DUMBORC P6DCG

DUMBORC P6DCG RC Receiver User Manual

6-Channel Receiver with Gyroscope and LED Simulation System

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your DUMBORC P6DCG 6-channel RC receiver. The P6DCG receiver integrates a gyroscope and a comprehensive LED simulation system, enhancing the realism and control of your RC models. It is designed for use with DUMBORC X4, X5, X6, X6PM, X10P-350, and DDF-350 series transmitters.

Image 1: Two DUMBORC P6DCG RC receivers, showcasing their compact design and antenna wires.

2. Key Features

- **6-Channel Operation:** Provides six independent channels for various control functions.
- **Integrated Gyroscope:** Enhances stability and control, particularly useful for high-speed or challenging terrain applications.
- **Linkage LED Simulation System:** Features an integrated light group that simulates realistic vehicle lighting, including steering, headlights, brake lights, reversing lights, atmosphere lights, and emergency lights. This system minimizes wiring complexity.
- **Anti-Polarity Protection:** Designed to prevent damage to the receiver from incorrect power polarity connections.
- **Mixed Control Mode Support:** Ensures full functionality of the light group even when operating in mixed control modes.
- **Broad Compatibility:** Fully compatible with DUMBORC X4, X5, X6, X6PM, X10P-350, and DDF-350 series transmitters.
- **Pluggable Extension Cord Option:** Allows for convenient battery replacement or model maintenance without extensive disassembly.

3. Specifications

Specification	Value
Brand	DUMBORC
Model	P6DCG
Channels	6CH
Function	Gyroscope, LED Simulation
Voltage Range	4.8-10V DC
Dimensions (L x W x H)	35 x 21 x 14 mm (1.37 x 0.83 x 0.5 inches)
Weight	9g (0.32 ounces)
Material	Component Material

