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> Radiolink Byme-A V2.1 RC Flight Controller Airplane Stabilizer with Gyro, 6 Flight Modes 4 Channels for A560 Stunt, 3D Fixed-Wing Airplane, Straight Wing, Jet, T-Tail Aircraft and More

Radiolink Byme-A

Radiolink Byme-A V2.1 RC Flight Controller Instruction Manual

Airplane Stabilizer with Gyro

INTRODUCTION

The Radiolink Byme-A V2.1 RC Flight Controller is an advanced stabilization system designed to enhance the flight experience for various fixed-wing aircraft. This compact and lightweight unit integrates a high-precision gyroscope and acceleration sensor to provide stable and precise control across multiple flight modes. It is engineered for ease of use, allowing both beginners and experienced pilots to enjoy improved flight stability and maneuverability.

This manual provides essential information for the proper setup, operation, and maintenance of your Byme-A V2.1 Flight Controller. Please read it thoroughly before use to ensure safe and optimal performance.

WHAT'S IN THE BOX

- Byme-A Flight Controller
- Sticker
- Anti-Static Package Bag

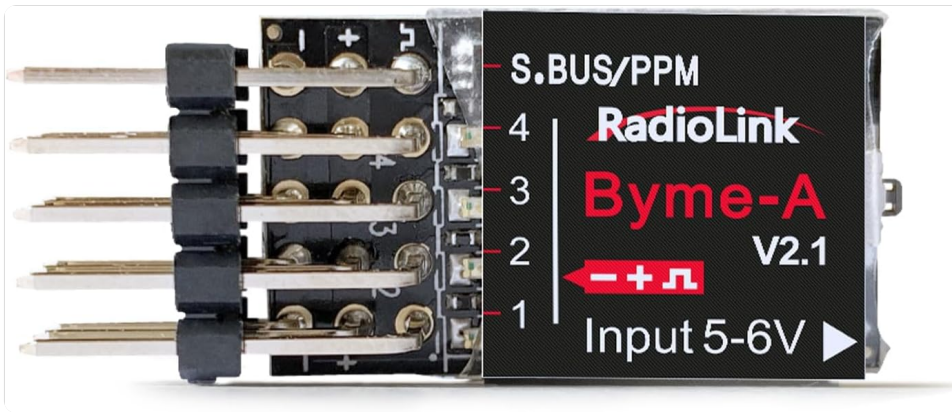


Figure 1: Radiolink Byme-A V2.1 Flight Controller, showing its compact size and pin connectors.

SETUP

General Connection

The Byme-A V2.1 supports all SBUS/PPM signal output receivers. Simply plug in the receiver directly; no soldering is required. The input voltage range for the flight controller is 5-6V.

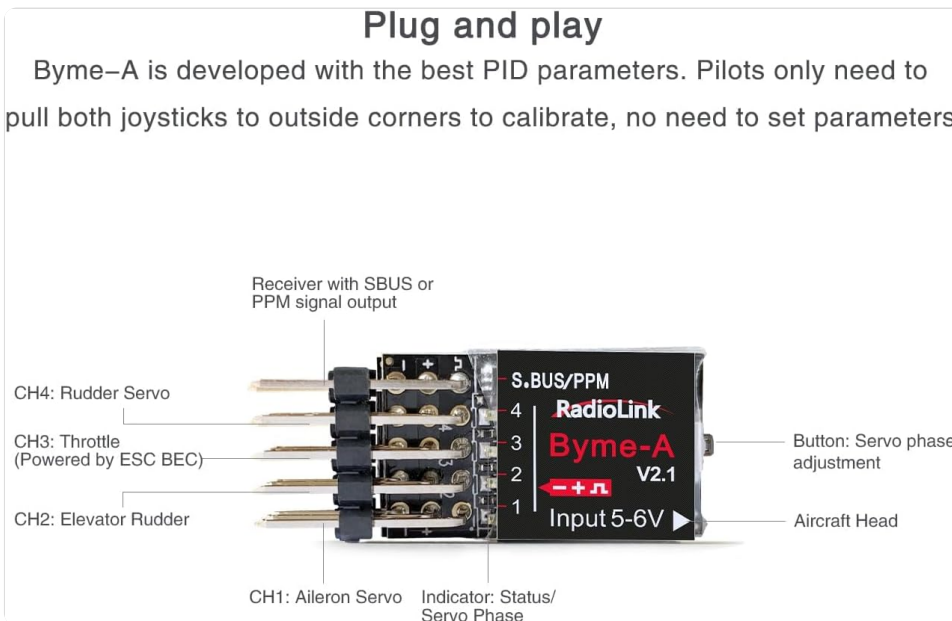


Figure 2: Detailed view of Byme-A V2.1 connections, including CH1 (Aileron), CH2 (Elevator), CH3 (Throttle), CH4 (Rudder), and S.BUS/PPM input.

