

96253 SG-X HELICOPTER GYRO INSTRUCTIONS

FEATURES:

1. Integrated Gyro/Rudder servo system.
2. Compact size allows easy mounting.
3. Ball Bearing equipped Gyro gimbal.
4. Gyro output reverse switch on Mixer.
5. Connector system provides for easy mounting in model.
6. Power to the gyro is supplied by the receiver's 4 cell, 4.8 volt NiCd battery.

TECHNICAL SPECIFICATIONS:

Power Supply:	4 cell 4.8 volt (common power)
Motor Running Current:	160 MA D C
Amplifier Current:	30 MA D C
Dimensions:	Gyroscope - 1.69" x 1.48" x 1.48" Control Box - 1.5" x 0.91" x 0.59"
Weight:	Gyroscope and Control Box - 3 ounces (w/o servo)
Detection Method:	Hall Effect Sensor

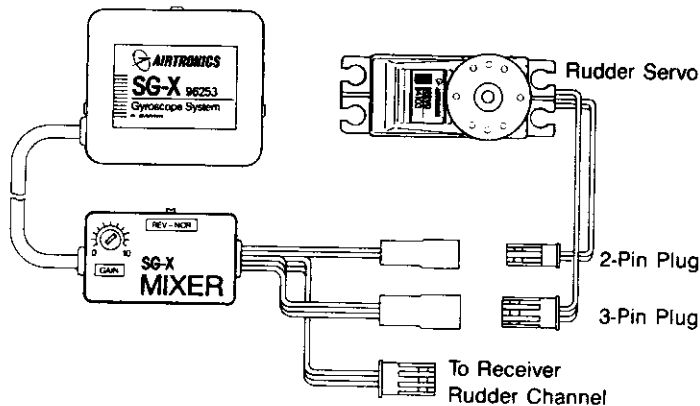


FIGURE 1

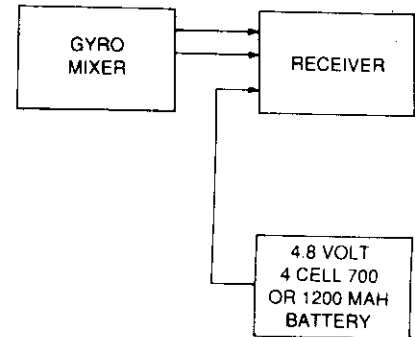


FIGURE 2

SET UP AND ADJUSTMENT OF GYRO

Gyro systems for R/C model helicopters and the transmitters they are flown with, have to be designed to work together to make full use of the best features of both. The Airtronics 96253 Gyro system is designed to take full advantage of the features of the Airtronics Helicopter Radios and vice versa, and therefore are highly recommended for use with each other. It is recommended that you set up the gyro system on the helicopter's receiver as indicated in Figure 1. A single 1200 MAH or 700 MAH battery can be used to power both the receiver and the gyro as shown in Figure 2. The Gyroscope motor should operate.

1. Connect the gyro system to the helicopter's receiver as indicated in Figure 1. A single 1200 MAH or 700 MAH battery can be used to power both the receiver and the gyro as shown in Figure 2. The Gyroscope motor should operate.
2. The Gain control on the Mixer is factory set for optimum control response from the rudder servo when the tail of the helicopter is slewed. If the tail rotor pitch correction is in the incorrect direction, switch the Gyro Output Reverse REV-NOR Switch on the Gyro Mixer from Normal to Reverse or Vice Versa.
3. Final Setting of the Gain Trimmer on the Mixer is determined by flight tests.

GYRO POSITIONING AND INSTALLATION

The detection axis of this gyroscope runs from the top (marked with the Airtronics Logo) to the bottom. The gyroscope responds to the rotary motion around the axis. (See Figure 3) Set the Gyroscope detection axis to the rotational axis of the part of the helicopter to which application of gyroscopic force is desired.

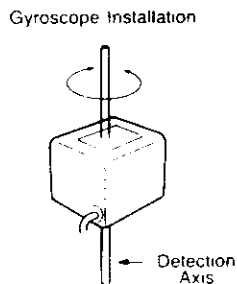


FIGURE 3

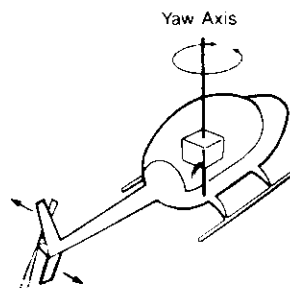


FIGURE 4

Gyroscope installation

- Only the rudder servo supplied with the integrated SG-X Gyro system must be used with this unit since it is an integral part of the unit.
- To control the rudder (yaw axis) with a gyroscope, set the gyroscope upright at a right angle to the yaw axis (or to the main rotor shaft, in helicopters) as shown in Figure 4.

Secure the gyroscope on the helicopters floor, with two pieces of 3mm thick double-faced adhesive tape. Confirm that gyroscope force is accurately coordinated with the pitch deflection of the tail rotor. Make all connections as shown in the connection diagram, and then turn on the transmitter, receiver, and the gyroscope power sources. Swing the helicopter tail to the left or right by hand and note that the tail rotor pitch angle will change. Then, swing the tail so that the helicopter nose turns right and observe how the tail rotor pitch angle increases or decreases according to the movement. Then push the transmitter rudder stick to the left and note the movement of the tail rotor.

If the tail rotor pitch change agrees with the pitch change when applying left rudder, the gyroscope action is correct. If the pitch deflection angle is incorrect, position the Mixer Gyro Output Reverse Switch to the opposite direction.

Note: If the gyroscopic force is not coordinated with the tail rotor pitch change, helicopter flight will be unstable and dangerous. Make sure to check all the above points before a flight. It is desirable to mount the gyro as close to the model's center of gravity as possible, however, it is not absolutely necessary.

CAUTION: Check your installation to insure that the gyro provides a correction to the controlled servo in the proper direction. Failure to do so may cause you to lose control of your model, possibly causing injury to yourself, to others, or property damage.