RADIOMASTER

GX12

Quick start guide

WWW.RADIOMASTERRC.COM

Introduction

Welcome to the RadioMaster GX12 Dual-Band Remote Control System!

Thank you for choosing the RadioMaster GX12, a versatile remote control system featuring dual-band capabilities with 2.4GHz, 900MHz, and Gemini-Xrossband technology. Whether you're a beginner or a seasoned professional, the GX12 is designed to meet your needs, offering precision, flexibility, and reliability.

Please read this guide carefully before operating your new remote to ensure safe and optimal use. We may release updated versions of this manual as we continually enhance our software and hardware. For the latest information and resources, please visit our website.

The GX12 is compatible with many applications, including fixed-wing aircraft, gliders, helicopters, cars, boats, robotics, multi-rotor aircraft, and more. If you can build it, the GX12 can control it! Powered by the robust EdgeTX platform, the GX12 is equipped for seamless integration with your projects.

Follow the links below for more detailed guides, firmware updates, and additional resources.

— The RadioMaster Team

Safety Information

Many remote-control models feature powerful motors and sharp propellers. Please always be careful when using or maintaining these models. Before assembling or performing maintenance, disconnect the power and remove the propellers to ensure your safety.

Do not operate the GX12 remote control system under the following conditions:

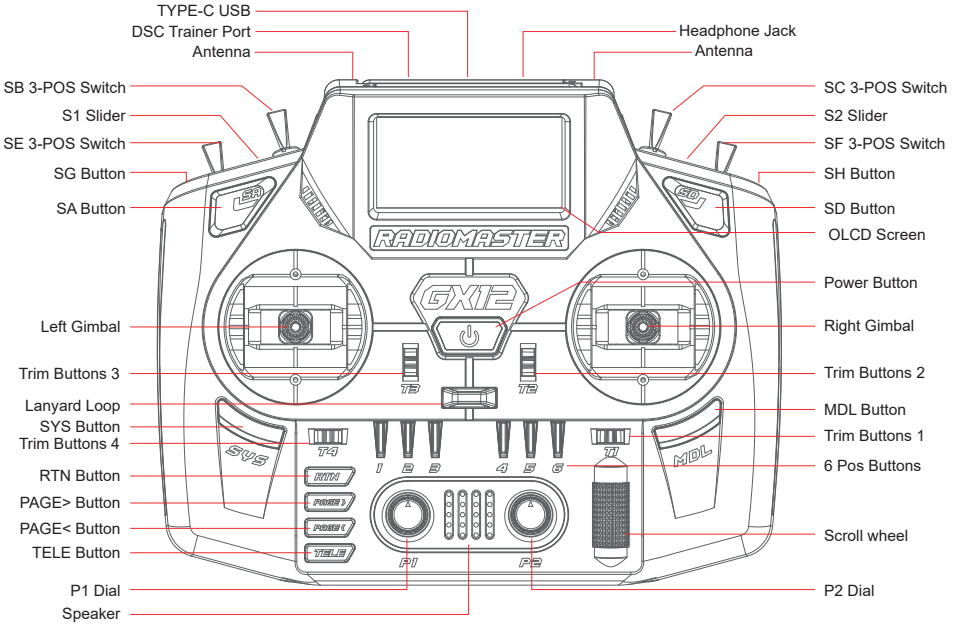
- During severe weather or strong winds, including rain, hail, snow, storms, or in areas with electromagnetic interference.
- In situations with limited visibility.
- Near people, property, high-voltage power lines, public roads, vehicles, or animals.
- If you feel tired, unwell, or under the influence of drugs or alcohol.
- If the remote control or model appears damaged or is not functioning correctly.
- In areas with high levels of 2.4GHz or 900MHz interference or where these frequencies areprohibited.
- When the battery voltage of the radio is too low for safe operation.
- In regions where local regulations restrict the use of aviation models. Manual and firmware download

Manual and firmware download

The GX12 comes pre-installed with a factory-tested and approved version of EdgeTX and ExpressLRS firmware. Please update the firmware only if you are confident in the process, as incorrect updates may render the remote inoperable.

For factory release firmware versions, visit the RadioMaster website: https://www.radiomasterrc.com. For future updates and the latest firmware, check the EdgeTX website: https://edgetx.org/ and the ExpressLRS website: https://www.expresslrs.org/.

