VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi - 590010

PROJECT REPORT ON

"Advanced Military Spying and Bomb Disposal Robot"

Submitted in partial fulfilment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
1 ASHWAL P R	4AL13EC010
2 DHANUSH K A	4AL13EC024
3 KRISHNA HANDENAVAR	4AL13EC034
4 MARUTI	4AL13EC042

Under the Guidance of
Mr. DEEPAK RAJ
Assistant Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2016-2017

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***ADVANCED MILITARY SPYING AND BOMB DISPOSAL ROBOT***" is a bona fide work carried out by*

ASHWAL.P.R	**4AL13EC010**
DHANUSH.K.A	**4AL13EC024**
KRISHNA.HANDENAVAR	**4AL13EC034**
MARUTI	**4AL13EC042**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2016–2017. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Deepak Raj	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D	PRINCIPAL

Dept. Of Electro munication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

In the past decade, robotic systems have been used with increased popularity for Explosive Ordnance Disposal (EOD) missions. Advances in robotic technology have made it possible for robots to perform functions previously only possible by human workers wearing a blast suit. The primary advantage to using robotic systems for explosive ordinance disposal is the reduced risk to humans. Currently, EOD robots are able to traverse a variety of terrain, collect and destroy certain explosives and provide improved reconnaissance capabilities to law enforcement and military agencies. Although far from perfected, these robots are saving lives by finding and disposing of explosives without the need for direct human contact reliable robotic platform.

The key features of the robot include an intuitive user interface which provides additional sensor feedback and enhanced visual awareness compared to existing systems, an on board three degree of freedom manipulator arm providing an enlarged workspace, and a dexterous gripper allowing for the removal of detonators. The flexible and modular robot design utilizes commercial off the shelf components for ease of maintenance and repairs. The robot provides a safe distance threat assessment and increased capacity for explosive ordinance disposal, improving the effectiveness of bomb disposal teams. The robots low-cost, intuitive operation and ease-of-maintenance promote its widespread appeal, thereby saving the lives of both law enforcement personnel and civilians.

The robot constructed is used for bomb disposal purpose and wireless camera is used for image feedback so operator can operate more efficiently. The operation of robot is control by using wireless module so it can provide more range of operation. Also construct a basic bomb diffusing robot which can handle simple tasks like cutting wires, flip on switches, lift light objects, etc. and a simple autonomous robot to help in the transit of the bomb. Also gives video feedback to us so effective handling of robot can be possible. The designed project act as an assistant robot to the bomb disposal squad which performs several applications in the field of military.