Marathon Targets

smart targets for live-fire moving marksmanship training

Marathon smart targets are intelligent armoured robots which can move freely across the entire training environment.

This unique system was developed in conjunction with the Australian Department of Defence to facilitate challenging, realistic training.

A team of Marathon smart targets can execute complex pre-planned scenarios, moving in and out of buildings and out of sight of instructors, going anywhere a person could go.

The targets are designed to be human-like in size, shape, speed and behaviour. When a target is shot, the rest of the targets respond by scattering and running for cover.

The system can run by day and by night, in all weather, for hours at a time.

Features

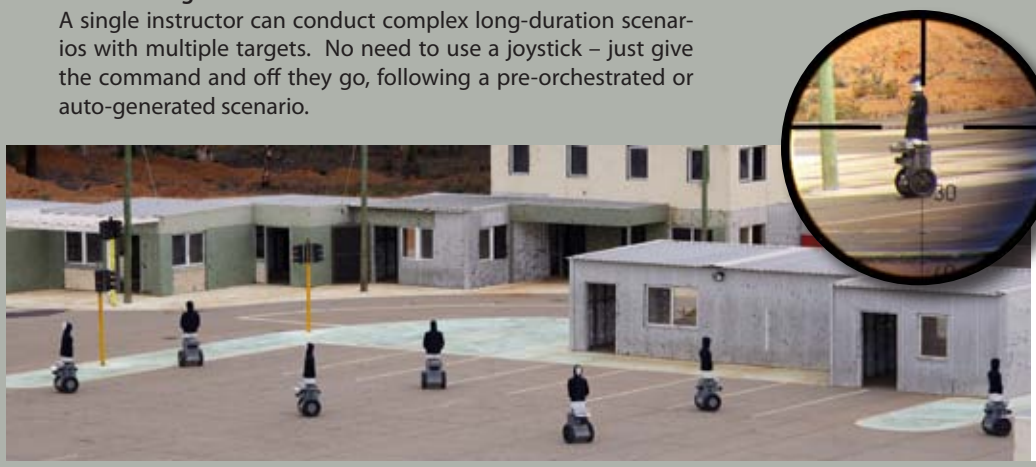
Responsive
When a target is shot, it provides instant visual feedback by stopping and dropping its mannequin. Simultaneously, it sends a message to other targets, who scatter and run for cover.

Challenging
The targets are human-like in size, shape, and speed. Marathon smart targets allow soldiers to train the way they fight: against unpredictable moving targets.

Labour-Saving
A single instructor can conduct complex long-duration scenarios with multiple targets. No need to use a joystick – just give the command and off they go, following a pre-orchestrated or auto-generated scenario.

Minimum Infrastructure
The system operates without expensive infrastructure such as rails or magnets embedded in the ground. Smart targets can be added to existing facilities, or transported to new ones.

Flexible Training
The system can be used for intensive training on specific skills or long-term endurance exercises, with any number of targets. With no constraints on motion, instructors can generate an infinite number of scenarios.



Target Technology

T20

A unique two-wheel target that provides life-like human motion. Well suited for both indoor and outdoor ranges, ideal for MOUTs.

Capable of turning in tight circles, leans to accelerate like a human.

Command & Control

A choice of stationary and rugged mobile computers with a modern Graphical User Interface to create and run training scenarios.

The user interface provides complete control of motion patterns, variable speed, stop-and-go, hit reaction, etc.

Training scenarios can easily mix T20s and T40s.

Hit Indication

Clear visual feedback is provided by lowering the mannequin after a hit. The mannequin resets to the raised position automatically or on command.

On-Board Software

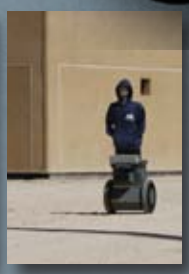
State-of-the-art robotic software controls targets' motion, individually and as a group. Artificial intelligence generates human-like behaviours which react quickly to unexpected situations.

Wheels

Field-replaceable wheels with puncture-proof tyres. Armoured hub cap covers for extra protection.

Segway Platform

Marathon targets leverage proven technology for mobility. The Segway Robotic Mobility Platform provides fast human-like motion and outstanding endurance. Powerful motors propel the target at human running speed.



T40

A four-wheel target optimised for outdoor ranges with unimproved terrain.

Extra power delivers faster speed and accelerations. Goes over dirt, gravel, grass, brush.

MARATHON TARGETS

Communications

Targets use high-speed wireless links to exchange information with the command & control station and with other targets. This enables remote monitoring, interactive control, and multi-target coordination.

Extendable range through scalable COTS technology.

Mannequin

The human-sized all-aspect 3D mannequin is made from durable plastic which will withstand hundreds of shots before easy replacement.

Hit Sensors

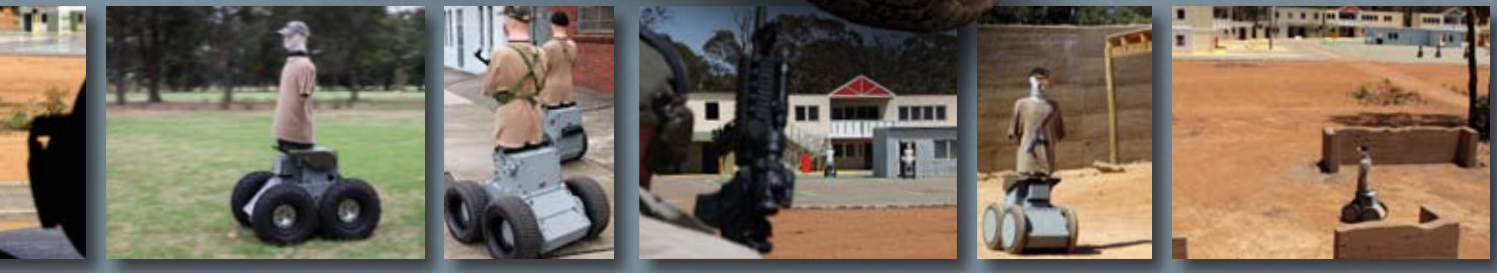
Built-in hit sensors detect shots from all directions and discriminate between head/spine shots vs. body shots.

Armour

Field-replaceable modular armour plates are tested with 5.56mm and 7.62mm FMJ.

Environmental Sensors

Marathon targets use GPS and a scanning laser range-finder for navigation, positioning, and obstacle detection & avoidance.



Specifications

T20

T40

Target Realism		
Human shape	★★★	★★☆
Human motion	★★★	★★☆
Silent motion	★★★	★★☆
Human running speed	★★☆	★★★
Performance by Range & Terrain		
Doorways	★★★	★★☆
Pavement	★★★	★★☆
Packed dirt	★★☆	★★★
Grass, loose dirt	★☆☆	★★★
Tall grass, short brush	☆☆☆	★★☆
Sand, gravel	☆☆☆	★★☆
Slopes	☆☆☆	★★☆
Minor curbs & holes	☆☆☆	★★☆
Dimensions & Weight		
Length	65 cm (26 in)	102 cm (40 in)
Width	65 cm (26 in)	88 cm (35 in)
Height	180 cm (5 ft 11 in)	
Weight	180 kg (400 lbs)	235 kg (520 lbs)
Mobility		
Maximum speed	12.5 km/h (7.8 mph)	18.0 km/h (11.2 mph)
Turning radius	0	
Battery Endurance		
Driving range	19-24 km (12-15 mi)	
Run time, stationary	24 hrs	
Recharge time, from empty	8 hrs	
Environmental		
Operating temperature	0-50 C (32-120 F)	
Waterproofness	Operates in heavy rain	

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