Helidirect GF-TT24

Helidirect G-Force TT24 1/24 Scale RC Drift Car Chassis Instruction Manual

Model: GF-TT24

1. Introduction

The Helidirect G-Force TT24 is a high-precision 1/24 scale chassis system designed for the RC racing class. This advanced platform offers extensive configurability and consistent performance, providing competitive drivers and technical tuners with a robust framework to optimize handling characteristics, mechanical balance, and component integration. Manufactured with full-aluminum components and a 1.5mm carbon-fiber chassis plate, the TT24 ensures exceptional rigidity, durability, and lightweight performance.

2. Setup

2.1 Unboxing and Initial Inspection

Carefully unpack all components from the packaging. Verify that all parts listed in the product's packing list are present and undamaged. Inspect the chassis and components for any signs of shipping damage.

2.2 Component Overview

The TT24 chassis is designed for modularity and precision. Key components include:

- Full Aluminum Architecture: High-strength aluminum elements for structural integrity.
- 1.5mm Carbon-Fiber Main Plate: Provides torsional stiffness and minimal weight.
- Double Front Suspension Arms: Enhances suspension articulation and reduces vibration.
- Rear Solid Axle: Reinforced for stability and durability.
- Magnetic Body Mounting System: For fast and reliable body attachment.

2.3 Assembly and Initial Adjustments

The TT24 chassis comes pre-assembled, but fine-tuning and installation of electronics are required. Refer

to the detailed assembly guide provided with your product for step-by-step instructions on installing your chosen electronics (servos, motor, battery) and making initial adjustments.

