ELECTROMAGNETIC CRANE CONSTRUCTION MANUAL

A step-by-step guide

Welcome to the guide for building your own ELECTROMAGNETC CRANE model! This project combines creativity with engineering principles. Follow these steps carefully to construct a sturdy and impressive headgear structure.

Materials included for the project

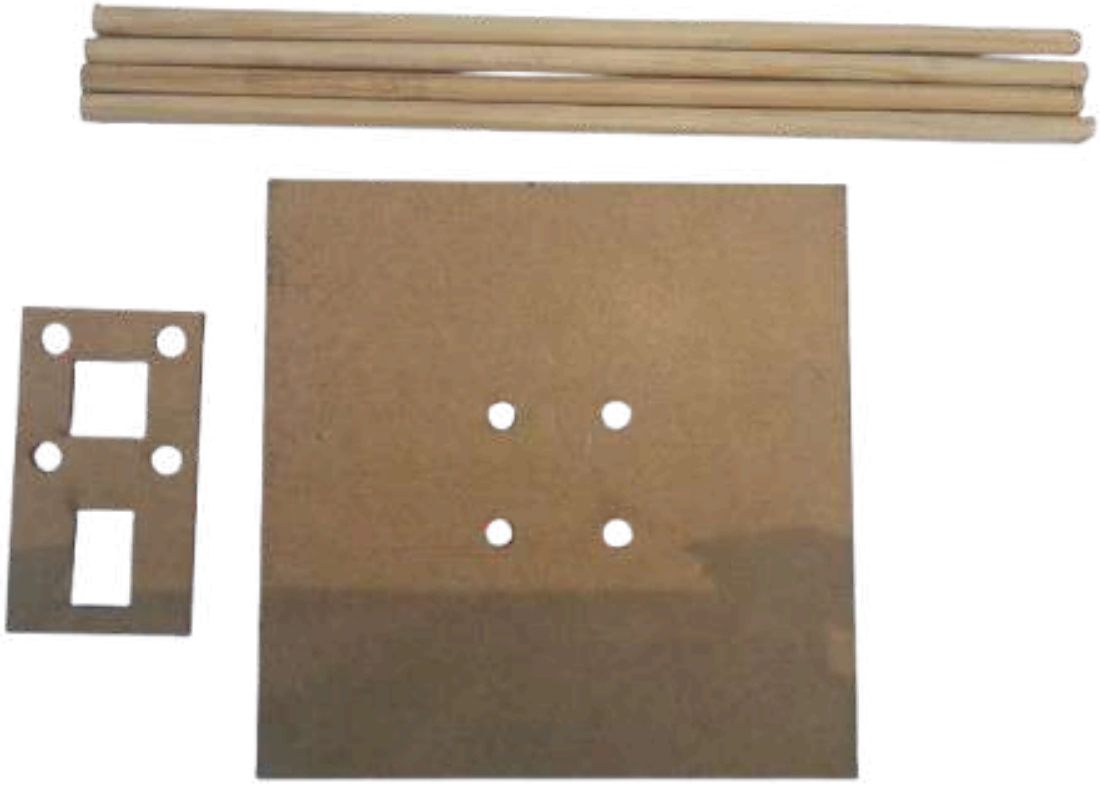
- Supa wood
- 6mm dowels
- Wood glue or strong adhesive
- Sandpaper (optional)
- String or twine
- Battery supply
- Electrical wire
- switch
- Wire nail

Step-by-Step Instructions

Step 1: Plan your Design

Before you begin, place all the pieces of your electromagnetic crane kit on a board in front of you. C

Step 2: Using wood glue or a string adhesive glue the parts shown together

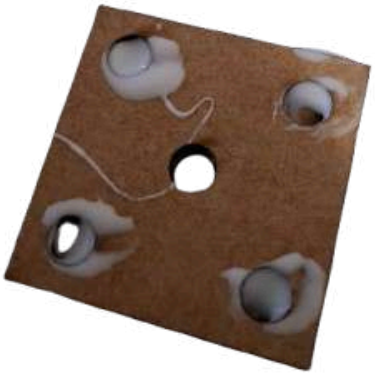


Step 3: Assemble the Frame

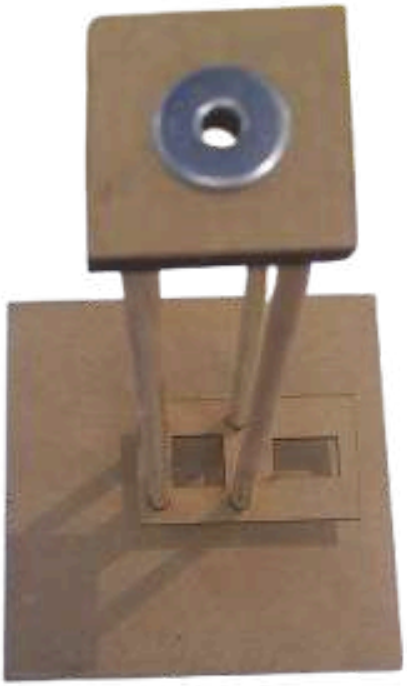
Using wood glue or strong adhesive, begin assembling the frame. Start with the base and attach the vertical supports. Ensure the structure is square and stable as you build upwards. Use weights to secure joints while they dry. make sure the switch holder is glued a third of the way on the frame

