

# Arc 3 Seq 2 | Mini-Game

## Junction Traversal

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### Spectral Trunk Locator

Used to Identify trunks when the wall pinstripe is either damaged or not yet set.

- **HUD Overlay:** [□□ Alpha | □□ Beta | □□ Gamma]
- **Mechanics:**
  - Pinstripe on wall panels (bottom edge) displays trunk color
  - Hold trigger → indicator light glows if selector mode matches wall pinstripe
  - Wrong mode → no light (trial-and-error cycling required to find correct trunk)

## Puzzle Elements

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### Wires:

- 5 wires: **Red (R), Green (G), Blue (B), Black (K), White (W)**
- RGB = true QCD colors
- K & W = decoys to increase cognitive load (don't participate in QCD rules)
- **Wire cladding color** = quark's current color charge (mutates under anti-color pressure)

### Patch Panel (Ports):

- 5×2 grid (2 rows × 5 columns)
- Columns colored: **R, G, B, K, W**
- Each port has:
  1. **Port color** = environmental reference color (mutates under anti-color pressure)
  2. **Steady light** = color of the connection (mutates along with wire and port to preserve color relationships)
  3. **Blinking activity light** = indicates anti-color / external gauge pressure (may be slightly tinted under transformation)

## Puzzle Mechanics

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### 1. Directed Connections:

- The player is instructed to connect a wire to a port (e.g., "Green wire → Red port").
- The player does **not choose freely**; the puzzle is **guided**.

### 2. Color Rules (QCD Analogy):

- RGB = real QCD colors
- Anti-colors: **Cyan = anti-Red, Magenta = anti-Green, Yellow = anti-Blue**
- **Color mutation rules under anti-color pressure:**
  - **Same color + corresponding anti-color → neutral (white)**
  - **Different color + anti-color → rotates to another RGB color**
- KW wires/ports = decoys (no QCD rules)

### 3. Gauge Transformation (Anti-Color Pressure):

- External anti-color pressure causes a **global color rotation**, affecting all RGB elements:
  - **Wire cladding**
  - **Port color**
  - **Steady light**
  - **Blinking light** (indicates anti-color, may shift hue slightly)
- **Relative relationships are preserved** (the sum of color charges at the connection stays consistent)

## Visual Dynamics Under Transformation

- Task: Green wire → Red port
- Steady light = Blue
- Anti-color: Cyan (anti-Red)

Element	Original	Mutated (Anti-Red)
Wire Cladding	Green	Blue
Port Color	Red	White
Steady Light	Blue	Green
Blinking Light	White	Cyan-tinted

## In Game Hints

## QCD Paper Integration

In the alpha junction after junction reconnect the local terminals will be accessible by the player using their sysop access. This is found within the network files. "Color Charge Confinement -

Jeremy, Age 13"

- $\text{Red} + \text{Green} + \text{Blue} = \text{White}$  (neutral)
- $\text{White} - \text{Red} = \text{Cyan}$  (missing Red charge)
- $\text{White} - \text{Green} = \text{Magenta}$  (missing Green charge)
- $\text{White} - \text{Blue} = \text{Yellow}$  (missing Blue charge)

**Role:** Optional pre-Beta pickup → Beta/Gamma subtraction hint

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