Remote control overview



Batteries and charging

Battery and Charging Information for the GX12

The GX12 has a built-in USB-C smart balance charging function designed specifically with 3.7V lithium batteries. It supports:

• 2x 3.7V Li-ion 18650 batteries or 2x 3.7V Li-Poly batteries (2S 7.4V LiPo battery pack).

• The nominal voltage for each cell is 3.7V, with a fully charged voltage of 4.2V per cell.

Important Charging Guidelines:

• Do Not Use LiFe battery packs or 18650 Li-ion batteries with a nominal voltage of 3.6V and a fully charged voltage of 4.1V. Using incorrect batteries may damage the charger or pose a fire hazard.

• Ensure Non-Protected Li-ion Batteries: If using Li-ion batteries, ensure they are non□protected.

• Regularly check the voltage and condition of your batteries.

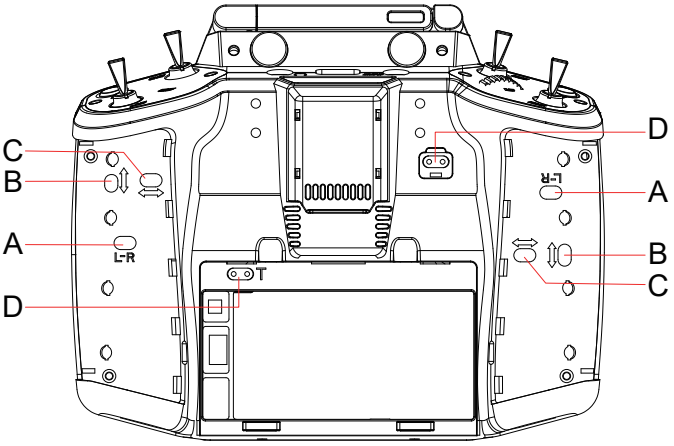
• Never Charge Unattended: Always charge in a safe environment, away from flammable materials.

• Avoid Charging if the Remote is Wet or Damaged: Only charge when the device works properly.

• Polarity Matters: Do not charge with reversed polarity, which can cause severe damage.

Disclaimer: RadioMaster is not responsible for any damages or consequences resulting from the improper use or misuse of this product.

Exterior adjustable

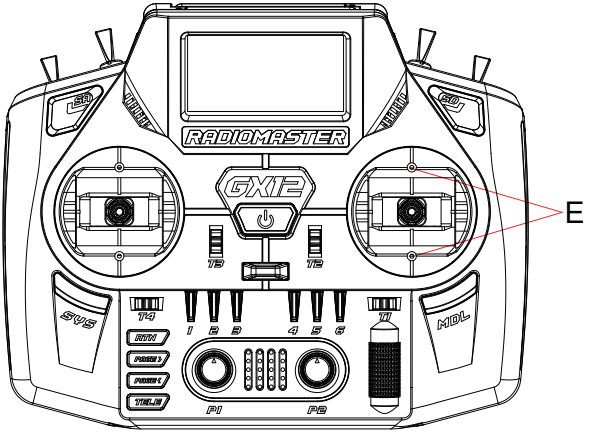


A: L-R Mode-1 and Mode-2:
Turn clockwise to disable self-centering (Throttle) / Turn counterclockwise to enable self-centering (Elevator)

B: Up-Down tensions adjustment:
Turn clockwise to increase vertical stick tension / Turn counterclockwise to decrease tension

C: Left-Right tension adjustment:
Turn clockwise to increase horizontal stick tension / Turn counterclockwise to decrease tension

D: Throttle stick tension adjustment:
Turn clockwise to increase throttle stick tension / Turn counterclockwise to decrease tension



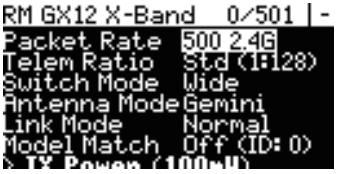
E: Upper and lower Angle travel (38-60 degrees) :
Adjust the screw clockwise, and the Angle becomes smaller.
Adjust the screw counterclockwise to increase the Angle.

