INSTALLING A HEADING HOLD GYRO IN THE AXE CP

Items Needed:

- ❑ (1) Futaba® GY240 AVCS Gyro (FUTM0809)
- ❑ (1) Great Planes® ElectriFly™ C-12 Micro Brushed ESC w/BEC (GPMM2015)
- ❑ (1) W.S. Deans® Micro 2R Plug (WSDM3007) (for C-12 ESC)
- ❑ (2) Small Tie Wraps

Optional Items:

- ❑ (1) Great Planes LiPo 910mAh 11.1V 3s 15C Discharge Deans battery (GPMP0815)
- ❑ (1) W.S. Deans 2-Pin Ultra Plug™ WSDM3001)

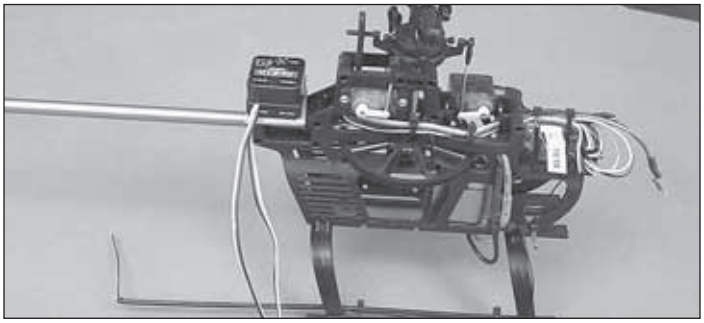
Tools:

- ❑ Solder and Soldering Iron
- ❑ Wire Cutters

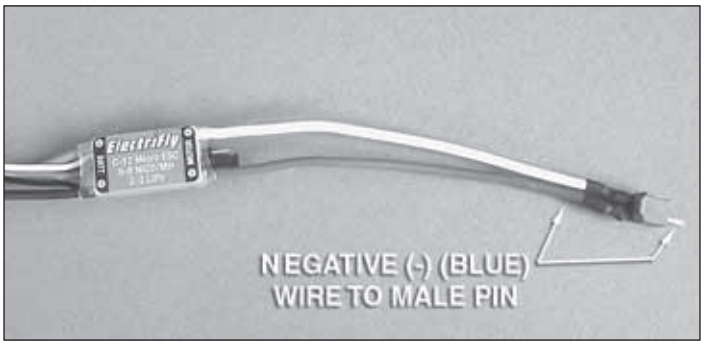
Installing a heading hold gyro into the Heli-Max™ AXE CP™ will make the model easier to fly. The gyro will now allow you to focus your concentration on the other controls instead of constantly flying the tail.

We highly recommend using the optional Great Planes LiPo 11.1V 3s 15C battery (GPMP0815) for the best overall performance. This battery provides a longer flight time and higher power output in comparison to the stock NiMH battery.

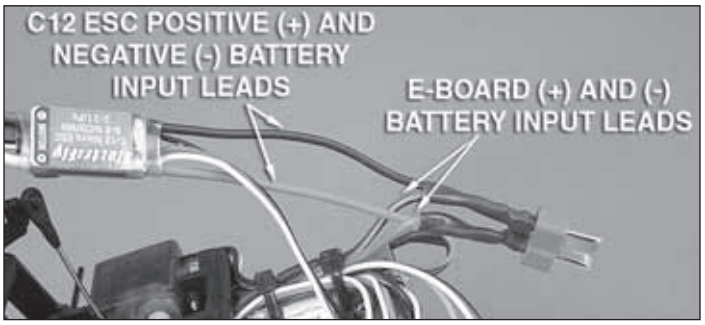
INSTALLING THE GYRO



❑ Use alcohol and a paper towel to remove any grease or mold release agents on the gyro and helicopter frame. Apply the double-sided foam mounting tape included with the gyro to the bottom of the unit. Carefully align the gyro as shown in the picture and mount the gyro onto the helicopter frame.



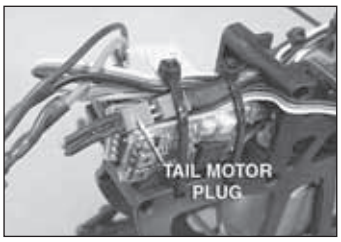
❑ Solder a Micro Deans plug onto the motor wires of the C-12 ESC as shown. The negative (-) motor lead **(blue wire)** connects to the male pin on the connector. This will be connected to the tail motor in a later step.

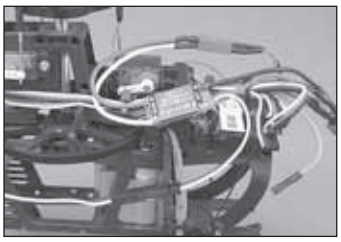


❑ It will be necessary to solder the E-Board and C-12 ESC to the battery connector as shown above. If you decide to use the Great Planes 910mAh LiPo battery (GPMP0815), we suggest installing a Deans Ultra Male Plug onto the ESC and E-Board to match the connector on the battery pack. The Deans Ultra Plug will better handle the increased current draw of more aggressive flight as your skill level advances.

