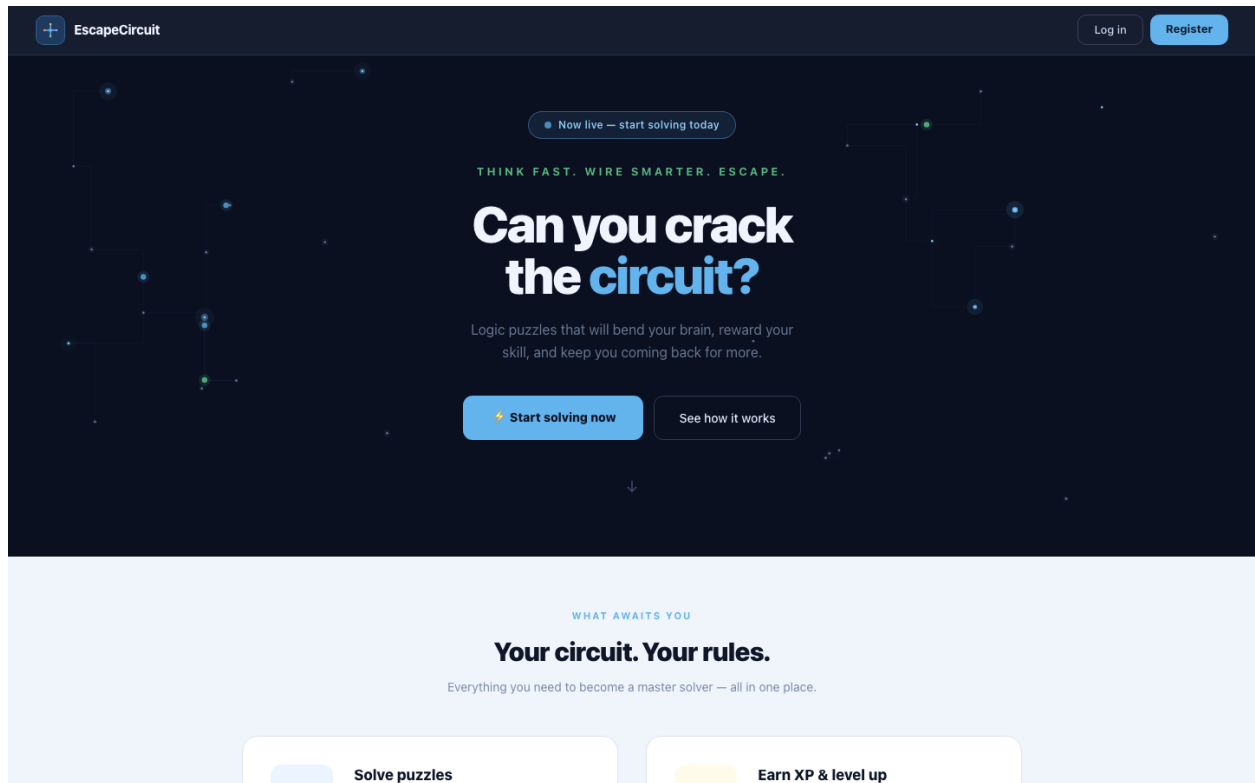


# EscapeCircuit: Comprehensive User Guide

Welcome to **EscapeCircuit**, the web app where you "Wire your way out" by creating and solving logic-circuit puzzles. This detailed guide covers everything from the basic interface to advanced creator and administrator tools.



## System Dictionary & Terminology

Understanding these core concepts is vital for your success in EscapeCircuit:

- **Circuit Board / Canvas:** The main grid-based area where you build your logic designs. It supports pan, zoom, and multi-selection.
- **Components:** The parts used to build circuits.
  - *Logic Gates:* Foundational pieces (AND, OR, NOT, NAND, NOR, XOR, XNOR, DFF [Flip-Flop component]).
  - *I/O:* Input switches and output displays (in binary format).
- **Budget / Cost:** Every component costs a certain amount. Most puzzles have a strict budget constraint that you cannot exceed, forcing you to find efficient logic design that stands out with the limitations of the riddle.



