

# ROBOVR

## SRB TUG OF WAR

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## About the game:

Two robots will be hooked up with a rope and the bots will have to move in opposite directions. The one robot crossing the mentioned line will lose the match. The specifications and components to build the robot are mentioned below.

## Components and its Specifications:

Sr. No.	Components	Specifications
1.	Planetary DC Geared Motor *	438 rpm*
2.	DPDT Switch	3 positions Momentary switch
3.	Battery	12 v - 15 v *
4.	Chassis	Aluminum Sheet (5mm thick)
5.	Wheels	2x Rubber Belts
6.	Pulleys	Plastic Pulleys

Note: ‘ \* ’ mark indicates the value or component can vary according to the need

## Robot Details:

**Robot Dimensions:** 8” x 8” x 8”

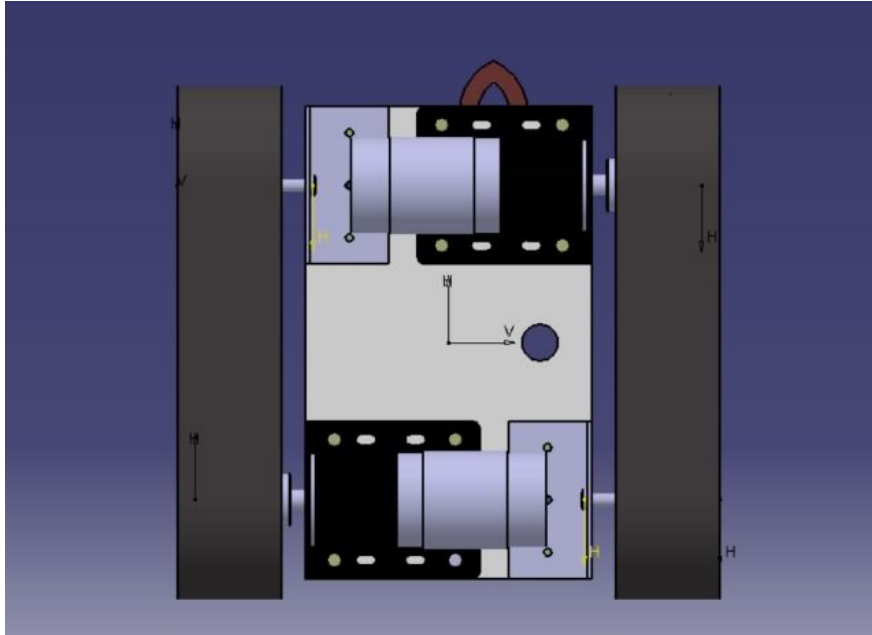
**Robot Weight:** 4kg

**Robot Control:** Wired

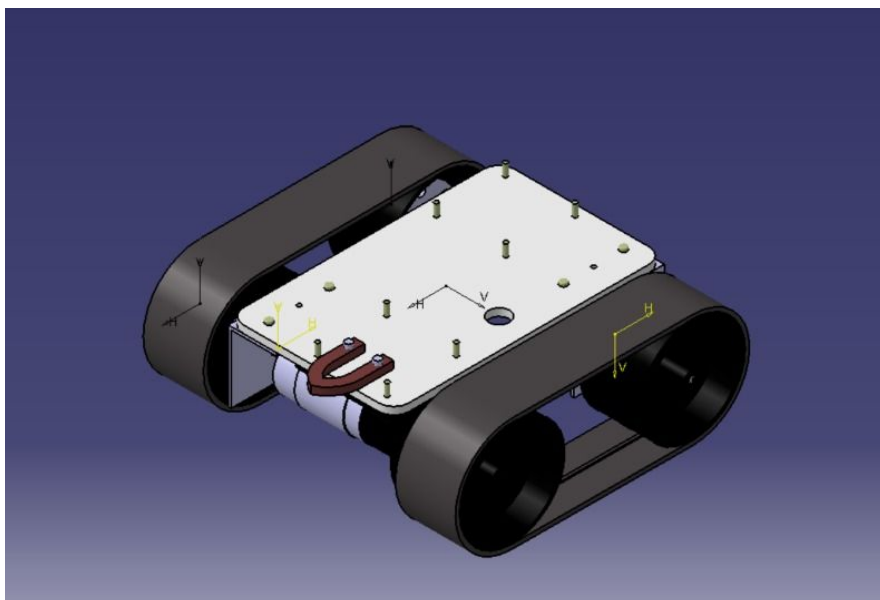
**Robot Drive:** Belt Drive

# Mechanical Design:

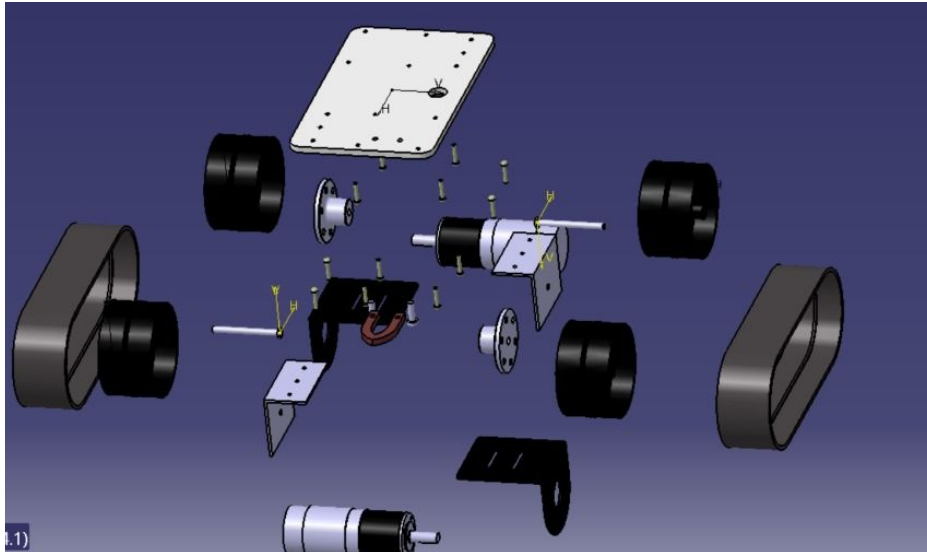