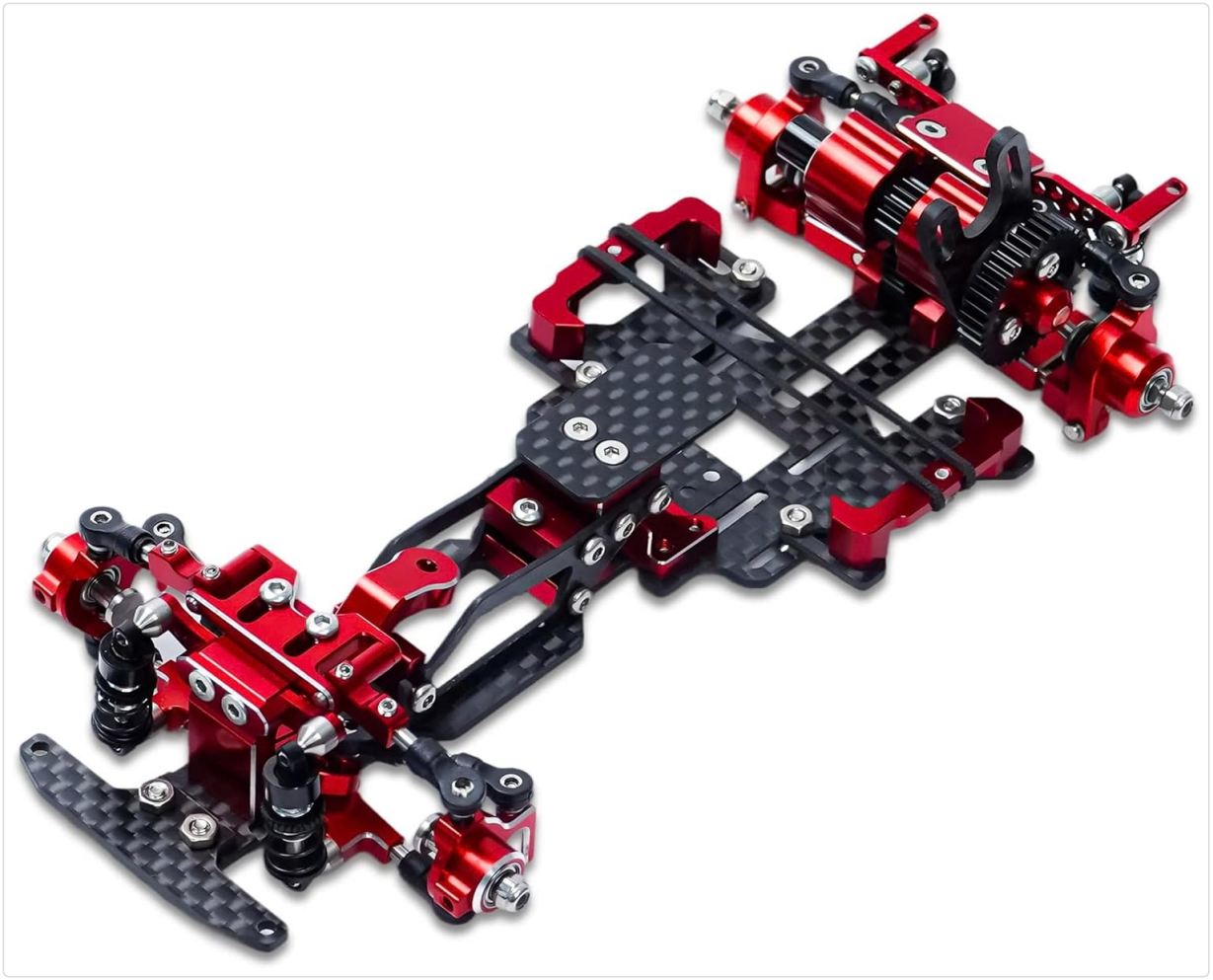

Image: Helidirect G-Force TT24 Chassis, top-down view, showcasing the full CNC aluminum and carbon fiber construction.

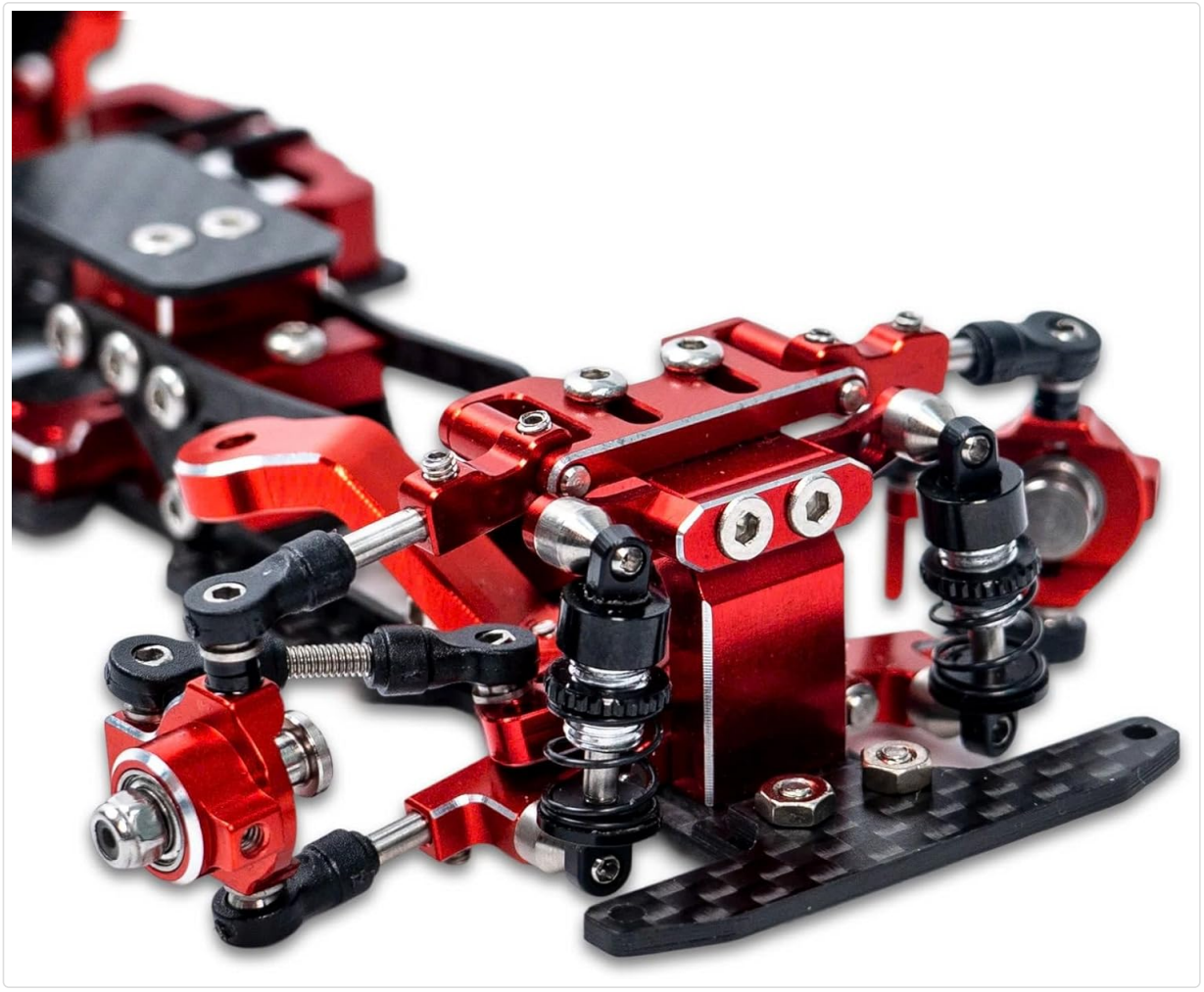

Image: Close-up of the front suspension system on the Helidirect G-Force TT24 Chassis, highlighting the double front suspension arms and adjustable components.