Channel Connections

Ensure that the servo connections are made in the correct order for proper functionality:

- **CH1:** Aileron Servo
- **CH2:** Elevator Servo
- **CH3:** Throttle (Powered by ESC BEC)
- **CH4:** Rudder Servo

If your ailerons are controlled by two independent servos, connect them using a Y-line.

Byme-A Connect Instruction

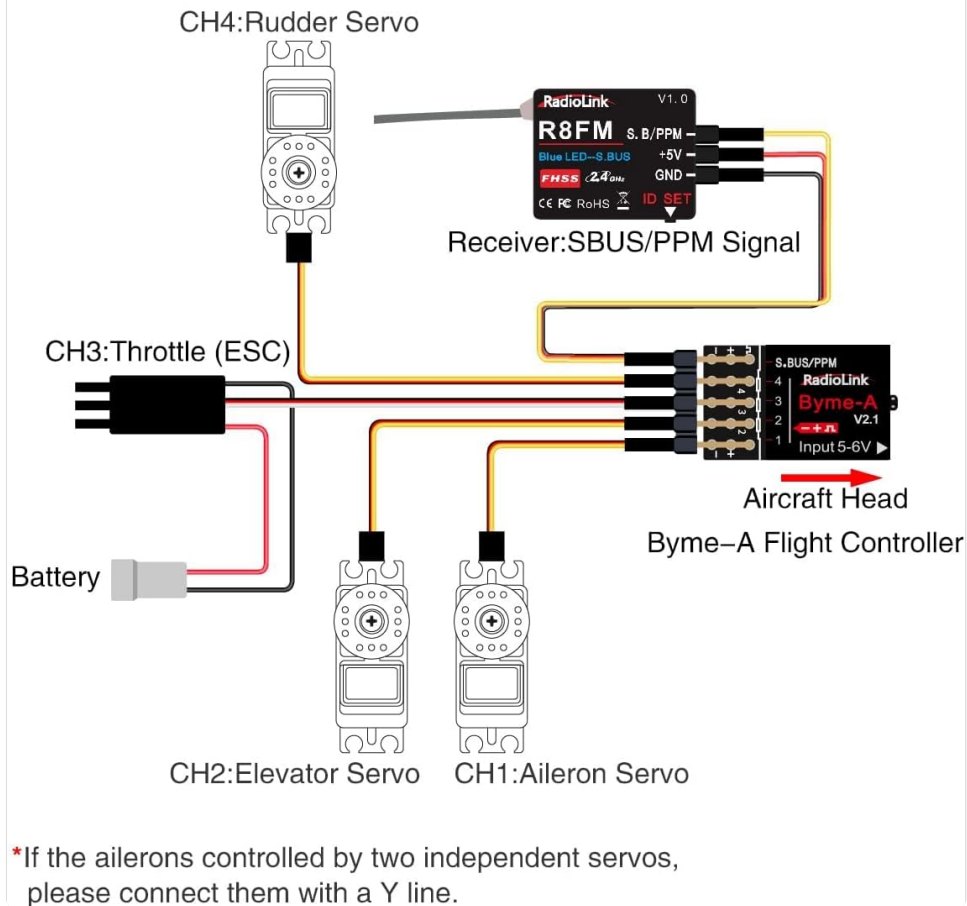


Figure 3: Wiring diagram showing the connection of the Byme-A Flight Controller to a receiver, battery, and servos for Aileron, Elevator, and Rudder, as well as the ESC for Throttle.

Radio Setup

For optimal performance, ensure your radio transmitter is configured correctly. The Byme-A V2.1 is compatible with radios that support PPM or SBUS signals. The flight modes are typically controlled using CH5 (3-way switch) and CH7 (2-way switch) on your transmitter.

