



The ultimate protective tool for IED identification and disposal

PackBot 510 Performs Multiple Missions:

Bomb Disposal / EOD (IEDs / VBIEDs / UXOs)

Safely disposes of roadside and car bombs, as well as unexploded weapons that pose a risk of detonation.

Checkpoints / Inspections / Explosives Detection

Examines vehicles, packages and buildings to distinguish deadly IEDs from harmless objects, using advanced vision and surveillance capabilities.

Route Clearance

Safely investigates and moves IEDs spotted by a route clearance team as it sweeps for threats on mission routes.

- Identify and neutralize roadside bombs, car bombs and other IEDs...
- Protect bomb squad technicians and ground troops from danger...
- Defeat a variety of ordnance and SWAT threats...

The next-generation iRobot PackBot 510 with EOD Kit quickly adapts to different IED, conventional ordnance and SWAT missions, while keeping EOD personnel and other warfighters at safe stand-off distances.

Enhanced Next-Gen Features

Advanced chassis for 30% faster speeds, better navigation and increased dragging capability.

Improved manipulator doubles lifting, carrying and manipulation capabilities.

New game-style hand controller enables faster training and greater mission success in the field.

Four cameras ensure optimal surveillance and maneuverability in a variety of environments.

Vision and Targeting Head

Equipped with powerful cameras, the vision and targeting head ensures that the operator can see and overcome anything in the robot's path. The included QuickClamp Accessory Mount allows for fast installation and removal of a variety of tools at the head.

Manipulator 1.0

A more powerful manipulator doubles lifting, carrying and manipulation capacity. The base rotates 360° to allow for precise targeting and placement of disrupters.

Stronger Manipulator Joints

Strengthened elbow joints enable the robot to lift up to 30 lbs (13.6 kg) with the arm in a compact position or 10 lbs (4.5 kg) while fully extended.

Surveillance Camera

Continuous pan and 220-degree tilt, color CCD with 312x zoom, auto-focus, image stabilization and low-light capabilities.

Color Cameras (2)

Arm cameras provide enhanced views and operation. One camera points at the head, allowing for maneuvering in tight situations. The second camera points at the gripper on the manipulator, enabling easier handling of objects.

Drive Camera

Wide-angle, mounted on base of unit with multiple positions allowing for forward, rear and downward views. It can also view manipulator positions.

SmartSpool™ Fiber Optic Spooler

The intelligent fiber spooler includes 820 ft. (250 m) of optical fiber, as well as automatic payout and rewind, minimizing fiber tangle and excess tension.

Lights

Variable-intensity LEDs are mounted at each camera location. Surveillance camera has both white and IR LED arrays for illuminating in all ambient light conditions.

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PackBot 510 with EOD Kit Contents

- PackBot 510 Chassis
- Portable Command Console (PCC)
- Manipulator 1.0
- 2 Hand Controllers
- QuickClamp Fireset
- Firing Key
- Dual MicroCharger Kit
- 3 NiCad Batteries
- Rugged Equipment Cases
- User Documentation
- Commercial license for Aware™ 2.0 robot intelligence software available

Specifications with EOD Kit

- Microelectronics & Sensors
- Onboard mobile Pentium® PC, 256 MB SDRAM, onboard overheat protection, compass accelerometers, inclinometer
- Height: 16" with Manipulator in stowed position
87" with Manipulator fully extended
- Width: 16" with Quickflip flippers off
20.5" with flippers on
- Length: 32" with flippers stowed
40" with flippers extended
- Weight: 68 lbs (includes 2 batteries)

Total Capacity

- Eight payload bays
- Can carry up to 46 lbs (20.9 kg) at one time

Battery Endurance

- 2 NiCad packs 2-12 hours depending on mission profile (optional 4-24 hours with Battery Expansion Kit)
- Up to 6+ miles (9.6 km) of travel

Communications

- RF: Fully digital 2.4 GHz (up to 3,280' / 1000 m range* line of sight)
Long range antenna (optional)
* Configuration dependent

Manipulator Specification

- Extension: 80" (203.2 cm)
- Lifting capacity:
 - 10 lbs (4.5 kg) at full extension
 - 30 lbs (13.6 kg) at close-in position
- Degrees of Freedom (DoF)
 - 8 independent DoF
- Shoulder rotation: Continuous
 - Shoulder pivot: 220°
 - Elbow 1: 340°
 - Elbow 2: 340°
- Gripper rotation: Continuous
 - Gripper open: 180°
- Head rotation: Continuous
 - Head tilt: 220°

PCC Specifications and Capabilities

The Portable Command Console (PCC) provides operators with pre-set manipulator positions and a 3-D display that enable operators to easily position and see the robot. The PCC operates in all weather conditions.

Size

- 18" (45.7 cm) W x 14.6" (37.1 cm) L x 18.5" (47 cm) H

Weight

- 41 lbs (18.6 kg) with 1 battery

Screen

- 10.5" (26.7 cm) daylight readable

Processor

- Pentium with 128 MB RAM

Power

- 2 Battery slots, interchangeable with robot

Portability

- Carry handle and strap

Duration

- 3 hrs nominal mission
- Can be run from external power supply

Input Devices:

The Hand Controller is easy to use and significantly reduces on-robot training time

- Membrane keyboard
- Two multi-degree-of-freedom controllers
- Membrane keypad with mission-specific buttons

Software

- Multi-image display with full screen option
- Multiple pre-set manipulator positions
- Auxiliary USB, Ethernet, video output
- Two way audio communications
- Power-saving sleep mode
- 3D active model of vehicle
- Image capture capability
- Gauge display of batteries
- Gauge display of optical-fiber
- Multiple speed ranges
- Multi-lingual



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