



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

MCO 8420.16
SST
3 Aug 93

MARINE CORPS ORDER 8420.16

From: Commandant of the Marine Corps
To: Distribution List

Subj: MATERIEL FIELDING PLAN FOR THE PORTABLE INFANTRY TARGET
SYSTEM (PITS)

Encl: (1) Materiel Fielding Plan for the Portable Infantry
Target System (PITS)

1. Purpose. The enclosure is provided to advise selected Marine Corps commands of the plan to field and logistically support the Portable Infantry Target System (PITS), and provide the information necessary to establish all actions and responsibilities required in its fielding.

2. Information. The PITS is a lightweight one man portable live fire target system that is programmable to support different scenarios. This system will be used to train Marines in marksmanship using a realistic threat oriented environment.

3. Action. The commanders of each organizational element concerned shall ensure implementation of this Order.

4. Reserve Applicability. This Order is not applicable to the Marine Corps Reserve.


J. A. BRABHAM
By direction

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MATERIAL FIELDING PLAN FOR THE
PORTABLE INFANTRY TARGET SYSTEM (PITS)

1. Introduction

a. Source of Requirement. This project was initiated during July 1991 as a result of a training deficiency for a lightweight, one man portable live fire target with automatic scoring that would be programmable to support different scenarios.

b. Points of Contact. A list of the points of contact is provided below.

<u>TITLE</u>	<u>COMMAND</u>
Program Manager	MARCORSYSCOM (SST) 2033 BARNETT AVE SUITE 315 QUANTICO VA 22134-5010 DSN: 278-2886 COML: (703)640-2886
Deputy Program Manager	MARCORSYSCOM (SST) 2033 BARNETT AVE SUITE 315 QUANTICO VA 22134-5010 DSN: 278-3310 COML: (703)640-3310
Project Officer	MARCORSYSCOM (SST) 2033 BARNETT AVE SUITE 315 QUANTICO VA 22134-5010 DSN: 278-2546 COML: (703)640-2546
Logistics Support Manager	MARCORSYSCOM (SST) 2033 BARNETT AVE SUITE 315 QUANTICO VA 22134-5010 DSN: 278-2547 COML: (703)640-2547

c. Fielding Methodology

(1) General Fielding Plan. Procurement action has been initiated to include the fielding of systems to support Marine forces. Fielding will be accomplished using the vertical fielding method.

(2) Method of Fielding. Shipment of PITS from the manufacturer will be accomplished using commercial carriers.

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Training and Audiovisual Support Centers (TAVSC) are to ensure personnel are available to receive the PITS. Upon receipt, the PITS will be placed on administrative deadline and remain in that status until the manufacturer's training team arrives. The arrival of the training team should be within 48 hours of the unit's notification of receipt of the PITS. Upon notification of the training team's arrival, the TAVSC will ensure that all government personnel to receive the training are present for the on site operator/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 PITS Project Officer via Naval message format.

d. Replaced Systems Equipment. The PITS does not replace any system currently in the inventory.

2. System Description

a. Administrative Information. The PITS will be a Cognizance Symbol 2 "O" (COG 20) device. Information for this assignment can be found in NAVTRASYSCEM P530.

(1) Nomenclature: Portable Infantry Target System (PITS)

(2) TAMCN: N/A

(3) SAC: 3

(4) NSN: N/A

(5) Unit of Issue: Set

(6) Unit Cost: \$125,000

(7) Support Cost: \$ 150.00/yr

(8) Petroleum, Oil, and Lubricants (POL): POL specified requirements will be limited to the use of lightweight all purpose machine oil in accordance with the technical manuals.

(9) Equipment Density: Normal

(10) Readiness Reporting: N/A. The PITS is a training device and as such falls under the cognizance of the Naval Training Support Center, Orlando, FL for configuration management and configuration control.

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b. Physical Characteristics

(1) Infantry Target Mechanism

(Antenna and battery disconnected)

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(a) <u>Length</u> :	20 in (51 cm)	24 in (61 cm)
(b) <u>Width</u> :	18 in (46 cm)	18 in (46 cm)
(c) <u>Height</u> :	12 in (31 cm)	11 in (28 cm)
(d) <u>Square</u> :	2.5 sq ft	3 sq ft
(e) <u>Cube</u> :	2.5 cu ft	2.75 cu ft
(f) <u>Weight</u> :	49 lbs (22 kg)	49 lbs (22 kg)
(g) <u>Weight of Battery</u> :	13.7 lbs (6.2kg)	
(h) <u>Stowage</u> :	N/A	
(i) <u>Power Requirements</u> :	Input Power - 12VDC rechargeable battery	

(2) Range Controller

(Antenna and battery disconnected)

