

# GYA460

## 6-Axis Flight Control

### Quick Reference



Thank you for purchasing a GYA460 flight control.

This document summarizes the simple method of using the GYA460.

For the detailed usage method and precautions, refer to the GYA460 6-axis Flight Control instruction manual.

\*For first flight aircraft, before mounting the GYA460 have a veteran flier make flight adjustments without the GYA460 connected.

### THREE MODES

**Beginner-MODE**  
<Blue>

- This mode is suitable for level flight training of beginners.
- The fuselage flight attitude angle is limited to approximately  $\pm 80^\circ$ .
- When the transmitter sticks (except the throttle) are set to neutral, automatic horizontal level control returns the airplane to the level state.



**GYRO-OFF**  
<Yellow>

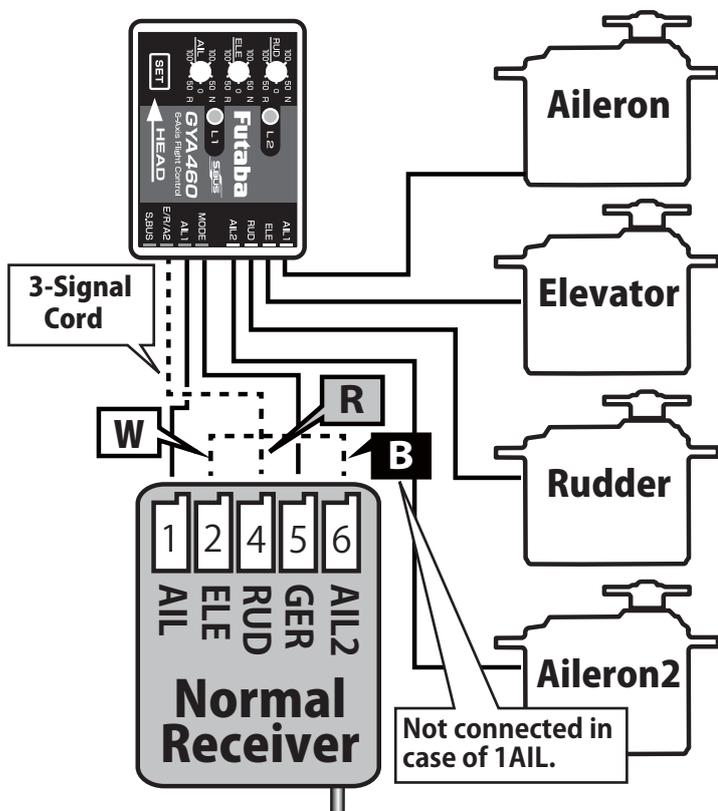
- In this mode, the plane is not controlled by gyro sensor.

**GYRO-MODE**  
<Red>

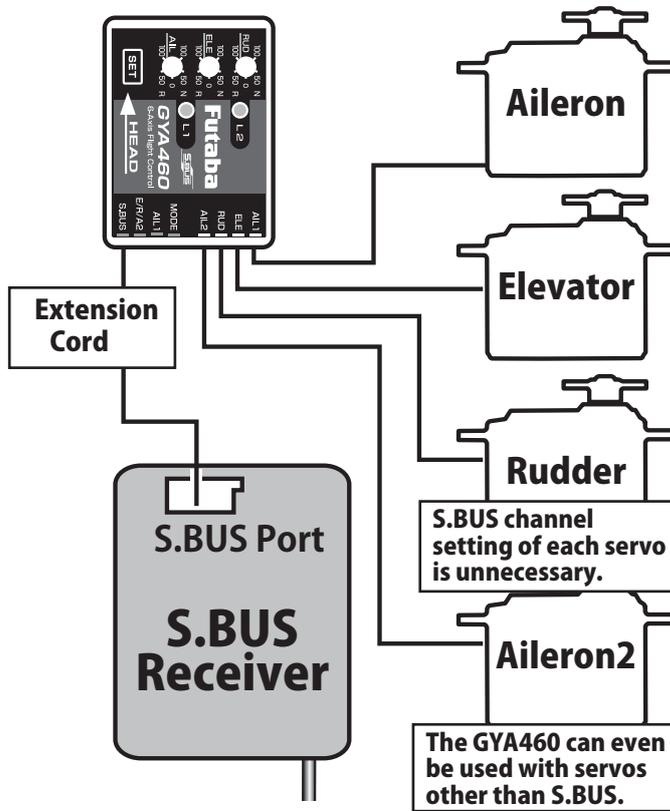
- This mode is suitable for inverted flight and acrobatics.
- The plane is controlled by gyro sensor only.
- Fuselage attitude angle limit and automatic horizontal level control are turned off.

