

3-Axis gyroscope ~ Airtrix A733-G

User Instructions

1. Foreword :

The Airtrix series A733-G is a very high performance 3-axis gyro. It is developed for the RC model airplanes. The following players will benefit greatly by using this A733-G gyro on their airplane flying:

- (1). the player who would like to fly the airplane in the gust.
- (2). the player who would like to fly the unstable designed airplane which flies like in the gust but even the wind is calm.
- (3). the beginner lacks good control ability making the airplane fly as in the gust.

The tailor-made advanced feed-forward control algorithm of this A733-G gyro will bust the wind and proficiency limitations for all the players. Everyone will be able to fully enjoy the fun of the flight in all weather and regardless of the personal skill. With the fine integration of the sensor and control circuit, it is so compact, simple and easy to install and use.

2. Features :

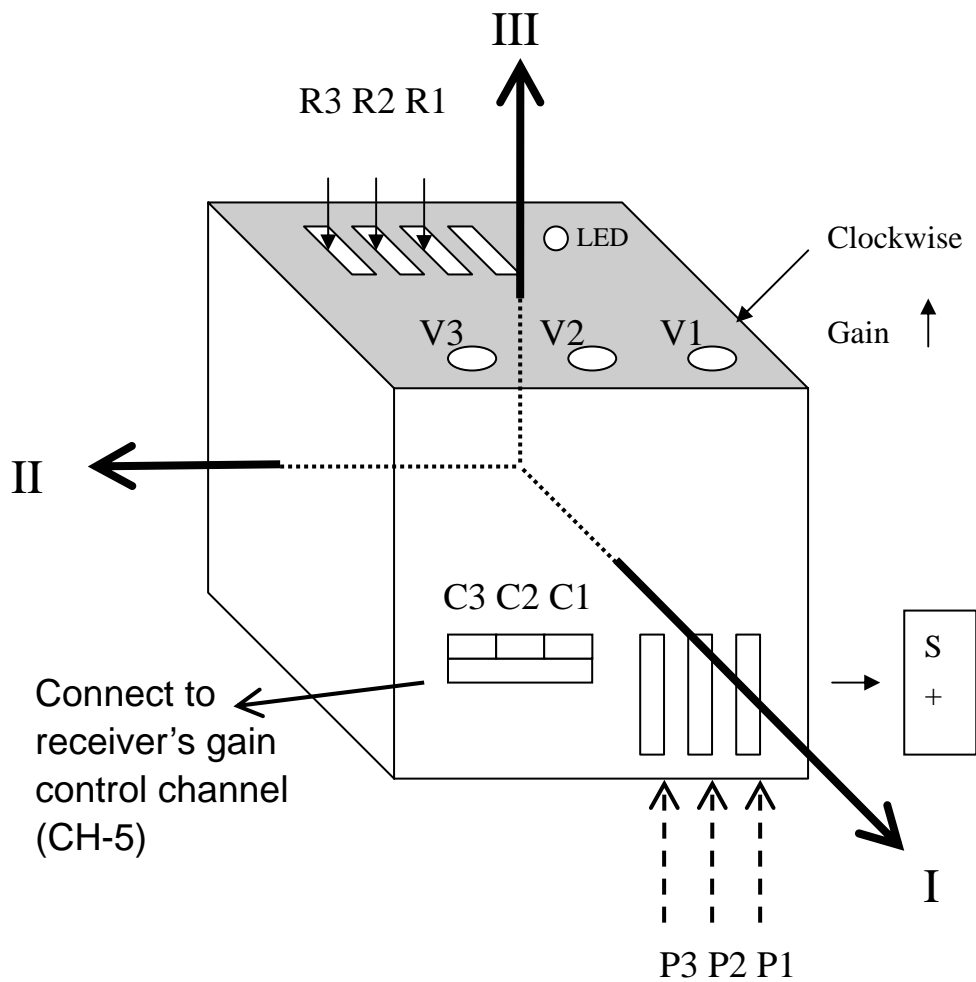
- Easy installation and concise setup.
- High-speed CPU and tailor-made advanced feed-forward control algorithm.
- Newly developed extremely low drift gyro sensor.
- Instant reaction and smooth engagement.
- Precise adjustment and high reliability.
- Digital servo compatible.
- Remote gain function and multi gain-setting switching functions.
- Integrated, compact, and lightweight.
- Low power consumption.

