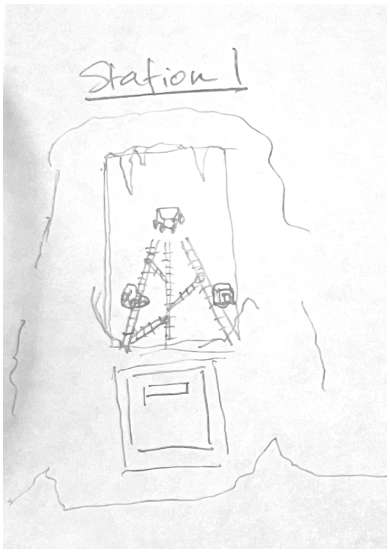
Knights of the Golden Horseshoe

Puzzle 2-3 | Minecart Puzzle Explanation

Players encounter 3 stations within the mine.

Station 1 - Viewport



Station 1 shows a mine cart and a series of 3 tracks each coming towards the players. There is a small compartment at the station. A glowing horseshoe badge and vault wheel can be seen in the minecart on the screen. If the cart is brought all the way forward, it will deposit its contents into the station's compartment, making them retrievable by players.

Also visible on the tracks is a series of obstacles, blocking certain paths. There does not appear to be any viable route, at least before players interact with Station 3.

Somewhere on the screen is a readout displaying the position of the cart, using the same Stop Numbers depicted at Station 3.

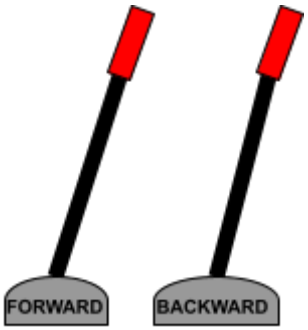
Components

- **Display Monitor** visible through a moderately sized hole in a rocky recess in Room 2
- **Compartment** beneath the main screen, which dispenses puzzle rewards:
    - Vault Wheel
    - Horseshoe Badge

Player Input

Players visually observe cart and obstacle positions at this station, but otherwise do not physically interact with this station until after solve, when they collect their reward.

Station 2 - Control Levers



Station 2 consists of two levers, within a visible distance from Station 1, one is labeled “Forward” and the other is labeled “Backward.” A sign beside them should read “Minecart Control.” Players can move the levers. Upon activating the “Forward” lever, the mine cart moves up the tracks, towards the Station 1 display. Activating the “Backward” lever causes the mine cart to move away from the players and the Station 1 display. The levers should return to a neutral position once activated, and pulling them continually should have no further effect until it is returned to neutral.

The mine cart will move whenever a lever is successfully triggered. If it is blocked by an obstacle or missing track, it will stay in its current position and make a clattering sound effect. If the track in front of the mine cart is clear, it will progress one step along the track in the direction input by the players.