### CONNECTION

#### CONVENTIONAL CONNECTION



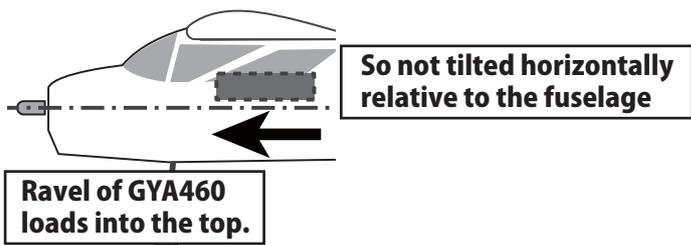
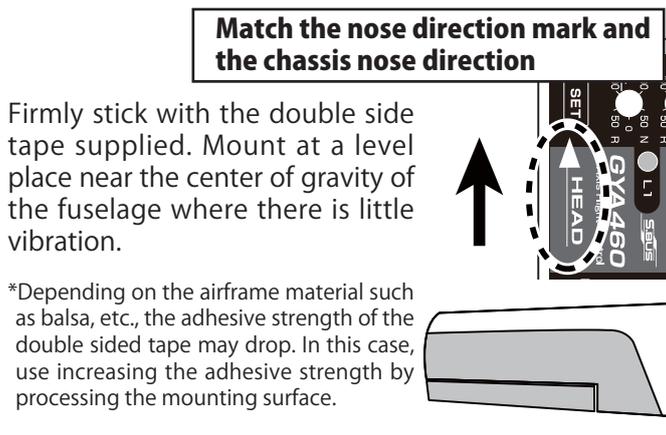
#### S.BUS CONNECTION



- GYA460 : MODE  $\Leftrightarrow$  Extension Cord  $\Leftrightarrow$  RECEIVER : CH5
- GYA460 : AIL1  $\Leftrightarrow$  Extension Cord  $\Leftrightarrow$  RECEIVER : CH1(AIL)
- GYA460 : E/R/A2  $\Leftrightarrow$  3-Signal Cord  $\Leftrightarrow$   
White : ELE Red : RUD Black : AIL2

- GYA460 : S.BUS  $\Leftrightarrow$  Extension Cord  $\Leftrightarrow$  RECEIVER : S.BUS
- Transmitter function**
- |            |            |            |
|------------|------------|------------|
| 1CH : AIL1 | 2CH : ELE  | 3CH : THR  |
| 4CH : RUD  | 5CH : GEAR | 6CH : AIL2 |

### MOUNTING to the AIRPLANE



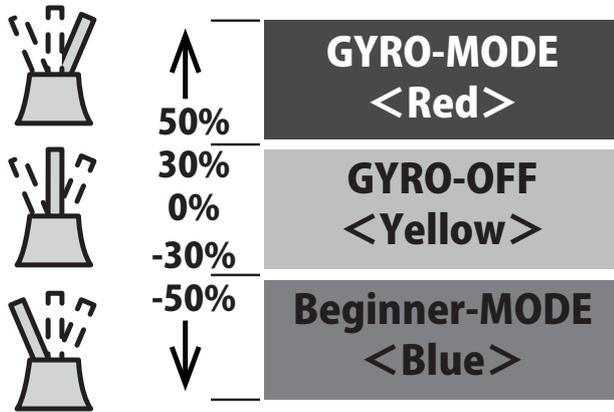
\*When mounting the to the side of the airframe or when the label plate is at the bottom, perform the mounting direction setting described on pages 19 and 20 of the instruction manual.

## TRANSMITTER SETTING

Assign transmitter CH5 to a 3-position switch, and set the function to "GEAR". This setting enables use of the Beginner MODE, GYRO-OFF MODE, and GYRO-MODE by switching a switch. When you want to change the direction of operation of the switch, perform reverse setting at the transmitter.

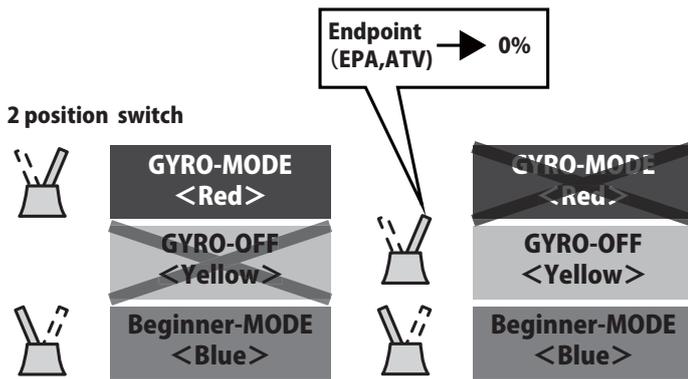
### 5CH Switch

### MODE <LED>



### IN CASE of 2 POSITIONAL SWITCH

When the transmitter has no 3-position switch.