Step 4: Add the square crane turning control System

glue the square turning bay the glue the square with on hole to the square with 5 holes. The center hole will line up and the 4 holes on the corners will line up with the bases dowels



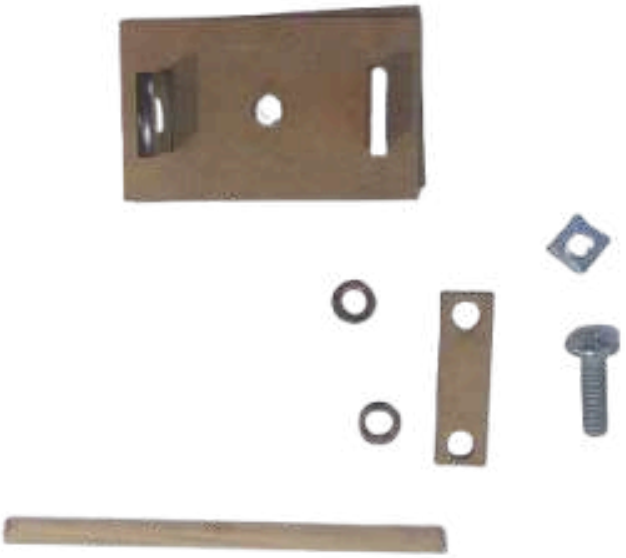
Step 5: Attach the turning bay base to the crane base



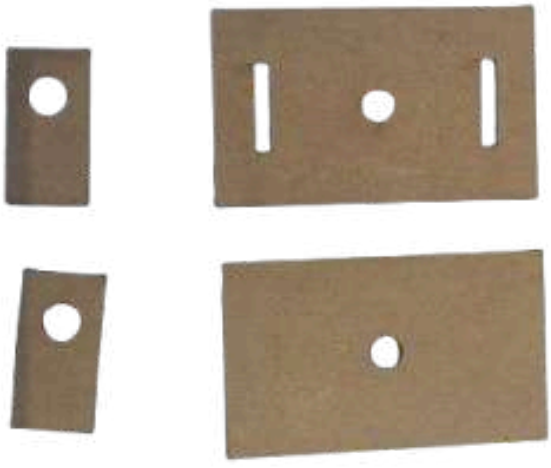
Step 6: Construct the Crane Arm

Place the triangles and the dowels provided in front of you, gently insert the dowels into the holes in the triangles as demonstrated below.

