Century Picco Piezo Gyro System

Instruction Manual

CN2022, CN2022E & CN2022A
For electric and 30-50 size Heli-copter Use

CN2022
CN2022E
Single Rate

CN2022A
Dual Rate

Please read instructions completely before operation.

Features:

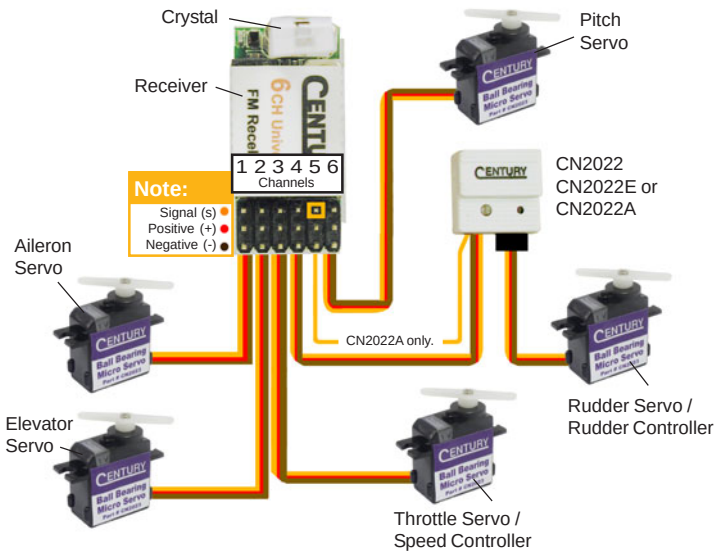
- World's smallest Micro and Super lightweight design contained in a single unit.
- 10 Times more reliable than mechanical gyros.
- Solid state with no moving parts for nearly unlimited use.
- Manual Gain for beginners, Dual Gain for intermediate pilots (CN2022A version only).
- Temperature differential compensated circuitry.
- Offset drift cancellation during initialization phase.
- Compatible with JR, Futaba, Hitec and Airtronics "Z" radio systems.

Specifications:

Dimensions:	20mm L x 20mm W x 13mm H
Weight:	4.5 g
Power Supply:	4.8 -7.2 Volts
Current Consumption:	25 ma
Operating Temp:	23° - 130°F

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 will damage the Picco gyro.



Radio Connector Type

JR	Futaba	Hitec	Airtronics Z
red to red	red to red	red to red	red to red
brown to brown	brown to black	brown to black	brown to black
orange to orange	orange to white	orange to yellow	orange to white

CN2022A Dual Rate Connections:

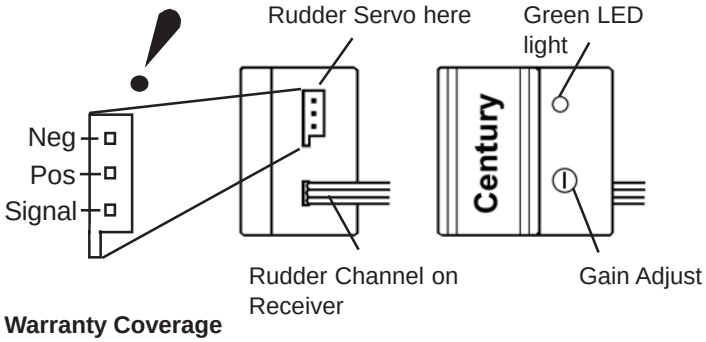
The single lead is connected to the signal pin on channel 5, commonly the gear / gyro channel. The gain is then controlled using the ATV or EPA setting for the gear channel. Newer transmitters actualy refer to channel 5 as the gyro channel. When used on 4 channel radios, the single lead is not connected and the gyro gain is adjusted using the pot on the face of the gyro.

Gyro Direction:

The gyro should be mounted with the Century name vertical and parallel to the main shaft. If the direction of the gyro is reversed, then the gyro needs to unmounted, flipped upside down and installed in the opposite direction.

Adjustments:

On the single rate gyro or if using the dual rate gyro in manual gain adjustment mode, use a plastic screw driver to make "Gain" changes on the gyro. Remember turn off and turn on the gyro for the new gain setting to take effect.



Warranty Coverage

Your new equipment is warranted to the original purchaser against manufacturer defects in material and workmanship for 90 days from the date of purchase. The warranty is limited to the original purchaser and is not transferable. This warranty does not apply to any unit which has been improperly installed, mishandled, abused or damaged in a crash, or to any unit which has been opened, repaired or altered by any unauthorized agencies. Under no circumstances will the buyer be entitled to consequential or incidental damages. Do not subject your gyro to extreme temperatures, humidity or moisture or in direct sunlight for long periods of time. Due to the delicate nature of the electronic components, the impact of dropping the gyro to the floor can damage the unit.

