

## DUMBORC G03

# DUMBORC G03 RC Mini Gyroscope Instruction Manual

Model: G03

## INTRODUCTION

The DUMBORC G03 RC Mini Gyroscope is a compact and lightweight device designed to enhance the stability and control of your RC cars, especially racing cars and small vehicles. This manual provides detailed instructions for its installation, setup, operation, and maintenance to ensure optimal performance. With its mini size of 20mm x 15.5mm x 8.8mm and a weight of only 4.2g, the G03 gyroscope can be easily mounted on various types of RC vehicles. It features Gyro Gain Adjustment, Priority Control Adjuster (PCA), and Anti Glitching System (AGS) to provide precise control and stability.

## SAFETY INFORMATION

No specific safety information is provided for this product. Always handle electronic components with care and ensure proper insulation to prevent short circuits. Keep the device away from water and extreme temperatures. Adult supervision is recommended for users under 14 years of age.

## PRODUCT OVERVIEW

The DUMBORC G03 RC Mini Gyroscope is engineered for precision and ease of use. It integrates advanced features to improve the handling characteristics of your RC vehicle.

### Key Features:

- **Mini Size:** Dimensions of 20mm x 15.5mm x 8.8mm, making it suitable for various RC car models.
- **Lightweight:** Weighs only 4.2g, minimizing impact on vehicle performance.
- **Gyro Gain Adjustment:** Allows fine-tuning of the gyroscope's sensitivity.
- **Priority Control Adjuster (PCA):** Adjusts the mixing rate of steering signal and gyro effect signal.

- **Anti Glitching System (AGS):** Used to adjust the speed of wheel return.
- **Easy Installation:** Designed for straightforward setup and compatibility with X6PM transmitters.

### What's in the Box:

- G03 RC Mini Gyroscope
- Connection Cables
- Mounting Tape
- Small Screwdriver



Image: The DUMBORC G03 RC Mini Gyroscope package contents, showing the red gyroscope unit, various connection cables, double-sided mounting tape, and a small blue screwdriver for adjustments.

# Ultra-small Size & Lightweight

DUMBORC gyro with a 20.0×15.5×8.8mm size and a weight of 4.2g. It can be easily mounted on all types of RC vehicles.



Image: A visual representation of the G03 gyroscope's compact size, held in a hand, alongside a diagram illustrating its dimensions: 20mm length, 15.5mm width, and 8.8mm height.

## SETUP

Follow these steps for the initial setup and calibration of your DUMBORC G03 Gyroscope.

# Initial setting:

## 1. Gyro calibration

When you start using the gyroscope, you must do the initial setup. Before turning on G03, make sure that the car is in a stationary state. G03 starts immediately after being switched on. The gyroscope light will flash alternately red and green, and when the gyroscope is calibrated, it will be steady red.

## 2. Setting for end point

Limit to Maximum movement of the servo to protect from mechanical damage.

①. Turn on the transmitter and receiver;

②. Long press the setting button for 2 seconds, and the red and green lights will flash quickly to enter the EPA setting;

③. When the directional handwheel (CH1) is screwed to the right to the maximum, the red light will be on for 2 seconds; when the handwheel (CH1) is screwed to the left to the maximum, the red light will be on for 2 seconds. At this time, the EPA setting of the handwheel (CH1) is completed. If you do not adjust the gyroscope sensitivity through the remote control channel, press the setting button to complete the EPA setting. Otherwise, continue with the following operations.

④. If you want to adjust the gyroscope sensitivity through the remote control, continue to set the EPA value for setting the gyroscope channel on the remote control after completing the EPA setting of the direction handwheel (CH1) in the previous step. Take CH6 as an example. If you screw CH6 to the minimum value, the red light will be on for 2 seconds. If you screw CH6 to the maximum value, the red light will be on for 2 seconds.

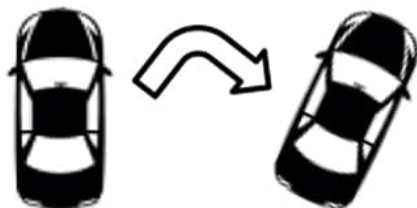
At this time, the red and green lights continue to flash alternately. Press the setting button to save the Settings, and the red light will keep on.

\*When the lights do not appear in the above operation, check the wire connections.

## 3. Set Up reverse

This is use for changing the direction of the Gyro effect. If Gyro effect direction is not correct, please change the setting as informed below. If Gyro effect is correct, you do not need to follow these steps.

①. After turning on the transmitter and receiver, check the movement of steering.



②. Press the gyroscope setting button briefly, the LED light will flash, and the direction switch is successful.

\* End point setting and reverse setting need only to be performed only once. These settings are saved to memory of the unit. If you change the transmitter, receiver or servo, please do these settings again.

Image: A detailed diagram outlining the initial setup process for the G03 gyroscope, covering gyro calibration, setting end points for the servo, and configuring reverse direction.