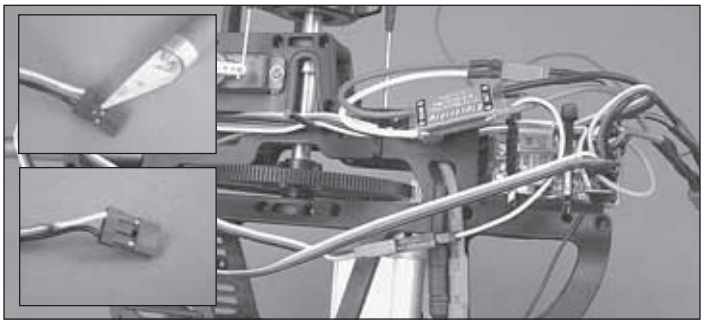
❑ Using wire cutters, remove the Deans Micro connector from both battery input leads on the E-Board and the C-12 ESC. Remove 1/4" [6mm] of wire insulation from both the positive (+) and negative (-) leads of the C-12 ESC and E-Board.

❑ Compare the battery pack connector to the ESC connector and verify the polarity is correct before soldering. Twist and solder together the positive battery lead from the C-12 ESC and the positive lead from the E-Board. Slide the supplied heat-shrink tubing (included with the Deans Ultra Plug) over the wires and solder them to the Deans connector. Repeat for the negative lead. Slide the heat-shrink tubing up the wire to the plug. Use heat to shrink the tubing.

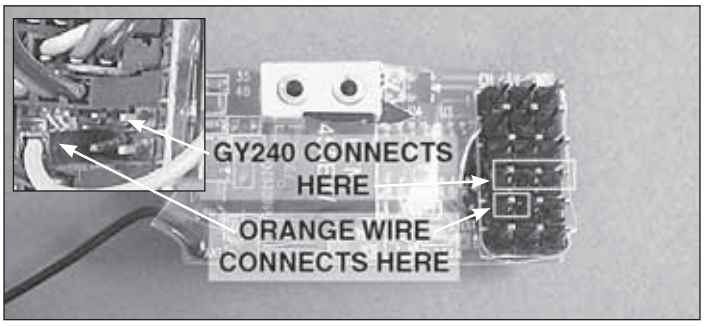




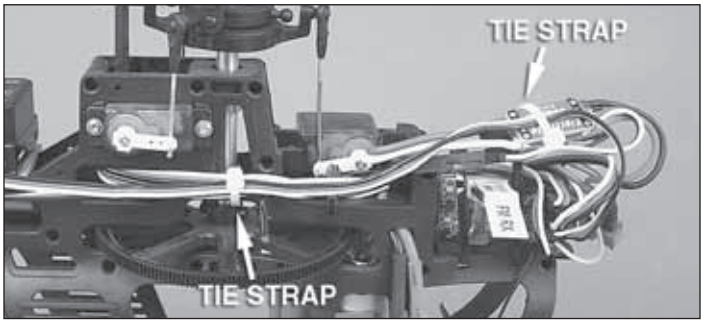
❏ Disconnect the tail motor plug as shown above and connect the plug directly into the blue and white motor wires on the C-12 ESC.



❏ Since the E-Board provides power to the receiver and servos, the BEC in the C-12 ESC must be disabled. Carefully lift up the plastic tab on the C-12 ESC connector, remove the red pin from the plug, and fold it back over the wire. Wrap a piece of electrical tape or heat-shrink tubing around the connector pin and wire. Plug the C-12 ESC into the GY240 gyro.



❏ Remove the orange wire from the receiver and plug the GY240 into the same position. Verify the black wire (-) on the connector is towards the outside edge of the receiver. Now plug the orange connector into the next available position on the receiver (channel 5), and align it with the column of white wires on the other connectors.



❏ Use two tie straps to attach the gyro wires to the frame. Bundle the wires and ESC together at the front of the helicopter.

❏ On the gyro, set the “AVCS” switch to “ON” and set the “DIR” switch to “REV”. Set the gain to 60% using the adjustment dial on the gyro. If necessary, adjust the gain to match your flying style or desired setup. The typical range of gain is 50% to 75%.

Review your work and verify that none of the wires can get caught in the main rotor gear or the swash plate. The helicopter is now ready for the test flight.

FLIGHT INITIALIZATION

If this is your first time flying a heading hold gyro, be sure to take your time and become accustomed to the new gyro before jumping into your normal flying routine.

Turn on the transmitter, center the tail rotor trim tab, extend the antenna, and verify the idle up switch is “OFF” (toward the back of the transmitter). Connect the flight battery and allow the gyro 10 seconds to initialize. The helicopter and tail rotor stick must remain still during this process.

ARMING THE TAIL ESC

The tail motor ESC must be armed before each flight. The best time to do this is after you place the helicopter on the ground before taking off.

You will hear three beeps from the tail ESC once the gyro has initiated. Carefully apply full right tail rotor and you will hear 4 beeps. Apply full left tail rotor and you will hear another set of beeps. The tail ESC and motor are now armed and you are ready to fly. If you need to pick up the helicopter, firmly hold onto the main frame since the tail motor could operate at any time. You can hold full left tail rotor on the transmitter to prevent this from occurring.

FLYING

If the tail wants to drift slowly due to wind gusts, your gain may be set too low. Increase the gain a small amount and see if performance improves.

If the tail has a tendency to oscillate from left to right, your gain may be set too high. Reduce the gain and see if performance improves.