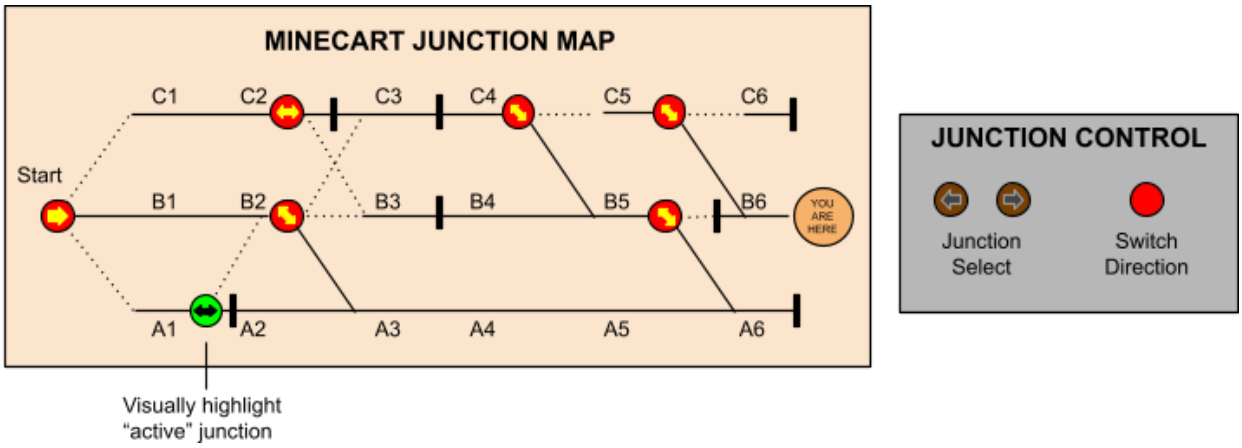
Components

- **Lever 1** controls the forward movement of the cart
- **Lever 2** controls the backward movement of the cart

Player Input

- Players pull the levers to trigger the movement of the minecart visible through Station 1. Each lever has an activating position and a neutral position, and must be returned to the neutral position before another movement can be made.

Station 3 - Map & Junction Control



Station 3 can be found out of immediate view of Station 1. This station is a map of the three main minecart tracks with 18 Stops (6 per Line), with obvious depictions of all obstacles and large circles with arrows marking the 7 Junctions.

Beside the map is a metallic box labeled “Junction control” with three buttons on it. These can be pressed to cycle through the Junctions displayed on the map, and to change the directions of the tracks at those 7 junction points. As junction directions are switched, the map display changes— with a double-ended arrow pointing either diagonally left, diagonally right, or straight on— and simultaneously, some visual aspect of Station 1 also changes to indicate the new directionality of the tracks. A sound effect plays each time any button is pressed, possibly with tonal differences to indicate the new direction.

The endpoint/ player goal, stop B6, should be labeled with “You Are Here” to indicate to players that that point is their goal

Components

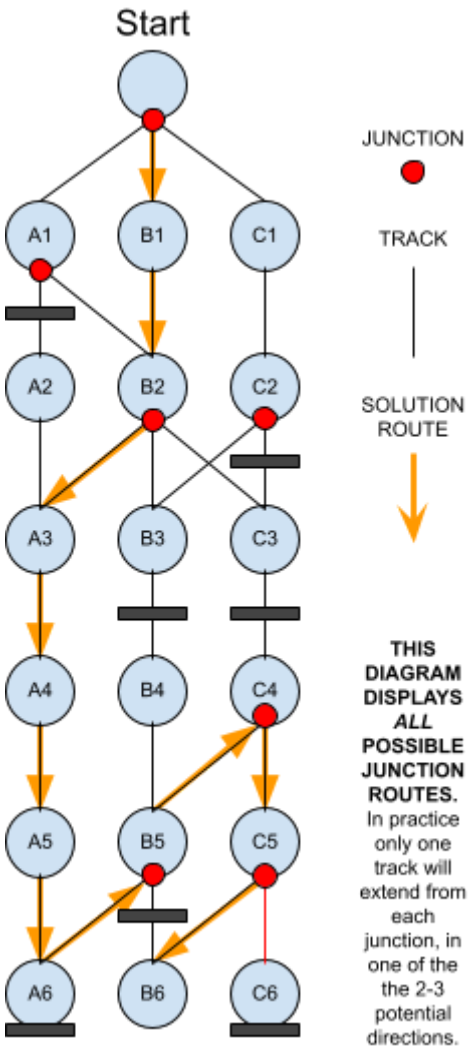
- **Display Monitor** stylized to look like an old railway map, labeled “Minecart Junction Map”
    - An arrayed display of Lines, Stops, and Junctions
        - “Lines” being the three main tracks extending from the far back start position to the frontmost destination of Station 1
        - “Stops” being the locations along the track that the minecart moves to when the Station 2 levers are activated
        - “Junctions” being the tracks between selected Stops, which can be adjusted through interaction with the Junction Control Panel (see below).
    - All Junctions must connect tracks to Lines before the next labeled set of Stops
- **Junction Control Panel** beside the map, an old-looking metal device
    - Junction Select Buttons
        - Two Buttons labeled with arrows pointing in opposite directions
        - Labeled “Junction Select”

