

Hot Rod Daycare

3-Relay Power Distribution Board

Instruction Manual

Version 1.1 – November 2025

“We’re not just a garage — we’re a playground for cars.”

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1. Overview

The Hot Rod Daycare 3-Relay Power Distribution Board provides a clean, reliable way to manage and protect up to three switched 12V accessories such as fuel pumps, fans, lighting, or solenoids.

Each board is designed, built, and tested by hand in Winfield, Kansas using high-current automotive components for long life and consistent performance.

Features:

- 3 independent 40A relays with fused outputs
- Constant fused 12V output (CH4) for accessory power
- LED indicators for blown fuses
- Ground-triggered relay activation
- Total board capacity: 100A
- Compact design, built for harsh environments

2. Specifications

Parameter	Description
Input Voltage	12 V DC
Relay Capacity	40 A per circuit (CH1–CH3)
Total Board Capacity	100 A maximum
Fuse Rating	≤ 40 A per circuit
Trigger Input	Ground / -12 V
LED Indicator	Fuse-blown indicator (only active when circuit powered)
Output Channels	CH1–CH3 (relay controlled), CH4 (constant fused +12V)
Ground Test	“G” terminal for testing and troubleshooting

3. Wiring & Connections

Each relay channel (1–3) corresponds directly between the input and output terminal strips.

Input Terminal Strip: [1] [2] [3] [G]

Output Terminal Strip: [1] [2] [3] [P]

Terminals 1–3 correspond to relays 1–3. The G terminal provides a ground reference. The P terminal is a constant fused +12V output.

4. LED Behavior

Condition	LED State	Meaning
Relay OFF	OFF	No power to circuit (LED inactive even if fuse blown)
Relay ON, fuse good	OFF	Circuit operating normally
Relay ON, fuse blown	ON	Fuse has failed; circuit open, no load power

Note: Fuse-blown indicators only function when the circuit is energized (relay ON). LEDs remain off during inactive states.

5. Fuse & Safety Notes

- Use the proper fuse size for the accessory load (≤ 40 A per circuit).
- Do not exceed 100 A total board current.
- Use appropriate wire gauge (#10–#12 AWG typical).
- Mount to a flat, dry surface 6 inches away from passengers.
- Avoid water or chemical exposure.
- Protect from vibration in high-performance environments.

6. Testing & Troubleshooting


1. Apply +12V and ground to main terminals.
2. Ground each trigger (1-3) to activate the corresponding relay.
3. Verify load operation and LED behavior.
4. If no relay click: check fuse, trigger, and ground connections.
5. For quick checks, use the 'G' terminal to manually ground test inputs.


7. About Hot Rod Daycare


Hot Rod Daycare is a Kansas-based performance and electrical solutions brand specializing in custom wiring, relay systems, and innovative garage-built products. Each product is designed, assembled, and tested by hand — for builders who demand reliability, performance, and craftsmanship.

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8. Support & Contact

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