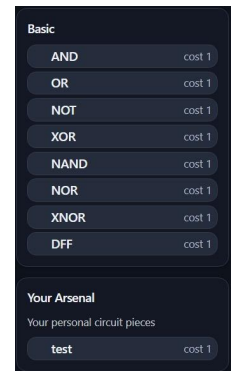
# Understanding Your Workspace Panels

When you enter a puzzle workstation, the interface is split into specialized panels:

## 1. The Component Library (DEFAULT GATES + YOUR ARSENAL+ RIDDLE'S SPECIAL GATES)

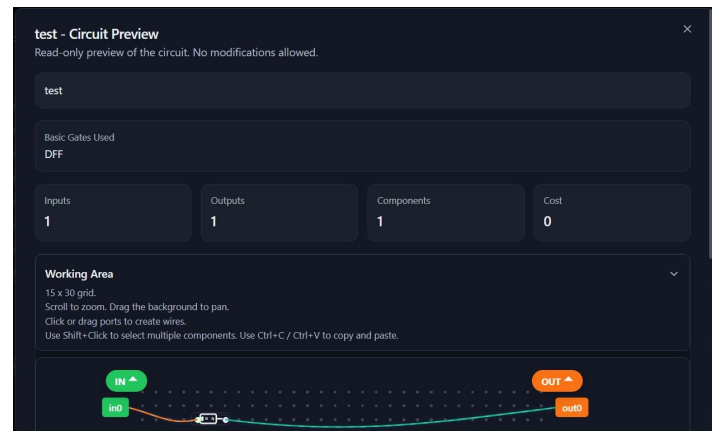
Located on the side, this is your categorized toolbox. You can view component specifications and costs here, then drag them directly onto the board.

\*Note: default gates cost 1, arsenal and special gates may cost more.



## 2. The Property Panel

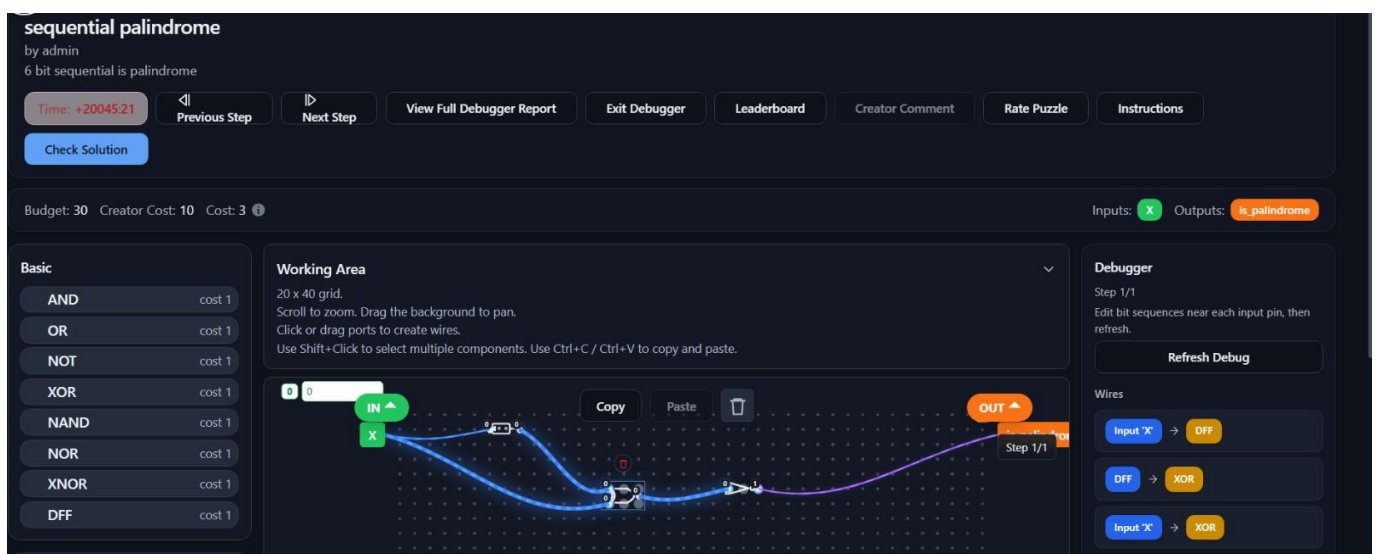
When you click on the “i” icon next to a gate on the menu, you can open a page of details that explains all the data needed for the gate.



## 3. The Debug Panel

Crucial for finding errors. It provides signal tracing, step-by-step real-time simulation, and allows you to inspect the exact 0 or 1 value at any node.