    - Switch Direction Button
        - Large single button, in a bold color like red
        - Labeled “Switch Direction”

Player Input

- Touching the display monitor showing the map does nothing
- Pressing the “Junction Select” buttons cycles through the activated junction displayed on the map
    - All junctions will be shown as a circle with an arrow in the center
    - The background color of the junctions will change when “activated” by the Junction Select buttons, preferably to a contrasting color with the arrow becoming an inverse to the rest on the display
    - Pressing the right button cycles through the junctions in Stop # then Line order, so B0 (start), A1, B2, C2, C4, B5, C5 then loops back to B0.
    - Pressing the left button cycles in the opposite order
- Pressing the “Switch Direction” button alters the direction of the active Junction, cycling between the 2-3 options with each press
- Changing the directions of the junctions also impacts the view of the tracks seen through the Station 1 viewport (if possible)

Win Case



There are multiple solutions to this puzzle, but the progression will be as follows:

Assuming all junction tracks start in the straight position, players can progress from the start position to B3 unimpeded by pressing the Station 2 Forward Lever forward three times, however the cart cannot progress any further due to the obstruction between B3 and B4.

Instead players must press the “Junction Select” buttons on the Station 3 Junction Control Box, cycling to the B2 junction, then press the “Switch Direction” button until the track is connecting B2 diagonally to A3. Now, pressing the Station 2 Forward Lever while at the B2 stop will progress the cart to A3. The cart can then progress unimpeded to A6, where again it encounters an obstacle.

By pressing the button on B5 Stop of the Station 3 Map, players can connect B5 to A6 diagonally.

When moving backwards, the cart will always prioritize diagonal movement. In this configuration there are no stops where two diagonal tracks can meet at the same place, so that should not be an issue.

Players must now pull the Station 2 Backwards Lever, to progress up and diagonally from A6 to B5, then use the same trick to get from B5 to C4. The C4 Junction will need to be triggered a second time, to orient it straight on once more, then from this position players can progress forward to C5, activate its junction at Station 3 and then move diagonally forward one space to the winning position of B6.

Fail/ Special States

Hitting an obstacle

When the cart is activated to move from one stop to another, but is blocked by an obstacle on the track, the cart will visually move forward and collide with the obstacle in Station 1 and then

travel in reverse to the previous stop. A failure/collision sound effect will be heard throughout the room.

Reversing onto no track

When the cart is activated to move from one stop to another, but there is no track to travel across, (most notably when moving backwards towards an unturned junction), the cart should be seen visually in Station 1 to start to progress but stop, then return to the original position. A sound effect like squeaking brakes should be heard throughout the room.

Two tracks leading to the same stop

When encountering an overlapping diagonal and straight track, the cart should always prioritize diagonal movement. It should not be possible, in this layout, for three tracks to connect at the same point.

End State

Time-out

There should be no time-out mechanic for this puzzle. The state of the board should remain consistent throughout a player's experience of the room, and it should be possible to undo any movements made while interacting with the puzzle through further interaction with Stations 2 & 3.

Solve

At solve, meaning when players bring the cart to the frontmost stop (labeled here as B6), the compartment at Station 1 will open providing player rewards. The screens at Stations 1 and 2 should remain visually in that same solve state, displaying the cart at the end stop, and **interacting with the input mechanisms at Stations 2 and 3 should have no further effect.**

Reset

The puzzle should only be reset when resetting the entire room to its base state. No player interaction should reset the puzzle. When escape room employees reset the room, Station 1 should revert to displaying the cart at the backmost start position, and the junctions seen at Stations 1 & 2 should all be set to straight. All electronic/mechanical input points should naturally set to a neutral position after each interaction, independent of puzzle state.