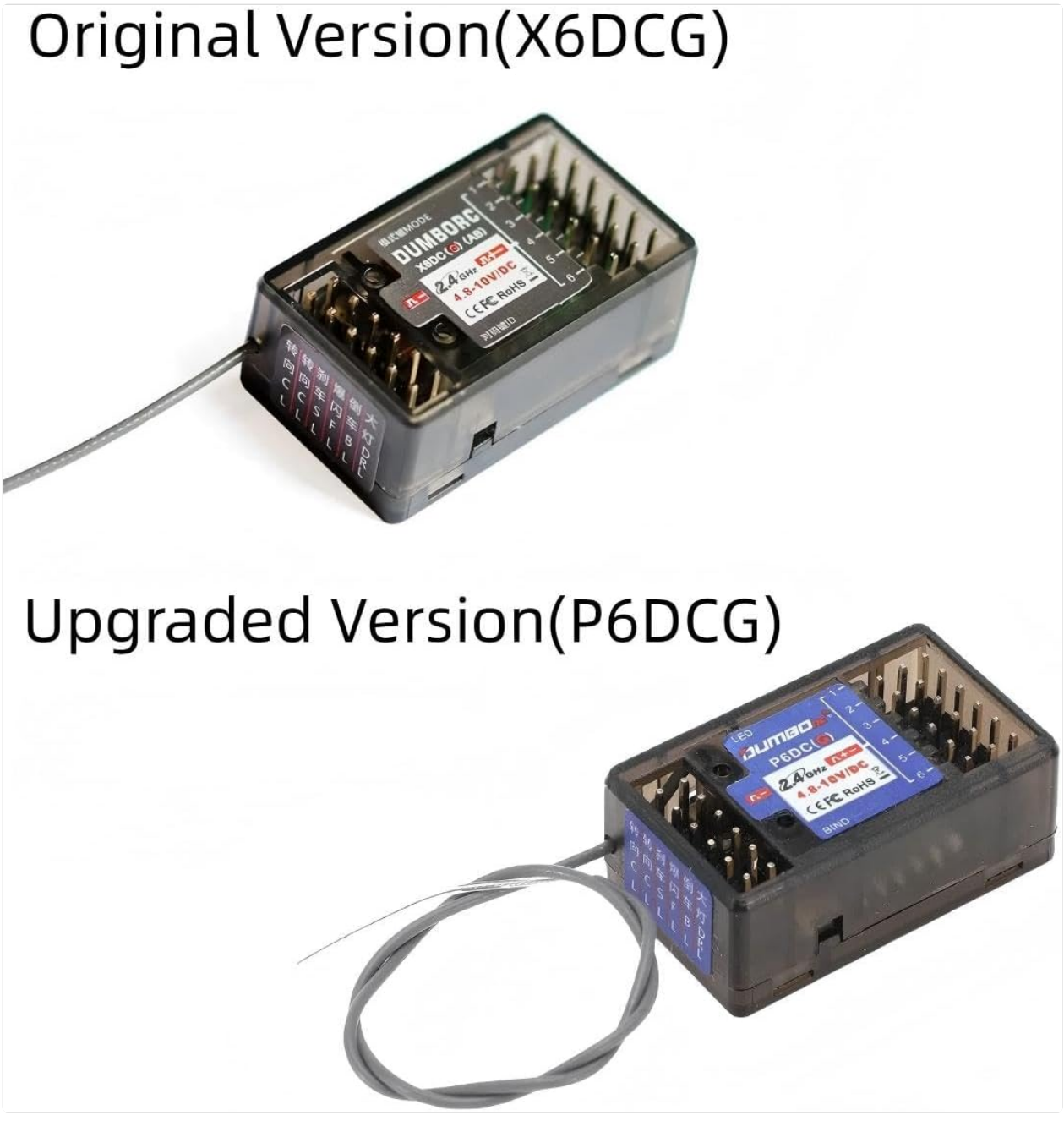

Image 2: Comparison illustrating the DUMBORC X6DCG (Original Version) and the DUMBORC P6DCG (Upgraded Version) receivers.

4. Setup Instructions

4.1. Binding the Receiver to the Transmitter

1. Ensure your DUMBORC transmitter (X4/X5/X6/X6PM/X10P-350/DDF-350) is powered off.
2. Connect a bind plug (not included, typically comes with the transmitter) to the 'BIND' port on the P6DCG receiver.
3. Apply power to the receiver (4.8-10V DC). The LED on the receiver should start flashing rapidly, indicating it is in binding mode.
4. While holding the bind button on your transmitter (refer to your transmitter's manual for exact location), power on the transmitter.
5. The LED on the receiver should turn solid, indicating a successful bind.
6. Power off both the receiver and transmitter. Remove the bind plug from the receiver.
7. Power on the transmitter first, then the receiver. The receiver LED should be solid, confirming the connection.

4.2. Connecting Servos and ESC

- Connect your steering servo to Channel 1.
- Connect your Electronic Speed Controller (ESC) to Channel 2.
- Additional servos or accessories can be connected to Channels 3-6 as required by your model.

4.3. Connecting the LED Simulation System

The P6DCG receiver features dedicated ports for its integrated LED simulation system. Connect your model's LED lights to the corresponding ports on the receiver. Refer to the diagram below for port identification:

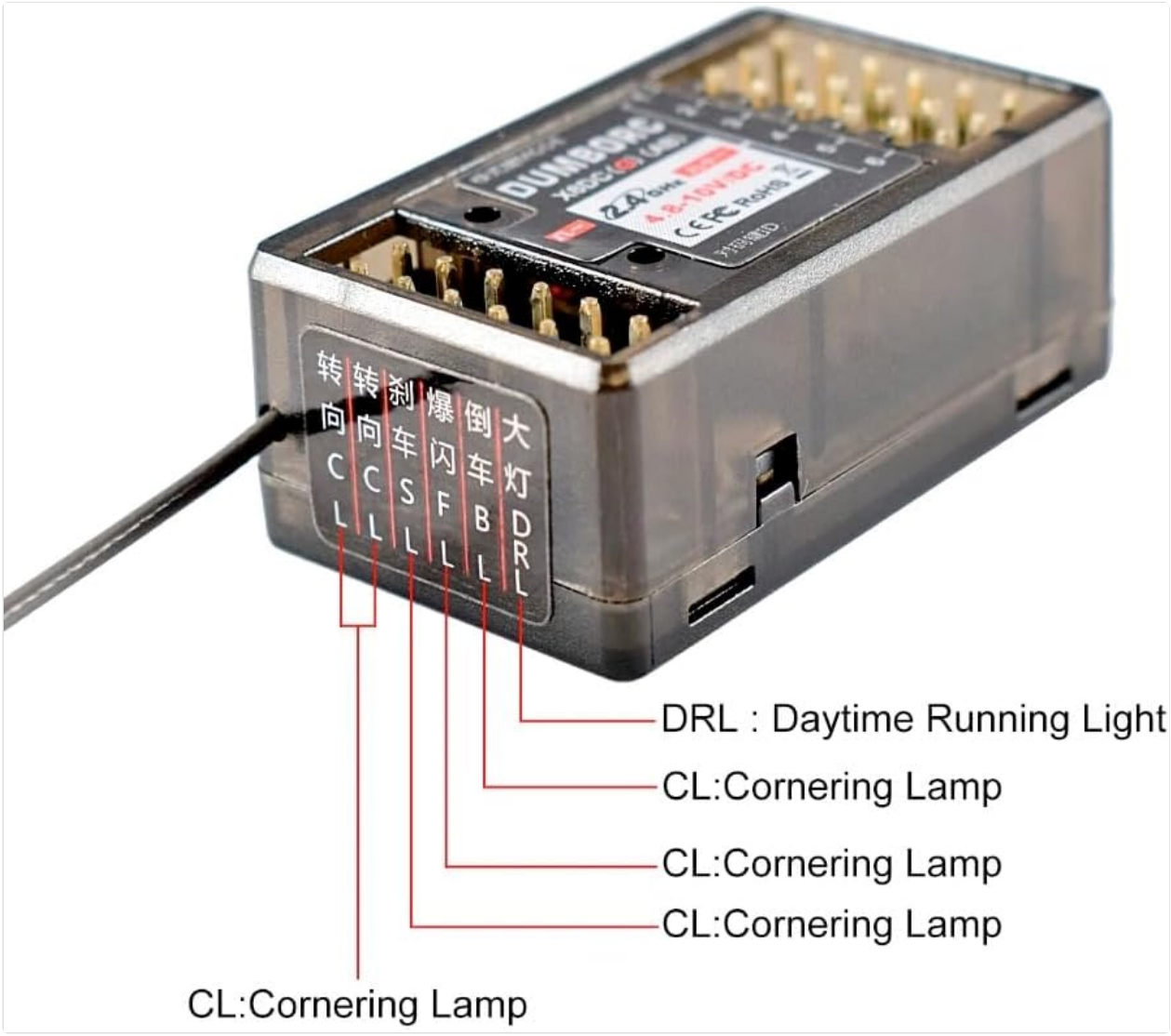

Image 3: Close-up view of the DUMBORC P6DCG receiver, highlighting the labeled ports for Daytime Running Lights (DRL) and Cornering Lamps (CL).

- **DRL:** Daytime Running Light
- **CL:** Cornering Lamp (multiple ports for various cornering lights)
- The system supports linkage simulation for steering, headlights, brake, reversing, atmosphere, and emergency lights. Ensure your LED wiring matches the receiver's output for correct functionality.

4.4. Gyroscope Setup

The integrated gyroscope helps stabilize your RC vehicle. Its sensitivity can typically be adjusted via your DUMBORC transmitter. Consult your transmitter's manual for specific instructions on gyroscope calibration and sensitivity settings. Ensure the receiver is mounted securely and oriented correctly within your model for optimal gyro performance.

5. Operating Instructions

5.1. Basic Control

After successful binding and setup, operate your RC model using your DUMBORC transmitter. The P6DCG receiver will translate your transmitter inputs into control signals for your servos, ESC, and the integrated LED system.

5.2. LED Simulation System Operation

The linkage LED simulation system automatically activates lights based on your control inputs:

- **Steering:** Turn signals will activate with steering input.
- **Brake:** Brake lights will illuminate when braking.
- **Reverse:** Reversing lights will turn on when the vehicle is in reverse.
- **Headlights/Atmosphere Lights:** These can typically be controlled via a dedicated switch or channel on your transmitter, depending on your transmitter's configuration.
- **Emergency Lights:** May be activated via a specific channel or button on your transmitter.

The system supports mixed control modes, ensuring that light functions operate correctly even when complex control schemes are in use.

5.3. Gyroscope Functionality

The gyroscope actively assists in maintaining the vehicle's stability, especially during turns or on uneven surfaces. It helps to counteract unwanted drifts and provides a smoother driving experience. Adjust the gyro sensitivity on your transmitter to match your driving style and model characteristics.

6. Maintenance

- **Keep Clean:** Regularly inspect the receiver for dirt, dust, or debris. Use a soft, dry brush or compressed air to clean it.
- **Avoid Moisture:** Protect the receiver from water and excessive humidity. If it gets wet, disconnect power immediately and allow it to dry completely before re-applying power.
- **Secure Mounting:** Ensure the receiver is securely mounted within your model to prevent vibrations from affecting its performance, especially the gyroscope.
- **Cable Management:** Ensure all wires are neatly routed and secured to prevent them from interfering with moving parts or becoming damaged.
- **Antenna Placement:** Position the antenna wire away from metal parts and other electronics to maximize signal range and reliability. Do not cut or modify the antenna wire.

7. Troubleshooting

- **Receiver Not Binding:**
  - Ensure the bind plug is correctly inserted into the 'BIND' port.
  - Verify the receiver is receiving adequate power (4.8-10V).
  - Confirm the transmitter is in binding mode and is compatible with the P6DCG receiver.
  - Try repeating the binding process carefully.
- **No Control/Intermittent Control:**
  - Check all connections between the receiver, servos, and ESC.
  - Ensure the receiver and transmitter are properly bound.
  - Verify the transmitter batteries are charged.
  - Check for potential signal interference (e.g., from other 2.4GHz devices).
- **LED Lights Not Functioning:**
  - Confirm LED lights are correctly plugged into the designated ports on the receiver.
  - Check for damaged LED wires or faulty LED units.

- Ensure the power supply to the receiver is sufficient for both receiver and LED operation.

- **Gyroscope Not Responding/Incorrectly Functioning:**
  - Verify the receiver is securely mounted and not experiencing excessive vibration.
  - Check gyroscope settings on your transmitter.
  - Ensure the receiver is oriented correctly within the model.

8. Warranty and Support

For warranty information, please refer to the terms and conditions provided by your retailer at the time of purchase. For technical support or further assistance, please contact DUMBORC customer service or visit the official DUMBORC website. You can find more information and products at the DUMBORC Store.