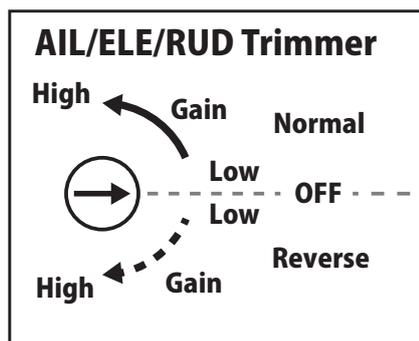


In the case of a beginner, the side at which the CH5 endpoint (EPA, ATV) switch is pushed forward should be made 0% and the mode should be switched between the GYRO OFF mode and Beginner mode.

## GYRO GAIN and DIRECTION

Aileron, elevator, and rudder gyro gain adjustment and gyro operating direction are set by flight control trimmer. The center of the scale becomes the gyro low gain position, and gyro gain adjustment and gyro operating

direction setting are performed by turning the trimmers to the left or right.



Gain is too high

Hunting

Lower Gain

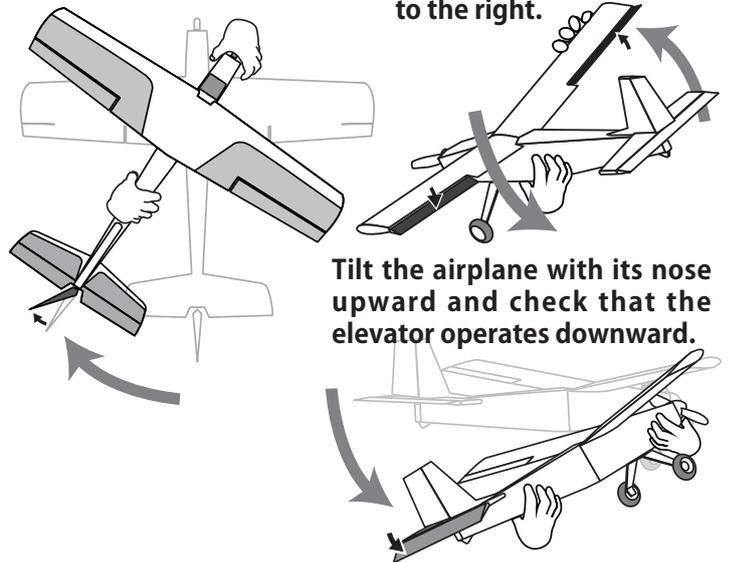
Adjust the gyro gain so that hunting (deflection of the aircraft in small increments) does not occur in the control axis direction. The gyro gain is different depending on the area of the aircraft rudder (aileron/elevator), air speed, and gyro used. Initially try changing the gain in 5% steps. If hunting is excessive, the aircraft may be damaged. Hunting tends to stop when the airspeed is lowered.

## PRE-FLIGHT SETTING

- ① Set the aileron, elevator, and rudder gyro gain trimmers to about 45°.
- ② In the state in which the gyros are operative, move the transmitter sticks and check that each control surface moves in the proper direction. If a control surface moves in the opposite direction of stick operation, set transmitter reverse.
- ③ Remove you hand from the transmitter and turn in the aileron, elevator, and rudder rotating axis direction and check if each control surface moves in the direction opposite the rotating direction (direction in which the plane returns). If the direction of the steering angle correction rudder is reversed, change the trimmer to 45° of the opposite side.

Tilt the airplane to the right on the ground and check that the rudder operates to the left.

Tilt the airplane to the left on the ground and check that the ailerons operate to the right.



Tilt the airplane with its nose upward and check that the elevator operates downward.

## FLIGHT SETTING

- ① Turn on the power in the GYRO OFF -MODE or GYRO-MODE.
- ② Fly the plane in the GYRO OFF-MODE or GYRO-MODE and adjust the trimmers.
- ③ Land the plane and turn off the gyro power.
- ④ Turn on the gyro power again in the GYRO OFF-MODE or GYRO-MODE. This memorizes the trim position at the gyro.