Step 7: Construct the turning bay and crane arm

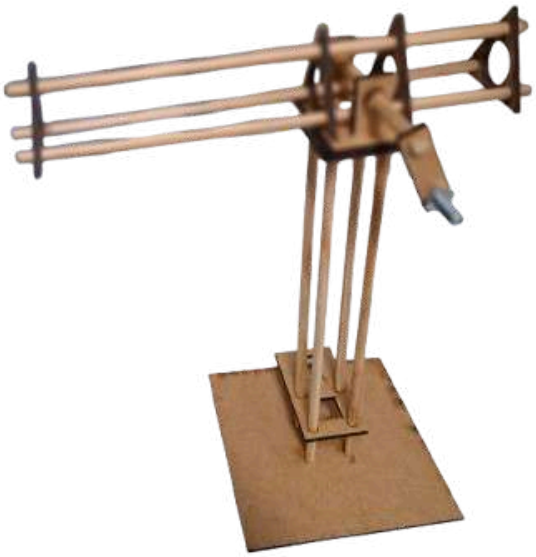


Step 8: Glue each Piece together to fit



Step 9: Connect the crane Swivel mechanism together

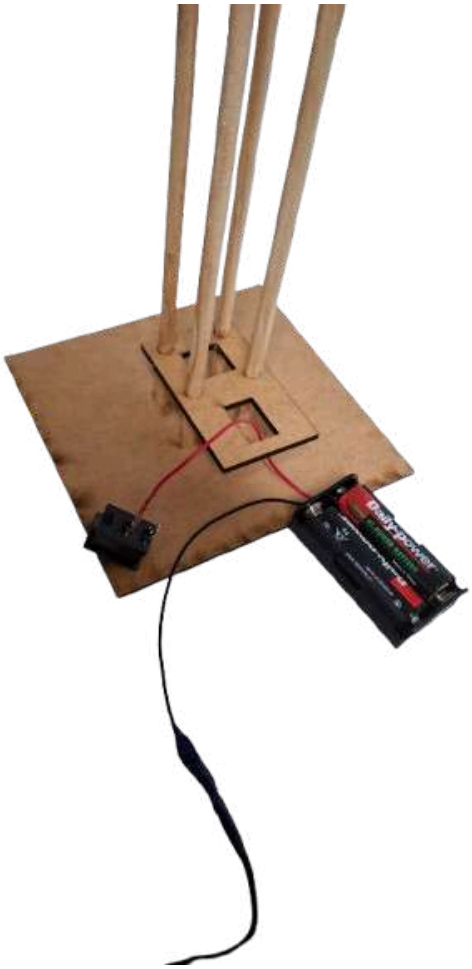
Step 10 Connect the lever system

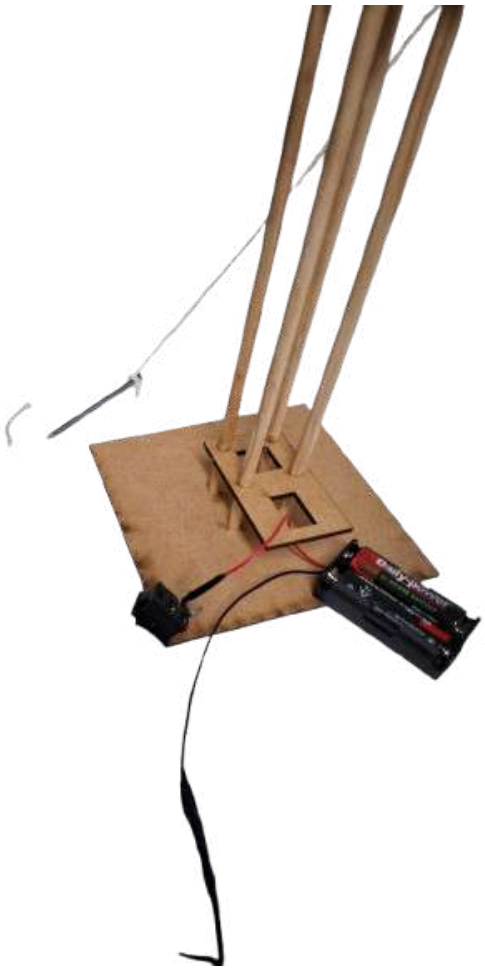


Step 11: Attach the wire nail and string provided to the crane

Step 12 Connect the Electromagnet

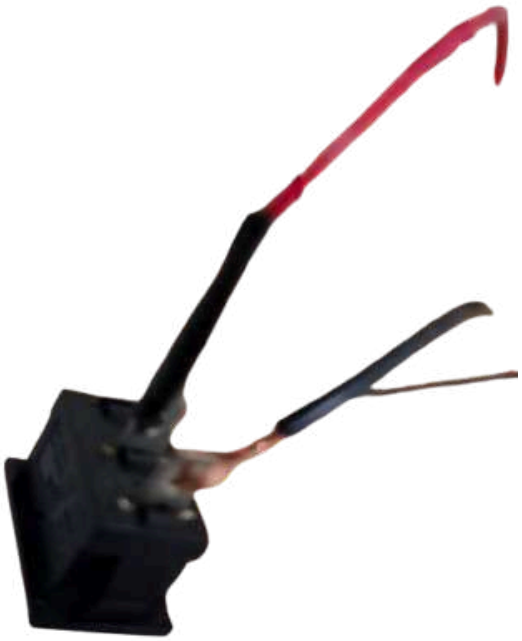
(make sure to seal the exposed wire joins with insulation tape)



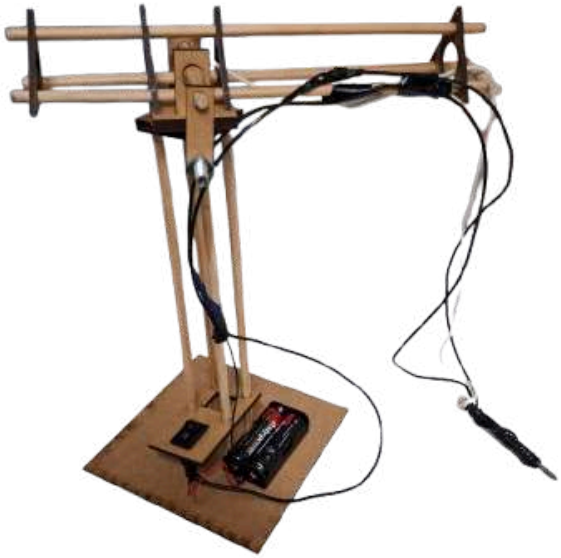


Connect one end of the wire to the switch (make sure the wire goes through the switch hole from underneath before connecting the wire to the switch.) Wind the wire tightly and in a neat fashion

around the wire nail and secure with insulation tape. You can use insulation tape to secure the extra wire to the side of the crane (make sure the crane can swivel properly).



Connect the wires insert the switch in the hole provided. Connect the batteries correctly to positive and negative fitting. When you switch the switch on it should transform the wire nail a magnet. Turn the lever to draw the wire nail upward. If the magnet is not working properly please make sure the exposed wires are making contact with the switch connectors.



Congratulations on completing your Electromagnetic Crane Project