Video: Overview of the G-Force TT24 1/24 Full CNC Aluminum drift chassis, demonstrating its features and construction.

Chassis Geometry Adjustability:

- **Wheelbase:** Adjustable from 98mm to 120mm for tailored handling dynamics.
- **Width:** Fine-tunable between 72mm and 80mm to optimize track stance and cornering stability.
- **Caster & Camber Adjustment:** Precision control of steering and tire contact angle to enhance grip and responsiveness.
- **Ackermann Geometry:** Four adjustable positions to refine steering characteristics and reduce understeer or oversteer tendencies.

Suspension & Steering Systems:

- **Servo Compatibility:** Supports all thick-format 1/28 servos, including OMG 03DF and AGFRC A11.
- **Adjustable Servo Angle:** ±15° of tuning capability to optimize linkage alignment and torque response.

Video: Demonstrates the AGFRC GY04M Gyro and A11CLS Servo, compatible with 1/28 scale chassis like the Atomic DRZ2, showcasing precision steering and control.

Drivetrain & Motor Configuration:

- **Adjustable Motor Angle:** 60° of adjustability for precise tuning of motor position to balance torque delivery and weight distribution.
- **Reversible Motor Setup:** Backend is reversible for rapid transition to a rear-motor configuration.

- **Dual-Side Motor Mounting:** Allows left or right motor placement based on preferred handling bias.

Battery Management System:

- **Universal Battery Compatibility:** Accommodates both 1/28 and 1/24 scale battery sizes.
- **Adjustable Battery Tray:** Provides customizable positioning for center-of-gravity optimization.

3. Operating the Chassis

Once assembled and electronics are installed, ensure all connections are secure and the battery is fully charged. Power on your remote control first, then the chassis. Perform a range check to ensure proper signal reception. Test steering and throttle responses before operating at full speed.

Video: Product overview of the Xbility 1 chassis, highlighting its innovative design for precision and performance in RC applications.

3.1 Basic Controls

Familiarize yourself with the steering and throttle inputs on your remote control. Gentle inputs are recommended for initial operation, especially when performing drift maneuvers.

3.2 Advanced Tuning

The TT24 chassis offers numerous tuning options to adapt to different track conditions and driving styles. Experiment with the adjustable wheelbase, width, caster, camber, Ackermann geometry, servo angle, and motor position to find your optimal setup. Document your changes to understand their impact on performance.

4. Maintenance

Regular maintenance is crucial for the longevity and performance of your G-Force TT24 chassis.

4.1 Cleaning

After each use, especially on dusty or dirty surfaces, clean the chassis thoroughly. Use a soft brush or compressed air to remove debris from moving parts, gears, and electronics. Avoid using harsh chemicals that could damage materials.

4.2 Lubrication

Periodically lubricate moving parts such as bearings, universal joints, and gear meshes with appropriate RC-grade lubricants. This reduces friction and wear, ensuring smooth operation.

4.3 Inspection

Regularly inspect all screws, nuts, and fasteners for tightness. Check for any worn or damaged parts, including suspension components, drivetrain elements, and wiring. Replace any damaged parts immediately to prevent further issues.

5. Troubleshooting

This section addresses common issues you might encounter with your TT24 chassis.

5.1 Poor Steering Response

- **Check Servo:** Ensure the servo is properly connected and functioning. Verify servo horn is securely attached.
- **Steering Linkages:** Inspect steering linkages for binding or looseness. Adjust as necessary.
- **Caster/Camber:** Incorrect caster or camber settings can affect steering. Refer to tuning guidelines for adjustments.

5.2 Drivetrain Issues

- **Loose Wheels:** Ensure wheel nuts are tightened correctly.
- **Gear Mesh:** Check the motor pinion and spur gear mesh. Adjust to prevent excessive wear or binding.
- **Bearings:** Worn or locked bearings can cause drag. Inspect and replace if necessary.

5.3 Power Problems

- **Battery:** Ensure the battery is fully charged and properly connected.
- **ESC/Motor:** Check for loose wiring or damaged components in the Electronic Speed Controller (ESC) and motor.

6. Specifications

Feature	Specification
Model Number	GF-TT24
Scale	1/24
Chassis Material	Full CNC Aluminum, 1.5mm Carbon-Fiber Main Plate
Wheelbase Adjustment	98mm to 120mm
Width Adjustment	72mm to 80mm
Servo Compatibility	Thick-format 1/28 servos (e.g., OMG 03DF, AGFRC A11)
Motor Angle Adjustment	60°
Battery Compatibility	1/28 and 1/24 scale batteries
Product Dimensions	5 x 5 x 5 inches

7. Warranty and Support

For warranty information and technical support, please refer to the official Helidirect website or contact their customer service directly. Keep your proof of purchase for any warranty claims.