



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, DC 20380-0001

MCO 8420.15
SST
24 Feb 92

MARINE CORPS ORDER 8420.15

From: Commandant of the Marine Corps
To: Distribution List

Subj: MATERIAL FIELDING PLAN FOR THE INDOOR SIMULATED
MARKSMANSHIP TRAINER (ISMT)

Ref: (a) MCO P4105.3

Encl: (1) Material Fielding plan for the Indoor Simulated
Marksmanship Trainer (ISMT)

1. Purpose. To advise selected Marine Corps Commands of the plan to field and logistically support the Indoor Simulated Marksmanship Trainer (ISMT) and provide the information necessary to establish all actions and responsibilities required in its fielding, as specified in reference (a).
2. Information. The ISMT is an interactive videodisc based system that employs the latest technology to accomplish the realism and accuracy need for effective small arms training.
3. Action. The commanders of each organizational element concerned shall ensure implementation of this Order.
4. Reserve Applicability. This Order is applicable to the Marine Corps Reserve.

R.A.T.
R. A. TIEBOUT
Rv direction

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(2) Method of Fielding

(a) Shipment of ISMT units from the manufacturer is being accomplished utilizing commercial carriers. Unit commanders are to ensure personnel are available to receive the ISMT. Upon receipt, the ISMT will be placed on administrative deadline and remain in that status until the manufacturer's installation team arrives. The arrival of the installation team should be within 48 hours of the unit's notification of receipt of the ISMT. Upon notification of the installation team's arrival, the using unit will ensure that all Government personnel to receive the training are present for the on-site instructor/maintenance training. Delays in training within the control of the using unit must be identified at the earliest possible opportunity. Notification should be provided to the ISMT Project Officer.

(b) The ISMT will be force fed to selected USMCR units designated in appendix A. Receipt of the equipment will be reported to CG 4th MarDiv and CG MCCDC (TE35DM) per MCO P5290.1 as modified by CG MCDEC letter 5290 Ser C22/1 dated 7 February 1986. Authority is hereby granted to inform the vendor of receipt so that delivery services and training may be scheduled. The point of contact is Mr. Jeff Marlin, (404) 448-7018.

d. Replaced Systems Equipment. N/A

2. System Description

a. Administrative Information

(1) Nomenclature: Indoor Simulated Marksmanship Trainer (ISMT)

(2) TAMCN: N/A

(3) SAC: 3

(4) NSN: N/A

(5) Unit of Issue: Each

(6) Unit Cost: \$72,000.00

(7) Support Cost: \$400.00/yr

(8) Petroleum, Oil, and Lubricants (POL): N/A

(9) Equipment Density: N/A

(10) Readiness Reporting: Not required.

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b. Physical Characteristics

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(1) <u>Length</u> :	30 ft	2 pallets (5'X10')
(2) <u>Width</u> :	14 ft	2 pallets (4'X8')
(3) <u>Height</u> :	8 ft	2 pallets (4'X8')
(4) <u>Square</u> :	420 ft(2)	2 pallets = 80 ft(2)
(5) <u>Cube</u> :	3,360 ft(3)	640 ft(3)
(6) <u>Weight</u> :	1000 lb	combined pallet weight
(7) <u>Power Requirements</u> :	115 VAC, 60 Hz 11 AMP single phase	

c. Operational Characteristics. The ISMT is an interactive videodisc-based system designed for use in the classroom. It uses weapons modified to preclude firing or reconversion to firing condition. The M16 has a chamber block permanently affixed, the middle of the barrel has been replaced with electronic circuitry, an eye-safe laser as verified by NATC, Orlando, FL, and the recoil mechanism modified to operate only by compressed carbon dioxide. Weapons so modified for use in the ISMT, are not considered repairable small arms per MCO 8300.1, and do not therefore, require special security precautions or reporting to the Marine Corps Registry, Naval Weapons Support Center, Crane, IN. The videodisc presentations used for the ISMT include rifle and pistol ranges, combat scenarios, and shoot/no shoot scenarios. The computer, responding to the instructor's actions, replays scenarios for review by the student to evaluate response time, accuracy, and overall proficiency. The system consists of a projector, screen, laser hit sensor, and a computer with a printer.

d. Associated Systems and Equipment. There are no other pieces of equipment associated with this project.