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(a) <u>Length</u> :	3.75 in (9.62 cm)	3.75 in (9.62 cm)
(b) <u>Width</u> :	7 in (18 cm)	7 in (18 cm)
(c) <u>Height</u> :	12 in (31 cm)	12 in (31 cm)
(d) <u>Square</u> :	.18 sq ft	.18 sq ft
(e) <u>Cube</u> :	.18 cu ft	.18 cu ft
(f) <u>Weight</u> :	6 lbs (2.7kg)	6 lbs (2.7kg)
(g) <u>Stowage</u> :	N/A	
(h) <u>Power Requirements</u> :	N/A	

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(3) Range Controller Power Pack
(With Shoulder Strap Carrying Case and Charger)

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(a) <u>Height</u> :	6.5 in (16.5 cm)	6.5 in (16.5 cm)
(b) <u>Width</u> :	8.5 in (22 cm)	8.5 in (22 cm)
(c) <u>Depth</u> :	3.0 in (8 cm)	3.0 in (8 cm)
(d) <u>Weight</u> :	3.6 kg	3.6 kg
(e) <u>Battery Type</u> :	Rechargeable	
(f) <u>Battery Capacity</u> :	6 ampere-hours	
(g) <u>Charger Input Power</u> :	120 VAC, 60 Hz @ 500 ma (max)	
(h) <u>Power Cable Length</u> :		
a Retracted:	12 in (31 cm)	
b Extended:	60 in (153 cm)	

(4) Battery Recharging System

	<u>Operational Configuration</u>	<u>Storage/Shipping Configuration</u>
(a) <u>Length</u> :	67.5 in (171.5 cm)	67.5 in (171.5 cm)
(b) <u>Depth</u> :	5.5 in (14 cm)	5.5 in (14 cm)
(c) <u>Height</u> :	28 in (71.1 cm)	28 in (71.1 cm)
(d) <u>Square</u> :	2.6 sq ft	2.6 sq ft
(e) <u>Cube</u> :	6 cu ft	6 cu ft
(f) <u>Weight</u> :	165 lbs (75 kg)	165 lbs (75 kg)
(g) <u>Stowage</u> :	N/A	
(h) <u>Input Power</u> :	120VAC, 60 Hz, 20 AMP single phase	
(i) <u>Power Consumption with maximum of 60 batteries being charged</u> :	1,800 Watts	

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c. Operational Characteristics. The PITS is a lightweight one man portable live fire target system that is programmable to support different scenarios. This system will be used to train a variety of personnel in marksmanship using a realistic threat oriented environment. The PITS consists of four lightweight hand held, VHF controllers capable of controlling up to 60 single targets or a combination of up to 60 targets out to a range of 1,500 meters. The controller includes a built-in battery charging pack. The 60 target mechanisms are powered by a removable 12 volt maintenance free gel-acid battery. A battery recharger capable of recharging the 60 gel acid batteries in an eight hour period is a part of the system. The recharging system is capable of being used in normal rooms without extra ventilation. The Battery Recharging System must be installed/assembled in an area that meets hazardous waste requirements and restraints. The PITS is designed to be operated outdoors in a field environment. The operating climate is -25 degrees F to +110 degrees F. The system can withstand rainfall of up to one inch an hour. The target mechanisms respond to the impact of 5.56mm, 7.62mm, and 9mm rounds. The system has the control functions which allow for target exposure and programming sequences. The PITS has automatic scoring at the hand held controller and at each target mechanism. The PITS system is compatible with the Laser Target Interface Device portion of the Multiple Integrated Laser Engagement System equipment. The preferred type of target is the E-type silhouette.

d. Associated Systems and Equipment. Support equipment associated with this system includes the 12 volt battery recharging system for the hand held controller and target lifting devices.

3. Logistics Support

a. Maintenance Support

(1) Organizational level (0-level) maintenance consists of 1st and 2d echelon maintenance and is limited to checks and services accomplishable by unskilled personnel without the use of special tools (beyond normal hand tools) or test equipment. This level is restricted to cleaning, lubrication, tightening, battery re-charging, and other minor adjustments.

(2) Intermediate level (I-level) maintenance (3d and 4th echelons) shall be performed by contractor personnel under either Contractor Logistics Support (CLS) or Contractor Operation and Maintenance of Simulators (COMS) contract.

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(3) Depot level maintenance shall be performed by contractor personnel under either CLS or COMS.

b. Contractor Support Requirements. Contractor support beyond that support identified above is not anticipated.

c. Manpower, Personnel, and Training

(1) Personnel Requirements. No modifications to existing Table of Organizations are necessary to either operate or maintain the system.

