

Ground Range Sustainment Program Systems

1. Multi-Purpose Pneumatic Target System (MPPTS)

Patriot Products can design, ship, and install all components required for the MPPTS. The MPPTS is designed in a minimum of ten (10) feet sections. These items can come in multiples to increase the total size of any given Multi-Purpose Pneumatic Target Range. For example, thirty (30) lanes will require three (3) MPPTS.

2. Multi-Purpose Pneumatic Target Control System

Patriot Products can install the same Pneumatic Target Control System as the Pistol Pneumatic Target System.

3. Multi-Purpose Pneumatic Target Operating System

Patriot Products can install the same Pneumatic Target Operating System as the Pistol Pneumatic Target System.

4. MPPTS-Spares Package

Patriot Products provides a spares package for the MPPTS for first level maintenance for a one (1) year period. The spares package includes all consumable items required for one (1) year of continuous operation with an eight (8) hour training cycle.

5. Installation of the MPPTS

Patriot Products can install the MPPTS on existing Range Infrastructure. Typical installation on an existing range that requires new targets, removal and disposal of existing targets, replacement of pneumatic air lines up to one hundred (100) yards, and all electrical wiring terminations up to six (6) feet.

- a. Patriot Products can install and connect all sections, so they operate as one (1) target system

6. Pistol Pneumatic Target System

Patriot Products provides Pistol Pneumatic Target Systems which includes twenty-five (25) pistol targets as directed and IAW the specifications. Patriot Products offers design, shipping and installation of all components required for the Pistol Pneumatic Target System. This system can be procured in multiples to increase the total size of any given Pistol Range.

7. Pistol Pneumatic Target Control System

Patriot Products can provide a Pistol Pneumatic Target Control system that provides both automatic and manual control. The automatic control system does consist of a ruggedized laptop computer and associated software to control the targets. The manual control system consists of a portable hand-held control box to control the same set of targets. The portable hand-held control box comes with an additional lithium battery, charger, charger cables, and storage case. Both automatic and manual control systems are designed to receive hard-wired or wireless data communication depending on if the Range has exiting conduit to utilize a hard-wired connection. Patriot Products can install the Pistol Pneumatic Target Control System IAW the specifications.

8. Pistol Pneumatic Operating System

Patriot Products provides a Pistol Pneumatic Operating System consisting of a properly sized compressor, all compressor accessories, and a compressor enclosure as directed IAW the specifications.

The pneumatic operating system shall consist of the following components: an air compressor with dryer package, a pressure gauge, regulator, filter, an air-cooled after-cooler, desiccant dryer assembly, all hoses and other parts as required to make the target system operational.

9. Pistol Pneumatic Target System- spares package

Patriot Products provides a spares package for the Pistol Pneumatic Target System for first level maintenance for one (1) year. The spares package includes all consumable items required for one year of continuous operation with an eight (8) hour training cycle.

10. Installation of the Pistol Pneumatic Target System

Patriot Products can install the Pistol Pneumatic Target System on existing Range Infrastructure. Typical installation on an existing range has new targets, removal and disposal of existing targets, replacement of pneumatic air lines up to but not limited to one hundred (100) yards, and all electrical wiring terminations up to six (6) feet.

- a. Patriot Products can use any combination of specified pre-cast, relocatable, equipment pads to support the installation of the target system. Patriot Products can install the target system on the pre-cast equipment pads and allow a minimum of two (2) feet clearance at the front of the target system to support the emplacement of Ballistic Concrete blocks for ballistic protection without hindering the full range of motion of the target
- b. Patriot Products will remove and dispose of old pneumatic lines and install new pneumatic air lines through existing range conduit from the compressor to the targets to include all fitting and connections
- c. Patriot Products will install hard-wire communication cable from the target controller, located in the Range Control, to the target actuator
- d. Patriot Products will install electrical wire in corrosion resistant conduit up the existing power source. The existing power source will be within six (6) feet of the target line. All electrical work will be done by a certified Electrician in the State where the installation is located
- e. Patriot Products will install the target actuator near the targets and placed in a protected area below the protective barrier or deflector and away from live fire ammunition
- f. The Pistol Pneumatic Target will be bolted down to existing concrete firing line using properly designed concrete anchors
- g. The Pistol Pneumatic Targets will be installed fifty-four (54) inches on center and located on the target line
- h. The Pistol Pneumatic control system will be installed inside the existing range control tower, or designated control point, for maximum environmental protection and provide the Range Operator full visibility of the firing line

- i. The Pneumatic operating system will tie into existing infrastructure including existing power and pneumatic lines
- j. Patriot Products will install the RF or Bluetooth receiver and transmitter enclosures as close as possible to the existing power source, but no further than six (6) feet
- k. The RF or Bluetooth receiver and transmitter will be installed in a NEMA 4 rated enclosure
- l. Installation includes the assembly of the compressor enclosure and all anchors and straps required to meet wind and seismic loads in the state the enclosure is to be installed
- m. All components will be environmentally protected IAW the specifications

11. Non-automated Steel Targets

Patriot Products can offload Non-automated Steel Targets as required by the associated DO and IAW the specification.