3. Logistics Support

a. Maintenance Support

(1) Organizational level maintenance for the ISMT will be preventative and minor corrective maintenance. Organizational maintenance will be performed by the using unit and will consist of visual diagnostics for fault isolation. Additional

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maintenance will include the replacement of minor components such as lights, lubrication, cleaning, and minor adjustments or alignments not requiring special tools or test equipment. The replacement will be only that required to replace defective subassemblies identified during the above maintenance actions.

(2) Intermediate level maintenance is not required for this system.

(3) Depot level maintenance will be performed by contractor personnel at the contractor's facility. This level consists of bench checks, repair, test and adjustment actions required to restore faulty equipment to a serviceable condition for re-issue.

b. Contractor Support Requirements

(1) Depot Support. The prime contractor is responsible for the Central Depot Support of the ISMT. That support includes a toll free 1-800 telephone hot-line for assistance on diagnostic problems encountered in the field. The telephone call must be authorized by the Contracting Officer's Technical Representative (COTR) prior to the user contracting the vendor.

(2) Shipping Defective Parts. The contractor initiates shipment of repair subassemblies to the field. Faulty subassemblies will be placed into the shipping container the new part came in, then returned to the contractor as soon as possible. Return postage/paperwork is the responsibility of the contractor.

(3) On-Site Technical Support. If on-site technical support is required, the user, after receiving authorization from the COTR (see paragraph 1.b) to utilize the toll free telephone hot-line (1-800-344-6771), will contact the contractor who will accomplish remedial actions in a timely manner.

c. Repair Procedures Upon Failure of Device

(1) Organizational level will identify and resolve problems using the System Interface Manual (SIM) and the Built-in-Test (BIT) diagnostics.

(2) The COTR will be contacted prior to direct liaison with the contractor.

(3) If the problem cannot be identified, the user is authorized to call the contractor at 1-800-344-6771 for technical assistance.

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(4) If the problem is determined to be a defective assembly, the contractor will immediately ship the replacement spare part to the site to correct the deficiency.

(5) The user site will receive the part and install it in the system to bring the device back on line.

(6) Site personnel will then ship the defective assembly back to the contractor for repair. The same reusable container will be utilized and all appropriate paperwork will have been completed by the contractor when shipment was initiated. Immediate return of the defective part is necessary to keep sufficient quantities of repair/spare parts available.

(7) If the problem cannot be corrected on-site and/or by using the toll free call, the contractor will contact the COTR. The COTR may authorize a contractor technician to travel to the site to perform corrective maintenance on the system.

d. Manpower, Personnel, and Training

(1) Personnel Requirements. No modifications to existing T/O's are necessary to either operate or maintain the system. Initial training for site personnel will be conducted during the installation of the system by the contractor. Follow-on training will be the responsibility of the using unit to pass down knowledge of the system prior to Instructor and Key Personnel Training (IKPT) personnel leaving the organization. The time required to cross-train new personnel in the use and maintenance of the ISMT should not exceed a 4 hour turn-over.

(2) Training Requirements. Operator training at each site will be conducted during device installation. With the installation of the device the contractor is required to conduct a 4 hour on-the-job-training (OJT) lesson to site personnel. The system will be operated by the using command. A training instructor at the local command level will be assigned to conduct formal and informal instruction in accordance with training requirements. The on-site maintenance plan calls for performance of planned and scheduled maintenance, and replacement of consumable items such as fuses, lamps, printer paper and ribbons, etc. The manufacturer maintenance plan calls for performance of an Operational Readiness Test (ORT) and built-in diagnostic test to quickly determine the cause of the malfunction, and correct if possible, or accurately fault isolate to the faulty Slowest Repairable Unit (LRU) at 1st/2nd echelon. The System Interface Manual (SIM) will provide trouble shooting flow charts and diagnostic tables to further assist the on-site user in determining the exact cause of the malfunction. The manufacturer has a 24 hour hot-line to answer user questions to assist in