(2) Training Requirements. Initial training (Instructor and Key Personnel (IKP)) for personnel will be conducted by the contractor upon receipt of the system. The contractor is required to conduct 80 hours of formal instruction. Forty hours will be devoted to operator training/scenario development. This portion shall cover pre-operational procedures, power up and initialization, system utilization, and power down. Forty hours will be devoted to maintenance skills required to perform organizational level maintenance as set forth in the maintenance concept for the system. No formal follow-on training is anticipated. The using unit will be responsible for training new personnel utilizing I&KP trained personnel. The time required to cross-train new personnel in the operation and maintenance of the PITS should not exceed 40 hours.

(3) Training Support Items. Training Support Items are non-applicable for this system.

d. Supply Support. An Initial Issue Provisioning (IIP) package has been approved and funds allocated for procurement. The IIP is expected to arrive with each PITS, but should not interfere with use or training if not available on site.

e. Support Equipment

(1) Special Tools. Not required.

(2) Common Tools. Common hand held tools currently held by local TAVSC's.

(3) Special Purpose Test Equipment. Not required.

(4) General Purpose Test Equipment. Not required.

(5) Test Program Sets. Not required.

(6) Other Support Equipment. Not required.

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f. Technical Publication. The contractor has provided a commercial operation and organizational maintenance manual that covers installation, operation, lubrication, maintenance, troubleshooting repair, and inspection of the PITS (third, fourth, and depot level maintenance requirements will be performed by COMS contract). The manual also contains a repair parts list for the different components. The manual has been validated by the contractor and approved by the government. The Publication Control Number assigned to this commercial manual is 50092200000.

A copy of this manual has been overpacked with each end item and two sets of manuals have been filed in the MARCORSYSCOM technical library. Additional copies of the manual will be placed in stock at MARCORLOGBASES, Albany, GA, to support follow-on training/operational requirements. Using units may requisition as needed.

g. Commuter Resources Support. None.

h. Facilities. Existing facilities satisfy the requirement for the PITS.

i. Packaging, Handling, Storage, and Transportation

(1) Packaging. Preservation and packaging shall be in accordance with best commercial practice.

(2) Handling. Using units are reminded of safe lifting standards because of the weights involved and the hazardous nature of battery acids.

(3) Storage. The PITS should be disassembled and prepared for storage in a clean dry space.

(4) Transportation. No special transportation necessary.

j. Warranties. A standard 12 month warranty is in place upon initial delivery to using unit. Warranty reporting procedures are contained in the local COMS contract.

4. Actions Re uired to Place Equipment in Service

a. Gaining Commands

(1) General. The contractor's training team will need the assistance of on site personnel to assist in the unpacking process. In the event that the system is delivered prior to the contractor training team's arrival, the system is not to be

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unpacked. The unpacking, setup, and training should take no more than one week to accomplish.

(2) Consumables. The receiving command will be responsible for requisitioning and maintaining a sufficient supply of consumable targets for use on the PITS.

b. MARCORLOGBASES, Albany, GA. There are no specific actions required of MARCORLOGBASES in support of this project.

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LIST OF UNITS TO RECEIVE PITS

COMMANDING GENERAL
(ATTN: TAVSC)
MCB CAMP BUTLER JAPAN
FPO SEATTLE WA 96773-5000

COMMANDING GENERAL
MARINE CORPS AIR-GROUND COMBAT CENTER
(ATTN: TAVSC)
TWENTYNINE PALMS CA 92278-5000

COMMANDING GENERAL
(ATTN: TAVSC)
MCB CAMP LEJEUNE NC 28542-5000

COMMANDING GENERAL
(ATTN: TAVSC)
MCB CAMP PENDLETON CA 92055-5000

COMMANDING GENERAL
(ATTN: TAVSC)
MARINE CORPS RECRUIT DEPOT
PARRIS ISLAND SC 29902-5000

COMMANDING GENERAL
(ATTN: TAVSC)
MARINE CORPS RECRUIT DEPOT
SAN DIEGO CA 92140-5000

Appendix A to
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SCHEDULE OF EVENTS

<u>DELIVERIES</u>	<u>QTY</u>	<u>DATES</u>
MCB Camp Lejeune, NC	1	FY 93 (Mar 93)
MCB Camp Butler, JA	2	FY 93 (Jul 93)*
MCB Camp Lejeune, NC	1	FY 94*
MCAGCC, 29 Palms, CA	2	FY 94*
MCB Camp Pendleton, CA	1	FY 94*
MCB Camp Lejeune, NC	1	FY 95*
MCB Camp Pendleton, CA	2	FY 95*
MCB Camp Lejeune, NC	1	FY 96*
MCB Camp Butler, JA	1	FY 96*
MCRD, Parris Island, SC	1	FY 96*
MCRD, San Diego, CA	1	FY 96*

* Sites are dependent on assignment of a cleared VHF Radio Frequency.

Appendix B to
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