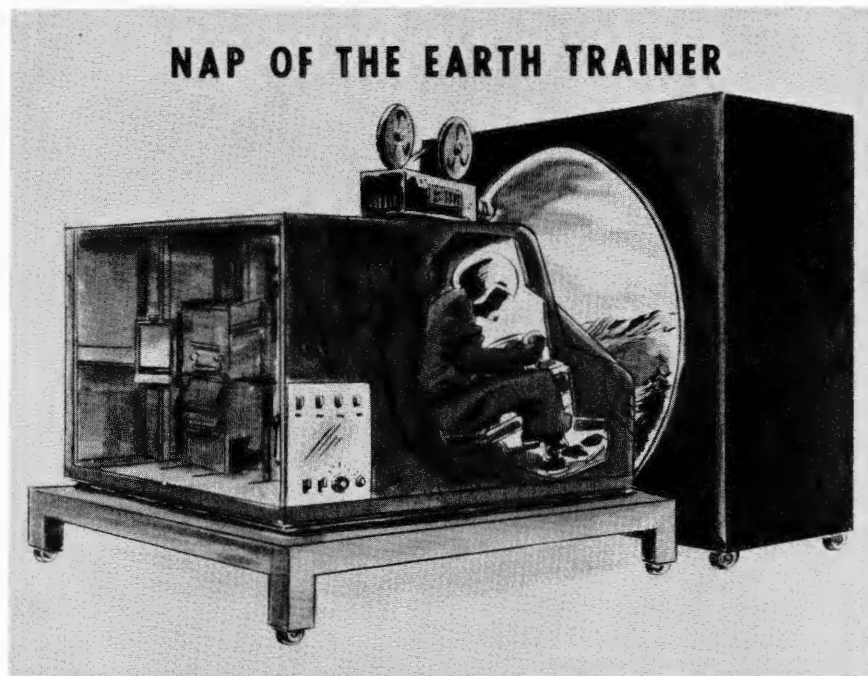
TANKER GAME



Description: A gaming device designed to be played by two, four or six players. It presents Armor subjects directly related to tank crew knowledges and functions in combat by combining the elements of competition, a representation of real life activity (armor combat), and the subject material to be taught. Each player learns by studying, discussing and answering questions on the particular subject content package installed in the game. Present content packages include 105mm ammunition, Direct Fire Control System, M13 Ballistic Computer, M32 Gunner's Periscope, 90mm Main Gun and Stereoscopic Range Finder.

Unit Cost: Materials - Approximately \$65..

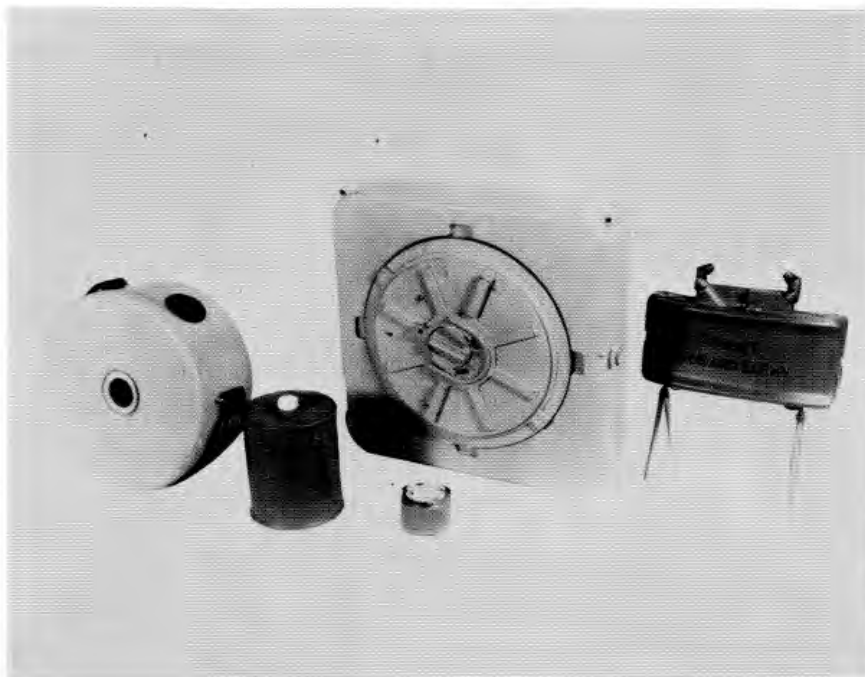
NAP-OF-THE-EARTH NAVIGATION TRAINER



Description: A simulator designed to assist in teaching nap-of-the-earth navigation techniques. It consists of a UH1 cabin constructed primarily of wood and salvage parts, a nine-foot parabolic screen surrounding the pilot's zone of visibility, a 16mm movie projector with a special fisheye lens, and a 20-minute motion picture course with synchronized audio tape. The student "flies" the course while an instructor observes his techniques.

Unit Cost: Material for trainer - \$1,000.
Locally filmed NOE Course (optional) - \$1,200.