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training system trouble calls. The established diagnostic resources will easily exceed the minimum requirements of the maintainability engineering mean time to repair (MTTR). The on-site operator will report the malfunctioning unit to the manufacturer, and once the malfunction is verified, ship the malfunctioning LRU, via available overnight shipping companies, to the manufacturer using the same packing box the new/rebuilt LRU arrived in. The repaired LRU will be returned to the user following the program plan set forth by the Government ILS team.

(3) Training Support Items. Not required.

e. Supply Support. Due to the large number of device sites and geographical locations, a Central Depot Supply Support concept was adopted. This concept is based on storing only consumable spares at the device site. The contractor will maintain Line Replaceable Units (LRU's) at his facility for central distribution when needed. Consumable spares will be identified in the System Interface Manual (SIM). These include such items as fuses, glass cleaner, duster cloths, 8 1/2" X 11" printer paper, etc., needed to support the ISMT. It is the using unit's responsibility to hold and replace these consumables as needed.

f. Support Equipment

(1) Special Tools. None required.

(2) Common Tools. None required.

(3) Special Purpose Test Equipment. None required.

(4) General Purpose Test Equipment. None required.

(5) Test Program Sets. None required.

(6) Other Support Equipment. Only general purpose hand tools are needed by the using unit to perform preventative and minor maintenance actions on the ISMT.

g. Technical Publications (TP). The device will be delivered with a SIM that is designed to provide the organizational level information necessary for site personnel to operate and maintain the ISMT. The SIM will include the following sections (chapters):

Description and Leading Particulars
Installation and Storage
Operation
Theory of Operation

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System Troubleshooting
System Maintenance Illustrations/Schematics
Parts Catalog

h. Computer Resources Support. This device has been designated a COG 20 device in accordance with NAVTRAEQUIPCEN Instruction 4410.4B, Assignment of Cognizance Symbol "20" Training Designators. NTSC is designated the configuration manager and is responsible for post-deployment software support of the system. Requests for changes in trainer configuration or software should be addressed to the Training Software Support Agency (TSSA) of NTSC, Orlando, FL.

i. Facilities. The ISMT is designated to be indoors in a clean classroom environment. The classroom dimensions should be at least 20' X 10' with an 8' ceiling. The ISMT operates from a line voltage of 115 VAC, and will draw (worst case) 11 amps of current. The normal operating climate is 63o to 83o fahrenheit, with relative humidity of between 30 to 85 percent. The classroom should have secure locking to prevent pilferage.

j. Packaging, Handling, Storage and Transportation

(1) Packaging. The ISMT will be loaded on a wooden pallet and encased in thick corrugated triple wall cardboard with a burst test pressure of 1100 lb/inch(2). Tilt sensors are placed on the unit. These sensors indicate if the unit has exceeded certain attitudes during transit. All training system shipments are tracked from the manufacturer's facility until delivery to the using unit and verification received.

(2) Handling. The ISMT is a high technology training simulator. It should be afforded care similar to that provided a personal computer, or large optical instrument.

(3) Storage. The ISMT should be set up and remain ready for training in an appropriate classroom. The ISMT can be disassembled and stored in a clean dry space.

(4) Transportation. The ISMT is transportable via all mobility modes; i.e., highway, rail, air transport, airlift, and marine per MIL-STD-1366B. The ISMT will be shipped to the using unit in two large palletized triple walled cardboard containers measuring 5 'X 4' X 4' and weighing approximately 400 lb and 600 lb respectively. The ISMT will arrive at the using unit via transportation, and will be off-loaded using a pallet jack provided by the shipping company. No further transportation to the system is anticipated.

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k. Warranties. There are no warranty provision for this project. The ISMT manufacturer is the depot support facility until the items can be taken under an existing COMS contract.