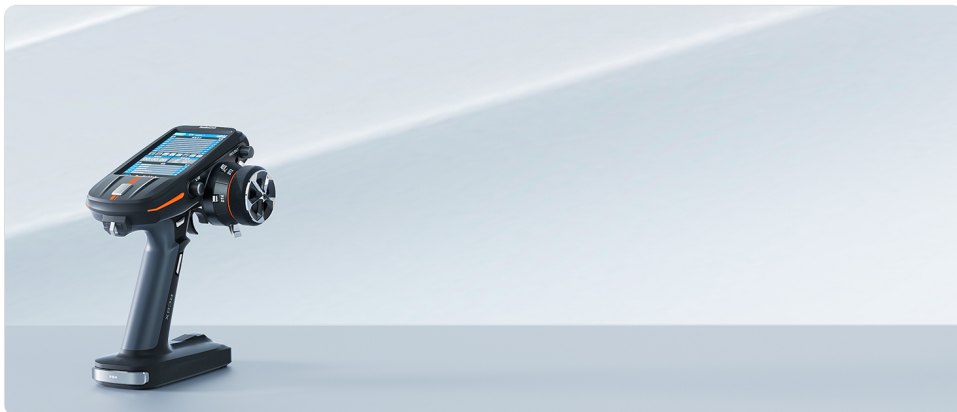


Figure 4: Visual representation of A560 flight modes (Stabilize, Gyro, Acrobatic, Dual Vertical) and wide compatibility with various transmitters and receivers.

Flight Modes Switch



Figure 5: Detailed diagram showing how to configure CH5 and CH7 switches on a Radiolink transmitter to select different flight modes (Stabilize, Gyro, Manual, Vertical Multirotor, Acrobat, Vertical Fixed Wing).

Gyro Calibration

To perform the initial attitude calibration, ensure your aircraft is on a level surface. The Byme-A is designed for plug-and-play operation, with control algorithm and digital filter combined with three-axis gyroscope and three-axis acceleration sensor. For calibration, pilots only need to pull both joysticks to outside corners. No complex parameter settings are required.

Video 1: Demonstrates the initial gyro calibration process for the Radiolink Byme-A, including stick movements and visual feedback from the flight controller.

Servo Reversing / Phase Adjustment

After initial calibration, it is crucial to verify and adjust servo phases to ensure control surfaces move in the correct direction relative to aircraft movement. This is done using the button on the flight controller. Incorrect servo phasing can lead to loss of control.

Byme-A Servo Phase Adjustment

No.	Channel	If phase is reversed	Indicator LED
1	AIL	Short press the button once	Green LED to CH1 on/off
2	ELEV	Short press the button twice	Green LED to CH2 on/off
3	THRO	N/A	Green LED always on
4	RUDD	Short press the button four times	Green LED to CH4 on/off

Video 2: Guide on servo reversing and phase adjustment for the Byme-A, demonstrating how to correct control surface movements after initial setup.

OPERATING

Flight Modes

The Byme-A V2.1 offers 6 distinct flight modes to suit various flying styles and pilot skill levels:

- **Stabilize Mode:** Provides automatic stabilization, ideal for beginners.
- **Gyro Mode:** Utilizes the gyroscope for enhanced stability, offering more control than Stabilize Mode.
- **Acro Mode:** Disables most stabilization, allowing for full acrobatic maneuvers.
- **Manual Mode:** Direct control without any stabilization assistance.
- **Vertical Mode (Multirotor):** Allows the aircraft to maintain vertical posture and direction, mapping joystick operation onto horizontal coordinates for full altitude control (similar to a multi-rotor).
- **Vertical Mode (Fixed Wing):** Allows the aircraft to maintain vertical posture and direction, mapping joystick operation onto horizontal coordinates for full altitude control (similar to a 3D aircraft).



Figure 6: A collage demonstrating various flight modes of an A560 stunt plane, including stabilized flight, acrobatic maneuvers, and vertical flight.

Video 3: Flight footage of an AtomRC Flying Fish plane equipped with the Byme-A Gyro, showcasing its stable flight characteristics and maneuverability in various modes.