Model and Protocol Selection

The GX12 is equipped with a built-in dual-band, dual-frequency ExpressLRS RF module, offering compatibility with a wide range of receivers:
• 2.4GHz receivers
• Sub-GHz (900MHz) receivers
• Gemini-Xross dual-band receivers

Packet Rate Selection:
To select the appropriate Packet Rate on your GX12 remote control, follow these options based on the receiver type:
• 50Hz-500Hz 2.4G: For binding with any ELRS 2.4GHz receiver.
• 50Hz-200Hz Low Band: This is for binding with any ELRS Sub-GHz (900MHz) receiver.
• X100 and X150: For use with Gemini Xross dual-band receivers.
• DK250/DK500/K1000: These are new FSK high-speed modes for LR1121-based receivers.
For a detailed receiver compatibility chart, visit the RadioMaster manuals page.

Binding Instructions for ExpressLRS
Follow these steps to bind your GX12 with an ExpressLRS receiver:
1. Turn off the transmitter.
2. Cycle power to the receiver three times. The receiver LED should flash twice, indicating bind mode.
3. Turn on the transmitter, long-press the SYS button, and navigate to the ExpressLRS LUA under the TOOLS menu.
4. Scroll down to [Bind] and press enter.
5. The LED on the receiver will turn solid, indicating a successful bind.



Notes

The GX12 runs on the powerful EdgeTX platform, known for its advanced programming, customization, and mixing capabilities. Whether you're a novice or an experienced user, EdgeTX provides a wide range of features to help you customize your remote control experience according to your specific requirements.

To fully explore the potential of EdgeTX, including step-by-step instructions for installation, programming, and advanced functions, please download the comprehensive software installation guide from the links provided below:

EdgeTX Official Site: https://edgetx.org
RadioMaster Support: https://www.radiomasterrc.com

Specifications

Item: GX12 Radio
Size: 183*148*78mm
Weight: 573g
Frequency: 2.400GHz and Sub-G 900MHz
Internal RF: ExpressLRS 2.4GHz / Sub-G 900MHz
Supported protocols: ExpressLRS
Cooling fan: YesAntenna: Dual folding 2.4GHz/ Sub-G 900MHz
Voltage Range: 6.6 - 8.4V DC
Control distance: Max 2km
Current: 390mA - 1000mA, 8.0V(Mode and Power level dependent)
Radio Firmware: EdgeTX (Transmitter) / ExpressLRS (RF module)
Channels: Max 16 channels (Receiver dependent)
Battery: 7.4V 2-cell Lithium-Polymer / Two 3.7V 18650 Lithium-Ion cells (batteries not included)
Charging: 2s Smart Balance Charging
Connectivity: USB-C
Display: 128*64 Monochrome OLED display
Gimbal: GX01 1000Hz, 3D Digital CNC Hall Effect Gimbal with folding sticks
Gimbal sticks: 3mm
External module: Nano / Crossfire compatible
Upgrade Method: USB / EdgeTX Companion PC software
Memory: 512Mb Integrated Flash

Warranty and Repair

If you experience any issues with your GX12 hardware, please retain your proof of purchase for warranty purposes. To initiate a warranty claim or seek repair assistance, follow these steps:
1. Contact Your Retailer: Contact the retailer where you purchased your GX12 for warranty support.
2. Visit Our Warranty Support Page: For additional assistance or to contact our support team, visit RadioMaster Warranty Support: https://www.radiomasterrc.com/contact.
Our team is here to help ensure your GX12 operates at peak performance.

EU Simple Declaration of Conformity

RadioMaster declares the radio equipment GX12 is in compliance with EU directives Directive 2014/53/EU. Full text of the declaration of conformity is available at the following website www.radiomasterrc.com

Manufacturer by

ShenZhen RadioMaster Co., Ltd
4th Floor, Yangtian Building, No. 18 Yangtian Road, Xin'an Street, Baoan District, Shenzhen, Guangdong.

FCC ID: 2BBP3-GX12

FCC Information

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Full text of the declaration of conformity is available at the following website www.radiomasterrc.com

CAUTION:

Changes or modifications not explicitly approved by the responsible party may void the user's authority to operate this equipment. This product includes a radio transmitter utilizing wireless technology that has been tested and found compliant with the relevant regulations for radio transmitters within the specified frequency range of the original hardware.

Antenna Separation Distance

When using your RadioMaster transmitter, please maintain a minimum distance of 20 cm between your body (excluding fingers, hands, wrists, ankles, and feet) and the antenna to comply with RF exposure safety requirements set by FCC regulations.