## Bottom View



## Isometric View



## Split View



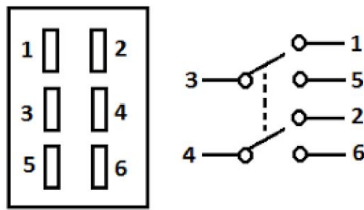
## Remote Details:



A similar remote is needed to be built for this robot.

A Double Pole Double Throw (DPDT) switch is an electromechanical switch that has 2 inputs and 4 outputs and each input has 2 corresponding outputs that it can connect to.

Given below is the diagram of a DPDT switch.

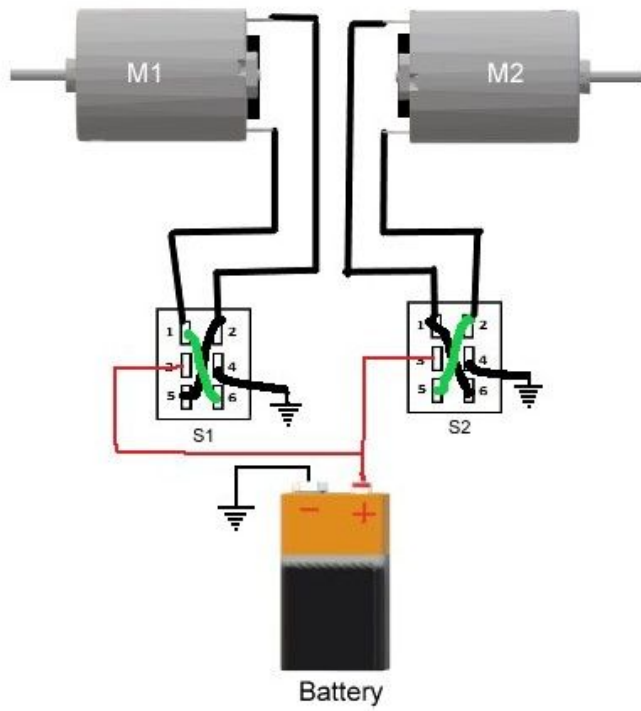


## Working:

The robot is controlled with a DPDT switch wired remote control. The rope is attached to the hooks. Two dummy wheels will be provided motion with the help of belt drive. Remote Control connections are provided below.

<b>Motion</b>	<b>Switch s1</b>	<b>Switch s2</b>
<b>Forward</b>	Forward	Forward
<b>Backward</b>	Backward	Backward
<b>Left</b>	n/c	Backward
<b>Right</b>	Backward	n/c

Connections:



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