If the gyro requires service and is within the warranty period, call for a return authorization # and include a copy of the original receipt. Return your gyro unit only in the original box with foam packaging. Package the unit in a sturdy container and include full return address and description of damage. Send the parcel insured and postage prepaid, please allow 8-12 weeks for service.

Non-warranty repairs

- You will be advised on the repair cost, please allow 8-12 weeks for service.

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Century Hummingboard Mixer & Speed Control

Instruction Manual CNE052

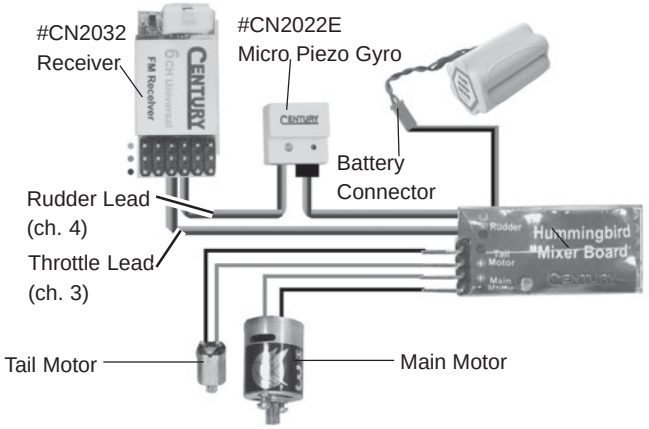
The HummingBird Mixer & Speed Control is a microprocessor electronic controller for micro electric helicopters that use separate direct current motors for the main and tail rotor systems. The control board provides all the power for the electric motors, the radio equipment and performs automatic mixing of the tail rotor to the main rotor.

For 8.4V operation only!

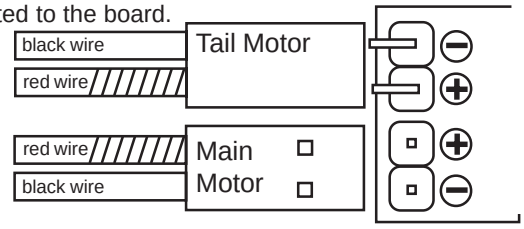
1 Connect the Hummingboard

1. *NoteConnect the Throttle lead to the throttle channel on the receiver and the Rudder lead to the gyroscope. Do not connect a separate receiver battery to the receiver, this will damage the Hummingboard. The Hummingboard has a BEC circuit to supply power to the receiver, gyro and servos.

Connections for a Futaba radio.



2. Press the tail motor and main motor connectors to the board, note that the two red wires are beside each other when connected to the board.



2 Hummingboard LEDs

The LED on the hummingboard has preset conditions to indicate the condition of the control board.

Red Flashing	Initializing	Do not move the heli.
Red Solid	Throttle not at idle	Return to idle position.
Green Solid	Normal	Board operating normal.
Red Green Flashing	No tx Signal	Turn on transmitter.

3 Channel Map by Radio

The following are for the MPI micro receiver, if you are using a different receiver the assignments may change.

		JR	Futaba	Hitec	Airtronics
Aileron	(move left & right)	**CH2**	**CH1**	**CH1**	**CH2**
Elevator	(move front & back)	**CH3**	**CH2**	**CH2**	**CH1**
Throttle	(go up & down)	**CH1**	**CH3**	**CH3**	**CH3**
Rudder	(turn left & right)	**CH4**	**CH4**	**CH4**	**CH4**

4 Servo Wires

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5 Flying the model

After checking all the connections to the Hummingboard, follow this procedure.

1. Connect battery to Hummingboard	Wait 5 seconds for LEDs on the hummingboard and gyro to stop flashing. Do not move helicopter until LEDs are solid.
2. Solid green LED	Hummingboard functioning properly.
3. Solid red LED	Throttle stick must be moved to low stick, then raised slightly to change to green LED. Ok to fly.
4. Solid red LED	Throttle stick is moved to low stick, but LED will not change to green. Use endpoint adjustment to expand low stick position. Disconnect and repeat steps 1-2.
5. Solid red LED	Throttle stick is moved to high stick and LED changes to green. Throttle channel needs to be reversed. Disconnect and repeat steps 1-2.
6. Red & green flashing LED	Hummingboard not receiving signal from transmitter. Check transmitter power and verify channel matches on receiver.

During regular operation the Hummingboard will remain solid green. Note, as the battery starts to run outas voltage drops the helicopter will simply descend, land immediately.

6 Helicopter Radios

On helicopter radios that have revolution mixing, either inhibit the function or set the revolution mixing amounts to 0 (zero) percentage. Also remove any rudder offsets, or tail curves if available on the radio. The Hummingboard is designed to automatically add tail rotor into the main rotor to compensate for increased torque as the throttle is advanced.

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