4. Actions Required to Place Equipment in Service

a. Gaining Commands

(1) General. The contractors installation team will need the assistance of two site personnel to assist in the installation process. In the event that the device is delivered prior to the installation team's arrival the pallets are not to be unpacked. The unpacking, installation, setup, and on-the-job-training will take no more than one day to accomplish.

(2) CO2 Bottles. The receiving command will be required to identify a source to fill the arriving empty carbon dioxide (CO2) bottles. During the unpacking and installation process, site personnel will be required to have the two bottles filled. The filling of the two CO2 bottles is important in that OJT cannot begin without them. Safety standards require that the carbon dioxide bottles be immobilized. Appropriate stands must be provide by the gaining command.

(3) Consumables. The receiving command will be responsible for requisitioning and maintaining a sufficient supply of consumables.

b. MCLB Albany. There are no actions required of the Marine Corps Logistics Base in support of this project.

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LIST OF RESERVE UNITS TO RECEIVE ISMT'S

Co I, 3d Bn, 24th Marines
MCRRC, 160 White Bridge Rd.
Nashville, TN 37902-4597

Co F, 2d Bn 25th Marines
NMCRC, 270 Main St.
New Rochelle, NY 10801-5796

Co H, 3d Bn, 24th Marines
MCRRC, Box 5158
Estes Kefauver Station
Johnson City, TN 37603-5158

Co D, 2d Bn, 25th Marines
MCRTC, Picatinny Arsenal
Dover, NJ 07801-5001

1st MP Co, (-), H&S Bn, 4th FSSG
AFRC, 151 Vo-Tech Rd.
Lexington, KY 40510-1002

Co F (-), 2d Bn, 23rd Marines
NMCRC, 116 Pollock Rd.
Salt Lake City, UT 84113-5011

Co B, 1st Bn, 25th Marines
NMCRC, 199 North Main St.
Manchester, NH 03102-4080

MP Plt (Rein), 1st MP Co,
H&S Bn, 4th FSSG
NMCRC, 410 Gettysburg Ave.
Dayton, OH 45417-1797

Det, 4th Force Reconnaissance Co
NMCRC, 4601 Cocoa Ave.
Reno, NV 89506-1298

Co C, 1st Bn, 25th Marines
NMCRC, Linsley Drive
Plainville, CT 06062-2918

Co G (-) 3d Bn, 24th Marines
NMCRC, 1255 Wilken Rd.
Danville, IL 61832-1689

Appendix A to
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Co E (-), 2d Bn, 23rd Marines
NMCRC, Sneath Lane & El Camino Real
San Bruno, CA 94066-0095

Co H, 3d Bn, 23rd Marines
1105 Kershaw Street
Montgomery, AL 36108-2305

Co D (-), 2d Bn, 23rd Marines
AFRC, Bldg 20, Yorktown St.
Los Alamitos, CA 90720-5001

2d MP Co, H&S Bn, 4th FSSG
NMCRC, 4902 Forbes Ave.
Pittsburg, PA 15213-9998

Co F, 2d Bn, 24th Marines
NMCRC, 2401 S. Lincoln Memorial Dr.
Milwaukee, WI 53207-1988

Co E, 2d Bn, 25th Marines
NMCRC, 2991 North 2nd St.
Harrisburg, PA 17110-1298

Co D, 2d Bn, 24th Marines
AFRC, 1430 Wright St.
Madison, WI 53704-4192

Co I, 3d Bn, 25th Marines
NMCRC, 3 Porter Ave.
Buffalo, NY 14201-1095

MP Co, Hq Bn
NMCRC 6400 Bloomington Rd.
Ft. Snelling
Twin Cities, MN 55111-4002

Co G, 3d Bn, 25th Marines
NMCRC, 800 Dan St.
Akron, OH 44310-3986

Co E, 2d Bn, 24th Marines
NMCRC, Bldg 47, Dickman Ave.
Des Moines, IA 50315-6213

Co E, 4th Recon Bn
MCRRC, Bldg 24-855, Elmendorf AFB
Anchorage, AK 99506-5000

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4th Force Reconnaissance Co (-)
NMCRC, 530 Peltier Avenue
Honolulu, HI 96818-3753