## 1. Gyro Calibration

Before turning on the G03, ensure your RC car is in a stationary position. The gyroscope light will flash alternately red and green. Once calibrated, the light will become steady red.

## 2. Setting for End Point

This limits the maximum movement of the servo to protect it from mechanical damage.

1. Turn on the transmitter and receiver.
2. Long press the setting button for 2 seconds. The red and green lights will flash quickly to enter the EPA setting.
3. When the directional handwheel (CH1) is screwed to the right to the maximum, the red light will be on for 2 seconds. When the handwheel (CH1) is screwed to the left to the maximum, the red light will be on for 2 seconds. At this time, the EPA setting of the handwheel (CH1) is completed. If you do not adjust the gyroscope sensitivity through the remote control channel, press the setting button to complete the EPA setting. Otherwise, continue with the following operations.
4. If you want to adjust the gyroscope sensitivity through the remote control, continue to set the EPA value for setting the gyroscope channel on the remote control after completing the EPA setting of the direction handwheel (CH1) in the previous step. Take CH6 as an example. If you screw CH6 to the minimum value, the red light will be on for 2 seconds. If you screw CH6 to the maximum value, the red light will be on for 2 seconds.

At this time, the red and green lights continue to flash alternately. Press the setting button to save the settings, and the red light will keep on.

**Note:** If the lights do not appear as described, check the wire connections.

## 3. Set Up Reverse

This is used for changing the direction of the Gyro effect. If the Gyro effect direction is not correct, please change the setting as informed below. If the Gyro effect is correct, you do not need to follow these steps.

1. After turning on the transmitter and receiver, check the movement of steering.




Function Model	Picture (red example)	Color (4 type)	EPA (Trip Setting)	PCA (Priority Control Adjuster)	AGS (Anti Glitching System)	GAIN (Gyro Gain Adjustment)
G01		√	√	×	×	√
G02		√	√	√	×	√
G03		√	√	√	√	√

Image: A visual guide demonstrating the correct and incorrect steering responses for an RC car, crucial for setting up the gyroscope's reverse function.

2. Press the gyroscope setting button briefly. The LED light will flash, and the direction switch is successful.

**Note:** End point setting and reverse setting need only to be performed once. These settings are saved to the memory of the unit. If you change the transmitter, receiver, or servo, please do these settings again.

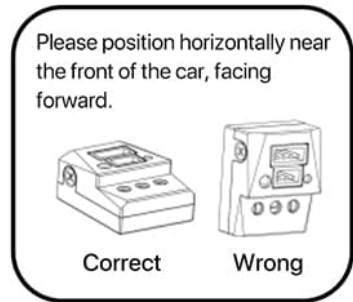
## OPERATING

Understand the functions and connections of your DUMBORC G03 Gyroscope for effective operation.

### Function and Operation of this product:

1. The 4P cable is connected to the 4P seat of the gyroscope, and the other end of the 3P cable is connected to the CH1 of the receiver (ST:Steering), and a single wire CH3 is connected to the CH3 of the receiver or other corresponding channels.

2. Set button



LED:  
No signal: light blinks slowly  
Signal: the red light is always on

3. Connect to Steering Servo.



#### Function 1. PCA (Priority Control Adjuster)

[ The Function ]

You can adjust mixing rate of the steering signal and Gyro effect signal.

[The operating method ]

Gyro priority is increase when turn to left by PCA VR,Otherwise reduce the priority. Please start VR position from center and adjust to your position.

\*G01 does not have this feature.

#### Function 2. AGS (Anti Glitching System)

[ The Function ]

Used to adjust the speed of the wheel slow back.

[The operating method ]

When the knob is turned to the left to the maximum, the wheel return speed is slowest, when the right to the maximum, the wheel return speed is fastest.

\*G01 and G02 do not have this function.

#### Function 3. GAIN (Gyro gain adjustment)

[ Function ]

This function is adjusted by the VR of the unit or CH3 of the controller.

[ The operating method ]

Rotating the GAIN volume to the left increases the gain, Otherwise reduce the gain.If Glitching occurs by increasing the gain, readjust the AGS volume. If Glitching does not stop with the AGS volume, please reduce the gain.

When starting use, please test from about 50% (volume center) and increase /decrease depending on your preference. The knob function on the gyroscope is invalid when the gain of the gyroscope is controlled through the transmitter.

Image: An illustration showing the DUMBORC G03 gyroscope with labels for its CH3 CH1+ port, SET button, LED indicator, EPA, SERVO+, PCA, AGS, and GAIN controls, along with explanations of each function.