MAINTENANCE

To ensure the longevity and reliable performance of your Radiolink Byme-A V2.1 Flight Controller, follow these maintenance guidelines:

- **Keep Clean:** Regularly inspect the flight controller for dust, dirt, or debris. Use a soft, dry brush or compressed air to gently clean the unit. Avoid using liquids or harsh chemicals.

- **Check Connections:** Before each flight, verify that all servo and receiver connections are secure and free from damage. Loose connections can lead to intermittent control or failure.
- **Inspect Wiring:** Check all wires for fraying, cuts, or kinks. Repair or replace damaged wiring immediately to prevent short circuits or signal loss.
- **Secure Mounting:** Ensure the flight controller remains securely mounted within the aircraft. Vibrations can affect gyro performance and lead to instability. Re-apply adhesive if necessary.
- **Storage:** When not in use, store the flight controller in a dry, cool environment away from direct sunlight, extreme temperatures, and high humidity. Use the provided anti-static bag to protect it from static discharge.
- **Firmware Updates:** Periodically check the Radiolink official website for any available firmware updates. Keeping the firmware up-to-date can improve performance, add new features, or resolve known issues.

TROUBLESHOOTING

If you encounter issues with your Radiolink Byme-A V2.1 Flight Controller, consider the following common troubleshooting steps:

- **No Power/No Lights:**
 - Check battery connection and charge level.
 - Verify correct voltage (5-6V) is supplied to the flight controller.
 - Inspect wiring for any breaks or short circuits.
- **No Control/Unresponsive:**
 - Ensure the receiver is properly bound to the transmitter.
 - Check all servo and signal connections to the flight controller.
 - Confirm the flight mode switch on your transmitter is correctly configured and sending the expected signals (refer to Radio Setup section).
 - Perform a gyro calibration as described in the Setup section.
- **Unstable Flight/Erratic Behavior:**
 - Re-check servo phase adjustments (refer to Servo Reversing / Phase Adjustment section). Incorrect phasing is a common cause of instability.
 - Ensure the flight controller is securely mounted and free from vibrations.
 - Verify the orientation of the flight controller (arrow pointing towards the nose of the aircraft).
 - Check for any physical damage to the aircraft's control surfaces or linkages.
- **Motors Spin Unexpectedly (Warning):**
 - **CRITICAL:** Ensure propellers are removed during setup and testing.
 - Verify that the throttle channel is NOT reversed on your transmitter, unless specifically required by a Radiolink transmitter model. For most radios, the throttle channel should NOT be reversed.
 - Ensure throttle stick is at its lowest position before powering on the aircraft.

For further assistance, please refer to the official Radiolink support channels.

SPECIFICATIONS

Feature	Specification
Brand	Radiolink
Model Name	Byme-A
Special Feature	for RC airplane, 3D airplane, Compact
Age Range (Description)	Adult
Color	black
Connectivity Technology	PPM/S-BUS signal
Included Components	Sticker, Byme-A Flight Controller, Anti-Static Package Bag
Skill Level	All
Item Weight	4.5 Grams (0.159 ounces)
Battery Capacity	800 Milliamp Hours
Remote Control Technology	2.4GHz
Control Type	control,rc
Material	Plastic
Wireless Communication Technology	Radio Frequency
Battery Cell Composition	Lithium Polymer
Are Batteries Included	No
Operating Temperature	10 Degrees Celsius
Remote Control Included?	Yes
Rechargeable Battery Included	No
Product Dimensions	0.61"L x 0.41"W x 1.4"H
Manufacturer	Radiolink
Item model number	Kontroler lotu Byme-A RC
Is Discontinued By Manufacturer	No
Manufacturer Part Number	Byme-A
Date First Available	November 11, 2020

WARRANTY AND SUPPORT

Radiolink Electronic Co., Ltd. was established in 2003 and specializes in researching, developing, and producing RC transmitters, flight controllers, receivers, GPS, drones, ESC, airplanes, and balance chargers. They apply automatic producing & testing instruments to provide high-quality, diversified products, along with friendly after-sales service.

For quick support, you can contact Radiolink's after-sales service. Full user manuals and FAQ troubleshooting files are often available on product sales pages.

Contact Information:

- **Email:** after_service@radiolink.com.cn
- **Website:** www.radiolink.com