H&S Co, 1st Bn, 23rd Marines
1902 Old Spanish Trail
Houston, TX 77054-2097

Co G, 3d Bn, 23rd Marines
NMCR, 3114 Jackson Ave.
Memphis, TN 38112-1597

Co B, 1st Bn, 23rd Marines
AFRC, 4601 Fairview Dr.
Austin, TX 78731-5398

Co I, 3d Bn, 23rd Marines
AFRC, 8005 Camp Robinson Rd.
N. Little Rock, AR 72118-2206

Co C (-), 1st Bn, 23rd Marines
MCRC, Bldg 1721, NAS
Corpus Christi, TX 78419-5402

Co A, 1st Bn, 24th Marines
NMCRC, 1863 Monroe Ave., NW
Grand Rapids, MI 49505-6294

Co C, 1st Bn, 24th Marines
NMCRC, 1620 E. Saginaw St.
Lansing, MI 48912-2396

Co B, 1st Bn, 24th Marines
AFRC, 3500 Douglas St.
Saginaw, MI 48601-4799

H&S Co (-), 1st Bn, 25th
MCRTC, 640 Plantation Street
Camp Edwards, MA 02542-0013

Co A (-), 1st Bn, 25th Marines
NMCRC, Washington & N. Main Avenue
Albany, NY 12203-1493

2d & 3d Plt (Rein), Co A
1st Bn, 25th Marines
AFRC, Westover AFB
Chicopee, MA 01022-1095

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Dgn Plt (Rein), Weapons Co
1st Bn, 25th Marines
MCRTC, Brunswick Annex Bldg. 339
Topsham, ME 04086-1198

H&S Co, 2d Bn, 25th Marines
MCRTC, 605 Stewart Avenue
Garden City, NY 11530-4761

H&S Co, 3d Bn, 25th Marines
MCRC, 5572 Smith Road
Brookpark, OH 44142-2027

Co H (-), 3d Bn, 25th Marines
NMCRC, 85 North Yearling Road
Columbus, OH 43213-1346

Wpns Plt (Rein), Co H
3d Bn, 25th Marines
1600 Lafayette Avenue
Moundsville, WV 26041-2347

Hq Btry, 14th Marines
NMCRC, Bldg 193, USNAS
Dallas, TX 75211-9508

Hq Btry, 1st Bn, 14th Marines
NMCRC, Bldg 2,
Treasure Island
San Francisco, CA 94130-50

Btry A, 1st Bn, 14th Marines
NMCRC, N 5101 Assembly Street
Spokane, WA 99205-6199

Btry B, 1st Bn, 14th Marines
MCRTC, 3551 S. San Gabriel River Pkwy.
Pico Rivera, CA 90660-1449

Btry C, 1st Bn, 14th Marines
4350 South Drive
Jackson, MS 39209-3930

Btry D, 2d Bn, 14th Marines
NMCRC, 1689 Burton Avenue
Waterloo, IA 50703-2196

Btry E, 2d Bn, 14th Marines
2711 McDonough Street
Joilet, IL 60436-9756

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Hq Btry, 3d Bn, 14th Marines
AFRC, Woodhaven 13 Comly Road
Philadelphia, PA 19154-1699

Btry G, 3d Bn, 14th Marines
NMCRC, Scotch Road
Mercer County Airport
West Trenton, NJ 08628-1395

Btry I, 3d Bn, 14th Marines
NMCRC, 615 Kenhorst Blvd
Reading, PA 19611-1717

Btry K, 4th Bn, 14th Marines
3506 S. Memorial Pkwy
Huntsville, AL 35801-5390

Btry M, 4th Bn, 14th Marines
NMCRC, 12 Meadow Street
Chattanooga, TN 371105-3950

Hq Btry, 5th Bn, 14th Marines
NMCRC, 1700 Stadium Way
Los Angeles, CA 90012-1404

Btry N. 5th Bn, 14th Marines
NMCRC, 480 Pallard Street
P.O. Box 31366
El Paso, TX 79931-0366