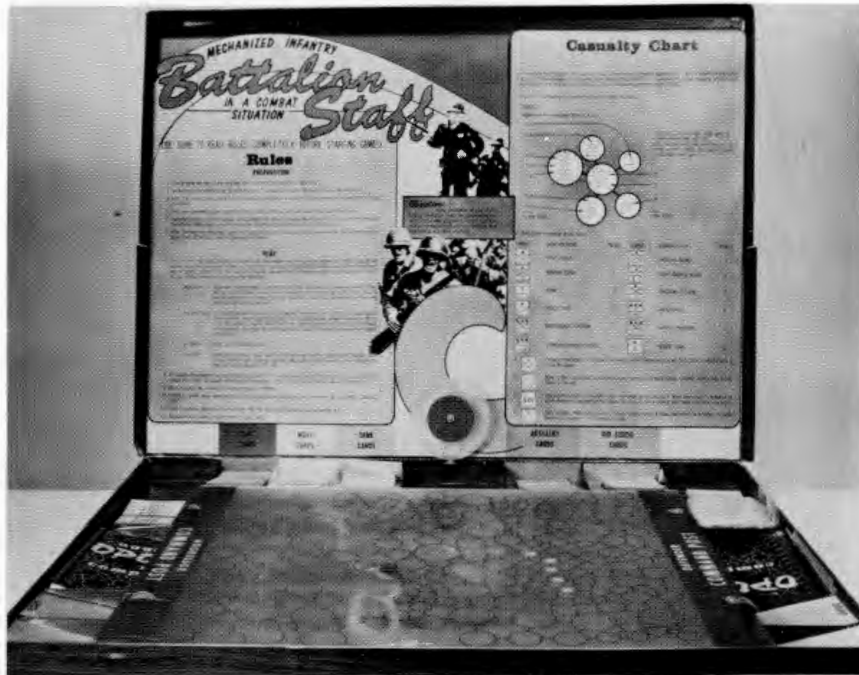
PLASTIC US MINES



Description: Plastic functional replicas of US mines developed to aid in teaching assembly, disassembly, arming, and laying of mines. Pictured above from left to right: M21 Antitank Mine, M16 Antipersonnel Mine, M19 Antitank Mine, M14 Antipersonnel Mine, and the M18A1 Claymore Antipersonnel Mine.

Unit Cost: Materials - \$17 (per kit containing one of each type mine).

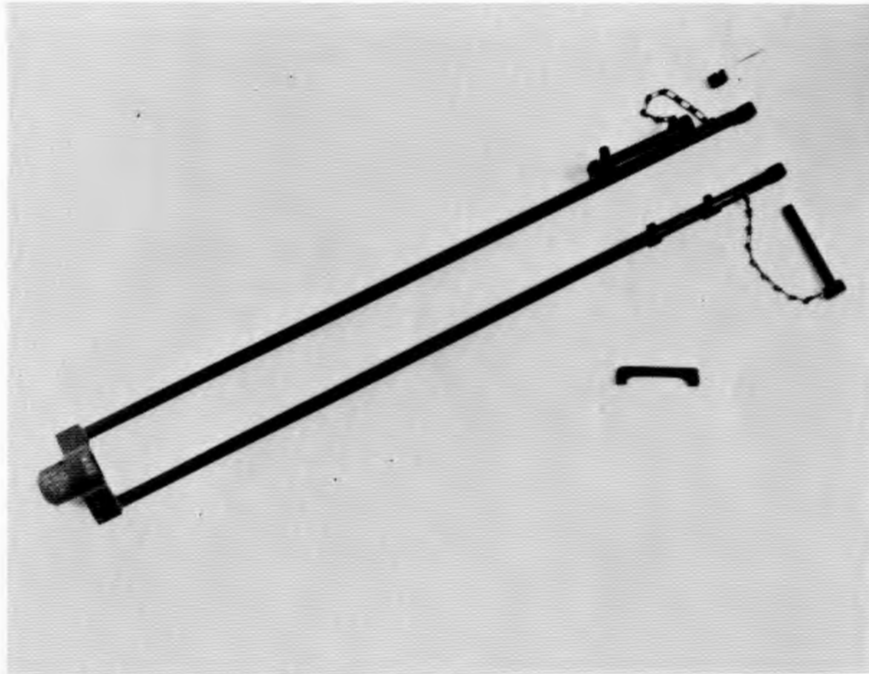
BATTALION STAFF GAME



Description: A three-dimensional game which reinforces staff procedures, tactics, and fire support applications through the medium of gaming simulation. Designed to be played by two, three, four or more players, the game consists of a terrain board, opposing force operations orders, player pieces which represent maneuver units and weapons systems, question and answer cards, and dice. The play of the game requires players to interact in answering questions pertaining to tactics, staff procedures, doctrine and weapons employment at battalion level.

Unit Cost: Material - Approximately - \$45.

CALIBER .50 MACHINE GUN BLANK FIRING ADAPTER



Description: A caliber .50 blank firing adapter which provides for the integration of the Caliber .50 Machine Gun into field training exercises as well as increasing weapon handling proficiency.

Unit Cost: Materials - \$10.

