TAMIYA 58693

TAMIYA 1/10 R/C TA08 PRO Chassis Kit Instruction Manual

Model: 58693

1. Introduction

Thank you for purchasing the TAMIYA 1/10 R/C TA08 PRO Chassis Kit. This kit is designed for enthusiasts seeking a high-performance 2 belt-driven 4WD touring car chassis. This manual provides essential information for the assembly, setup, operation, and maintenance of your TA08 PRO chassis. Please read this manual thoroughly before beginning assembly or operation to ensure correct usage and to maximize the performance and longevity of your model.

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the product:

- This product is not a toy. It is intended for experienced R/C hobbyists.
- Keep small parts out of reach of children to prevent choking hazards.
- Always use appropriate tools and follow assembly steps carefully.
- Ensure all electronic components (motor, ESC, receiver, battery) are correctly connected and insulated.
- Operate the R/C car in open, safe areas away from people, pets, and obstacles.
- Do not operate in wet conditions or near water to avoid damage to electronics.
- Always disconnect the battery when not in use or during maintenance.

3. Package Contents

The TAMIYA TA08 PRO Chassis Kit includes the following main components:

- TA08 PRO Chassis Frame (Stepped-V shaped main chassis)
- 2 Belt-Driven 4WD System components
- TRF420 Oil-Filled Gear Differentials
- Steel TA07 Differential Joint Cups
- A-arm Suspension Arms
- Super Short Big Bore (SSBB) Shock Dampers
- Universal Drive Shafts

- Full Ball Bearings
- 10-spoke wheels (Gunmetal color)
- Assembly hardware and small parts

Note: Body, motor, tires, R/C equipment (transmitter, receiver, servo, ESC), and battery are **not included** in this kit and must be purchased separately.

Figure 3.1: Assembled TA08 PRO Chassis Kit. Note that the body, motor, tires, R/C equipment, and battery are not included. 10-spoke wheels (gunmetal) are included.

4. Assembly and Setup

4.1 Chassis Layout and Rigidity

The TA08 PRO features a unique chassis layout that eliminates the need for an upper deck, balancing weight and rigidity. The battery pack and servo are positioned at a slight angle (approximately 10 degrees) to minimize surface contact during cornering and optimize weight distribution. This design contributes to appropriate pitching (longitudinal) and rolling (lateral) rigidity.

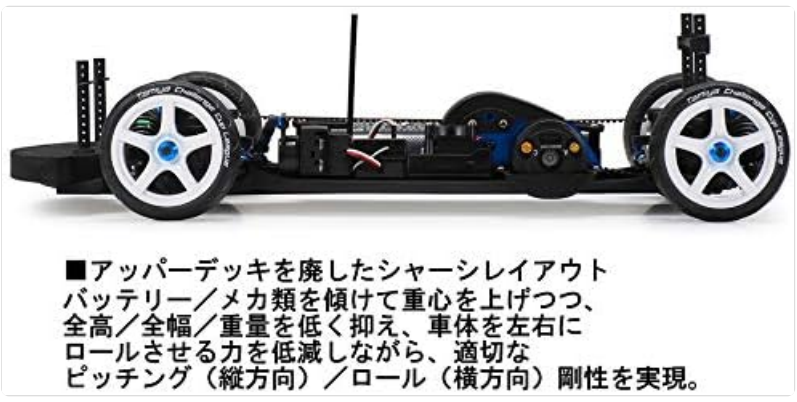

Figure 4.1: Side view of the chassis layout. The design, without an upper deck, allows for tilting of battery and mechanical components to optimize the center of gravity, reducing overall height, width, and weight, while achieving balanced pitching and rolling rigidity.

4.2 V-Shaped Carbon Fiber Reinforced Resin Chassis

The chassis utilizes a V-shaped bottom and carbon fiber reinforced resin construction. This ensures high rigidity even without an upper deck. The balance of longitudinal (pitching) and lateral (rolling) rigidity has been optimized for performance. The front part of the rear suspension is designed to mount the suspension bushes directly to the chassis.

Figure 4.2: Top-down view of the V-shaped carbon fiber reinforced resin chassis. The V-shape and material ensure rigidity and optimized pitching and rolling balance.

4.3 Optimized Weight Balance

Mounting the battery and R/C equipment in a V-shape optimizes the weight balance. This design contributes to a low overall height, width, and weight, enabling high driving performance on relatively low-grip surfaces, especially within Tamiya Challenge Cup regulations.

Figure 4.3: Top view illustrating the V-shaped placement of the battery and R/C equipment for optimal weight balance.