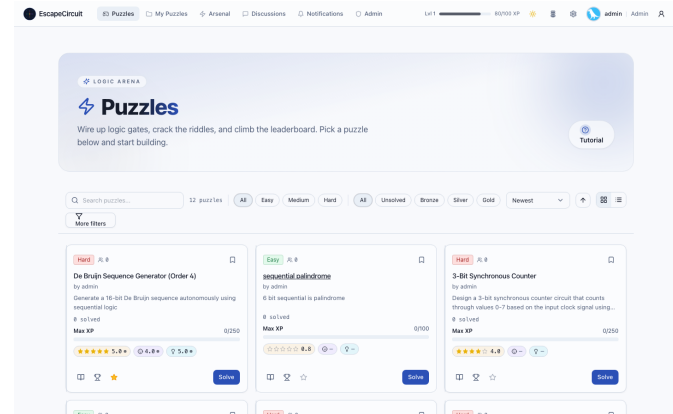
You can move forward and backward in the step-by-step process and view each step separately.



# For Players: Solving & Community

## 1. Discovering Puzzles

Navigate to the **Puzzle Browser**. You can search for specific challenges or filter the community library by difficulty, category, date, etc.



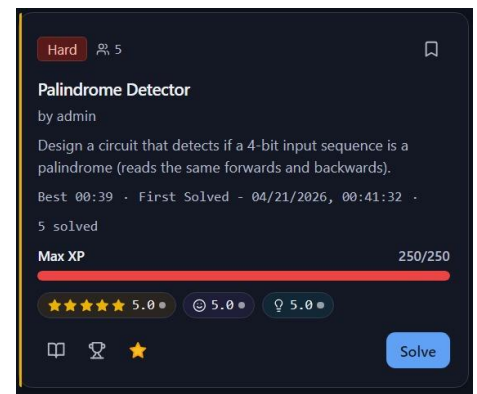
## 2. Building & Evaluating

Drag gates from your Arsenal, drop them on the grid, and click/drag between pins to route your wires. Keep an eye on your budget tracker. The system performs real-time simulation and features full Undo/Redo history so you can experiment freely.



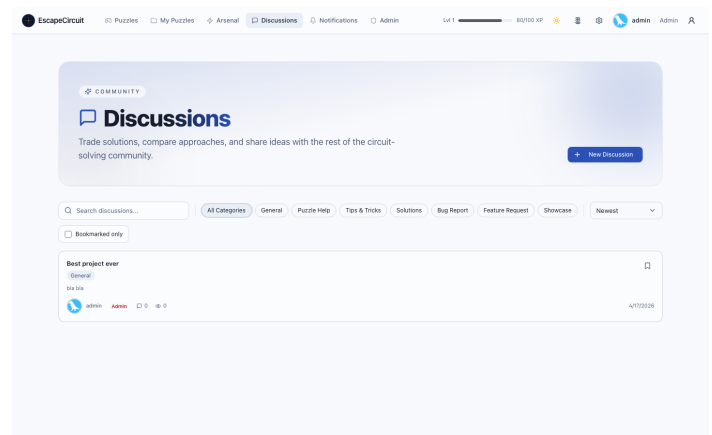
## 3. Tracking Progress & Leaderboards

Once your circuit output matches the required puzzle targets, you pass! Check your Profile/Dashboard to track your puzzle-solving statistics, view past solutions, and see how you rank on the global Leaderboards.



## 4. Discussions & Feedback

Don't forget to interact with the community! You can rate puzzles you have completed and participate in platform discussions to ask for help or share logic tips.





# For Creators: Designing Challenges

When you create a puzzle, you need to provide data that describes the puzzle and specify all its limitations. The main parts are:

## 1. Laying the Groundwork

In the puzzle creation suite, map out your intended logic. Use the **Input/Output Configuration** to rigidly define what successful outputs the player must achieve.

The screenshot shows the 'Create New Puzzle' interface in the EscapeCircuit application. The top navigation bar includes links for Puzzles, My Puzzles, Arsenal, Discussions, Notifications, and Admin, along with a user profile for 'admin'. The main form is titled 'Create New Puzzle' and has several tabs: Basic Info, Test Cases, Python Tests, Custom Pieces, Instructions, Initial Board, and Solution. The 'Basic Info' tab is active, showing fields for 'Puzzle Name' (with a placeholder 'e.g., Binary Adder'), 'Description' (with a placeholder 'Brief description of the puzzle'), 'Budget' (set to 0), 'Difficulty' (set to 'Easy'), 'Time Limit (seconds, optional)' (with a placeholder 'Leave empty for no limit'), 'Board Rows' (set to 15), 'Board Columns' (set to 30), 'Min Cycles (optional)' (with a placeholder 'For sequential circuits'), 'Max Cycles (optional)' (with a placeholder 'For sequential circuits'), and 'Minimum Gate Count (optional)' (with a placeholder 'Min gates required').