### Connection and LED Indicator

- The 4P cable is connected to the 4P seat of the gyroscope.
- The other end of the 3P cable is connected to the CH1 of the receiver (ST: Steering).
- A single wire CH3 is connected to the CH3 of the receiver or other corresponding channels.
- **LED Indicator:**
  - No signal: light blinks slowly
  - Signal: the red light is always on

## Function Controls

- **Function 1. PCA (Priority Control Adjuster):**
  - Adjusts the mixing rate of the steering signal and Gyro effect signal.
  - *Operating Method:* When the knob is turned to the left, the priority is increased. When turned to the right, the priority is reduced. Start PCA position from center and adjust to your preference.
- **Function 2. AGS (Anti Glitching System):**
  - Used to adjust the speed of the wheel slow back.
  - *Operating Method:* When the knob is turned to the left to the maximum, the wheel return speed is slowest. When turned to the right to the maximum, the wheel return speed is fastest.
- **Function 3. GAIN (Gyro Gain Adjustment):**
  - This function is adjusted by the VR of the unit or CH3 of the controller.
  - *Operating Method:* Rotating the GAIN volume to the left increases the gain, otherwise reduces the gain. If glitching occurs by increasing the gain, readjust the AGS volume. If glitching does not stop with the AGS volume, please reduce the gain. When starting use, please test from about 50% (volume center) and increase/decrease depending on your preference. The knob function on the gyroscope is invalid when the gain of the gyroscope is controlled through the transmitter.

Video: An official DUMBORC video demonstrating the functionality and adjustment of the G03 RC Gyroscope, including handwheel intervention ratio adjustment.

## MAINTENANCE

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To ensure the longevity and optimal performance of your DUMBORC G03 Gyroscope, follow these general maintenance guidelines:

- **Keep Clean:** Regularly clean the exterior of the gyroscope with a soft, dry cloth. Avoid using harsh chemicals or solvents.
- **Protect from Elements:** Keep the unit away from dust, dirt, moisture, and extreme temperatures.
- **Secure Connections:** Periodically check all cable connections to ensure they are secure and free from damage. Loose connections can lead to intermittent performance.
- **Avoid Physical Impact:** While designed for RC environments, excessive physical shock can damage internal components.

## TROUBLESHOOTING

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If you encounter issues with your DUMBORC G03 Gyroscope, consider the following troubleshooting steps:

- **No LED Indication:** Check power connections to the gyroscope and receiver. Ensure the receiver is powered on.
- **Incorrect Gyro Effect Direction:** Refer to the "Set Up Reverse" section in the Setup guide to correct the direction.
- **Glitching or Unstable Performance:**
  - Adjust the GAIN setting. If increasing gain causes glitching, try reducing the AGS volume.
  - If glitching persists, reduce the GAIN setting further.
  - Ensure all connections are firm and free from interference.

- **No Response from Steering:** Verify that the 3P cable is correctly connected to CH1 of the receiver and the servo is properly connected to the gyroscope. Check the transmitter and receiver for proper binding and battery levels.
- **Settings Not Saving:** Ensure you press the setting button to save changes after making adjustments to EPA or reverse settings. If changing transmitters, receivers, or servos, settings may need to be re-applied.

## SPECIFICATIONS

Detailed technical specifications for the DUMBORC G03 RC Mini Gyroscope:

### Specification:



Brand: DUMBORC

Weight: 4.2g

Operating voltage: 5~10V

Working temperature: -10°C+50°C

Control system: PID control system

Accessory package: ZH1.5 4P cable, ZH1.5 4P to DuPont cable, ZH1.5 3P to DuPont cable, screwdriver

Shell material: AL6061

Size: 20.0×15.5×8.8mm

Current: 20mA/6V

Input signal: PWM

Input and output plug: ZH1.5MM

Image: A graphic displaying the technical specifications of the DUMBORC G03 gyroscope, such as its shell material (AL6061), weight (4.2g), operating voltage (5~10V), working temperature (-10°C to +50°C), and PID control system.

Specification

Value

Brand Name	DUMBORC
Model Name	dumborc G03 gyroscope
Model Number	G03
Manufacturer Part Number	09930
Item Type Name	mini gyroscope
Shell Material	Aluminum (AL6061)
Weight	4.2g
Operating Voltage	5~10V
Current	20mA/6V
Working Temperature	-10°C to +50°C
Control System	PID control system
Input Signal	PWM
Input and Output Plug	ZH1.5MM
Dimensions (L x W x H)	20.0mm x 15.5mm x 8.8mm (0.78 x 0.61 x 0.31 inches)
Age Range Description	14+
Batteries Required	No
Assembly Required	No

## WARRANTY

Specific warranty details are not provided with this product. Please retain your proof of purchase for any potential claims. For information regarding returns or defects, refer to the retailer's policy where the product was purchased.

## SUPPORT

For any questions, technical assistance, or setting issues, please contact DUMBORC customer support. The manufacturer is committed to helping customers resolve any problems they may encounter with their products. You may also visit the official DUMBORC store for additional resources and product information: [DUMBORC Store on Amazon](#)