The non-automated steel target concrete support base will be reinforced and designed to be of sufficient weight and size to hold the removable steel target upright and withstand multiple ammunition impacts without allowing the target to fall over.

12. Remote Sniper Targets

The Remote Sniper Target will be specifically designed for long range rifle shooting that can be remote-controlled from long distances and will automatically reset after ammunition impact.

One (1) battery charger will be delivered for every two (2) Remote Sniper targets.

Patriot Products can offload remote control steel sniper re-setting targets as required by the associated DO and IAW the specification.

13. Remote Sniper Targets Recharging Storage Stand

The Remote Sniper target recharging stand will be made of heavy-duty steel and have a covered platform for the battery chargers.

The Remote Sniper target recharging stand will come with two (2) battery chargers.

Each battery charger will have a built-in microprocessor that allows the charging process to switch from a charge to long-term storage while continuously monitoring the charge, so it does not have to shut off.

14. Remote Sniper Targets Recharging Storage Stand

Patriot Products can offload remote control steel sniper re-setting target storage/recharging stand as required by the associated DO and IAW the specification.

15. Remote Steel Sniper Targets Silhouette

Patriot Products provides a remote steel sniper re-setting target Silhouette IAW the specifications.

16. Environmentally Friendly 3D Steel Armor Targets (EFSATS)

The Environmentally Friendly 3D Steel Armor Targets can be painted to give the appearance of the actual vehicle in an assortment of colors and camouflage.

Patriot Products will certify and provide the weight of each target by serial number with each delivery.

Patriot Products can offload the Environmentally Friendly 3D Steel Armor Targets as required by requirements. Patriot Products provides the following variations of the Environmentally Friendly 3D Steel Armor Targets.

- a. BMPs (Boevaya Mashina Pehoty)
- b. Technical Trucks
- c. T-72 Tanks
- d. BRDMs (Soviet Armored Reconnaissance Vehicle)
- e. Suicide Cars
- f. High Fidelity Environmentally Friendly 3D Steel Armor Targets

17. Steel Silhouette Targets

Patriot Products can offload Military style "E" and "F" Steel Silhouette targets as required.

18. Reactive Steel Targets

Patriot Products can offload reactive steel targets as required and IAW requirements. Patriot Products provides but is not limited to the following configurations of reactive steel targets:

- a. Reactive Steel High Velocity IPSC Target
- b. Reactive Steel High Velocity Bobber Target
- c. Reactive Steel Precision Rifle Target
- d. Reactive Steel High Velocity 2/3 Target
- e. Reactive Steel High Velocity Multi-Purpose Target

19. Known Distance Target Carriages (KDC-84GEN2)

Known Distance Target Carriages (KDC-84GEN2) will be comprised of a two targets counter balanced with the intended functionality of one target raised for one stage of fire exercise and the other target raised for an additional stage of fire exercise without the need to reload a new target.

Patriot Products can install KDC-84GEN2 as required IAW the specifications.

20. Installation of the KDC-84GEN2

Patriot Products does install the KDC-84GEN2 on existing Range infrastructure. A typical installation requires the removal and disposal of the old carriages and the installation of the new KDC-84GEN2 with Patriot Products supplied anchor bolts. The KDC-84GEN2 will be designed and installed to withstand the

climate of the region where they will be installed. All KDC-84GEN2 will be installed in the target pit area behind protective beam where no metal parts are exposed during live fire.

- a. Patriot Products will bolt the KDC-84GEN2 to an existing concrete pad
- b. Patriot Products will design the KDC-84GEN2 anchors and braces to sufficiently withstand winds up to 130mph with the targets removed
- c. Patriot Products does remove and dispose of existing target carriages

21. Manual Moving Target System (Manual-MTS)

The Manual Moving Target System will be installed at Marine Corps Known Distance (KD) target ranges. M-MTS will be manually operated by target puller personnel. M-MTS does allow targets to be quickly brought to the up-right facing position and set at a fixed height for a constant horizontal movement.

Patriot Products can install a Manual-MTS as required based on local requirements and local engineering requirements for any system mounted to the overhead otherwise all M-MTS installation will occur on the pit berm bulkhead.

