

Plot No. 50, DIC, Industrial Area, Baddi, Solan (H.P)

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### **ROVER MARK-1**



**MODEL: ROVER MARK-I** 

#### STRUCTURE INSTALLATION

The ROV is able to carry out EOD and surveillance of the following structures/installation:

- 1. Building Operations & installation.
- 2. Urban Transportation Location.
- 3. Passenger Terminals
- 4. Inside Aircraft

#### **KEY TECHNICAL FEATURES**

The ROV is having the following key technical features:

- 1. Weight man portable not more than 90 kg for basic unit
- 2. Climbing ability 45 degree stair/slopes.
- 3. Video color camera, driving reverse camera and aiming camera.
- 4. Night vision capability with IR camera.
- 5. It is provided with EOD manipulator arm with camera & white floodlight.



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- 6. Aiming with the help of both camera & laser aiming pointer.
- 7. Lifting Capability of 10 kg with arm fully extended.
- 8. Spot lights -
  - For driving camera
  - For aiming camera compatible with video camera

#### **CONTROLS**

- 1. Provided with radio control for Urban / Built-up area of 200m.
- 2. Provided with radio control for open area of 1Km.
- 3. Provided with fiber optics control of 100m.

#### **EOD OPTIONS**

- 1. Water jet disruptor.
- 2. Charge Dropper Assembly.
- 3. RTVS Mount.
- 4. Lifting Bracket for articulated movement of key opening.

#### POWER SUPPLY

- 1. AC to DC via on-board power convertor with cable min 100m.
- 2. Rapid rechargeable SMF batteries.
- 3. Battery capacity: Driving endurance & Operational endurance of 2 hrs.
- 4. Battery charger to be provided with maximum charging time for charging not more than 8-12 hrs.

#### **BASE STATION**

- 1. It is compact and light weight.
- 2. Portable control system.
- 3. Display unit with a high resolution LCD screen.
- 4. It is capable of powered on mains and battery both.
- 5. It has picture in picture display with camera selection by way of touch screen.
- 6. It has joystick control.
- 7. It has inbuilt safety feature.
- 8. It has essential operational controls.

#### **OPERATING TEMPERATURE**

-10°C to +55°C



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### **ROVER MARK-II**



MODEL : ROVER MARK - II

#### STRUCTURE INSTALLATION

The ROV is able to carry out EOD and surveillance of the following structures/installation:

- 5. Building & installation.
- 6. Urban Transportation Location.
- 7. Passenger Terminals

#### **KEY TECHNICAL FEATURES**

The ROV is having the following key technical features:

- 9. Weight vehicle portable not more than 300 kg.
- 10. Climbing ability 30 degree stair/slopes.
- 11. Video color camera, driving reverse camera which can aim with pan and tilt capability.
- 12. Night vision capability with IR camera.
- 13. It is provided with EOD manipulator arm with camera & white floodlight.
- 14. Aiming with the help of both camera & laser aiming pointer.



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- 15. Lifting Capability of 10 kg with arm fully extended.
- 16. Spot lights
  - a. For driving camera
  - b. For aiming camera compatible with video camera

#### **CONTROLS**

- 4. Provided with radio control for Urban / Built-up area of 200m.
- 5. Provided with radio control for open area of 1Km.
- 6. Provided with fiber optics control of min 100m.

#### **EOD OPTIONS**

- 5. Water jet disruptor.
- 6. Charge Dropper Assembly.
- 7. RTVS Mount.
- 8. Lifting Bracket for articulated movement of key opening.

#### **POWER SUPPLY**

- 5. AC to DC via on-board power convertor with cable min. 100m.
- 6. Rapid rechargeable SMF batteries.
- 7. Battery capacity:
  - a. Driving endurance 2hrs
  - b. Operational endurance 4 hrs.
- 8. Battery charger to be provided with maximum charging time for charging not more than 8-12 hrs.

#### **BASE STATION**

- 9. It is compact and light weight.
- 10. Portable control system.
- 11. Display unit with a high resolution LCD screen.
- 12. It is capable of powered on mains and battery both.
- 13. It has picture in picture display with camera selection by way of touch screen.
- 14. It has joystick control.
- 15. It has inbuilt safety feature.
- 16. It has essential operational controls.

#### **OPERATING TEMPARATURE**

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### **ROVER MARK-III**



MODEL: ROVER MARK - III

#### INCLINE ASCENT/DECENT

The ROV is able to ascend/descend a slope of a minimum of 45 degrees.

#### **GENERAL SPECIFICATION**

The ROV is having the following key technical features:

- 17. Platform Dimensions: Able to fit through an aperture measuring (H x W) of (720MM x 680MM) or (28.35"x26.77")
- 18. Overall Weight (platform): max 100lb (45.4 kg) to allow the platform to be two-man-portable.
- 19. Overall Wright (platform, OCU & transit container): max 150lb (68.1kg) to allow complete system to be loaded/transported prior to deployment.
- 20. Running Gear Tracks: min 4"width (10cm) wheels are off road capable, min 4"clearance from base.
- 21. Packing container: provision of packing container for protection of system components, box able to contain both platform/OCU.
- 22. Tools: ability to attach tools (including disruptor) to the arm.
- 23. Firing systems: two independent firing circuits.
- 24. Lights: sufficient light systems to operate in the dark.



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#### **COMMUNICATION FEATURES**

- 7. Operating System: Ability to change frequency setting dependent on the environment conditions at the time of operating.
- 8. Communications:
  - a. Ability to control the platform via the operational control unit (OCU) at a distance of at least 200mtrs.
  - b. Ability to allow multiple platforms to be operated from the same incident control point (ICP)

#### **MANIPULATION FEATURES**

- 9. Shoulder rotation of no less than 200 degrees of rotation.
- 10. Elbow rotation of no less than 180 degrees.
- 11. Ability to lift a weight of no less than 10lb(4.6kg) fully extended (min two feet arm range from the front of the rov) or 25lb(10.5kg) when retracted.
- 12. Continual wrist rotation of the manipulator (gripper) assembly.
- 13. Manipulator assembly able to open to minimum width of 5"(12.7cm)

#### **CAMERA FEATURES**

**Multiple Cameras**: A minimum of 3x camera system mounted on to the platform, front and back side covered.

- a) Front camera: minimum 120 degree view ability, fixed or movable
- b) **Pan/Tilt Color Camera**: provision of color imagery to OCU via 100 degree tilt and 180 degree pan abilities, has pan/tilt capability for target assessment & RSP

#### ENVIRONMENTAL PERFORMANCE

- 17. **Incline Ascent/Descent**: able to ascent/descent a slop of min 45 degrees without affecting performance.
- 18. **Curb ascent/descent**: able to ascend/descend over a curb height no less than 4" (10cm) without impending performance.
- 19. **Mobility**: ability to operate in an area containing loose sand to depth between 2" & 4" (5-10cm) without impending performance.
- 20. **Endurance**: ability to operate for a duration not less than 60 mins (constant) & 2 hrs. intermittent (with operation cycles in total).
- 21. **Vulnerability**: ability to operate within an environment which contains sand/dust particles.

#### **COMMAND CONTROL**

- Radio Control
- Color Screen



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### **ROVER MARK-IV**



**MODEL: ROVER MARK-IV** 

This is the Rover Mark IV Robotic platform. The rover mark IV is small, lightweight, affordable robot designed for surveillance, reconnaissance and inspection. The Rover Mark IV is a tracked platform with a fixed front facing camera, a lightweight shell and the ability to turn on a dime. The Rover Mark IV is designed to be rugged and withstand the daily abuse of tactical operations.