## 2. Setting Difficulty Parameters

Make your puzzle harder by restricting the **Budget** (forcing players to use fewer or cheaper gates) or by imposing a strict **Time Limit**.

## 3. Testing

Testing the solutions will be done using either black-box tests or more advanced tests in a Python file provided by the creator.

## 4. Validation & Release

Before publishing, the system runs an automatic **Self-Solution Validation** to guarantee the puzzle is actually solvable under the constraints you provided.

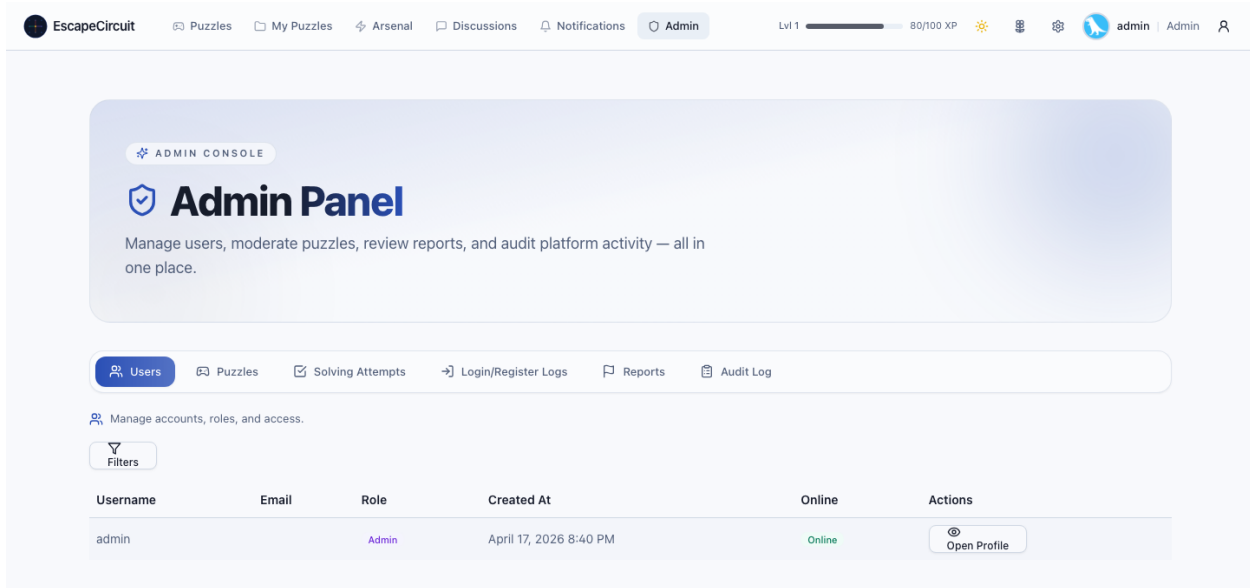
## 5. Publishing

The puzzle is created as unpublished, and if you're happy with it, you can publish it for everyone.

# For Admins: Platform Control

## 1. Content Moderation

Admins must review incoming user-submitted puzzles to maintain quality standards. Puzzles can be approved or rejected from the moderation queue.



## 2. User & System Management

The Admin Dashboard allows you to handle user permissions, review analytics, and toggle specific community features on or off instantly if issues arise.

puzzle management

| Status      | Creator | Ratings | Flags                                                                               | Created                |                                                                                             |           |
|-------------|---------|---------|-------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------|-----------|
| Unpublished | admin   | 0       | -                                                                                   | May 5, 2026 8:38 PM    |  Preview | Delete    |
| Unpublished | Unknown | 0       | -                                                                                   | May 5, 2026 8:30 PM    |  Preview | Delete    |
| Published   | admin   | 0       |  | April 20, 2026 1:58 AM |  Preview | Unpublish |
| Published   | admin   | 0       |  | April 20, 2026 1:58 AM |  Preview | Unpublish |
| Published   | admin   | 0       |  | April 20, 2026 1:58 AM |  Preview | Unpublish |

user management

| Role   | Created At            | Online  | Actions                                                                                            |              |        |
|--------|-----------------------|---------|----------------------------------------------------------------------------------------------------|--------------|--------|
| Solver | May 12, 2026 11:09 AM | Online  |  Open Profile | Make Creator | Delete |
| Solver | May 12, 2026 10:13 AM | Online  |  Open Profile | Make Creator | Delete |
| Solver | May 9, 2026 9:12 PM   | Online  |  Open Profile | Make Creator | Delete |
| Solver | May 7, 2026 6:54 PM   | Offline |  Open Profile | Make Creator | Delete |