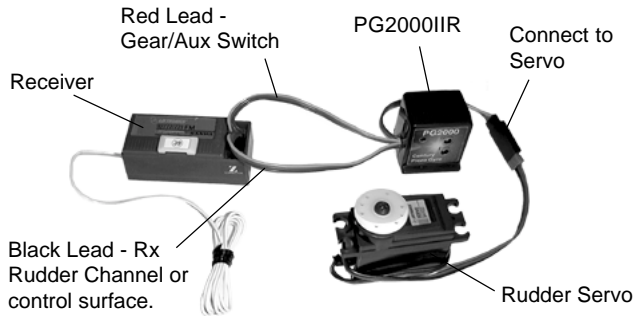


Setup and Installation of PG2000 IIR Remote Gain Gyro (purchased separately)

Connections:

The connectors on the gyro have been selected to be universal for the range of radios and servos on the market. Warning, if any radio system is used other than those listed make sure same polarity is maintained and double check your connections, otherwise you risk damaging the PG2000 IIR gyro.



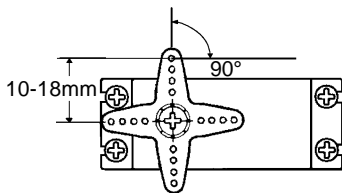
Transmitter Settings:

The PG2000 IIR is truly "plug and play" with your radio, the following chart shows the basic settings for your transmitter.

		Rudd	Gear/Aux
Servo Reverse		N	N
Travel* (ATV or EPA)	H	100%	100%
	L	100%	100%
Revo Mix	Up	30%	
	Down	20%	

Helicopter Servo Setup:

1. Disconnect the tail pushrod from the rudder servo and check that the pushrod moves smoothly, requiring only a gentle force to move through the entire range of movement. Make necessary changes if needed.
2. Following the tail rotor instructions, set the pushrod length so the pitch slider is centered within it's movement range and has the proper 5° of tail pitch to hold the helicopter straight in a hover while the collective/throttle stick is at the hovering position.
3. Position the control ball on the servo arm to achieve maximum mechanical throw (10-18mm from center). For beginners getting started use 10-14mm.

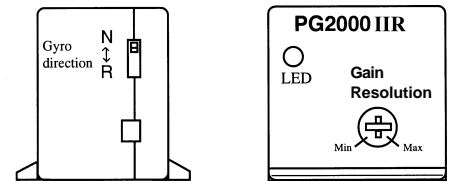


Final Connections:

1. Connect the tail rotor servo directly to your receiver. Turn on the transmitter and receiver. Set all transmitter subtrims, trim offsets and mechanical trims to zero (neutral). Move the collective stick to the hover position (usually 50%) and install the servo horn in the mid position (such that there is equal pushrod movement in each direction).
2. Turn off power to the transmitter and receiver. Disconnect the rudder servo from the receiver and connect the gyro wiring harness. Connect the black lead from the gyro to the rudder channel on the receiver, the red lead to the Gear/Aux channel.
3. **Insure your throttle/collective stick is at the bottom** and turn on the power of the TX and then the RX. The green LED on the top left corner of the gyro will flash rapidly for 5 seconds. **During this time do not move the helicopter or the rudder stick.** The green LED will become solid when the gyro has initialized. Later, when hovering, trim the rudder channel using your trims or sub-trims and revo-mixing for no drift at all collective settings.

Adjustments:

Only use a plastic screw driver to make changes on the gyro switches and pots.



Gyro Configuration & Setup:

The Gain setting corresponds to the switch position on the radio however the PG2000 IIR is unique in that the ATV controls the actual gain setting from the transmitter while the Gain Resolution adjustment on the gyro allows for fine tuning your setup.

Futaba / Hitec	Switch
Position 0	Back
Position 1	Front
Gyro Direction	R
JR / Airtronics Z	Switch
Position 0	Front
Position 1	Back
Gyro Direction	N

Gain Settings:

Position 0	Hovering	Range 35% - 100%
Position 1	Forward Flight	Range 20% - 85%

Start with setting the Gain Resolution at 50%. Bring the helicopter to a hover and keep increasing **ATV** in **Position 0** until the tail starts to oscillate (hunt). At this point reduce **ATV** setting slightly (5-10%). To set **Position 1** (forward flight), bring the helicopter into forward flight and continue to increase **ATV** until the tail oscillates (hunts), again at this point reduce slightly (5-10%). Due to the range differential, the two **ATV** settings may appear to be the same, but Position 1 is a lower setting to accommodate the forward speed & higher rotor speed.

Mechanical Gain:

- A. If hunting occurs at less than 65% while hovering - then reduce the Gain Resolution pot on the gyro.
- B. If no hunting occurs at 100% in hover - increase the Gain Resolution pot. If no hunting occurs at 100% Gain Resolution then move the rudder pushrod connection one hole outward on the servo arm.

Revolution Mixing:

Due to the high sensitivity of the piezo gyro, the revo mix settings will be lower than the default setting in most radios. To correctly set for the UP direction, hover the helicopter and apply full throttle/collective and watch the tail rotation. Again for the DOWN direction, hover at a higher altitude lower the power/collective stick and watch the rotation.

Nose turns left	increase revo value to increase tail pitch
Nose turns right	decrease revo value to decrease tail pitch

Pirouette Rate Adjustment

You may wish to have a faster or slower yaw (pirouette/rudder) rate then provide with these initial settings. As this is a "yaw rate" and not a "heading hold" gyro. One can set the servo to "over-drive" it's throw in order to increase yaw rate. In the air, a yaw rate gyro, will have continual feedback from the piezo element working through the gain circuit to limit the throw of the servo. First increase (for faster) or decrease (for slower) the rudder **ATV** settings to achieve the desired rate. If you require a greater setting then move the rudder control pushrod attachment point farther from the center of the servo arm (faster) or closer to the center of the servo arm (slower).