- a. The length of the rail tubing for all ranges can be between eight hundred (800) to one thousand (1,000) feet depending on the range and shall be determined by site requirements.
- b. The M-MTS will be installed at sufficient height to not be a head bump hazard

22. Installation of the Manual-MTS

- a. Patriot Products will securely mount the Manual-MTS rail assembly to the existing concrete pit bulkhead without damaging the concrete so not to put undue stress on the existing overhead.
- b. Patriot Products will ensure the rail system is level and the moving target carriage assembly moves freely and without obstruction
- c. Patriot Products will remove all sharp edges and burs

23. Targetry Solar Power Systems

Patriot Products provides solar panel systems with ample regeneration capability to maintain power for pre-existing battery-powered SIT and SAT systems, IAW the specifications. Solar panel systems include all attaching cables and hardware to connect and supply power to the battery systems. Patriot Products utilizes the smallest size panels capable of efficiently regenerating power for each battery system.

24. Ballistic Concrete Blocks and Panels

Patriot Products provides Ballistic Concrete blocks and panels as required by the specifications. Patriot Products will ensure an appropriate licensed vendor provides and installs all Ballistic Concrete products. Patriot Products provides the following configurations of Ballistic Concrete:

- a. Blocks- 12" W x 18" H x 12" thick
- b. Panels- 8' tall x 46" W x 30" thick

25. Ballistic Concrete Technical Report-Study/Services

Patriot Products can provide Ballistic Concrete technical report-study/services providing fully documented results of studies, analysis, and tests performed on the Ballistic Concrete product. Patriot Products does follow all test procedures, test frequencies, and provide test results stipulated in the Army Corps of Engineers Technical specification of SACON Section 0333 or Government Approved Equivalent Technical Specifications, and delivered to verify Ballistic Concrete meets the local specifications.

26. Installation of Ballistic Concrete Blocks and Panels

The Ballistic Concrete blocks will be installed, stacked, and locked together per manufacturer's recommendations and specifications.

- a. Patriot Products can install the Ballistic Concrete blocks in the proper quantities to erect any structure stipulated in the requirements.
- b. If Ballistic Concrete blocks are going to be stacked and installed without panels, each row of blocks will be staggered $\frac{1}{2}$ blocks over from the row below and end blocks used to finish off the row.
- c. The Ballistic Concrete panels will be installed per manufacturers' recommendation.
- d. Patriot Products can install the Ballistic Concrete panels in the proper quantities to erect any structure stipulated in the DO requirements.

27. Ballistic Rubber Protection

Patriot Products can offload ballistic rubber blocks and panels IAW the specifications. Patriot Products provides a Ballistic rubber protection product which has comprehensive certification from an accredited Ballistic testing service. The ballistic rubber blocks and panels can be provided with the manufacturer's recommended adhesive if required by the requirements branches per service requirements. Patriot Products system requires no adhesive and is mounted using a mechanical mounting system. Patriot Products provides the following configurations of ballistic rubber protection:

- a. Blocks - 24" W x 12" H x 9" Thick
- b. Panels - 24" W x 24" H x 2" Thick

Patriot Products provides ballistic test results IAW product certification that it meets all Military Standards.

28. Installation of Ballistic Rubber Blocks and Panels

- a. The ballistic blocks will be stacked as specified, and bonded top to bottom with Patriot Products provided and manufacturer's recommended adhesive if required.
- b. The ballistic panels will be installed in the vertical and the horizontal orientation using Patriot Products provided manufacturer's recommended mounting system and use of adhesive is only used per local range requirements.

29. Moving Target System

Patriot Products can install a moving target system as required by the associated requirements and IAW specifications. Patriot Products offers the following configurations of moving target system:

- a. Electric Moving Target System- Rail. This configuration will be designed to work with the Pistol Pneumatic Target System and Patriot Products Multi Turning Target Electronic System.
- b. Remote Controlled Moving Target System. This configuration shall be used on remote ranges as a temporary system where the Rail system is not practical or if free moving remote-controlled targets are required to meet the sniper training requirements.

30. SIT Ballistic Protection Shield & Sub-Plate Assembly Installed

Patriot Products provides a SIT Ballistic Protection Shield & Sub-Plate Assembly as required IAW the specifications.

31. SIT Ballistic Protection Shield & Sub-Plate Assy Installed w/2" Ballistic Rubber

Patriot Products provides a SIT Ballistic Protection Shield & Sub-Plate Assembly with 2" Ballistic Rubber panel material fitted and attached to the protective shield IAW the specifications.

32. Pre-Cast Relocatable Equipment Pad

Patriot Products provides Pre-Cast Relocatable Equipment Pads that will be used to install temporary and or relocatable training systems and components such as Pneumatic, multi-purpose, automated target systems, compressors, compressor enclosures, and other systems as directed in the DO. The pads shall be designed IAW the specification. Patriot Products provides the following configuration of Pre-Cast Relocatable equipment Pads:

- a. 52" W x 75" L x 4" Thick
- b. 60" W x 60" L x 4" Thick