4.4 Slim Chassis and Bumper Design

The slim main chassis and distinctive bumper shape reduce interference with the road surface during rolling. The urethane bumper features strategically placed holes, and its shape is designed to facilitate airflow between the tires and bumper, further enhancing driving stability.

Figure 4.4: Bottom view highlighting the slim chassis and the 87mm width, along with the specially designed urethane bumper for improved stability.

4.5 Spur Gear Placement

The spur gear is strategically positioned in front of the motor. This minimizes the difference in front and rear belt lengths, resulting in stable machine behavior. A shorter belt length also reduces resonance even with looser tension, thereby reducing drive loss.

Figure 4.5: Side view showing the spur gear positioned in front of the motor, optimizing belt length and reducing drive loss.

4.6 New Suspension System

The new suspension system enhances rigidity and maximizes tire grip. It features A-type upper arms supported by ball joints. Compared to conventional upper arm suspension types, this design allows for easier load transfer to the tires, enabling solid tire grip even at Tamiya Challenge speeds and on relatively low-grip surfaces.

Figure 4.6: Detail of the front suspension, showcasing the new design with A-type upper arms and SSBB dampers for enhanced grip.

4.7 Rear Suspension with Toe Control

The rear suspension is equipped with a toe control function. The suspension mount is a hanging type, which increases rear rigidity and improves rear grip and driving stability. Both front and rear SSBB (Super Short Big Bore) dampers are utilized. The toe control function specifically enhances traction by allowing the suspension to sink during cornering.

Figure 4.7: Detail of the rear suspension, featuring the toe control function and SSBB dampers for improved stability and traction.

4.8 Cable Storage Box

A compact cable storage box is included to neatly organize the wiring for the servo, speed controller, and receiver. Keeping the R/C equipment area tidy helps prevent accidental problems and ensures a clean setup.