H&S Co (-), 4th Aslt Amphib Bn
MCRTC 5121 Gandy Blvd
Tampa, FL 33611-3099

Co A (-), 4th Aslt Amphib Bn
NMCRC, USNAB, Little Creek
Norfolk, VA 23520-5310

4th Plt (Rein), Co A, 4th Aslt Amphib Bn
NMCRC Bldg 91
Construction Bn Ctr
Gulfport, MS 39501-5000

Co B (-), 4th Aslt Amphib Bn
AFRC, Box 44, Bldg 938
Naval Air Station
Jacksonville, FL 32212-0044

4th Plt (Rein), Co B, 4th Aslt Amphib Bn
MCRTC, Fort Point
P.O. Box 1650
Galveston, TX 77553-1650

H&S Co, 4th Cbt Engr Bn
MCRTC, Hamlet & Chesley Avenues
Baltimore, MD 21234-7499

Co A, 4th Cbt Engr Bn
103 Lakeview Drive
Charleston, WVA 25313-1486

Co B (Rein), 4th Cbt Engr Bn
NMCRC, 5301 Barnes Avenue, N.W.
Roanoke, VA 24019-3899

H&S Co, 4th Recon Bn
Bldg 3620, Binzengleman
Fort Sam Houston, TX 78234-5000

Co B, 4th Recon Bn
NMCRTC, 8th Avenue N & 22nd Street
Billings, MT 59101-0398

H&S Co (-), 4th Tank Bn
MCRTC, NAS Miramar
San Diego, CA 92145-5680

Co B, 4th Tank Bn
AFRTC, 1702 Tahoma Avenue
Yakima, WA 98902-5792

Co C (-) (Rein), 4th Tank Bn
MCRRC, 4866 Lindberg Street
Bldg 916 Gowen Field
Boise, ID 83705-5081

Det, Co C, 4th Tank Bn
NMCRC, 2309 Line Avenue
Amarillo, TX 79106-6687

Co A (Rein), 8th Tank Bn
Queen St. Bldg T-7374
Fort Knox, KY 40121-5770

Co B (Rein), 8th Tank Bn
MCRTC, E. Malloy & Townline Road
Syracuse, NY 13211-0036

Co C (Rein), 8th Tank Bn
NMCRC, 2910 Roberts Avenue
Tallahassee, FL 32304-5098

Appendix A to
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Co D (Rein), 8th Tank Bn
NMCRC, 513 Pickens Street
Columbia, SC 29201-4198

AT (TOW) Co, 8th Tank Bn
MCRTC, Bldg 25
Richmond Naval Air Station
15860 SW, 127 Avenue
Miami, FL 33177-1407

3d Force Reconnaissance Co
NMCRC, P.O. Box 8485
Spring Hill Substation
Mobile, AL 36608-0485

3d ANGLICO
676, US Naval Station
Long Beach, CA 90822-5092

4th ANGLICO
MCRTC 1226 Marine Drive
West Palm Beach, FL 33409-6298

Comm Co (-), Hq Bn
NMCRC, 3190 Gilbert Avenue
Cincinnati, OH 45207-1498

Truck Co (-), HQ Bn
AFRC, 3938 Old French Road
Erie, PA 16504-2097

1st Plt (Rein), Truck Co, Hq Bn
MCRTC, Connellsville Airport
Connellsville, PA 15425

2d Plt (Rein), Truck Co, Hq Bn
NMCRC
Edensburg, PA 15931-8955

Brigade Service Support Group
1300 Gresram Road
Marietta, GA 30062-4005

H&S Co (-) (Rein), H&S Bn
NMCRC, 274 5th Street NW
Atlanta, GA 30318-5699