Track-Bot IR Remote Controlled

Assembly Guide & Manual

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TrackBot is a simple remote controlled robot. It's made using Normal 100 RPM DC motors, Advance Robot Chassis, 2cm width Pulleys, Track Belts 2 cm width and a 11.1V 1500 mAh battery. It is controlled through IR remote and receiver circuit.

**Track Bot IR Remote Controlled Kit**

This kit contains everything you will need to make a working robot except hardware tools like screwdrivers, pliers, spanner etc and 2 X AA size cells.

This kit uses 2 dummy motors as it is a belt driven system, there are only 2 driving motors of 100 RPM. If you want extra speed you can buy 4 200 RPM motors separately and get double speed. In fact all parts used in this robot except some screws and studs are available on our website. You can build your own configuration after buying different parts separately.

The advantage of using track belt is Compared to wheel which provides only one point contact to ground belt provides a large contact area to ground. This provides high traction and also helps going over the obstacles.

As this is a track belt driven robot it works on skid steer mechanism. On pressing forward button on remote both left and right motor moves forward so robot goes forward, for backward both motors move backward, for left turn left motor goes backwards and right goes forward and for right turn right motor moves backwards and left motor moves forward.

**Track Bot IR Remote Controlled Kit includes ...**

- 1 X Advanced Robot Chassis
- 2 X 100 RPM DC Motors
- 4 X 2 Cm width Pulleys
- 2 X Track belts 2 Cm width, cut and joined to proper length
- 1 X 11.1V 1500mAh battery
- 1 X IR Remote Control
- 1 X IR Receiver and Motor Controller Circuit for 2 DC motors
- All required screws, studs, cable ties and connectors

You can see video demo of this robot on YouTube at :  
https://www.youtube.com/watch?v=jMUEgDPHygM

http://www.robokits.co.in  
http://www.robokitsworld.com
Assembly

Step 1

First of all we need to take 2 DC motors and 2 Dummy motors to fit in Chassis.

Twist the wires of both motors to keep them neat and managed.

Fix 2 motors to back of Chassis with nuts. You will need to open the nuts first.
Step 2
Fix 2 dummy motors on front side of chassis.
You can use spanner or pliers to fix the nuts.

Step 3
Fix 4 pulleys to the shafts of both DC motors and dummy motors.
Threaded holes are already there on all shafts. Try to fix the screw through them.
Now it is time for fixing the battery to the chassis.

Place the battery on front center.

Take 2 cable ties and fix one into other for extending. Make 2 such extended cable ties.

Fix the battery to the base with cable ties. After fixing properly cut extra cable ties portion with nipper or cable cutter.
Step 5

Now the assembly starts to look like a robot car but first of all it needs track belts.

Put a belt over pulleys on each side. You may need to stretch belts a little.

Now the mechanical part is complete, it is now time to put on electronics.
Step 6

Take the circuit and screws and 10 mm studs.

Fix 4 studs to the circuit holes with screws.
Step 7
Mount the circuit to the chassis with help of 2 screws. It is not required to fix all 4 screws as there is no mechanical load on it. Second thing is the chassis doesn’t have compatible holes to fix all 4 screws, so fix with only 2 screws.

Step 8
Now screw 4 wires of motors to screw terminals of M1 and M2 (on circuit). Left motor goes to M2 and Right one goes to M1.
This is just for testing, once tested the connections it is advisable to take the wires out from below the circuit so they are not visible on top.
Step 9

Robot is now almost ready, check its working by powering up.

Screw a soldered connector to power connector on circuit. Now plug in the battery checking its polarity.

The Orange or Red wire on one end of battery connector is +VE. We need to connect this wire to VDD and Black wire to GND.

Note : Putting battery in reverse will damage the circuit permanently. Take enough care while plugging in the battery every time.

If the battery is connected properly board will power up and you will be able to see power LED glowing.

Now you can test the working of robot with keys on remote.
Step 10

Once you have tested working of robot it is now time to manage the wires and fix them properly so everything looks neat and clean.

Make a bunch of all wires and fix them on bottom with a cable tie. You can also cut the extra wires and shorten length if you want.

Now the TrackBot is ready.

Remote Control Commands

<table>
<thead>
<tr>
<th>Key</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH Up</td>
<td>Move Forward</td>
</tr>
<tr>
<td>CH Down</td>
<td>Move Backward</td>
</tr>
<tr>
<td>Vol +</td>
<td>Turn Right</td>
</tr>
<tr>
<td>Vol -</td>
<td>Turn Left</td>
</tr>
</tbody>
</table>
Service and Support

Service and support for this product are available from Robokits India. The Robokits Web site (http://www.robokits.co.in) maintains current contact information for all Robokits products.

Limitations and Warrantees

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