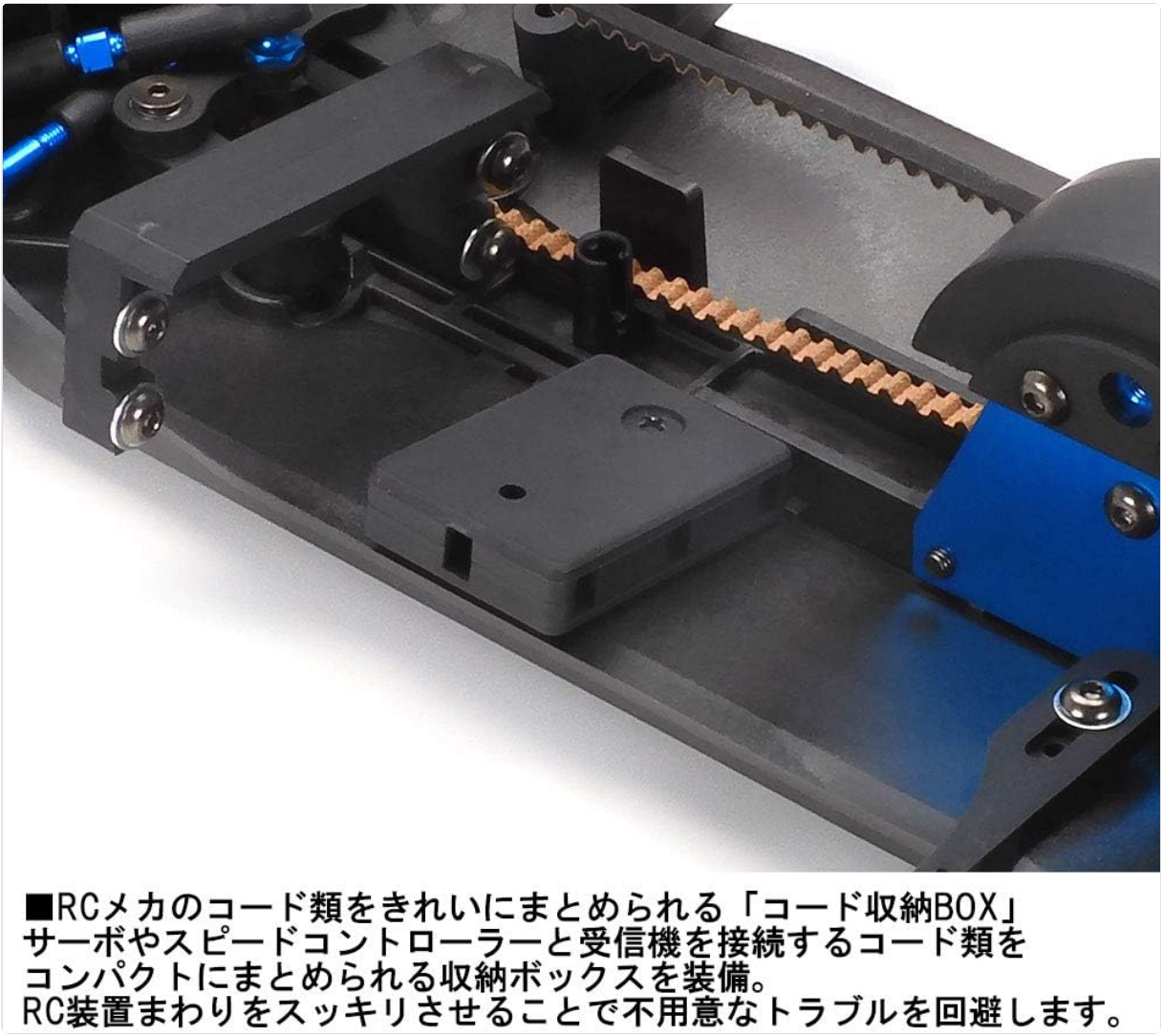

Figure 4.8: Close-up of the cable storage box, designed to keep R/C wiring organized and prevent issues.

5. Operating Instructions

Once the chassis is fully assembled and all R/C equipment (motor, ESC, servo, receiver, battery, and transmitter) is installed and configured according to their respective manuals, you can begin operation. Ensure the battery is fully charged and the transmitter is properly bound to the receiver.

5.1 Pre-Run Checks

- Verify all screws are tightened and components are securely attached.
- Check steering and throttle response from the transmitter.
- Ensure wheels spin freely and suspension operates smoothly.
- Confirm battery is fully charged and securely installed.

5.2 Driving Tips

- Start with gentle throttle inputs to get a feel for the car's response.
- Practice steering in wide, open spaces before attempting tighter turns.
- Adjust camber and caster angles using turnbuckle shafts and lower arm spacers to fine-tune handling characteristics for different track conditions.
- Experiment with rotating body mounts (180 degrees) to switch between standard and 2mm advanced body positions, which allows for changing the car's balance with various bodies.

5.3 Relevant Videos

No official TAMIYA TA08 PRO assembly or operation videos were provided by the seller in the product data. Please refer to the detailed instruction manual included with your kit for step-by-step assembly and setup guides.

6. Maintenance

Regular maintenance is crucial for the performance and longevity of your TA08 PRO chassis.

- **After Each Run:** Clean the chassis of dirt and debris. Inspect for any loose screws or damaged parts.
- **Periodically:** Check the condition of the drive belts for wear or damage. Lubricate moving parts as recommended in the kit's detailed manual.
- **Shock Dampers:** Inspect SSBB shock dampers for leaks and ensure smooth operation. Refill with appropriate shock oil as needed.
- **Bearings:** Clean and lubricate ball bearings regularly to ensure smooth rotation and reduce friction.
- **Differentials:** Check the TRF420 oil-filled gear differentials for smooth operation and proper fluid levels.

7. Troubleshooting

This section addresses common issues you might encounter:

Problem	Possible Cause	Solution
Car does not respond to controls	Low battery in car or transmitter; loose wiring; un-bound transmitter/receiver	Charge batteries; check all connections; re-bind transmitter and receiver
Poor handling/traction	Incorrect suspension setup; worn tires; differential issues	Adjust camber/caster; replace tires; inspect and service differentials
Unusual noise during operation	Debris in drivetrain; worn gears/bearings; loose components	Clean drivetrain; inspect and replace worn parts; tighten all screws
Reduced speed/power	Motor/ESC overheating; low battery; excessive friction	Allow components to cool; charge battery; check bearings and drivetrain for friction

8. Specifications

Feature	Detail
Model Number	58693
Scale	1/10
Drive Type	2 Belt-Driven 4WD
Chassis Type	Stepped-V shaped main chassis, carbon fiber reinforced resin
Differentials	TRF420 Oil-Filled Gear Differentials with Steel TA07 Joint Cups
Dampers	Super Short Big Bore (SSBB) Shock Dampers
Suspension	A-arm suspension with adjustable camber and caster, rear toe control function
Bearings	Full Ball Bearings
Product Dimensions	18.3 x 8.5 x 5.2 inches (approximate, assembled)

Feature	Detail
Item Weight	1 pound (chassis kit only)

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your TAMIYA product or visit the official TAMIYA website. As this is a kit, warranty typically covers manufacturing defects of individual parts. Damage due to assembly errors, misuse, or normal wear and tear is generally not covered. For further assistance, please contact TAMIYA customer service or your authorized TAMIYA dealer.