

ELECTRONICS - STEADY HAND GAME



USEFUL LINK

<https://technologystudent.com/elec1/steady2.htm>

ADVANTAGES AND DISADVANTAGES OF THE CONCEPT DESIGN

The design of this electronic steady hand game for children appears well-thought-out and engaging.

Positives

Interactive Components: The wire loop and wand mechanism are classic and effective for testing fine motor skills and hand-eye coordination. Including a buzzer and / or an LED enhances interactivity and provides immediate feedback, making it enjoyable for children.

Thematic Handles: The yellow hand-shaped supports are visually appealing and child-friendly, adding a touch of playfulness that young users will appreciate.

Safety Considerations: Having an MDF base and securely mounted components suggests durability and safety, essential for a children's product. The on/off switch and reset button provide added control and usability.

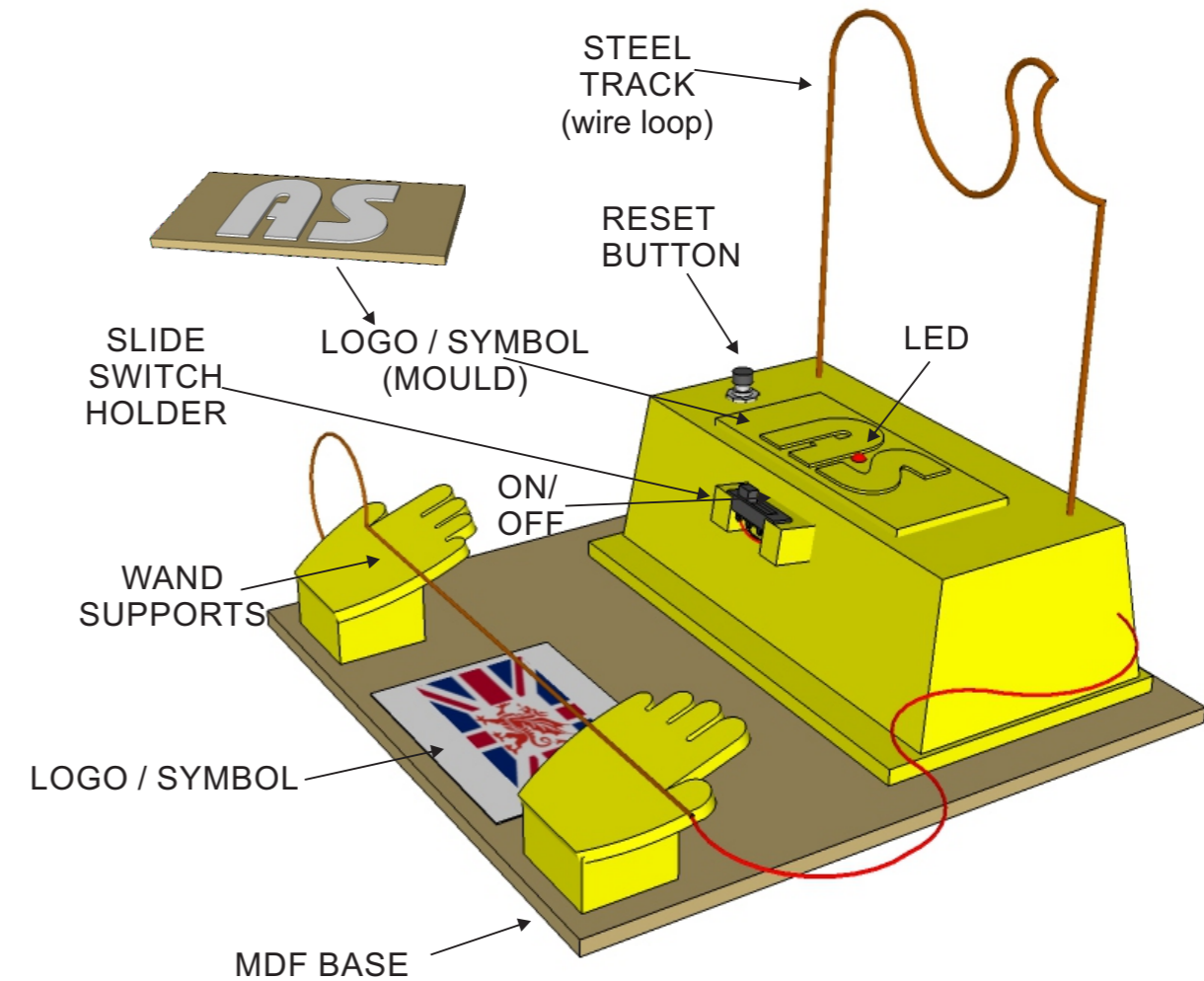
Improvement Opportunities

Visual Appeal: Introducing a cohesive theme (e.g. space, jungle or sports) across the design elements, could make the product more engaging.

Adjustable Difficulty: Adding replaceable wire mazes of varying complexity, could broaden the game's appeal to children of different ages or skill levels.

Educational Value: Transparent sections to show the internal circuit or an accompanying guidebook, could teach children basic concepts about circuits, sparking curiosity and learning.

Overall: The game is a solid foundation for a fun and educational product, but incorporating additional features like thematic elements or modularity could take it to the next level.



How would you improve the concept design?

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FURTHER DETAIL AND GUIDANCE

Thematic Design

The theme of the steady hand game is important because it must capture children's attention.

For example, an 'outer space theme' could feature a rocket-shaped wand navigating through a wire maze, with a background designed like an asteroid field.

Alternatively, a 'jungle theme' might involve a vine-shaped wire and a jungle background.

Educational Value

The circuit will include components that introduce basic electronics. The PCB will hold a thyristor, resistors, LED, push to break switch, slide switch and battery snap.

Ergonomics

A comfortable and ergonomically designed grip for the wand, making it easy for smaller hands to use.

Durability

Use robust materials for the wire and wand to prevent wear and tear. Ensure the base is stable, perhaps with a non-slip bottom or weighted material.

Safety

Securely 'house' electronic components, ensuring they are inaccessible to children. The steady hand game will be powered by low-voltage batteries to minimise risks.

Eco-Friendliness

Consider using recycled or biodegradable materials for the game's base and wand.

Packaging and Assembly

The product could come as a DIY kit, allowing kids to build it themselves with parental supervision. This approach not only teaches them assembly skills, but also deepens their understanding of how the game works.

Marketing

You could design a poster aimed at promoting the game. The poster must interest parents / guardians as well as the potential users (young children).



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EXAMPLE THEMES FOR A STEADY HAND GAME

- 1. Outer Space Adventure:** Navigate a rocket through an asteroid field without touching the space debris.
- 2. Jungle Escape:** Guide an explorer through twisting jungle vines to find hidden treasure.
- 3. Underwater World:** Manoeuvre a submarine through coral reefs and underwater caves.
- 4. Medieval Quest:** Help a knight carry a sword through a castle full of traps to rescue a princess.
- 5. Racing Circuit:** Drive a race car around a winding racetrack to claim victory.
- 6. Haunted Mansion:** Steer a flashlight through spooky paths to escape the ghosts.
- 7. Pirate Treasure Hunt:** Lead a pirate ship through treacherous waters to find buried treasure.
- 8. Robot Challenge:** Navigate a robot arm through a factory assembly line to complete tasks.
- 9. Superhero Mission:** Fly a superhero through skyscrapers to save the city.
- 10. Magical Journey:** Guide a wizard's wand through enchanted forests to retrieve a magic crystal.

Write three of your own themes for the steady hand game.

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