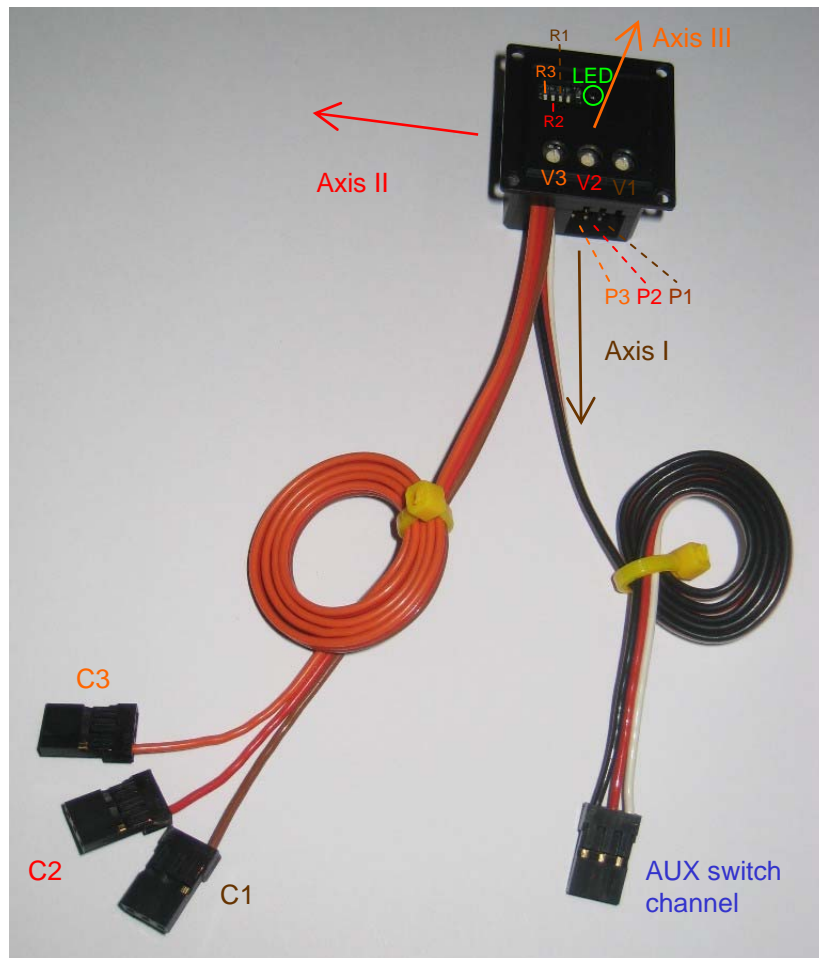
3. Specifications:

- Operating Voltage Range: DC4.2V~6.0V.
- Supply Current: <50mA@4.8V.
- Temperature Range: -20°C ~ 85°C.
- Control Frequency: 70Hz.
- Angular Rate Sensing Range: ± 300 degree/sec on each axis.

4. Configurations:

The brief photographs are as follows:





The each connection port is description as follows:

- *. R1 、 R2 、 R3 : Signal reverse DIP switch for Axis I 、 II 、 III .
- *. V1 、 V2 、 V3 : Gain adjustment for Axis I 、 II 、 III .
- *. P1 、 P2 、 P3 : Connection port for servos of Axis I 、 II 、 III .
- *. C1 、 C2 、 C3 : Connect to receiver's channels for Axis I 、 II 、 III .

Single Brown cable: Axis I.

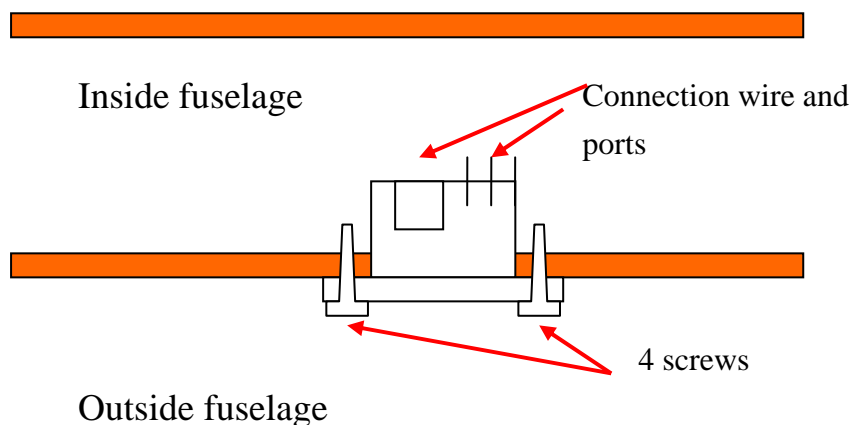
Single Red cable: Axis II.

Single Orange cable: Axis III.

White-red-black cables: AUX switch channel (Gain control channel, CH-5).

5. Installation :

The best location for the A733-G installation is the C.G. position of airplane. However, it is difficult to install on the exactly C.G. position for mostly RC airplanes. The plane surface which is close to the C.G. position and aligned with any axis of the airplane (X · Y · Z) will be good enough for installation. The alignment with the axes of the airplane is a very important step, also use four screws to fix the A733-G onto the airplane fuselage and connect all the servo's leads and wires. This A733-G with noise filter function, it can reduce the usually vibration effects, but if the vibration of the airplane is significant, the double-sided sponge tape can be inserted to absorb the vibration noise.



6. Operations :

- (1). Turn on your transmitter.
- (2). Turn the power of A733-G on, red and green LED will flash together.
- (3). Do not move airplane (gyro) for 5 seconds, until only one LED is lightened (red or green).
- (4). Setting the gyro's gain as follows:
 - a. The gain values of setting are relative.
 - b. The relative values can be calculate by the formula as follows :



The transmitter's switch up (LED red)

Gain Axis-I = $ATV(up) * V1$ position.

Gain Axis-II = $ATV(up) * V2$ position.

Gain Axis-III = $ATV(up) * V3$ position.



The transmitter's switch middle (LED red and green)

Gain Axis-I = 0.

Gain Axis-II = 0.

Gain Axis-III = 0.



The transmitter's switch down (LED green)

Gain Axis-I = $ATV(down) * V1$ position.

Gain Axis-II = $ATV(down) * V2$ position.

Gain Axis-III = $ATV(down) * V3$ position.

- c. Firstly, turn the transmitter's switch (CH-5) up and setting the $ATV(up)$ as 50%, then adjust V1, V2, V3 to get the axis I, II, III under best flying conditions.
- d. Or turn the transmitter's switch (CH-5) down and setting the $ATV(down)$ as 50%, then adjust V1, V2, V3 to get the axis I, II, III under best flying conditions.
- e. Every time, while you flying, you can change setting (CH-5) on different $ATV(up)$ and $ATV(down)$ values of your transmitter to get the best flying conditions.

Wish you have a good flying. If you still have any problem please contact with the service mail address at : rc.mart@msa.hinet.net